

# Marina-Salinas Multimodal Corridor Conceptual Plan

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California State University, Monterey Bay
County of Monterey Agricultural Advisory Commission
County of Monterey Board of Supervisors
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# Final Report for Marina-Salinas Multimodal Corridor Conceptual Plan

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# Final Report for Marina-Salinas Multimodal Corridor Conceptual Plan

## **EXECUTIVE SUMMARY**

The vast majority of jobs and housing in Monterey County are located in the City of Salinas and the Monterey Peninsula, and yet there are few transportation routes connecting these areas. The most travelled route is Highway 68, which suffers from peak congestion and barriers to roadway widening. The second most travelled route is Highway 1 via Imjin Parkway, Reservation Road and Blanco Road, which also experiences peak hour congestion. The Marina-Salinas Multimodal Corridor Plan was developed in response to the need for a regional route through the former Fort Ord area that will increase roadway capacity by prioritizing high quality transit, bicycling and walking as viable alternatives to driving.

### Goals and Objectives

The purpose of the Marina-Salinas Multimodal Corridor Plan is to:

- Preserve a multi-iurisdictional corridor
- Plan for regional high quality transit
- Provide a regional bicycle route that will serve users of all ages and abilities
- Improve pedestrian safety, particularly in urban areas
- Identify improvements that will minimize impacts to the environment, sensitive habitat lands and prime agricultural lands
- Provide conceptual corridor designs
- Estimate the cost of implementation and identify potential sources of funding
- Provide opportunities for stakeholders and the community to shape future transportation options to meet their needs.

## Partner Agencies

The development of the Marina-Salinas Multimodal Corridor Plan was a collaborative effort of the Transportation Agency for Monterey County and several partner agencies:

- County of Monterey
- City of Salinas
- City of Marina
- Monterey-Salinas Transit
- Fort Ord Reuse Authority
- California State University Monterey Bay (CSUMB); and,
- Association of Monterey Bay Area Governments.

These agencies came together to develop criteria to achieve the plan goals, identify a preferred corridor alignment that would enhance their local transportation networks and determine the types of treatments that would make transit, bicycling and walking more attractive. These Partner Agencies will continue to work together to secure funding and implement the plan consistently across jurisdictional boundaries.

## Phase I: Preferred Alignment

The first phase of the planning process focused on determining a preferred corridor route based on an analysis of opportunities and constraints and input from stakeholders and the greater community.

The major opportunities and constraints identified include:

Constraints	Opportunities
Impacts to sensitive habitat lands through the former Fort Ord area	Urban areas with potential for transit-oriented development
Impacts to prime agricultural land	Popular regional destinations such as academic institutions, downtowns, and major employment centers
Impacts to CSUMB's campus core	Ability to fill gaps in existing bicycle and pedestrian networks
Cost of bridgework to cross the Salinas River	
Cost of widening Reservation Road Between East Garrison Road and South Davis Road	

Through the public engagement with partner agencies, interest groups and members of the community, the Transportation Agency formed a recommendation for a preferred corridor alignment (see Figure ES-1). The recommended corridor alignment begins at the proposed Monterey Branch Line Light Rail station at 8th Street, providing access to future transit and bicycle connections to Peninsula cities, and continues along 8th Street to 9th Street. From 9th Street the corridor continues up 2nd Avenue through the Dunes development area to Imjin Parkway. The corridor stays along Imjin Parkway to Reservation Road and down Reservation Road to East Garrison Drive. This route provides direct access to regional shopping and entertainment, academic institutions, health care, resources for veterans, and housing. To better serve the East Garrison development and avoid the costly curve on Reservation Road, the corridor turns down East Garrison Drive from Reservation Road. From East Garrison Drive the corridor heads east on Sherman Boulevard, down Sloat Street to Watkins Gate Road and back out to Reservation Road via Watkins Gate Road. From the East Garrison Development the corridor continues on Reservation Road to Davis Road. At the intersection of Davis Road and Blanco Road, the corridor shifts East on Blanco Road and accesses Salinas and the Intermodal Transit Center via W. Alisal Street and Lincoln Avenue.

Although Blanco Road is not a part of the long-term regional multimodal corridor, it is recommended that it serve as an interim multimodal corridor until the Reservation Road and South Davis Road sections are developed.

## Phase II: Conceptual Design

The second phase of the planning process was focused on developing the preferred conceptual roadway design features along the recommended corridor route. Enhanced transit, bicycle and pedestrian treatments were considered to provide attractive alternatives to driving.

**High Quality Transit** - The corridor will provide a high quality transit route designed to be competitive with the automobile. Between Marina and Salinas, high quality transit will take the form of bus service that arrives every 15 minutes, makes fewer stops, provides more amenities at bus stops, and serves popular destinations. Proposed features include transit priority at signalized intersections, bus-only lanes on 2nd Avenue and Imjin Parkway in Marina, a separate busway along Imjin Parkway between Imjin Road and Reservation Road, longer distance between stops, and transit stops with attractive amenities.

Enhanced bicycle facilities – To provide a safer and more comfortable connection between the Monterey Bay Sanctuary Scenic Trail on the coast and major population center Salinas, the corridor will provide enhanced bicycle facilities along the entire route. These enhanced bicycle facilities will offer physical barriers that provide more separation between fast-moving motor vehicles and bicyclists. The presence of both "on-road" and "off-road" facilities along the majority of the corridor will provide options for bicyclists of all ages, speeds and abilities. Proposed bicycle facilities include: bicycle lanes on Lincoln Avenue and buffered bicycle lanes along W. Alisal in Salinas, a two-way protected bicycle path connecting the East Garrison development and Salinas, and separated multiuse paths and buffered bicycle lanes in Marina.

**Safer Pedestrian Treatments** — Improved pedestrian facilities will provide safer access to and from high quality transit stops and support walking along the corridor. Proposed improvements include separate multiuse paths, sidewalks, lighting, and crossing enhancements such as bulb-outs and pedestrian refuge medians.

#### **Near-Term Actions**

The Marina-Salinas Multimodal Corridor Plan sets a long-term vision that will take decades to implement. Improvements will need to be made incrementally over time and as funding becomes available. However, there are several actions that can be taken in the near-term to jump-start projects along the corridor.

**Memorandum of Understanding -** a Memorandum of Understanding will be developed to signed by all Partner Agencies to memorialize the new alignment of the Marina-Salinas Multimodal Corridor and provide conceptual assurance that the plan is supported by all Partner Agencies. This Memorandum of Understanding will replace all previous agreements referencing a multimodal corridor between Marina and Salinas through the former Fort Ord Area.

**Policy Amendments -** To assure that new development supports the corridor, local planning documents must be amended to reflect the preferred alignment, accommodate the proposed conceptual design and provide opportunities for transit-oriented development. These changes will constitute minor amendments to General Plans, Specific Plans and Zoning Codes and will likely require some level of environmental review.

**Regional Bicycle and Pedestrian Wayfinding Signage** – The Transportation Agency has budgeted funds to develop a regional bicycle and pedestrian wayfinding plan and sign program. The Marina-Salinas Multimodal Corridor will be identified as a regional route in the Wayfinding Plan and appropriate signage will be designed.

West Alisal Road Diet & Lincoln Avenue Improvements – In 2014, the Transportation Agency awarded the City of Salinas Regional Surface Transportation Program funds to design the West Alisal Road Diet and Lincoln Avenue improvements consistent with the conceptual plans in the Salinas Downtown Vibrancy Plan and Marina-Salinas Multimodal Corridor Plan. Design work will begin in Spring 2015.

**South Davis Road Bridge and Widening Project** – The County plans to widen South Davis Road (south of Blanco Road) from two to four lanes and construct a new bridge over the Salinas River. The County has included the proposed Marina-Salinas Multimodal Corridor conceptual designs for South Davis Road as an alternative in the environmental review documents for the project. Environmental review will conclude in summer 2015 and a preferred project alternative will be selected by the Board

of Supervisors. The Transportation Agency will support the project alternative that is consistent with the Marina-Salinas Multimodal Corridor Plan.

Coordination with Developments Under Construction – The Marina-Salinas Multimodal Corridor passes through the Dunes development in Marina and the East Garrison development in the County. Both developers were consulted throughout the planning process to determine how to best incorporate multimodal features in the corridor. Minor modifications to designs will be required to accommodate the proposed Multimodal Corridor, these changes will be reflected in the Memorandum of Understanding and signed by the County of Monterey and City of Marina.

### **Related Projects**

Through the planning process, several projects came to light that have the potential to enhance the Marina-Salinas Multimodal Corridor. Although the following projects and concepts could not be fully explored during the Marina-Salinas Multimodal Corridor planning process, they merit further study:

**East Alisal Street Corridor Study** – The East Alisal corridor study will identify improvements for transit, bicycling and walking in one of the lowest income and highest transit ridership corridors in Monterey County. The City of Salinas has applied for a Caltrans planning grant to conduct this study.

**Highway 68 Corridor Study** —The Highway 68 Corridor study will evaluate current and future travel patterns between Salinas and the Monterey Peninsula and the feasibility of State Route 68 improvements.

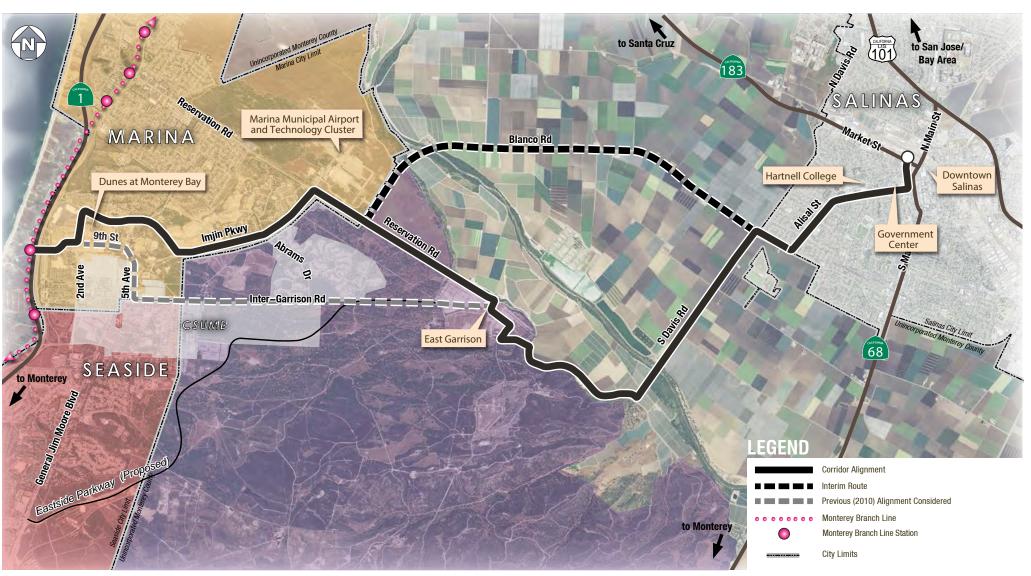
**Fort Ord Recreational Trail and Greenway** – The Fort Ord Recreation Trail and Greenway (FORTAG) proposes two connected regional loop trails totaling 28 miles, most of which is in the former Fort Ord area. These trails will improve access to recreational areas and open space from the Marina-Salinas Multimodal Corridor.

**2nd Avenue Extension and Improvements** – The City of Marina plans to extend 2nd Avenue from Imjin Parkway north to Reindollar Avenue. The 2nd Avenue extension will provide a critical link for transit, bicyclists and pedestrians between the Multimodal Corridor and Downtown Marina. As the existing sections of 2nd Avenue develop, there are opportunities for

**Monterey Branch Line Busway** – Monterey-Salinas Transit is proposing to build an express busway adjacent to the railroad tracks in or along Highway 1 and the Monterey Branch Line right-of-way. The busway will connect to the Marina-Salinas Multimodal Corridor at 8th Street, providing unhindered bus travel from Marina to Downtown Monterey.

**Cal State University, Monterey Bay Master Plan Update** – The University is updating its campus master plan and supports improved transit, bicycle and pedestrian access plan. Parallel routes and access to the Multimodal Corridor can be an important feature of this update.

Figure ES-1: Preferred Alignment



## 1. INTRODUCTION

The largest population and employment centers in Monterey County are located in the City of Salinas and along the Monterey Peninsula, resulting in substantial travel demand between those two areas. The existing transportation network that connects the City of Salinas and the Monterey Peninsula, which includes Highway 68 and the Blanco Road/Imjin Parkway corridor, is already stretched to its limits. The state highways are overloaded and experience daily backups. The local street network experiences delays and queuing in the peak periods. The main bus route making this connection, Route 20, is the busiest in the entire regional system, carrying over 468,000 riders annually.

Furthermore, transportation demand on the roadway network is anticipated to continue to grow. By 2035, nearly 60 percent of Monterey County residents are projected to live in the City of Salinas or the Monterey Peninsula (Marina, Seaside, Monterey, Pacific Grove, Sand City) and approximately 100,000 daily commute trips are forecast between these two areas. The existing roadway network is not capable of supporting that level of trip demand without deteriorating the quality of life for the local residents. While some expansion of auto capacity is planned, expanding the roadway network to fully handle forecast demands is in conflict with the region's prioritization of sustainable growth, preservation of agricultural lands and greenhouse gas reductions. The region has identified improving active transportation and public transit as essential solutions to meet the growing transportation demands while satisfying environmental and sustainability objectives.

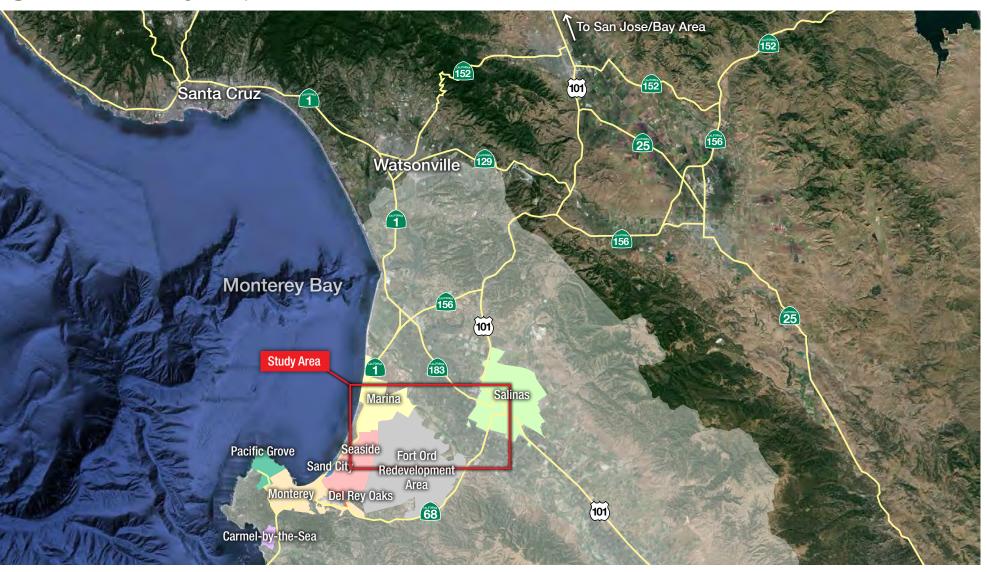
In light of the demands for travel between Salinas and the Monterey Peninsula and the emphasis on encouraging non-auto modes, the provision of enhanced transit, bicycle and pedestrian facilities is a critical element in satisfying demand in the corridor. Facilities for non-auto modes are currently limited in between Marina and Salinas. Bicycle and pedestrian facilities are discontinuous or not present. Transit modes face the same congestion as mixed-flow traffic and thus are often not travel time competitive with auto travel. For example, while more than 50 percent of homes and 65 percent of jobs within Monterey County are within an eight-minute walk of a transit stop, average transit times are 150 percent longer than by private auto. As a result, the transit mode share for commute trips is just three percent countywide, and closer to one percent for Salinas residents.

By improving transit, bicycle, and pedestrian facilities, residents will have alternatives to auto travel that are competitive in terms of travel time and comfort. Improving mobility options is extremely valuable for a community such as Salinas where nearly 22 percent of residents live below the poverty line. Enhancing the competitiveness of non-auto travel modes will likely serve to reduce auto demand in the long-term and help to achieve the region's sustainability goals, including a targeted five percent reduction in greenhouse gas emissions by 2035. Enhancing multimodal facilities has proven to be effective at achieving sustainability objectives in communities throughout the country. For example, Portland and Seattle have both invested heavily in bicycle and transit infrastructure in the last decade and have seen measurable shifts in mode shift to transit and active transportation modes, indicating that residents are taking advantage of the new facilities.

Improving the Salinas to Monterey Peninsula connection is critical when considering the region's planned transportation network. Preparations for the extension of rail service from the Bay Area to the Salinas Valley are well under way. Connecting to the west end of the corridor, plans for providing light rail or high-quality bus rapid transit service between Monterey and Marina have been developed. Providing a high-quality transit connection between those major regional systems would be an essential piece in the regional transportation network. Enhancing transit service in the Marina-Salinas Corridor would perfectly align with the region's greater vision and contained in the adopted Regional Transportation Plan and Metropolitan Transportation Plan.

A multimodal corridor spanning between Marina and Salinas has long been an essential element of regional and local planning in the area. A "transit corridor" was included in the Ford Ord Base Reuse Plan, adopted along with its Final Environmental Impact Report in 1997, which governed the development of the former military base located along the corridor. This alignment was included in the City of Marina's General Plan and has been included in Regional Transportation Plans. In 2010, ten public entities and jurisdictions signed a Memorandum of Agreement to shift the "Multi-Modal Transit Corridor" to Inter-Garrison Rd/Reservation Rd and Davis Rd to access Salinas. While a variety of alignments have been considered for the multimodal corridor, no work had previously been conducted regarding the feasibility of any alignments, nor any definition of the facilities to be provided along the multimodal corridor.

## Figure 1-1: Vicinity Map



## 1.1 Type of Improvements to be Considered

A multimodal corridor is generally defined as a transportation corridor or connected set of corridors with features that encourage the use of a variety of modes. In this study, improvements will focus on transit, bicycle and pedestrian modes to enhance the roadway facilities that currently are designed to support auto travel.

With respect to transit, the improvements are intended to facilitate the introduction of a new bus rapid transit route that spans the length of the corridor. Bus rapid transit is a mode of transit that blends the flexibility and low-cost of bus service with the enhanced effectiveness and competitiveness of fixed-rail service. While bus rapid transit uses buses operating on rubber tires instead of rails, it includes a combination of added amenities such as enhanced stations, passenger information displays, dedicated travel lanes or travelways, and priority at signalized intersections. Bus rapid transit service is frequent and all-day, providing a dependable transportation option. Compared to existing transit services in the corridor, the planned bus rapid service is more frequent, provides faster trip times, and includes enhanced amenities at the stations, such as enhanced shelters, passenger information systems, and possibly off-board fare payment. Bus rapid transit is characterized by fewer stops, which may mean a longer walk to the nearest stop for some riders as a trade-off to the reduced overall travel time. It is anticipated that the bus rapid transit system will overlay on top of existing local bus routes. The local routes are anticipated to maintain their existing closely-spaced stops, although changes in local bus frequency or alignment may occur to optimize the system.

One purpose of the Marina-Salinas Multimodal Corridor is to accommodate bicyclists with a wide range of abilities, comfort levels, and trip purposes. This leads to the need to provide a range of bicycle facilities to accommodate the full spectrum of users. Experienced riders making commute trips often seek on-road facilities that require limited out of direction travel and provide for high travel speeds. Less experienced riders generally require facilities that are well separated from high-speed auto traffic with limited conflict points. The multimodal corridor seeks to provide facilities that can accommodate the range of bicyclists reasonably expected to use the facilities, given nearby land uses and anticipated trip types.

Pedestrian activity in the corridor will primarily occur in urban areas. There are long segments of agricultural or open space in the mid-section of the corridor that generate little to no pedestrian activity. Improvements in the corridor will seek to improve the connectivity of land uses within a typical walkshed through the provision of sidewalks, mixed use paths and enhanced roadway crossings.

Figure 1-1 depicts a vicinity map of the study area.



Enhanced bicycle facilities, like Buffered Bike Lanes, provide a more comfortable environment for bicyclists of varying ability levels.

## 1.2 Project Process

The Transportation Agency of Monterey County (TAMC), in close cooperation with the City of Salinas, County of Monterey, City of Marina, the Fort Ord Reuse Authority (FORA), Monterey-Salinas Transit (MST), Cal State University Monterey Bay (CSUMB), the Association of Monterey Bay Area Governments (AMBAG) and other affected agencies, undertook this study to further define the multimodal corridor, obtain public input, and bring it closer to fruition. The project has the following key milestones:

- Define the preferred alignment through consensus building and public input;
- Identify corridor multimodal elements through stakeholder and public input;
- Prepare conceptual plan lines; and
- Prepare conceptual opinions of probable cost.

To achieve these objectives, the project was divided into two phases. Each phase included extensive opportunities for public input, public presentations, and consensus building amongst stakeholders.

- Phase 1: Analysis of Potential Alignments
  - » Assessment of potential corridor roadway segments
  - » Development of corridor alignment alternatives
  - » Analysis of opportunities and constraints for alignment alternatives
  - » Selection of a preferred alignment
- Phase 2: Detailed Development of Corridor Elements
  - » Development of corridor design concepts
  - » Analysis of corridor integration with existing/planned multimodal system and land use implications and Transit-Oriented Development opportunities
  - » Assessment of project costs and implementation prioritization

This report documents the project process, findings of the technical analysis, public and stakeholder involvement, and the agreed upon outcomes. A large number of graphics are contained in this report to help illustrate the concepts and solutions considered for the corridor. Many of these graphics have been distributed to the public and key stakeholders throughout the project process to help inform and assist in decision-making.





## 2. PLANNING CONTEXT

In order to define a final alignment for the multimodal corridor, it is important to understand the past and current planning efforts related to the Marina-Salinas Corridor, as well as other key projects immediately in the vicinity of the corridor.

The 1997 Fort Ord Base Reuse Plan proposed an alignment for a multimodal right-of-way from State Route 1 to 8th Street and Imjin Parkway in Marina and then Blanco Road and Davis Road in Monterey County to the train station in the City of Salinas. In 2010, FORA, California State University Monterey Bay (CSUMB), MST, University of California Santa Cruz (UCSC), Golden Gate University, the County of Monterey, the City of Marina, and TAMC signed a Memorandum of Agreement (MOA) accepting a revised alignment. The alignment identified in the 2010 MOA followed 9th Street, 5th Avenue and Inter-Garrison Road through Marina, continuing along Inter-Garrison through the East Garrison development, connecting to Reservation Road. The City of Marina's General Plan currently identifies the previously agreed-upon alignment along Imjin Road and Imjin Parkway . For reference, the alignment figure included in the City of Marina's General Plan is provided in **Appendix A**.

In 2003, TAMC purchased the Monterey Branch Line alignment, an existing rail spur extending between Monterey and Castroville. In the following years, TAMC and MST progressed with planning efforts to evaluate the potential for future fixed guideway service along the Monterey Peninsula,

Figure 2-1: Planned Monterey Peninsula Fixed Guideway Alignment



including a planned station near 8th Street and Highway 1 in Marina. MST is currently working towards implementing bus rapid transit service within the Monterey Branch Line corridor or adjacent roadways. The service would operate between Marina and Monterey. Extensive stakeholder and public outreach, supported by technical analysis, led to the selection of light-rail transit as the preferred long-term alternative in the Monterey Branch Line corridor. The proposed Monterey Peninsula Fixed Guideway Alignment is shown in Figure 2-1.

In addition to the Monterey Branch Line, TAMC is also in the process of designing and implementing a passenger rail service extension from San Jose in Santa Clara County, where Capital Corridor now terminates, to Monterey County with stations planned for Pajaro/Watsonville, Castroville and Salinas. The Salinas Commuter Rail Extension corridor map is shown in **Figure 2-2**. The planned addition of these two major transit connections in Monterey County provides further justification for providing a quality multimodal connection between Marina and Salinas .

The City of Salinas recently completed the Downtown Salinas Vibrancy Plan, a community-based vision and implementation blueprint for a vibrant downtown. The plan includes recommendations to improve pedestrian and bicycle circulation, implement parking strategies, improve economic vitality, and develop a sense of place through art, culture and streetscape features. Development of the Marina-Salinas Multimodal Corridor Conceptual Plan included close collaboration with the City of Salinas and the Downtown Salinas Vibrancy Plan team to ensure consistent recommendations for the transportation network within downtown Salinas.

It is the goal of this study to supplement these previous initial planning efforts with a more-detailed analysis in order to confirm the final desired alignment and the configuration of that alignment. By designating a final alignment and identifying potential design elements of this alignment, TAMC and other local agencies can continue with the planning of future development and transportation facilities, and in particular, bus rapid transit service between Marina and Salinas.

Other adopted local and regional plans that could require amendment to reflect the final alignment of the multimodal corridor include:

- Monterey County General Plan
- City of Salinas General Plan
- City of Marina General Plan
- The Dunes at Monterey Bay Specific Plan
- 2007 California State University Monterey Bay Master Plan
- 2010 Memorandum of Agreement for Alignment of the Multimodal Corridor
- Fort Ord Base Reuse Plan
- East Garrison Specific Plan

Figure 2-2: Planned Salinas Commuter Rail Extension Map



## 3. IDENTIFICATION OF POTENTIAL ALIGNMENTS

## 3.1 Roadway Segments Considered

The first step in the corridor concept development process involved the identification of potential roadway segments to be considered as part of the multimodal corridor alignment. Potential roadway segments to be considered were identified based on review of previous plans for the Marina-Salinas corridor (i.e. TAMC federal "TIGER" Grant Application, City of Marina General Plan, previous Memoranda of Understanding), input from project stakeholders and each of the jurisdictions through which the corridor extends, and review of key origins and destinations along potential roadway segments. Key origins and destinations identified in this initial assessment include, but are not limited to, the following:

- City of Salinas Hartnell College, City/County Government Center, Downtown, Amtrak Station (known as the Salinas Intermodal Transportation Center), Monterey-Salinas Transit (MST) Bus Transit Center:
- Unincorporated Monterey County East Garrison Development, University of California Monterey Bay Educational Science and Technology Center (UC MBEST);
- City of Marina Cal State University Monterey Bay, 8th Street Transit Center, future Monterey Branch Line stations, planned VA Hospital, AMCAL student housing, The Dunes at Monterey Bay development, Marina Heights, regional retail center.

**Figure 3-1** shows the initial roadway segments identified for consideration as part of the multimodal corridor alignment. To assist in the selection of a corridor, the team identified the general characteristics of each initial roadway segment in terms of planning context, transportation and land use opportunities and constraints (**Appendix B**).



Key destinations, such as the MST Bus Transit Center in Salinas, were identified when evaluating potential benefits of corridor alignment options.

## 3.2 Corridor Alignment Alternatives

Based on the assessment of potential roadway segments considered for the Marina-Salinas corridor, five distinct corridor alignment alternatives were developed, representing various routing options to connect Marina and Salinas. For the purposes of this study, the corridor terminus points were understood to be the Salinas Intermodal Transportation Center and the proposed 8th Street MST Transit Station in Marina, which is anticipated to be located east of the 8th Street overcrossing of Highway 1.

**Figure 3-2** shows the corridor alignment alternatives defined for further review. The five alignment alternatives defined for further assessment are summarized as follows:

- Alignment Alternative 1: This alignment begins at the 8th Street MST Transit Station in Marina, then runs along 8th Street, 9th Street, 2nd Avenue, Imjin Parkway, Reservation Road, and Blanco Road to the Davis Road/Blanco Road intersection. From this point, the alignment may follow one of two routes to the corridor terminus in Salinas: Option A follows Davis Road and Market Street to the Salinas Intermodal Transportation Center; Option B follows Blanco Road, Alisal Street, and Lincoln Avenue to the rail station. (Alignment shown in Red in Figure 3-2)
- Alignment Alternative 2: This alignment follows Alignment 1, except that it follows Reservation
  Road to Davis Road to the Davis Road/Blanco Road intersection (rather than Blanco Road).
  (Alignment shown in Purple in Figure 3-2)
- Alignment Alternative 3: This alignment begins at the 8th Street MST Transit Station in Marina, then runs along 8th Street, 9th Street, 5th Avenue, Inter-Garrison Road, Reservation Road, and Davis Road to the Davis Road/Blanco Road intersection. (Alignment shown in Blue in Figure 3-2)
- Alignment Alternative 4: This alignment is similar to Alternative 2, except that it does not take
  2nd Avenue to Imjin Parkway, but instead travels stays on 9th Street to 8th Street, Imjin Road and
  then to Imjin Parkway. It also diverts from Reservation Road through the East Garrison development
  before returning to Reservation Road. (Alignment shown in Green in Figure 3-2)
- Alignment Alternative 5: This alignment follows Alternative 3 through Marina, but within East
  Garrison, stays on Sherman Boulevard to Sloat Street and Watkins Gate Road to reach Reservation
  Road. To reach Salinas, instead of turning on Davis Road as in Alternative 3, it continues to State
  Route 68, which turns into S. Main Street, then turns at Clay Street to Lincoln Avenue and to the
  corridor terminus in Salinas. (Alignment shown in Yellow in Figure 3-2)

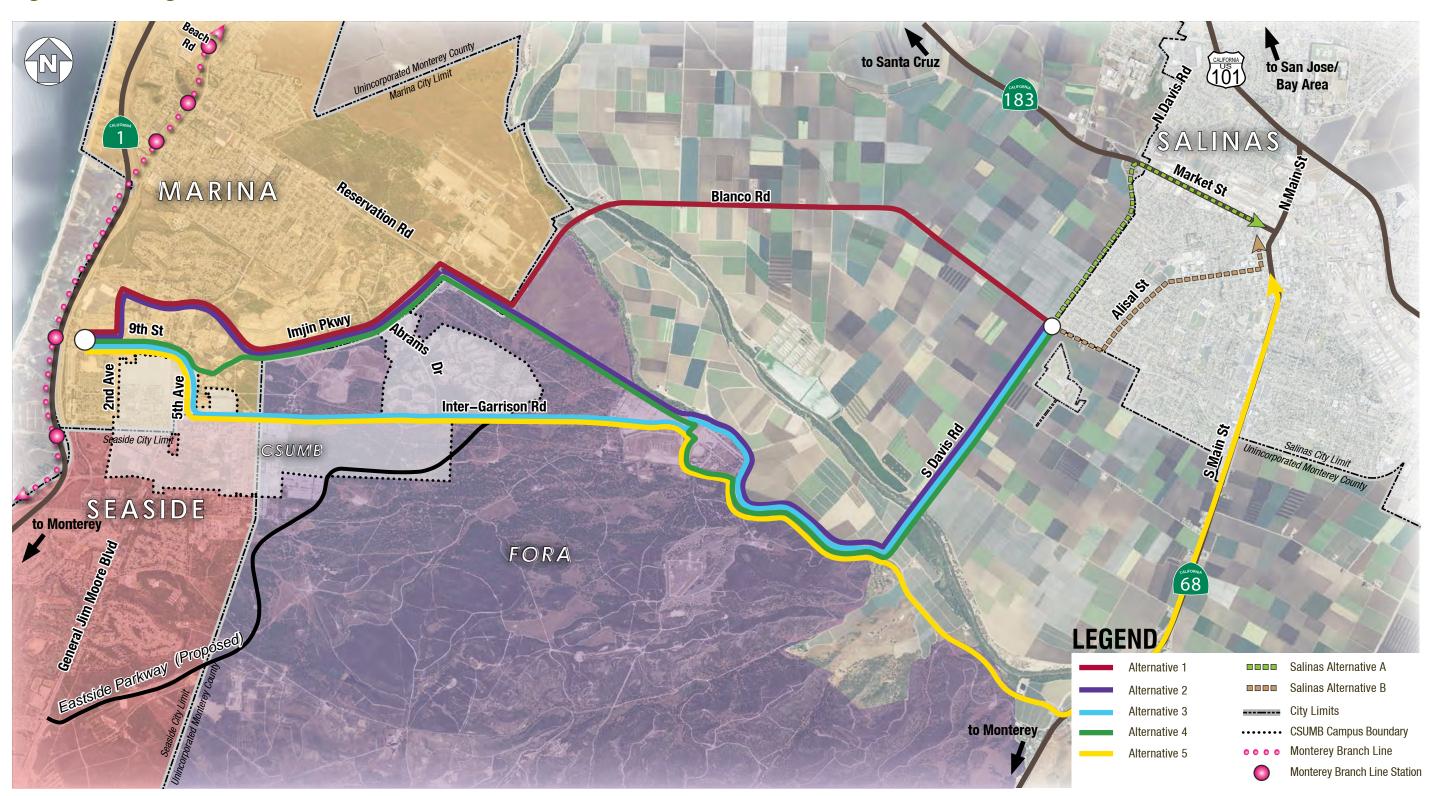




to San Jose/ Bay Area to Santa Cruz MARINA Blanco Rd Imjin Pkwy Inter-Garrison Rd CSUMB SEASIDE) to Monterey FORA Monterey Branch Line to Monterey Monterey Branch Line Station City Limits **CSUMB Campus Boundary** 

Figure 3-1: Roadway Segments for Consideration

Figure 3-2: Alignment Alternatives



## 4. ASSESSMENT OF POTENTIAL ALIGNMENTS

In order to compare the relative benefits associated with each of the corridor alignment alternatives, a detailed assessment of each alignment alternative was performed. This assessment identified how the alternative under consideration could enhance travel opportunities (speed, convenience, potential to attract non-auto trips, environmental benefits) and noted constraints that might limit the options for corridor development and/or land use integration. To guide this assessment, Kimley-Horn obtained a variety of available data from TAMC and other stakeholder agencies, including available aerial imagery, topographic and right-of-way mapping, existing and projected traffic data, planned and proposed roadway project information, environmental data, existing and planned transit system data, and relevant land use and transportation planning documents and studies within the corridor study area.

