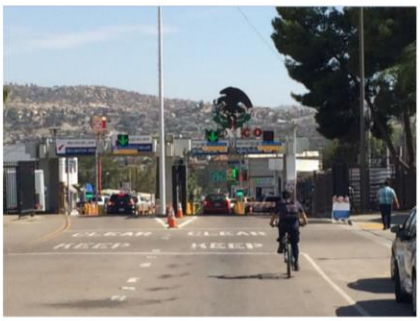
IMPERIAL COUNTY TRANSPORTATION COMMISSION

PEDESTRIAN AND BICYCLE TRANSPORTATION ACCESS STUDY FOR THE CALIFORNIA/BAJA CALIFORNIA LAND PORTS OF ENTRY



KOA CORPORATION
PLANNING & ENGINEERING

IMPERIAL COUNTY TRANSPORTATION COMMISSION

Caltrans

SANDAG

Final Report
February 2015

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

ACKNOWLEDGEMENTS

Lead and Partner Agencies

Imperial County Transportation Commission (ICTC) – Lead Agency
California Department of Transportation (Caltrans)
San Diego Association of Governments (SANDAG)
Secretaría de Infraestructura y Desarrollo Urbano del Estado (SIDUE)

Funding

State Highway Planning and Research Funds Program

Agency Working Group

Caltrans
City of Calexico
City of San Diego
County of Imperial
County of San Diego
ICTC
Instituto de Administración y Avalúos de Bienes Nacionales (INDAABIN)
Instituto Metropolitano de Planeación de Tijuana (IMPLAN) and the Municipio de Tijuana
Instituto Municipal de Investigación y Planeación de Mexicali (IMIP) and the Municipio de Mexicali
Municipio de Tecate
SANDAG
SIDUE
Southern California Association of Governments (SCAG)
U.S. Customs and Border Protection (CBP)
U.S. General Services Administration (GSA)

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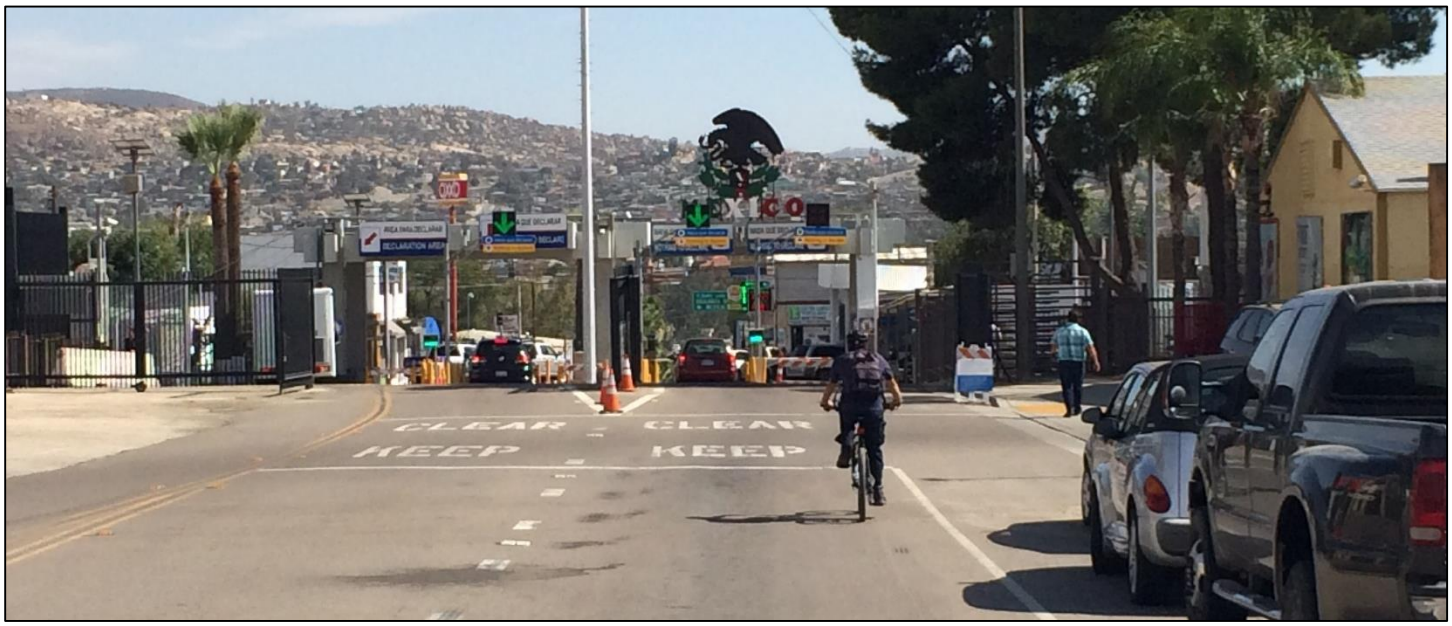
1.0 EXECUTIVE SUMMARY



A bicyclist rides towards the Tecate/Tecate POE

35.5 million

The combined total of pedestrians and bicyclists who crossed the U.S./Mexico international border through the California/Baja California POEs in 2013

California and Baja California share a 150-mile international border extending from the Pacific Ocean to the Colorado River. In 2013, 35.5 million pedestrians and bicyclists crossed the border at one of the six land ports of entry (POEs) providing access to travelers between California and Baja California[1,2]. Several previous studies have analyzed passanger and commercial vehicle travel at the border as well as economic impact of binational travel. However, there has never before been a study to assess the cross-border infrastructure for pedestrians and bicyclists at either the United States' southern border with Mexico or northern border with Canada. As a result, the California State Department of Transportation (Caltrans) was awarded a State Planning and Research grant to fund a year-long study of pedestrian and bicycle transportation access at the California/Baja California POEs. The Imperial County Transporation Commission (ICTC) served as the lead agency in carrying out the study, in coordination with Caltrans, the San Diego Association of Governments (SANDAG), and binational local, state, and federal agencies and community members.

[1] Land ports of entry will hereafter be referred to as "ports of entry," "ports," or "POEs."

[2] 2013 data from Transborder.bts.gov, "Border Crossing/Entry Data: Query Detailed Statistics," Research and Innovative Technology Administration (RITA), U.S. Department of Transportation. As there is no equivalent southbound crossing data, we have assumed that comparable demand exists for northbound and southbound vehicle and pedestrian crossings. Please see Appendix A for details on crossing volume and wait time source information pertinent to this citation as well as the study as a whole.

A recently completed Caltrans project in Andrade improved pedestrian and bicycle access to the port with pathway enhancements and amenities

The goal of this study is to improve the travel experience for people walking or bicycling across the California/Baja California border, seeking to make trips safer, easier, and more comfortable around the POEs. Suitable infrastructure for pedestrians and bicyclists not only encourages active transportation at the border but also results in positive environmental, economic, and community health benefits for the binational border region. Shifting some travel to active transportation modes such as walking and bicycling has been shown to increase life expectancy and reduce health costs associated with heart disease, stroke, diabetes, dementia, depression, and breast and colon cancer, as well as to reduce pollutants and greenhouse gas emissions, and facilitating cross-border travel produces billions of dollars of economic benefit on both sides of the border[3,4].

A Spanish-language version of this Executive Summary and the complete matrix of recommendations from the study can be found separately on ICTC's website.

1.1 Introduction

The California/Baja California border region has a population of 6.4 million people, with a population of 10.6 million people expected in the year 2040[5]. It is projected that 48.4 million pedestrians and bicyclists will cross the border between California and Baja California in the year 2040, an increase of almost 13 million border crossers in comparison to current volumes[6]. This growing population continues to increase demand for crossborder travel and add pressure to the existing port of entry facilities.

$3.69 billion

Estimated revenue that will be lost binationally due to border delays in 2017

There are six existing POEs providing access to travelers between California and Baja California. From west to east, they are:

- San Ysidro/Puerta México-El Chaparral POE
- Otay Mesa/Mesa de Otay POE
- Tecate/Tecate POE
- Calexico West/Mexicali I POE
- Calexico East/Mexicali II POE
- Andrade/Los Algodones POE

One new port (Otay Mesa East-Mesa de Otay II) and one cross-border facility (Cross Border Xpress) are currently planned for the California/Baja California Border, and major infrastructure changes at the San Ysidro/Puerta México-El Chaparral and the Calexico West/Mexicali I POEs are currently under way.

[3] *From Policy to Pavement: Implementing Complete Streets in the San Diego Region* (San Diego Complete Streets Task Force, June 2012)
[4] *Economic Impacts of Wait Times at the California-Mexico Border 2009 Update* (HDR Decision Economics, January 2010)
[5] *California-Baja California 2014 Border Master Plan Update* (Caltrans, July 2014)
[6] *California-Baja California 2014 Border Master Plan Update* (Caltrans, July 2014) Annual northbound pedestrian crossings in the year 2040 anticipated to reach 24.2 million persons. As there is no equivalent southbound crossing data, we have assumed that comparable demand exists for northbound and southbound pedestrian crossings. As of 2014, bicycle and pedestrian crossings are counted together.

150,000 barrels of oil

Biannual green house gas emmissions due to border delays in San Diego County are equivalent to consuming over 150,000 barrels of oil each year

Well-planned and designed border crossing infrastructure for pedestrians and bicyclists is important not only because of high existing demand and impending population growth, but also because of the environmental, health, and economic impacts of facilitating non-motorized travel. Northbound border delays in San Diego County have been shown to produce between 74,700 and 82,600 metric tons of carbon dioxide every six months, the equivalent of consuming over 150,000 barrels of oil, and respiratory illness, asthma, cardiovascular disease, increased mortality, and adverse birth outcomes are just a few of the health effects associated with living and working near high-traffic areas[7].

Ensuring adequate border crossing facilities also has positive economic impacts. Currently, demand at some POEs can lead to pedestrians and vehicles waiting to cross the border for multiple hours at a time. These delays in personal travel caused a loss of business revenue of $2.26 billion in California and $278 million in Baja California in 2008, with $3.69 billion in combined revenue losses anticipated for the year 2017[8].

The results of this study assess current conditions at the POEs and provide a list of recommended infrastructure projects, programs, public educational opportunities, and policies aimed at improving the border crossing experience for the milllions of people crossing on foot or by bike each year. The study is divided into nine chapters including this Executive Summary. Each of the subsequent chapters, excluding the introduction, is briefly discussed below, followed in section 1.9 by a condensed list of recommended projects and policies.

A map of the Andrade/Los Algodones POE after an Imperial County Focus Group meeting

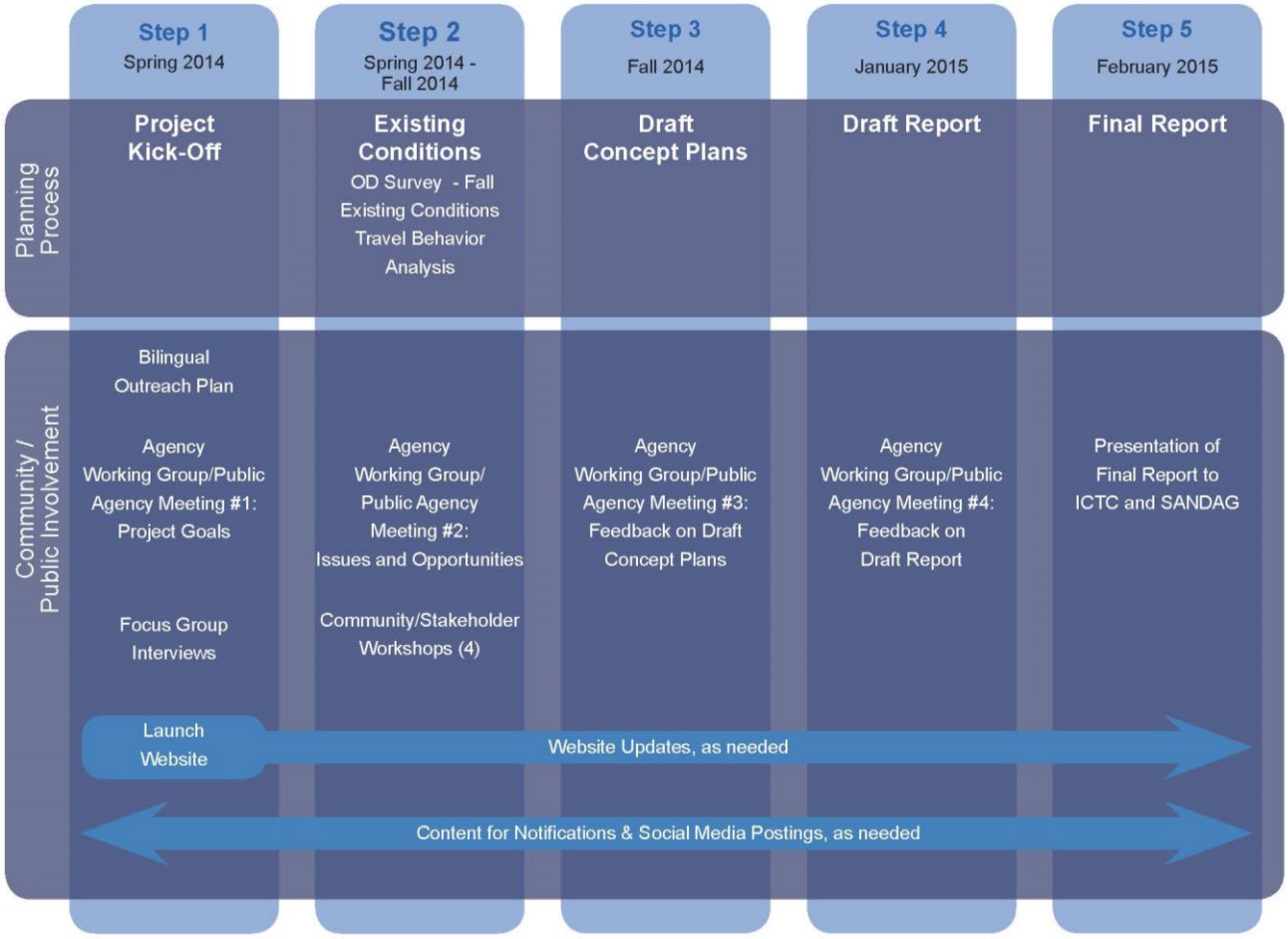
1.2 COMMUNITY AND PUBLIC INVOLVEMENT

This study included extensive outreach efforts that took place over ten months in multiple locations along the U.S./Mexico border, giving stakeholder groups as well as members of the general public the opportunity to provide their input and make an impact on the content of the study. The graphic on the next page displays the study process and timeline, showing progression from project kick-off to the production of the final report a year later.

As part of the outreach efforts, a project website was developed with periodic content updates and a link to the eAudit, an online participation tool which allowed members of the public to provide their input on issues and opportunities at the ports from anywhere with an internet connection. Hundreds of comments were documented using the eAudit tool, with input ranging from documentation of missing bicycle signage to pinpointing locations where travelers felt unsafe at night because of lack of lighting.

[7] *U.S.-Mexico Border Crossings at San Ysidro: Social and Environmental Effects for Pedestrian Crossers and San Diego Communities* (Presentation) (SDSU Graduate School of Public Health, Casa Familiar, San Diego Prevention Research Center)
[8] *Economic Impacts of Wait Times at the California-Mexico Border 2009 Update* (HDR Decision Economics, January 2010)

Process and Timeline



Over 1,000 comments

Received during the community and public outreach process

A variety of in-person outreach events were conducted in addition to the online outreach efforts. The Agency Working Group, whose membership included 15 agencies from both sides of the border, met four times over the course of the study to provide input and information to the study team. The members of the binational Agency Working Group were:

- Caltrans
- City of Calexico
- City of San Diego
- County of Imperial
- County of San Diego
- ICTC
- Instituto de Administración y Avalúos de Bienes Nacionales (INDAABIN)
- Instituto Metropolitano de Planeación de Tijuana (IMPLAN) and the Municipio de Tijuana
- Instituto Municipal de Investigación y Planeación de Mexicali (IMIP) and the Municipio de Mexicali

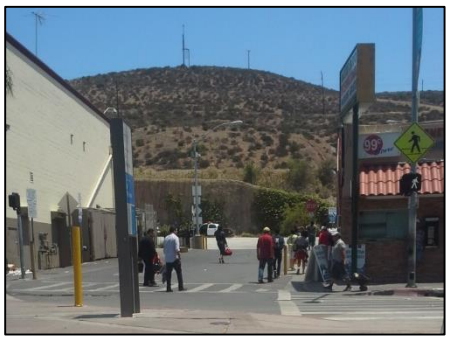
- Municipio de Tecate
- SANDAG
- Secretaría de Infraestructura y Desarrollo Urbano del Estado (SIDUE)
- Southern California Association of Governments (SCAG)
- U.S. Customs and Border Protection (CBP)
- U.S. General Services Administration (GSA)

Summer 2014 Focus Group meeting in Imperial County

A total of ten focus group sessions were held in San Diego and Imperial Counties in summer and fall 2014 to engage representatives from diverse backgrounds, including city and county governments from California and Baja California; border security agencies; transit and transportation agencies; non-governmental organizations (NGOs); ICTC, SANDAG, and Caltrans working groups; community and neighborhood groups; employers; major institutions; and economic development interests. On-site Outreach Workshops were also conducted at each of the six POEs in the study area to engage cross-border travelers in one-on-one conversations with the study team. One thousand comments were received as a result of the Focus Group meetings and On-Site Outreach Workshops. Findings from all of the outreach efforts were rich and varied, ranging from broad policy changes and operational suggestions to location-specific details such as identification of an area where trash frequently piles up or a shade tree could be planted.

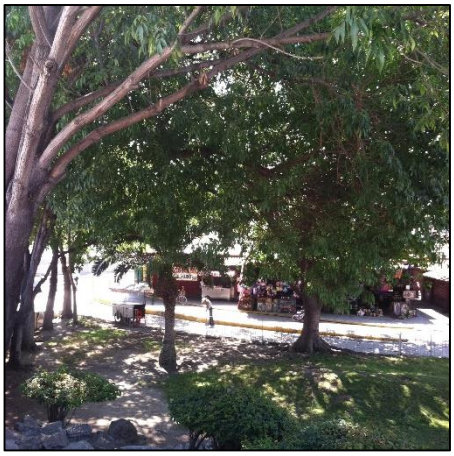
1.3 Existing Conditions Analysis and Assessment

The goal of the existing conditions analysis was to evaluate pedestrian and bicycle conditions at each port, with the aim of creating an environment that facilitates walking and cycling at each POE. Findings from the community and public involvement phase of the study shaped the development of the existing conditions review, resulting in a user-focused approach to the existing conditions assessment.



Pedestrians approach the southbound pathway at the San Ysidro POE

A unique study area was first developed for each port, connecting the port facility to major origins and destinations nearby. Then a network connectivity assessment and a network amenities assessment were conducted at each POE, identifying gaps, maintenance issues, and other barriers to walking and biking in the study area, as well as evaluating the availability of amenities such as water fountains, benches, shade, bicycle racks, transit shelters, and restrooms. The results from the analysis at each port are discussed in the Existing Conditions Analysis and Assessments chapter. Major findings include lack of basic amenities such as restrooms, water fountains, bilingual signage, and shade at many of the ports' approach and departure pathways for pedestrians, and nonexistent or limited bicycle infrastructure at all of the POEs.



Landscaping outside the Puerta México POE

1.4 Planned Improvements and Future Conditions

As each port has unique demand, capacity, and character, planned improvements and future conditions at each POE vary widely. The San Ysidro/Puerta México-El Chaparral and the Calexico West/Mexicali I POEs are undergoing major renovations and expansions, as noted in section 1.1. New roadway and pedestrian pathway configurations and increased inspection capacity projects are in various stages of planning, construction, and completion at these POEs. More minor improvements or operational changes are planned at the other four existing ports.

One POE and one cross-border facility are planned as well. The Otay Mesa East/Mesa de Otay II port will serve freight ("commercial") and personal traveler ("passenger") traffic, and will absorb some of the existing demand at the San Ysidro/Puerta México-El Chaparral and Otay Mesa/Mesa de Otay POEs. Cross Border Xpress will be a privately funded facility which will provide pedestrian access from General Abelardo L. Rodríguez International Airport to the United States for a fee.

U.S./Mexico border delineation in the roadway at the Tecate/Tecate POE

1.5 Travel Behavior Survey Results

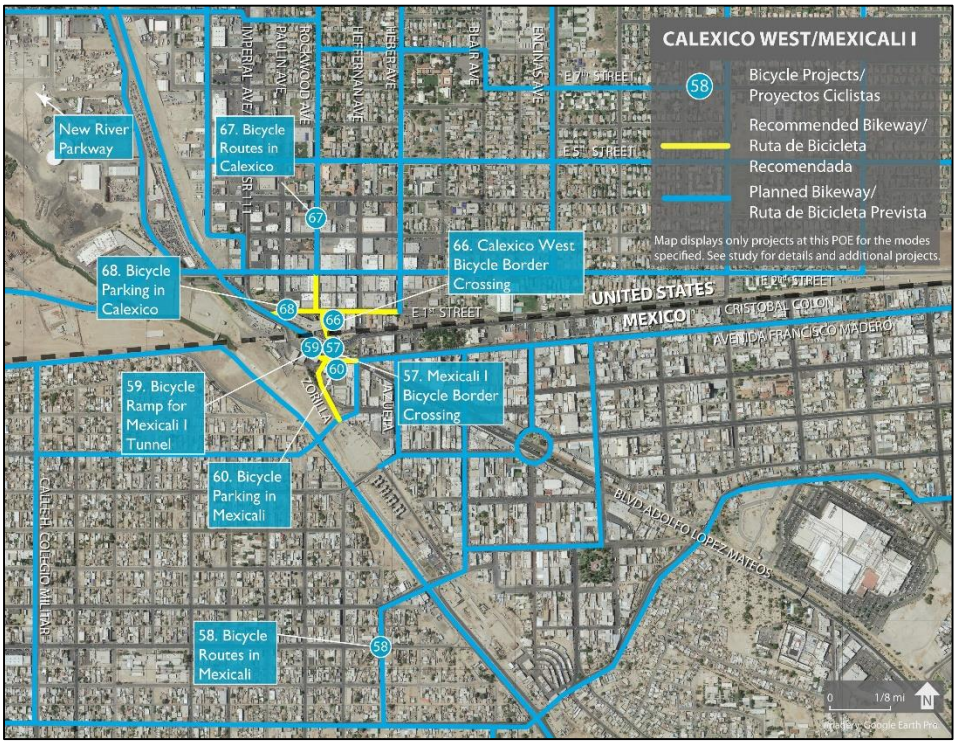
In order to better understand the needs of pedestrians and bicyclists who cross the border between the U.S. and Mexico at the six ports of entry between California and Baja California, information needed to be gathered about the types of users, their reasons for traveling, and the frequency with which they cross the border. Two existing studies provided the majority of the necessary travel behavior information. However, the mode of transportation for border crossers continuing the trip into the U.S. was not addressed for all six POEs, as this data was not recorded at the Otay Mesa/Mesa de Otay or the Tecate/Tecate ports of entry. Supplemental surveys were thus completed to gather data at these two locations. A summary of the existing and supplemental data is included in the Travel Behavior Survey Results chapter.

1.6 Recommended Projects and Policies

One hundred and two recommended projects and policies were developed as a result of the Existing Conditions and Public Outreach phases of this study. Recommended projects were reviewed and revised based on input from local, state, and federal agencies and community groups from both the United States and Mexico. Seventy percent of the recommendations represent pedestrian and bicycle projects, while the rest are policies and transit and vehicle projects.

102 Recommended Projects and Policies

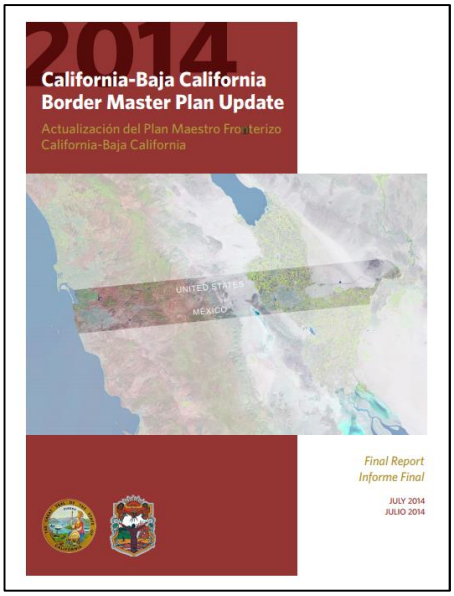
- 34 Pedestrian Projects (16 U.S./18 Mexico)
- 37 Bicycle Projects (18 U.S./19 Mexico)
- 12 Transit Projects (8 U.S./4 Mexico)
- 12 Vehicle Projects (6 U.S./6 Mexico)
- 7 Policies (Binational)



Sample project recommendations map for the Calexico West/Mexicali I POE. Full scale map available in section 1.9 and in Chapter 7

A summary version of the recommended projects at each POE is included both in section 1.9 and in the Recommended Projects chapter, along with maps depicting the location of each proposed project. A complete list of recommended projects and policies sorted by POE, country, and project type is available in Appendix H. The line item for each project includes:

- Project number
- Project name
- Country
- Jurisdiction
- Type (pedestrian, bicycle, vehicle, or transit)
- Limits
- Brief description
- Agency stakeholders
- Estimated cost



California/Baja California 2014 Border Master Plan Update

- Related plans and programs
- Source of the recommendation
- Identification of short-term or long-term project timeline

Concept mapping for each project and concept plans developed for select projects can be found in Appendix G. Cost estimates for both the U.S. and Mexico were completed in U.S. dollars, and line-item information on cost estimates for each project is available in Appendix H. Design Guidelines for POE pedestrian and bicycle access were also developed and can be found in Appendix I. A transit feasibility report for a bus service between the Calexico East and West POEs can be found in Appendix J. This report discusses the potential demand for such a service and describes the most cost-effective service level option.

1.7 Funding and Implementation Opportunities

Implementation of the recommended projects depends on available funding sources. A list of potential funding sources for infrastructure projects in each country is provided in the Funding and Implementation Opportunities chapter along with a brief description of each source. The federal, state, local, private, and tribal funding sources listed in the chapter give stakeholder agencies the opportunity to find funding sources that best match their projects and pursue them based on program criteria. Coordination between the United States and Mexico and among multiple levels of government in both nations is crucial to project implementation in these sensitive POE locations.

1.8 Next Steps

Projects and policies that support the vision for the California/Baja California POEs must be included in local, state, and federal **plans in both the United States and Mexico**, especially in the subsequent updates of the **California/Baja California Border Master Plan**

ICTC, Caltrans, SANDAG, SIDUE, IMPLAN, IMIP, and the other integral partners in this study have a vision for improved access for the millions of bicycle and pedestrian border crossers. The binational goal for the California/Baja California POEs is to facilitate safe, easy, and comfortable cross-border trips for pedestrians and bicyclists. Projects and policies that support this vision must be included in local, state, and federal plans in both the United States and Mexico, especially in the subsequent updates of the California/Baja California Border Master Plan (BMP). The BMP, a binational document for coordinating the planning and delivery of port-related projects in the region, was most recently updated in 2014.

The last step in the study process was to present the Final Study to ICTC in February 2015 and the SANDAG Board of Directors in March 2015. Subsequently, implementation of projects identified in the Final Study will be dependent on funding secured by stakeholder agencies and will also be submitted during the next BMP update process.

1.9 Condensed Project List

The table below lists each of the 102 recommended projects and policies with their associated project numbers, names, limits, descriptions, and cost estimates. The recommendations are organized by port, and then by country and type (pedestrian, bicycle, transit, or vehicle). The full list of recommended projects and policies, including information on Jurisdiction, Agency Stakeholders, Related Plans and Programs, Source of Recommendations, and identification of Short-Term or Long-Term timeline, can be found in Appendix H. Maps locating each project follow the recommendations for each port; policy recommendations are listed at the end of the section.

San Ysidro/Puerta México-El Chaparral POE

Mexico	Pedestrian Project Recommendations
Project 1	**Tijuana Pedestrian-Friendly Crossing Improvements ($218,000)**
Various Intersections	Create pedestrian-friendly crossings at intersections of Av Frontera and Av Ferrocarril, Alfonso Reyes and Línea Internacional, and northbound ramp gore at Paseo Centenario Tijuana connecting to Av Ferrocarril.
Project 2	**Puerta México-El Chaparral Pedestrian Pathway Enhancements ($982,000)**
Pedestrian processing to Av de la Amistad and Av Frontera	Add restrooms, water fountains, benches, shade for pathways and waiting areas, information kiosks, and informational signage. Add additional directional signage, lighting, shade for queuing area, pedestrian sidewalk ramps, and lane segmentation. Consider widening queue area. As an interim improvement, add additional lighting, shelter, and seating for transit stop.
Project 3	**Tijuana Pedestrian-Friendly Sidewalk Improvements ($268,000)**
Av de la Amistad, Paseo Centenario Tijuana, and Línea	Sidewalk rehabilitation and installation of pedestrian ramps, crosswalks, signage, and lighting along Av de la Amistad, Paseo Centenario Tijuana, and Línea Internacional.
Mexico	**Bicycle Project Recommendations**
Project 4	**Puerta México - El Chaparral Bicycle Border Crossing ($300,000)**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians.
Project 5	**Bicycle Routes in Tijuana ($584,000)**
Various	Construct planned bicycle routes in Tijuana. Additionally, construct routes to establish connections between planned routes and the POE. Install bicycle-related signage.
Project 6	**Bicycle Parking in Tijuana ($7,000)**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the Puerta México Este and El Chaparral POE. Consider secure parking and storage where possible.
Mexico	**Transit Project Recommendations**
Project 7	**Tijuana Intermodal Transit Center ($50,000,000)**
Colonia Cuauhtémoc area	Build an ITC with pedestrian, bus, and taxi services and a connected commercial development.

Project 8	**Puerta México-El Chaparral Mobility Hub ($750,000 Bike Share only)**
Within a three minute walk of the pedestrian queue	Construct a mobility hub near the POE. Bicycle share is recommended; other appropriate services at this location dependent on further study.
Mexico	**Vehicle Project Recommendations**
Project 9	**Puerta México Passenger Pick-Up/Drop-Off Zone ($107,000)**
Within a three minute walk of the pedestrian queue	Create sufficient and exclusive pick up/drop off zones at an appropriate location at the Puerta México POE. Include benches, signage, shade, and lighting.
Project 10	**Av de la Amistad Roundabout Improvements ($1,925,000)**
Intersection of Av de la Amistad and Av Frontera	Improve Av de la Amistad and Av Frontera roundabout to be more pedestrian-friendly. Additionally consider installing speed bumps and traffic signals to improve pedestrian safety.
United States	**Pedestrian Project Recommendations**
Project 11	**East San Ysidro Blvd Pedestrian-Friendly Crossing Improvements ($141,000)**
East San Ysidro Blvd	Enhance intersection of East San Ysidro Blvd north of San Ysidro Transit Center to be more pedestrian and bicycle-friendly.
Project 12	**San Ysidro Pedestrian Pathway Enhancements ($1,215,000)**
Pedestrian processing to East San Ysidro Blvd	Add restrooms, information kiosk, shade for queuing area, and informational signage. Add additional directional signage, benches, lighting, and shade for waiting and transit areas. Improve overall design/view of necessary security features. Improve segments of sidewalk.
Project 13	**San Ysidro Sidewalk Improvements ($28,000)**
East San Ysidro Blvd, Camino de la Plaza	Add missing pedestrian sidewalk ramps, crosswalks, and sidewalk.
United States	**Bicycle Project Recommendations**
Project 14	**San Ysidro Bicycle Border Crossing ($300,000)**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians.
Project 15	**Bicycle Routes in San Ysidro ($212,000)**
Various	Construct planned bicycle routes in San Ysidro. Additionally, construct routes to establish connections between planned routes and the POE. Install bicycle-related signage.
Project 16	**Bicycle Parking in San Ysidro ($7,000)**
Within a three minute walk of the pedestrian queue	Construct additional bicycle parking at the east and west facilities of the San Ysidro POE. Consider secure parking and storage where possible.
United States	**Transit Project Recommendations**
Project 17	**San Ysidro Intermodal Transportation Center ($138,200,000)**
Current location of ITC plus additional area	Build an ITC to provide a centralized facility for the Trolley, local and long distance buses, taxis, jitneys, and bicycles.

Project 18	**San Ysidro Mobility Hub ($750,000 Bike Share only)**
Within a three minute walk of the pedestrian queue	Construct a mobility hub near the POE. Bicycle share is recommended; other appropriate services at this location dependent on further study.
Project 19	**Pedicab Passenger Pick-Up/Drop-Off Zone ($8,000)**
East San Ysidro Blvd north of San Ysidro ITC	As an interim improvement, add signage and paint curb to designate pedicab pick-up/drop-off zone north of the San Ysidro Intermodal Transportation Center.

Figure 1.1 San Ysidro/Puerta México-El Chaparral Pedestrian, Transit, and Vehicle Projects

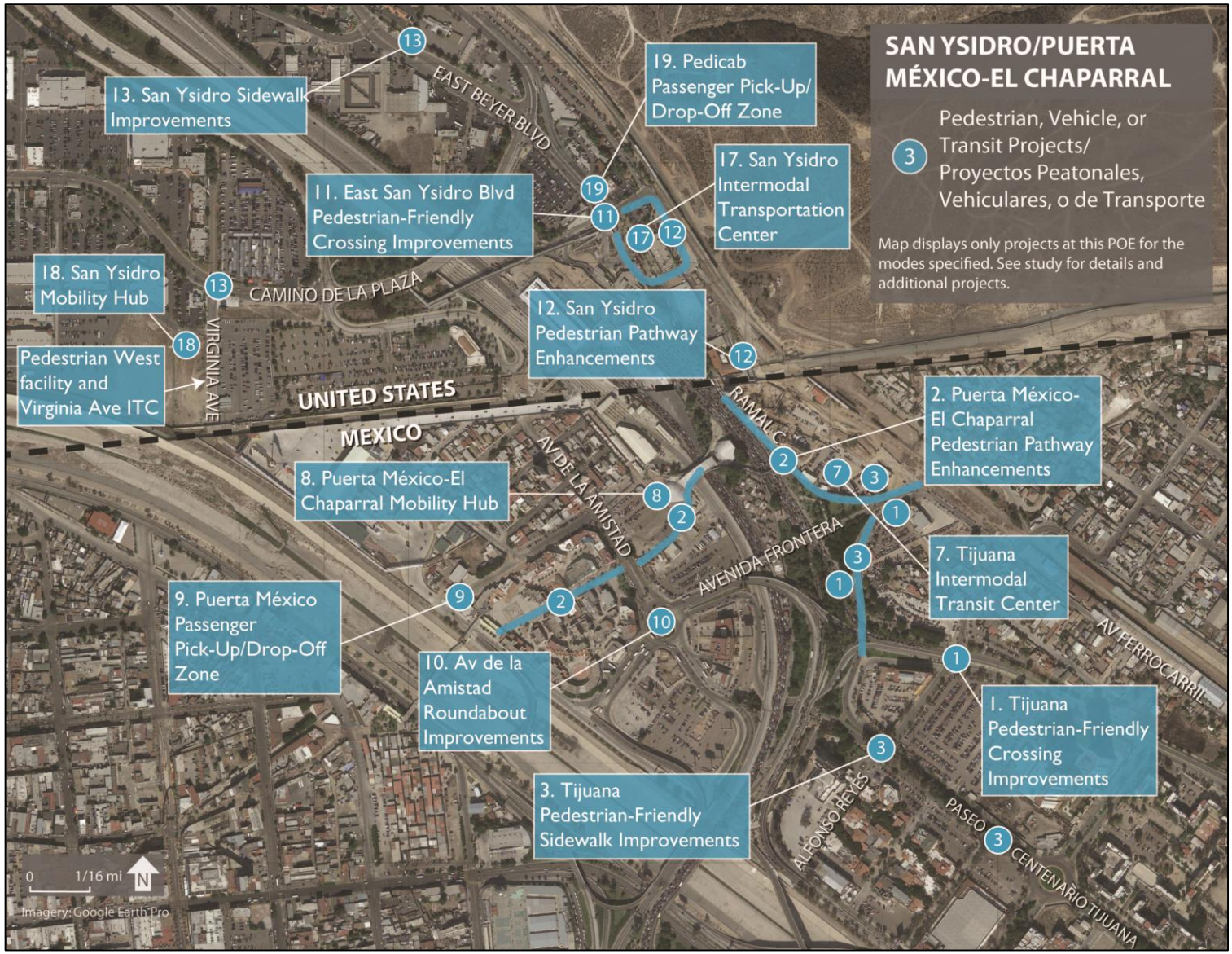
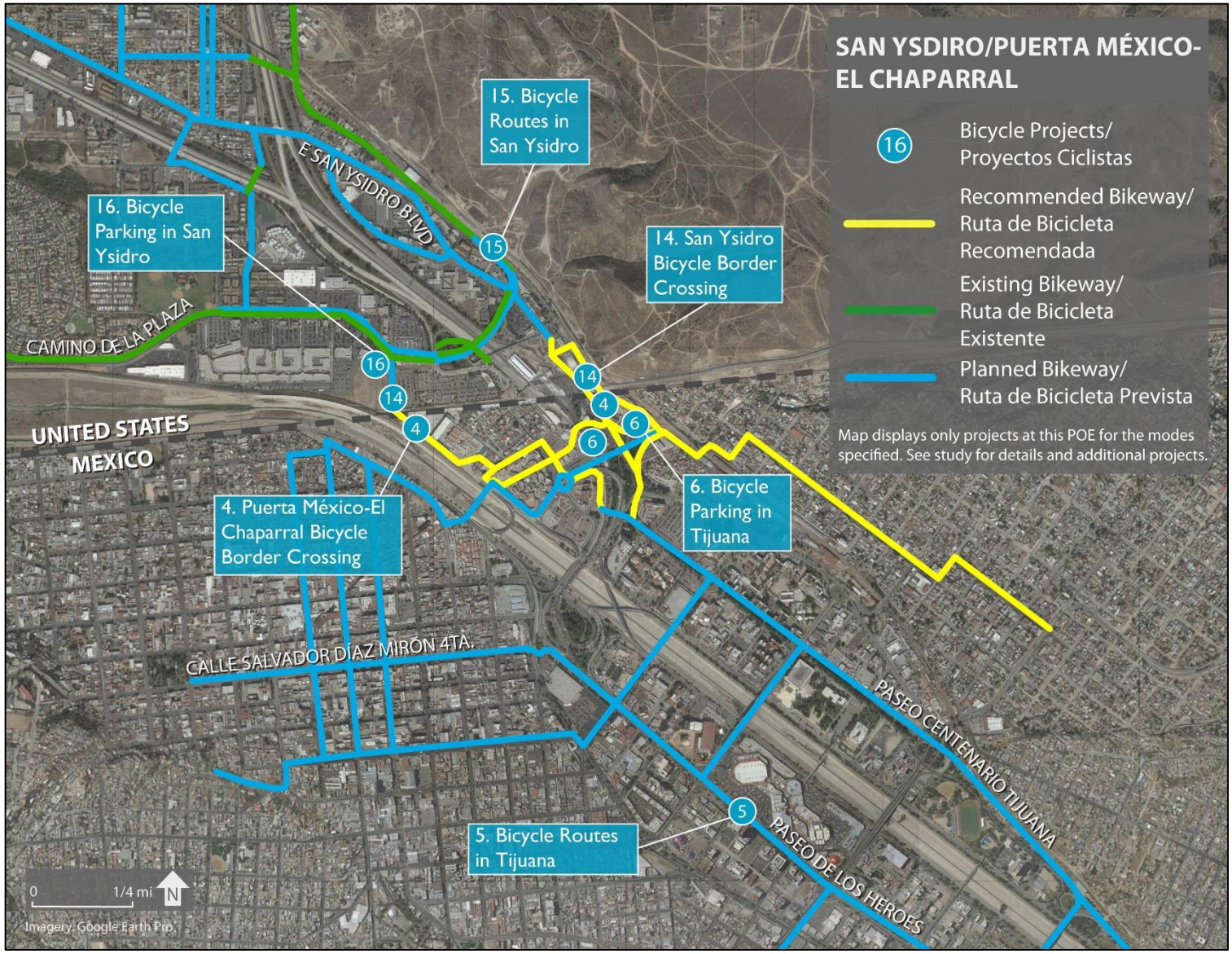


Figure 1.2 San Ysidro/Puerta México-El Chaparral Bicycle Projects



OTAY MESA/MESA DE OTAY POE

Mexico	Pedestrian Project Recommendations
Project 20	**Blvd Garita de Otay Pedestrian Bridge ($1,440,000)**
Blvd Garita de Otay	Construct east-west pedestrian bridge over Blvd Garita de Otay.
Project 21	**Colina del Sol Multi-Purpose Path ($189,000)**
Colina del Sol from Sor Juana Inés de la Cruz to Blvd de las Bellas Artes	Construct a multi-purpose path in the median between Calle Colina del Sol and Calle Josefina Rendon Parra from Av Sor Juana Inés de La Cruz to Boulevard de las Bellas Artes.
Project 22	**Blvd Garita de Otay Interim Pedestrian Crossing and Two-Way Turnstile Removal ($8,000)**
Blvd Garita de Otay	Add interim solution for pedestrian crossing across Boulevard Garita de Otay until pedestrian bridge project is completed. Remove two-way turnstile on Blvd Garita de Otay which creates a barrier to northbound pedestrian traffic crossing the vehicle SENTRI lane to access pedestrian processing.
Project 23	**Mesa de Otay Pedestrian Pathway Enhancements ($1,929,000)**
Blvd de las Bellas Artes to pedestrian processing	Add restrooms, water fountains, benches, information kiosks, informational and directional signage, lane segmentation, lighting, and shade for pathways and transit areas. Add additional shade for queuing area. Add pedestrian-friendly crossing just south of southbound border crossing.
Project 24	**Boulevard Garita de Otay Sidewalk Improvements (Cost: $145,000)**
Blvd Garita de Otay from Blvd de las Bellas Artes to pedestrian processing	Construct pedestrian sidewalk ramps and missing sidewalk and crosswalks.
Project 25	**Boulevard de las Bellas Artes Crosswalk Improvements ($7,000)**
Intersection of Blvd de las Bellas Artes and Calle Garita de Otay SENTRI	Enhance pedestrian crosswalk visibility, accessibility, and safety where the sidewalk on the east side of Boulevard Aztecas N intersects with Calle Garita de Otay SENTRI.
Mexico	**Bicycle Project Recommendations**
Project 26	**Mesa de Otay Bicycle Border Crossing ($300,000)**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians.
Project 27	**Bicycle Routes in Mesa de Otay , Tijuana ($60,000)**
Various	Construct bicycle routes in Mesa de Otay, Tijuana and install bicycle-related signage.
Project 28	**Bicycle Parking in Mesa de Otay, Tijuana ($7,000)**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where possible.

Mexico	Transit Project Recommendations
Project 29	**Colina del Sol Pick-Up/Drop-Off Zone and Transit Stop ($385,000)**
Colina del Sol, west of intersection of Sor Juana Inés de la Cruz and Josefina Rendón Parra	Create a passenger pick-up/drop-off zone and transit facility near the northbound pedestrian queuing area. Include shade, lighting, benches, and informational and directional signage.
Mexico	**Vehicle Project Recommendations**
Project 30	**Blvd Garita de Otay Traffic Control ($9,000)**
Blvd Garita de Otay	Add traffic control to prevent wrong-way driving due to passenger drop-off on Blvd Garita de Otay SENTRI lane.
United States	**Pedestrian Project Recommendations**
Project 31	**Pedestrian Bridge – Northbound Ramp ($780,000)**
Pedestrian bridge to pedestrian path south of Nicola Tesla Ct	In the absence of new pedestrian bridge projects, add northbound pedestrian ramp to existing pedestrian bridge.
Project 32	**Paseo de la Amistad Pedestrian and Bike International Border Crossing ($2,060,000)**
Various locations	Improve Paseo Internacional with new, expanded sidewalk and bicycle lane, widen sidewalk and improve existing pick-up/drop-off point at Via de la Amistad, and add pedestrian amenities. Construct a transit center west of SR 905 and improve Nicola Tesla Ct cul de sac. Construct a pedestrian bridge for north-south pedestrian traffic along west side of SR 905. This is a TEA project that remains viable if TEA program or other funding becomes available.
Project 33	**Paseo Internacional Sidewalk Improvements and Sidewalk Construction ($30,000)**
Pedestrian processing to Roll Drive	Add pedestrian crossing north of POE. In the absence of Paseo de la Amistad Pedestrian and Bike International Border Crossing project, also construct sidewalk on east side of Paseo Internacional and add pedestrian ramps on west side of Paseo Internacional.
Project 34	**Otay Mesa Pedestrian Pathway Enhancements ($542,000)**
Pedestrian processing to Roll Drive, pedestrian processing to Nicola Tesla Ct	Add water fountains, restroom, benches, information kiosk, informational and directional signage, and lighting. Add additional shade for pathways, queuing area, waiting areas, and transit areas. Add shelters, additional benches, and lighting for bus stops.
United States	**Bicycle Project Recommendations**
Project 35	**Otay Mesa Bicycle Border Crossing ($300,000)**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians.
Project 36	**Bicycle Routes in Otay Mesa ($242,000)**
Various	Construct planned bicycle routes in Otay Mesa. Additionally, construct routes to establish connections between planned routes and the POE. Install bicycle-related signage. Lead Agency: City of San Diego, GSA Cost:

Project 37	**Bicycle Parking in Otay Mesa ($7,000)**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where possible
United States	**Transit Project Recommendations**
Project 38	**Otay Mesa Intermodal Transportation Center and Pedestrian Bridge ($7,600,000)**
Parcel southeast of Nicola Tesla Ct	Construct planned ITC south of Nicola Tesla Ct. Construct planned pedestrian bridge from northbound pedestrian inspections.
United States	**Vehicle Project Recommendations**
Project 39	**SR 905 Safety Enhancements ($8,000)**
SR 905 north of vehicle processing facility	Add safety enhancements on SR 905 to prevent passenger drop-off.
Project 40	**Roll Drive Passenger Pick-Up/Drop-Off Zone ($42,000)**
Intersection of Roll Drive and Via de la Amistad	In the absence of Via de la Amistad pick-up/drop-off improvements identified in Paseo de la Amistad Pedestrian and Bike International Border Crossing project, re-paint curb to create official and sufficient passenger pick-up/drop-off zone at southwestern edge of Roll Drive. Add trees, benches, lighting, and directional signage.

Figure 1.3 Otay Mesa/Mesa de Otay Pedestrian, Transit, and Vehicle Projects

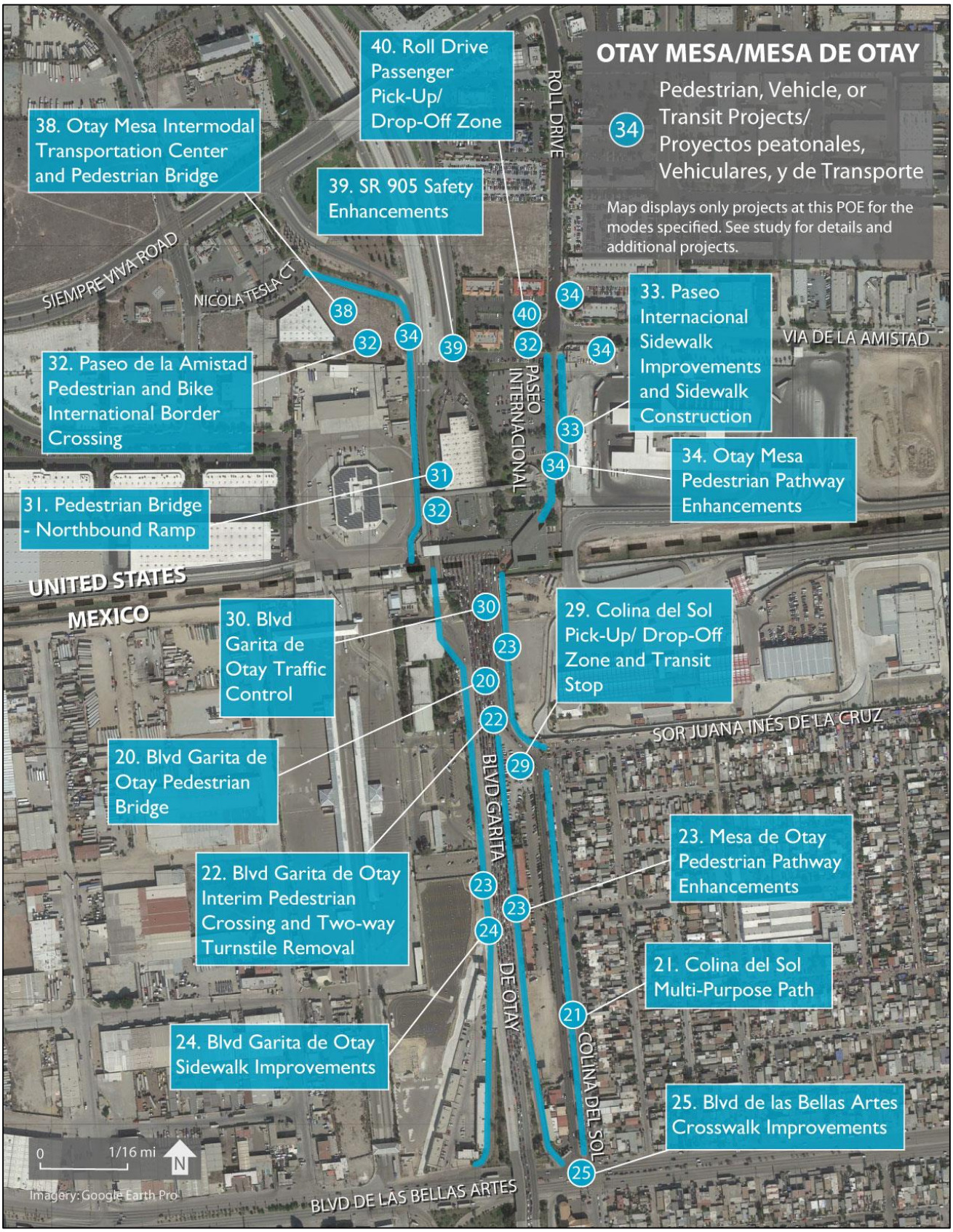
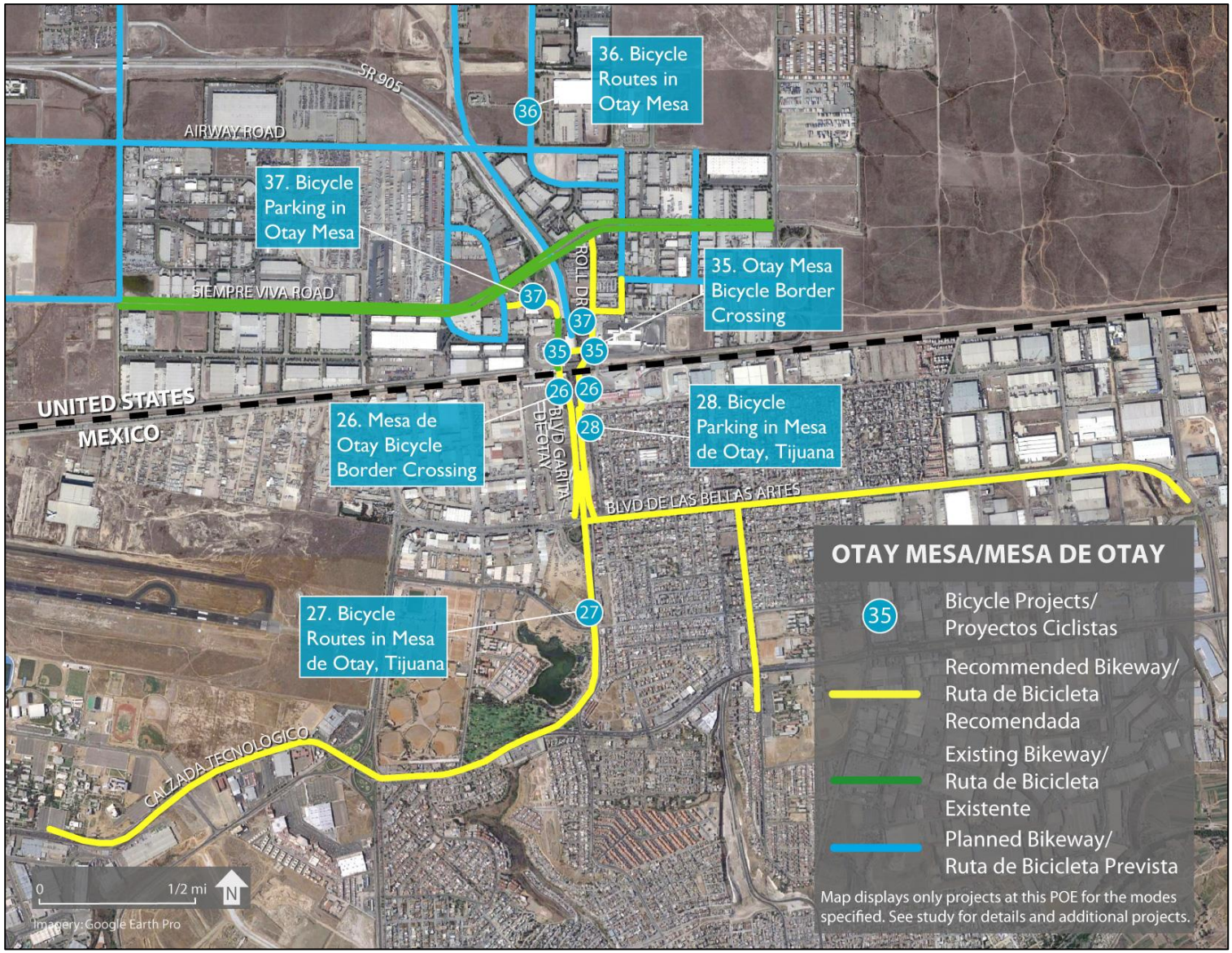


Figure 1.4 Otay Mesa/Mesa de Otay Bicycle Projects



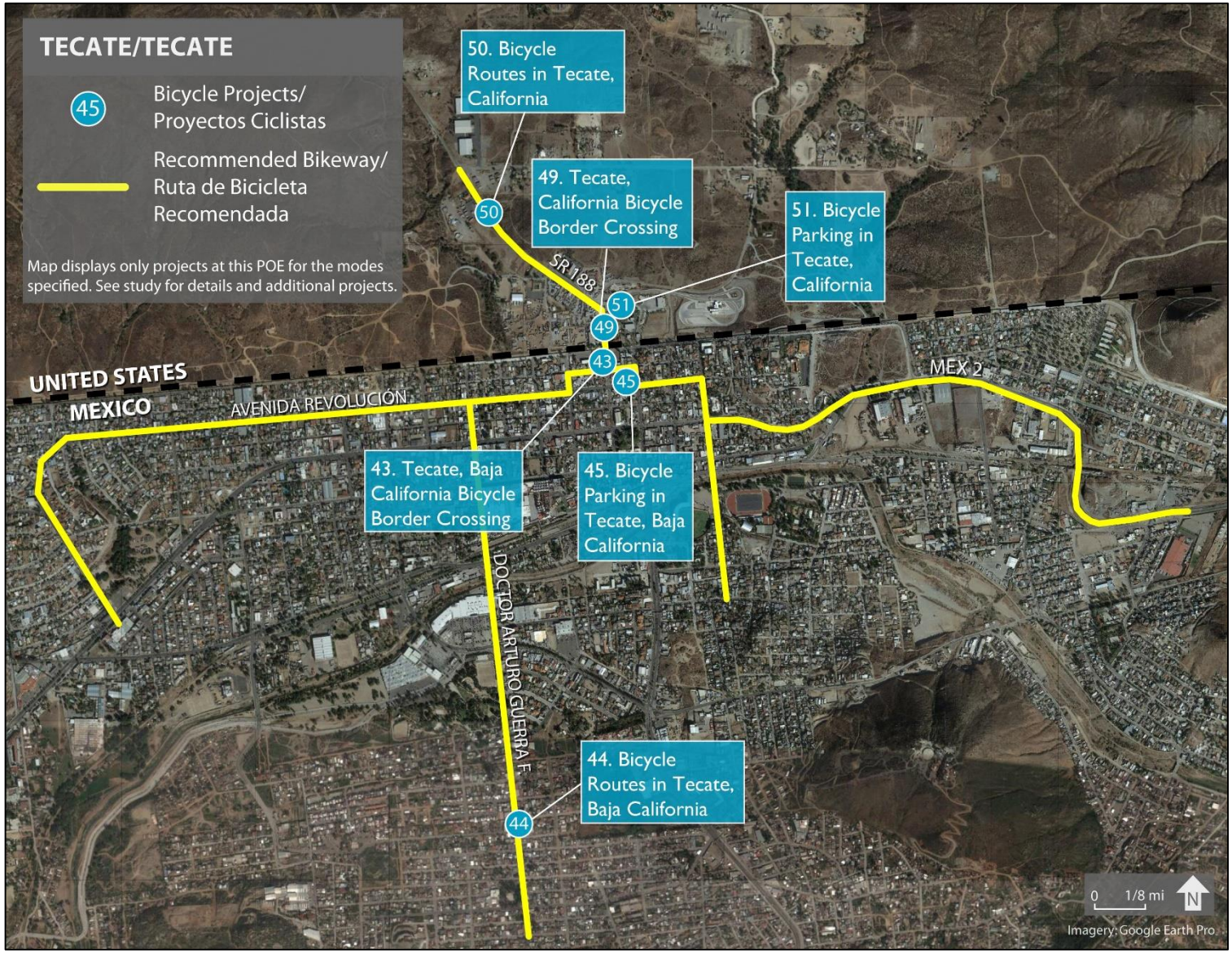
TECATE/TECATE POE

Mexico	Pedestrian Project Recommendations
Project 41	**Tecate, Baja California Pedestrian Pathway Enhancements and Passenger Pick-Up/Drop-Off Zone ($199,000)**
Intersection of Callejón Francisco I Madero and Presidente Lázaro Cárdenas	Add water fountain, benches, information kiosk, shade for waiting area, and informational signage. Add additional lighting and directional signage. Create a protected passenger pick-up/drop-off zone at the intersection of Callejón Francisco I Madero and Presidente Lázaro Cárdenas.
Project 42	**Tecate, Baja California Sidewalk and Wayfinding Improvements ($145,000)**
POE to Av Hidalgo	Construct additional pedestrian sidewalk ramps and crosswalks, install signage, and rehabilitate sidewalk one block east and west of pedestrian processing as well as along Presidente Lázaro Cardenas and along one block of Av Hidalgo.
Mexico	**Bicycle Project Recommendations**
Project 43	**Tecate, Baja California Bicycle Border Crossing ($300,000)**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians.
Project 44	**Bicycle Routes in Tecate, Baja California ($213,000)**
Various	Construct bicycle routes in Tecate, Baja California and install bicycle-related signage.
Project 45	**Bicycle Parking in Tecate, Baja California ($7,000)**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where appropriate.
United States	**Pedestrian Project Recommendations**
Project 46	**SR 188 Pedestrian-Friendly Crossing Improvement ($110,000)**
SR 188 at Thing Rd	In the absence of Kumeyaay Crossing at Tecate International Border Crossing, create north-south pedestrian-friendly crossing across SR 188 at intersection of Thing Road.
Project 47	**Kumeyaay Crossing at Tecate International Border Crossing ($2,382,000)**
SR 188 extending from POE to approximately 1100' north	Replace and widen sidewalk on west side of SR 188 including additional space for pedestrian pathway amenities and signage. Add bike lane. Add pedestrian crosswalks on and across SR 188. This is a TEA project that remains viable if TEA program or other funding becomes available.
Project 48	**Tecate, California Pedestrian Pathway Enhancements ($326,000)**
Border to MTS bus stop on SR 188	Add restrooms, water fountain, informational kiosks, benches, lighting, and informational and directional signage. Add additional benches behind bus stop and bus shelter. Add additional shade for southbound queuing area.
United States	**Bicycle Project Recommendations**
Project 49	**Tecate, California Bicycle Border Crossing ($300,000)**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians.

Project 50	**Bicycle Routes in Tecate, California ($23,000)**
Various	Construct bicycle routes in Tecate, California and install bicycle-related signage.
Project 51	**Bicycle Parking in Tecate, California ($7,000)**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where possible.
United States	**Transit Project Recommendations**
Project 52	**Increase Route 894 Frequency**
-	Increase frequency of Route 894 with service to and from Tecate.
United States	**Vehicle Project Recommendations**
Project 53	**Tecate, California Passenger Pick-Up/Drop-Off Zone ($47,000)**
SR 188	Create a passenger pick-up/drop-off zone outside of CBP pedestrian processing facility. Add bench, shade, lighting, and signage.

Figure 1.5 Tecate/Tecate Pedestrian, Transit, and Vehicle Projects

Figure 1.6 Tecate/Tecate Bicycle Projects



CALEXICO WEST/MEXICALI I POE

Mexico	Pedestrian Project Recommendations
Project 54	**Mexicali I Tunnel Modification ($123,000)**
Pedestrian tunnel	As an interim improvement, resolve flooding issues and improve ventilation in pedestrian tunnel.
Project 55	**Mexicali I Pedestrian Pathway Enhancements ($112,000)**
Agustin Melgar to POE and Callejón Zorilla to POE	As interim improvements, add water fountain, information kiosk, and informational signage. Add additional benches, shade for queuing area and waiting area, lighting, and directional signage. Add benches, shade, signage, and lighting for transit stop.
Project 56	**Mexicali Pedestrian-Friendly Crossing Improvements, Sidewalk Improvements, and Sidewalk Maintenance ($725,000)**
Various intersections	Add pedestrian-friendly crossing at intersections of Blvd Adolfo López Mateos with Av Francisco I Madero and Ignacio Manuel Altamirano. Add pedestrian sidewalk ramps and crosswalks and conduct sidewalk maintenance on Augustin Melgar, Zorilla, Blvd Adolfo López Mateos, Ignacio Manuel Altamirano, and Av Francisco I Madero.
Mexico	**Bicycle Project Recommendations**
Project 57	**Mexicali I Bicycle Border Crossing ($300,000)**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians.
Project 58	**Bicycle Routes in Mexicali ($480,000)**
Various	Construct planned bicycle routes in Mexicali; consider implementation of some facilities as bicycle lanes. Additionally, construct routes to establish connections between planned routes and the POE. Install bicycle-related signage.
Project 59	**Bicycle Ramp for Mexicali I Tunnel ($38,000)**
Pedestrian tunnel	As an interim improvement, construct bicycle ramp alongside western stairway to facilitate bicycle users entering and exiting pedestrian tunnel.
Project 60	**Bicycle Parking in Mexicali ($7,000)**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at or near the POE. Consider secure parking and storage where possible.
Mexico	**Transit Project Recommendations**
Project 61	**Mexicali I Mobility Hub ($750,000 Bike Share only)**
Within a three minute walk of the pedestrian queue	Construct a mobility hub near the POE. Bicycle share is recommended; other appropriate services at this location dependent on further study.
Mexico	**Vehicle Project Recommendations**
Project 62	**Passenger Pick-Up/Drop-Off Zone on Callejón Zorilla ($101,000)**
Callejón Zorilla north of Callejón Reforma	As an interim improvement, use paint and signage to add a passenger pick-up/drop-off zone on Callejón Zorilla.

United States	Pedestrian Project Recommendations
Project 63	**Calexico Border Gateway and 1st Street Promenade ($4,184,000)**
E 1st Street between SR 111 and Heber Ave	Widen sidewalks and add pedestrian amenities on E 1st Street. Improve traffic flow on adjacent streets and add pick-up/drop-off area. This is a TEA project that remains viable if TEA program or other funding becomes available.
Project 64	**Calexico Pedestrian Pathway Enhancements ($114,000)**
POE to E 1st Street	As interim improvements, add water fountain, benches, information kiosk, informational and directional signage, and shade for waiting area. Add additional lighting. Add signage and lighting for transit areas.
Project 65	**Calexico Pedestrian-Friendly Crossing Improvements and Crosswalk Maintenance ($178,000)**
Various intersections between E 1st Street and E 7th Street	Construct pedestrian-friendly crossings at intersections of E 1st Street and Rockwood Ave and E 2nd Street and Rockwood Ave. Repaint crosswalks on Paulin Ave, Rockwood Ave, Heffernan Ave, and Heber Ave.
United States	**Bicycle Project Recommendations**
Project 66	**Calexico West Bicycle Border Crossing ($300,000)**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians.
Project 67	**Bicycle Routes in Calexico ($480,000)**
Various	Construct planned bicycle routes in Calexico, including New River Parkway project. Additionally, construct routes to establish connections between planned routes and the POE. Install bicycle-related signage.
Project 68	**Bicycle Parking in Calexico ($7,000)**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where possible.
United States	**Transit Project Recommendations**
Project 69	**Calexico Intermodal Transportation Center ($10,000,000)**
E 3rd St between Rockwood and Heffernan Avenues	Construct an ITC in Calexico near the POE.
Project 70	**Calexico West Mobility Hub ($750,000 Bike Share only)**
Within a three minute walk of the pedestrian queue	Construct a mobility hub near the POE. Bicycle share is recommended; other appropriate services at this location dependent on further study.