The following sections provide a brief discussion of the general opportunities and constraints associated each alignment alternative as they relate to these focus areas:

- Existing and Planned Roadway System
- Existing and Planned Multimodal System (pedestrian, bicycle and transit considerations)
- Sensitive Lands (habitat, floodplain, agricultural land constraints)
- Land Use and Development Potential

## 4.1 Existing and Planned Roadway System

The existing and future roadway network considered for the potential multimodal corridor alignment was studied to identify potential opportunities to enhance multimodal elements, or potential constraints that would limit opportunities to improve the functionality of certain streets for non-auto users. Brand new roadways are not proposed in order minimize potential impacts to sensitive habitats and agricultural land. For each roadway considered for the proposed corridor alignment, the roadway system evaluation focused on the following:

- Existing street right-of-way widths were determined in order to identify potential to provide quality bicycle facilities, sidewalks and/or transit only lanes.
- Currently planned and programmed roadway improvements were identified and evaluated for potential to incorporate multimodal enhancements.
- Existing and projected future traffic volumes (where available) were evaluated to identify potential capacity constraints that could impact transit operations.
- Bottleneck points, such as the Davis Road bridge or Blanco Road bridge over the Salinas River were identified to highlight locations where potential widening to provide additional capacity or multimodal facilities may prove challenging or costly.

**Figure 4-1** shows the existing and planned roadway system within the portions of the City of Salinas and unincorporated Monterey County within the project study area. **Figure 4-2** shows the existing and planned roadway system within the vicinity of the study area in the City of Marina. These figures identify the right-of-way widths, number of existing and proposed travel lanes, average daily traffic volumes, and proposed improvement projects for key roadway segments considered for the potential corridor alignment.

## 4.2 Existing and Planned Multimodal System

For the purposes of this assessment, the existing and planned "multimodal system" includes current and planned pedestrian facilities (sidewalks, trails, crossings), bicycle facilities (on-street and offstreet facilities) and transit systems (local and regional MST bus service, passenger rail service). It is important to understand the existing and future planning context of the multimodal facilities within the study area in order to identify corridor alignment options that provide opportunities to fill gaps in the existing network and/or compliment and integrate with the existing network. The multimodal system evaluation focused on the following:

- Opportunities to connect with existing or planned MST bus transit hubs (Salinas Transit Center, planned Marina MST Transit Station) and other major transit stations (Salinas Intermodal Transportation Center, future Monterey Branch Line Station at 8th Street);
- Existing MST bus stops and corridors with high ridership in order to identify corridor alignment segments with good ridership potential;
- Existing and currently proposed on-street bicycle facilities and off-street pedestrian/bicycle trails in order to evaluate opportunities to integrate with potential multimodal corridor alignments;
- Streets with high on-street parking utilization, multiple driveways or high traffic speeds and volumes, as these locations may pose challenges when considering pedestrian and bicycle improvements: and
- Opportunities to jump-start and/or refine potential planned bicycle/pedestrian/transit improvement projects.

Figure 4-3 shows the existing and planned pedestrian system within the vicinity of the study corridor.

The existing and planned bicycle systems within the corridor study area are shown in **Figure 4-4** and **Figure 4-5**, respectively.

Figure 4-6 shows the existing and planned transit system within the corridor study area.

## 4.3 Environmental Considerations

Monterey County contains some of California's most valuable agricultural land and wildlife habitat. In assessing alignment alternatives for the multimodal corridor, it is important to consider environmentally sensitive resources, such as agricultural lands, critical habitats and regional open space preserves that could potentially be impacted by widening or other roadway improvements proposed in conjunction with the multimodal corridor. In addition to potential constraints to roadway widening, adjacent agricultural lands can also create conflicts with bicyclists and pedestrians on streets utilized by agricultural equipment. For each roadway considered for the proposed corridor alignment, the evaluation of environmentally sensitive land included identification of the following:

- Sensitive agricultural lands within the vicinity of the potential corridor alignments using GIS mapping data provided by the Association of Monterey Bay Area Governments (AMBAG);
- Critical habitat areas within the vicinity of the potential corridor alignments using GIS mapping data created by the California Department of Fish and Game;
- While not necessarily a concern in terms of environmentally sensitive lands/resources, floodplain
  constraints within the study area were displayed using data from the Federal Emergency
  Management Agency (FEMA) in order to identify roadway segments with potential to be impacted
  during major floods, as flooding potentially affects corridor design features.

Figure 4-7 shows environmentally sensitive lands within the corridor study area.

As shown in **Figure 4-7** agricultural land currently exists along both sides of Blanco Road between Marina and Salinas, along the north side of Reservation Road, along the west side of Davis Road north of Blanco Road, and along both sides of Davis Road between Blanco Road and Reservation Road. The land along either side of Blanco Road is considered to be prime agricultural land.

For the purposes of this initial assessment, a planning-level evaluation was performed to compare the potential loss of agricultural land associated with corridor alignment alternatives that use (a) Blanco Road, or (b) Davis Road and Reservation Road, to connect between Salinas and Marina. This assessment assumed that to facilitate transit and bicycle movement along the corridor, the multimodal cross-section along either of these corridors would include four travel lanes with shoulders, a center turn lane (where applicable) and dedicated bicycle facilities. In addition, it was assumed that all agricultural frontage roadways would be shifted/realigned in conjunction with the required widening. Ultimately, this initial assessment indicated that the anticipated agricultural land losses would be roughly equivalent between the two alignment options; however, it should be noted that agricultural land losses along Blanco Road would be considered more regionally significant due to the prime nature of this farmland, as indicated by the California Department of Conservation.

As shown in **Figure 4-7**, critical habitat areas are noted within the study area for the Steelhead Trout, the Western Snowy Plover and the Monterey Spineflower. The Steelhead Trout critical habitat area is identified within the vicinity of the Salinas River, and could be affected by potential improvements to the Blanco Road or Davis Road bridges. The Western Snowy Plover habitat area is identified along the coastline and wouldn't likely be affected by modifications to any of the potential corridor roadway segments. The Monterey Spineflower critical habitat area is identified along the coastline and within a large area within the Fort Ord Reuse Area and extending north between Marina and Salinas. Potential impacts to this habitat area would need to be closely studied in conjunction with any potential modifications to Inter-Garrison Road, Imjin Parkway, Reservation Road or Blanco Road.

Figure 4-1: Existing and Planned Roadway System

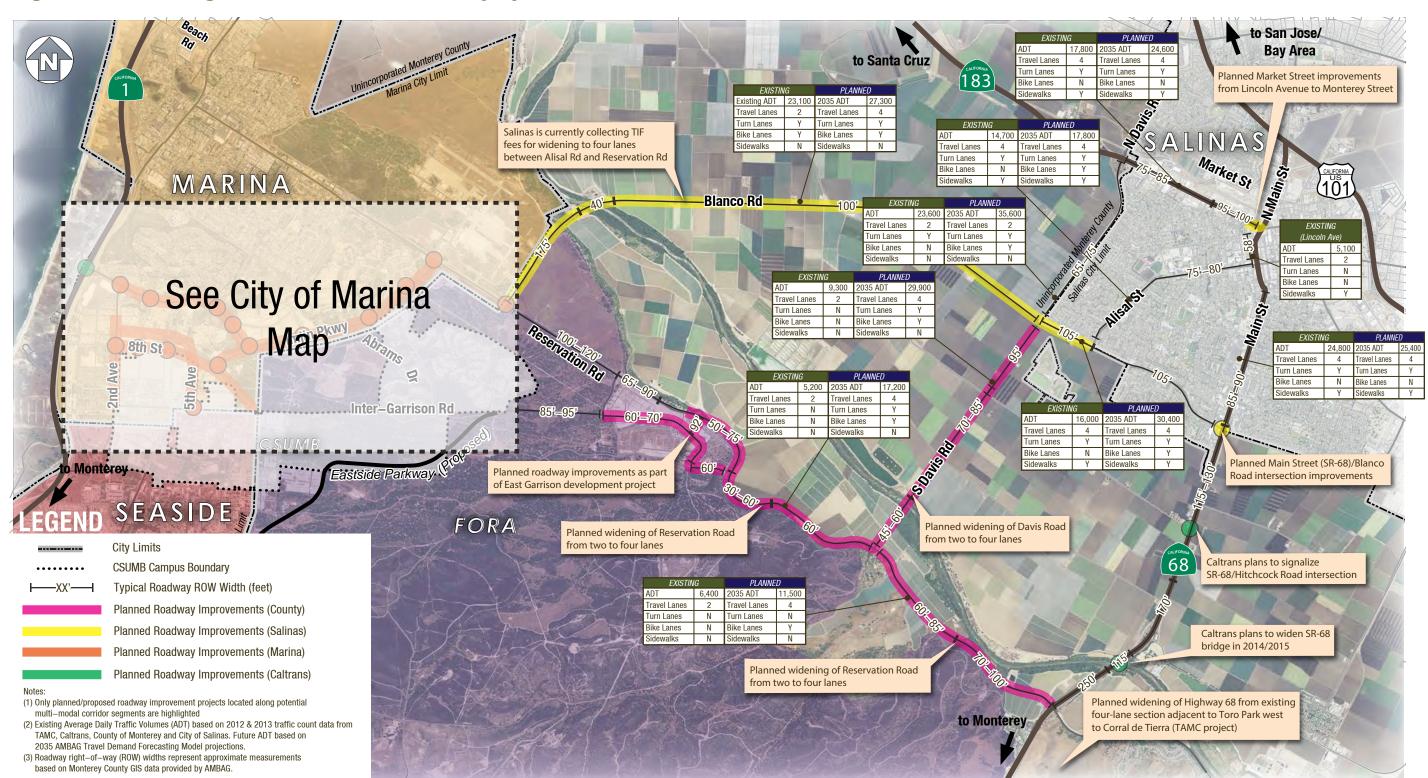


Figure 4-2: Existing and Planned Roadway System (City of Marina)

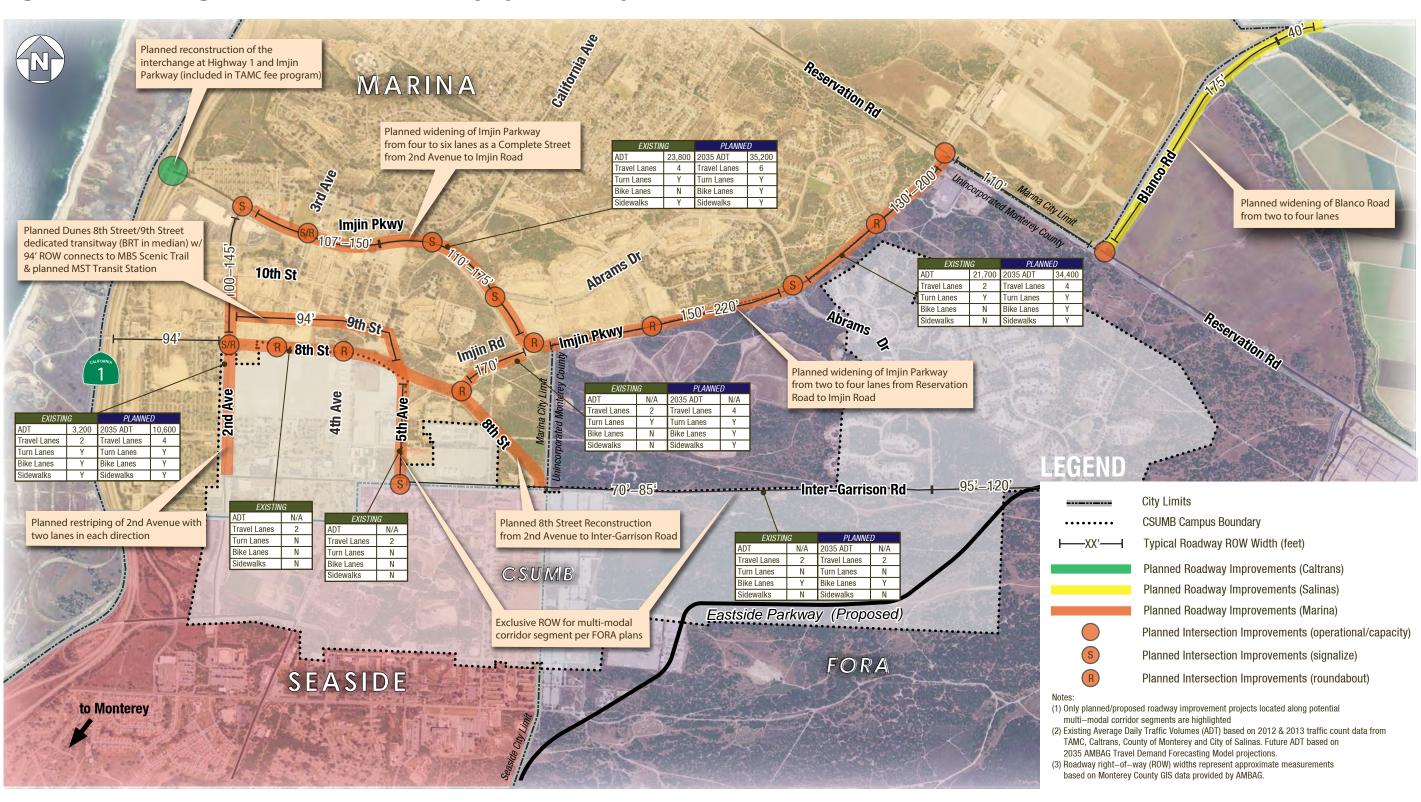


Figure 4-3: Existing and Planned Pedestian System

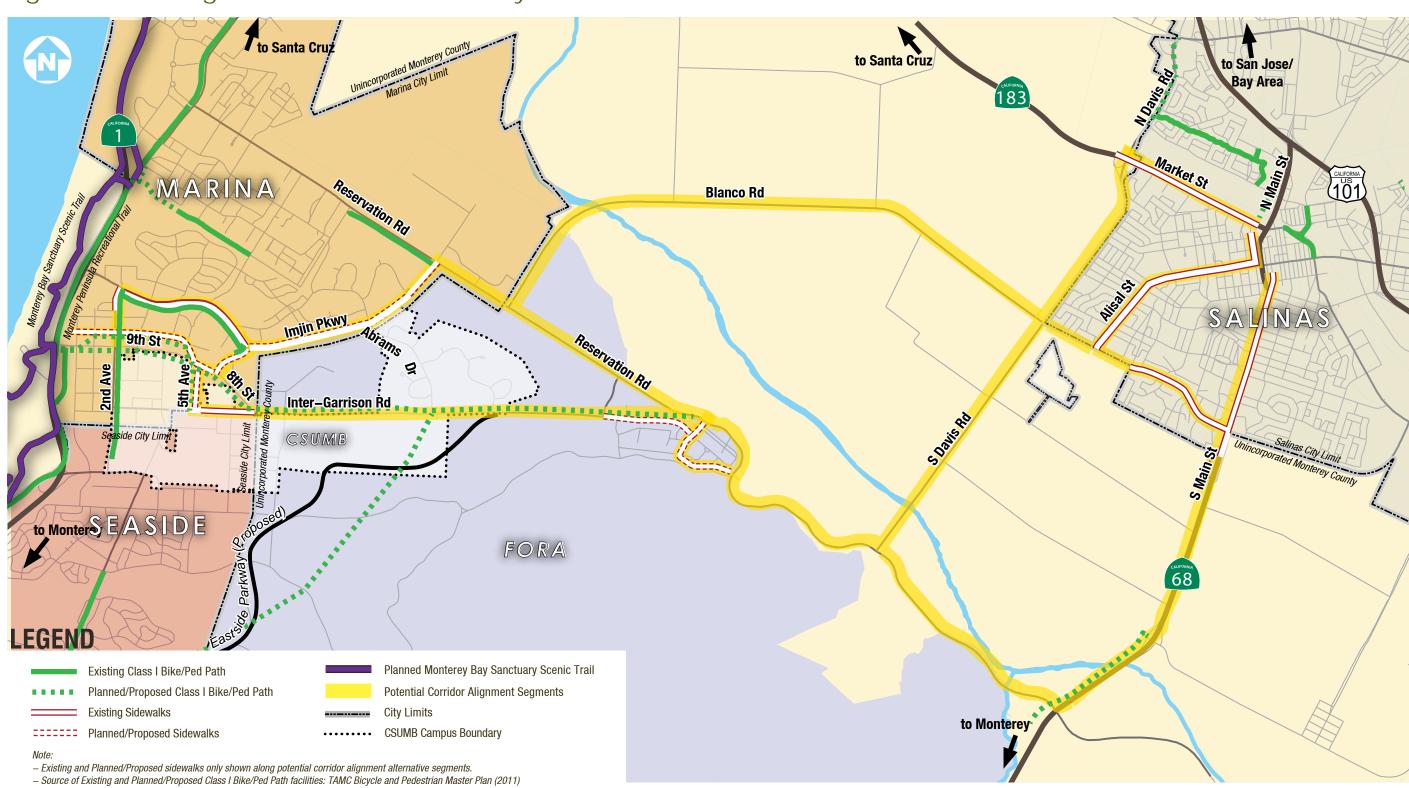


Figure 4-4: Existing Bicycle System

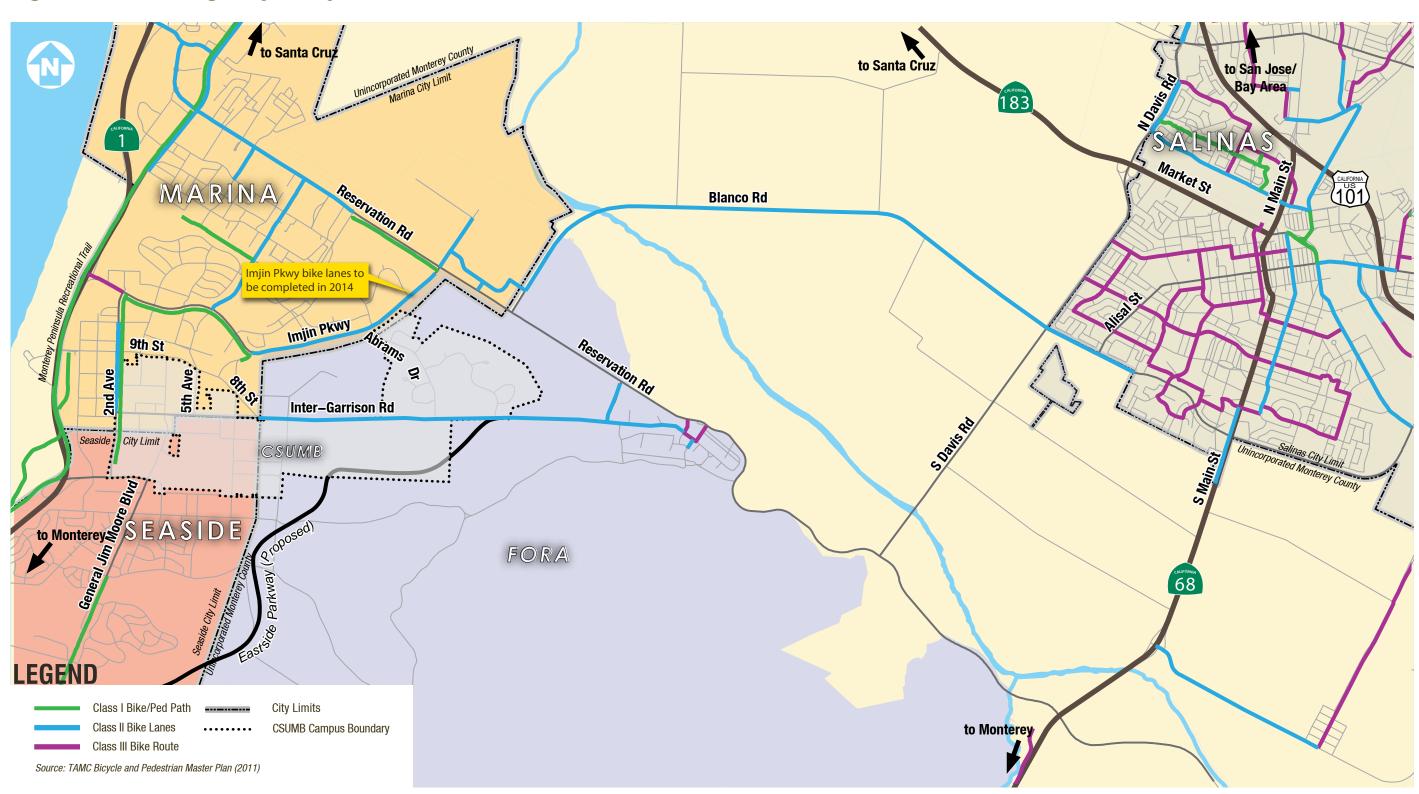


Figure 4-5: Planned Bicycle System

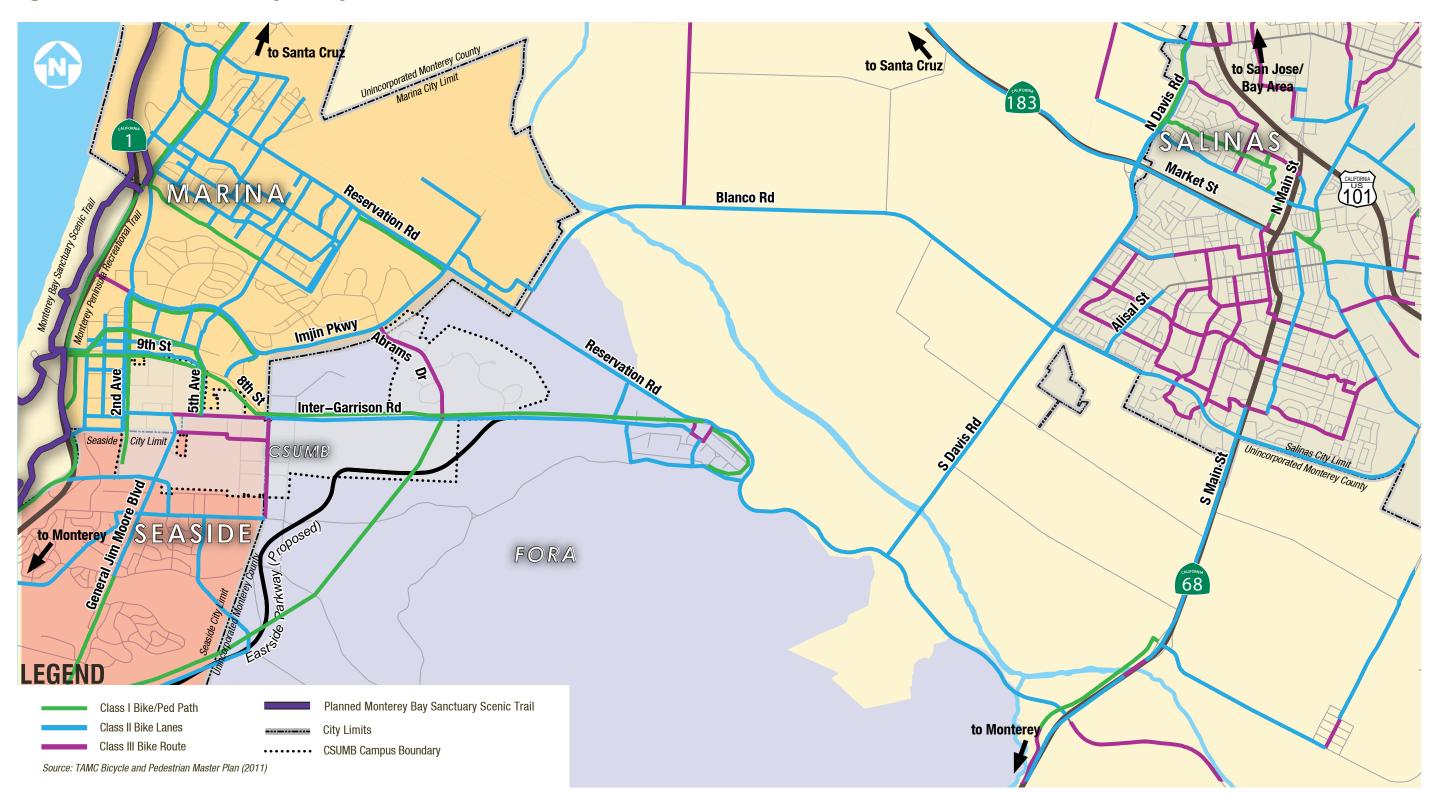


Figure 4-6: Existing and Planned Transit Service

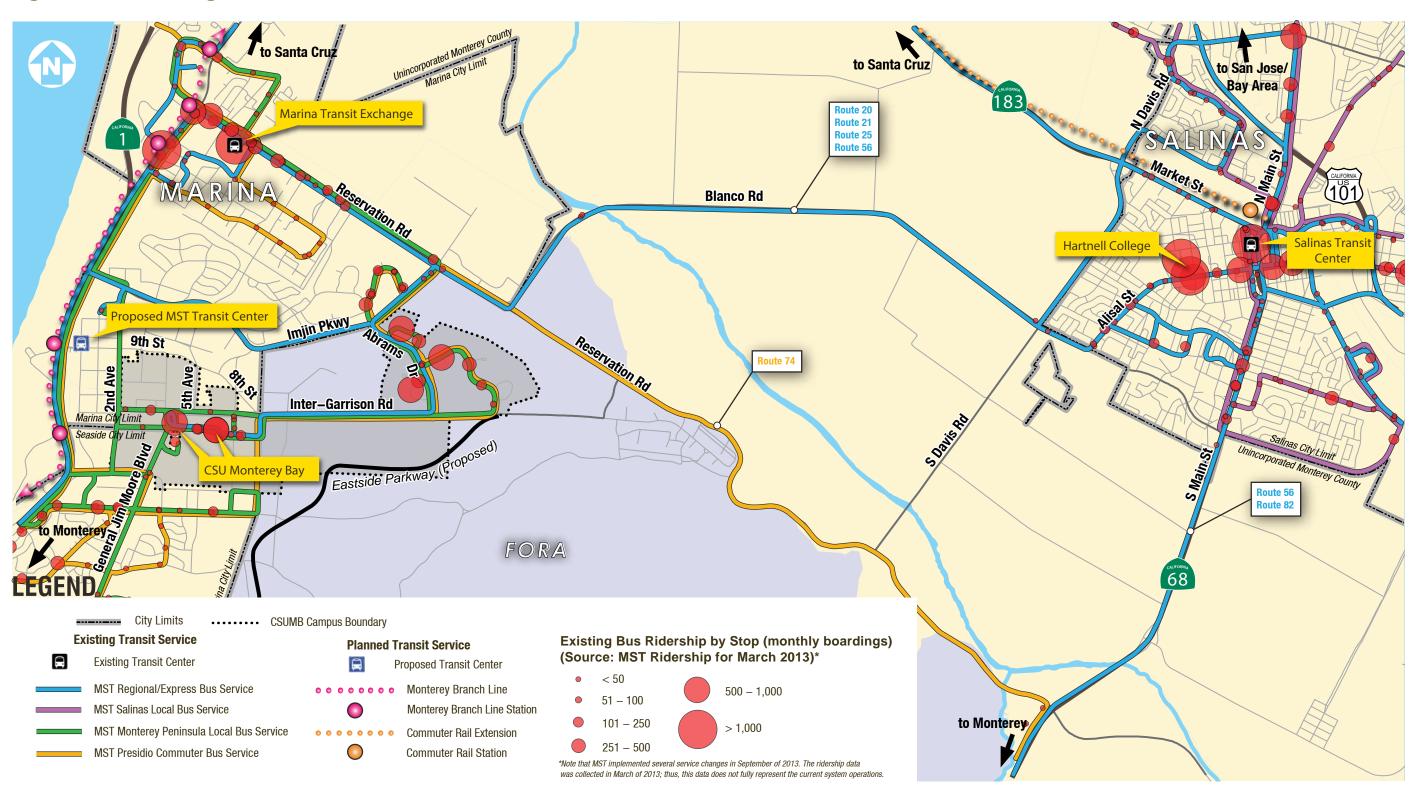
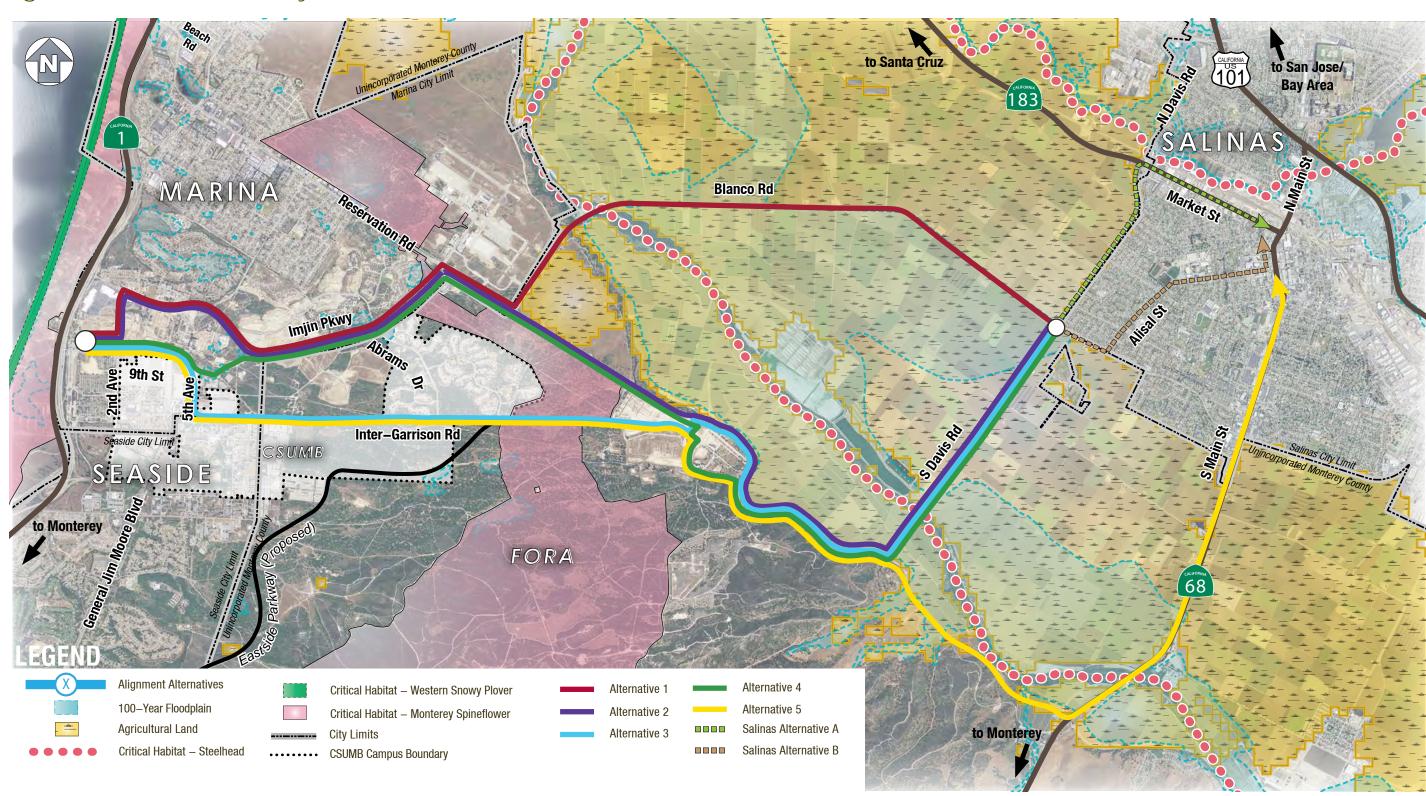


Figure 4-7: Environmentally Sensitive Lands



## 4.4 Land Use and Development Potential

Local planning documents (General Plans, Specific Plans), development proposals, existing and projected AMBAG population and employment densities, and other available information provided by stakeholder agencies were reviewed to identify locations where key origins/destinations or future transit oriented development opportunities exist within the vicinity of the multimodal corridor alignments under consideration. The implementation of the multimodal corridor will provide an opportunity to reduce the environmental impact of planned development by providing modal alternatives with less of an environmental footprint.