Figure 1.7 Calexico West/Mexicali I Pedestrian, Transit, and Vehicle Projects

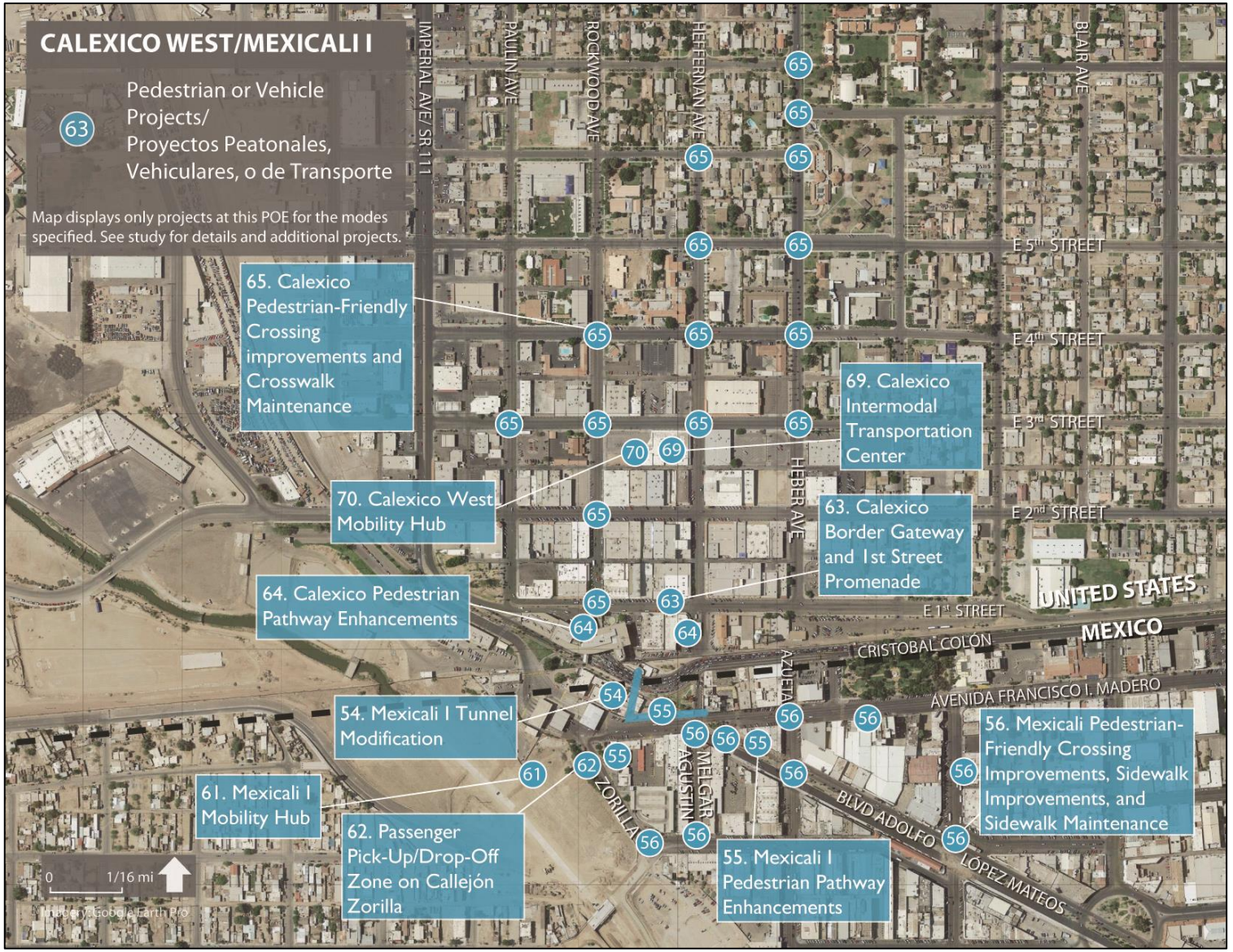


Figure 1.8 Calexico West/Mexicali I Bicycle Projects

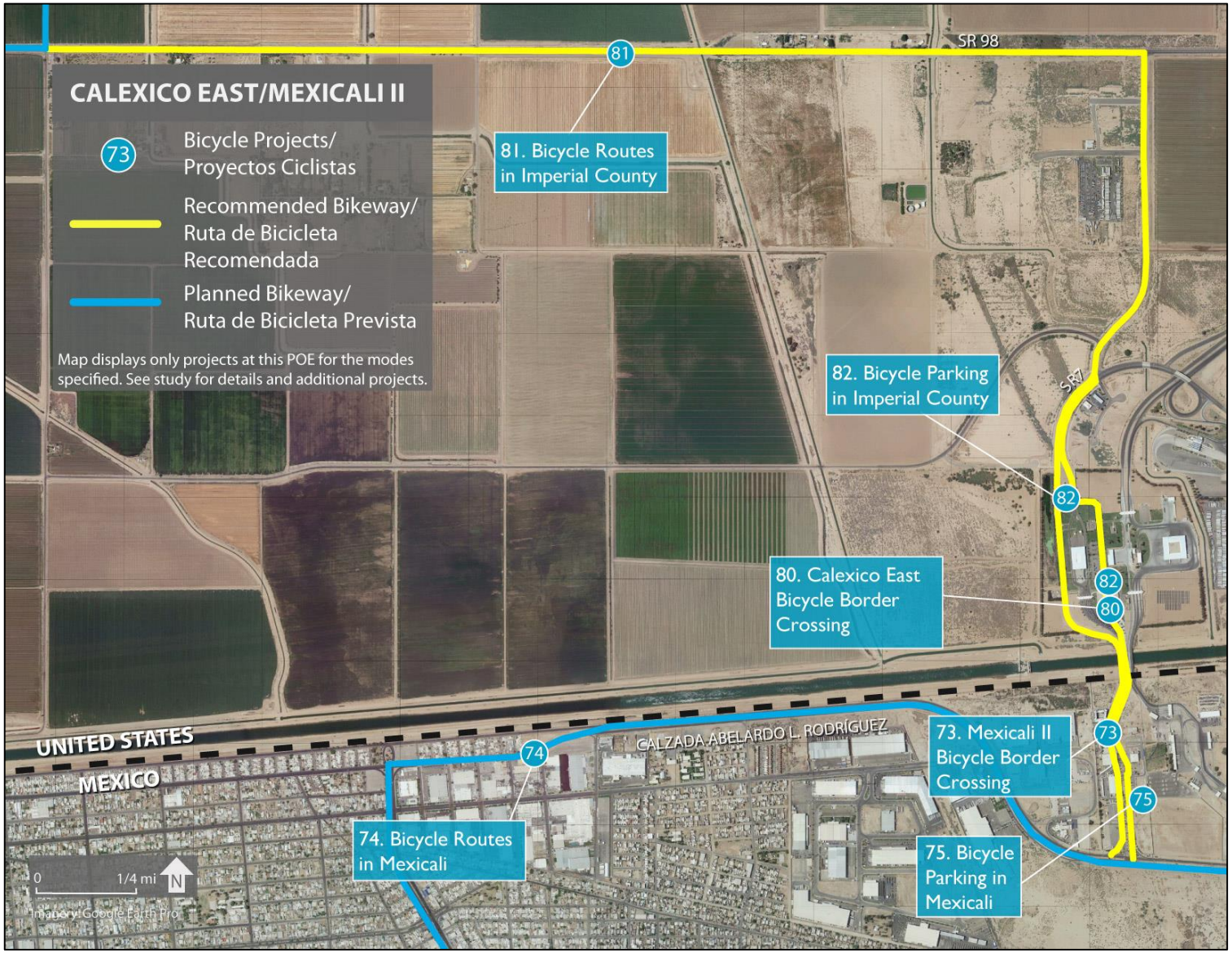
CALEXICO EAST/MEXICALI II POE

Mexico	Pedestrian Project Recommendations
Project 71	**Mexicali II Pedestrian Pathway Enhancements ($1,097,000)**
Calzada Abelardo L. Rodríguez to pedestrian processing	Add water fountains, benches, information kiosks, lighting, and informational and directional signage. Add shade for queuing areas, waiting area, and pathways. Add additional restroom, crosswalks, and pedestrian sidewalk ramps. Add more shade for departure pathway. If new northerly pick-up/drop-off zone is not constructed, improve existing passenger pick-up/drop-off zone with shade structure, benches, and information kiosk.
Project 72	**Calzada Abelardo L. Rodríguez Sidewalk Improvements ($58,000)**
Intersection of Calzada Abelardo L. Rodríguez and POE access roads	Add pedestrian sidewalk ramps and sidewalk and crosswalks connecting northbound and southbound pedestrian pathways along north side of Calzada Abelardo L. Rodríguez.
Mexico	**Bicycle Project Recommendations**
Project 73	**Mexicali II Bicycle Border Crossing ($300,000)**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians.
Project 74	**Bicycle Routes in Mexicali ($375,000)**
Various	Construct planned bicycle routes in Mexicali. Additionally, construct routes to establish connections between planned routes and the POE. Install bicycle-related signage.
Project 75	**Bicycle Parking in Mexicali ($7,000)**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where possible.
Mexico	**Vehicle Project Recommendations**
Project 76	**Mexicali II Passenger Pick-Up/Drop-Off Zone ($580,000)**
South of bridge that crosses All-American Canal	Create passenger pick-up/drop-off zone approximately 800' north of current location to reduce pedestrian walking distance to border crossing. Include lighting and informational and directional signage.
Project 77	**Overnight Parking on Calzada Abelardo L. Rodríguez ($287,000)**
Calzada Abelardo L. Rodríguez southeast of POE	Create one overnight parking lot on Calzada Abelardo L. Rodríguez southeast of POE.
United States	**Pedestrian Project Recommendations**
Project 78	**Calexico East Pedestrian Path ($44,000)**
Pedestrian processing building to 900' north	Add pedestrian path on west side of roadway, adjacent to existing trees. Or, add trees to provide shade to existing sidewalk.
Project 79	**Calexico East Pedestrian Pathway Enhancements ($1,072,000)**
Border to SR 7	Add restroom, water fountains, information kiosks, lighting, benches, and informational and directional signage. Add shade and benches for waiting area. Add shade to waiting area, queuing area, and southbound pathway. Create pedestrian-friendly crossing just north of pedestrian processing facility.

United States	Bicycle Project Recommendations
Project 80	**Calexico East Bicycle Border Crossing ($300,000)**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians.
Project 81	**Bicycle Routes in Imperial County ($163,000)**
Various	Construct bicycle routes in Imperial County and install bicycle-related signage.
Project 82	**Bicycle Parking in Imperial County ($7,000)**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where possible.
United States	**Transit Project Recommendations**
Project 83	**Calexico East ITC and Relocation of Southbound Pedestrian Pathway Access ($5,000,000)**
Potentially at parcel located at split of SR 7 northbound and southbound vehicle lanes, or other location as appropriate	Create an ITC and include shade, lighting, benches, and restroom. Add pedestrian-friendly crossings across northbound and southbound SR 7 to connect northbound and southbound pedestrian pathways adjacent to the ITC. Consider providing connections to other transit routes within Imperial County.
United States	**Vehicle Project Recommendations**
Project 84	**Calexico East Passenger Pick-Up/Drop-Off Zone ($125,000)**
Southern terminus of Menvielle Rd	As an interim improvement, create a passenger pick-up/drop-off zone at the southern terminus of Menvielle Rd. Add benches, signage, a shade structure, and a sidewalk to connect to the northbound pedestrian pathway.
Project 85	**Relocate Calexico East SENTRI Lane (N/A)**
POE	Assign vehicle lane closest to POE (eastern-most northbound lane) as SENTRI lane and create SENTRI pedestrian drop off on curb adjacent to northbound pedestrian entrance to POE. This project is contingent on the expansion plans for this POE as it cannot be completed with existing passenger lane configuration.

Figure 1.9 Calexico East/Mexicali II Pedestrian, Transit, and Vehicle Projects

Figure 1.10 Calexico East/Mexicali II Bicycle Projects



ANDRADE/LOS ALGODONES POE

Mexico	Pedestrian Project Recommendations
Project 86	**Los Algodones Pedestrian Pathway Enhancements ($60,000)**
Saratoga, from east of canal to pedestrian processing	Add water fountains, information kiosk, and shade for waiting area. Widen pedestrian sidewalk ramps. Add additional pedestrian sidewalk ramps, benches, shade for northbound queuing area, and informational and directional signage.
Project 87	**Los Algodones Sidewalk Improvements ($81,000)**
Border to 16 de Septiembre	Rehabilitate crosswalks and sidewalk and add pedestrian sidewalk ramp along Calle 2, 5 de Mayo, and 16 de Septiembre.
Mexico	**Bicycle Project Recommendations**
Project 88	**Bicycle Routes in Los Algodones ($95,000)**
Various	Construct bicycle routes in Los Algodones and install bicycle-related signage.
Project 89	**Los Algodones Bicycle Border Crossing ($300,000)**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians.
Project 90	**Bicycle Parking in Los Algodones ($7,000)**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage
United States	**Pedestrian Project Recommendations**
Project 91	**Andrade Pedestrian Pathway Enhancements ($594,000)**
Border to SR 186 just north of northbound pedestrian exit	Add waiting area with benches, shade, and information kiosk on eastern side of SR 186. Add informational signage, water fountain, and restroom. Add information kiosk and shade and bench for southbound queuing area.
United States	**Bicycle Project Recommendations**
Project 92	**Bicycle Route and Signage in Andrade ($458,000)**
Various	Install bicycle wayfinding signage and construct bicycle route in Andrade providing connection to Arizona.
Project 93	**Andrade Bicycle Border Crossing ($300,000)**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians.
Project 94	**Bicycle Parking in Andrade ($7,000)**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where possible.

United States	Vehicle Project Recommendations
Project 95	**SR 186 Pullover ($188,000)**
SR 186 north of northbound pedestrian exit	Create shoulder on SR 186 for passenger pick-up and drop-off.

Figure 1.11 Andrade/Los Algodones Pedestrian, Transit, and Vehicle Projects

Figure 1.12 Andrade/Los Algodones Bicycle Projects

POLICY RECOMMENDATIONS

Project 96	**Increase SENTRI Access for Bicyclists and Pedestrians**
	Increase education about SENTRI and Ready Lanes and create a less costly pedestrian and bicycle-only SENTRI program.
Project 97	**Design Guidelines**
	Institute or update design guidelines for POEs to guide future construction and modification of border crossings to promote pedestrian-friendly and bicycle-friendly infrastructure. See design guidelines appendix for recommendations.
Project 98	**Operable Bicycles in Bicycle Border Crossing Lanes**
	A bicycle must be ridden to the crossing in order for the bicyclist to cross in the bicycle border crossing lane. If bicycle is not operable, the individual will have to cross the border through pedestrian inspection.
Project 99	**Landscaping and Public Art**
	Add landscaping and public art to all border crossings.
Project 100	**Thirty Minute Wait Times**
	Strive for maximum 30 minute wait times at all ports up to primary inspection facility, with expedited service for the elderly and disabled.
Project 101	**Senior/Disability Lanes**
	Study feasibility of instituting pedestrian crossing lanes for senior citizens and the disabled at existing and future ports.
Project 102	**Maintenance Districts**
	Explore the creation of Maintenance Commitments executed through a Memorandum of Understanding that prioritizes maintenance of influence areas around all POEs.

2.0 INTRODUCTION

Pedestrians exit the northbound pedestrian processing facility at the Calexico East POE

There are **six** existing POEs between California and Baja California:
three in San Diego County and
three in Imperial County

This chapter provides a brief overview of each of the six POEs in the study area, as well as a description of the inspection process at each port. Demographic data for the California/Baja California region is also described in this chapter, including population and employment projections for the next several decades. This chapter additionally summarizes border crossing volumes and wait times for each POE, and outlines the environmental, health, and economic impacts of border access in the region.

The Pedestrian and Bicycle Transportation Access Study for the California/Baja California Land Ports of Entry is the result of a year-long, binational process with the goal of improving the travel experience for people walking or bicycling across the California/Baja California border. Through a combination of community and public outreach, field work, contributions from local, state, and federal agencies, and a review of existing studies and plans, the study effort resulted in a list of recommended projects and policies to make walking and biking trips safer, easier, and more comfortable around the six California/Baja California ports of entry. The recommended projects are intended to benefit border crossers of all ages and abilities, balancing user comfort with important national security priorities.

"The border crossings need to say, '*welcome*.'"

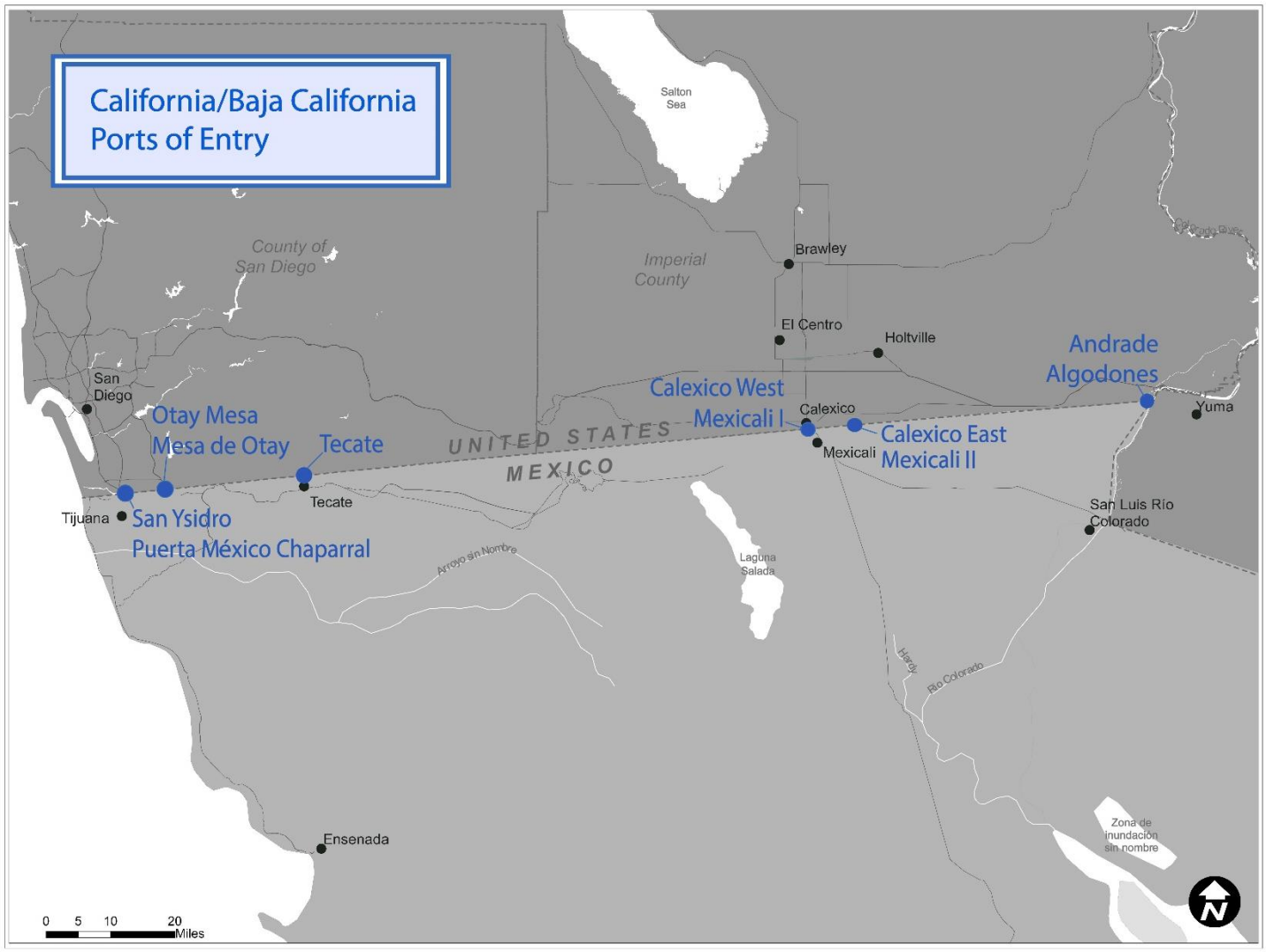
– Focus Group Participant

2.1 Description of Border Function

What are POEs?

POEs are the locations where travelers or goods may enter or leave a country under official supervision. Of the six California/Baja California POEs, three are passenger POEs, meaning that they process solely cross-border travelers, while three are both commercial and passenger POEs that process goods as well as travelers.

Figure 2.1 California/Baja California Ports of Entry



What are the characteristics of the California/Baja California POEs?

Each of the six California/Baja California POEs has unique characteristics, with different border crossing volumes, wait times, and user demographics.[9] A brief description of each port is included below[10].

Pedestrian queue at the Puerta México POE

San Ysidro/Puerta México-El Chaparral POE is the busiest border crossing in the western hemisphere.[11] This passenger-only port connects two large cities, the city of San Diego in California and the City of Tijuana in Baja California. In 2013, 15.5 million pedestrians and 22.7 million personal vehicles carrying 39.8 million passengers crossed the border at this port. Pedestrian wait times during peak hours on most days can be three hours or more. Northbound pedestrians most frequently arrive at the port on foot and depart via transit, and the majority of cross-border trips at this POE are made for the purpose of work or shopping.

Northbound pedestrian exit at the Otay Mesa POE

Otay Mesa/Mesa de Otay POE serves passenger and commercial traffic at its location approximately five miles east of the San Ysidro/Puerta México-El Chaparral POE. These two ports function in tandem to connect the cities of San Diego and Tijuana. In 2013, 6.6 million pedestrians and 12.5 million personal vehicles carrying 21.8 million passengers crossed the border at this POE. Wait times for pedestrians during peak hours can reach over two hours. Northbound pedestrians most often arrive at the port via taxi/private shuttle, via a car that was subsequently parked, or by getting dropped off by a personal vehicle. Over half of these pedestrians depart from the POE on foot or in a previously parked car. The most common purpose for northbound pedestrian trips at this port is work, followed by visiting family or friends.

A bicyclist rides towards the Tecate/Tecate POE

Tecate/Tecate POE is the smallest port in San Diego County, located 24 miles east of the San Ysidro/Puerta México-El Chaparral POE. This passenger and commercial port connects the unincorporated community of Tecate in the United States with the Mexican Municipality of Tecate. One and a half million pedestrians and 1.5 million personal vehicles carrying 2.9 million passengers crossed the border at this rural POE in 2013. Wait times during peak periods can reach 45 minutes for pedestrians and three hours for vehicles. The majority of northbound pedestrians arrive at this port via a car that was subsequently parked and then depart on foot. Almost 40 percent of northbound trips at this port are made with shopping as the main purpose.

[9] All crossing volumes in this chapter are sourced from Transborder.bts.gov, "Border Crossing/Entry Data: Query Detailed Statistics," Research and Innovative Technology Administration (RITA), U.S. Department of Transportation. As there is no equivalent southbound crossing data, we have assumed that comparable demand exists for northbound and southbound vehicle and pedestrian crossings. All wait times in this chapter are sourced from Traffic.calit2.net, *Best Time to Cross the Border.* Please see Appendix A for additional crossing volume and wait time source information.

[10] Please see Chapter 6 Travel Behavior Survey Results for more information on pedestrian travel behavior and data source information.

[11] GSA.gov, *San Ysidro Land Port of Entry*

Looking towards the Mexicali port of entry

Calexico West/Mexicali I POE is a passenger-only port and the busiest port in Imperial County. This urban POE connects the downtown areas of the Cities of Calexico and Mexicali, with 8.8 million pedestrians and 8.2 personal vehicles carrying 14.3 million passengers crossing the border at this port in 2013. Pedestrian and vehicle wait times during peak periods can reach two hours. Mexicali is the capital of the state of Baja California, while the Imperial Valley is a smaller, much less populous agricultural area. Northbound pedestrians most frequently arrive at the port by taxi/private shuttle, a car that was parked in Mexico, or by getting dropped off, and most frequently depart by being picked up by a personal vehicle, walking, or taking a taxi or private shuttle. Most northbound trips at this port are made to go to work or visit family and friends.

Calexico East/Mexicali II POE

Calexico East/Mexicali II POE is a passenger and commercial port located six miles east of the Calexico West/Mexicali I POE. This port connects unincorporated Imperial County to the easternmost portion of the City of Mexicali. In 2013, 1.4 million pedestrians and 6.4 million personal vehicles carrying 11.8 million passengers crossed the border at this port. Wait times for pedestrians generally do not exceed 40 minutes, though vehicle wait times can reach almost two hours. The majority of northbound pedestrians arrive at the port by being dropped off and depart by getting picked up in a personal vehicle. Primary trip purposes are to commute to work and visit family or friends.

Medical offices in Los Algodones just outside the POE

Andrade/Los Algodones POE is Imperial County's smallest port. Located just one half mile west of the Arizona border, this passenger-only port connects the mostly-undeveloped U.S. community of Andrade to the small Mexican town of Los Algodones. During 2013, 1.7 million pedestrians and 790,000 personal vehicles carrying 1.6 million passengers crossed the border at this port. The majority of traffic occurs during the winter season, when "snow birds" from other states and Canada flock to the area for warm weather and medical and dental treatment in Los Algodones. Pedestrian wait times during the peak season can reach 40 minutes but generally do not exceed 10 minutes in the warmer months. Vehicle wait times can reach 1.5 hours year-round. Most pedestrians arrive at the port on foot and depart in a previously parked car. Shopping and medical visits are the primary reasons for trips made at this port.

What is inspection like at the ports?

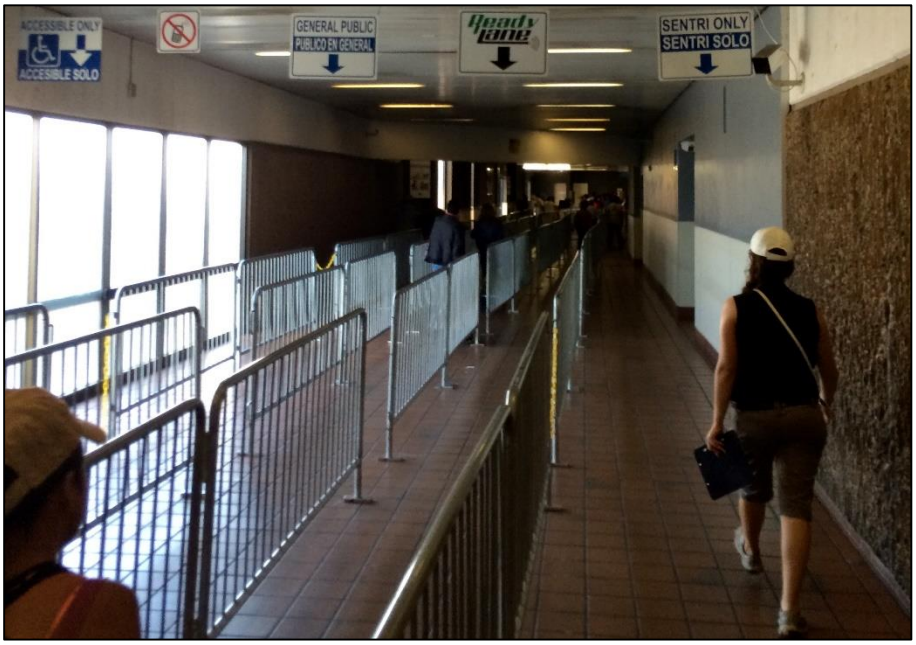
Pedestrians, personal vehicles, and buses are all processed differently at the POEs. Bicyclists are currently processed as pedestrians at all six ports, requiring bicyclists to dismount their bicycles and navigate facilities designed for pedestrians. The exception is bicycles with trailers attached, which are currently permitted in vehicle lanes. In general, northbound pedestrians queue to pass through CBP primary inspection. Most pedestrians enter the United States after primary inspection, though some are sent to secondary inspection or denied entry to the country. Southbound processing is conducted by Aduanas, the Mexican customs authority, through randomized inspections.

Vehicle processing follows a similar format, with northbound and southbound vehicles queuing to approach primary inspection, with some diverted to secondary inspection or denied access to cross the border. Bus processing happens at some ports in a designated bus-only lane. Northbound international bus passengers must disembark their bus, wait in the pedestrian processing queue, and reload on to the bus after crossing the border on foot.

Documentation requirements to cross the border into the United States and into Mexico vary by country and the citizenship of the traveler. In general, to enter the United States from Mexico by land, a secure document such as a passport or permanent resident card is required. Secure documentation can also be required to enter Mexico, with different documentation required based on length of stay and for destinations inside or outside the border region.

AVAILABILITY OF EXPEDITED PROCESSING LANES

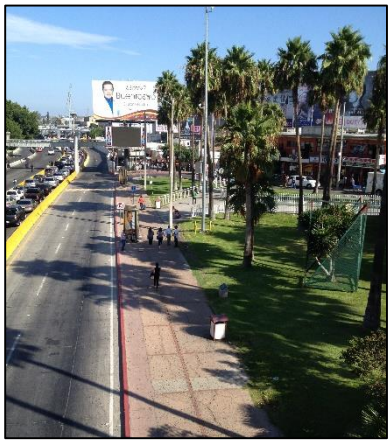
	Pedestrian Processing	Vehicle Processing
San Ysidro	SENTRI, Ready Lane	SENTRI, Ready Lane
Otay Mesa	SENTRI, Ready Lane	SENTRI, Ready Lane
Tecate	-	-
Calexico West	SENTRI, Ready Lane	SENTRI
Calexico East	SENTRI, Ready Lane	SENTRI, Ready Lane
Andrade	-	-



Pedestrians walk towards San Ysidro POE northbound pedestrian processing booths.

Expedited pedestrian and vehicle processing is available at select ports through the Secure Electronic Network for Travelers Rapid Inspection (SENTRI) and Ready Lane programs. SENTRI provides accelerated processing for pre-approved individuals who CBP considers low-risk travelers. SENTRI card holders must undergo a thorough background check and interview with a CBP Officer before being approved for this program. Once approved, cardholders can use the vehicle or pedestrian SENTRI-only lane, which for pedestrians can have processing times up to three times as fast as the regular processing lanes.

Ready Lanes are travel lanes for vehicles or pedestrians who have a radio frequency identification-enabled (RFID-enabled) travel documents, including U.S. passport cards, enhanced drivers licenses, trusted traveler cards such as SENTRI cards, and enhanced permanent resident cards, among others. Ready Lane processing for pedestrians can be twice as fast as the regular processing lanes.



Looking north at the Puerta México POE

Currently, **6.43 million people** live in the California/Baja California border region

The 2040 population projection for the region is **10.64 million people**

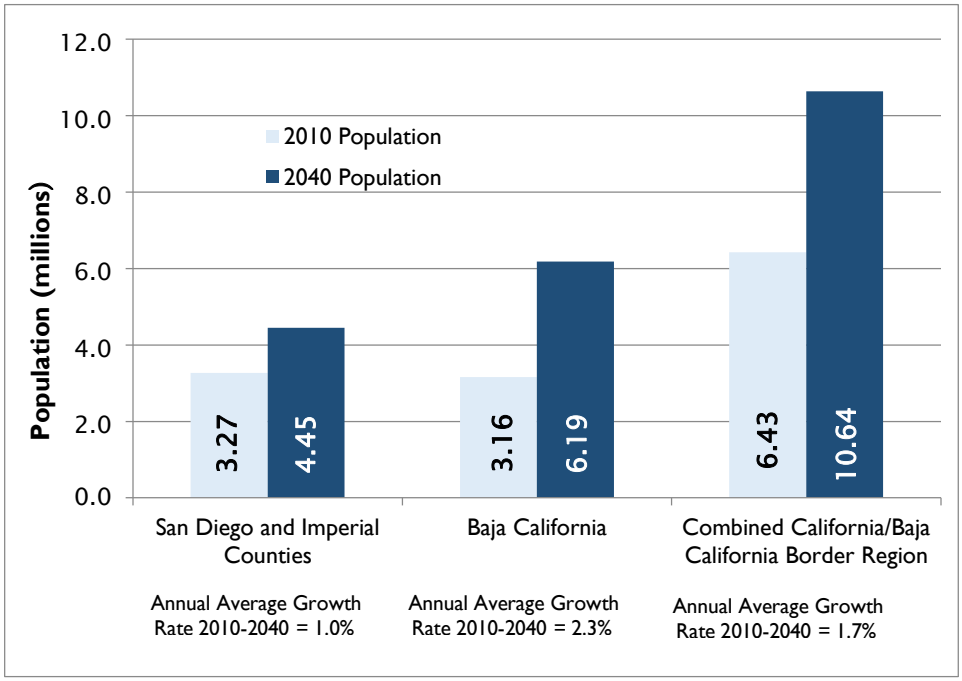
2.2 Demographic Data

This section provides a brief overview of the anticipated demographic changes in the California/Baja California region over the next 35 years. All data have been sourced from the *California/Baja California 2014 Border Master Plan Update*.

Population

Approximately 6.43 million people lived in the California/Baja California border region in 2010. In California, 3.27 million people lived in the border region, 3.1 million in San Diego County and 170,000 in Imperial County. These counties are expected to grow at a combined rate of 1.0 percent in the next 35 years, bringing the 2040 population to 4.45 million, an increase of 1.18 million people. In Baja California, 3.16 million people lived in the state's five municipalities (Tijuana, Playas de Rosarito, Ensenada, Tecate, and Mexicali) in 2010. Tijuana and Mexicali were the largest municipalities, with populations of approximately 1.56 million and 940,000 people, respectively. The state is expected to grow at a rate of 2.3 percent until the year 2040, increasing the population by 3.03 million people to 6.19 million residents. Overall, the combined population of the California/Baja California border region is expected to grow by 4.21 million people by the year 2040.

Table 2.1 Total Population, 2010 and 2040: Border Region



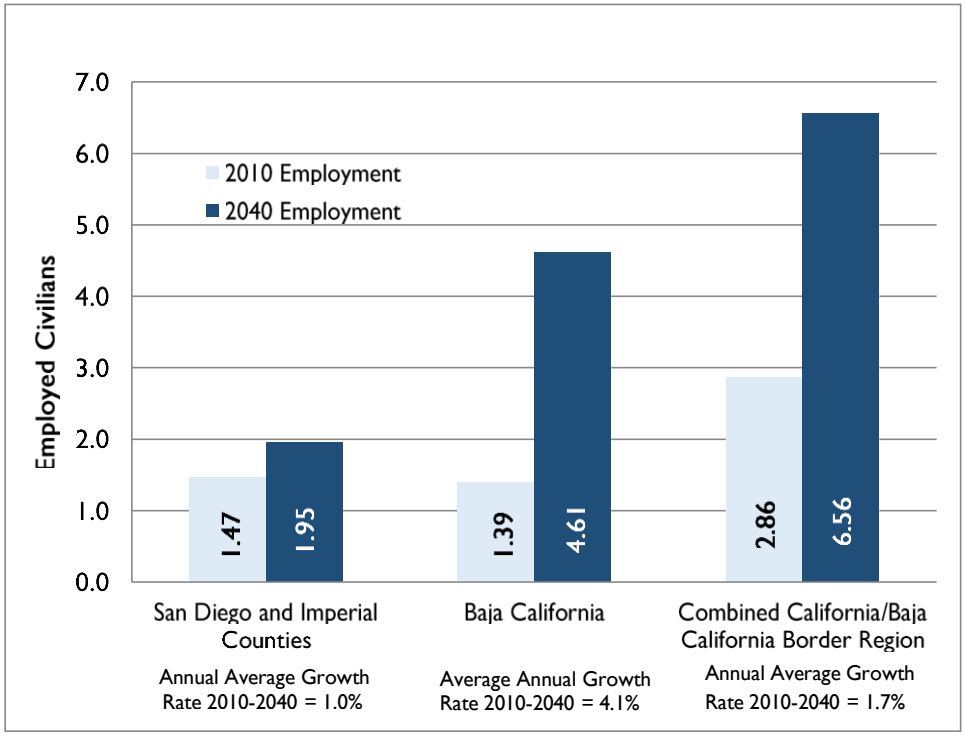
* Projections for Imperial County were only available for 2035. Projected data for includes 2040 data for San Diego County added to 2035 data for Imperial County.

Employment

Approximately 2.86 million people were employed in the California/Baja California border region in 2010. In California, approximately 1.47 million people worked in the border region, with 1.41 million civilians working in San Diego County and 60,000 in Imperial County. These labor markets are expected to grow at a combined rate of 1.0 percent in the next 35 years, bringing the total 2040 civilian labor force to 1.95 million people, an increase of approximately 490,000 people. In Baja California, 1.39 million civilians were employed in the state's five municipalities, with 700,000 in Tijuana, 40,000 in Tecate, and 410,000 in Mexicali. Growth is expected to occur at a rate of 4.1 percent until the year 2040, bringing an additional 3.21 million people to the labor market for a total of 4.6 million employed individuals. Together, the labor market of the combined San Diego/Imperial County and Baja California border region is expected to grow by 3.7 million people in the next 35 years, producing a figure of 6.56 million employed persons in the region in 2040. Appropriately, employment is one of the top three reasons motivating cross border trips at all of the POEs except Andrade/Los Algodones. Please see Chapter 6 Travel Behavior Survey Results for more travel behavior information.

Together, the labor market of the combined San Diego/Imperial County and Baja California border region is expected to grow by **3.7 million people** in the next 35 years

Table 2.2 Civilian Employment, 2010 and 2040: Border Region



San Ysidro/Puerta México-El Chaparral POE has the **highest crossing volumes and wait times** of any of the six ports in the study area

2.3 Crossing and Wait Time Summaries

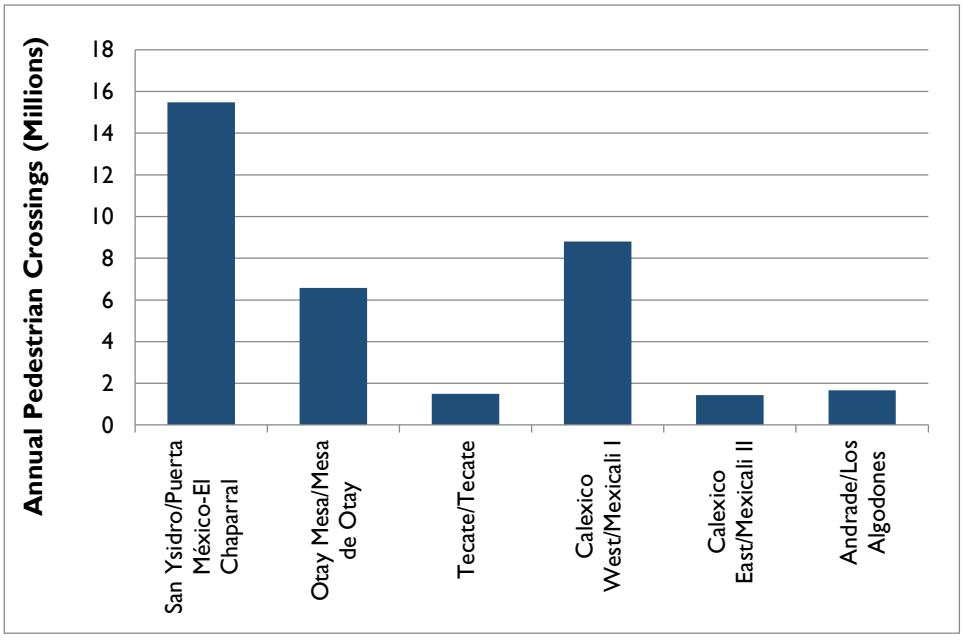
Annual pedestrian crossing volumes and average peak hour wait times are shown below in Tables 2.3 and 2.4. Please reference Appendix A for annual crossing volumes for personal vehicles, personal vehicle passengers, and buses and average peak hour wait times for personal vehicles. Appendix A also contains information on crossing volume and wait time source data.

The crossing volumes shown below correlate with wait times. The San Ysidro/Puerta México-El Chaparral POE has the highest crossing volumes and wait times of any of the six ports. Calexico West/Mexicali I and Otay Mesa/Mesa de Otay POEs have the next highest crossing volumes and wait times. Tecate/Tecate, Calexico East/Mexicali II, and Andrade/Los Algodones POEs all have annual pedestrian crossing volumes under two million people and average wait times under 50 minutes.

A pedestrian waits to cross the street near the Mexicali I POE

People cross the border monthly, weekly, and daily to go to school or work, shop, visit family and friends, and to do a variety of other tasks. Long border wait times inhibit the flow of people and resources in the interlocked economies of California and Baja California and can cause environmental and health impacts, issues which are discussed below.

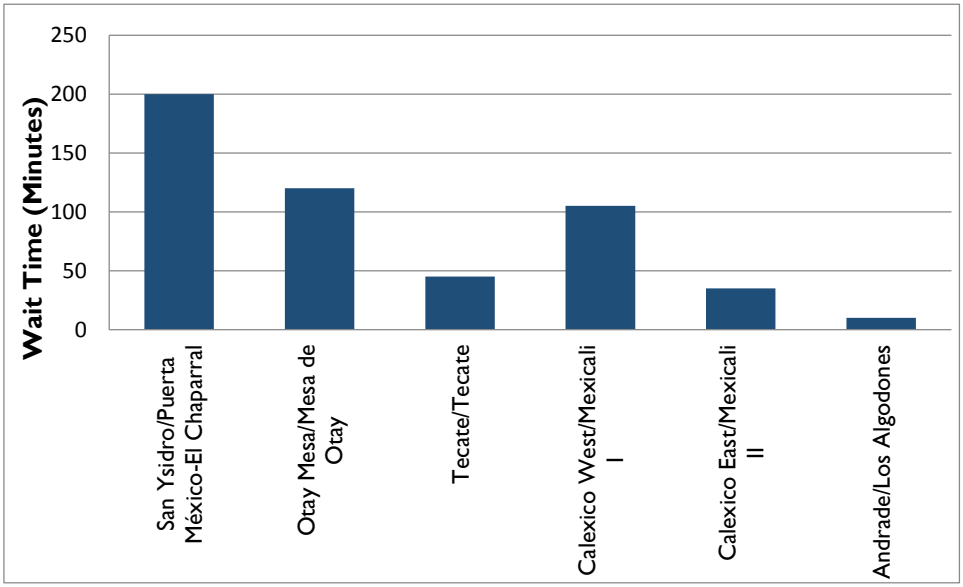
Table 2.3 Annual Pedestrian Crossing Volumes



2013 data from Transborder.bts.gov, "Border Crossing/Entry Data: Query Detailed Statistics," Research and Innovative Technology Administration (RITA), U.S. Department of Transportation. As there is no equivalent southbound crossing data, we have assumed that comparable demand exists for northbound and southbound pedestrian crossings

Viva Tijuana bus terminal

Table 2.4 Average Pedestrian Peak-Hour Wait Times



Northbound data from Traffic.calit2.net, *Best Time to Cross the Border*. Wait times shown represent wait times during each port's unique peak period. Wait times calculated by Traffic.calit2.net as an average of hourly wait times over a three-month period in summer 2014. Summer season wait times may show significant differences in comparison to other seasons because of school summer vacation.

2.4 Environmental, Health, and Economic Impacts of Border Access

Transportation infrastructure providing access to the California/Baja California POEs has far-reaching effects for pedestrians and bicyclists even beyond their immediate crossing experience. Different facets of the economic, environmental, and health impacts of border access and delay are described in the subsections below.

A bicyclist heads towards the Tecate/Tecate POE from the U.S.

Economic Impacts

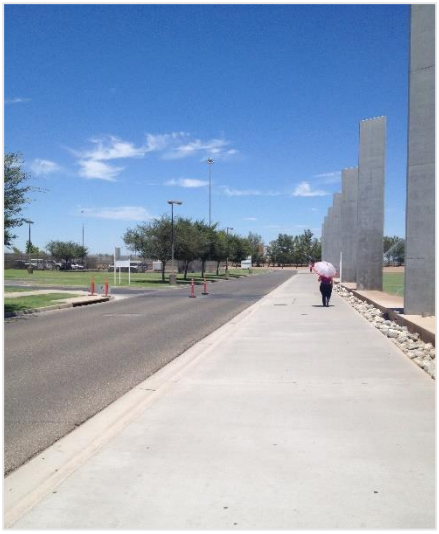
Inadequate and aging infrastructure combined with increasingly more rigorous security requirements can create congestion and delay at the POEs. According to a 2010 study commissioned by SANDAG and Caltrans, delays at the California/Baja California POEs create losses in employment, labor income, and output on both sides of the border due to reduced personal travel and delays in freight movement[12]. The study calculated that in 2008, border delay caused the following losses due to reduced personal travel:

- Total business revenue loss of $2.26 billion in California and $278 million in Baja California
- Employment loss of close to 20,000 jobs in San Diego and Imperial Counties combined and over 2,000 jobs in Baja California

2008 losses due to delays in freight movement were also calculated:

- Total business revenue loss of $943 million in California and $1.66 billion in the United States as a whole, and $1.16 billion in Baja California and $1.83 billion in Mexico as a whole
- Employment loss of 2,353 jobs in California and 5,467 jobs in Baja California

By the year 2017, economic impacts associated with personal trips would increase by 40 percent along the California/Baja California border, generating over **$3.6 billion in revenue losses**



A pedestrian walks north at the Calexico East POE

The study projects that by the year 2017, economic impacts associated with personal trips would increase by over 40 percent along the California/Baja California border, bringing revenue losses of $3.29 billion in California and $396 million in Baja California. Economic impacts associated with freight delays would reach $2.56 billion in California and $3.15 billion in Baja California by 2017. Infrastructure, along with security requirements, creates measurable economic impacts for both Mexico and the United States.

Environmental and Health Impacts

Infrastructure to support pedestrian and bicycle border access is important for the health of border residents and the environment. Shifting some travel to active transportation modes such as walking and bicycling has been shown to increase life expectancy and reduce health costs associated with heart disease, stroke, diabetes, dementia, depression, and breast and colon cancer, as well as to reduce pollutants and greenhouse gas emissions.[13] Additionally, according to a recent report, mobility and built environment factors such as pedestrian safety, transportation support, and sidewalk coverage at and near POEs could contribute positively to measurable health outcomes.[14] This community health perspective is especially important in the border region, where in California over a third of youth are overweight or obese (35 percent in San Diego County

[12] *Economic Impacts of Wait Times at the California-Mexico Border 2009 Update* (HDR Decision Economics, January 2010)
[13] *From Policy to Pavement: Implementing Complete Streets in the San Diego Region* (San Diego Complete Streets Task Force, June 2012)
[14] *Border Health Equity Transportation Study – Draft Final Task 4 Report* (Chen Ryan, August 2014)

and 47 percent in Imperial County) and in Baja California where 42 percent of children ages five to 11 are overweight or obese[15,16,17].

Health effects associated with traffic pollution, such as pollution created by vehicles idling in queues to cross the border, can create **negative health impacts** such as:

- Respiratory illness
- Asthma
- Cardiovascular disease
- Adverse birth outcomes

Similarly, delays in border travel contribute negatively to health and the environment. Northbound border delays in San Diego County have been shown to produce between 74,700-82,600 metric tons of carbon dioxide every six months, the equivalent of consuming over 150,000 barrels of oil.[18] Particulate pollution is especially created by freight delay, as commercial trucks emit much more particulate pollution on a per vehicle basis.[19]

Traffic pollution also causes negative health impacts. In 2007 and 2008, respiratory or pulmonary diseases and diseases of the heart were among the top ten leading causes of death in the border states of the U.S. and Mexico, with diseases of the heart as the number one leading cause of death in both regions.[20] Respiratory illness, asthma, cardiovascular disease, increased mortality, and adverse birth outcomes are just a few of the health effects associated with living and working near high-traffic areas, making it important to reduce traffic pollution and provide protection for pedestrians and bicyclists.

[15] *A Patchwork of Progress: Changes in Overweight and Obesity Among California 5th, 7th, and 9th Graders, 2005-2010* (UCLA Center for Health Policy Research and California Center for Public Health Advocacy, November 2011)
[16] *Encuesta Nacional de Salud y Nutrición 2012 Resultados por Entidad Federativa: Baja California* (Instituto Nacional de Salud Pública, 2013)
[17] SANDAG's Healthy Communities Atlas (http://www.sandag.org/index.asp?classid=12&projectid=482&fuseaction=projects.detail) is an additional resource for health data in the border region (San Diego County data only).
[18] *U.S.-Mexico Border Crossings at San Ysidro: Social and Environmental Effects for Pedestrian Crossers and San Diego Communities* (Presentation) (SDSU Graduate School of Public Health, Casa Familiar, San Diego Prevention Research Center)
[19] *White Paper: Health Impacts of Crossings at U.S.-Mexico Land Ports of Entry: Gaps, Needs, and Recommendations for Action* (SCERP, May 2012)
[20] PAHO.org, *United States-Mexico Border Area* (Pan American Health Organization, October 2014)

3.0 COMMUNITY AND PUBLIC INVOLVEMENT

Participants in discussion at a summer 2014 Imperial County Focus Group meeting

QR code for smartphone eAudit access

This chapter outlines the community and public outreach conducted as part of the study. It describes the types of events and methods used to ensure robust public participation in the project, which helped guide the understanding of existing conditions and the development of the recommended projects and policies. A summary of key findings from the outreach is also included in this chapter.

This study included extensive outreach efforts that took place over ten months in multiple locations along the California/Baja California border, giving stakeholder groups as well as members of the general public the opportunity to provide their input and make an impact on the content of the study.

Outreach by the numbers:

- 10 Focus Group meetings
- 6 On-site Outreach Workshops
- 4 Agency Working Group Meetings
- Over 1,000 public comments received

Meetings were held at community centers and offices of local agencies in both San Diego and Imperial counties, and On-Site Outreach workshops were conducted at each of the six California/Baja California POEs. Community and agency stakeholder groups were strongly binational, with ongoing participation by groups from Mexico and the United States. For those who could not participate in the study in person, an online participation tool, eAudit, was developed so individuals could provide input at a time convenient for them.

Project Website

3.1 PROJECT KICKOFF

Project kick-off occurred in spring 2014 with the development of a Bilingual Outreach Plan and the first Agency Working Group meeting. The 15-page Bilingual Outreach Plan was used to ensure participation in the study from both monolingual English and Spanish speakers, and described the bilingual approach for all outreach programs during the study. The Agency Working Group was developed to provide a coordinated mechanism for interaction with key agency representatives. The Working Group met four times at key milestones during the study process. At the Working Group meetings, team members provided project updates, ensured coordination among key stakeholders, and solicited feedback and technical assistance at critical junctures of the study process.

Project kick-off also included the development of the project website, which was hosted by ICTC and was linked to by the SANDAG and Caltrans websites.

A bilingual fact sheet was created for distribution at outreach events, and the eAudit tool was developed with a link included on the project website.

The eAudit tool was an online mapping resource that allowed any individual with an internet connection to label problem or opportunity areas for bicyclists and pedestrians at the POEs. On the eAudit webpage, users could choose to map a point relevant to bicycle or pedestrian access based on a drop-down menu listing different types of deficiencies or they could enter in a custom description of their own to identify the point. Sixty-second how-to videos for the eAudit were developed in both English and Spanish and included on the project website. Hundreds of comments were documented using the eAudit.

On-Site Outreach Workshop at San Ysidro POE

3.2 OUTREACH EVENTS

Outreach events included ten Focus Group meetings and six On-Site Outreach Workshops. These events were conducted in order to disseminate accurate information about the study and participation opportunities and to gain diverse perspectives on issues and opportunities around making the border crossing experience safer, easier, and more comfortable.

Eight initial focus group meetings were held in spring/summer 2014, four in Imperial County and four in San Diego County. Participants included representatives from diverse backgrounds, incorporating city and county governments from California and Baja California; border security agencies; transit and transportation agencies; non-governmental organizations (NGOs); ICTC, SANDAG, and Caltrans working groups; community and neighborhood groups; employers; major institutions; and economic development interests. Fifty-eight participants in eight sessions heard a presentation and took part in a round-table discussion and interactive mapping exercise, resulting in 167 unique comments. Two additional Focus Group meetings, one in Imperial County and one in San Diego County, took place in November 2014 to solicit feedback on draft project recommendations. A brief presentation was given followed by an open house session where participants could provide input on projects that were of interest to them.

Six On-Site Outreach Workshops were conducted in summer 2014, one at each California/Baja California POE. These workshops engaged cross-border travelers in one-on-one conversations with the project team as well as with the same interactive mapping exercise used during the focus group sessions. One thousand comments were received during the Focus Group meetings and On-Site Outreach Workshops.

Additional documentation for public and community outreach efforts can be found in Appendix K.

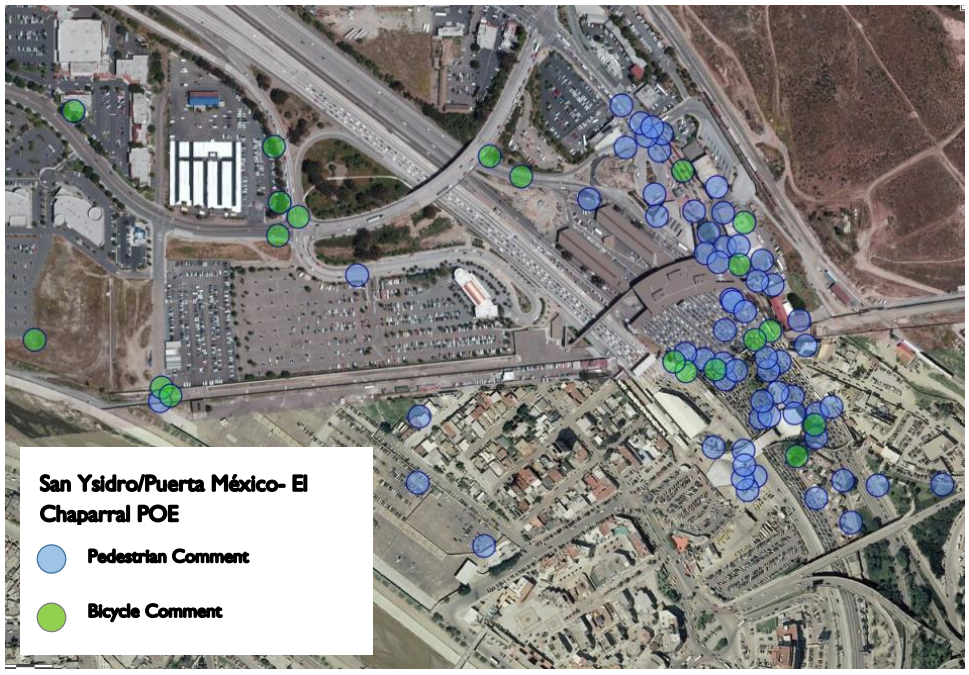
3.3 FINDINGS

The findings from the outreach efforts were rich and varied, ranging from broad policy changes and operational suggestions to location-specific details such as identification of an area where trash frequently piles up or a shade tree could be planted.

"Borders are where two countries come together and should be spaces for exchange."

– Focus Group Participant

Location-specific findings received through the eAudit tool, the Focus Group meetings, and the On-Site Outreach Workshops were plotted and organized using GIS software. Each point corresponds to a specific issue or opportunity identified through public outreach. An example of the maps created from those points is shown below. Location-specific issues and opportunities identified on these maps informed the study's project recommendations.



Mapping of comments received during public outreach – San Ysidro/Puerta México-El Chaparral POE

"Big ideas" and broad themes also emerged during the community and public involvement process. The "big ideas" were translated into the study's policy recommendations. The themes that emerged from the outreach process are listed below, with security, operational, and inspection issues emerging as participants' most common issues:

- Access for People with Disabilities and the Elderly
- Bicycle Access
- Branding/Information/Marketing
- Connectivity/Transit
- Design/Place-Making/Image
- Economics
- General Crossing Experience

- General Infrastructure
- General Study Comment
- Lighting
- Other Amenities/Services
- Other Study/Precedent/Project Reference
- Pedestrian Access
- Personal Safety
- Pick-Up/Drop-Off
- Public Health
- Restrooms
- Safety - Mode Mixing
- Sanitation
- Security/Operations/Inspection
- Signage
- Waiting Areas/Rest Areas/Shade
- Water Fountains/Misters

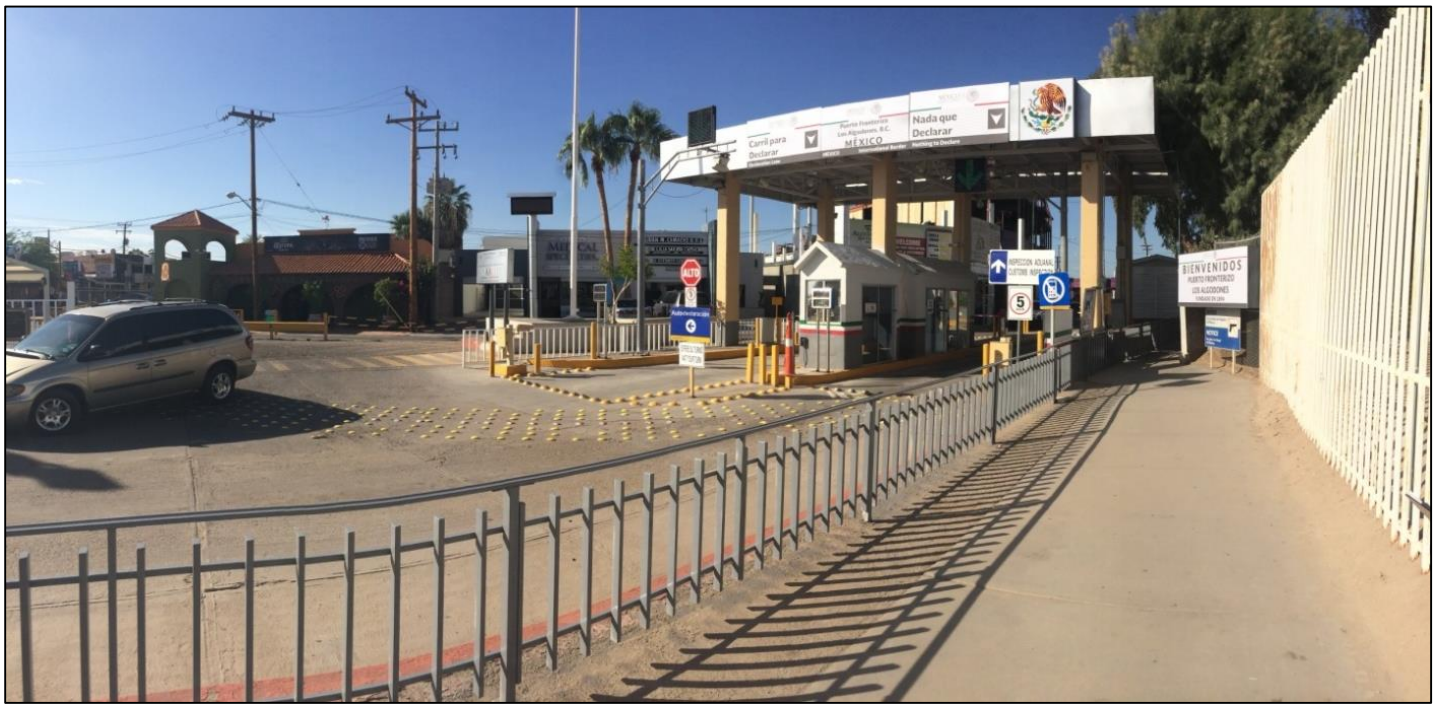
"It's important that we bring more people into the process and gather more public input."

-- Focus Group Participant

Findings from the community and public involvement phase of the study shaped the development of the existing conditions review, resulting in a user-focused approach to the existing conditions assessment. Issues and opportunities identified by study participants were verified by the study team during field visits, and the team sought opportunities at the POEs to address the issues most discussed during outreach. Input received during the community and public involvement phase became a key basis for the study's project and policy recommendations. Additionally, the large themes that emerged during the outreach process informed the creation of the study's bicycle-friendly and pedestrian-friendly design guidelines.

Members of the study team speaking with members of the public at the San Ysidro POE On-Site Outreach Workshop

4.0 EXISTING CONDITIONS ANALYSIS AND ASSESSMENTS



Los Algodones POE vehicle processing facility

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This chapter includes an evaluation of existing pedestrian and bicycle conditions at each of the six ports of entry within the study area. It includes a discussion of the analysis methodologies, a brief description of the location, inspection facilities, and transit and vehicle conditions at each port, and an assessment of existing pedestrian and bicycle conditions

Pedestrians walk towards the Mexicali I port facility under a metal shade structure

4.1 ANALYSIS METHODOLOGY

This section provides an overview of the methods of analysis used to evaluate existing conditions at the ports of entry in this study. The goal of the analysis was to evaluate pedestrian and bicycle conditions at each port, with the aim of creating an environment that facilitates walking and bicycling at each POE. The following subsections describe the analysis methodology.

Study area

The study area for the pedestrian network was developed by identifying pedestrian travel routes between each POE and major origins and destinations nearby. Examples of these origins and destinations include transit stops, parking

lots, large shopping centers, educational facilities, and tourist destinations. The resulting pedestrian networks included sidewalks and pedestrian bridges as well as dirt paths and unofficial walkways.

"Cyclists shouldn't have to ride on sidewalks."

– Focus Group Participant

The study area for the bicycle network was developed by identifying existing and planned bicycle facilities (bike lanes, routes, and paths) around each POE, and identifying bicycle travel routes between each POE and nearby origins and destinations such as transit services and existing popular bicycling routes. Popular bicycling routes were identified using cyclist heat map data from the fitness tracking company Strava. Maps of the bicycle and pedestrian networks at each port are included in Appendix C.

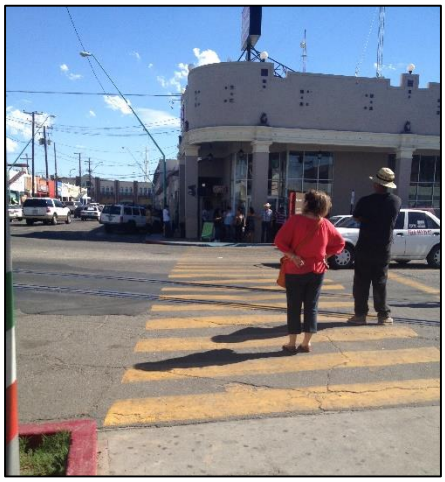
Pedestrian Travel Time Analysis

Pedestrian travel time analysis was conducted by calculating typical walking times between POEs and major nearby destinations such as transit facilities, shopping centers, and parking lots.

Network Connectivity Assessment

The network connectivity assessment evaluates gaps, maintenance issues, and other barriers to walking and biking in the pedestrian and bicycle study areas. Network connectivity analysis criteria were developed with the help of site visits to each POE and input from port users and government agency staff. Pedestrian network connectivity analysis criteria include:

- **Complete, gap-free sidewalk networks**. Sidewalks that connect pedestrians to their destinations.
- **Well-maintained sidewalk networks** free from major cracks and holes.
- **Sidewalk networks that cater to users of all abilities**. Pathways that avoid stairs and steeply sloped ramps and that provide adequate pedestrian sidewalk ramps are important for elderly and disabled users as well as individuals with luggage, strollers, and shopping handcarts. Sidewalks should be constructed to adequate width for all users.



A marked crosswalk in the pedestrian network outside of the Mexicali I POE

Bicycle network connectivity analysis criteria include:

- **Connectivity to existing routes** from the port facility. Well-connected routes increase the attractiveness of crossing the border by bicycle. Additionally, **well-controlled intersections** located near port facilities increase safety for travelers using all modes of transportation.
- **Complete, gap-free bicycle networks** that connect cyclists to their destinations. **Facilities without stairs** and **routes protected from fast vehicle traffic** both facilitate bicycle travel.

- **Well-maintained bicycle networks** free from major cracks, holes, and debris contribute to a high-quality bicycling environment.

Transit network connectivity was evaluated by assessing the availability of light rail, private and public bus service, taxis, jitneys, and pedicabs.

Using the network connectivity analysis criteria, a rating was developed for the overall condition of gaps, maintenance issues, and other barriers to walking or biking at each POE. For the pedestrian network connectivity analysis, a separate assessment was also conducted for the network for the area immediately surrounding each POE. Information on the ratings metrics can be found in Appendix D.

Network Amenities Assessment

The quality of pedestrian, bicycle, and transit amenities was evaluated by reviewing the availability of amenities such as water fountains, benches, shade, bicycle racks, maintenance/repair services, transit shelters, and restrooms at each POE. The status of each type of amenity was then rated as poor, fair, or good for each travel mode based on this field assessment and public and agency input. Information on the ratings system can be found in Appendix E.