Within the City of Salinas, key existing points of interest along potential corridor alignment segments include Hartnell College along Alisal Street, the Government Center along Alisal Street and Lincoln Avenue, as well as the downtown Salinas commercial core. The Downtown Salinas Vibrancy Plan, which involved identifying opportunities for land use revitalization and transportation enhancements within the Salinas downtown area, was prepared in coordination with the multimodal corridor plan.

Adopted area plans and potential development project locations within the City of Marina are shown in **Figure 4-8**. There are several planned development projects within the vicinity of the City of Marina, including The Dunes at Monterey Bay development, UC MBEST Master Plan Area development, the Marina Heights development and various development projects planned within the CSUMB Campus area. Within The Dunes at Monterey Bay development, a Veterans Administration Clinic will be soon under construction and is anticipated to generate significant multimodal activity.

East Garrison is a new master-planned residential development featuring a range of residential housing options, neighborhood-serving retail, and community facilities located within the former Fort Ord base. The development plans include a pedestrian-oriented street network on a grid system with short blocks and designated bicycle facilities to provide multimodal connectivity throughout the community. The first development phase of this community, which includes approximately 400 residential units, is currently under construction and an additional 1,000 units are planned to be constructed in future phases . The Final Map for Phase 2 of East Garrison was approved by the County in early 2015 The specific timeframe for completion of Phase 2 and initiation of Phase 3 is yet to be determined. The location and character of this development (high-density, good bicycle and pedestrian connectivity) provides considerable potential to generate multimodal travel.

**Figure 4-9** shows the future development potential within the Fort Ord Reuse Area per the Former Fort Ord 1997 Habitat Management Plan. As shown in this map and in the environmentally sensitive lands map **(Figure 4-7)** discussed previously, outside of the East Garrison development, UC MBEST Center, and the proposed development project south of Inter-Garrison Road and east of the City of Seaside, there are few areas with significant development potential without some land use restrictions and/or habitat constraints within FORA and the unincorporated County area between Marina and Salinas. The future development potential of these areas is further examined in Chapter 11.

## 4.5 Summary of Opportunities and Constraints

The key opportunities and constraints identified for each alignment alternative are summarized on the following pages. A more detailed evaluation of opportunities and constraints is provided in **Appendix C.** 

Figure 4-8: Adopted Area Plans (City of Marina)

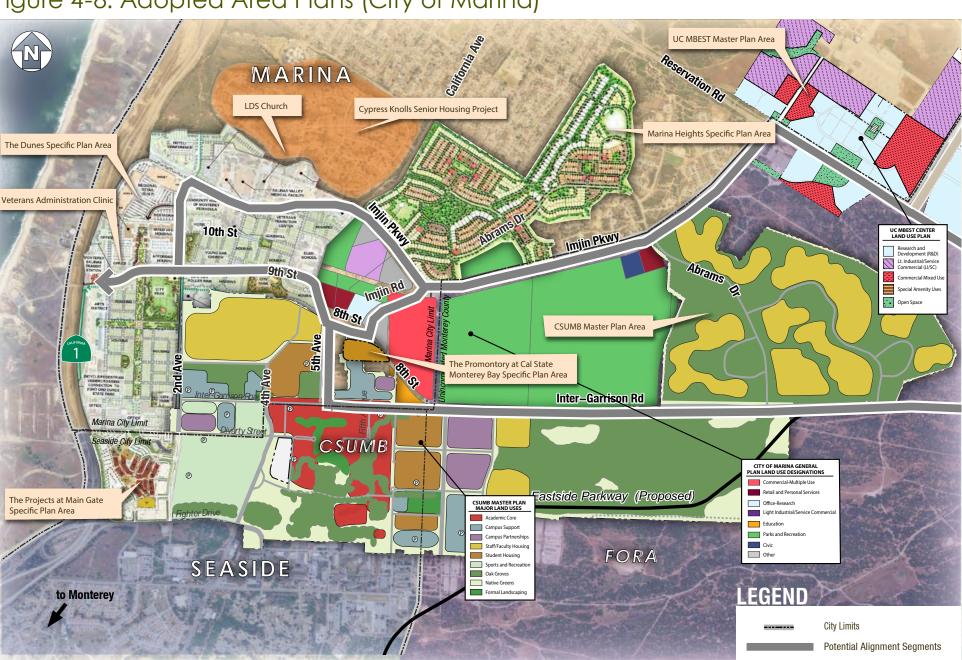
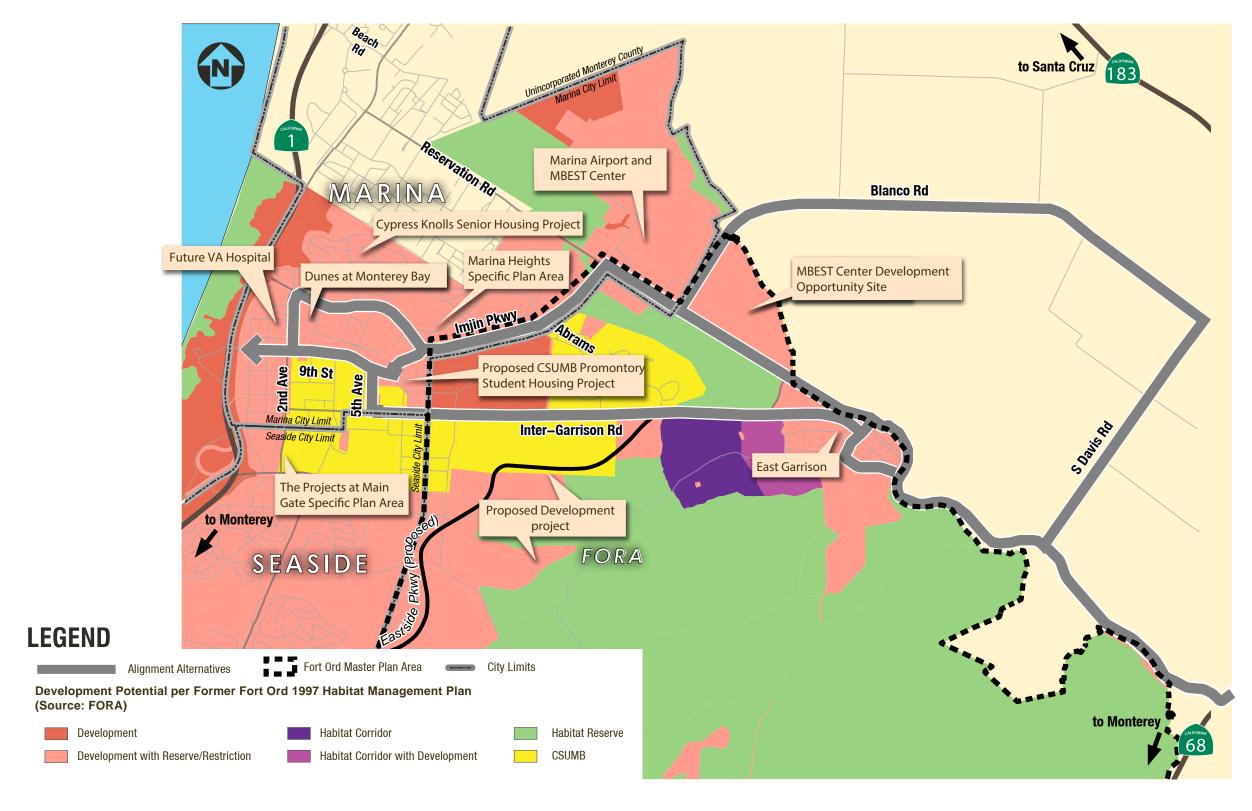


Figure 4-9: Future Development Potential (FORA Management Plan Area)



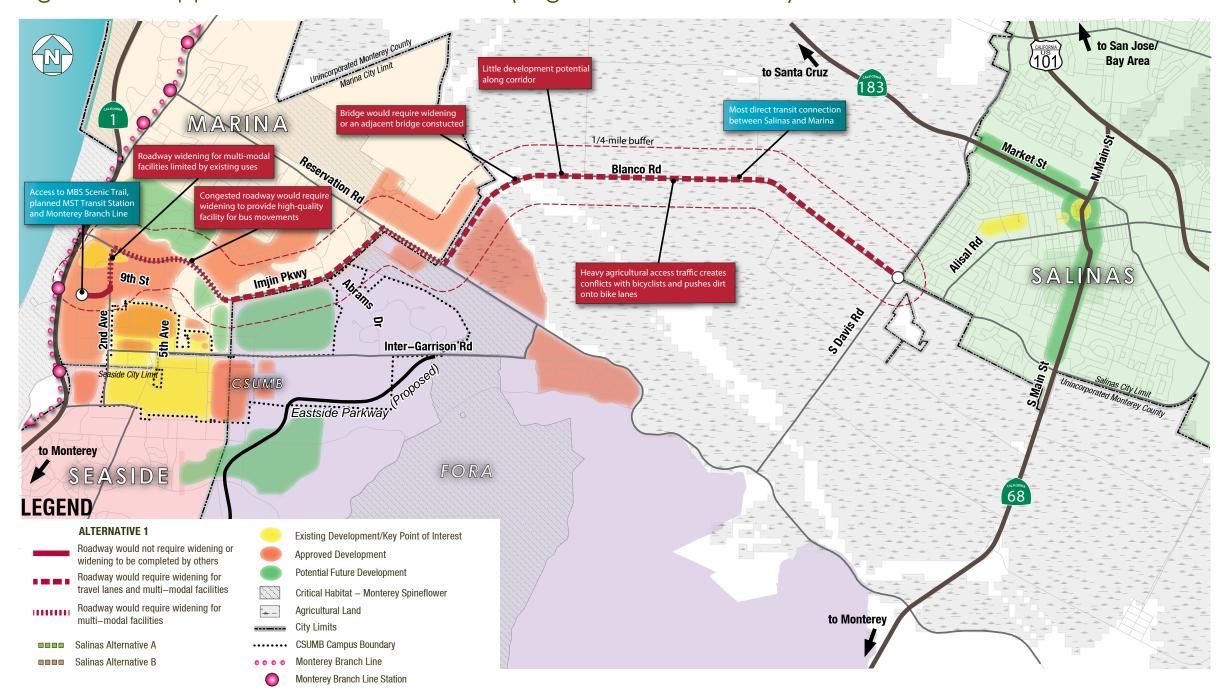
Key opportunities and constraints identified for Alignment Alternative 1 are summarized in **Figure 4-10**.

#### Opportunities:

- Location of the Marina corridor terminus provides multimodal connections with Monterey Bay Sanctuary Scenic Trail, planned MST Transit Station and the proposed Monterey Branch Line Station.
- Alignment using Blanco Road provides most direct transit connection between Salinas and Marina
- Alignment serves regional shipping center at 2nd Avenue and Imjin Parkway.
- Alignment serves UC MBEST Center.

- Potential roadway widening for multimodal facilities along 2nd Avenue may be limited by existing adjacent uses north of General Stilwell Drive.
- Vehicular congestion along Imjin Parkway would require roadway widening to provide additional width for high-quality bus service.
- Heavy agricultural access traffic along Blanco Road creates conflicts with bicyclists and pushes dirt onto bike lanes.
- Alignment does not serve the East Garrison development.
- Existing Blanco Road bridge over the Salinas
  River would require widening or construction of
  an adjacent bridge to provide additional width
  for vehicular/transit capacity and/or quality
  pedestrian and bicycle facilities.
- Roadway widening for multimodal facilities along Blanco Road has potential to impact prime agricultural land.
- Little development potential exists along Blanco Road due to adjacent agricultural land.

Figure 4-10: Opportunities and Constraints (Alignment Alternative 1)



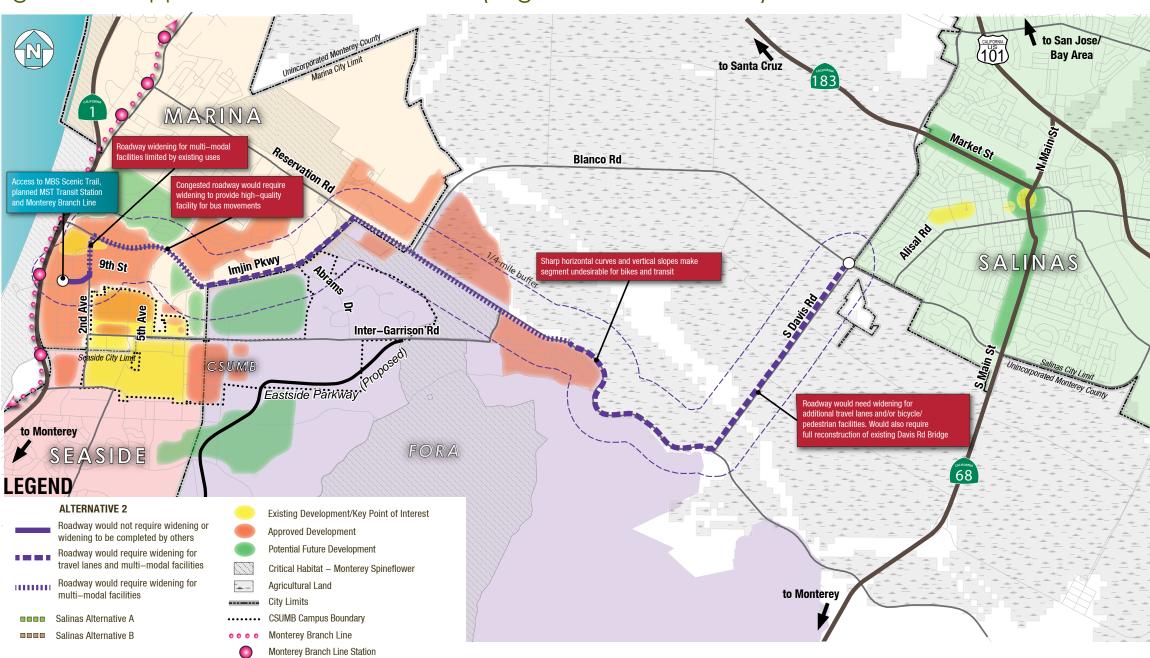
Key opportunities and constraints identified for Alignment Alternative 2 are summarized in **Figure 4-11**.

#### Opportunities:

- Location of the Marina corridor terminus provides multimodal connections with Monterey Bay Sanctuary Scenic Trail, planned MST Transit Station and the proposed Monterey Branch Line Station.
- Alignment serves the UC MBEST Center.
- Monterey County is already planning widening of Davis Road and the Davis Road Bridge.

- Potential roadway widening for multimodal facilities along 2nd Avenue would be limited by existing adjacent uses north of General Stilwell Drive.
- Vehicular congestion along Imjin Parkway would require roadway widening to provide additional width for high-quality bus service.
- Sharp horizontal curves and vertical slopes along Reservation Road make segment undesirable for bikes and transit.
- Roadway widening for multimodal facilities along Reservation Road and Davis Road has potential to impact agricultural land.

Figure 4-11: Opportunities and Constraints (Alignment Alternative 2)



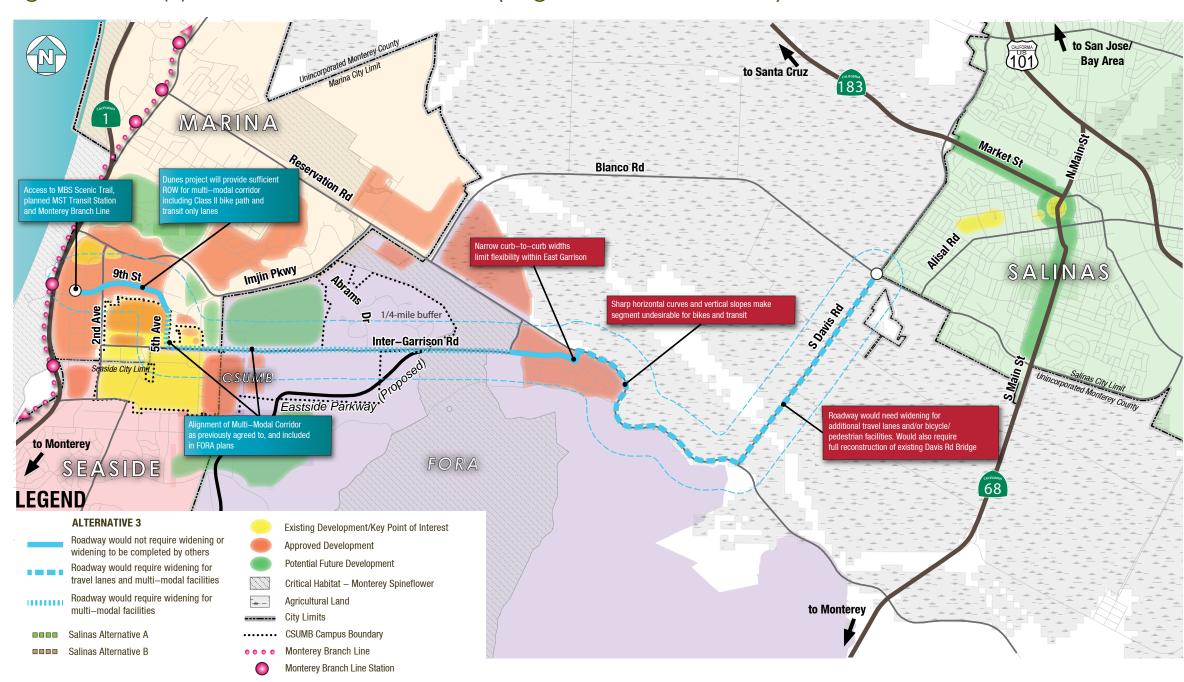
Key opportunities and constraints identified for Alignment Alternative 3 are summarized in **Figure 4-12**.

#### Opportunities:

- Location of the Marina corridor terminus provides multimodal connections with Monterey Bay Sanctuary Scenic Trail, planned MST Transit Station and the proposed Monterey Branch Line Station.
- The Dunes at Monterey Bay development project will provide sufficient right-of-way for multimodal corridor, with potential along 9th Street and 2nd Avenue for transit only lanes and bike facilities.
- Alignment Alternative 3 is consistent with the signed 2010 MOU through Marina and FORA.
- Alignment more directly serves CSUMB.
- Alignment provides improved access to bike trails in Fort Ord National Monument.

- Some habitat and floodplain constraints exist along Inter-Garrison Road and Reservation Road segments.
- Inter-Garrison Road would likely need widening for multimodal facilities.
- Significant pedestrian activity crosses the corridor along Inter-Garrison Road at CSUMB.
- Limited land use integration opportunities exist along Inter-Garrison Road.
- Narrow curb-to-curb widths limit design flexibility within East Garrison development.
- Sharp horizontal curves and vertical slopes along Reservation Road make the segment undesirable for bikes and transit.

Figure 4-12: Opportunities and Constraints (Alignment Alternative 3)



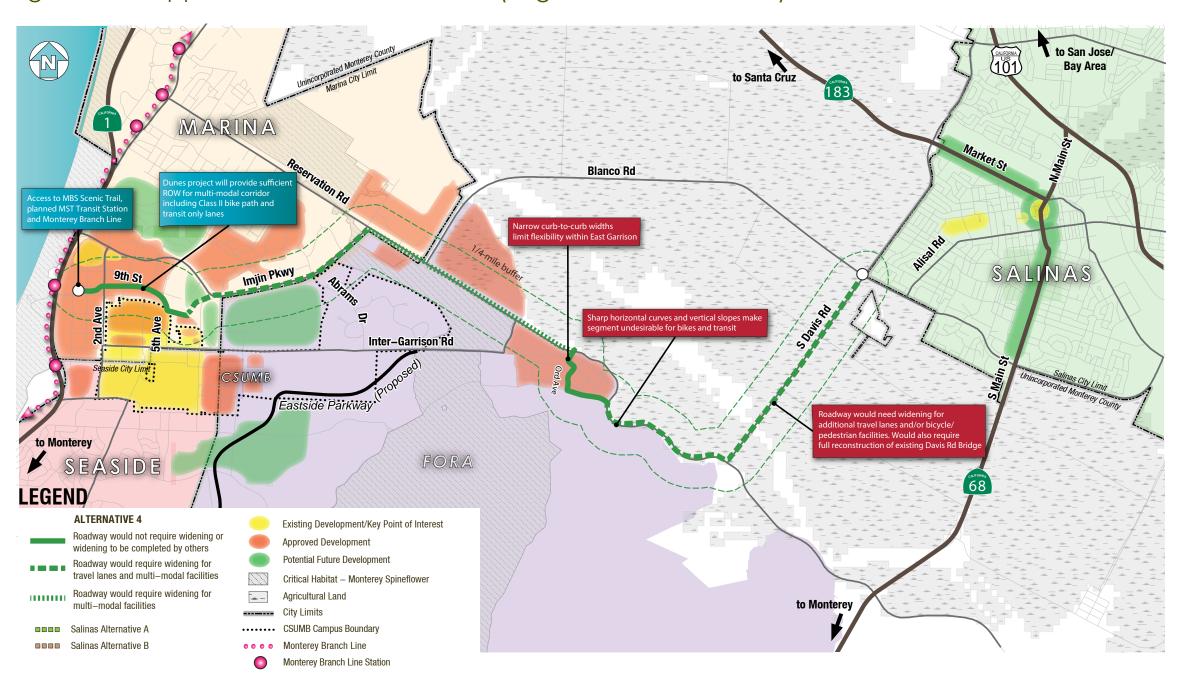
Key opportunities and constraints identified for Alignment Alternative 4 are summarized in **Figure 4-13**.

#### Opportunities:

- Location of the Marina corridor terminus provides multimodal connections with Monterey Bay Sanctuary Scenic Trail, planned MST Transit Station and the proposed Monterey Branch Line Station.
- Alignment serves the UC MBEST Center.
- Alignment serves East Garrison development directly.
- The Dunes at Monterey Bay development project will provide sufficient right-of-way for multimodal corridor, with potential along 9th Street and for transit only lanes and bike facilities.

- Roadway widening for multimodal facilities along Reservation Road and Davis Road has potential to impact agricultural land.
- Vehicular congestion along Imjin Parkway would require roadway widening to provide additional width for high-quality bus service.
- Some habitat and floodplain constraints exist along Reservation Road segments.
- Narrow curb-to-curb widths limit design flexibility within East Garrison development.

Figure 4-13: Opportunities and Constraints (Alignment Alternative 4)



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## Opportunities and Constraints within Salinas (applies to all of Alternatives 1 – 4)

Key opportunities and constraints are consistent among Alignment Alternatives 1, 2, 3 and 4, as these alternatives utilize the same routing options within the City of Salinas. For this reason, opportunities and constraints within Salinas for each of these alternatives are discussed in a single section and shown in **Figure 4-14**:

#### Salinas Alternative A:

#### Opportunities:

- Potential to remove on-street parking provides width for multimodal improvements along Market Street
- Alignment provides potential for connection to the proposed Salinas Intermodal Transportation Center
- Davis Road and Market Street are relatively high-speed roads, which could provide transit travel time benefits.

#### Constraints:

- High-traffic volumes and agricultural land constraints along west side of Davis Road limit potential for widening to provide additional travel lanes and/or bicycle and pedestrian facilities.
- The Davis Road/Market Street interchange creates constraint to circulation for bicyclists.
- Alignment does not directly serve Hartnell College or the County Government Center.
- Right of way is owned by Caltrans.
- There is limited transit ridership potential along this segment without significant redevelopment along Market Street.

#### Salinas Alternative B:

#### Opportunities:

- Within Salinas, the Alisal Street alignment provides potential for bike lanes and other multimodal improvements in conjunction with proposed road diet.
- Many bicycle and pedestrian enhancements can be implemented through re-striping and other relatively low-cost improvements.
- Salinas Alternative Alignment B provides a potential connection to the existing MST Salinas Transit Center along Lincoln Avenue alignment in Salinas.
- Salinas Alternative Alignment B provides for integration with the Salinas Vibrancy Plan and potential for major multimodal demand generated in downtown Salinas.
- Alignment provides potential for integration with existing and planned bicycle connections within the downtown
- Alignment provides potential for connection to the proposed Salinas Intermodal Transportation Center.

- Roadway widening would be needed along Blanco Road to provide width for additional travel lanes and/or bicycle and pedestrian improvements.
- Some agricultural land constraints exist along the south side of Blanco Road.
- Existing residential uses fronting Alisal Street provide limited potential for new development along corridor.

Figure 4-14: Opportunities and Constraints (City of Salinas)



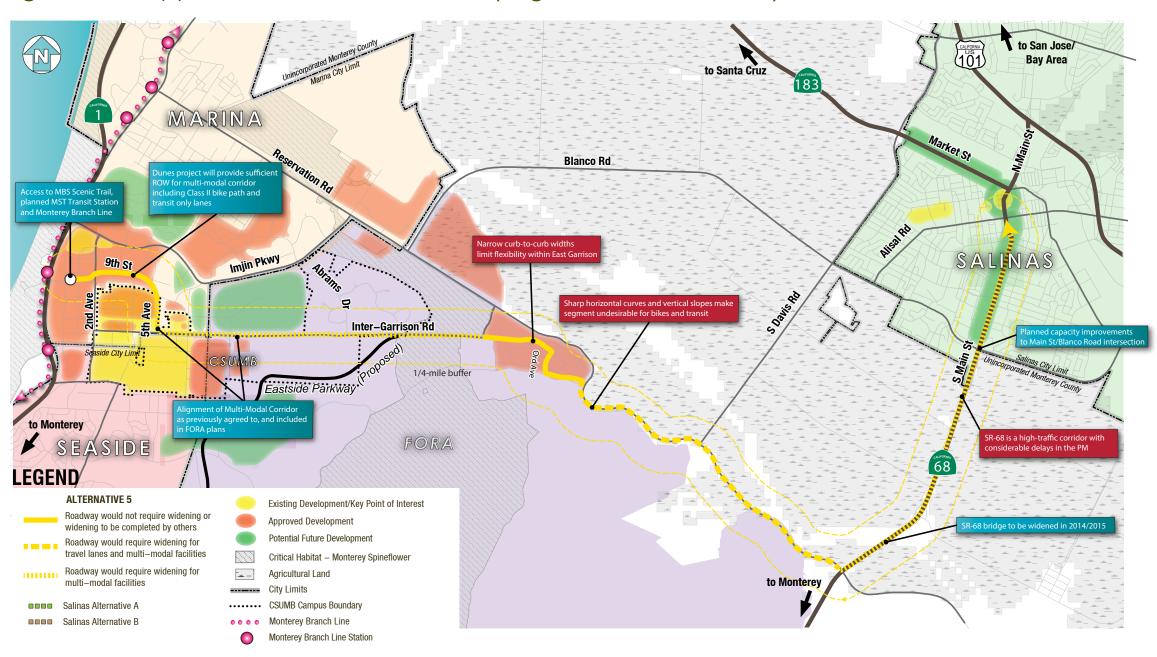
Key opportunities and constraints identified for Alignment Alternative 5 are summarized in **Figure 4-15.** 

#### Opportunities:

- Location of the Marina corridor terminus provides multimodal connections with Monterey Bay Sanctuary Scenic Trail, planned MST Transit Station and the proposed Monterey Branch Line Station.
- The Dunes at Monterey Bay development project will provide sufficient right-of-way for multimodal corridor, with potential along 9th Street and for transit only lanes and bike facilities.
- Alignment Alternative 5 is consistent with the signed 2010 MOU through Marina and FORA.
- Highway 68 Bridge north of Reservation Road to be widened in 2014/2015, provides the opportunity for improved multimodal elements.
- Planned capacity improvements to the Main Street (SR-68)/Blanco Road intersection provides the opportunity to incorporate multimodal improvements.