The type of amenities to include in each assessment was developed with the help of site visits to each POE and input from port users and government agency staff. For pedestrians, the amenities assessed include:

A curved shade structure provides all-day protection from the sun in the northbound pedestrian queue in Los Algodones

- **Shade and weather protection**. Protection from the sun and rain is crucial, especially for the desert ports of Imperial County. Transit stops and pedestrian queuing areas especially need weather protection. Structures ideally protect against morning and afternoon sun angles and are breathable to ensure airflow and prevent vehicle exhaust from becoming trapped underneath.
- **Water fountains and restrooms**. These amenities are necessary at all port facilities, and should be accessible from pedestrian queuing areas.
- **Food services** for port users to purchase refreshments.
- **Benches**, especially important along queues.
- **Lighting** for the port facility, transit stops, and popular paths to and from the POEs increases safety for users.
- **Drop off and pick up locations close to the POE**. Designating pick-up and drop-off locations as near as possible to the pedestrian queues can help avoid safety concerns and increase convenience for users. Both "kiss & ride" and "park & call" locations facilitate pedestrian access to the ports.
- **Information kiosks**.

Informational signage at the Otay Mesa POE designates Ready Lanes near the front of the pedestrian queue

- **Bilingual directional signage** on both sides of the border for pedestrians, vehicle drivers and bicyclists. Lane designations are another important wayfinding component which provide crucial information and order pedestrian queues between SENTRI, Ready Lane users, and regular border crossers.
- **Bilingual Informational signage** includes information on crossing procedure, wait time information, and permitting information. Signage may also include maps of the port facility and directions to tourist destinations, transit stops, amenities such as restrooms and water fountains, and the pathway leading to the POE.

For bicyclists, the amenities assessment included additional components specific to bicycle travel, such as:

- **Bicycle parking and lockers**.
- **Bicycle rental** or bike share stations.
- **Maintenance/repair services**.
- **Showers**. These amenities are increasingly becoming common at bicycle destinations.
- **Transit with bicycle-carrying capacity** to extend the feasible distance of bicycle trips. These amenities can encourage non-motorized travel by providing for individuals who bicycle for "First Mile/Last Mile" access to their transit trips[21].

For transit, the amenities assessment included an evaluation of shelter, seating and restrooms provided specifically for transit users.

[21] SCAG.ca.gov, "First Mile/Last Mile." "The goal for developing First Mile/Last Mile access to transit strategies is to increase the effective range of transit stations (currently about 1/4 mile) allowing more transit patrons, or increase the number of transit patrons within the effective range. This can involve improving the walking and biking experience, increasing safety and security."

Pedestrians crossing northbound into the U.S. from the Puerta México POE queue in designated lanes before reaching inspection facilities

SAN YSIDRO/PUERTA MÉXICO-EL CHAPARRAL INSPECTION FACILITIES

	NB (entering U.S.)	SB (entering Mexico)
Hours	24 hours	24 hours
Processing	Passenger[i]	Passenger[i]
Pedestrians	15 lanes	1 lane
Vehicles	46 booths, 24 lanes	6 lanes
Bus-only	1 lane	None
SENTRI and Ready Lane[ii]	Pedestrian and Vehicle	NA

[i] Includes all non-commercial drivers, their passengers, and pedestrians

[ii] See Chapter 1 for further explanation of SENTRI and Ready lanes

4.2 Existing Conditions Assessment

This section describes the results of the existing conditions analysis. The existing conditions assessment for each port includes an overview of border crossing data and transportation services at the POE, a description of access to the POE in both the northbound (NB) and southbound (SB) directions, a discussion of major destinations in the vicinity of the port, and a summary of network connectivity and amenities for pedestrians and cyclists. See Appendix A for information on crossing volume and wait time source data and Chapter 5 for information on future conditions at each of the ports.

San Ysidro/Puerta México – El Chaparral

The San Ysidro/Puerta México-El Chaparral POE is the main connection between San Diego and Tijuana, serving as the key cross-border link for the California/Baja California mega-region[22]. This POE is the busiest land port in the western hemisphere,[23] with an average of 62,000 vehicles and 42,000 pedestrians crossing the border at this location each day. Over 22 million personal vehicles carrying almost 40 million passengers crossed the border at this port during 2013. During peak periods vehicle wait times can be up to four hours, although new inspection facilities opened in fall 2014 have decreased wait times. Pedestrian wait times during peak hours can be three hours or more.

There are existing bicycle facilities in the U.S. near the POE, though there are currently none in Mexico. Transit services at the POE include taxis, private buses serving regional and interstate destinations in the U.S. and Mexico (e.g., Greyhound, El Corre Caminos, and Cruceros), public buses (MTS bus routes 906 and 907, Azul y Blanco bus routes), pedicabs, licensed and unlicensed jitneys, and light rail (San Diego Trolley Blue Line). Approximately 20,000 daily trolley trips start or end at the San Ysidro Intermodal Transportation Center (ITC), as well as 3,000 MTS bus trips.[24] Approximately 165 buses cross the border northbound at the San Ysidro/Puerta México-El Chaparral POE daily.

Access and Major Destinations

Access to the POE from Mexico

To enter the U.S. from Mexico, pedestrians access the Puerta México northbound pedestrian queue from local roadways east of Vía Rápida Oriente, with pedestrian queuing along Ramal C. Unofficial pedestrian pick-up and drop-off occurs adjacent to the queue. A pedestrian bridge provides access over the northbound vehicle queue from the Puerta México port to the area around the new El Chaparral facility towards downtown Tijuana.

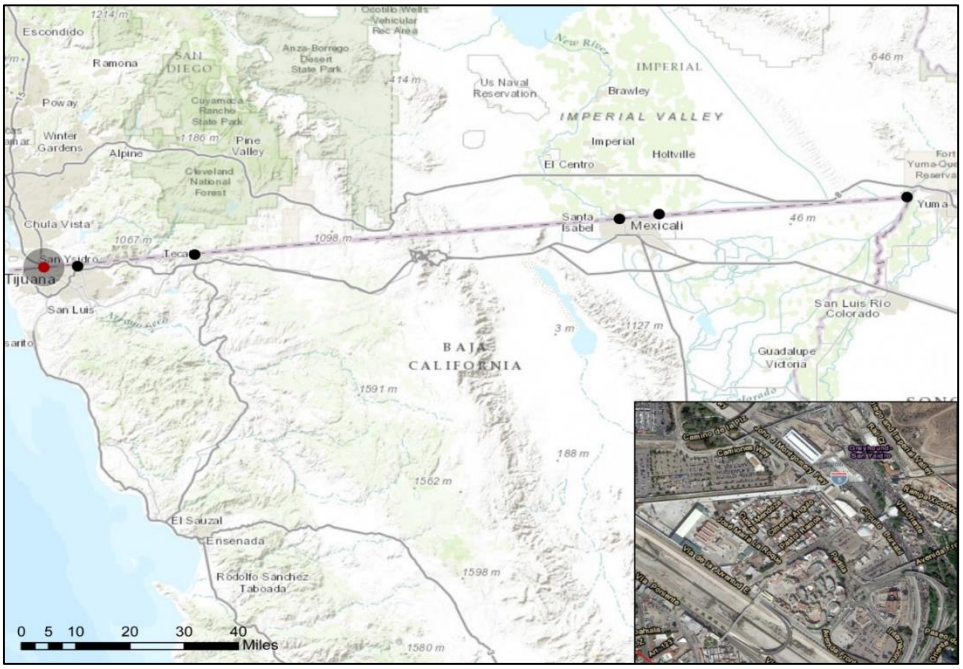
[22] A mega-region is a large network of interconnected regions.
[23] GSA.gov
[24] *San Ysidro Port of Entry Reconfiguration Mobility Study* (Parson Brinckerhoff and Estrada Land Planning, January 2010)

PEDESTRIAN TRAVEL TIME ANALYSIS

DESTINATION (POE TO):	TRAVEL TIME
United States	
San Ysidro Intermodal Transportation Center	1 min
Parking on E San Ysidro Blvd	3 min
Bus, jitney, POV loading on E San Ysidro Blvd	5 min
Parking, POV loading off Camiones Way	7 min
Border Village	9 min
Bus ticketing, parking off Virginia Avenue	10 min
Las Americas Outlets	12 min
Mexico	
Parking, Bus stop, and taxis at end of Ramal C	4 min
Taxis, Parking, POV loading, bus ticketing at western end of Tijuana pedestrian bridge	5 min
Bus ticketing, parking off Paseo Centenario Tijuana	7 min
Viva Tijuana bus terminal, nearby taxis and parking	8 min
El Chaparral Tijuana River pedestrian bridge	11 min

Cyclists are required to dismount their bicycles and cross the border as pedestrians. Northbound vehicles approach the Puerta México POE on Vía Rápida Oriente, which connects to Federal Highways 1D, 1, and 2.

Figure 4.1 San Ysidro/Puerta México-El Chaparral POE Regional Map



Access to the POE from the U.S.

To enter Mexico from the U.S., pedestrians pass through the San Ysidro Intermodal Transportation Center, located just north of the U.S. pedestrian processing facility. The ITC is the access point for a pedestrian bridge over Interstate 5, the southbound pedestrian path, and the northbound pedestrian exit. From the ITC, the southbound path leads to two turnstiles providing access to Mexico. Once in Mexico, the pathway becomes a staircase with an adjacent steep ramp, which continues through the Mexican inspection facility and terminates at Ramal C, with nearby access to the pedestrian bridge towards El Chaparral and downtown Tijuana.

Bicycle amenities and facilities in the vicinity of the POE include a bike parking rack at the ITC, bicycle lanes along Camino de la Plaza, and bicycle lanes that turn into a bicycle route along E Beyer Boulevard. Cyclists are currently required to dismount their bicycles and cross the border as pedestrians. Vehicles access the San Ysidro POE using I 5; Camino de la Plaza provides access to the streets in the immediate vicinity of the POE.

The existing San Ysidro Intermodal Transit Center serves transit riders at the POE in the US

Major Destinations

Within the U.S., popular shopping centers are located west of the POE, and shops and pay parking are located to the north. The San Ysidro Intermodal Transportation Center is also located directly north of the POE. Within Mexico, the Zona Río neighborhood is located southwest of the POE, and tourist destination Avenida Revolución is located southwest of the POE, across the Tijuana River. Small shops are located adjacent to the northbound pedestrian and vehicle queuing areas, and taxis, private buses and public buses are located within a half-mile of the POE in both nations. A more detailed discussion of nearby destinations is included in Appendix C.

Pedestrian and Bicycle Assessment

Network Connectivity

Network connectivity deficiencies encompass gaps, maintenance issues, and other barriers along the transportation network around the POE, as well as the availability of transit service. Maps and detailed analysis of the San Ysidro POE network connectivity are available in Appendix D.

Significant pedestrian network deficiencies include steep grades and staircases in both the U.S. and Mexico, uneven pavement and sidewalks, narrow pathways, and limited capacity at turnstiles entering Mexico. Passenger pick-up and drop-off locations in both the U.S. and Mexico are hectic, with transit, vehicles, pedestrians and bicycles competing for limited space.

Table 4.1: Network Connectivity Assessment

	Pedestrian			Bicycle			Transit					
	Gaps	Maintenance	Stairs/Steep Slopes	Existing Facilities	Gaps	Maintenance	Light Rail	Private Bus	Public Bus	Taxi	Jitney	Pedicab
	United States											
At POE	Good	Fair	Poor	Yes	Fair	Good	Yes	Yes	Yes	Yes	Yes	Yes
POE Vicinity	Fair	Fair	Fair	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]
	Mexico											
At POE	Fair	Poor	Poor	No	NA[ii]	NA[ii]	No	Yes	Yes	Yes	No	No
POE Vicinity	Fair	Fair	Poor	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]

[i] Bicycle and transit assessed at the POE, not in the vicinity of the POE
[ii] Because no existing bicycle facilities were in place, bicycle analysis was not conducted

"It would be great to have shade in the pedestrian northbound crossing lane."

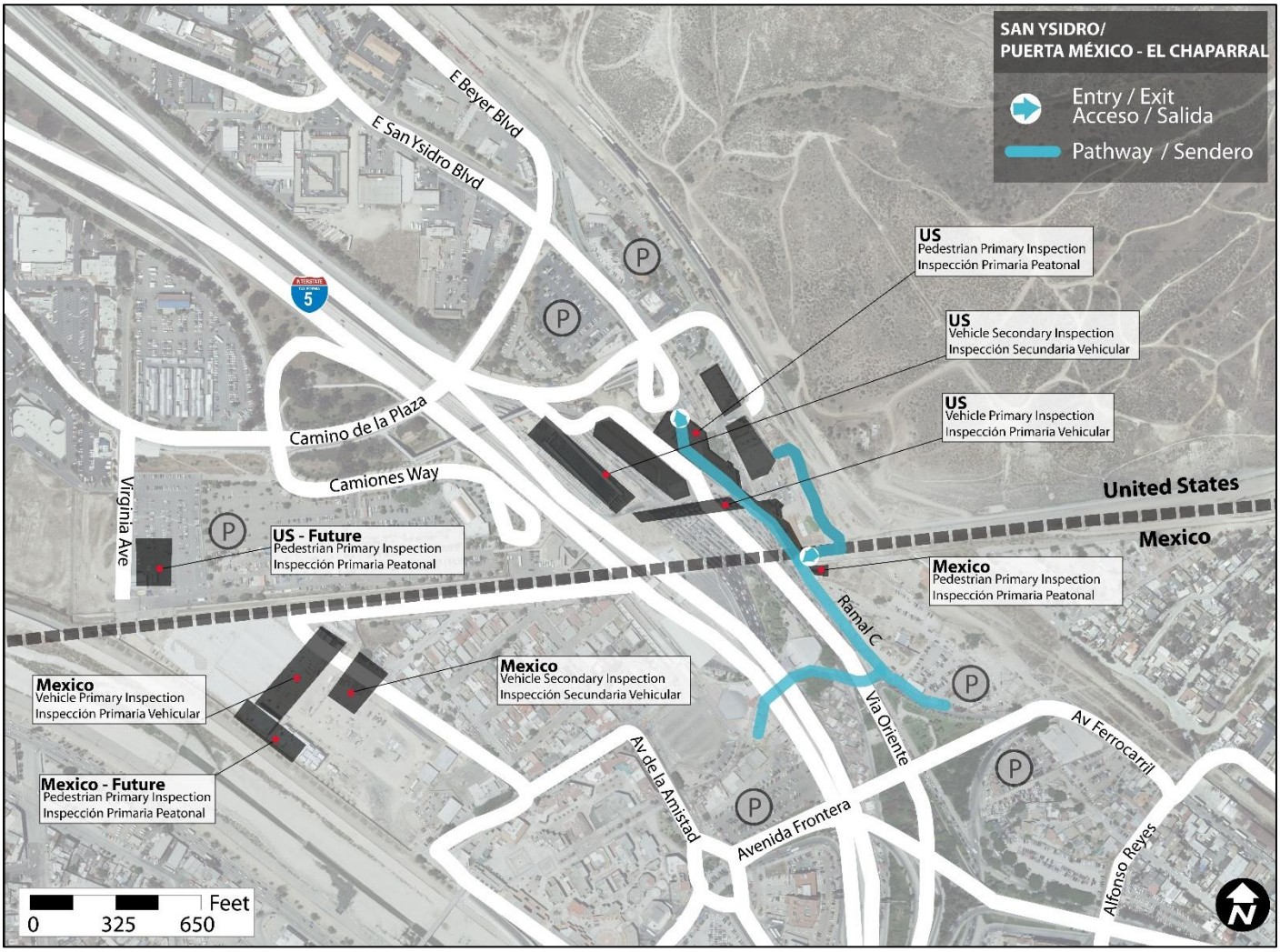
– Focus Group Participant

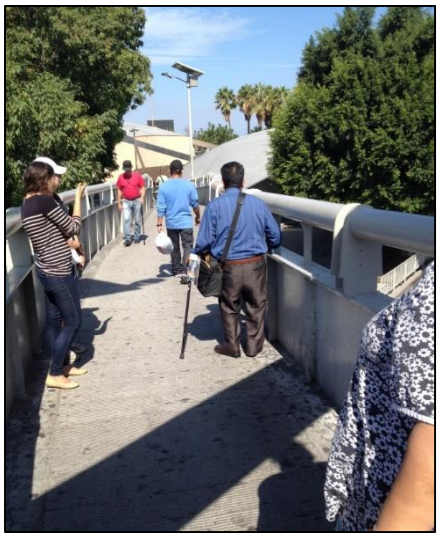
Significant bicycle network deficiencies include missing connections to the area around the POE in both nations, as well as missing connections to regional bike routes. Bicyclists must dismount and wheel bikes through the POEs, which include stairs, narrow sidewalks, and other facilities not designed to accommodate bicycles. Transit vehicles in the U.S. can accommodate only a minimal number of bicycles, and buses in Mexico do not have provisions for bicycles.

Network Amenities

Transportation network amenities help create a high-quality experience for pedestrians, cyclists, and transit riders. Key deficiencies for pedestrians include a lack of sun and rain protection for transit stops and pathways that provide access to the POE, especially the northbound pedestrian queue; incomplete informational and directional signage; and a limited number of restrooms, water fountains, and benches. Some bicycle racks are available for cyclists in the U.S.

Figure 4.2 San Ysidro/Puerta México-El Chaparral POE Map



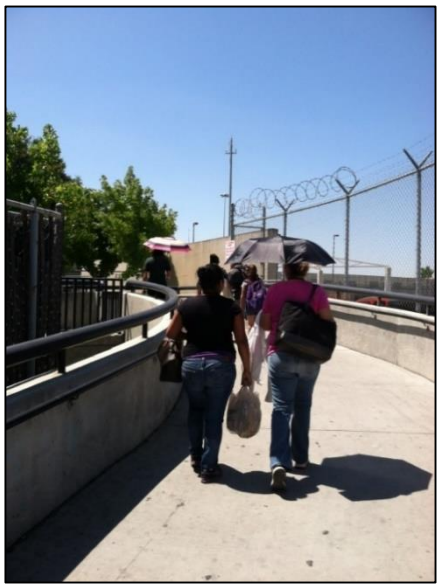


A pedestrian bridge provides access to the Puerta México POE over the northbound vehicle queue

just north of the POE. In the U.S., transit amenities include public phones, pay restrooms, vending machines, benches, and small shelters at the San Ysidro ITC, and in Mexico transit users have access to public phones, pay restrooms, and food services. A more detailed analysis of network amenities is included in Appendix E.

Table 4.2: Network Amenities Assessment

	Pedestrian									Bicycle						Transit		
	Shade	Water Fountains	Food Services	Benches	Restrooms	Lighting	Proximate Passenger Pickup	Information Kiosk	Signage	Bicycle Parking	Bicycle Lockers	Bicycle Rental	Maintenance/Repair Services	Showers	Accommodations on Transit	Shelters	Seating	Restrooms
United States																		
	Poor	Fair	Good	Fair	Poor	Fair	Fair	Poor	Poor	Fair	Poor	Poor	Poor	Poor	Fair	Good	Good	Fair
Mexico																		
	Poor	Fair	Good	Poor	Fair	Fair	Fair	Fair	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Good	Fair	Good



Pedestrians use an unshaded pathway at the Otay Mesa POE to access the southbound pedestrian lane into Mexico

Otay Mesa/Mesa de Otay

The Otay Mesa/Mesa de Otay POE is located in San Diego County, approximately five miles east of the San Ysidro/Puerta México-El Chaparral POE. These two ports function in tandem as the gateway between the cities of Tijuana and San Diego. The Otay Mesa/Mesa de Otay POE provides service for pedestrians, passenger vehicles, buses, and commercial vehicles, and many travelers access the airport via this POE due to of its location one mile east of the General Abelardo L. Rodríguez International Airport.

This POE is among the ten busiest land ports in the U.S. and is the busiest commercial border crossing on the California/Baja California border[25]. Over 12 million passenger vehicles carrying 21.8 million passengers in addition to 6.6 million pedestrians crossed the border at this port in 2013, an average of 18,000 pedestrians per day. During peak periods northbound wait times for vehicles can reach three hours. Pedestrian wait times during peak hours on weekday mornings can reach over two hours.

There are some existing bicycle facilities in Otay Mesa and none currently near the POE in Tijuana. Transit facilities at the port include private buses serving regional and interstate destinations in the U.S. (e.g., Otay Mesa Transit and Saenz), public buses (MTS bus routes 905, 905A and B, and 950, public bus

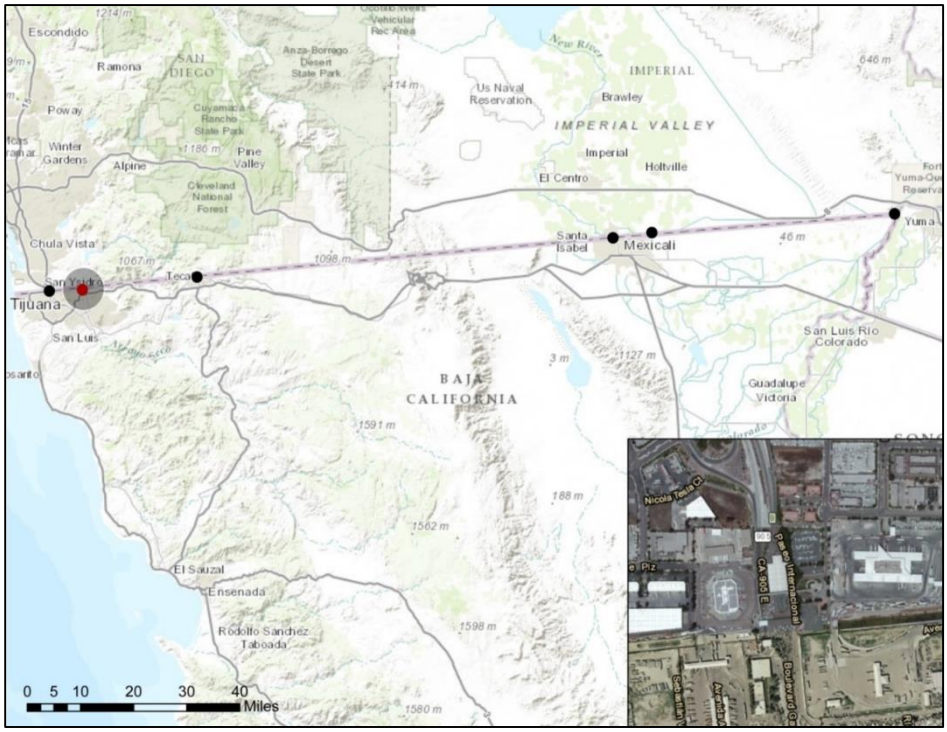
OTAY MESA/MESA DE OTAY INSPECTION FACILITIES

	NB (entering U.S.)	SB (entering Mexico)
Hours	24 hours	24 hours
Processing	Passenger,[i] Commercial	Passenger, Commercial
Pedestrians	6 lanes	1 lane
Vehicles	12 lanes	4 lanes
Bus-only	1 lane	None
SENTRI and Ready Lane[ii]	Pedestrian and Vehicle	NA

[i] Includes all non-commercial drivers, their passengers, and pedestrians

[ii] See Chapter 1 for further explanation of SENTRI and Ready lanes

Figure 4.3 Otay Mesa/Mesa de Otay POE Regional Map



[25] Sdforward.com, "Overview of the San Diego Region International Land Ports of Entry" (San Diego Association of Governments Committee on Binational Regional Opportunities, September 3, 2013), page 18.

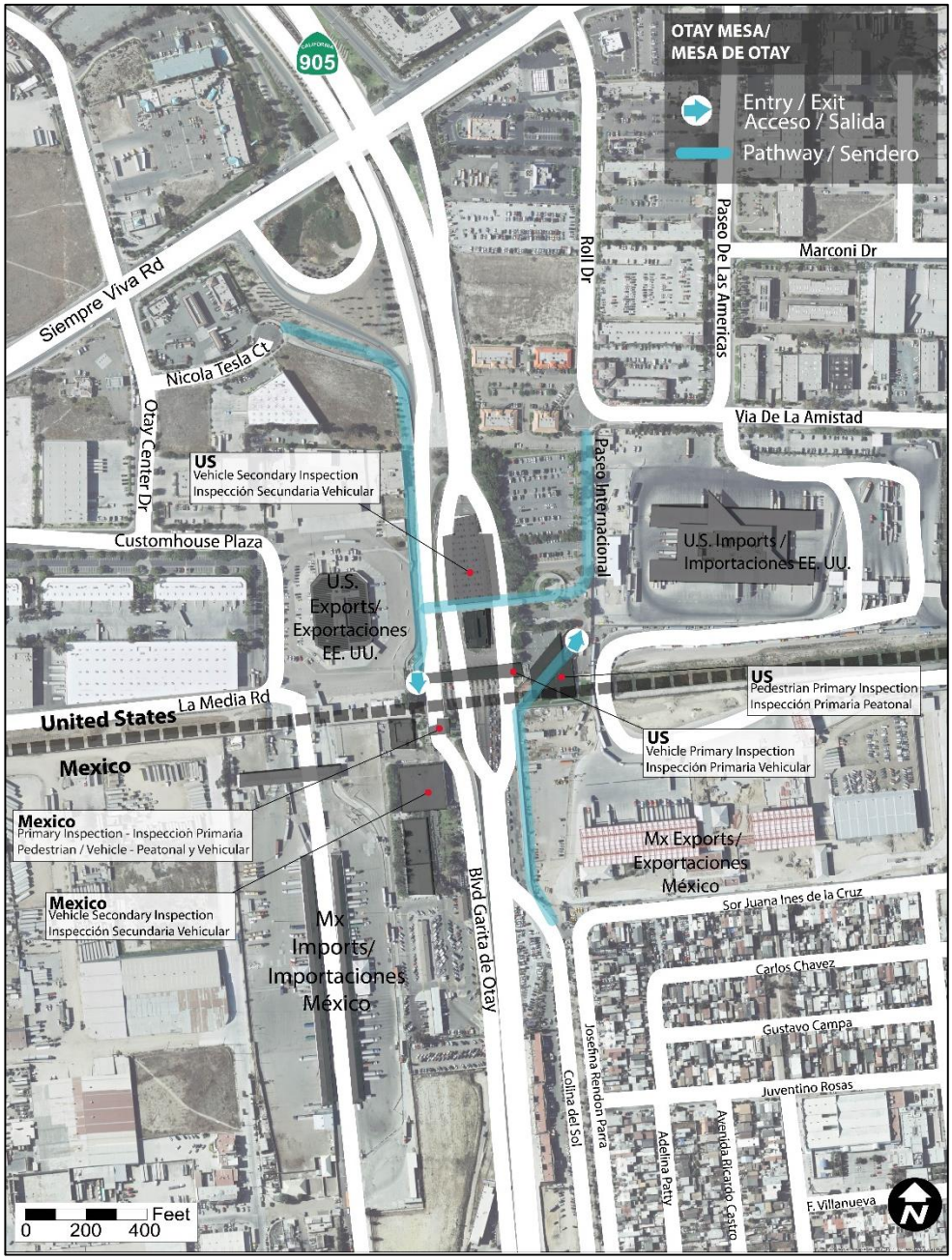
routes in Tijuana), taxis, and jitneys. Over 42,000 buses cross northbound at the POE annually, averaging more than 100 buses daily in each direction.

Access and Major Destinations

Access to the POE from Mexico

Northbound pedestrians access the Mesa de Otay POE facility via Boulevard Garita de Otay or one block to the east via a dirt path along Colina del Sol. Many pedestrians are also dropped off closer to the POE at a passenger pick-

Figure 4.4 Otay Mesa/Mesa de Otay POE Map



PEDESTRIAN TRAVEL TIME ANALYSIS

DESTINATION (POE TO):	TRAVEL TIME
United States	
Loading, taxis, jitneys, MTS bus on Roll Drive & Via de la Amistad	3 min
Saenz and Otay Mesa Transit	4 min
Parking on Roll Drive	5 min
Loading zone on Nicola Tesla Court	9 min
MTS bus stops on Siempre Viva Road	13 min
Mexico	
Loading in SENTRI lane	0 min
Taxis and loading on S. Juana Inés de la Cruz	3 min
Parking on Colina del Sol	4 min
Loading, parking, and bus stop on corner of Colina del Sol and Blvd. de las Bellas Artes	10 min
Public bus stop on Blvd. de las Bellas Artes under overpass	11 min

up/drop-off area at the northern end of Colina del Sol, or unofficially in the SENTRI lane adjacent to the northbound pedestrian queue. There are no bicycle facilities in Mexico within the POE vicinity, and cyclists are required to dismount their bicycles and cross the border as pedestrians. Vehicle enter the U.S. from Mexico via Boulevard Garita de Otay, one mile off of Federal Highway 2.

Access to the POE from the U.S.

Southbound pedestrians access the POE from the intersection of Roll Drive and Via de la Amistad, walking south on Paseo Internacional alongside the employee and SENTRI-applicant parking lot and then west across a pedestrian bridge to access the pathway into Mexico. An alternative pedestrian route exists northwest of the crossing and provides a multiuse path from a passenger pick-up/drop-off zone at Nicola Tesla Court to the southbound pathway.

Bicycles may use the multiuse path connecting Nicola Tesla Court to the POE, and bike lanes exist along Siempre Viva Road. Cyclists are currently required to dismount their bicycles and cross the border as pedestrians. To enter Mexico from the U.S. by car, vehicles access the POE from SR 905.

Major Destinations

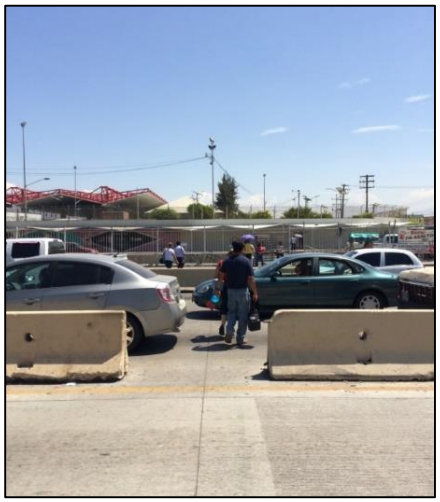
Within the U.S., popular destinations close to the POE include shopping centers and transit facilities. Within Mexico, major destinations include the Universidad Autónoma de Baja California - Campus Tijuana, located two miles southeast of the POE, and a large park, Parque de la Amistad, located one mile south of the POE, as well as the aforementioned General Abelardo L. Rodríguez International Airport. The port is located within the city of Tijuana's Otay Centenario district and the Otay Mesa community of San Diego. A more detailed discussion of nearby destinations is included in Appendix C.

Pedestrian and Bicycle Assessment

Network Connectivity

Network connectivity deficiencies encompass gaps, maintenance issues, and other barriers along the transportation network around the POE, as well as the availability of transit service.

Significant pedestrian network deficiencies include poor crosswalk and sidewalk infrastructure in both the U.S. and Mexico. Sidewalks in many locations are too narrow, poorly maintained, and unshaded, with obstacles (e.g., poles and high curbs) impeding pedestrian movement. Many pedestrian sidewalk ramps are missing, and some crosswalks are unmarked or faded. There is no pedestrian bridge across Boulevard Garita de Otay in Mexico, forcing pedestrians to walk through fast-moving traffic to cross the street. Finally, drop-off/pick-up locations are distant from POE entry points, and often crowded.



Pedestrians crossing Boulevard Garita de Otay among vehicle traffic

"Public transportation is far away – you have to walk far and then stand waiting. We need water too, and bathrooms."

– Focus Group Participant

Significant bicycle network deficiencies include an absence of bicycle facilities in Mexico, as well as missing connections to the POE in both nations. Bicyclists must dismount and wheel bikes through the POE, which include stairs, narrow sidewalks, and other facilities not designed to accommodate bicycles. Transit vehicles in the U.S. can accommodate only a minimal number of bicycles, and buses in Mexico do not have provisions for bicycles. Maps and detailed analysis of network connectivity are available in Appendix D.