- Roadway widening for multimodal facilities along Reservation Road has potential to impact agricultural land.
- Some habitat and floodplain constraints exist along Inter-Garrison Road and Reservation Road segments.
- Significant pedestrian crossing activity along Inter-Garrison Road at CSUMB would conflict with additional vehicle traffic and potentially increase delays to transit operations.
- Inter-Garrison Road would likely need widening for multimodal facilities.
- Alignment results in a longer route between Marina and Salinas than the other alignments.
- Narrow curb-to-curb widths limit design flexibility within East Garrison development.
- Main Street (SR-68) is a high-traffic corridor with considerable delays through Salinas during the PM peak periods, which would slow bus travel.

Figure 4-15: Opportunities and Constraints (Alignment Alternative 5)



## 5. PHASE 1 COMMUNITY AND STAKEHOLDER OUTREACH

Public and stakeholder outreach has been a critical component of this project. From the outset of the project, TAMC and the project consultant team participated in regular coordination meetings to request input from and provide project updates to representatives of the partner agencies. In addition to these regular partner agency coordination meetings and presentations to their governing boards, the team held additional meetings with stakeholder groups representing agricultural and environmental interests within the study area. In total, the project team reached out to the following groups and organizations in this first phase of the project:

- TAMC Bicycle and Pedestrian Advisory Committee;
- Farm Bureau of Monterey County;
- Growers and Shippers Association of the Central Coast:
- Salinas Traffic & Transportation Committee;
- Local developers:
- Environmental interest groups and associations;
- Bluffs Homeowners Association: and
- County of Monterey, Fort Ord Committee.

The team also held Phase 1 public workshops in Salinas and Marina in February 2014 to introduce the project to the public and obtain input on potential alignments and project features. The workshops were advertised through the use of relevant mailing lists, website updates, print publications, announcements at other public meetings, and project flyers. The Marina workshop was held on the campus of CSUMB and was very well attended by students, faculty/staff and members of the general public. For both workshops, tables were setup focusing on individual transportation modes or other key aspects of the project. Attendees were encouraged to visit each of the tables, where extensive opportunities for written and verbal feedback were provided. Additional interactive feedback stations provided other opportunities for the public to indicate their interactions with the existing corridor and express their vision for the multimodal corridor. This feedback was used in both identifying the corridor alignment and in identifying the corridor features in the subsequent phase of the project.

## 6. SELECTION OF THE PREFERRED ALIGNMENT

The adopted alignment for the Marina-Salinas multimodal corridor was selected based on consideration of the key opportunities and constraints identified through the alignment alternatives assessment and through input received via stakeholder and community outreach. The adopted corridor alignment is Alternative 2, with Salinas Alignment Option B, except that it shifts the corridor to travel through the East Garrison development (**Figure 6-1**). The adopted ultimate corridor alignment begins in Marina at the proposed 8th Street MST Transit Station, then runs along 8th Street and 9th Street, 2nd Avenue, and Imjin Parkway to Reservation Road—through the East Garrison Development via Sherman Boulevard, Sloat Street, and Watkins Gate Road—along Reservation Road and Davis Road to the Salinas City Limit, then along Blanco Road, Alisal Street, and Lincoln Avenue to the corridor terminus in Salinas at the Intermodal Transportation Center.

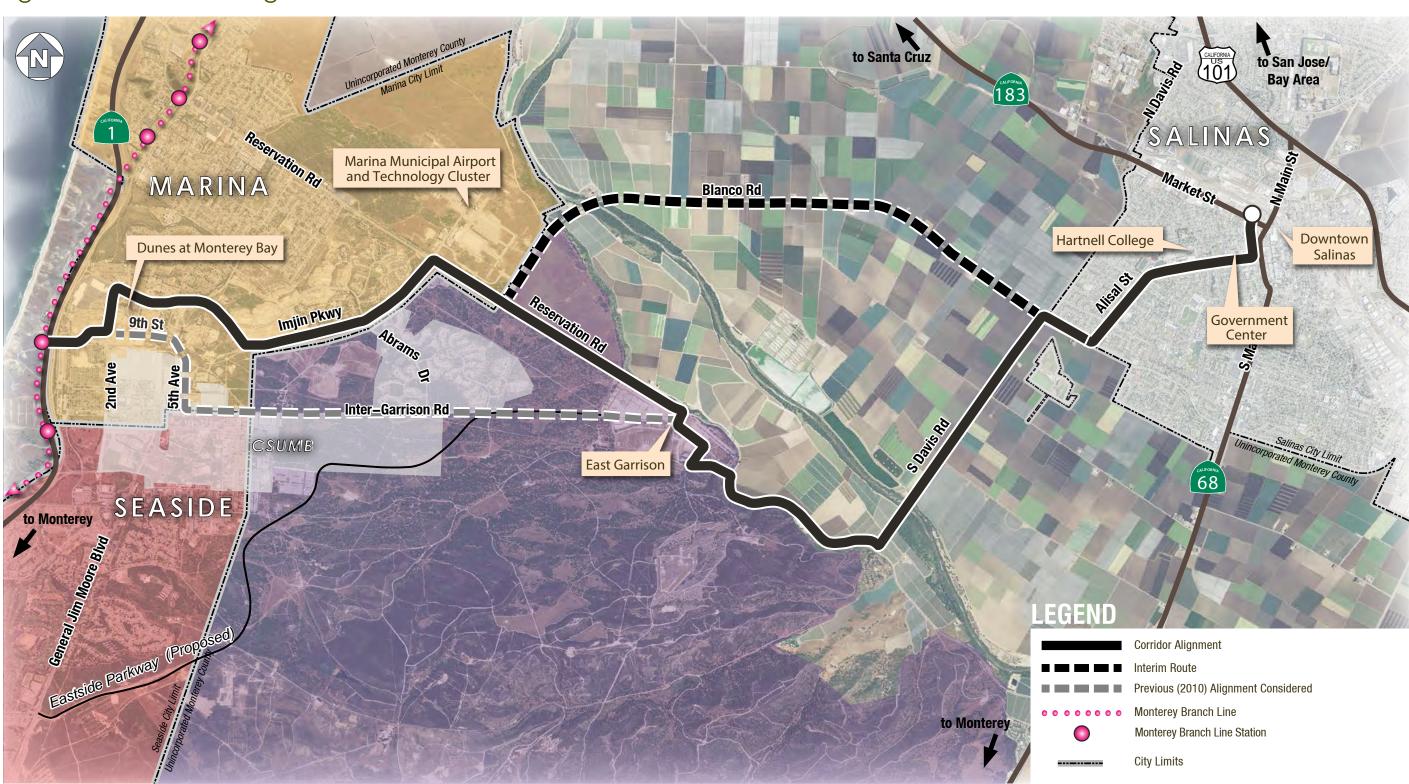
The adopted corridor alignment provides numerous benefits. This routing strategically connects with key development sites and activity centers that will provide considerable potential to generate new transit ridership, such as East Garrison, UC MBEST, Marina Heights, the County Government Center in Salinas, and The Dunes at Monterey Bay development in Marina. This alignment also leverages planned roadway projects on Davis Road and Imjin Parkway where widening improvements already planned or in design can incorporate the recommended multimodal improvements.

Due to the phased schedule of the East Garrison Development's street and infrastructure improvements, implementation of the adopted corridor routing through East Garrison is highly dependent on the completion of East Garrison's future improvement phases (in particular, Phase 3), which include construction of the eastern portion of Sherman Boulevard, Sloat Avenue, Ord Avenue and Watkins Gate Road. For this reason, an interim alignment is identified for the multimodal corridor, utilizing Blanco Road to bridge the gap between the Marina and Salinas segments of the corridor until the East Garrison road network is built out.

The alignment was presented to the decision-making bodies of partner agencies in the spring/summer of 2014. Upon review, this alignment was formally adopted by the following agencies as the new multi-modal corridor alignment (with date of adoption):

- Marina City Council (June 3, 2014)
- Salinas City Council (June 17th, 2014)
- Monterey County Board of Supervisors (June 24th 2014)
- TAMC Board (June 25, 2014)
- FORA Board (June 13th, 2014)
- MST Board (July 14, 2014)

Figure 6-1: Preferred Alignment





#### 7. POTENTIAL CORRIDOR DESIGN FEATURES

Currently, many of the streets along the preferred multimodal corridor alignment are lacking in features that support high-quality pedestrian, bicycle or transit mobility. In order to improve multimodal mobility and connectivity along the preferred alignment, a variety of potential corridor design elements were identified. The types of design elements considered for the corridor are highly dependent on the various constraints, needs and potential benefits associated with specific street segments and within the context of the surrounding land uses and transportation networks. With limited public right-of-way to work with, it is often a delicate balancing act to prioritize street design features and allocate space within the street section in a manner that is context-sensitive and appropriately considers the specific needs of all users.

Design features selected for consideration reflect cutting edge multimodal solutions currently being implemented nationally or internationally and are consistent with current National Association of City Transportation Officials (NACTO), Institute of Transportation Engineers (ITE) and American Public Transportation Association (APTA) recommendations. Key multimodal design elements considered for the Salinas-Marina Multimodal Corridor are highlighted in **Table 1** below.

**Table 1: Multimodal Design Features to be Considered** 

Element	Mode	Description	Benefits	
Mixed-Use Path	Bicycle Pedestrian	A completely separated right-of-way for the exclusive use of bicycles and pedestrians with crossflow by motorists minimized	Creates a designated facility for bicyclists and pedestrians with fewer conflict points with motorists	
Standard Bike Lanes	Bicycle	Defines a lane for bicycle travel in the roadway	Provides a dedicated space for bicyclist and increases bicyclist comfort on busy streets	1090 1090
Buffered Bike Lanes	Bicycle	Similar to a standard bike lane, but with a striped "buffer" located between the bike lane and roadway traffic	Creates more separation between bicyclists and moving vehicles     Provides additional width for bicyclists to clear the 'door zone' when on-street parking is provided	

Element	Mode	Description	Benefits	
Protected Bikeway (Cycle Track)	Bicycle	A bikeway that is physically protected from motor traffic using parked cars or other physical elements and distinct from the sidewalk  May allow one-way or two-way bicycle travel	Creates a physical barrier between bicycles and motor vehicle traffic	
Green Pavement Treatment	Bicycle	Green colored pavement used within a bicycle lane and/or within merging zones or potential conflict points between bicycles and other roadway users	Increases visibility of the bicycle facilities     Highlights conflict areas for bicyclists and other roadway users	Spring & Bar Ling.
Bike Boxes	Bicycle	Designated area at the head of a traffic lane at a signalized intersection	Provides bicyclists with a safe, visible area to position themselves ahead of queued motor vehicles during a red signal phase     Reduces the need for bicyclists to merge with vehicular traffic to make left-turns at intersections     Helps prevent 'right-hook' conflicts with turning vehicles at intersections	JANAH ANTAH
2-Stage Left- Turn Queue Boxes	Bicycle	Defines a zone for bicyclists to wait at traffic signals outside of the path of other bicyclists, to queue for a two-stage left-turn movement	Improves bicyclist ability to safely and comfortably make left turns     Reduces turning conflicts between bicyclists and motor vehicles	Ter-Gagge Town Open Rev Public, Law Alleman which, Lond
Bicycle Detection	Bicycle	Allows bicycles to be detected at demandactuated traffic signals	Reduces potential delay for bicyclists at red lights	TO REDUEST GREEN WAIT ON OPO

Element	Mode	Description	Benefits	
Bicycle Signals	Bicycle	Dedicated traffic signal head to facilitate bicycle crossings of roadways	Separates bicycle     movements from conflicting     movements of motor     vehicles and other modes     Helps simplify bicycle     movements through     complex intersections	
Dedicated Bus Lanes	Transit	Travel lanes within a street segment dedicated exclusively for transit vehicles	Reduces delays for transit service due to traffic congestion and raises the visibility of high-quality service     Improves reliability and ontime performance for transit	3720
Dedicated Busway	Transit	A separate running way dedicated exclusively for transit vehicles	Reduces delays for transit service due to traffic congestion and raises the visibility of high-quality service     Reduces conflicts with non-transit vehicles     Improves reliability and on-time performance for transit	Inplication 22
Shared Bus/ Bicycle Lanes	Transit Bicycle	Travel lane dedicated for exclusive use by buses, bicyclists and in some cases, right-turning vehicles	Reduces delay for transit service due to high congestion     Provides a dedicated space for bicyclists with separation from most motor vehicles	Pacific Cascade State and Control of the Control of

Element	Mode	Description	Benefits	
Bus Bulb-Outs	Transit	An extension of the curb into the street for a bus stop, typically within the width that would otherwise be part of a parking lane	Allows a bus to remain in its travel lane during passenger loading, which reduces delay for buses when re-entering the traffic stream     Increases area for bus stop amenities and pedestrian space	
Transit Islands	Transit Bicycle Pedestrian	Similar to a bus bulb as it places the bus stop adjacent to the travel lane, but also provides space behind the bus stop to allow bikes to continue in a dedicated lane	Eliminates conflicts between buses and bikes at bus stops     Reduces pedestrian crossing distance     Increases area for bus stop amenities and pedestrian space     Allows a bus to remain in its travel lane during passenger loading, which reduces delay for buses when re-entering the traffic stream	O PO
Enhanced Transit Stations	Transit Pedestrian	Enhanced transit station amenities, such as those typically found at major BRT stations, often include attractive shelter canopies & seating, off-board ticket vending machines, real-time information displays, information kiosks, bike racks, etc.	Provides quality     environment and     experience for transit riders     and improves visibility and     perception of the transit     service     Investment in high-quality     transit facilities and stations     can increase private     investment along transit     corridors	Secondary She'ter Canopy  Shelter Canopy  Shelter Workcreen Lumbus Residencemy Easts Individual Seating  Information Der  Tranil Pac Can Reader  Cantral  Tash ikeeptaris



Element	Mode	Description	Benefits	
Element  Transit Signal Priority (TSP)	Mode Transit	A system that detects buses approaching traffic signals and ether extends the green time (if the signal is already green) or shortens the red time (if the signal is red)	Reduces signal delay for transit vehicles and improves transit service reliability  reliability	Green Extension  1) The bus approaches the green signal  2) The signal controller detects the bus; it extends the current green phase  3) The bus proceeds on an extended green signal

Element	Mode	Description	Benefits	
Queue Jumps	Transit	A travel lane at an intersection approach that is restricted to transit vehicles (and sometimes right-turning vehicles) and accompanied by an exclusive signal phase which provides a "headstart" for transit vehicles to bypass vehicle queues at an intersection	Reduces signal delay for transit vehicles at intersections and improves service reliability	
				1

Element	Mode	Description	Benefits	
High-Visibility Crosswalk Striping and Signs	Pedestrian	"Ladder" or "zebra" crosswalk striping and signs indicating the location of crossings	Improves visibility of crossings to roadway users over standard crosswalks	
Curb Bulb-Outs	Pedestrian	Narrowing of the roadway and widening of the sidewalk towards the edge of the adjacent parking lane (also referred to as "curb extensions")	Shortens crossing distance for pedestrians     Improves visibility between pedestrians and motorists     Reduces effective curb radius, which slows vehicle turning speeds	
Median Refuges	Pedestrian	Physical or painted island within the center median at a pedestrian crossing	<ul> <li>Provides additional protection for pedestrians from moving vehicles</li> <li>Allows pedestrians to cross street in two shorter stages</li> </ul>	

#### 8. MULTIMODAL NETWORK INTEGRATION

As discussed in the Phase 1 section of this plan, the selection of the adopted alignment for the multimodal corridor was based on the consideration of multiple factors, including the potential for the individual street segments (and the corridor as a whole) to attract transit ridership and increase bicycle and pedestrian mobility. With the specific alignment of the corridor now confirmed, this section provides a summary of how the transit, bicycle and pedestrian facilities of the corridor will integrate with and complement the existing and planned multimodal transportation network.

### 8.1 Potential Station Locations & Corridor Integration with Area Transit System

A primary purpose of designating a multimodal corridor alignment is to facilitate the planning of future transportation facilities and systems and, in particular, bus rapid transit service between Marina and Salinas. As an initial step in planning for future bus rapid transit service along the corridor, a set of potential station locations was identified. A total of 12 potential stations were identified along the corridor at locations where existing or future activity centers, population and employment concentrations and transit hubs exist or are planned. To maintain the high-frequency service and travel speeds typically associated with bus rapid transit, suggested station locations were spaced at least 1/2-mile apart, except at key transfer points. Identified station locations are:

- #1 Salinas Train Station
- #2 Salinas MST Transit Center
- #3 Government Center Station
- #4 Hartnell College Station
- #5 Palma Station
- #6 East Garrison Station
- #7 UC MBFST Station
- #8 Abrams Station
- #9 CSUMB Station
- #10 4th Avenue-Marina Station
- #11 2nd Avenue Station
- #12 Marina MST Transit Center (future transit center)

The potential station locations are shown graphically in **Figure 8-1**; the locations may be modified as roadway and development plans are refined. In addition to the 12 primary station locations identified, alternative or additional station locations that may be considered if deemed in the future to generate sufficient ridership are also shown in **Figure 8-1**.

Detailed vicinity maps for each of the potential station sites are provided in Figure 8-2 and Figure 8-3.

The corridor alignment and proposed bus rapid transit stations are strategically located to maximize integration with the existing and planned local and regional transit systems. The proposed corridor connects to existing MST regional, express, and local bus service in Salinas and Marina. The proposed bus rapid transit stations at the existing Salinas MST Transit Center and the proposed Marina MST Transit Center would ensure integration with the greater bus network. For reference, **Figure 4-6** shows the existing MST bus system and high ridership stops within the study area.

The proposed station locations at the Salinas and Marina terminus points of the corridor provide considerable potential to link bus rapid transit trips with planned regional transit systems. In Marina, the proposed station at the future Marina MST Transit Center near 8th Street and SR 1 is located within walking distance of the Monterey Branch Line Station, to be located just west of SR 1. As more detailed plans are developed for Marina-Salinas bus rapid transit service and the Monterey Branch Line system, there could be potential to extend the Marina-Salinas bus rapid transit service to the Monterey Branch Line station. In Salinas, the proposed bus rapid transit terminus is at the existing Salinas Intermodal Transportation Center, which is also the terminus for the passenger rail extension currently in design.

Figure 8-4 shows the integration of the proposed multimodal corridor with the existing and planned transit systems

Figure 8-1: Potential Station Locations

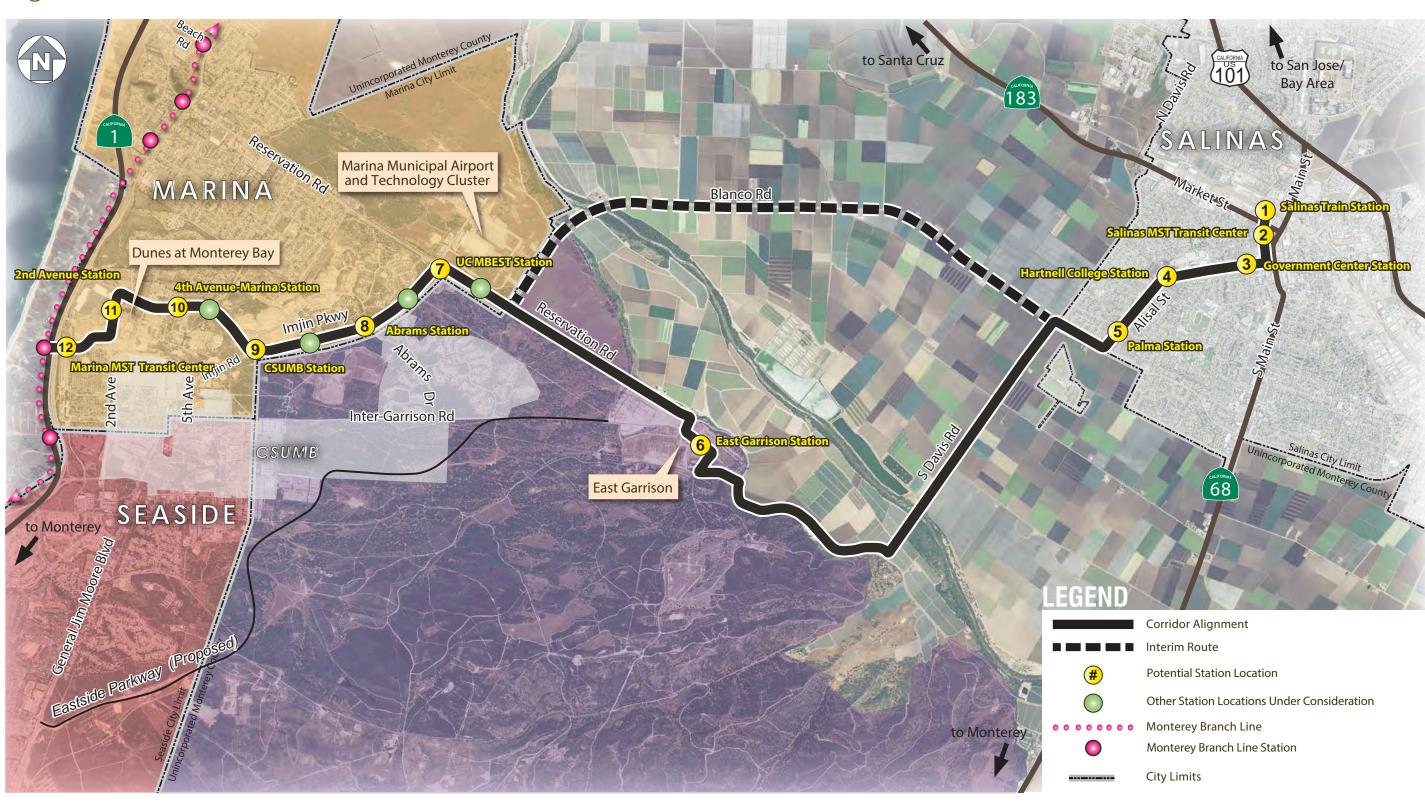
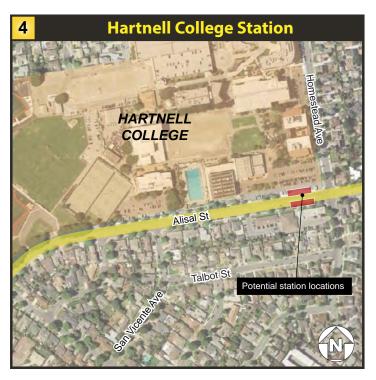
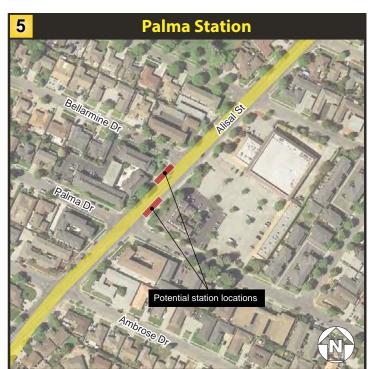


Figure 8-2: Potential Station Locations (#1-7)











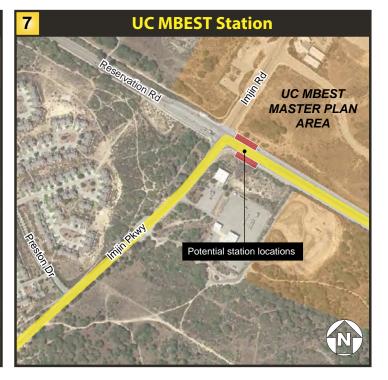
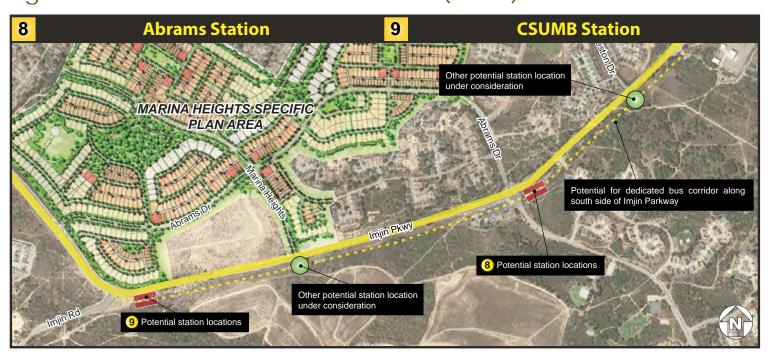


Figure 8-3: Potential Station Locations (#8-12)





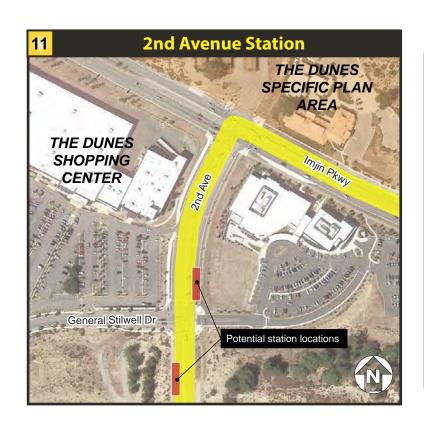
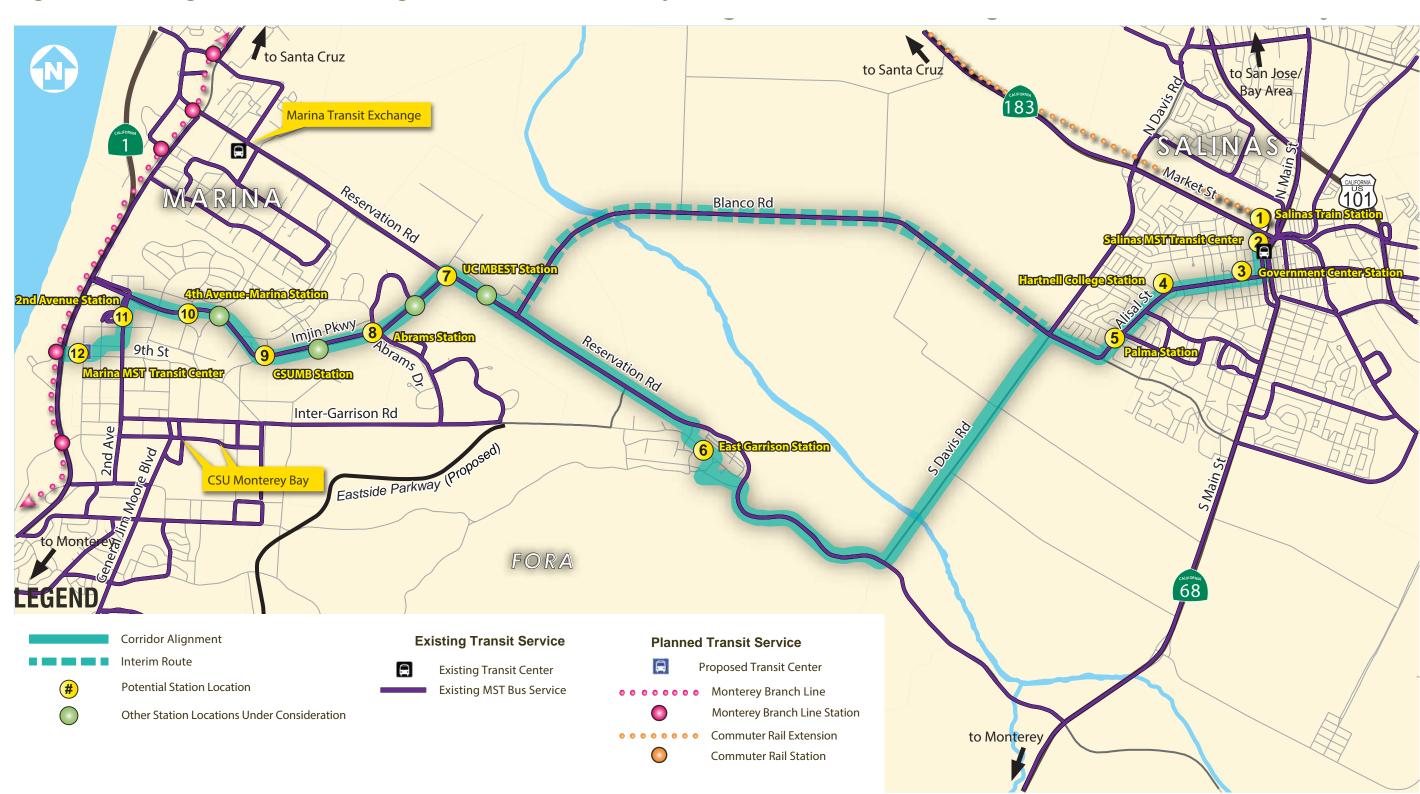




Figure 8-4: Integration with Existing and Planned Transit Systems



### 8.2 Corridor Integration with Area Bicycle & Pedestrian Systems

The multimodal corridor will include bicycle facilities along the extent of the corridor, with the specific types of facilities (i.e. bike lanes, protected cycle track, etc.) dependent on the context, needs and constraints associated with each specific corridor segment. The bicycle facilities along the multimodal corridor alignment will integrate with the existing and planned local bicycle systems in Salinas and Marina to facilitate local trips, as well with regional/recreational bicycle connections, such as the Monterey Peninsula Recreational Trail and the planned Fort Ord Recreational Trail and Greenway.

Where appropriate, the multimodal corridor include s designated pedestrian facilities, such as sidewalks or off-street shared bicycle/pedestrian paths. Pedestrian facilities are primarily provided within the developed areas of Salinas and Marina, where walking can be a viable mode for short trips between local destinations. Where the corridor extends through rural areas without destinations accessible to pedestrians, the available corridor right-of-way is used for facilities that serve bicycle, transit and vehicular travel.

Enhanced design features are incorporated at intersections and crossing locations along the corridor where there is increased potential for conflicts between different travel modes. Several key locations along the corridor alignment where there is significant potential for conflicts between automobiles, transit vehicles, bicycles and pedestrians are shown in **Figure 8-5**. At these locations, enhanced design features such as high-visibility crosswalk treatments, curb extensions, bicycle signals or other features, are recommended for implementation as part of the multimodal corridor improvements, or as part of other future improvement programs to improve safety and connectivity at these locations .





The multimodal corridor will integrate with existing and planned bicycle and pedestrian systems, such as the proposed Monterey Bay Scenic Sanctuary Trail and the existing buffered bike lanes and green lane treatments along Davis Road in Salinas

#### 8.3 Consideration for Roundabouts

Roundabouts are increasingly being considered as design alternatives to signalized intersections, as they can provide numerous operational and safety benefits. Numerous studies have shown significant safety improvements at intersections converted from conventional forms to roundabouts and roundabouts typically have traffic calming effects on streets by reducing vehicle speeds. In addition, roundabouts often have lower overall delay than signalized and all-way stop-controlled intersections, and typically require lower operating and maintenance costs than a traffic signal due to the lack of technical hardware, signal timing equipment and electricity needs. Roundabouts are not always feasible due to travel patterns or right-of-way constraints and do not always provide the optimal solution for every problem; the appropriate intersection configuration and traffic control for specific locations must be determined based on detailed design review and traffic operations analysis. Roundabouts have been recently implemented in Marina and are being considered for a number of locations throughout the County. Roundabouts are proposed along multimodal corridor at the following locations in Marina:

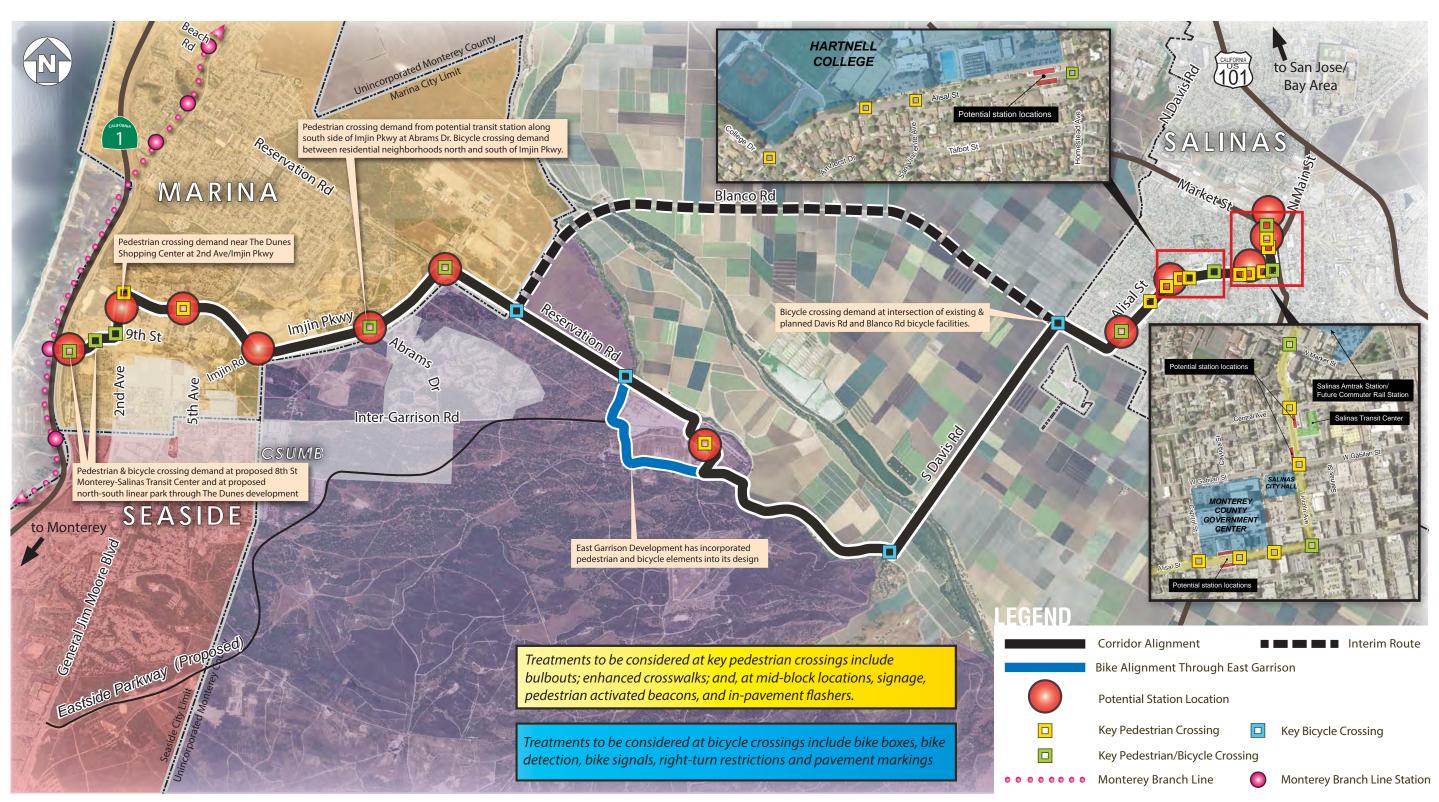
- Imjin Parkway/Preston Drive;
- Imjin Parkway/Marina Heights; and
- Imjin Parkway/Imjin Road.

A roundabout is also currently being analyzed for the intersection of Alisal Street and Capitol Street in Salinas. Roundabouts may be feasible and beneficial at other, currently signalized, locations along the corridor. Analysis and concept development subsequent to this study is required to evaluate the feasibility of implementing roundabouts at additional locations along the corridor.



Two roundabouts have been recently constructed along Reservation Road in the City of Marina

Figure 8-5: Key Pedestrian and Bicycle Crossings Along Alignment



## 9. RECOMMENDED CORRIDOR DESIGN

This section describes the design concepts developed for the Marina-Salinas Multimodal Corridor. The development of cross-section elements and design features specific to each segment of the corridor involved an iterative and collaborative process with input from TAMC, County and City engineers and planners, and the general public. When considering the various design elements to be considered along the corridor, the following key factors were considered:

- Existing and projected traffic volumes and vehicular capacity needs;
- Vehicular travel speeds;
- Right-of-way limitations and physical constraints;
- Existing and planned land use types and densities;
- Location of signalized intersections and potential congestion points;
- Environmental and agricultural constraints; and
- Location of key pedestrian and bicycle destinations and crossings/connections.

The sections below include a summary of the design details for each distinct segment of the corridor, including a discussion of typical cross section dimensions, right-of-way, vehicular travel lanes, bicycle facilities, transit considerations and enhancements, sidewalks, key intersection features and other elements. For several key segments, typical cross sections are shown graphically. **Figure 9-1** identifies the general corridor design configuration. For the extent of the corridor, a more detailed concept-level plan line of the preferred alignment is provided in **Appendix D**.



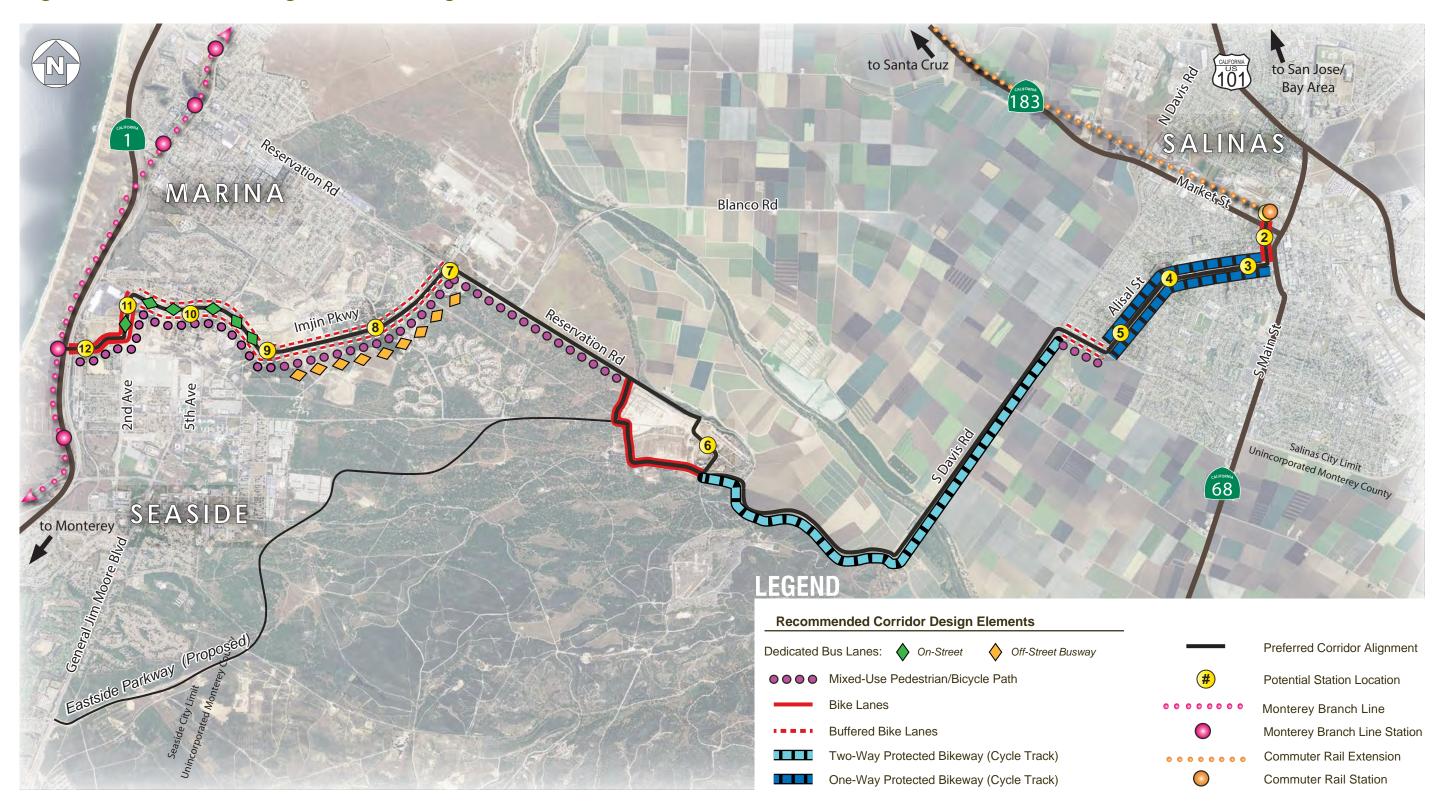






The recommended corridor design includes enhanced multimodal elements, such as Buffered Bike Lanes, Protected Bikeways (Cycle Tracks), green bike lane treatments, off-street mixed-use paths and Transit Island bus stops

Figure 9-1: Preferred Alignment Configuration



### Downtown Salinas Segments Enhanced Elements of the Recommended Design:

The following enhanced design elements are included in the recommended design concepts for the downtown Salinas segments of the multimodal corridor:

- Bike Lanes (Lincoln Avenue);
- Protected Bikeway/Cycle Track (Alisal Street);
- Green Pavement Treatment:
- Bike Boxes;
- Bicvcle Detection:
- Transit Islands (Alisal Street);
- High-Visibility Crosswalk Striping and Signs;
- Median Refuge (Alisal Street at Cayuga Street); and
- Curb Bulb-Outs.

Starting in downtown Salinas, the adopted corridor alignment begins at the Salinas Intermodal Transportation Center (proposed Capitol Corridor rail station) before extending south along Lincoln Avenue, then west along Alisal Street. The specific design elements for Lincoln Avenue and the multimodal corridor segments of Alisal Street within the downtown were developed in coordination with the Salinas Downtown Vibrancy Plan. Within downtown, the street design elements, outlined below, are intended to improve local access, circulation, safety and comfort for pedestrians and bicyclists of all ability levels and activate the streetscape in a manner that enhances the vibrancy of the downtown district.

**Figure 9-2** shows the recommended design concepts for the downtown Salinas segments of the multimodal corridor, which include Lincoln Avenue and Alisal Street from Lincoln Avenue west to Cayuga Street.

#### Street Design Characteristics:

The design concept for Lincoln Avenue maintains one mixed-flow travel lane in each direction with left-turn lanes at most intersections and a two-way left-turn lane between Gabilan Street and Howard Street. Bike lanes are provided on Lincoln Avenue from Market Street to Alisal Street, except at the intersections of Gabilan and Central, where the street width is too narrow to provided designated bike lanes. At these intersection approaches, shared lane markings or "sharrows" are used to identify the bicycle route. Green pavement treatment is applied within the bike lanes and through conflict areas along this segment. A bike box is provided at the southbound approach at Alisal Street to improve safety and visibility for bicyclists turning from Lincoln Avenue to Alisal Street. Parallel on-street parking is provided on both sides of the street from Howard to Gabilan and on the west side of the street from Gabilan Street to Market Street. In order to provide adequate width for bike lanes, the existing angled parking spaces along the west side of the street fronting City Hall will be converted to parallel parking. As recommended in the Downtown Vibrancy Plan, Lincoln Avenue will be extended north of Market Street to improve access to the Salinas Intermodal Transportation Center. A curbside bus rapid transit station is proposed at the nearside of Central Avenue (northbound stop) and at the nearside of Gabilan Street (southbound stop). Sidewalks are maintained at current width along this street segment.

The design concept for the multimodal corridor segment of Alisal Street within downtown Salinas (from Lincoln Avenue west to Cayuga Street) includes a lane reduction, or "road diet". This road diet reduces the four-lane street to a single mixed-flow travel lane in each direction with a center two-way left-turn lane west of Lincoln Avenue. A protected bikeway (cycle track) is provided along both sides of this segment of Alisal Street, with on-street parking and a striped buffer area placed between the curbside bikeway and the vehicular travel lanes. Green pavement treatment is applied within the bike lanes and through conflict areas along this segment. Bike boxes are provided for the eastbound left-turn at Lincoln Avenue and for the westbound left-turn at Cayuga Street. On-street parking is provided on both sides of Alisal Street for the majority of this segment.

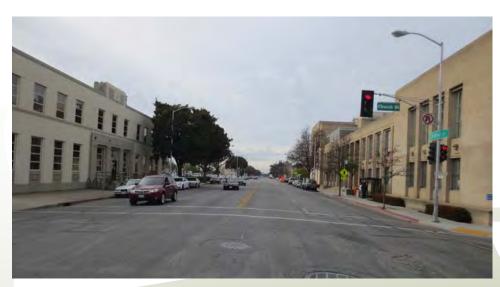
A potential bus rapid transit station location has been identified at the County Government Center (at Cayuga Street). At this station, transit island bus stops are provided, with a farside stop in the westbound direction and nearside stop in the eastbound direction. At this station, the street configuration will resemble the proposed typical cross section "Option A" shown in **Figure 9-3**. At this station, buses will stop in the mixed-flow travel lane for passenger loading and the bike lanes will continue along the curb behind the raised transit islands. By stopping in the travel lane, buses will not encounter delay associated with merging back into traffic and will not have a conflict with bicycles. However, auto traffic will be required to queue behind the bus while it is dwelling at the stations. The potential effect of this configuration on vehicle flow will be further evaluated and the station configuration coordinated with MST prior to completion of final design. Sidewalks are maintained at existing widths along this street segment, and additional landscaping improvements and other pedestrian enhancements can be explored in the future.



Existing conditions at the Salinas Amtrak station. The station is proposed to be revitalized with the addition of commuter rail from the Bay Area. This is the northern terminus of the Bus Rapid Transit route.

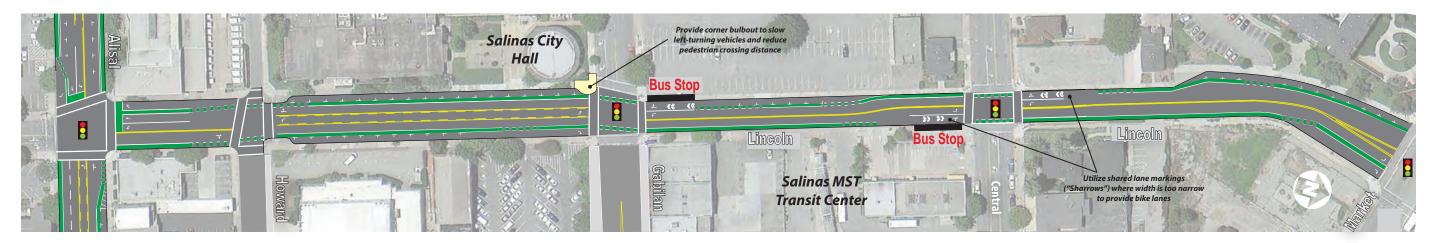


Existing conditions along Lincoln Avenue, looking south near City Hall. Green bike lanes are proposed for this segment



Existing conditions along West Alisal Street, looking west near Government Center. Protected bike lanes and transit islands are proposed for this segment.

Figure 9-2: Plan View of Alisal Street and Lincoln Avenue (Vibrancy Plan)





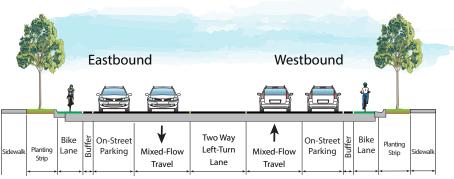
Transit Island bus stops buffer bike lanes from mixed-flow travel lanes



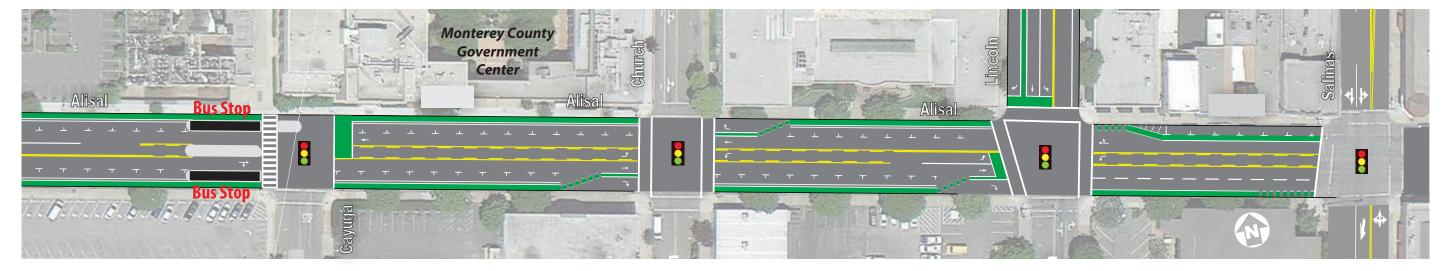
Bike Boxes provide bicyclists with a safe and visable way to get ahead of queueing traffing during the red signal phase



Enhanced bicycle facility treatments, such as colored bike lanes, improve visability and safety for bicyclists



Typical Cross Section for Alisal Street



#### Alisal Street Segment

#### Enhanced Elements of the Recommended Design:

The following enhanced design elements are included in the recommended design concepts for the Alisal Street segment of the multimodal corridor:

- Buffered Bike Lanes:
- Bicycle Detection;
- Shared Bus/Bicvcle Lanes:
- Transit Signal Priority; and
- High-Visibility Crosswalk Striping and Signs.

West of downtown Salinas, the multimodal corridor alignment follows Alisal Street to Blanco Road. Key activity centers along this segment include the western edge of the Monterey County Government Center and Hartnell College. The predominant land uses fronting this segment of Alisal Street are single family residential homes. The specific design elements for this



Existing conditions along West Alisal Street, looking west near Hartnell College. A road diet is proposed for this segment to provide bike lanes and a center turn lane.

segment of Alisal Street are intended to calm traffic and improve mobility and safety for bicyclists, while maintaining on-street parking and access for the adjacent properties.

**Figure 9-4** shows the typical cross section design for the segments of Alisal Street west of Downtown Salinas. **Figure 9-3** shows the typical cross section for this segment at transit stations. A more detailed concept-level plan line of the designs for this corridor segment is provided in **Appendix D**.



Existing conditions at the West Alisal Street and Blanco Road intersection. Enhanced treatments for transit and bicyclists are proposed at this intersection, including transit signal priority and a bike signal.

### Street Design Characteristics:

The design concept for the multimodal corridor segment west of downtown Salinas includes the continuation of the Alisal Street road diet, reducing the four-lane section to a single mixed-flow travel lane in each direction with a center left-turn lane. The excess street width provided from the lane reduction is reallocated to provide a protected bikeway along each side of the street while maintaining on-street parking where it is currently provided. On-

street parking will be provided on both sides of the street along the majority of this segment. Potential new BRT station locations within this corridor segment have been identified at Hartnell College (at Homestead Avenue) and near Palma Drive. The Palma Drive area includes opportunity sites discussed further in Chapter 11.

At Hartnell College, the proposed BRT service will utilize the existing curbside bus stops that exist near Homestead Avenue. At the Palma Drive station, the street configuration will resemble the proposed cross section "Option B" shown in **Figure 9-3**. At this location, buses and bikes will utilize a 15-foot wide combined bus/bike lane. Existing sidewalks are maintained along this street segment, while additional opportunities for landscaping improvements and other pedestrian enhancements will be explored as future improvements.

### Blanco Road Segment Enhanced Elements of the Recommended Design:

The following enhanced design elements are included in the recommended design concepts for the Blanco Road segment of the multimodal corridor:

- Buffered Bike Lanes
- Bicycle Detection
- Mixed-Use Pedestrian/Bicycle Path
- Bike Signal (Blanco Road/Alisal Street Intersection)
- Transit Signal Priority
- High-Visibility Crosswalk Striping and Signs
- Bike Boxes

West of Alisal Street, the multimodal corridor alignment follows Blanco Road to Davis Road. Between Alisal Street and Davis Road, Blanco Road has two travel lanes in the westbound direction, one travel lane in the eastbound direction, a raised center median and no dedicated bicycle or pedestrian facilities. The City of Salinas is currently collecting traffic impact fees for future widening of this high-volume arterial to four lanes west of Alisal Street; however, no designs have been prepared and the anticipated date of implementation has yet to be determined.

**Figure 9-5** shows the typical cross section design for the segment of Blanco Road between Alisal Street and Davis Road. A more detailed concept-level plan line of the designs for this corridor segment is provided in **Appendix D**.

#### Street Design Characteristics:

The design concept for the multimodal corridor segment of Blanco Road between Alisal Street and Davis Road includes reconstructing the existing three-lane street as a four-lane section with two mixed-flow travel lanes in each direction, buffered bike lanes, a narrower center median, and a 14-foot wide off-street mixed-use path along the south side of the street. These improvements will require widening of the roadway along the south side of Blanco Road. Pedestrian facilities do not currently exist along this segment of Blanco Road. No new sidewalks are proposed as part of the corridor improvements; however, the proposed mixed-use path can be utilized by bicycles and pedestrians. No new bus stops are proposed along this segment as the residential uses on the north side of the street do not provide access to Blanco Road. Intersection improvements are

recommended at the Blanco Road/Alisal Street and Davis Road/Blanco Road intersections to improve bicycle, pedestrian and transit movements through these intersections. Particularly, these intersection improvements will focus on providing convenient and safe crossing for bicycles and pedestrians to/from the dedicated mixed-use path running along the south side of Blanco Road.

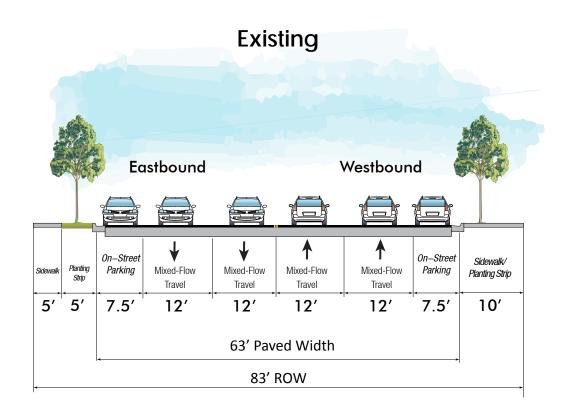


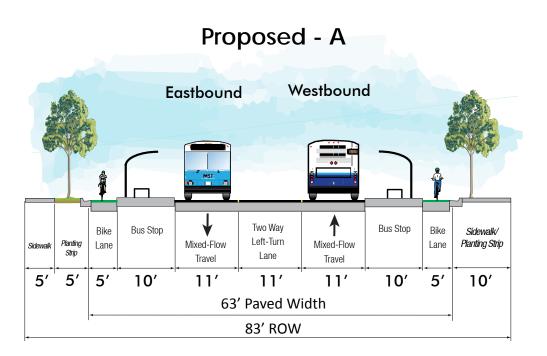
Existing conditions along Blanco Road, looking east from Davis Road. Buffered bike lanes and a mixed use path are proposed for this segment.

### Blanco Road (Davis Road to Reservation Road Interim Segment)

On an interim basis, the multimodal corridor is likely to continue on Blanco Road west to Marina until further development and infrastructure improvements are completed with future phases of the East Garrison development. While the City of Salinas is currently collecting traffic impact fees for future widening of Blanco Road to four lanes between the City of Salinas and Reservation Road in Marina, no designs have been prepared and the anticipated date of implementation has yet to be determined. The existing two-lane configuration is likely to remain during these interim conditions — autos and transit vehicles would operate in the existing two mixed-flow travel lanes and bicycles would use the existing striped bike lanes. If bus rapid transit service is implemented while the Blanco Road interim alignment is in place, improvements should be added to improve multimodal operations along this segment (i.e. transit signal priority, queue jump lanes, etc.). Even with the ultimate implementation of the full multimodal corridor alignment, Blanco Road would continue to serve as a key connection in the regional bicycle network.

Figure 9-3: Typical Cross Section: West Alisal Street (At Transit Stations)







Proposed - B

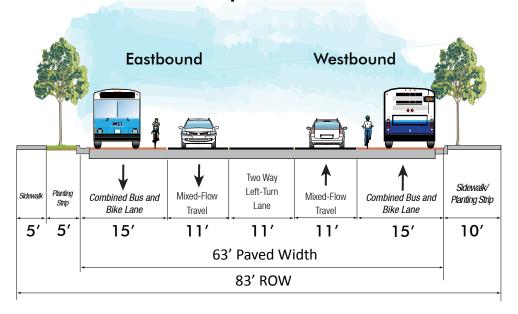
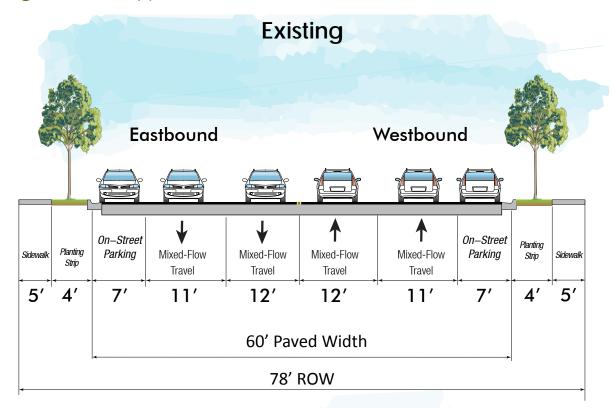


Figure 9-4: Typical Cross Section: West Alisal Street



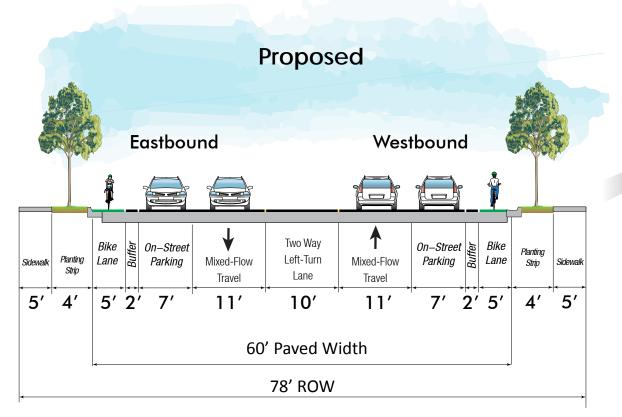
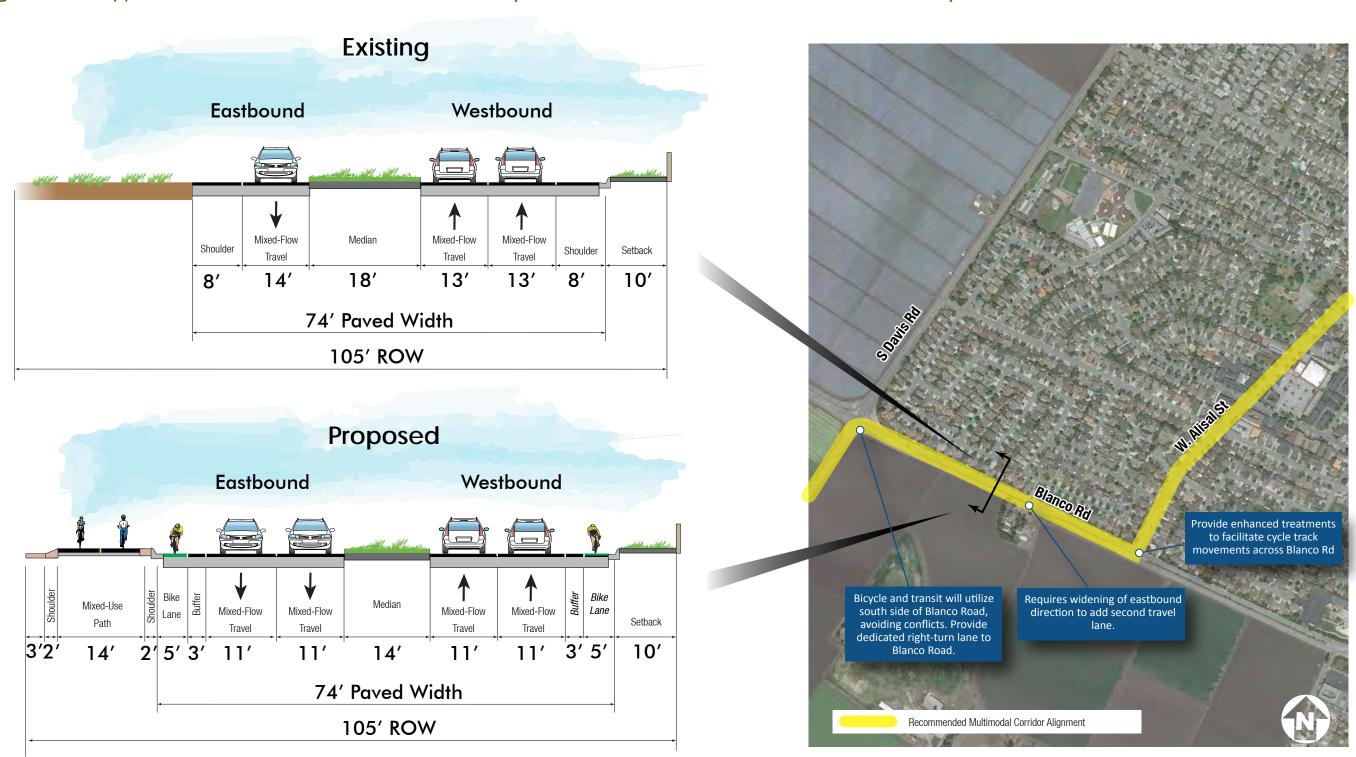




Figure 9-5: Typical Cross Section: Blanco Road (South Davis Road to West Alisal Street)



#### **Davis Road Segment**

#### Enhanced Elements of the Recommended Design:

The following enhanced design elements are included in the recommended design concepts for the Davis Road segment of the multimodal corridor:

- Protected Cycle Track;
- Bicycle Detection;
- Bike Signal:
- Green Pavement Treatment (through conflict areas at intersections); and
- Transit Signal Priority.