Table 4.3: Network Connectivity Assessment

	Pedestrian			Bicycle			Transit					
	Gaps	Maintenance	Stairs/Steep Slopes	Existing Facilities	Gaps	Maintenance	Light Rail	Private Bus	Public Bus	Taxi	Jitney	Pedicab
	United States											
At POE	Poor	Good	Poor	Yes	Fair	Good	No	Yes	Yes	Yes	Yes	No
POE Vicinity	Good	Good	Good	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]
	Mexico											
At POE	Fair	Poor	Good	No	NA[ii]	NA[ii]	No	Yes	No	Yes	No	No
POE Vicinity	Poor	Poor	Good	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]

[i]Bicycle and transit assessed at the POE, not in the vicinity of the POE
[ii]Because no existing bicycle facilities were in place, bicycle analysis was not conducted

Network Amenities

Transportation network amenities help create a high-quality experience for pedestrians, cyclists, and transit riders. Currently, weather protection is not in place in many locations on both sides of the POE. Restrooms, water fountains, and benches are also limited. There are no bike parking racks, lockers, or support services for cyclists in either nation around the POE. Pay phones are available to transit users at the POE, but luggage lockers are not available on either side of the border, and restrooms and refreshment services are not provided specifically for transit users. A more detailed analysis of network amenities is included in Appendix E.

Table 4.4: Network Amenities Assessment

	Pedestrian									Bicycle						Transit		
	Shade	Water Fountains	Food Services	Benches	Restrooms	Lighting	Proximate Passenger Pickup	Information Kiosk	Signage	Bicycle Parking	Bicycle Lockers	Bicycle Rental	Maintenance/Repair Services	Showers	Accommodations on Transit	Shelters	Seating	Restrooms
United States																		
	Poor	Poor	Fair	Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Fair	Fair
Mexico																		
	Poor	Poor	Fair	Fair	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Fair

"We need to connect pedestrians."

– Focus Group Participant

Northbound pedestrians on the way to make a multi-modal connection wheel luggage at the Otay Mesa POE

Pedestrians enter into Tecate, Mexico after passing through southbound inspection

Tecate/Tecate

The Tecate/Tecate POE is located 30 miles inland from the California coast. In the U.S., Tecate is a small community within unincorporated San Diego County, while in Mexico, Tecate is a municipality with approximately 109,000 residents. The city of Tecate has recently been named a Mexican "Pueblo Mágico" by SECTUR, the Mexican Secretariat of Tourism, recognizing the town's cultural importance and attraction to tourists.

Approximately 1.5 million pedestrians and 1.5 million personal vehicles carrying 2.9 million passengers crossed the border at this POE during 2013. The Tecate/Tecate POE has an average of 4,000 vehicle crossings and 4,000 pedestrian crossings per day, making it one of the smaller POEs along the California/Baja California border. Nevertheless, during peak periods on Sundays wait times can reach three hours for vehicles and 45 minutes for pedestrians.

There are no existing bicycle facilities near this POE on either side of the border. Transit services at this POE include public buses (MTS bus route 894, public bus routes in Mexico) and taxis in Mexico. Approximately 100-200 buses cross northwards at this POE annually, most of these owned by private companies carrying tourists.

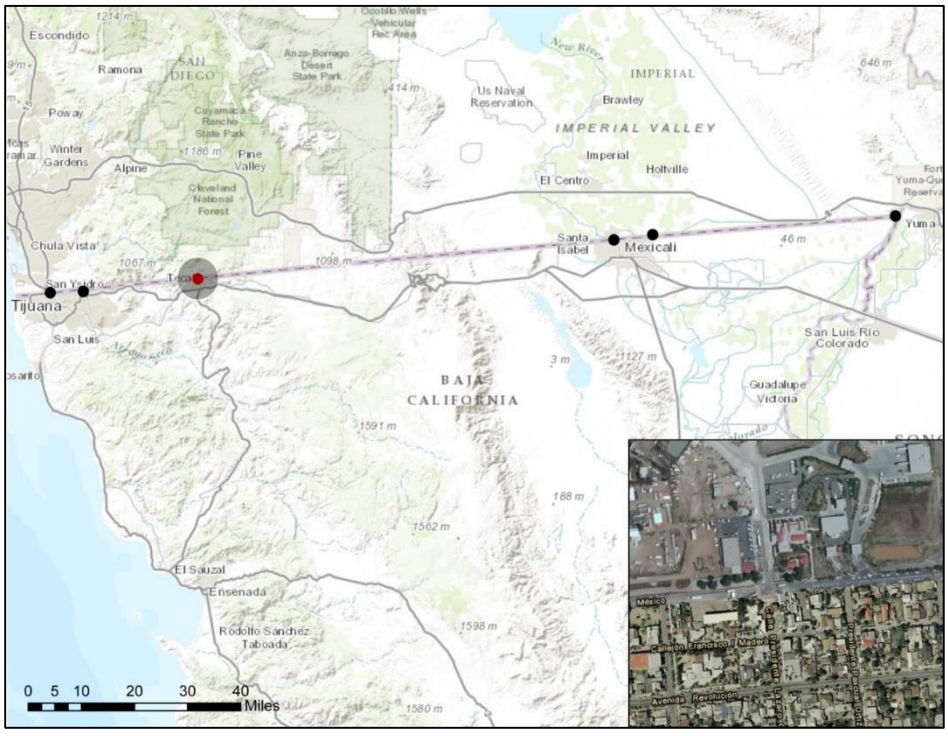
TECATE/TECATE INSPECTION FACILITIES

	NB (entering U.S.)	SB (entering Mexico)
Hours	5 AM – 11 PM	6 AM – 12 AM
Processing	Passenger,[i] Commercial	Passenger, Commercial
Pedestrians	2 lanes	1 lane
Vehicles	2 lanes	4 lanes
Bus-only	None	None
SENTRI and Ready Lane[ii]	No	NA

[i] Includes all non-commercial drivers, their passengers, and pedestrians

[ii] See Chapter 1 for further explanation of SENTRI and Ready lanes

Figure 4.5 Tecate/Tecate POE Regional Map



PEDESTRIAN TRAVEL TIME ANALYSIS

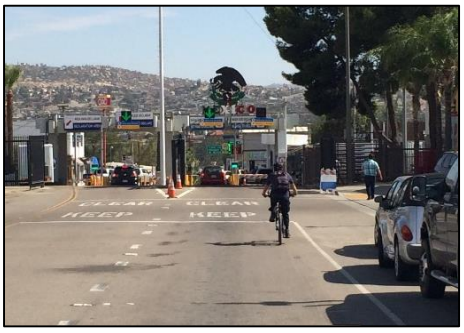
DESTINATION (POE TO):	TRAVEL TIME
United States	
Parking and loading on SR 188 outside of POE	0 min
Parking on SR 188	3 min
MTS bus stop	3 min
Mexico	
Loading and taxis on Callejón Francisco I Madero	1 min
Parque Miguel Hidalgo	4 min
Public bus stop and taxis at Parque Miguel Hidalgo	4 min
Public bus stop on Av. Hidalgo	6 min
Cervecería Tecate	7 min

Access and Major Destinations

Access to the POE from Mexico

To enter the U.S. from Mexico, pedestrians access the POE at the intersection of Callejón Francisco I Madero and Presidente Lázaro Cárdenas, within urban Tecate. There are no bicycle facilities in Mexico within the vicinity of the POE, and cyclists are required to dismount their bicycles and cross the border as pedestrians. Northbound vehicles access the POE from Federal Highway 2, with vehicle queuing along the border to the east of the port.

Figure 4.6 Tecate/Tecate POE Map



A cyclist approaches the Tecate POE

Access to the POE from the U.S.

To enter Mexico from the U.S., pedestrians pass through a turnstile on the sidewalk adjacent to SR 188. There are no bicycle facilities in the U.S. near the POE, and cyclists are required to dismount their bicycles and cross the border as pedestrians. Southbound vehicles access the POE from SR 188, which connects SR 94 to the port.

Major Destinations

Major destinations in Tecate, California include the MTS route 894 bus stop, parking lots, and small shopping centers. Nearby destinations in the Mexican municipality of Tecate include Parque Miguel Hidalgo and the Cervecería Tecate. A more detailed discussion of nearby destinations is included in Appendix C.

"Bike access just *needs* to be a priority."

– Focus Group Participant

Pedestrian and Bicycle Assessment

Network Connectivity

Network connectivity deficiencies encompass gaps, maintenance issues, and other barriers along the transportation network around the POE, as well as the availability of transit service. Significant pedestrian network deficiencies include a lack of designated drop-off/pick-up locations in the U.S. and Mexico, as well as a lack of marked crosswalks in the vicinity of the POE.

MTS bus stops near the Tecate POE

Significant bicycle network deficiencies include an absence of bicycle facilities in either country. Bicyclists must dismount and wheel bikes through POE locations, which include narrow turnstiles and doorways not designed to accommodate bicycles. Transit vehicles in the U.S. can accommodate a maximum of two bicycles, and buses in Mexico do not have provisions for bicycles, though some city buses in Mexico allow riders to carry their bicycle onboard the bus. Maps and detailed analysis of the Tecate/Tecate POE network connectivity are available in Appendix D.

Table 4.5: Network Connectivity Assessment

	Pedestrian			Bicycle			Transit					
	Gaps	Maintenance	Stairs/Steep Slopes	Existing Facilities	Gaps	Maintenance	Light Rail	Private Bus	Public Bus	Taxi	Jitney	Pedicab
	United States											
At POE	Good	Good	Good	No	NA[ii]	NA[ii]	No	Yes	No	No	No	No
POE Vicinity	Fair	Good	Good	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]
	Mexico											
At POE	Good	Good	Good	No	NA[ii]	NA[ii]	No	Yes	No	Yes	No	No
POE Vicinity	Fair	Fair	Poor	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]

[i]Bicycle and transit assessed at the POE, not in the vicinity of the POE
[ii]Because no existing bicycle facilities were in place, bicycle analysis was not conducted

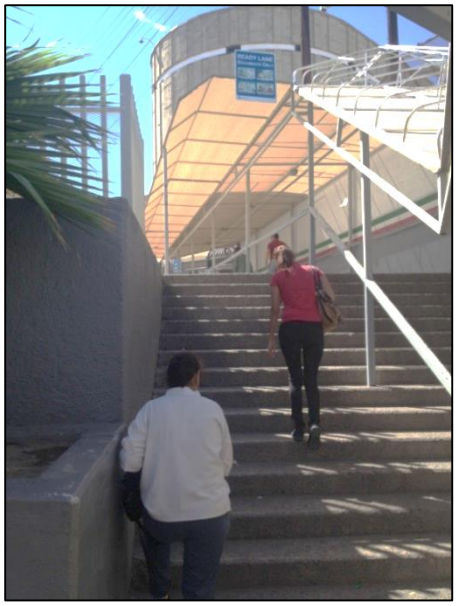
Tables and chairs at Parque Miguel Hidalgo in Tecate, Baja California

Network Amenities

Transportation network amenities help create a high-quality experience for pedestrians, cyclists, and transit riders. Currently, weather protection is not in place at the POE in different locations on both sides of the border. Informational signage, water fountains, and benches are also limited, though there are restrooms on both sides of the border. Public phones are the only transit amenity at the Tecate/Tecate POE; restrooms and refreshment services are not provided specifically for transit users. There are no bike parking racks, lockers, or support services for bicyclists on either side of the border. A more detailed analysis of network amenities is included in Appendix E.

Table 4.6: Network Amenities Assessment

	Pedestrian									Bicycle						Transit		
	Shade	Water Fountains	Food Services	Benches	Restrooms	Lighting	Proximate Passenger Pickup	Information Kiosk	Signage	Bicycle Parking	Bicycle Lockers	Bicycle Rental	Maintenance/Repair Services	Showers	Accommodations on Transit	Shelters	Seating	Restrooms
United States																		
	Fair	Fair	Fair	Poor	Fair	Fair	Good	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Good	Fair
Mexico																		
	Fair	Poor	Good	Poor	Fair	Fair	Good	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Fair



Pedestrians approach the northbound pedestrian queue at the Mexicali I POE

Calexico West/Mexicali I

Calexico West/Mexicali I POE is the busiest port in Imperial County. This port is a gateway between the Imperial Valley cities of Calexico, El Centro, Imperial, Brawley, Westmorland, Calipatria, and Holtville, and the Mexican city of Mexicali, providing a vital binational connection for the region. The small city of Calexico is located on the U.S. side of the border, adjacent to Mexicali, the capital of the State of Baja California and the second largest city in the state.

Over 8.5 million pedestrians and over 8 million personal vehicles carrying over 14 million passengers crossed the border at this POE in 2013. During peak periods on Monday, Wednesday, and Sunday nights vehicle wait times at the POE can be up to two hours. About 23,000 pedestrians cross the border at this POE daily, and pedestrian wait times during peak hours on some weekday mornings can be almost two hours as well.

There are no existing bicycle facilities near this port in the U.S. or Mexico. As of 2010, buses cannot cross the border at this port, instead using the Calexico East/Mexicali II POE facility. Transit options at the POE include private buses serving local, regional, and interstate destinations (e.g., Greyhound, Cruceros, and Calexico Transit System), public buses (such as IVT bus routes 1, 21, 31, and 32 in the U.S.), taxis, and jitneys. Long distance bus trips leave from Mexicali at Terminal Turista, approximately a mile southeast of the POE. Buses serving Calexico farm workers load in the parking lots of private businesses along Imperial Avenue near the border.

CALEXICO WEST/ MEXICALI I INSPECTION FACILITIES

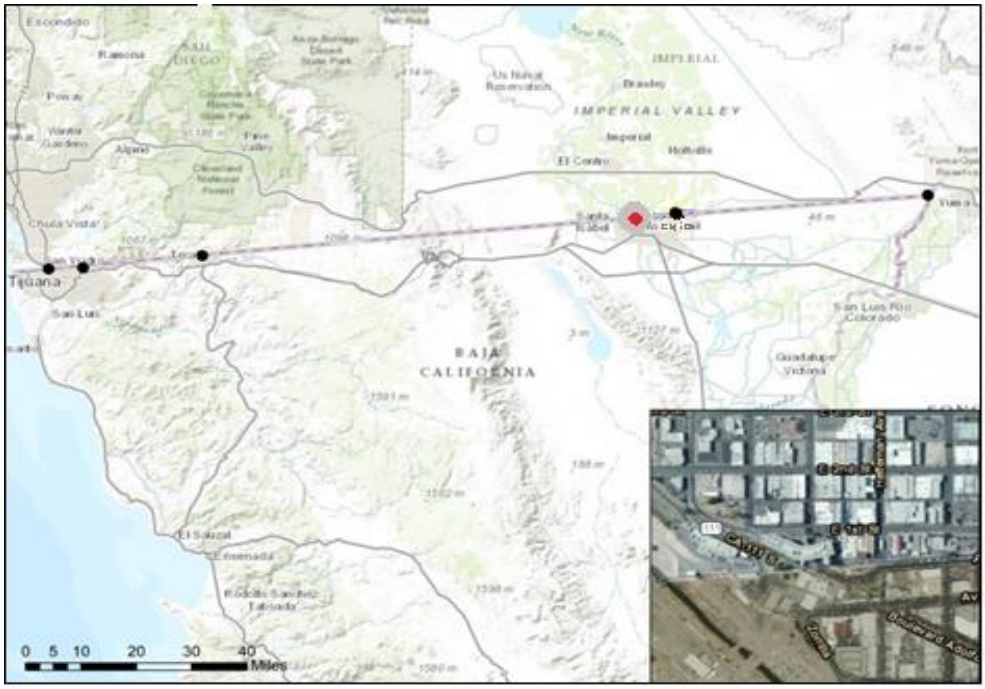
	NB (entering U.S.)	SB (entering Mexico)
Hours	24 hours	24 hours
Processing	Passenger[i]	Passenger
Pedestrians	6 lanes	1 lane
Vehicles	10 lanes	6 lanes
Bus-only	None	None
SENTRI and Ready Lane[ii]	Pedestrian and Vehicle[iii]	NA

[i] Includes all non-commercial drivers, their passengers, and pedestrians

[ii] See Chapter 1 for further explanation of SENTRI and Ready lanes

[iii] No vehicle Ready Lane

Figure 4.7 Calexico West/Mexicali I POE Regional Map



Signage warns drivers to be alert for pedestrians crossing the street from the Mexicali I POE

Access and Major Destinations

Access to the POE from Mexico

To enter the U.S. from Mexico, pedestrians access the POE through a tunnel in Mexicali with three entrances on Avenida Francisco I Madero, exiting the tunnel into the northbound pedestrian processing facility. Cyclists also cross northbound via the tunnel, as they are required to dismount their bicycles and cross the border as pedestrians. There are no bicycle facilities in Mexico nearby the POE. Northbound vehicles access the POE from the east on Cristóbal Colón.

Access to the POE from the U.S.

To enter Mexico from the U.S., southbound pedestrians enter the POE from Calexico on E 1st Street and exit into Mexico using the tunnel under Avenida Francisco I Madero. However, there are no existing bicycle routes in Calexico,

Figure 4.8 Calexico West/Mexicali I POE Map

PEDESTRIAN TRAVEL TIME ANALYSIS

DESTINATION (POE TO):	TRAVEL TIME
United States	
Loading on E 1st St	0 min
Downtown Calexico shopping district	1 min
Numero Uno Shuttle	1 min
Greyhound & Cruceros buses	1 min
Existing Transit Center on Heffernan Ave	2 min
Imperial Valley Mall shuttle and Intercalifornias bus	3 min
Parking on E 1st St	4 min
SDSU Imperial Valley Campus	13 min
Mexico	
Loading and taxi/bus/shuttle stop zone outside POE on Avenida Madero	1 min
Public bus stop and parking on Boulevard López Mateos	2 min
Public bus stop on Azueta	2 min
Parking and loading on Zorilla	3 min
Public bus stops on Ignacio Manuel Altamirano	7 min
Downtown Mexicali shopping district	10 min

and cyclists are required to dismount their bicycles and cross the border as pedestrians. Vehicles traveling southbound access the POE from SR 111.

Major Destinations

Major destinations near the POE in Mexicali include downtown Mexicali, La Cachanilla mall, and transit services. Major destinations in Calexico include the Gran Plaza Outlets, the SDSU Imperial Valley Campus, and transit services. A more detailed discussion of nearby destinations is included in Appendix C.

Pedestrian and Bicycle Assessment

Network Connectivity

Network connectivity deficiencies encompass gaps, maintenance issues, and other barriers along the transportation network around the POE, as well as the availability of transit service. Significant pedestrian network deficiencies include uneven sidewalks and missing sidewalk ramps in Mexicali, as well as hectic intersections on Rockwood Avenue in Calexico. The pedestrian tunnel in Mexicali used to enter and exit the POE has steep stairways which present challenges for the elderly, disabled, and people with luggage. In addition, the tile flooring is dangerous for pedestrians, particularly when it is wet or for people wearing slick-soled shoes or bicycle cleats. The tunnel is also subject to flooding during rain, and the pedestrian queue is located next to idling vehicles, exposing pedestrians to automobile fumes. Narrow doors, stairs, turnstiles, and queuing areas create problems with crowding, and can be difficult for people with impaired mobility. Finally, pick up and drop off locations on E 1st Street and at the intersection of Agustin Melgar with Avenida Francisco I Madero are hectic and expose pedestrians to vehicle traffic.

Significant bicycle network deficiencies include a lack of bikeways in Calexico and Mexicali, though both cities have bicycle routes planned, as well as narrow crossing facilities including doors, stairs, and turnstiles that present difficulties for people wheeling bicycles across the borders. Streets in the vicinity of the POE also have heavy traffic and some roadways are poorly maintained, which can be dangerous for cyclists. Maps and detailed analysis of Calexico West/Mexicali I POE network connectivity are available in Appendix D.

Absence of pedestrian crossing on E 1st Street in Calexico

"It would be best to have a separate bicycle booth next to the vehicular traffic."

-- On-Site Outreach Workshop Participant

Table 4.7: Network Connectivity Assessment

	Pedestrian			Bicycle			Transit					
	Gaps	Maintenance	Stairs/Steep Slopes	Existing Facilities	Gaps	Maintenance	Light Rail	Private Bus	Public Bus	Taxi	Jitney	Pedicab
United States												
At POE	Fair	Poor	Good	Poor	Fair	Fair	Good	Poor	Poor	Poor	Poor	Poor
POE Vicinity	Fair	Poor	Good	Poor	Fair	Fair	Good	Poor	Poor	Poor	Poor	Poor
Mexico												
At POE	Good	Good	Poor	No	Fair	NA[ii]	No	Yes	No	Yes	No	No
POE Vicinity	Good	Poor	Good	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]

[i]Bicycle and transit assessed at the POE, not in the vicinity of the POE
[ii]Because no existing bicycle facilities were in place, bicycle analysis was not conducted

Network Amenities

Transportation network amenities help create a high-quality experience for pedestrians, cyclists, and transit riders. Current deficiencies include limited sun and weather protection for pedestrians at transit stops in both nations and at the northbound pedestrian queue. There are currently no water fountains at this port, and there is one restroom that is often out of order and requires payment to enter. Benches are located at the exits to the tunnel in Mexicali. A limited number of bike racks are available at the POE in both the U.S. and Mexico. Public phones are the only transit amenity at the Calexico West/Mexicali I POE; there are no restrooms or refreshment services provided specifically for transit users. A more detailed analysis of network amenities is included in Appendix E.

Table 4.8: Network Amenities Assessment

	Pedestrian									Bicycle						Transit		
	Shade	Water Fountains	Food Services	Benches	Restrooms	Lighting	Proximate Passenger Pickup	Information Kiosk	Signage	Bicycle Parking	Bicycle Lockers	Bicycle Rental	Maintenance/Repair Services	Showers	Accommodations on Transit	Shelters	Seating	Restrooms
United States																		
	Fair	Poor	Good	Poor	Poor	Good	Good	Poor	Poor	Fair	Poor	Poor	Poor	Poor	Fair	Good	Good	Fair
Mexico																		
	Fair	Poor	Good	Fair	Fair	Fair	Fair	Poor	Poor	Good	Poor	Poor	Poor	Poor	Fair	Fair	Poor	Fair

A bicyclist rides on the sidewalk at the Calexico East/Mexicali II POE

Calexico East/Mexicali II

Calexico East/Mexicali II POE is a passenger border crossing as well as the primary commercial border crossing for Imperial County. This POE began operations in 1996, coinciding with the closure of commercial operations at the Calexico West/Mexicali I POE. Because they are only located six miles apart, crossing patterns at Calexico West and East/Mexicali I and II POEs influence one another in a similar fashion to the two POEs connecting San Diego and Tijuana.

Since opening the volume of border crossings at this POE has fluctuated, with overall growth since operations began; northbound pedestrian traffic has multiplied over sixteen times since 1997. In 2013, 1.4 million pedestrians and 6.4 million personal vehicles carrying 11.8 million passengers crossed the border at this port, 2.8 million more vehicles than in 1997. An average of 3,900 pedestrians and 17,500 vehicles cross the border daily at this POE. In 2012, the Calexico East POE was seventh busiest among U.S. truck crossings for dollar value of cargo processed, with $5.8 billion in exports and $7.0 billion in imports crossing the border at this port[26]. Vehicle wait times during peak periods on Thursday and Sunday afternoons can be almost two hours, but pedestrian traffic is lighter, and wait times normally do not exceed 40 minutes.

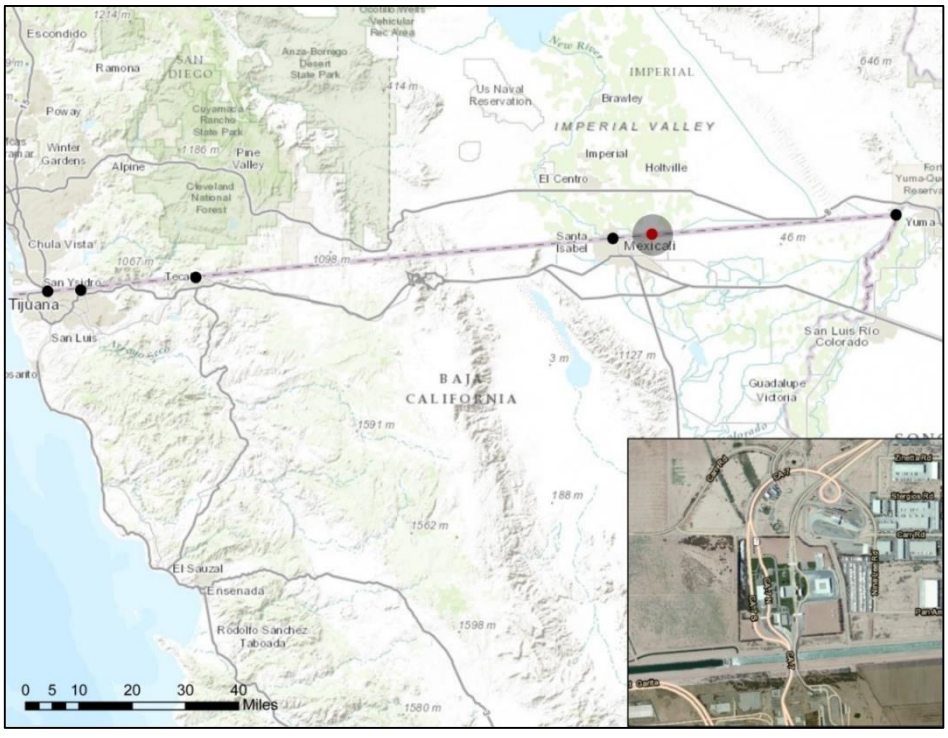
CALEXICO EAST/ MEXICALI II INSPECTION FACILITIES

	NB (entering U.S.)	SB (entering Mexico)
Hours	3 AM – 12 AM weekdays, 6AM – 12 AM weekends	3 AM – 12 AM
Processing	Passenger,[i] Commercial	Passenger, Commercial
Pedestrians	6 lanes	1 lane
Vehicles	8 lanes	4 lanes
Bus-only	None	1 lane
SENTRI and Ready Lane[ii]	Pedestrian and Vehicle	NA

[i] Includes all non-commercial drivers, their passengers, and pedestrians

[ii] See Chapter 1 for further explanation of SENTRI and Ready lanes

Figure 4.9 Calexico East/Mexicali II POE Regional Map



[26] *Calexico East Land Port of Entry Fact Sheet: Expansion of Truck and Auto Inspection Lanes at the Existing LPOE* (Imperial Valley Transportation Commission, May 2014)

Hot and dry conditions are normal at the Calexico East/Mexicali II POE

Pedestrian pathways at the Calexico East/Mexicali II POE are unshaded

"I'd like shade areas along the sidewalk to rest in while walking."

-- On-Site Outreach Workshop Participant

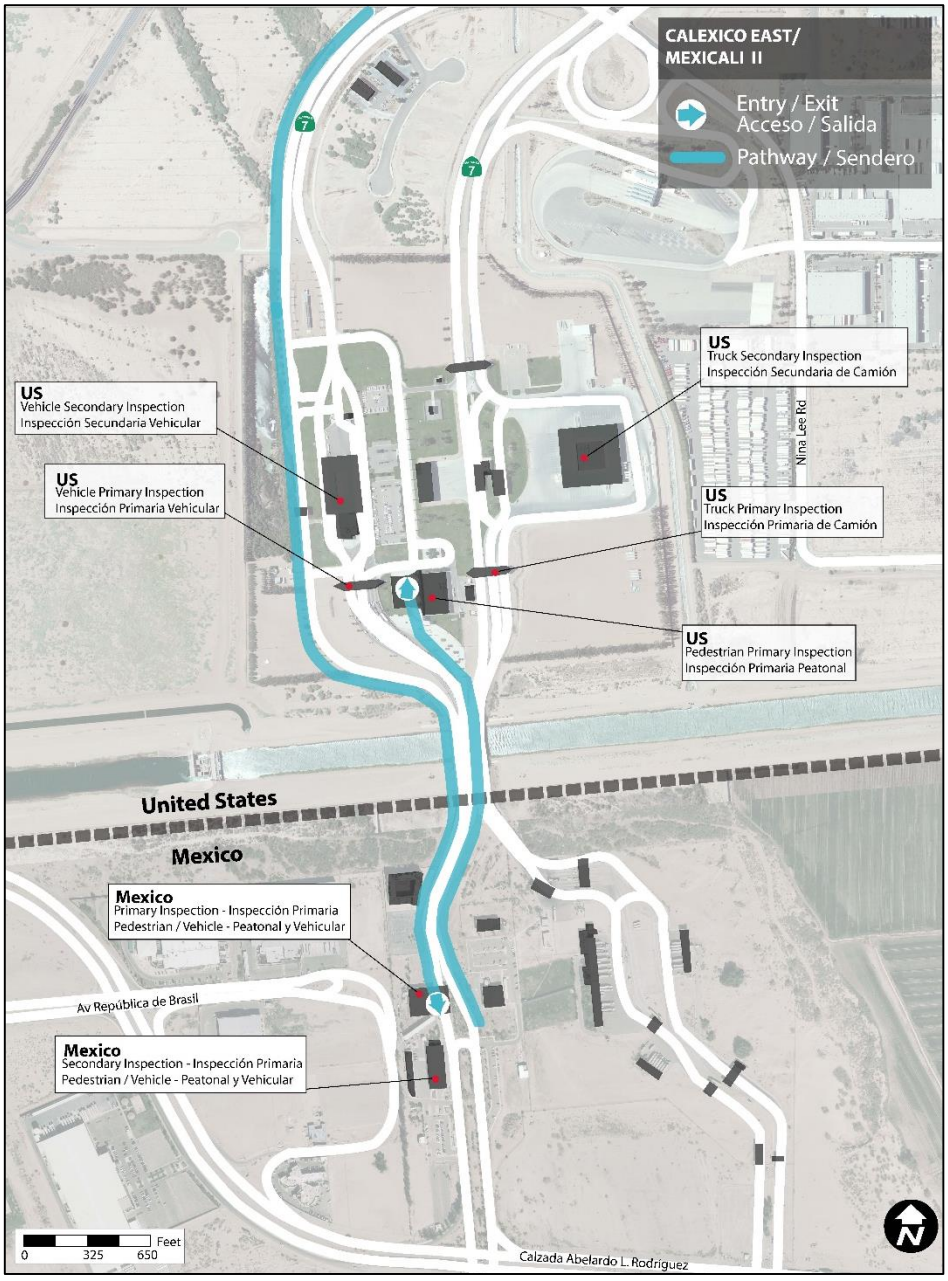
There are no existing bicycle facilities near the POE on either side of the border. The sole transit option at the port is a taxi, which often waits at the gas station north of the POE in the U.S. Nonetheless, 2,500 northbound buses carrying 103,000 passengers passed through this border crossing in 2013.

Access and Major Destinations

Access to the POE from Mexico

To enter the U.S. from Mexico, northbound pedestrians walk for a half-mile to the CBP pedestrian processing facility along a pedestrian pathway adjacent to

Figure 4.10 Calexico East/Mexicali II POE Map



PEDESTRIAN TRAVEL TIME ANALYSIS

DESTINATION (POE TO):	TRAVEL TIME
United States	
Taxi	12 min
Gas station	12 min
Loading and parking south of the gas station	14 min
Mexico	
Loading south of POE in Mexico	2 min
Parking on Calzada Abelardo L. Rodríguez	5 min

northbound vehicle traffic. As there are no pick-up/drop-off locations at the POE facility itself, northbound pedestrians walk another half mile to the nearby gas station and unofficial pick-up/drop-off area. Cyclists share the sidewalk and cross the border as pedestrians, as there are no bicycle facilities in Mexico within the vicinity of the POE. Northbound vehicles access the POE using local road Calzada Abelardo L. Rodriguez.

Access to the POE from the U.S.

To enter Mexico from the U.S., the pedestrian route to the POE begins at the intersection of Menvielle Road and SR 7. Pedestrians walk along a fenced-off path west of SR 7 and over the bridge that crosses the All American Canal for a total of one mile before arriving at the southbound pedestrian processing facility in Mexico. There are no bicycle facilities in the U.S. within the POE vicinity, so cyclists must use the pedestrian path or ride alongside vehicles in the road. SR 7 provides access for southbound vehicles, with connections from SR 98 and I 8.

Major Destinations

In the U.S., the Calexico East POE is surrounded by fields, and two gas stations along with support infrastructure for passenger and commercial vehicles are the only nearby destinations. In Mexico the POE is located within the city of Mexicali, but in the developing eastern portion of the city away from major destinations. The POE is partially bordered by agricultural fields in Mexico. A more detailed discussion of nearby destinations is included in Appendix C.

U.S./Mexico border delineation at the Calexico East/Mexicali II POE

Pedestrian and Bicycle Assessment

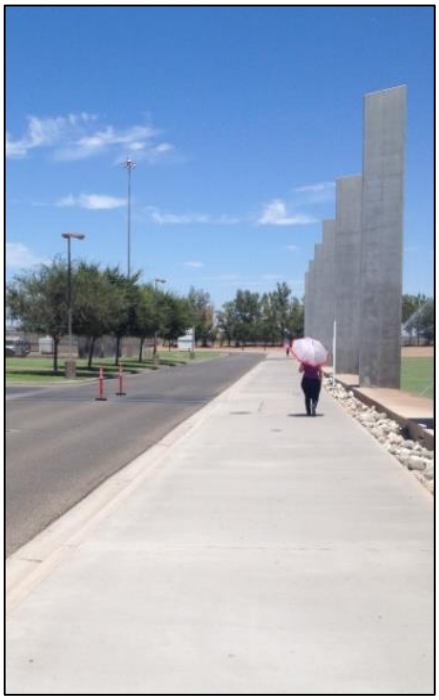
Network Connectivity

Network connectivity deficiencies encompass gaps, maintenance issues, and other barriers along the transportation network around the POE, as well as the availability of transit service.

Significant pedestrian network deficiencies in both the U.S. and Mexico include a lack of shade along pedestrian pathways and missing sidewalks on pedestrian routes. Drop-off and pick-up locations are far from the POE in both countries, forcing pedestrians to walk great distances, often in very hot weather.

Significant bicycle network deficiencies include a lack of bicycle facilities at or near the POE, which forces cyclists to either ride along the sidewalks or in vehicle lanes. Bicyclists must use pedestrian crossing facilities, which are not always designed to accommodate people wheeling bicycles.

Maps and detailed analysis of Calexico East/Mexicali II POE network connectivity are available in Appendix D.



A pedestrian uses a parasol on the northbound pathway at Calexico East POE

Table 4.9: Network Connectivity Assessment

	Pedestrian			Bicycle			Transit					
	Gaps	Maintenance	Stairs/Steep Slopes	Existing Facilities	Gaps	Maintenance	Light Rail	Private Bus	Public Bus	Taxi	Jitney	Pedicab
United States												
At POE	Fair	Fair	Good	No	NA[ii]	NA[ii]	No	No	No	Yes	No	No
POE Vicinity	Fair	Good	Good	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]
Mexico												
At POE	Good	Fair	Good	No	NA[ii]	NA[ii]	No	No	No	No	No	No
POE Vicinity	Fair	Fair	Good	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]

[i]Bicycle and transit assessed at the POE, not in the vicinity of the POE
[ii]Because no existing bicycle facilities were in place, bicycle analysis was not conducted

Network Amenities

Transportation network amenities help create a high-quality experience for pedestrians, cyclists, and transit riders. At this POE there are three restrooms, one at the northbound pedestrian facility exit in the U.S. and one along both the northbound and southbound pedestrian paths in Mexico. There are no water fountains and there is limited lighting and informational and directional signage, especially serving the southbound pedestrian pathway.

There are no bicycle parking racks, lockers, or other amenities at this POE, and no transit-specific amenities. A more detailed analysis of network amenities is included in Appendix E.

"We need more shade for pedestrians in Mexico."

-- On-Site Outreach Workshop Participant

Table 4.10: Network Amenities Assessment

	Pedestrian									Bicycle						Transit		
	Shade	Water Fountains	Food Services	Benches	Restrooms	Lighting	Proximate Passenger Pickup	Information Kiosk	Signage	Bicycle Parking	Bicycle Lockers	Bicycle Rental	Maintenance/Repair Services	Showers	Accommodations on Transit	Shelters	Seating	Restrooms
United States																		
	Poor	Poor	Fair	Fair	Fair	Poor	Poor	Poor	Good	Poor	Poor	Poor	Poor	Poor	-	Poor	Poor	Fair
Mexico																		
	Poor	Poor	Poor	Fair	Good	Poor	Poor	Poor	Good	Poor	Poor	Poor	Poor	Poor	-	-	-	-

Los Algodones bus stop

ANDRADE/LOS ALGODONES INSPECTION FACILITIES

	NB (entering U.S.)	SB (entering Mexico)
Hours	6 AM – 10 PM	6 AM – 10 PM
Processing	Passenger[i]	Passenger
Pedestrians	4 lanes	1 lane
Vehicles	3 lanes	2 lanes
Bus-only	None	None
SENTRI and Ready Lane[ii]	No	NA

[i] Includes all non-commercial drivers, their passengers, and pedestrians

[ii] See Chapter 1 for further explanation of SENTRI and Ready lanes

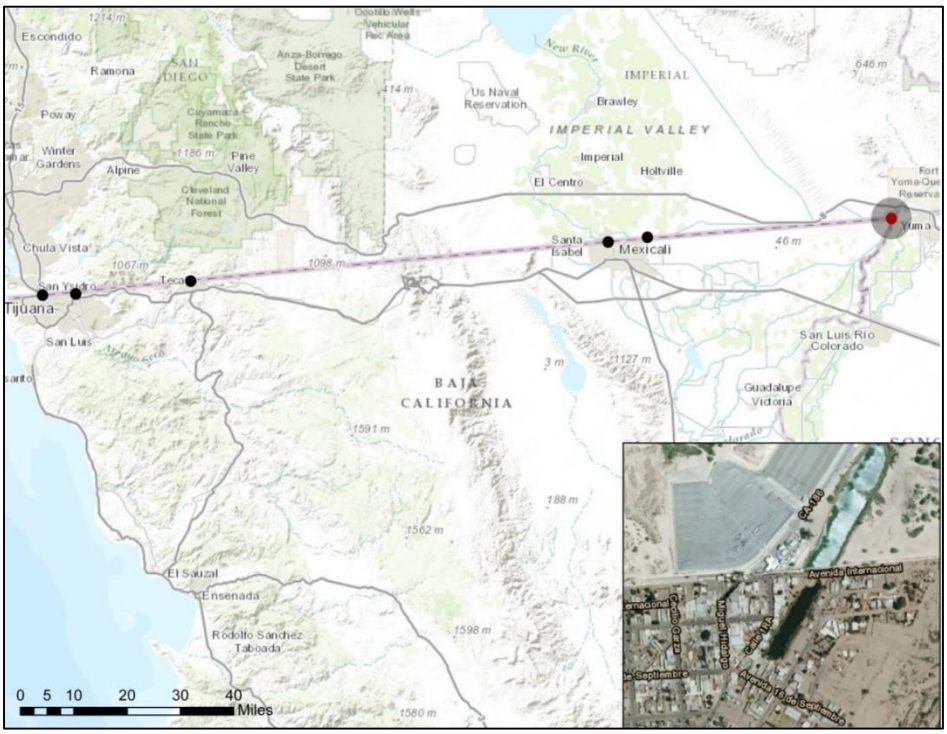
Andrade/Los Algodones

The Andrade/Los Algodones POE is located just west of the California-Arizona border at the Colorado River. The POE facilities in the U.S. are located on land owned by the Quechan Native American tribe, which leases the land to federal agencies. The area around the POE in the U.S. is undeveloped, except for the Quechan Casino Resort and an RV park located just north of the POE. On the Mexican side of the border, Los Algodones is a small town at the northeastern tip of the state of Baja California. Yuma, Arizona, is five miles east of the POE.

Major destinations in Los Algodones are medical and dental service providers, primarily serving "snowbird" travelers from the U.S. and Canada during the winter months. In 2013, 790,000 personal vehicles carrying 1.6 million passengers as well as 1.7 million pedestrians crossed the border at this POE, making it one of the smaller POEs in the California/Baja California region. Traffic in winter is much heavier than summer, with five times more pedestrian crossings in February than July. Pedestrian wait times during the peak season were 40 minutes in 2013, and typical off-season waits are ten minutes. Vehicle traffic stays relatively consistent year-round, with peak periods on Monday, Saturday, and Sunday afternoons leading to wait times of up to 90 minutes.

There is an existing bicycle route in Andrade providing access to the border; however, there are no existing bicycle facilities in Los Algodones. Transit options at this POE include private buses (medical tourism buses and shuttle

Figure 4.11 Andrade/Los Algodones POE Regional Map



services in the U.S. and Mexico), public buses (YCAT #5 in the U.S., service to Cuervos in Mexico), and taxi drop-off in the U.S. Buses do not cross the border at this POE, instead dropping off passengers to cross on foot. In the U.S., buses also stop near the Quechan parking lot to pick up students and farm workers.

"This port is perfect."

-- On-Site Outreach Workshop Participant

Access and Major Destinations

Access to the POE from Mexico

To enter the U.S. from Mexico, northbound pedestrians and vehicle access the POE from Saratoga Street, queuing along the street to the east. Cyclists are required to dismount their bicycles and cross the border as pedestrians; there are no bicycle facilities in Mexico within the vicinity of the POE.

Figure 4.12 Andrade/Los Algodones POE Map

PEDESTRIAN TRAVEL TIME ANALYSIS

DESTINATION (POE TO):	TRAVEL TIME
United States	
Loading on SR 186	1 min
Quechan parking lot	1 min
Bus stops (YCAT, field worker, school buses)	1 min
Mexico	
Medical/dental services district	1 min
Dental shuttles	1 min
Parking on Calle 2	2 min
Public bus stop	5 min

Landscaping at the Los Algodones POE

Access to the POE from the U.S.

To enter Mexico from the U.S., southbound pedestrians and vehicles access the POE from SR 186, which connects to the north to I 8. Parking is available in large lots to the west of the POE that are owned by the Quechan tribe, and unofficial passenger pick-up/drop-off occurs on SR 186 north of the POE. SR 186 immediately north of the POE has recently been designated as a bicycle route, though cyclists are still required to dismount their bicycles and cross the border as pedestrians.

Major Destinations

Popular pedestrian destinations close to the POE include medical and dental offices in Los Algodones, and transit stops and the Quechan-owned parking lot in the U.S. A more detailed discussion of nearby destinations is included in Appendix C.

Pedestrian and Bicycle Assessment

Network Connectivity

Network connectivity deficiencies encompass gaps, maintenance issues, and other barriers along the transportation network around the POE, as well as the availability of transit service. Significant pedestrian network deficiencies include damaged sidewalks and missing sidewalk ramps in Mexico. In addition, the drop-off and pick-up location in the U.S. is crowded, especially during winter months.

The Andrade/Los Algodones POE is unique because of the large senior population that crosses the border at this location. Walking distances and ramps that may not pose a challenge to other groups can be a barrier for the elderly. Additionally, hundreds of individuals using motorized scooters come to the port during winter, and turnstiles and doorways have been designed to accommodate scooter users. Frequent instances of scooter batteries dying pose a special challenge at this POE.

There is a bicycle route on SR 186 immediately north of the border in the U.S., and no existing bikeways in Mexico. Current bicycle border crossing volumes are reported by CBP officials to be low. Maps and detailed analysis of the Andrade POE network connectivity are available in Appendix D.

Benches, shade structures, and landscaping line the northbound pedestrian queue in Los Algodones

Pedestrians travel down ramps to access the Andrade POE from the Quechan tribe's parking lot

Table 4.11: Network Connectivity Assessment

	Pedestrian			Bicycle			Transit					
	Gaps	Maintenance	Stairs/Steep Slopes	Existing Facilities	Gaps	Maintenance	Light Rail	Private Bus	Public Bus	Taxi	Jitney	Pedicab
United States												
At POE	Good	Good	Good	No	NA[ii]	NA[ii]	No	Yes	Yes	No	No	No
POE Vicinity	Good	Good	Good	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]
Mexico												
At POE	Good	Good	Good	No	NA[ii]	NA[ii]	No	Yes	No	No	No	No
POE Vicinity	Fair	Fair	Good	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]	NA[i]

[i]Bicycle and transit assessed at the POE, not in the vicinity of the POE
[ii]Because no existing bicycle facilities were in place, bicycle analysis was not conducted

Network Amenities

Transportation network amenities help create a high-quality experience for pedestrians, cyclists, and transit riders. This POE has one water fountain in the U.S., benches along most of the pedestrian pathways, and restrooms in both countries; a recent project added lighting, benches, and landscaping along much of the west side of SR 186. Key deficiencies include a lack of sun and weather protection at transit stops and along some pedestrian pathways, though much of the northbound pathway is shaded with high-quality shade structures. There are no bicycle parking racks or lockers. Transit amenities include a small shelter, phone, and bench for the bus to Cuervos in Los Algodones; there are no transit facilities in the U.S. A more detailed analysis of network amenities is included in Appendix E.

Table 4.12: Network Amenities Assessment

	Pedestrian									Bicycle						Transit		
	Shade	Water Fountains	Food Services	Benches	Restrooms	Lighting	Proximate Passenger Pickup	Information Kiosk	Signage	Bicycle Parking	Bicycle Lockers	Bicycle Rental	Maintenance/Repair Services	Showers	Accommodations on Transit	Shelters	Seating	Restrooms
United States																		
	Good	Fair	Poor	Poor	Fair	Fair	Fair	Poor	Fair	Poor	Poor	Poor	Poor	Poor	Fair	Poor	Poor	Fair
Mexico																		
	Good	Poor	Good	Good	Good	Fair	Good	Good	Fair	Poor	Poor	Poor	Poor	Poor	Poor	Good	Good	Fair

5.0 PLANNED IMPROVEMENTS AND FUTURE CONDITIONS

Architect's rendering of Calexico West POE. Source: Teecom.com

Major expansion projects are currently underway at the San Ysidro/Puerta México-El Chaparral and Calexico West/Mexicali I POEs

This chapter includes a description of major improvements currently underway at the California/Baja California POEs, as well as improvements that are planned for future completion. Maps and descriptions of improvements impacting pedestrian, bicycle, and transit access are provided. A discussion of future conditions with the planned improvements, including deficiencies that will be resolved with the improvements as well as problems that may remain even after project completion, is also included for the ports currently undergoing major infrastructure changes (San Ysidro/Puerta México-El Chaparral and Calexico West/Mexicali I).

This chapter is organized into sections by port, naming major plans and projects for each POE. References to projects identified in the BMP are included with their project name and number[27].

[27] Roadway, interchange, and rail projects from the BMP within current study's study area are not included in this chapter.

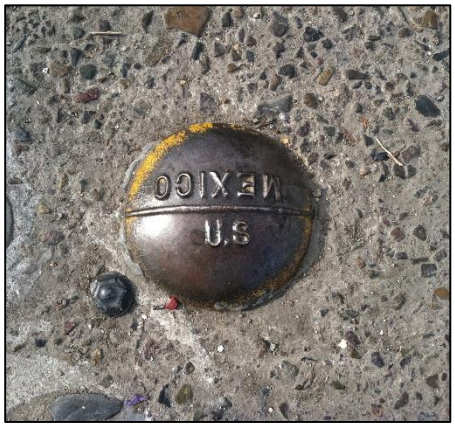
Binational POE expansion will ultimately add ten northbound and two reversible north-south pedestrian processing lanes, nine northbound vehicle lanes, and six southbound vehicle lanes

5.1 San Ysidro/Puerta México-El Chaparral

The San Ysidro POE is currently undergoing major infrastructure changes to modernize and expand the port facility (BMP Project No. 4020013, San Ysidro LPOE – Phase III and 4020010, San Ysidro LPOE – Phase II). This project has multiple phases:

- Project Phase 1A: Pedestrian Bridge and Phase 1C: Southbound Pedestrian Crossing have been completed, resulting in a new pedestrian bridge over Interstate 5 and southbound pedestrian crossing.

- Phase 1B: Northbound Vehicular Inspection, Phase 1D: Western Pedestrian Facility, Phase 2: Administration & Pedestrian Building, and Phase 3: I-5 North & Southbound Inspection Facilities are fully funded but currently incomplete. These three phases will expand northbound vehicle inspection capacity to 34 lanes with 63 inspection booths (including one booth for buses), construct a new bi-directional pedestrian crossing at Virginia Avenue called Pedestrian West (BMP Project No. 4020014, San Ysidro Border Station, Pedestrian West Facility and Virginia Ave Transit Center), create new buildings, and change the course of the southernmost section of I 5 South to connect to the Mexican inspection facilities at El Chaparral. Until the rerouting of southbound I 5 is completed, a temporary facility currently routes southbound vehicles to cross the border at the new El Chaparral facility.



U.S./Mexico border delineator in the pavement at the San Ysidro/Puerta México-El Chaparral POE

Northbound vehicles queue at the Puerta México POE

Extensive infrastructure changes are also occurring on the Mexican side of the border. A new facility, El Chaparral, has been built to the west of the existing Puerta México POE. This facility provides ten northbound pedestrian lanes and two reversible southbound pedestrian lanes which will connect to the Virginia Avenue Pedestrian West facility, and also incorporates southbound vehicle processing lanes.

In addition to the new Pedestrian West/El Chaparral connection, the existing northbound pedestrian crossing at Puerta México will remain open, resulting in two bidirectional pedestrian border crossing points at the San Ysidro/Puerta México-El Chaparral POE. The southbound pedestrian crossing at Puerta México will however eventually be relocated to the adjacent facility Puerta México Este, and a pedestrian plaza and transit facility are planned for the southern terminus of that southbound pathway at Calle Puente Frontera. Other changes at the Puerta México POE include an expansion of northbound vehicle lanes.

When the projects are completed, ten northbound and two reversible north-south pedestrian processing lanes will be added in addition to the 13 existing northbound lanes at the POE. Nine northbound vehicle lanes will be added to

the 24 existing vehicle lanes and booths (31 of them recently completed as "double stacked" with two booths), and six southbound vehicle lanes will be added to the six existing southbound vehicle lanes.

Figure 5.1 below displays future pedestrian pathways at the port. Figure 5.2 and Figure 5.3 show expansion plans for the San Ysidro POE and Puerta México/El Chaparral POE.

Figure 5.1 San Ysidro/Puerta México-El Chaparral POE Future Pedestrian Pathways

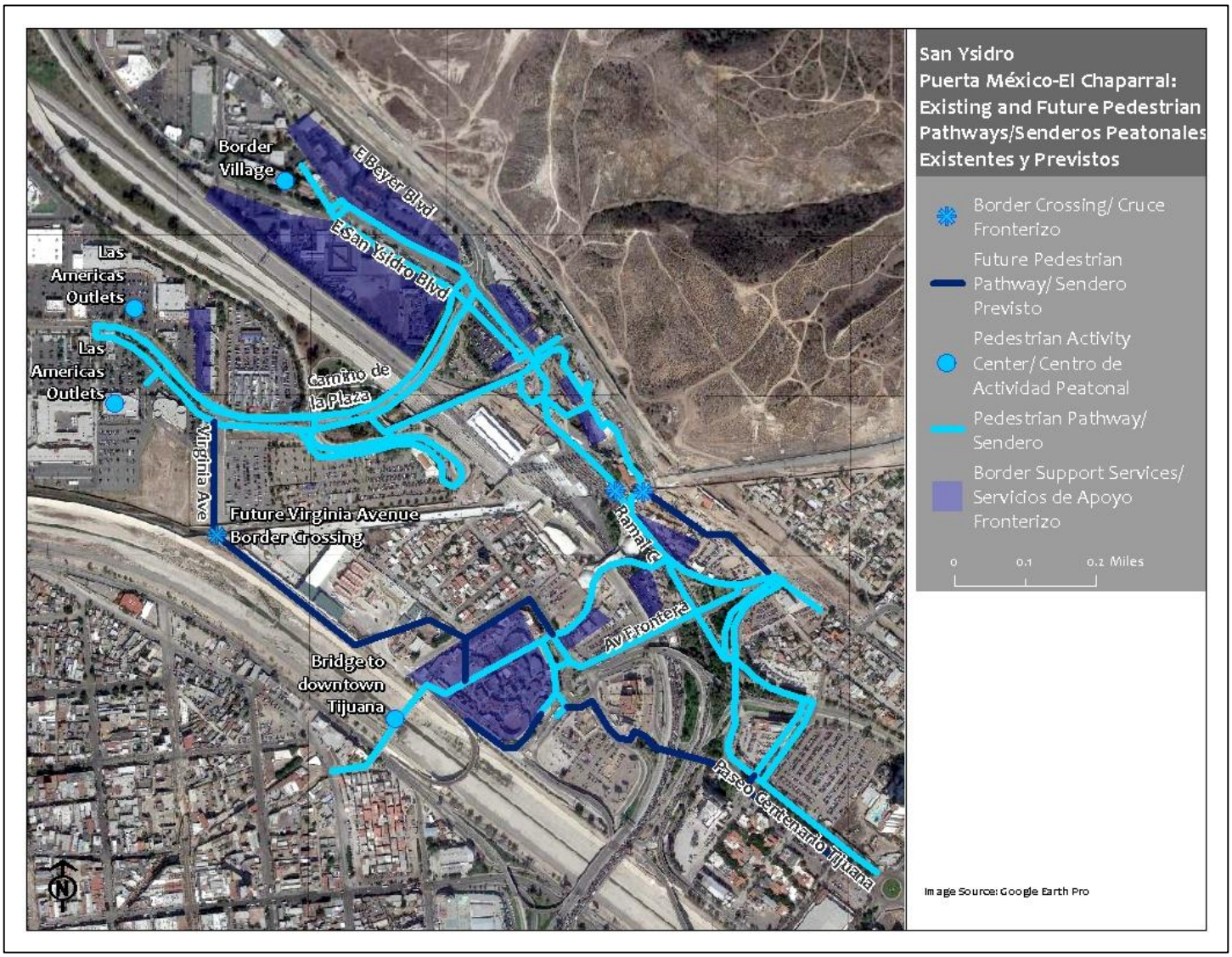
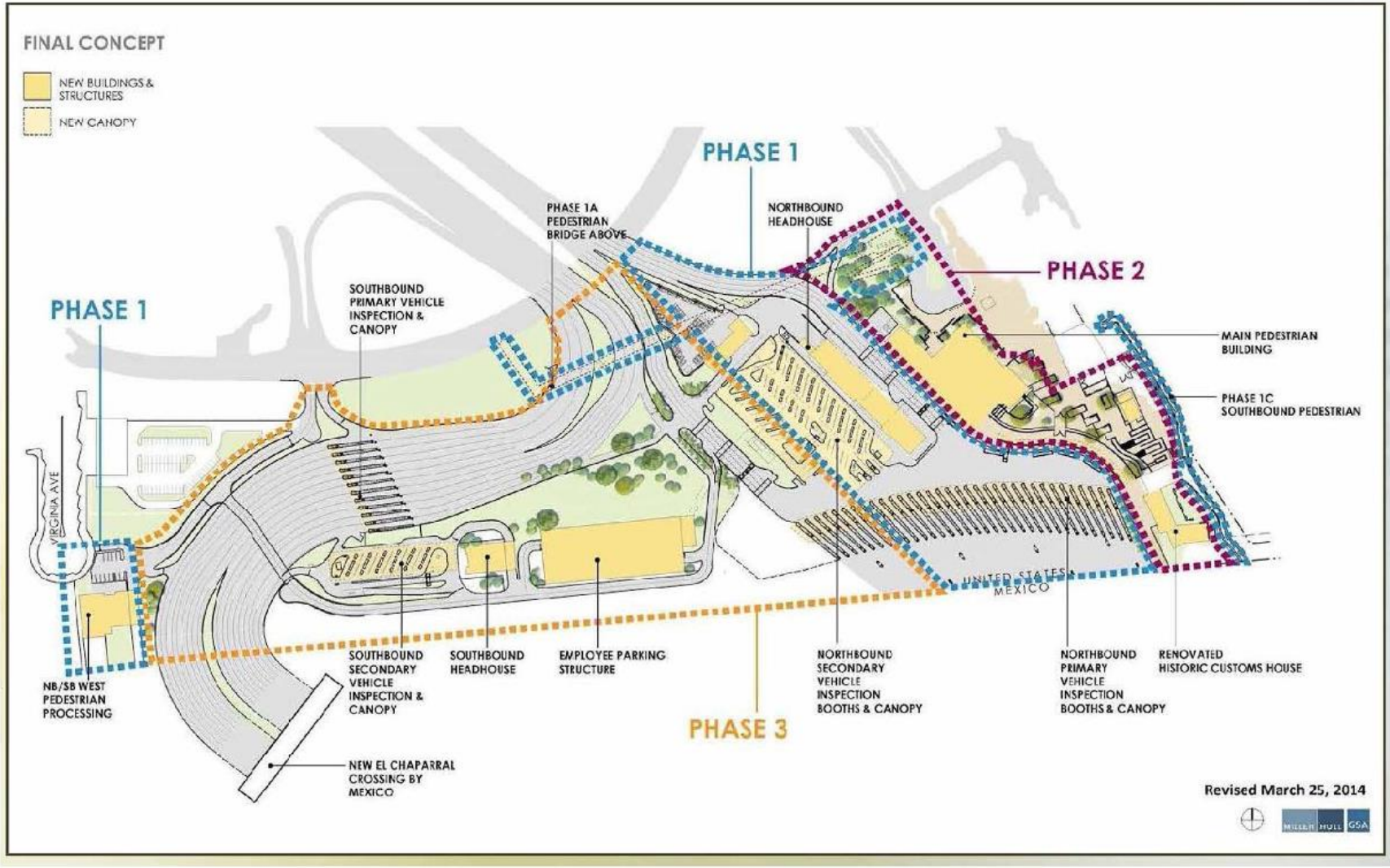


Figure 5.2 San Ysidro POE Expansion Plans



Source: GSA

Figure 5.3 Puerta México/El-Chaparral POE Expansion

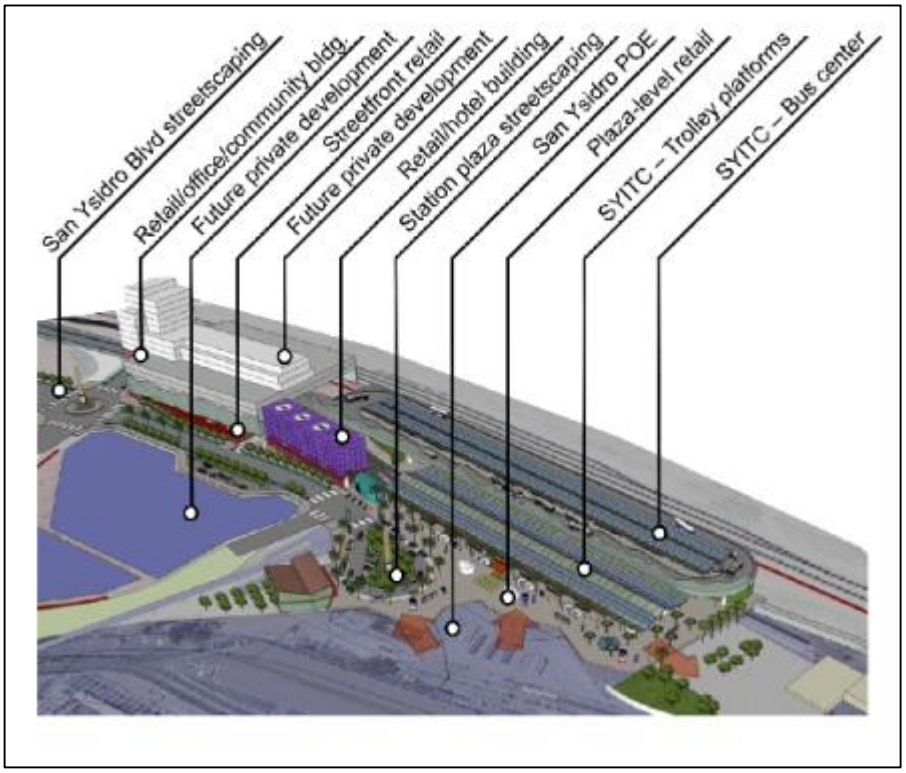
Rendering does not show most up-to-date design for U.S. facilities. Source: SIDUE

Existing San Ysidro ITC

In addition to major infrastructure changes, there are also significant plans in both nations for transit system improvements. In Tijuana, an Intermodal Transportation Center (ITC) is being built near the Puerta México facility (BMP Project No. 307003, Tijuana Intermodal Transit Center). New passenger rail and Bus Rapid Transit (BRT) services are also planned in Tijuana. The passenger rail service (BMP Project No. 3070004, Tijuana Trolley) is planned to run from the POE southeast across the city to Tijuana's El Florido neighborhood along the existing Vía Corta Tijuana-Tecate railway, coexisting with cargo transportation. The proposed BRT route, Route 1, is also planned to run from the POE to southeastern Tijuana (BMP Project No. 3070002, BRT Route 1). The Tijuana ITC, passenger rail, and BRT are all in the conceptual planning stages.

Transit system projects in San Ysidro include two new ITCs and BRT lines. The San Ysidro ITC (BMP Project No. 3020032 San Ysidro Intermodal Transportation Center) would be located just north of the border in the area of the existing San Ysidro ITC. The preferred option for the design of the ITC would include passenger pick-up/drop-off, parking, retail, trolley access, a bus center, and a bike center. See Figure 5.4 below for a rendering of the preferred ITC design. An ITC at the new Virginia Avenue facility is also in the planning stages (previously referenced BMP Project No. 4020014).

Figure 5.4 Preferred Design of San Ysidro ITC



Rendering shows design of ITC as seen from the southwest.
Source: San Ysidro Intermodal Transportation Study

Existing bus stop in Tijuana

Planned BRT routes in the U.S. will connect the POE with Kearny Mesa via downtown San Diego (BMP Project No. 3020021, BRT San Ysidro to Downtown San Diego, planned for the year 2020) and connect the San Ysidro and Otay Mesa POEs (BMP Project No. 3020030, Rapid Bus San Ysidro to Otay Mesa, planned for the year 2035).

Bicycle plans exist in both San Diego and Tijuana. In San Diego, routes are mapped in the City of San Diego Bicycle Master Plan Update and San Ysidro Community Plan Update (including BMP Project No. 5020006, Border Access Corridor (Preferred Alternative) and 5020021, West San Ysidro Blvd Bikeway). In Tijuana, IMPLAN documents "Movilidad Integral" and "Ciclovía Benitez" map proposed routes in the neighborhoods near the POE (including BMP Project No. 5070001, Ciclovía Frederico Benitez). Planned routes can be seen in Figure 7.2 in Chapter 7.

Possible Future Deficiencies

A number of current deficiencies may be ameliorated by proposed projects at the San Ysidro/Puerta México-El Chaparral POE. These include:

- **Drop-off/pick-up zones far from the POE**. The new crossing at Virginia Avenue will have a transit facility that will include designated passenger pick-up/drop-off zones closer to the port facility on the U.S. side of the border. The Tijuana ITC may address the same concerns in Mexico.
- **Access to downtown Tijuana**: the Virginia Avenue crossing will provide closer access to downtown Tijuana.
- **Intersection of northbound and southbound pedestrian paths in Mexico** will be resolved once the Puerta México southbound ramp is completed.

It is crucial to include **pedestrian and bicycle amenities** during POE modernization projects

Possible future pedestrian, bicycle, and transit deficiencies at San Ysidro/Puerta México-El Chaparral POE include the following:

- **Current pedestrian and bicycle wayfinding and connectivity deficiencies**, including signage, inadequacy of passenger pick-up/drop-off zones at the current port, and narrow or steep sidewalks.
- **Bicycle connections to Virginia Avenue crossing from both the U.S. and Mexico**.
- **Water fountains, benches, and restrooms** for the entire POE facility on both sides of the border.

Fencing over existing pedestrian bridge at the Otay Mesa POE

5.2 OTAY MESA/MESA DE OTAY

The Otay Mesa POE Modernization project, covering improvements to both commercial and passenger port facilities in the U.S., received approximately $21.3 million in funding in 2009 (BMP Project 4020012, Otay Mesa Passenger Facilities Modernization). This funding was used for land acquisition and project design which reached the 60 percent completion mark before funding was exhausted. Congress has not yet approved the projected $120 million needed to fund the completion of the modernization project, including final phases of design, Environmental Impact Statement, and construction[28].

An ITC is planned for a parcel southeast of Nicola Tesla Court. This ITC will feature bus stops for two planned BRT routes, the South Bay BRT connecting the Otay Mesa POE to Downtown San Diego via Chula Vista (BMP Project No. 3020019, South Bay BRT), and a route connecting the San Ysidro and Otay Mesa POEs. See Figure 5.5 below for the draft plan of this ITC. Additionally, Caltrans has proposed the Paseo de la Amistad Pedestrian and Bike International Border Crossing project to improve pathways for pedestrians and bicyclists, construct a transit center at the same location as the ITC described above, and create a new pedestrian bridge west of SR 905. This is a TEA project that remains viable if other sources of funding or TEA program funding becomes available[29].

On the Mexican side of the border, a plan to expand and reorganize the commercial and passenger facilities has finished conceptual planning stages. The number of northbound and southbound vehicle lanes would increase, and a new southbound pedestrian pathway could be constructed.