From Blanco Road, the ultimate multimodal corridor alignment continues south along Davis Road to Reservation Road. Davis Road is currently a rural, two-lane undivided road without bicycle or pedestrian facilities. Monterey County is currently in the process of analyzing the environmental impacts associated with widening Davis Road and reconstructing the Davis Road Bridge. Throughout the development of this concept plan, TAMC and the consultant team have engaged in ongoing coordination with County engineering staff to collaborate on potential design strategies and multimodal elements that can be incorporated into the ultimate designs for the Davis Road widening project. The cycle track configuration is included as a design feature in the Davis Road widening environmental analysis currently underway. The discussion below provides details regarding the recommended design elements identified for Davis Road through this process.

Figure 9-6 shows the typical cross section design for Davis Road between Blanco Road and Reservation Road. Figure 9-7 shows the conceptual layout of Davis Road at signalized intersections. Figure 9-8 shows the conceptual street layout for Davis Road at the Salinas River Bridge, while Figure 9-9 shows this typical street cross section along the bridge. A more detailed concept-level plan line of the designs for this corridor segment is provided in **Appendix D**.

#### Street Design Characteristics:



Existing conditions along Davis Road, looking south from Blanco Road. The road is proposed to be widened to 4 lanes, with a two-way cycle track on the east side of the road.

The design concept for the multimodal corridor segment of Davis Road between Blanco Road and Reservation Road will include the planned widening of the roadway to provide four mixed-flow travel lanes, paved shoulders and a protected twoway cycle track along the east side of the roadway. The protected cycle track provides enhanced safety and comfort for bicyclists and provides a continuous connection from the mixed-use pedestrian/bicycle path running along Blanco Road south to a cycle track running along the south side of Reservation Road to the East Garrison Development. This allows



Existing conditions along Davis Road at the Salinas River. A new bridge is proposed along with the widening to four lanes. A two-way be eight feet wide. Graded recovery cycle track would be provided on the east side of the roadway.

provided on either side of the main path space. Lateral vertical elements (anticipated to be flexible delineators) will be spaced at the outer edge of the cycle track to encourage separation between vehicles on the roadway and bicyclists (see cross-section). At intersections, the cycle track will have a dedicated space to cross the side-street. Signage and signal treatments will enhance the bicycle crossings at intersections. The cycle track is provided in lieu of on-street bicycle lanes and all bicycle traffic is assumed to use the cycle track. No bus stops are provided along Davis Road due to the lack of ridership-generating uses along the roadway frontage. Similarly, no dedicated pedestrian facilities are provided along Davis Road due to lack of pedestrian-conducive land uses within the area.

#### Reservation Road Segment (Davis Road to East Garrison)

#### Enhanced Elements of the Recommended Design:

The following enhanced design elements are included in the recommended design concepts for the Reservation Road segment of the multimodal corridor between Davis Road and East Garrison:

- Protected Cycle Track;
- Bicycle Detection;
- Bike Signal;
- · Transit Signal Priority; and
- · Queue Jumps (at the Davis Road/ Reservation Road intersection).

From Davis Road, the multimodal corridor alignment continues west along Reservation Road to the East Garrison Development at Watkins



for long-distance bicycle travel for

commute and recreational cyclists

with minimal conflict points with auto

traffic. Encouraging bicycle use in this

corridor may lead to less automobile

travel and as a result, reduced traffic

The width of the auto lanes, the cycle

track, and other roadway elements

effects of the roadway widening on

fronting agricultural land. The paved

area of the cycle track is proposed to

shoulders and clearance areas will be

has been minimized to limit the

congestion.

Existing conditions, looking east along Reservation Road. The ultimate plan is to widen this segment to four lanes, with a two-way cycle track on the south side.

Gate Road. This segment of Reservation Road is currently a rural, two-lane undivided road without bicycle or pedestrian facilities. Monterey County has future plans to widen Reservation Road to four lanes, but preliminary designs have not been prepared and the timeline for implementing this project is yet to be determined.

Figure 9-10 shows the typical cross section design for the segment of Reservation Road between Davis Road and Watkins Gate. A more detailed concept-level plan line of the designs for this corridor segment is provided in **Appendix D**.

#### Street Design Characteristics:



Existing conditions, looking east along Reservation Road. An interim configuration prior to full widening would be to shift the roadway to provide a two-way cycle track on the south side.

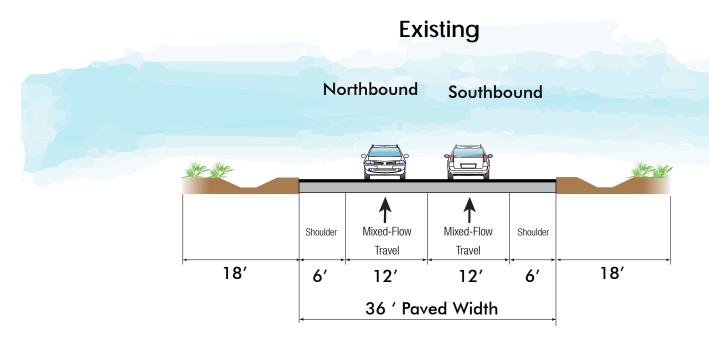
The ultimate design concept for the multimodal corridor segment of Reservation Road between Davis Road and the East Garrison development (at Watkins Gate Road) includes widening the roadway to provide four mixed-flow travel lanes paved shoulders, a center median/ left-turn lane, and a protected twoway cycle track along the south side of the roadway. The protected cycle track provides enhanced safety and comfort for bicyclists and provides a continuous connection from the cycle track running along Davis Road to bicycle facilities within the East Garrison development. This allows for

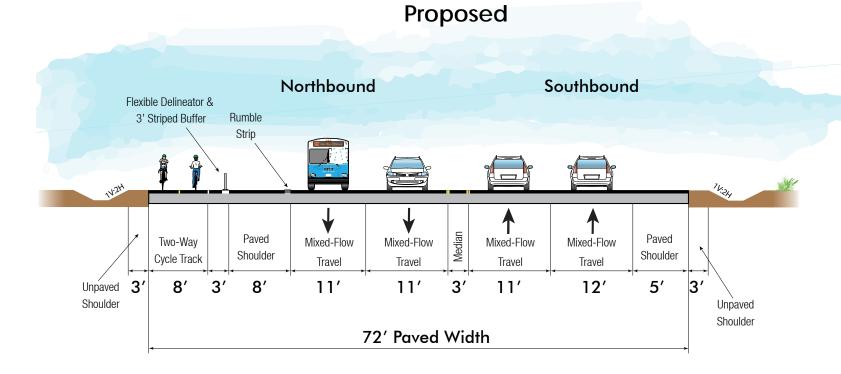
long-distance bicycle travel for commute and recreational cyclists with minimal conflict points with auto traffic, resulting in a more desirable bicycling facility.

The paved area of the cycle track is proposed to be 10 feet wide. Graded recovery shoulders and clearance areas will be provided on either side of the main path space. A lateral vertical element (such as flexible delineators) will be placed at the outside edge of the cycle track to maintain separation between vehicles on the roadway and bicyclists (see cross-section). The cycle track is provided in lieu of on-street bicycle lanes and all bicycle traffic would be assumed to use the cycle track. No bus stops or pedestrian facilities are located along this segment of Reservation Road due to the lack of uses that would generate transit ridership or pedestrian trips. At the Reservation Road/ Davis Road intersection, enhanced signage and signal treatments will be implemented to improve bicycle and transit movements through the intersection.

There are clear challenges associated with implementing the ultimate configuration for this segment of the corridor, as these improvements require considerable road widening. Such widening will be costly due to challenging topographical constraints and valuable agricultural lands that currently exist along the roadway frontage. In the short-term, an interim configuration could be implemented to provide multimodal connectivity without full widening of the roadway. As shown in Figure 9-10, an interim configuration can include widening within the existing right-of-way to provide a two-way cycle track, but without adding additional mixed-flow travel lanes. This interim improvement requires further evaluation and refinement to determine its cost and impacts to agricultural land.

Figure 9-6: Typical Cross Section: South Davis Road (Blanco Road to Reservation Road)





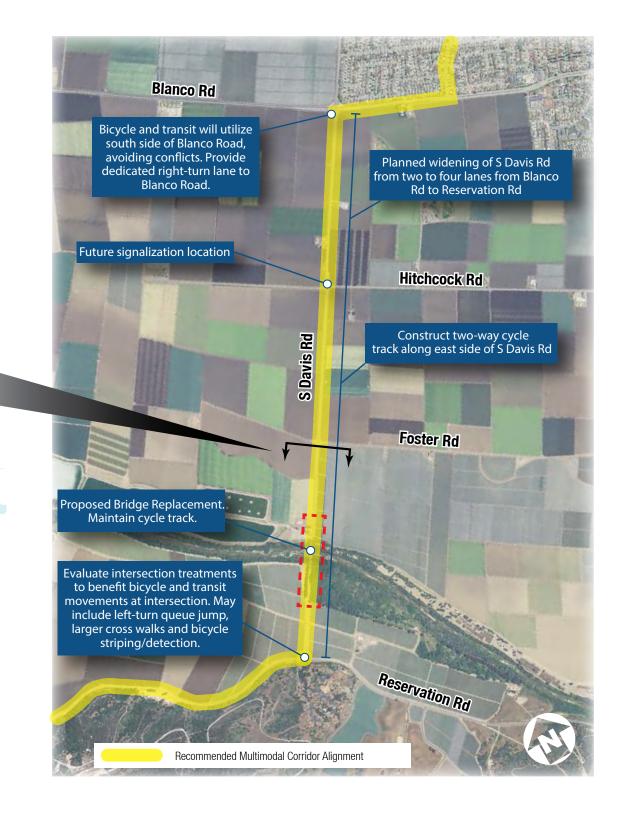


Figure 9-7: Typical Davis Road Sidepath Configuration at Signalized Intersections

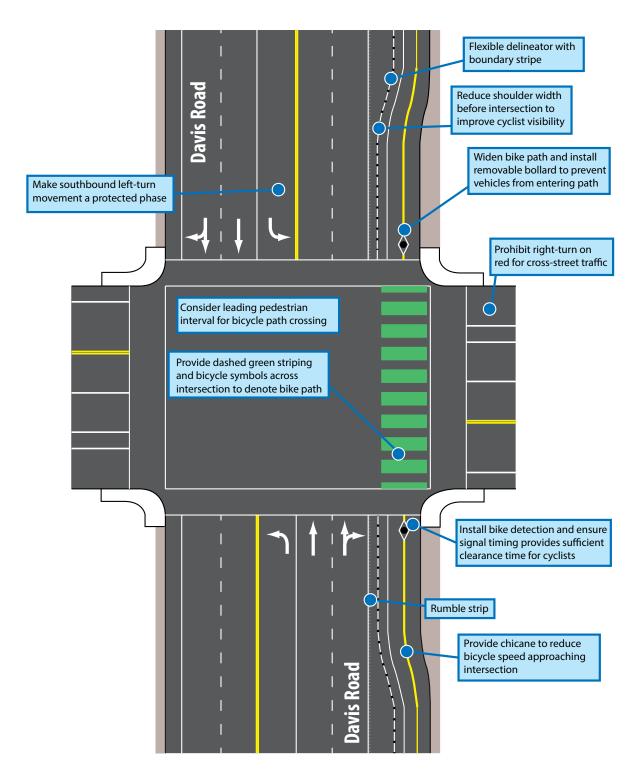


Figure 9-8: Davis Road Sidepath Configuration on Salinas River Bridge

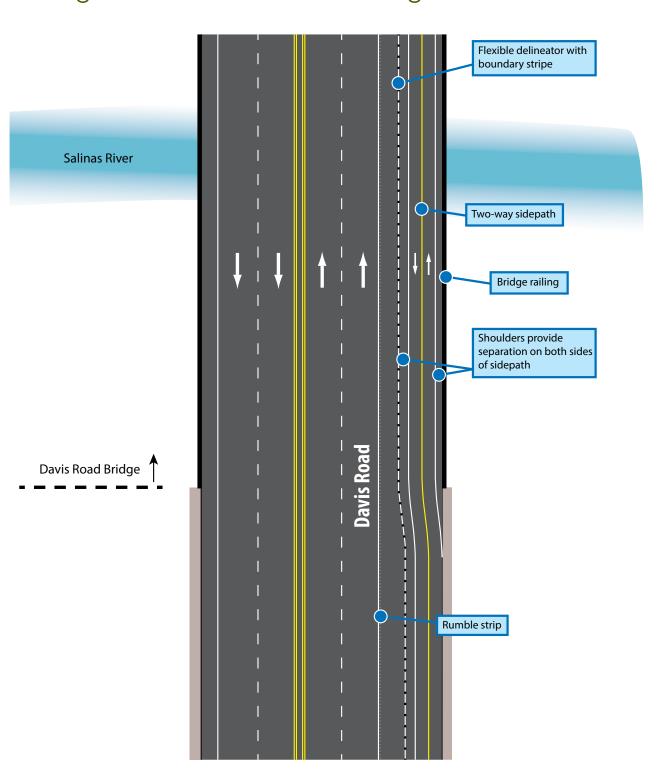
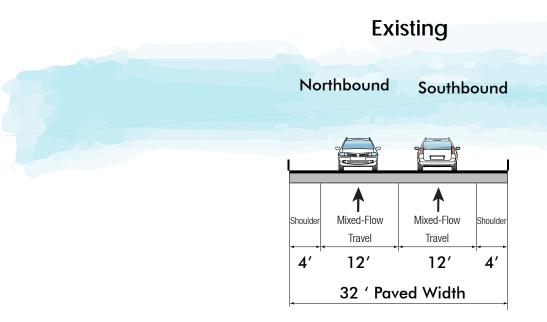
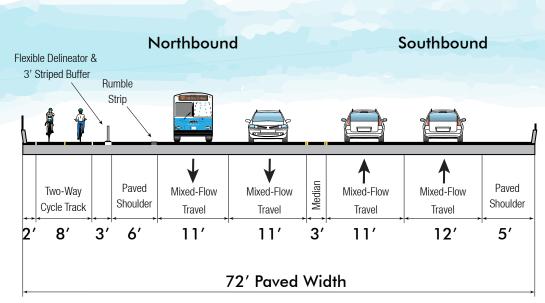


Figure 9-9: Typical Cross Section: South Davis Road (Salinas River Bridge)



### Proposed



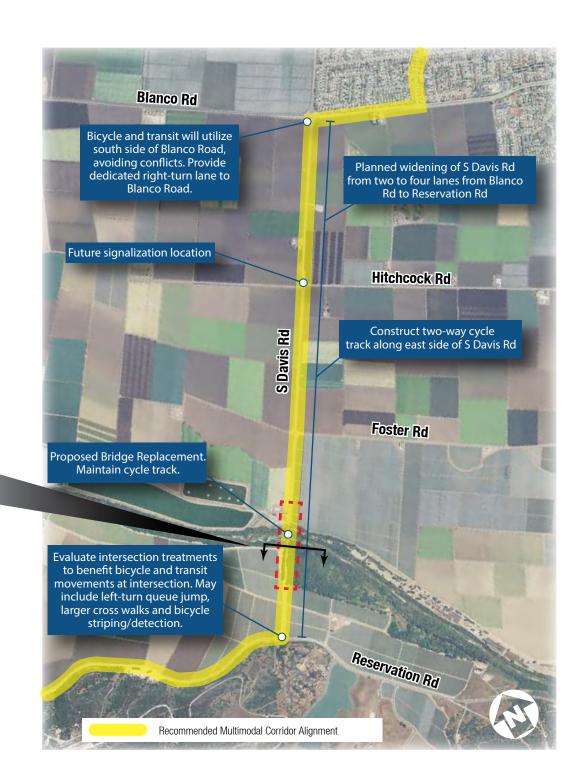
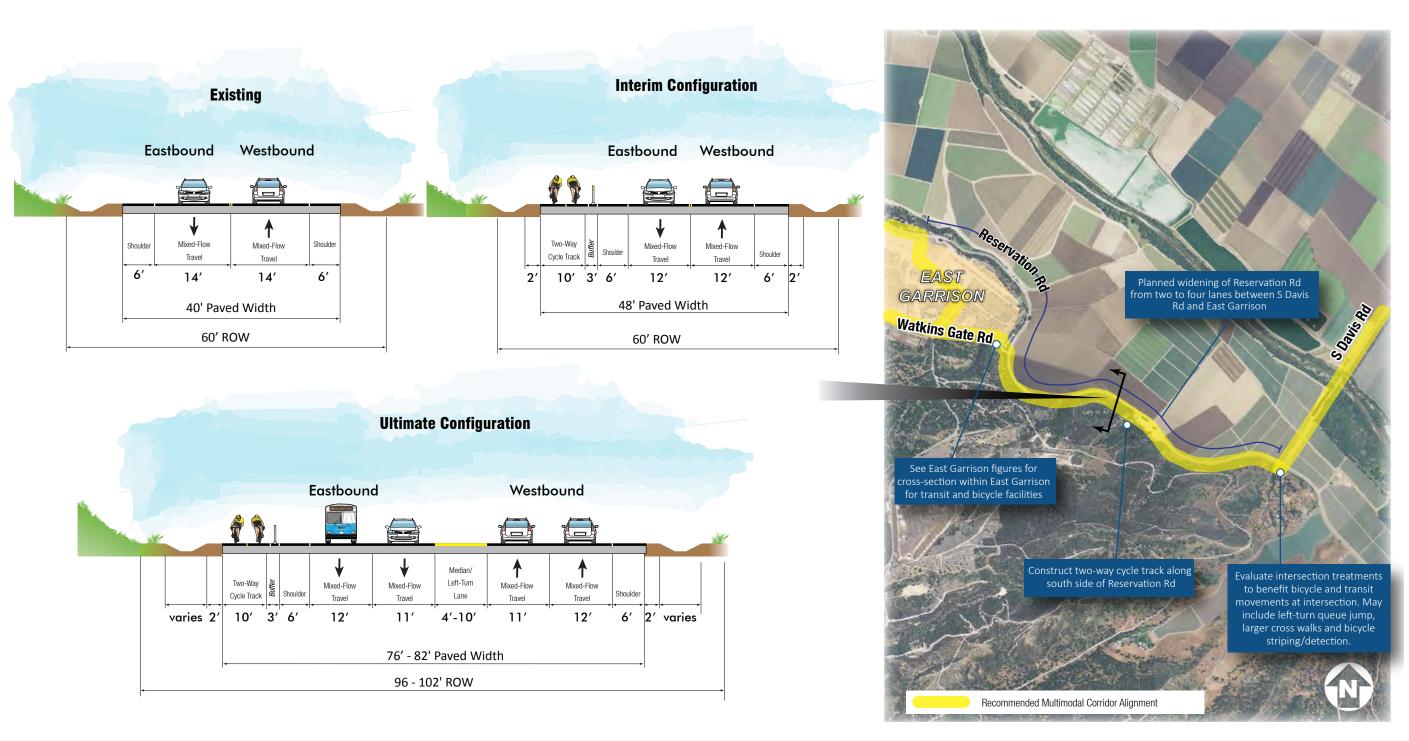


Figure 9-10: Typical Cross Section: Reservation Road (South Davis Road to Watkins Gate Road)



#### **East Garrison Segments**

Between Davis Road and the City of Marina, the multimodal corridor alignment diverts from Reservation Road through the East Garrison development. As mentioned previously, East Garrison is a new master-planned development with residential homes and neighborhood-serving retail, located within the former Fort Ord base. The development plans include a pedestrian-oriented street network on a grid system with short blocks and designated bicycle facilities to provide multimodal connectivity throughout the community. The first development phase is under construction, with an additional 1,000 units and further infrastructure improvements (including reconstruction of Watkins Gate Road and improvements at the Watkins Gate Road/Reservation Road intersection) to be constructed in future phases. The location and character of this development (higher-density mixed-use with good bicycle and pedestrian connectivity) provides considerable potential to generate multimodal travel.

Some of the street segments within East Garrison have already been constructed and initial designs have already been prepared for the remaining streets. Because many of these streets were originally designed with enhanced multimodal features, including a well-connected bicycle and pedestrian network, curb extensions at pedestrian crossings and other elements, the discussion in this section is focused on defining the preferred corridor alignment and ensuring a functional bus route through East Garrison. Where applicable, some additional design measures are recommended to provide improved integration with the multimodal corridor.

The streets within East Garrison will be privately owned and maintained, although within the jurisdiction of Monterey County. Therefore, coordination with the County and developer is required for ensuring implementation of the desired multimodal configuration through the community.

**Figure 9-11** shows the preferred multimodal corridor alignment for transit service through East Garrison. **Figure 9-12** shows the preferred alignment for bicycle travel through East Garrison.

#### Street Design Characteristics:



Existing conditions along Watkins Gate. This roadway will be widened and bike facilities added as part of the East Garrison development Phase 3.

In contrast to other seaments of the multimodal corridor, the preferred route for bicycle travel through this development diverges from the primary corridor alignment for transit The primary corridor alignment for transit through East Garrison (shown in green in **Figure 9-11**) connects from Reservation Road via Watkins Gate Road, then north along Sloat Street, west along Sherman Boulevard, then north along East Garrison Drive to connect back to Reservation Road. This portion of the community is higher-density and includes more commercial and

mixed-use development. A potential location for a new bus rapid transit station within East Garrison has been identified on Sherman Boulevard, just east of Ord Avenue. An initial review of the East Garrison Drive/Sherman Boulevard intersection, which has already been constructed, indicates that geometric modifications are needed to allow buses to sufficiently navigate turns through this



The East Garrison development is currently in Phase 1, with Phase 2 going to construction shortly. A network of bicycle lanes provide connectivity through the development.

intersection. Sloat Street and the segments of Sherman Boulevard east of Ord Avenue will be constructed in future phases of the East Garrison project. The final designs for these streets will need to ensure that buses are able to sufficiently navigate the alignment.

The preferred bicycle alignment through East Garrison follows Watkins Gate Road to West Camp Street, west along Sherman Boulevard, then north along Inter-Garrison Road to connect back with Reservation Road. The currently planned designs for

East Garrison include bike lanes along the full extent of this route. To improve the bicycle connection through this route, it is recommended that the preliminary Phase 3 designs be modified to provide a 10-foot cycle track following the south side of Watkins Gate Road up the hill from Reservation Road to Sloat Street. These recommended modifications are shown in **Figure 9-12**.

#### Reservation Road Segment (East Garrison to Imjin Parkway) Enhanced Elements of the Recommended Design:

The following enhanced design elements are included in the recommended design concepts for the Reservation Road segment of the multimodal corridor:

- Mixed-Use Pedestrian/Bicycle Path;
- Transit Signal Priority;
- Queue Jump (westbound Transit-Only Signal Phase at Reservation Road/Imjin Parkway); and
- Transit Islands (westbound station at Reservation Road/Imjin Parkway).

From the East Garrison development, the multimodal corridor alignment continues west along Reservation Road to Imjin Parkway and the Marina City Limit. This segment of Reservation Road is currently a rural, four-lane divided road without bicycle or pedestrian facilities. The planned UC MBEST development represents the only significant destination along this segment. The design elements for this segment of Reservation Road include bicycle facilities. There are few constraints in this corridor for transit, so only limited improvements are needed along this segment.

**Figure 9-13** shows the typical cross section design for the segment of Reservation Road between East Garrison and Imjin Parkway. A more detailed concept-level plan line of the designs for this corridor segment is provided in **Appendix D**.

#### Street Design Characteristics:

The ultimate design concept for the multimodal corridor segment on Reservation Road between the East Garrison Development and Imjin Parkway will include the widening of the roadway to provide six-foot paved shoulders and a 10-foot wide off-street mixed-use pedestrian/bicycle path along the south

side of Reservation Road. The off-street path provides enhanced safety and comfort for recreational cyclists and provides a continuous connection with the existing mixed-use path along Reservation Road to the west. The recommended design concept includes additional widening of Reservation Road at the east and west legs of the Blanco Road/Reservation Road intersection to provide room for two continuous westbound through lanes and two receiving lanes west of the intersection. The addition of a second westbound through lane at this intersection will serve to minimize delays for westbound buses.

A potential bus rapid transit station location within this corridor segment has been identified at the UC MBEST Center. In the eastbound direction, the proposed bus rapid transit service utilizes the existing curbside bus pullout just east of Imjin Parkway. In the westbound direction, service stops at a new transit island platform at the nearside of the Reservation Road/Imjin Parkway intersection. The existing westbound right-turn lane is shifted further to the north to provide width for the new station platform and a dedicated space for buses to stop and load/unload passengers. A dedicated transit-only phase will need to be added at the Reservation Road/Imjin Parkway traffic signal to facilitate westbound to southbound bus maneuvers from the station platform to the southbound travel lanes on Imjin Parkway. This exclusive transit phase will also allow buses to bypass vehicle queues in the other mixed-flow travel lanes.



Existing conditions, looking east on Reservation Road at the intersection with Imjin Parkway. A new raised transit island will be provided here for an enhanced Bus Rapid Transit stop.



The existing bike path on the south side of Reservation Road west of Imjin Parkway. The mixed-use path will be extended on the east side of Reservation Road east of Imjin Parkway to Inter-Garrison Road.

Figure 9-11: Multimodal Corridor Routing Through East Garrison (BRT Alignment)

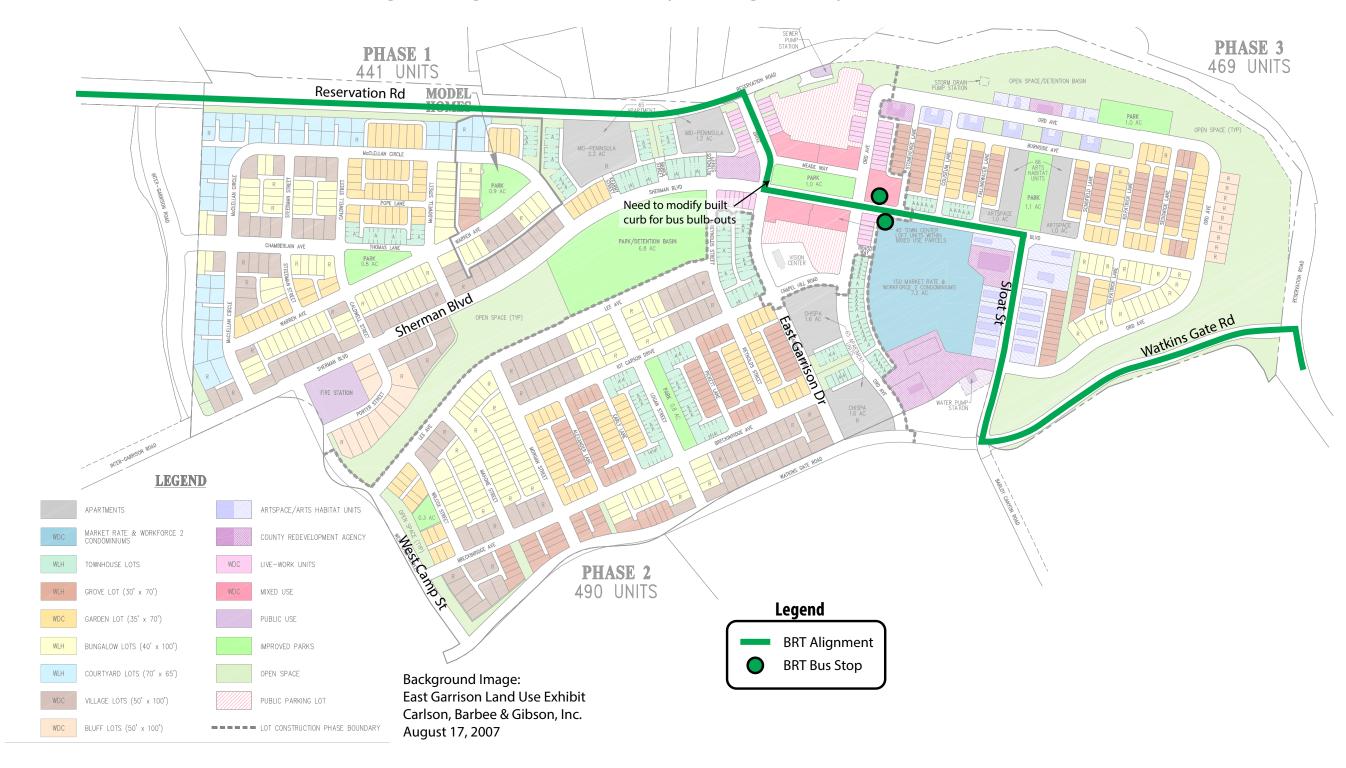


Figure 9-12: Multimodal Corridor Routing Through East Garrison (Bicycle Facilities)

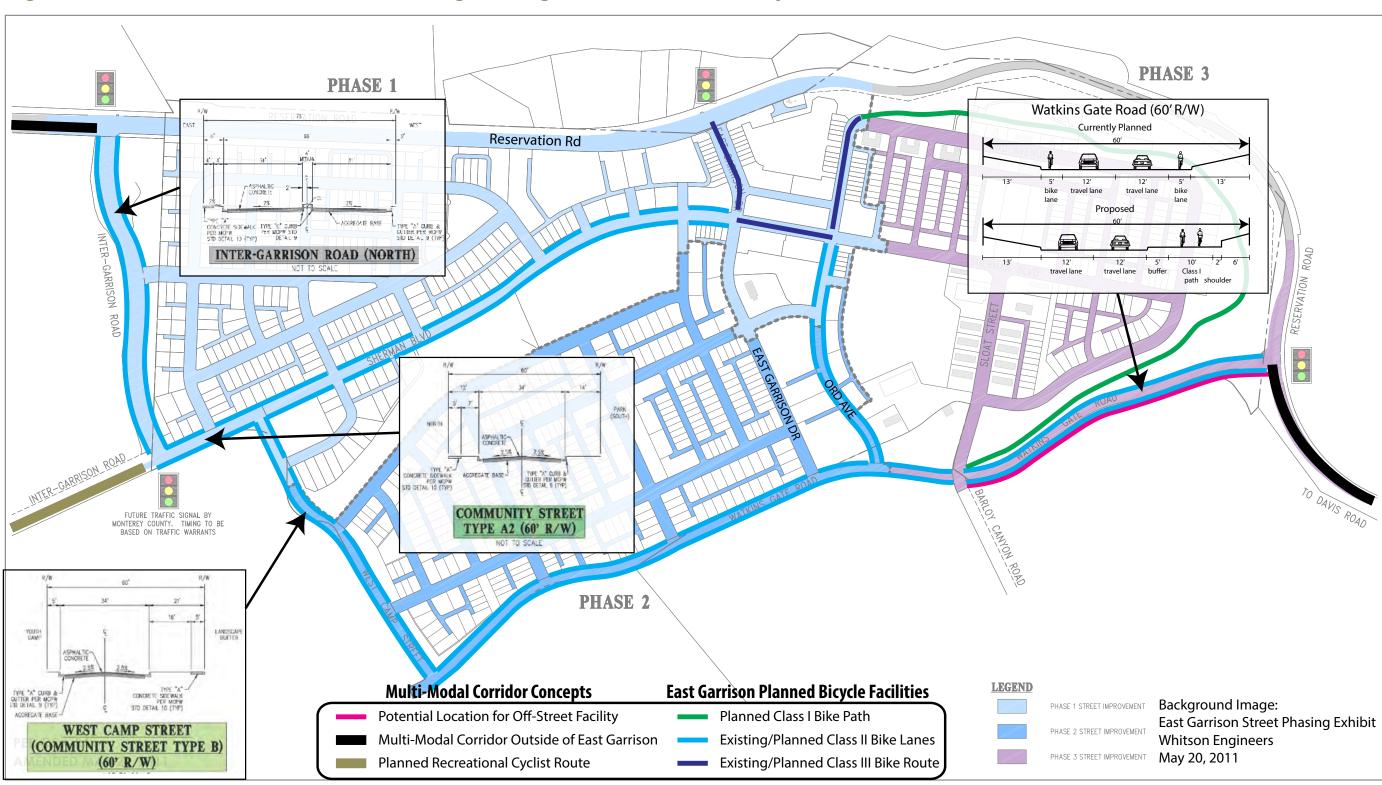
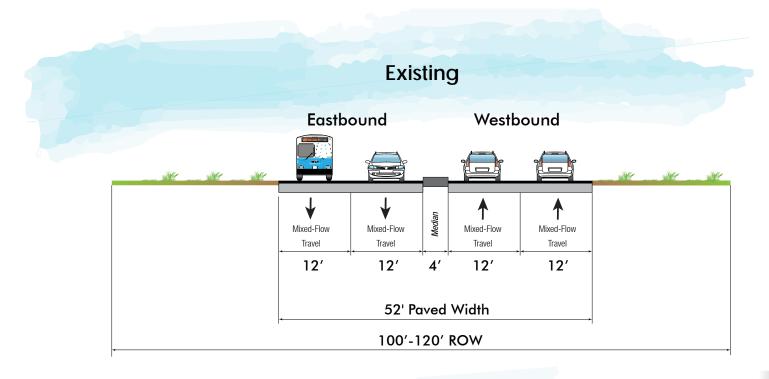
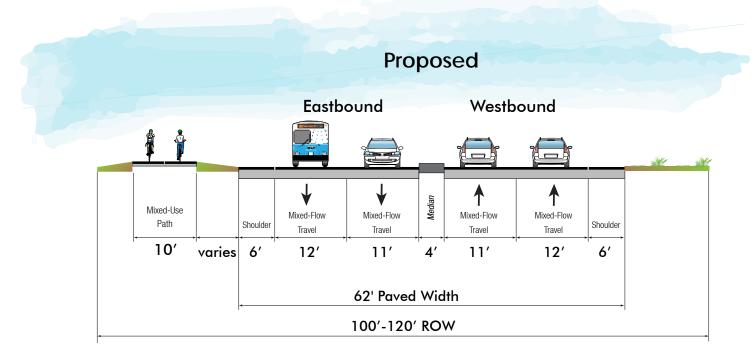
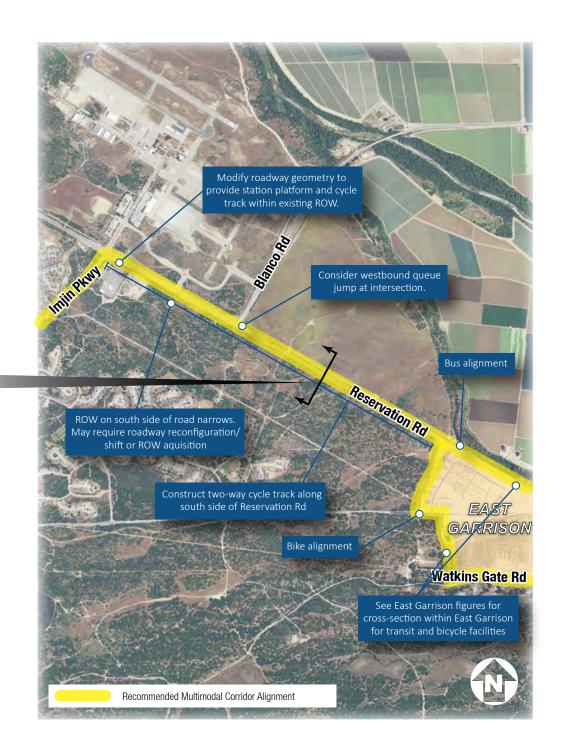


Figure 9-13: Typical Cross Section: Reservation Road (East Garrison Road to Imjin Parkway)







### Imjin Parkway Segment Elements of the Recommended Design:

The following enhanced design elements are included in the recommended design concepts for the Imjin Parkway segment of the multimodal corridor:

- Mixed-Use Pedestrian/Bicycle Path;
- Dedicated Bus Lanes:
- Transit Signal Priority:
- Transit Islands (at 4th Avenue BRT Stations);
- Shared Bus/Bicycle Lanes (limited segments where right-of-way is limited);
- Green Pavement Treatment; and
- High-Visibility Crosswalk Striping and Signs.

Within the City of Marina, the multimodal corridor alignment continues south along Imjin Parkway from Reservation Road to 2nd Avenue. The Imjin Parkway corridor segment is best described in two distinct parts: Imjin Parkway from Reservation Road to Imjin Road, and Imjin Parkway from Imjin Road to 2nd Avenue. These two roadway segments have very different physical characteristics, design needs/constraints and contexts.

Between Reservation Road and Imjin Road, Imjin Parkway is predominantly a two-lane, undivided road. Bicycle lanes were recently added, with green striping utilized to improve awareness at conflict points. Considerable traffic congestion occurs often along this segment during peak commute periods and the City of Marina has plans to widen this roadway to four lanes in the near future. As part of this widening project, roundabouts are proposed at the intersections of Imjin Road, Marina Heights and Preston Drive.

Between Imjin Road and 2nd Avenue, Imjin Parkway more closely resembles a traditional urban arterial, with two travel lanes in each direction, a raised median, curb and gutter. A 10-foot wide mixed-use path currently exists along the south side of Imjin Parkway along the extent of this segment and a sidewalk is provided along the north side of the roadway, but there are no bike lanes. While the existing sidewalk is buffered from the street by a planting strip, the sidewalk is roughly five feet in width, which is narrower than typically desired for a high-quality pedestrian environment. The City of Marina plans to widen this congested roadway segment to six lanes in the future.

While the specific design elements for Imjin Parkway will differ between the two distinct segments, overall, the improvements are intended to provide sufficient vehicular capacity for mixed-flow traffic while improving mobility, access and safety for transit users, bicycles and pedestrians. Given that there are several existing and planned residential and commercial developments concentrated along these corridor segments, including the Marina Heights residential community, the planned Cypress Knolls Senior Housing project, and The Dunes at Monterey Bay project, there will be significant opportunity to attract multimodal trips in this corridor.

**Figure 9-14** shows the typical cross section design for the segment of Imjin Parkway between Reservation Road and Imjin Road. **Figure 9-15** shows the typical cross section design for the segment of Imjin Parkway between Imjin Road and 2nd Avenue. A more detailed concept-level plan line of the designs for this corridor segment is provided in **Appendix D**.

#### Street Cross Section Characteristics:

#### Reservation Road to Imjin Road

The design concept for the multimodal corridor segment of Imjin Parkway between Reservation Road and Imjin Road includes reconstructing and widening the existing two-lane roadway as a four-lane section with two mixed-flow travel lanes in each direction, a center median, buffered bike lanes, a 15-foot wide mixed-use path along the south side of the street and a 24-foot wide two-way dedicated busway located along the south side of the mixed-use path. The off-street path provides enhanced safety and comfort for bicyclists and pedestrians and provides a continuous connection to the bicycle facilities along Reservation Road for long-distance bicycle travel for commute and recreational cyclists with minimal conflict points with auto traffic.

The dedicated busway between Reservation Road and Imjin Parkway is contra-flow and allows high-frequency transit service to bypass congestion and delays at intersections along this segment of Imjin Parkway. Westbound buses enter the dedicated busway at a new half signal located just east of Preston Drive and exit the busway at the Imjin Parkway/Imjin Road roundabout. Eastbound buses enter the busway via an entry lane just east of Imjin Road and exit the busway at the half signal located just east of Preston Drive. The busway will include enhanced crossing treatments, such as high-visibility markings or signage, and fencing or other divider treatments to minimize conflicts between transit vehicles, pedestrians and cyclists at crossing locations and along its extent. New bus rapid transit station locations along this segment of the corridor have been identified at Abrams Drive and at Imjin Road. The Abrams station is located just west of the Imjin Parkway/Abrams Drive intersection with a median platform station between the two lanes of the contra-flow busway. The bus rapid transit station at Imjin Road (the CSUMB Station) is located just east of Imjin Road, with a curbside station adjacent to the busway for westbound buses, and a curbside station adjacent to Imjin Parkway along this segment.

Two design options have been developed for the Imjin Parkway/Imjin Road roundabout to illustrate multiple options for westbound bus rapid transit vehicles to transition from the exclusive busway through the intersection to westbound Imjin Parkway. Under the first option, the dedicated westbound busway connects to the roundabout as a typical approach leg — bus rapid transit vehicles wait for an acceptable gap, and circulate counterclockwise through the roundabout and continue westbound along Imjin Parkway. Under the second option, traffic signals placed at each approach of the roundabout stop all mixed-flow traffic for a short phase to allow the westbound bus rapid transit vehicles to cross through a designated channel in the central island of the roundabout and continue westbound on Imjin Parkway. Both design options for this roundabout are shown in **Appendix D**.

#### Imjin Road to 2nd Avenue

The design concept for the multimodal corridor segment of Imjin Parkway between Imjin Road and 2nd Avenue includes reconstructing and widening the existing four-lane roadway as a six-lane section. Features include two mixed-flow travel lanes in each direction, one dedicated curb-running bus lane in each direction, buffered bike lanes, a narrower center median, a widened 15-foot wide mixed-use path along the south side of Imjin Parkway, and a widened 6-foot sidewalk along the north side of the street to provide a quality pedestrian facility. For the majority of this segment, there is sufficient right-of-way to provide width for exclusive bus lanes and bike lanes; however, near the intersections with California Avenue and 3rd Avenue, where width is limited due to the presence of multiple turn lanes, the buses and bicyclists must travel a short distance within a combined bus/bike lane. The westbound dedicated bus lane ends at 3rd Avenue, where bus rapid transit vehicles are

provided with a queue jump to in order to make a left-turn movement at 2nd Avenue. The dedicated bus lanes reduce delays and improve travel times for bus service and provide an additional buffer between the curb-running bike lanes and the high-volume mixed-flow travel lanes.

It should be noted that the mixed-use bicycle/pedestrian path narrows from 15 to 10 feet in width along the property fronting the medical office building at the southeast corner of the 2nd Avenue/Imjin Parkway intersection in order to provide sufficient clearance between the bicycle/pedestrian path and the existing building landscaping and utility equipment.

A bus rapid transit station location has been identified along this corridor segment at 4th Avenue. At the 4th Avenue station, transit island bus stops are provided, with a far-side stop in the westbound and eastbound directions. At this station, buses stop in the dedicated bus only lane for passenger loading and the bike lanes continue along the curb behind the raised transit islands. Pullouts are provided for local bus stops along Imjin Parkway to avoid the dwelling of local buses reducing bus rapid transit travel times.



Existing conditions, looking west on Imjin Parkway towards 2nd Avenue. Transit priority will be provided to improve bus movements through the intersection.



Existing conditions on Imjin Road near California Avenue. Bus-only lanes are proposed to be added in addition to a wider mixed-use path on the south side of the roadway.

Figure 9-14: Typical Cross Section: Imjin Parkway (Reservation Road to Imjin Road)

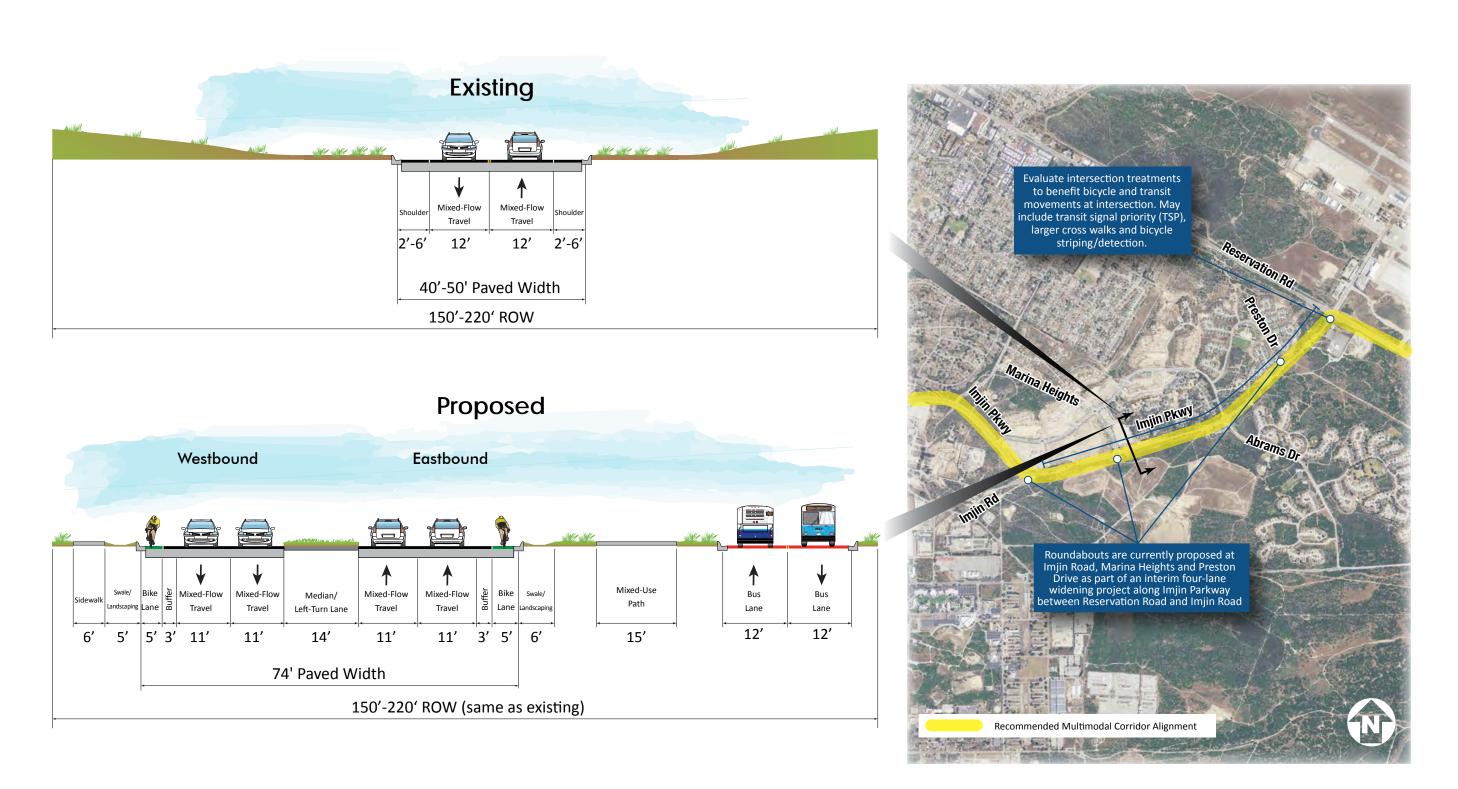
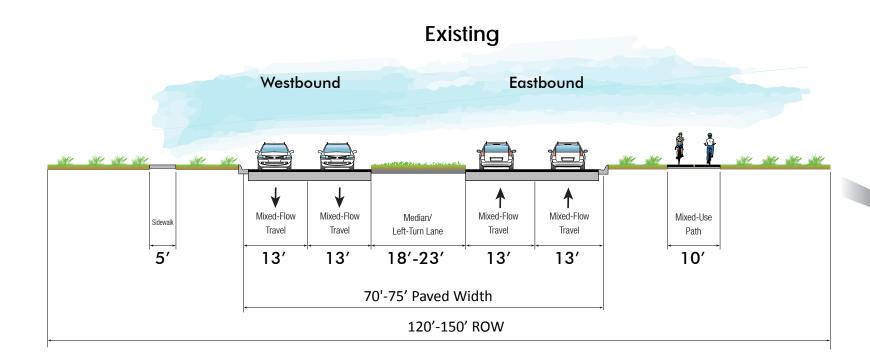
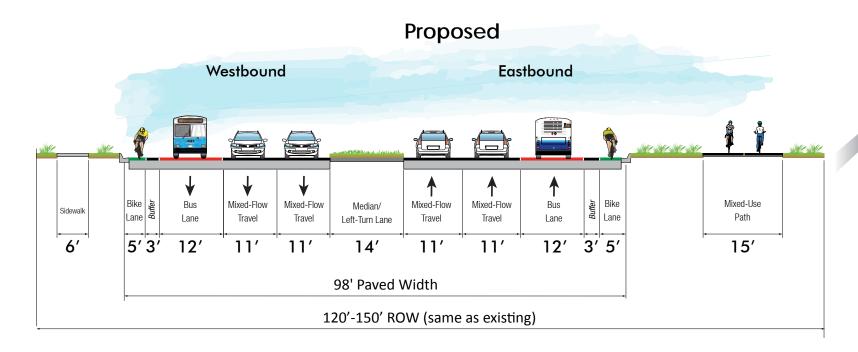
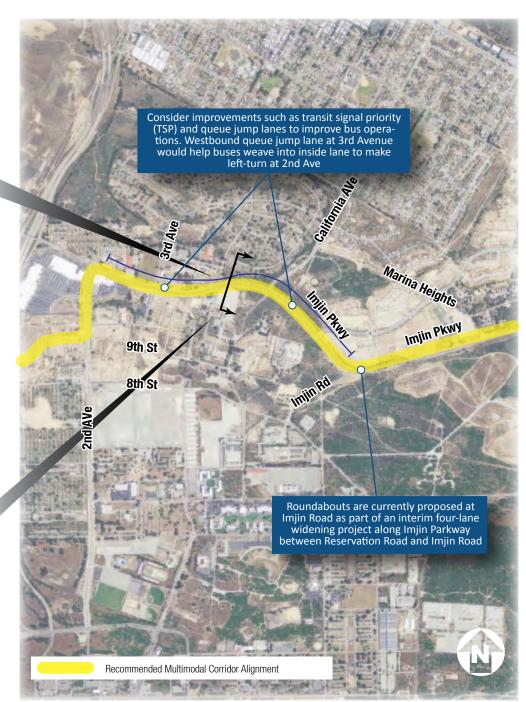


Figure 9-15: Typical Cross Section: Imjin Parkway (Imjin Road to 2nd Avenue)







#### 2nd Avenue Segment

#### Enhanced Elements of the Recommended Design:

The following enhanced design elements are included in the design concepts for the 2nd Avenue segment of the multimodal corridor:

- Mixed-Use Pedestrian/Bicycle Path;
- Bike Lanes:
- Bicvcle Detection:
- Dedicated Bus Lanes;
- Transit Island (southbound BRT station):
- Green Pavement Treatment; and
- High-Visibility Crosswalk Striping and Signs.

From Imjin Parkway, the multimodal corridor alignment follows 2nd Avenue through the heart of The Dunes at Monterey Bay development to 9th Street. Key activity centers along this segment include the Dunes Shopping Center, the Peninsula Wellness Center, and planned residential and commercial development. Given the development intensity planned along 2nd Avenue, there are significant opportunities to attract transit riders and facilitate multimodal travel. The design elements for this segment of 2nd Avenue improve access to transit and provide safe and attractive facilities for bicycle and pedestrian travel.

The existing 2nd Avenue street section includes two to four travel lanes with turn lanes at intersections, a raised center median and curb and gutter. There are sidewalks along the west side of the street fronting the Dunes Shopping Center and an eight-foot wide mixed-use path exists along the east side of the street. While this path provides the advantage of a separated right-of-way for bicycles and pedestrians, the existing width is narrower than desired for this type of facility.

**Figure 9-16** shows the typical cross section design for the segments of 2nd Avenue between Imjin Parkway and 9th Street. A more detailed concept-level plan line of the designs for this corridor segment is provided in **Appendix D**.

#### Street Design Characteristics:

**Figure 9-16** shows the design concept for the multimodal corridor segment along 2nd Avenue; it includes widening of the roadway to provide two mixed-flow travel lanes in each direction, a narrower center median, a widened mixed-use bicycle/pedestrian path along the east side of the street, and a new eight-foot sidewalk along the west side of the street. The sidewalk on the west side is limited to six feet for one block south of General Stillwell Drive due to limited right-of-way availability. Under Option A, a dedicated bus only lane is provided in each direction adjacent to a curb-running six-foot wide bike lane in each direction. Option B, also shown in **Figure 9-16**, swaps the location of the bike and bus lanes, providing buffered bike lanes between the mixed-flow travel lanes and the curbrunning bus only lane. The community and stakeholders indicated a preference for the configuration shown in Option A. The concept-level plan line provided in **Appendix D** reflects the Option A configuration.

The northbound intersection approach at 2nd Avenue/Imjin Parkway is widened to provide width for a second right-turn lane, reserved for bus and bike use only. This configuration allows buses to bypass northbound congestion at this intersection.

A bus rapid transit station is located at the 2nd Avenue/General Stillwell Drive intersection. In the northbound direction, the stop is far-side along the curb, within the dedicated bus-only lane. In the southbound direction, the stop is on a transit-island, just north of the private roadway.



Existing conditions on 2nd Avenue looking south from Imjin Parkway. Roadway striping is proposed to be modified to provide a continuous bike connection along 2nd Avenue to Imjin Parkway.



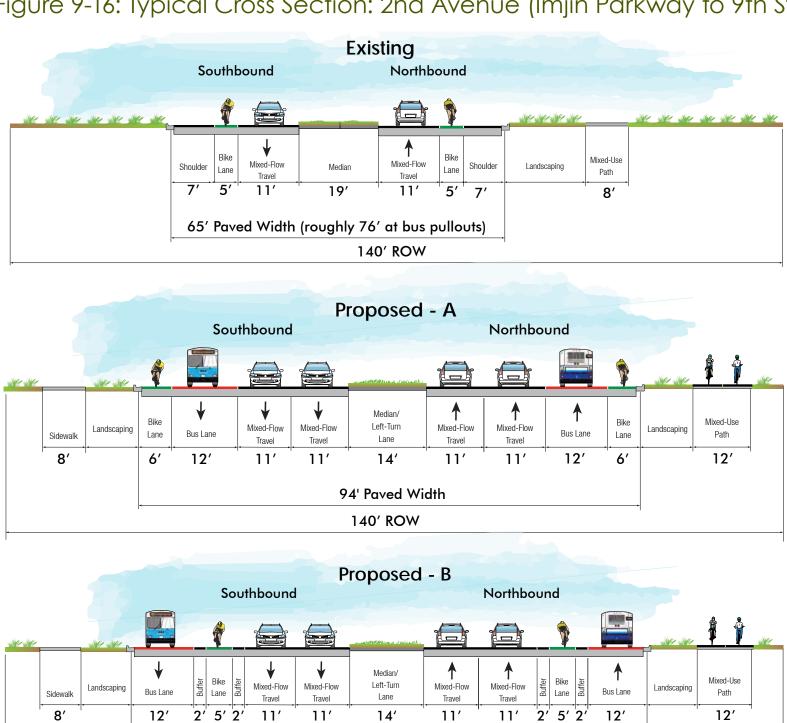
Existing conditions on 2nd Avenue south of 10th Street. Bus-only lanes and a wider mixed-use path are proposed for this segment along with planned roadway widening.

#### 9th Street / 8th Street Segments

The multimodal corridor alignment extends west from 2nd Avenue along 9th and 8th Streets to the western terminus of the corridor at the proposed Monterey-Salinas Transit Center, along the north side of 8th Street and just east of Highway 1. 8th and 9th Streets will be constructed in conjunction with the first phase of The Dunes at Monterey Bay development. Key activity centers along this segment of the corridor include the Veterans Administration Clinic, currently under construction, a city park to be constructed south of 9th Street, the proposed Monterey-Salinas Transit Center, and planned residential and commercial development as part of The Dunes at Monterey Bay project. There are additional opportunities for multimodal connections to the Monterey Bay Scenic Sanctuary Trail, the Fort Ord Dunes State Park, and the future Monterey Branch Line Station to be located just west of Highway 1, south of 8th Street.

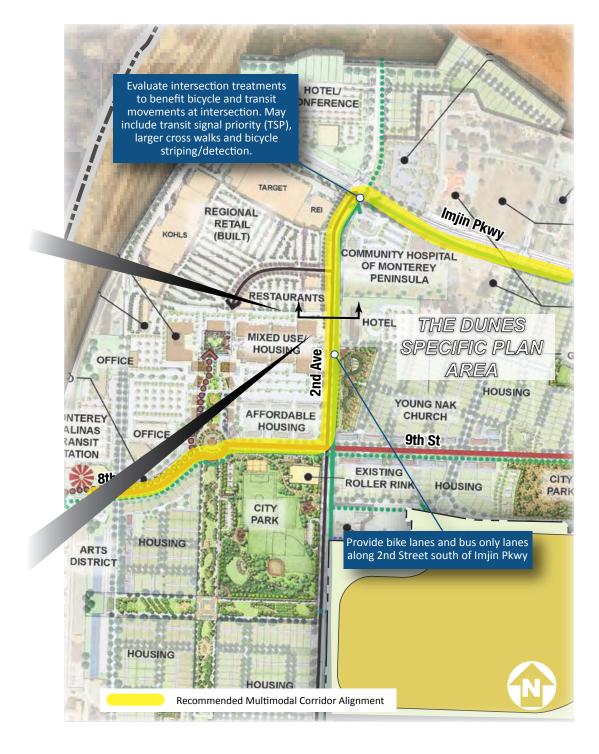
The Dunes at Monterey Bay Specific Plan classifies the future segments of 9th and 8th Streets west of 2nd Avenue as a neighborhood street/transit corridor. The streets will be constructed by the developer to provide two travel lanes, on-street bike lanes, some on-street parking, sidewalks and planting strips. A roundabout will be placed along 9th Street at the entrance to the Veterans Administration Clinic. Between 2nd Avenue and that roundabout, an 11-foot multi-purpose path will be provided on the south side of the street. Sufficient right-of-way is planned to provide for continuation of the multi-purpose path to the transit center, although that extension is not included in the initial phase of construction.

Figure 9-16: Typical Cross Section: 2nd Avenue (Imjin Parkway to 9th Street)



100' Paved Width

140' ROW



### 10. PROJECT COSTS AND IMPLEMENTATION PRIORITIZATION

#### Project Prioritization/Phasing

The recommended corridor alignment extends approximately 12.6 miles between Marina and Salinas through multiple jurisdictions. Improvements to each of the segments are in varying states of readiness, with some already in design and others not yet incorporated into regional plans. Some of the improvements are associated with already planned major roadway widening projects, while others are smaller-scale and focused in enhancing bicycle and pedestrian facilities. As a result, it is anticipated that the multimodal corridor improvements will be implemented in stages, as funding becomes available and the projects are advanced by their respective jurisdictions.

Relatively low-cost improvements, such as the proposed re-striping of Alisal Street and Lincoln Avenue, are likely to be implemented first. Other improvements, such as those proposed for Davis Road and Imjin Parkway, are already in the preliminary design phases and are likely to be constructed in the near-term. Some corridor segments, such as the Reservation Road segment between Davis Road and East Garrison, face significant design challenges and will likely be long-term projects. Even as improvements are implemented on a segment-by-segment basis, immediate benefits can be realized in terms of local bicycle and pedestrian safety and mobility. While some transit-specific benefits will be attained with development of incremental corridor improvements, the greatest benefit to transit travel time savings requires the development of a continuous corridor.

This plan splits the corridor segments into tiers to reflect their expected construction readiness. Bicycle and pedestrian improvement projects are generally lower-cost, require a shorter lead-time to implementation, and are easier to implement in stages. The transit improvements will require implementation across much of the corridor before a complete bus rapid transit-type service is viable. In addition, some of the transit improvement projects will require a more substantial environmental review process and, in some cases, right-of-way acquisition, requiring a longer lead time to implementation. The proposed projects by tier are listed below:

- **Tier I Improvements** corridor segments with low-cost and/or easily implementable improvements:
  - » Downtown Salinas Segments (Alisal Street and Lincoln Avenue)
    - Portion of project associated with re-striping and accompanying traffic control improvements, including Alisal Street road diet, to enhance pedestrian and bicycle facilities
  - » Alisal Street (Downtown Salinas to Blanco Road)
    - Portion of project associated with re-striping and accompanying traffic control improvements, including Alisal Street road diet, to provide enhanced bicycle and pedestrian facilities
  - » Marina Bike Lane Gap Closure (2nd Avenue and Imjin Parkway)
  - Close gap in existing bike lanes between 2nd Avenue & 10th Street and Imjin Parkway & Imjin Road. Includes re-striping only. Without curb modifications and roadway widening, this may require reducing the number of travel lanes in this segment of 2nd Avenue. Further development of the improvement will be required to identify the resulting roadway configuration.

- **Tier II Improvements** corridor segments with design currently underway and/or roadway improvements are fully or partially-funded:
  - » Davis Road (Blanco Road to Reservation Road)
  - » Imjin Parkway (Reservation Road to 2nd Avenue)
    - Portion of project associated with widening and reconfiguration of mixed-use pedestrian/ bicycle path west of Imjin Road and extension of path to Reservation Road
  - » Imjin Parkway (Reservation Road to Imjin Road)
    - Roadway widening and roundabout installation
  - » 2nd Avenue (Imjin Parkway to 9th Street)
    - Portion of project associated with widening and reconfiguration of existing mixed-use pedestrian/bicycle path
  - » Lincoln Avenue extension to the Salinas Intermodal Transportation Center
  - » 8th/9th Streets (MST Transit Center at 8th Street, to 2nd Avenue)
- Tier III Improvements corridor segments with improvements in adopted plans and without significant design constraints:
  - » Downtown Salinas Segments (Alisal Street and Lincoln Avenue)
  - Construction of BRT stations and other transit improvements
  - » Alisal Street (Downtown Salinas to Blanco Road)
    - Construction of BRT stations and other transit improvements
  - » Blanco Road (Alisal Street to Davis Road)
  - » Reservation Road (Davis Road to East Garrison)
    - Construct a two-way cycle track
  - » Reservation Road (East Garrison to Imjin Parkway)
  - Construct a mixed-use pedestrian/bicycle path
  - » Imjin Parkway (Reservation Road to Imjin Road)
    - Busway, BRT stations and associated transit improvements
  - » 2nd Avenue and Imjin Parkway (Imjin Parkway to 9th Street)
    - Roadway widening, addition of bus-only lanes and construction of BRT stations
- Tier IV Improvements corridor improvements with significant design constraints and/or dependent on future improvements whose timing is uncertain:
  - » Reservation Road (Davis Road to East Garrison)
    - Widening of Reservation Road to 4 lanes
  - » East Garrison Segments
  - » 8th Street MST Transit Center

**Figure 10-1** identifies the proposed project prioritization and phasing by roadway segment.

Implementing improvements in the more urbanized areas and on roadways currently experiencing congestion will generally provide the greatest benefit. Thus, the pedestrian and bicycle improvements along Lincoln Street, Alisal Street, Imjin Parkway, and 2nd Avenue should be considered the highest priority. These improvements will provide immediate benefits to bicycle circulation and pedestrian safety.

#### **Interim Alignment**

If BRT service is implemented before the recommended improvements along Reservation Road and through East Garrison can be feasibly implemented, then Blanco Road will be used as an interim connection for BRT service between Salinas and Reservation Road in Marina. To enhance bus service along the interim alignment, further development of improvements should be considered to improve transit operations along this segment (i.e. TSP, Queue Jumps, etc.).

#### Cost Estimates

Based on the concept-level configuration of the corridor shown in **Appendix D**, an opinion of probable cost was prepared for the proposed project.

Table 2 identifies the estimated cost breakdown by segment/project phase below.

As shown in the table, the total cost of improvements is \$169,494,000. This overall cost is in large part attributable to challenging roadway widening projects, including Davis Road and Imjin Parkway. Constructing these improvements represents the anticipated long-term build-out of these roadways (with the exception of Reservation Road between East Garrison and Davis Road) and thus includes planned long-term enhancements to auto circulation, as well as transit, bicycle, and pedestrian circulation. The cost associated with bicycle and pedestrian improvements are, in several cases, only a fraction of the total cost for each segment. The cost for transit improvements for several segments are closely tied to the overall roadway widening cost as the widening is to provide bus-only lanes or reduce congestion that may be experienced by the bus in mixed-flow lanes.

The cost estimates identified in this study represent high-level preliminary estimates of project costs and will ultimately need to be refined with additional levels of engineering, geotechnical and structural review. Additional cost details are provided in **Appendix E**.

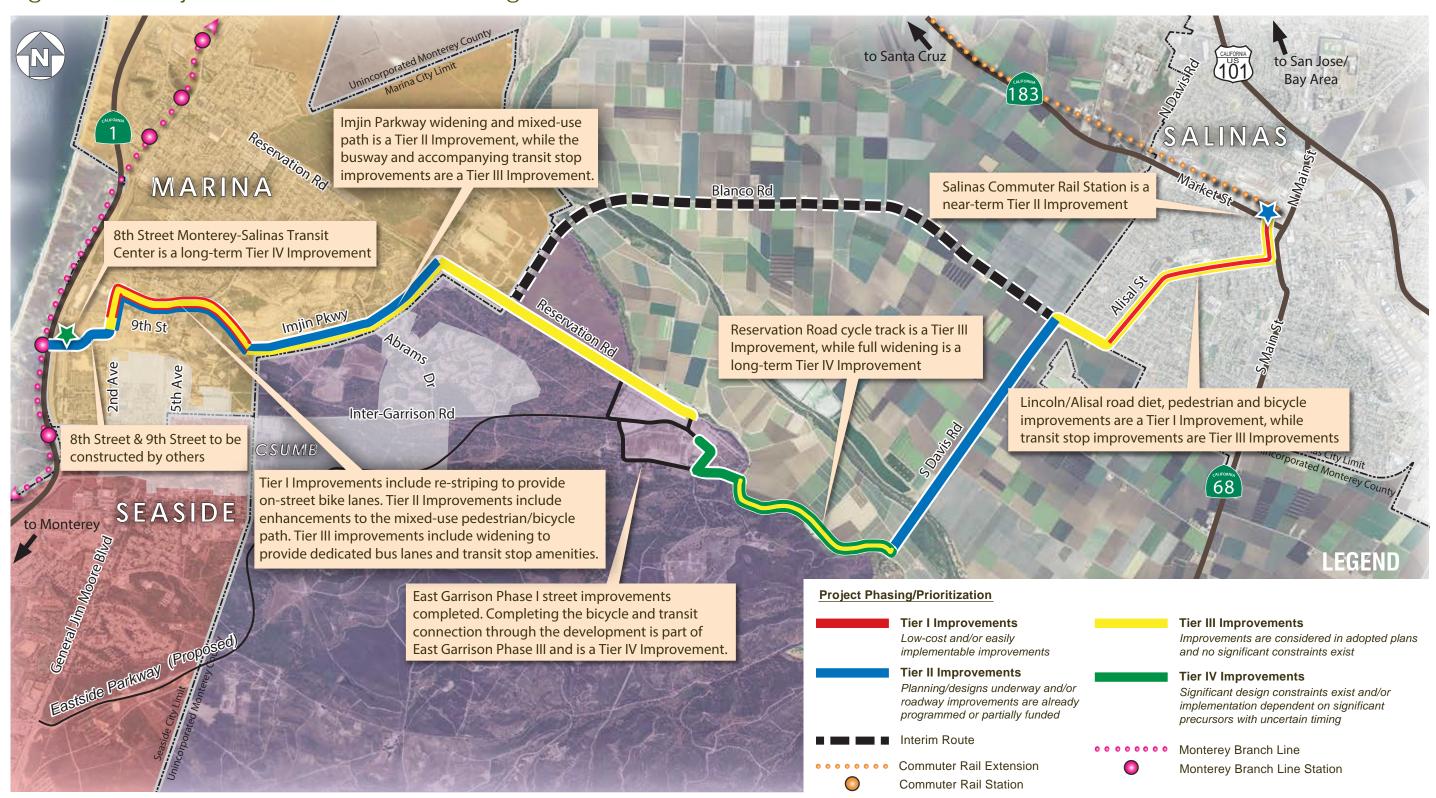
**Table 2: Opinion of Probable Cost by Segment** 

Corridor Segment	Tier I	Tier II	Tier III	Tier IV	Total
	Improvements	Improvements	Improvements	Improvements	Cost
Lincoln Avenue Segment	\$1,258,000 <sup>1</sup>		\$821,0002		\$2,079,000
Alisal Street Segment	\$1,581,000 <sup>1</sup>		\$3,694,000 <sup>2</sup>		\$5,275,000
Blanco Road Segment			\$6,015,000		\$6,015,000 <sup>3</sup>
Davis Road Segment		\$57,500,0004			\$57,500,0005
Reservation Road (Davis Road to East Garrison)			\$10,214,000	N/A <sup>6</sup>	\$10,214,0005
East Garrison Segments				\$2,614,000	\$2,614,000
Reservation Road Segment (East Garrison to Imjin			\$17,957,000		\$17,957,000
Parkway)			\$17,937,000		\$17,937,000
Imjin Parkway Segment (Imjin Road to Reservation		\$26,608,000 <sup>7</sup>	\$7.946.0008		\$34,554,0005
Road)		\$20,000,000	φ1,940,000		φ34,334,000
Imjin Parkway Segment (2nd Avenue to Imjin Road)	\$51,000°	\$2,025,00010	\$23,558,00011		\$25,634,000
2nd Avenue Segment	\$20,0009	\$740,00010	\$6,892,00011		\$7,652,000
9th Street/8th Street Segments		N/A <sup>12</sup>			N/A <sup>12</sup>
Total	\$2,910,000	\$86,873,000	\$77,097,000	\$2,614,000	\$169,494,000 <sup>13</sup>

#### Notes:

- 1) Includes bicycle and pedestrian striping improvements and full asphalt overlay 2) Includes transit improvements
- 3) Capacity improvements are included in City of Salinas Traffic Fee Ordinance
- 4) Cost estimate based on current estimate provided by Monterey County. Still undergoing refinement
- 5) Capacity improvements are included in the TAMC Regional Impact Fee Program
- 6) The Tier IV improvement is to widen to four lanes. This will require significant grading and right-of-way acquisition. Further design is required to prepare a cost estimate.
- 7) Includes roadway widening and mixed-use path improvements
- 8) Includes busway, busway intersection control, and BRT station facilities
- 9) Includes restriping to add bike lanes where they are not currently provided. 10) Includes mixed-use path improvements only
- 11) Includes roadway widening, intersection improvements, and bus priority features.
- 12) All improvements assumed to be completed by The Dunes developer
- 13) The total cost for segments with improvements split into multiple phases would be moderately less if all of the improvements for that segment were to be conducted simultaneously due to additional mobilization and traffic control costs

Figure 10-1: Project Prioritization and Phasing



#### 11. LAND USE IMPLICATIONS

Land use and transportation are intrinsically tied to one another. Development of an efficient transportation system that serves the diverse needs of various travel modes and users cannot be achieved without considering the context of existing and future land use and development plans. As population and employment growth continues within Monterey County, it is important that development and transportation planning are closely coordinated in order to provide mobility in a manner that is consistent with local and regional sustainability goals. This section includes an assessment of land use implications of the Marina-Salinas Multimodal Corridor, including the identification of potential opportunity sites and policy recommendations to support transit-oriented development investment along the corridor.

#### **TOD Benefits and Challenges**

Transit-oriented development is a type of community development that includes a mixture of uses and amenities integrated into a walkable neighborhood and located within close proximity (typically within a half-mile) of quality public transportation. Transit-oriented development is beneficial for a community because it:

- Reduces vehicle trips and rates of vehicle miles traveled, which in turn lowers traffic congestion, air pollution and greenhouse gas emissions and increases travel time;
- Reduces parking needs, which allows for the use of land for other higher purposes and reduces development costs;
- Increases transit ridership and fare revenue;
- Supports the creation of walkable communities that accommodate more active and healthy lifestyles:
- Raises property values where transit and multimodal investments have occurred;
- Improves access to jobs and economic opportunity for low-income people and working families;
- Reduces household transportation costs, which increases disposable income.

While there are numerous benefits associated with TOD, there are also many common barriers to implementing successful transit-oriented development, including:

- Existing land use codes often make it challenging to implement transit-oriented development (maximum density limits, minimum parking requirements, and restrictive zoning for properties near high-quality transit facilities);
- Traditional auto-oriented development ordinances are designed to ensure that sufficient parking is
  provided and appropriate vehicular transportation improvements are made, but considerations for
  transit and active transportation infrastructure are limited; and
- Transit-oriented development, infill and mixed-use development types are still a relatively new
  product in some areas; thus, there is often some initial hesitation/caution within the private
  development community and the public sector.

### Opportunities for Transit-Oriented Development

The planning team reviewed local planning documents (General Plans, Specific Plans), development proposals, existing and projected population and employment densities, parcel data and other available information provided by stakeholder agencies to identify parcels where potential transit-oriented development opportunities exist within the vicinity of the multimodal corridor. **Figure 11-1** identifies these key opportunity sites within downtown Salinas, while **Figure 11-2** identifies key opportunity sites within the City of Salinas outside of downtown. **Figure 11-3** identifies the key opportunity sites in the City of Marina and unincorporated Monterey County.

The Salinas Downtown Vibrancy Plan team worked closely with a Downtown Stakeholder Team to identify opportunity sites and develop recommendations for transit-oriented development and infill projects that will encourage the revitalization of downtown.

**Appendix F** is a table of the zoning and allowable uses for the opportunity sites identified in the figures.

### Transit-Oriented Development Policy Recommendations

The implementation of policies that support transit-oriented development generally occurs at the municipal level. The goal of these policies is to focus development in close proximity to high-quality transit and reduce reliance on the automobile for the end users of that development. A number of policies can be implemented to guide zoning, density, aesthetics, and infrastructure requirements to maximize the benefits of a transit-oriented development. Some policies that would particularly support the Marina-Salinas multimodal corridor are:

- Require sites along the corridor to have pedestrian access to the multimodal corridor;
- Place walkways and bicycle facilities immediately adjacent to the corridor;
- Require new developments to dedicate right-of-way and construct transit, pedestrian and bicycle facilities adjacent to the corridor;
- Establish a minimum requirement for on-site bicycle parking;
- Require or incentivize the implementation of Transportation Demand Management programs, such
  as the provision of transit passes or safe bicycle parking for employees;
- Abolish parking ordinances that require a minimum level of parking and/or implement parking ordinances that establish maximum parking levels;
- Provide density bonuses, height limit exceptions, or establish zoning overlays for parcels in close proximity to the corridor;
- Streamline the development permitting process for transit-oriented development parcels along the corridor; and
- Establish traffic impact fee reductions for developments along the corridor based on expected trip generation rate reductions, particularly for those implementing transportation demand management programs.

Some of these policies already exist within the municipalities encompassing the multimodal corridor. Success of the corridor will be enhanced if TAMC and the municipalities coordinate on expanding transit-oriented development-supportive policies and ordinances where appropriate.

Figure 11-1: Downtown Salinas Opportunity Sites

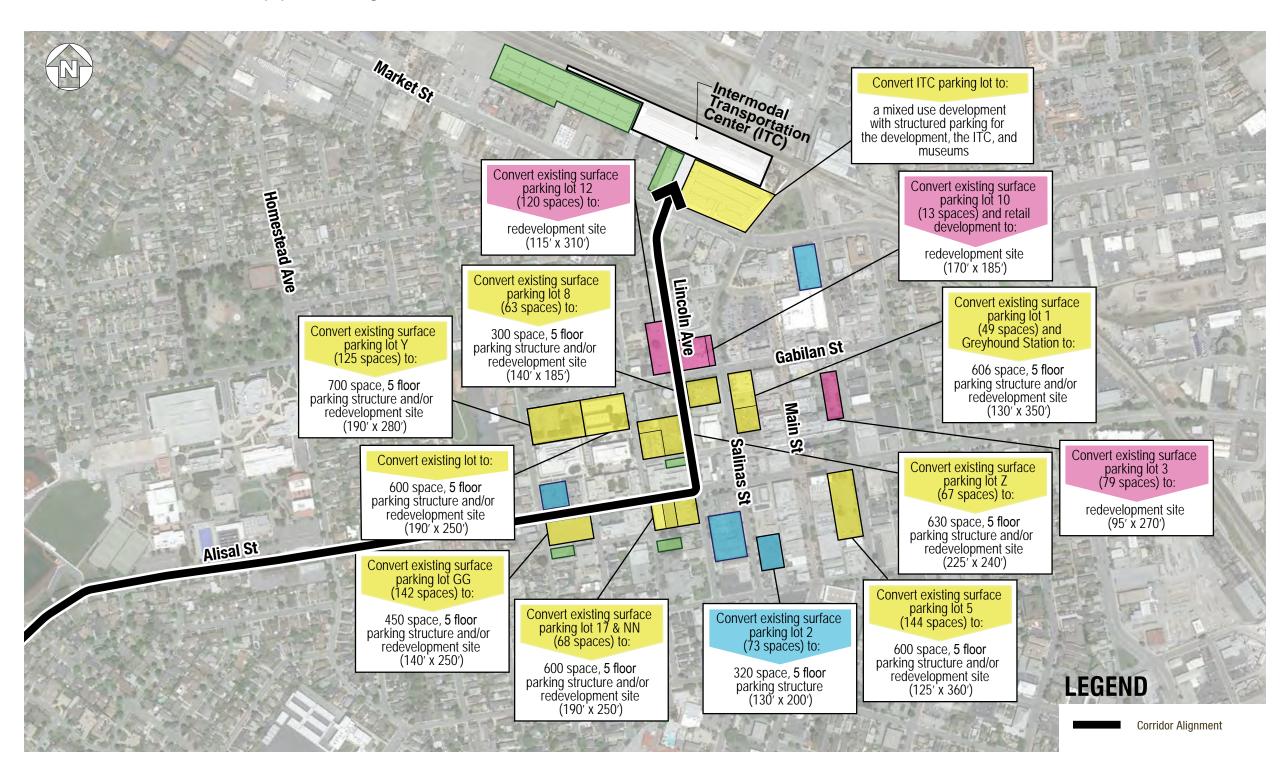
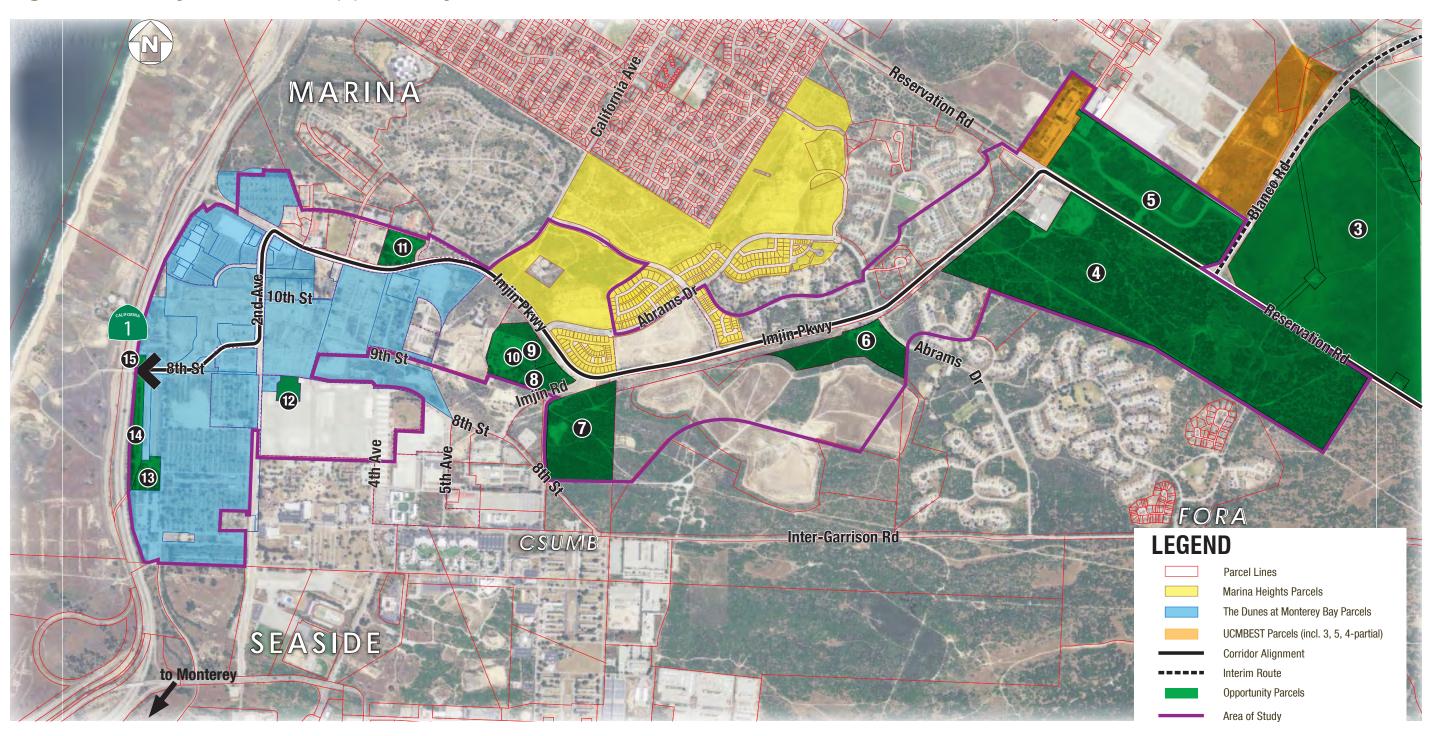


Figure 11-2: City of Salinas Opportunity Sites



Figure 11-3: City of Marina Opportunity Sites



# 12. PHASE 2 STAKEHOLDER COORDINATION AND PUBLIC OUTREACH

Stakeholder coordination and public outreach was a critical component of Phase 2 of this study. TAMC and the project consultant team held regular coordination meetings with staff of the partner agencies to provide project updates and discuss detailed design considerations for the multimodal corridor. The team also made presentations to and took input from the City Councils along the corridor, the County Boards of Supervisors, and FORA Board of Directors.

Public outreach during Phase 2 focused on two workshops held in mid-October 2014. One workshop was held in Salinas and the other in Marina. Information about the projects and the workshops was distributed through a number of avenues, including e-mail blasts, print publications, mailing lists, announcements at other public meetings, and flyers. The workshops also were covered by local news stations. At these workshops, the project team presented the background on the multimodal corridor study, the preferred alignment, information on the range of multimodal facilities under consideration, and options for specific roadway configurations. Attendees were given the opportunity to discuss the range of solutions being considered with the project team and provide input on preferred strategies and features.

In addition, TAMC posted project materials to the project website for download, and conducted a survey to obtain additional public input and better understand how the corridor was currently being utilized. The survey was distributed to local government employees, college students, and attendees at the public meetings.

The team also held follow-up meetings with key stakeholders, including the Farm Bureau and local developers, and provided project updates to the regional Bicycle and Pedestrian Advisory Group.



Workshop attendees indicates station location preferences in a hands-on activity at a Phase 2 public workshop.

#### 13. RELATED PROJECTS

There are several other planned or proposed transportation projects that may benefit or benefit from the Marina-Salinas Multimodal Corridor. These projects will serve to further enhance the local and/ or regional multimodal transportation system within Monterey County. The following projects may integrate with the Multimodal Corridor as they proceed towards implementation:

- East Alisal Street Corridor Study TAMC is currently pursuing grant funds for a corridor study for East Alisal Street in Salinas, a key travel route between East Salinas and Downtown Salinas. During public outreach activities for the Marina-Salinas Multimodal Corridor, which currently includes West Alisal Street between Blanco Road and Salinas Street, agency staff received significant interest in extending the Multimodal Corridor into East Salinas along East Alisal Street. It is currently a high ridership transit corridor with a large transit-dependent population. The East Alisal Street Corridor Study would develop a plan to continue multimodal improvements similar in fashion to those recommended for the Marina-Salinas corridor to the eastern Salinas neighborhoods along East Alisal Street.
- Highway 68 Corridor Study —TAMC has allocated funds and is currently pursuing additional grant funding to study the Highway 68 corridor between Salinas and Monterey. The Highway 68 Corridor is a key travel route between Salinas and the Monterey Peninsula and is subject to heavy auto congestion during peak travel times and major events. By enhancing throughput and circulation along the Highway 68 corridor, some auto demand pressure on the Marina-Salinas corridor may be alleviated. Currently, many commuters use Imjin Parkway, Reservation Road, and Blanco Road as an alternative to a congested Highway 68.
- Fort Ord Recreational Trail and Greenway The Fort Ord Recreation Trail and Greenway (FORTAG) is a proposed 30-mile regional network of paved recreational trails and greenways within Monterey County connecting communities to open space. The proposed trail includes a 13-mile northern loop encircling Marina and a 15-mile southern loop that encircles Seaside and bisects Del Rey Oaks. The Marina-Salinas Multimodal Corridor alignment would potentially connect with the FORTAG where the proposed northern trail loop crosses Reservation Road within Marina near the Imjin Parkway/Imjin Road intersection. At this point in time, funding for the FORTAG project has yet to be identified and the ultimate construction date is to be determined.
- 2nd Avenue Extension The City of Marina is currently assembling funds to implement a
  planned extension of 2nd Avenue north of Imjin Parkway to Reindollar Avenue. The 2nd Avenue
  Extension is included as a funded project within the City's current Capital Improvement Program,
  with full funding targeted by fiscal year 2015/2016. The 2nd Avenue extension will provide
  a critical link between the Multimodal Corridor and Downtown Marina. The completion of the
  extension is anticipated to increase demand for multimodal facilities along the portion of 2nd
  Avenue that lies along the Multimodal Corridor.
- Monterey Branch Line Busway In 2003, TAMC purchased the Monterey Branch Line alignment, an existing rail spur extending between Monterey and Castroville. In the following years, TAMC and MST progressed with planning efforts to evaluate the potential for future fixed guideway service along the Monterey Peninsula, including a planned station near 8th Street and Highway 1 in Marina. MST is proposing to build an express busway adjacent to the railroad tracks in the Monterey Branch Line right-of-way. The busway will connect to the Marina-Salinas Multimodal Corridor at 8th Street providing unhindered bus travel from Marina to Downtown Monterey.

#### 14. CONCLUSIONS & NEXT STEPS

Providing multimodal facilities along the Marina-Salinas corridor will provide a critical link in the regional transportation network, connecting two growing regions and connecting the two major regional transit corridors: the Union Pacific Coast Rail Line and the Monterey Branch Line. The multimodal corridor will also support the region's long-range transportation plan to meet aggressive sustainability and emissions reduction goals through an emphasis on transit and active transportation.

Over the course of this project, consensus was reached in support of a preferred multimodal corridor alignment extending from Marina through unincorporated Monterey County to Salinas. The study further defined, and built consensus around, the type and configuration of facilities to be provided along the corridor. Facilities proposed for the corridor reflect a wide range of solutions to improve safety and travel time for bicyclists, pedestrians and bus riders. Collectively, the improvements proposed in this plan will:

- Reduce transit travel time and improve travel time reliability, making transit a more competitive travel mode:
- Improve the visibility and perception of transit as an alternative travel mode;
- Provide options for regional commuter and recreational bicyclist travel;
- Enhance the cycling experience by creating a greater separation from automobile traffic;
- Improve pedestrian safety in urban areas;
- Contribute towards the vibrancy of urban areas by encouraging pedestrian and bicycle activity; and
- Connect different travel modes and systems, providing an integrated transportation network.

Achievement of these outcomes will encourage more people to bike, walk and take the bus, which will provide greater mobility for those who cannot drive, healthier options for residents of all income levels, and reduce greenhouse gas emissions.

By defining the multimodal corridor alignment and its components, transit, bicycle and pedestrian-friendly features can be integrated into improvements along the corridor as they are being designed. This plan can be utilized as a starting point for the identification of funding, environmental evaluation, engineering design, and further regional planning efforts. With adoption, the multimodal corridor plan will be incorporated into the TAMC Regional Transportation Plan (RTP), which provides a basis for identifying projects and funding for transportation improvements over a long-range 20-year timeframe. The Marina-Salinas Multimodal Corridor is currently included in the 2035 TAMC Regional Transportation Plan project list; however, this study will provide additional details to guide further development, funding, and prioritization of these improvements.

For many segments, the next step will be preliminary engineering and environmental review. Further engineering development will include the preparation detailed plan lines that better define the needed right-of-way and easements with the proposed concept. This would require further analysis of utility conflicts, topography, drainage requirements, soil conditions, and structural elements. Environmental review will evaluate the effects of the project on the surrounding community, including an analysis of noise, air quality, construction, sensitive habitat, cultural resources, historical resources, hazardous materials, and other possible effects of the project. Impacts and mitigations, if any, will be identified. The environmental analysis will include further analysis of project alternatives, providing additional opportunity for alternatives or modifications to the proposed concept to be evaluated. Public outreach is a required element for any significant environmental process. Progressing through preliminary engineering and environmental review can be a lengthy and intensive process and will be a

determining factor in the timing of the proposed improvements.

The public entities that control development patterns can utilize this plan to tailor zoning and development regulations to maximize the use of the multimodal transportation facilities planned for the corridor. Implementing transit-supportive policies for developments in the corridor will further help the region meet sustainability goals while also securing the success of the multimodal features to be implemented.

One of the principal hurdles in implementing the bulk of the planned improvements is identifying sufficient funding. By identifying the corridor and the type of features to be included in the improvements, this plan will aid in identifying and pursuing funding. A collection of different funding sources will likely be required to implement this project. These sources include a collection of local and regional funds, State and Federal grants

TAMC, Monterey County, the City of Salinas, and the City of Marina can utilize the cost estimates prepared for this study to update their traffic impact fee programs for new development. Roadway improvements along the preferred alignment are already accounted for to some degree in the fee programs of TAMC, FORA, Marina, and the City of Salinas. In the next update of each of the respective fee programs, the cost estimates for those roadway improvements should be updated to reflect the improvements included in this plan. Traffic impact fee funding can be further leveraged as a local match for larger regional, state or federal grant programs.

The project's overarching transit feature is the implementation of bus rapid transit service between Marina and Salinas. The Federal Transit Administration has a New Starts funding program to assist local transit agencies in the implementation of capital projects to support new or expanded transit service. A subset of the program, Small Starts, commonly funds bus rapid transit projects throughout the Country. Small Starts funds could be utilized to construct everything from the bus shelters to traffic signal improvements to even roadway improvements that include enhanced transit facilities. This program was utilized to construct the Monterey-Salinas Transit Jazz bus rapid transit route that was recently implemented on the Monterey Peninsula. Further analysis will be required to evaluate the competitiveness of the bus rapid transit route included in this plan for Small Starts or Very Small Starts funding.

The closer the project is to implementation, the more competitive it will be for the numerous grant funding opportunities. With the substantial pedestrian and bicycle amenities included in the plan, this project should be very competitive for a variety of regional, state and federal grant programs. Identification of potential sources of funding is a clear next step in bringing this plan to fruition.



Marina-Salinas Multimodal Corridor Development Opportunity Sites

Map#	Parcel #	Jurisdiction	Existing Land Use Designations	Ownership	Planning Area or Planned Development	Existing Uses	Allowable Uses
15	031-221- 004	City of Marina	Public Facilities (City of Marina); Planned Development Mixed Use (FORA)	TAMC	Dunes Specific Plan	Vacant Former Fort Ord Buildings	Public Facilities: Intended to accommodate existing and planned community facilities, including schools, police and fire facilities, civic uses, utilities, and various transportation-related facilities.  Planned Development Mixed Use. The Planned Development Mixed Use Base Designation allows a variety of land uses intended to create pedestrian-oriented communities. A variety of residential uses are allowed at a density up to 20 units per gross acre. Residential product types may include both detached and attached multifamily units as well as residential units integrated into other allowed uses. A variety of commercial and civic land uses are allowed and encouraged including retail, commercial, professional office and studios, entertainment, cultural centers, civic centers, transit centers, schools, churches, and day care centers.