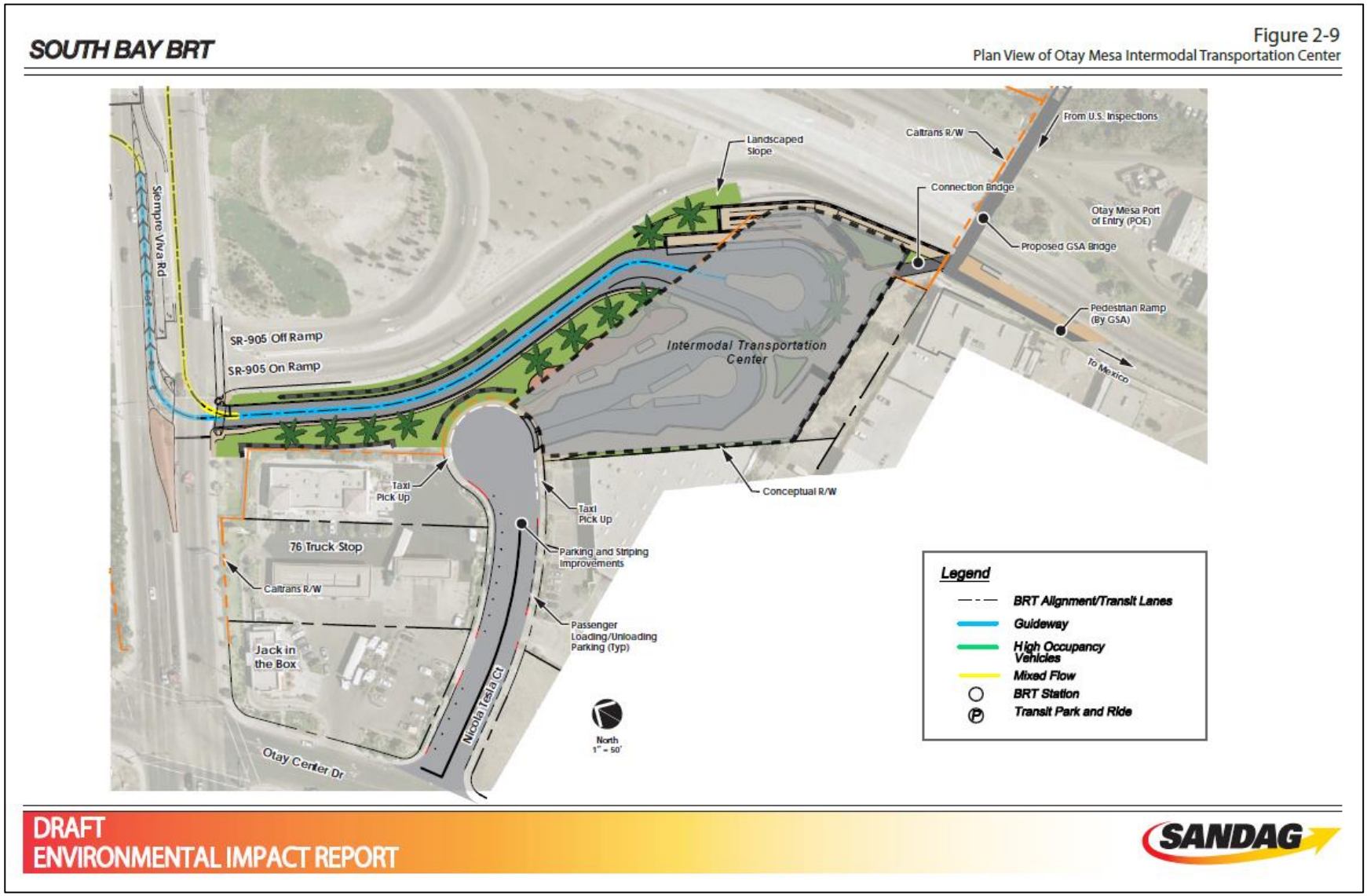
A Mexican transit center is also in the planning stages. This facility would provide a bus station and taxi staging and loading off of Boulevard Garita de Otay, a drop-off/pick-up area, a pedestrian bridge over Boulevard Garita de Otay, and information services (BMP Project No. 6070001, Pedestrian Bridge and Pick-Up/Drop-Off Location). A BRT-type bus named "Route 2" is planned to connect the Mesa de Otay area (including the Mesa de Otay and Otay II POEs) with the southwest portion of Tijuana. These plans are dependent on the modernization of the U.S. facility mentioned above[30]. See Figure 5.6 below for IMPLAN's preliminary plans for this facility from 2009.

Bicycle plans exist in San Diego near the Otay Mesa POE. The planned routes are described in San Diego Regional Bicycle Plan, City of San Diego Bicycle Plan

[28] "Overview of the San Diego Region International Land Ports of Entry" (San Diego Association of Governments Committee on Binational Regional Opportunities, September 3, 2013), page 19.
[29] The Transportation Enhancement Activities (TEA) program provided funding opportunities for surface transportation programs. The most recent federal surface transportation bill replaced TEA with the Transportation Alternatives Program.
[30] "Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan 2007-2012 Progress Report" (San Diego Association of Governments, March 2012), pages 16-17.

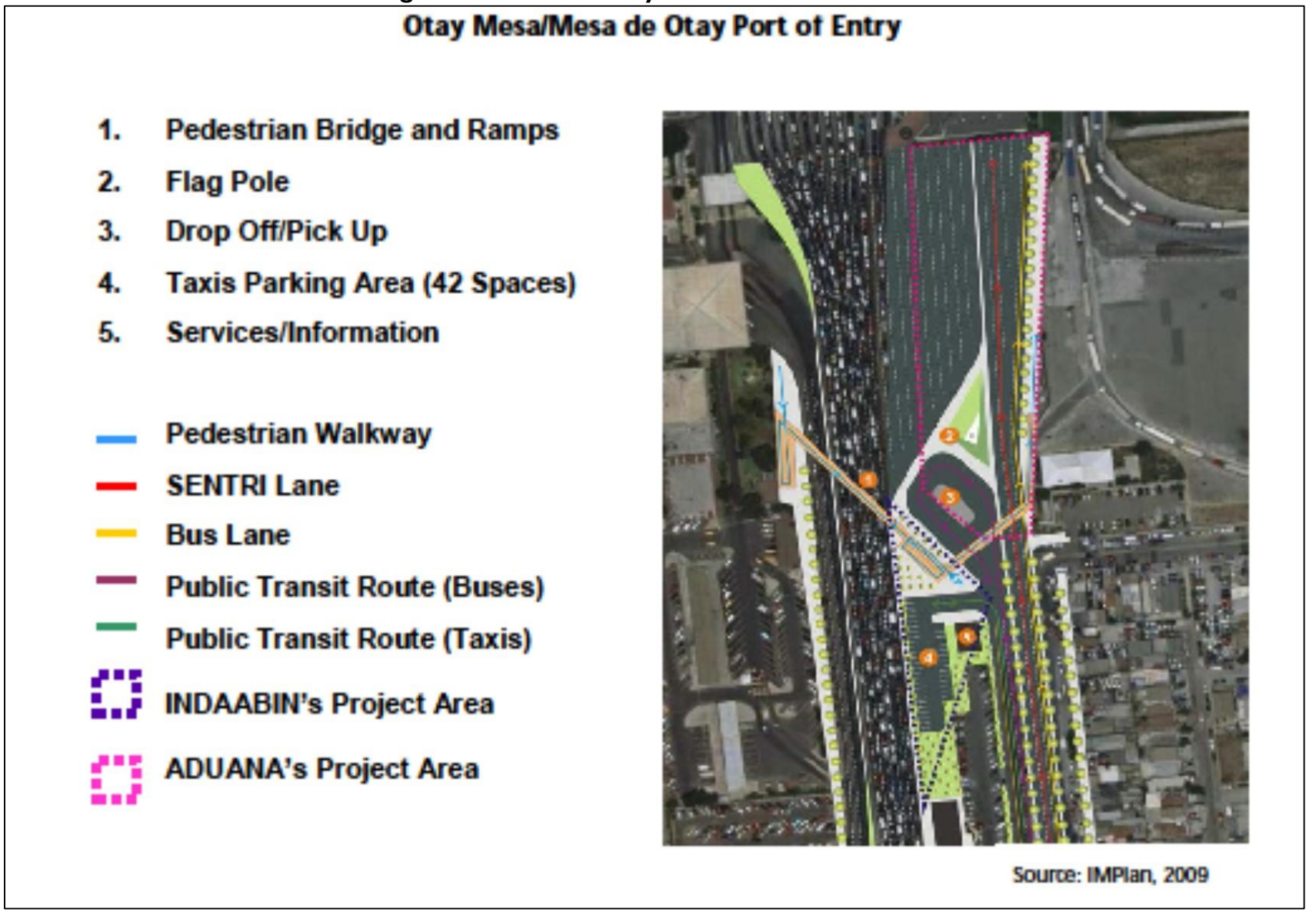
Update, and Otay Mesa Community Plan (including BMP Project No. 5020014, SR 125 Corridor). Planned routes can be seen in Figure 7.4 in Chapter 7.

Figure 5.5 Otay Mesa Intermodal Transit Center Draft Plan



Source: South Bay BRT EIR

Figure 5.6 Mesa de Otay Modernization Draft Plan



Source: Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan 2007-2012 Progress Report March 2012

5.3 TECATE/TECATE

Changes to the port facility are planned at the Tecate/Tecate POE on the Mexican side of the border (BMP Project No. 4060004, Expansion and Reorganization of the Cargo and Passenger Facilities). This project would remodel administrative offices in the pedestrian area of the facility as well as reorder and expand the passenger vehicle areas.

In the U.S., the Kumeyaay Crossing at Tecate International Border Crossing project is proposed by Caltrans to replace and widen sidewalk and create a bike lane on the west side of SR 188 as well as add crosswalks on and across SR 188 to improve pedestrian and bicycle access to the port (identified as BMP Project No. 5020019, Tecate Ped/Transit Facilities). This is a TEA project that remains viable if other sources of funding or TEA program funding were to become available[31]. Additionally, there is a discussion of extending the port's hours of operation earlier than the current 5:00 am opening time to alleviate wait times during the morning peak period.

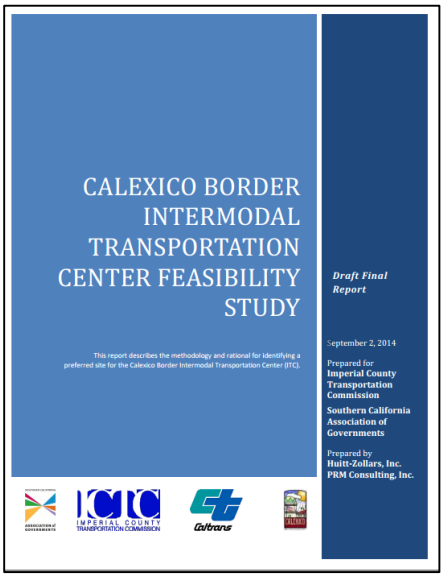
Vehicles approach Tecate POE vehicle processing facilities from California

[31] The Transportation Enhancement Activities (TEA) program provided funding opportunities for surface transportation programs. The most recent federal surface transportation bill replaced TEA with the Transportation Alternatives Program.

5.4 CALEXICO WEST/MEXICALI I

The future BRT line Línea Express #1 will stop at the site of this existing bus stop in Mexicali.

Expansion plans have been created for the Calexico West/Mexicali I POE on both sides of the border. Modifications to the POE in the United States include new vehicle and pedestrian processing facilities, a new headhouse and administration offices, and expansion of the port on to the site formerly occupied by the port's commercial facility, as existing facilities are obsolete and too small to meet current traffic demands (BMP Project No. 4010002, Calexico West – Phase 1 of Major Expansion & Reconfiguration and 4010003, Calexico West – Phase 2 of Major Expansion & Reconfiguration). U.S. expansion plans will be conducted in two phases. Phase 1, recently approved for funding in the President's Budget for FY 15, includes ten northbound vehicle inspection lanes, the headhouse, a bridge for southbound vehicle traffic, and site modifications to prepare for Phase 2 plans. Phase 2 will complete the expansion project with the completion of sitework, the pedestrian processing facility, administrative offices, five southbound vehicle inspection lanes, and six additional vehicle lanes[32]. Figure 5.7 below displays the expansion plans. A Caltrans TEA project called Calexico Border Gateway and 1st Street Promenade has been proposed. This project would widen sidewalks and add pedestrian amenities on E 1st Street and improve traffic flow on adjacent streets. TEA projects remains viable if TEA program funding or other funding sources become available.



Calexico ITC Feasibility Study. Source: Imperialctc.org

An ITC is planned in Calexico at the corner of Rockwood Avenue and 3rd Street, two blocks north of the POE (BMP Project No. 3010085, Calexico Intermodal Transportation Center). Upon completion, this ITC will include transit and Greyhound bus facilities, drop off and pick up zones, amenities such as restrooms and bicycle storage, and bus bays for public and private buses. Funding has not yet been secured for this project.

Modernization plans have also been made on the Mexican side of the border (BMP Project No. 4040005, Mexicali I – Pedestrian Processing Facility and 4040001, Mexicali I – Expansion and Improvement of the Customs Facilities). The Mexicali expansion project will consist of a new administration building and expansion and reconfiguration of personal vehicle crossing lanes on both sides of the New River, to the east of the current processing facilities. Four southbound vehicle lanes expanding into 17 inspection booths will be created east of the river, along with reconfiguration of northbound roadways west of the railroad tracks. The addition of a pedestrian plaza east of the current facility is also planned during the modernization project (BMP No. 5040001, Pedestrian Plaza at Mexicali I). See Figure 5.8 below for Mexicali I expansion plans.

.

[32] GSA.gov, *Calexico West Land Port of Entry Fact Sheet*

Figure 5.7 Calexico West POE Expansion Plans

Source: GSA

Figure 5.8 Mexicali I POE Expansion Plans

Source: Gobierno del Estado de Baja California

A BRT system is planned for Mexicali as part of a modernization of the city's public transportation system. Three lines will connect the main corridors of the city with a network of feeder routes. The first line, Línea Express #1, will cross the city of Mexicali (BMP Project No. 3040001, BRT Express Line 1). The northern terminus of the route will be located directly outside the POE on Boulevard Adolfo López Mateos.

"Cycling is really growing in Mexicali… Leverage this trend!"

-- Focus Group Participant

Plans for bicycle facilities exist on both sides of the border. In Calexico, planned routes include downtown bikeways as well as the New River Parkway project. Routes are described in the County of Imperial Bicycle Master Plan Update, Calexico Bicycle Master Plan, and New River Improvement Project strategic plan. A bicycle plan was recently completed for Mexicali. Planned routes are described in Proyecto de Rutas Ciclistas para Mexicali (includes BMP Project No. 5040003, Río Nuevo Bike Lane Phase I). A map which includes planned bikeways near the POE can be found in Figure 7.8 in Chapter 7.

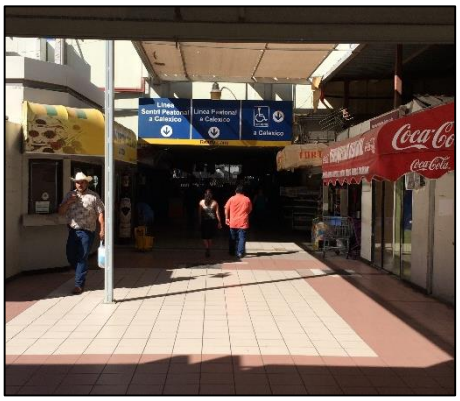
Possible Future Deficiencies

Some current deficiencies may be eliminated by proposed projects at the Calexico West/Mexicali I POE. These include:

- **Narrow facilities** in the Calexico West pedestrian processing facility and Mexicali I northbound pedestrian queue will be replaced by all new facilities which may feature expanded pedestrian infrastructure.
- Many **uneven sidewalks and roadway surfaces** in Mexico near the POE will be replaced by planned infrastructure changes.
- In the U.S., it appears that E 1st Street will no longer connect to SR 111, which may increase pedestrian safety by lessening **traffic volume immediately outside of the port**.

Future pedestrian, bicycle, and transit deficiencies at the POE may include the following, some of which were discussed in Appendix D:

- In Mexico, no **drop-off/pick-up zone** appears to be included in the modernization plans, potentially exacerbating a situation of pedestrian and vehicle traffic conflict just outside the port on Avenida Francisco I Madero.
- Inadequate **sun and rain protection** for pedestrian queuing areas and transit stops.
- Insufficient informational and directional **signage**, **water fountains, benches, clean restrooms**, and **lighting**.
- Exposure to **vehicle exhaust fumes** for border crossers in the northbound pedestrian queue and in the proposed northbound vehicle tunnel on Cristóbal Colón.
- Safety and design concerns of the **pedestrian tunnel**.



Mexicali I pedestrian tunnel

5.5 CALEXICO EAST/MEXICALI II

Binational Partnership – Toll Pilot Project

is an innovative plan to finance and complete improvements at the Calexico East/Mexicali II POE

Imperial Valley regional stakeholders have proposed an expansion of the truck and personal vehicle lanes at the Calexico East POE, as well as an expansion of the bridge over the All American Canal to reduce vehicle bottlenecks (BMP No. 4010004, Calexico East – Additional NB POV Primary Inspection Lanes). Personal vehicle lanes would increase from eight to 14, an addition of six new vehicle lanes and booths. A preliminary estimate places the cost of the project at a range of $60-75 million, though the project is currently unfunded. A proposal to toll the new facilities called "Binational Partnership – Toll Pilot Project" could become part of the final concept, with the current facilities remaining no-cost to users[33]. There is no corresponding project currently planned in Mexico, though a project to improve drop-off/pick-up areas, restrooms, and shade for pedestrians is undergoing advanced planning (BMP Project No. 6040002, Pick-Up/Drop-Off Location).

Construction of an ITC near the POE (BMP Project No. 3010086, Calexico East Intermodal Transportation Center) and a transit service connecting the Calexico West and East POEs (BMP No. 6010001, Calexico East Transit Services) have been identified as future needs.

Bicycle plans near the POE exist in the recently completed bike plan for Mexicali. Planned routes are identified in the "Proyecto de Rutas Ciclistas para Mexicali" and can been seen in Figure 7.10 in Chapter 7. No bicycle facilities are currently planned in Imperial County near the POE.

Vehicles approach the Calexico East POE vehicle processing facilities from Mexicali

[33] *Calexico East Land Port of Entry Fact Sheet: Expansion of Truck and Auto Inspection Lanes at the Existing POE* (Imperial Valley Transportation Commission, May 2014)

5.6 ANDRADE/LOS ALGODONES

SIDUE is planning modifications to make the border crossing facilities at the Andrade-Los Algodones POE more tourist-friendly (BMP Project No. 4040004, Los Algodones-Andrade Tourist Crossing Modernization). Additionally, Caltrans completed a project in 2014 creating improvements to the southbound pedestrian pathway and adding lighting, gazebos, benches, and landscaping (BMP Project 5010003, Andrade POE Ped/Transit Facilities). A photo of the improvements is below.

This recently completed pedestrian pathway leads to the Andrade POE

Planned Facilities:

- Otay Mesa East/Mesa de Otay II POE
- Cross Border Xpress
- Jacumba/Jacumé POE
  (conceptual planning stages only)

5.7 New POEs and Cross-Border Facility

Two new border crossing facilities are planned within two miles of the Otay Mesa/Mesa de Otay POE. The first, Otay Mesa East/Mesa de Otay II POE, is planned approximately two miles east of the existing POE (BMP Project No. 4020001, Otay Mesa East and 4070008, Mesa de Otay II). New roads in both nations, including California State Route 11, a new toll highway, are proposed to connect to the new passenger and commercial port facility. Construction on Segment 1 of the U.S. project began in December 2013. In Mexico, SIDUE estimates that the crossing on the southern side of the border will be complete in the year 2017[34].

The second border crossing facility under construction is a privately funded and operated pedestrian bridge linking the General Abelardo L. Rodriguez International Airport with Otay Mesa (BMP Project No. 4020008, San Diego-Tijuana Airport Crossborder Facility and 4070009, San Diego-Tijuana Airport Crossborder Facility Access Bridge). The project is entitled "Cross Border Xpress" and will be a pedestrian border crossing facility limited to toll-paying airline passengers. Construction on the project began in June 2014 and is expected to conclude in summer of 2015. See Figure 5.9 below for a map of the future location of the Otay Mesa East/Mesa de Otay II POE and Cross Border Xpress border crossing facility[35].

A rendering of Cross Border Xpress. Source: Businesswire.com

A POE linking the towns of Jacumba in the U.S. and Jacumé in Mexico is in the early conceptual planning stages (BMP Project No. 4020015, Jacumba Border Station and 4060003, Jacumé Border Station).

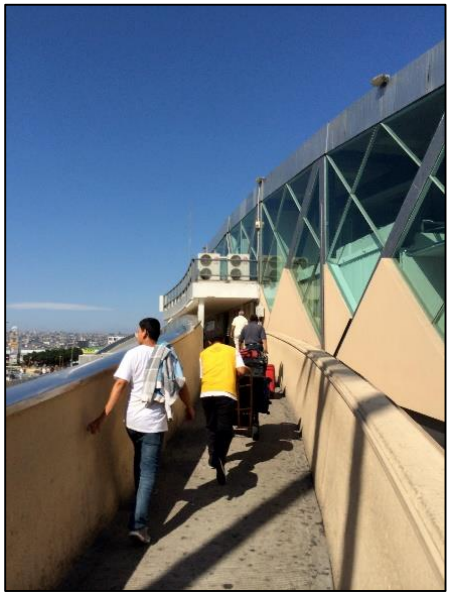
[34] "Plan Estratégico de Baja California 2013-2019" (Secretaría de Infraestructura y Desarrollo Urbano de Baja California)
[35] Dot.ca.gov, "SR 11/Otay Mesa East Port of Entry" (San Diego Association of Governments, Caltrans, February 2014)

Figure 5.9 Future Locations of Otay Mesa East/Mesa de Otay II POE and Cross Border Xpress Facility

Cross Border Xpress labeled as "Cross Border Airport Facility." Source: SANDAG

6.0 TRAVEL BEHAVIOR SURVEY RESULTS

Parque Miguel Hidalgo, a popular destination in Tecate, Mexico



Pedestrians walk west of the Puerta México POE towards downtown Tijuana

This chapter summarizes travel behavior survey data from previous studies in combination with supplemental surveys conducted in fall 2014. The travel behavior data analyzed includes information about travel mode to and from the border, trip frequency, and trip purpose.

Information was gathered about the travel habits of pedestrians and bicyclists who cross the border at the six California/Baja California POEs in order to better understand their needs. After consulting prior studies and agency experts on the border region, it was decided that this study should focus on key questions most relevant to creating a plan that improves bicycle and pedestrian infrastructure at the border. The questions are:

1. What is the arrival mode of transportation to the POE?
2. What is the departure transportation mode from the POE (into U.S.)?
3. What is the primary purpose of the trip?
4. How frequently is the trip made?

6.1 EXISTING STUDIES

A review of previously conducted border studies provided information pertinent to pedestrian and bicycle border crossing behavior. The study team decided to make use of all available information from these previous studies and supplement this information only where necessary.

Northbound pedestrian border crossers arrive and depart each port using a **variety of transportation modes**

A more in-depth review of prior survey work at the six POEs along the California/Baja California border found the following two surveys to be most pertinent to the current study:

- *Imperial County Cross-Border Survey Report* (Rae & Parker Research, June 2007). This study/survey was conducted for all three POEs in Imperial County.
- *San Ysidro Land Port of Entry Inspection Facility Expansion* (KOA Corporation, June 2012). This study was conducted at the San Ysidro POE.

Most northbound pedestrian border crossers make a cross-border trip **at least as frequently as once a week**

The studies above, along with supplemental surveys conducted at the Otay Mesa/Mesa de Otay and Tecate/Tecate POEs, provided information on port users' travel habits. The results of the existing studies and supplemental surveys have been summarized into four tables in the subsequent sections of this chapter, one for each of the four key travel behavior questions stated above.

The supplemental surveys were conducted at the northbound pedestrian exits of the Otay Mesa/Mesa de Otay and Tecate/Tecate POEs on Thursday, October 16th, 2014, for one two-hour session at each port. A copy of the bilingual form that was used by the surveyors is included in Appendix F[36].

6.2 TRANSPORTATION MODE

Work and shopping are the most common purposes of northbound pedestrian trips

Table 6.1 summarizes northbound pedestrian crossers' transportation mode of arrival at each POE. The table indicates that arrival by walking is the predominate mode at the San Ysidro/Puerta México-El Chaparral and Andrade/Los Algodones POEs. Northbound pedestrians generally arrive at the other four POEs via taxi/private shuttle, drop-off from a personal vehicle, or by parking their car and then walking to the port. Between 12 and 16 percent of pedestrians arrive via transit at all ports except Calexico East/Mexicali II and Andrade/Los Algodones.

San Ysidro/Puerta México-El Chaparral and Otay Mesa/Mesa de Otay POEs, two of the three ports with existing bicycle facilities in the U.S., show bicycle users accessing the ports. The third port with existing bikeway facilities is Andrade/Los Algodones, which according to CBP officials generally receives nominal bicycle traffic appropriate to its somewhat isolated desert location.

[36] Seventy-six survey responses were received at Otay Mesa/Mesa de Otay and 58 survey responses were received at Tecate/Tecate.

Table 6.1 Northbound Mode of Arrival

POE	Walk	Bike	Transit	Taxi/ private shuttle	Drove/ parked car	Drop-Off	Intercity Bus	Other
San Ysidro/Puerta México-El Chaparral[1]	41%	1%	12%	21%	12%	11%	1%	1%
Otay Mesa/Mesa de Otay[2]	17%	5%	11%	23%	19%	22%		3%
Tecate/Tecate[2]	22%		14%	3%	54%	7%		
Calexico West/ Mexicali I[3]	13%		16%	23%	25%	23%		
Calexico East/ Mexicali II[4]						80-100%		
Andrade/Los Algodones[3]	63%			1%	34%	2%		

[1] *San Ysidro Land Port of Entry Inspection Facility Expansion* (KOA Corporation, June 2012)
[2] Supplemental Surveys for current study (Fall 2014)
[3] *Imperial County Cross-Border Survey Report* (Rae & Parker Research, June 2007)
[4] Based on available infrastructure, transportation options, and summer/fall 2014 in-field observation, predominant mode is auto drop-off.

Table 6.2 summarizes the northbound departure mode of transportation for the POEs, showing considerable variation from port to port. The predominate mode of departure for the northbound pedestrians at San Ysidro/Puerta México-El Chaparral is transit, whereas at Otay Mesa/Mesa de Otay nearly one third of the pedestrians drive a car that was previously parked. Approximately two thirds of the pedestrians at Tecate/Tecate reported walking to their destination. Nearly one third of the pedestrians at Calexico West/Mexicali I and nearly all the pedestrians at Calexico East/Mexicali II were picked up by personal vehicles. Ninety-five percent of the pedestrians at Andrade/Los Algodones left the POE in a previously parked personal vehicle.

Table 6.2 Northbound Mode of Departure

POE	Walk	Bike	Transit	Taxi/ private shuttle	Drove/ parked car	Pick up	Intercity Bus	Other
San Ysidro/Puerta México-El Chaparral[1]	20%	1%	54%	2%	11%	9%	2%	1%
Otay Mesa/Mesa de Otay[2]	20%	5%	16%	9%	29%	18%		3%
Tecate/Tecate[2]	67%		15%	5%	9%	2%		2%
Calexico West/ Mexicali I[3]	22%		10%	21%	15%	32%		
Calexico East/ Mexicali II[4]						80-100%		
Andrade/Los Algodones[3]	1%			1%	95%	3%		

[1] *San Ysidro Land Port of Entry Inspection Facility Expansion* (KOA Corporation, June 2012)
[2] Supplemental Surveys for current study (Fall 2014)
[3] *Imperial County Cross-Border Survey Report* (Rae & Parker Research, June 2007)
[4] Based on available infrastructure, transportation options, and summer/fall 2014 in-field observation, predominant mode is auto pick-up.

Taxis near the Tecate POE

The significance of this mode of arrival and departure information is to reflect the diversity of port users' transportation needs. Adequate pedestrian border crossing infrastructure at the POEs, such as appropriate queuing and processing facilities, is clearly important for pedestrian travelers. However, the majority of border crossers begin or end their trip using another mode of transportation besides walking. Making multi-modal connections at the POEs is as vital to safe and comfortable pedestrian border crossings as the port facilities themselves.

The data shown above on individuals who bicycle to and/or from the border supports and broadens the conclusion that infrastructure which provides for multiple modes of transportation is crucial to promoting active transportation at the border. As discussed above, with the exception of Andrade/Los Algodones POE, the ports which show bicyclists arriving or departing from the port are those with some existing bicycle infrastructure. Appropriate infrastructure is a crucial part of promoting walking and biking near the ports.

Over half of pedestrian border crossers at the Otay Mesa/Mesa de Otay, Calexico West/Mexicali I, and Calexico East/Mexicali II POEs are dropped off near the port by a taxi, private shuttle, or private vehicle, which requires **well-planned drop-off zones**

The arrival and departure information also underscores the unique characteristics of each of the six POEs in the study area. Though users at each port benefit from multi-modal infrastructure, pedestrians at some ports show clear preference for one or two modes of transportation over others. For example, focusing on arrival mode of transportation, over 40 percent of border crossers arrived at the San Ysidro/Puerta México-El Chaparral port on foot and over 60 percent arrived on foot at Andrade/Los Algodones POE. Special attention can be paid at these ports to provide adequate pedestrian infrastructure. Similarly, over half of pedestrian border crossers at the Otay Mesa/Mesa de Otay, Calexico West/Mexicali I, and Calexico East/Mexicali II POEs are dropped off near the port by a taxi, private shuttle, or private vehicle, necessitating well-planned drop-off zones. Multi-modal or transit facilities are also important to potentially increase walking and biking trips at these ports.

6.3 TRIP FREQUENCY

San Ysidro POE southbound pedestrian crossing into Mexico

Table 6.3 summarizes the frequency at which travelers cross the border at each port. The results of the various surveys of travel frequency indicate that at San Ysidro/Puerta México-El Chaparral, Otay Mesa/Mesa de Otay, Tecate/Tecate, and Calexico West/Mexicali I, nearly half the travelers cross on a weekly basis, and that almost three quarters cross on a weekly basis at Calexico East/Mexicali II. Pedestrians at Calexico West/Mexicali I cross the most frequently, with almost half reporting daily border crossing trips in addition to the 42 percent reporting weekly trips. The surveys show that at Andrade/Los Algodones 84 percent of the travelers cross less frequently than once a week.

Wayfinding signage especially benefits infrequent cross-border travelers

The results indicate that with the exception of the users of the Andrade/Los Algodones POE, most travelers cross the border on a regular basis, and could benefit from expanded SENTRI and Ready Lane infrastructure and program accessibility for pedestrians[37]. The high percentage of infrequent crossers at Andrade/Los Algodones would indicate that many of the users may not be familiar with border crossing procedures and may need additional wayfinding signage or trip planning assistance.

Table 6.3 Northbound Crossing Frequency

POE	Daily	Weekly	Less than weekly
San Ysidro/Puerta México-El Chaparral[1]	27%	47%	26%
Otay Mesa/Mesa de Otay[2]	15%	44%	41%
Tecate/Tecate[2]	9%	49%	42%
Calexico West/Mexicali I[3]	47%	42%	11%
Calexico East/Mexicali II[3]	11%	72%	17%
Andrade/Los Algodones[3]	1%	15%	84%

[1] *San Ysidro Land Port of Entry Inspection Facility Expansion* (KOA Corporation, June 2012)
[2] Supplemental Surveys for current study (Fall 2014)
[3] *Imperial County Cross-Border Survey Report* (Rae & Parker Research, June 2007)

6.4 TRIP PURPOSE

Most border crossers make cross-border trips **on a regular basis**

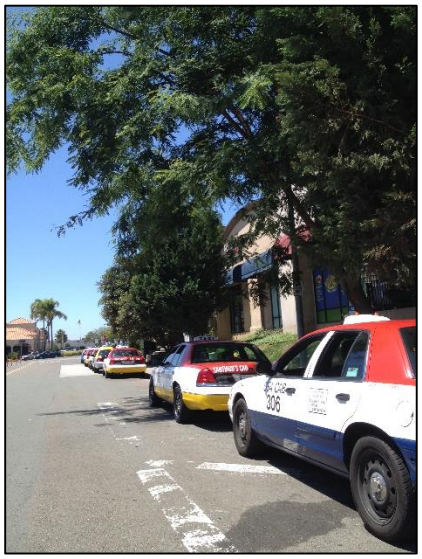
Table 6.4 summarizes the reasons that surveyed individuals cited for their typical border crossings. Work is the predominate specific motivation for northbound cross-border trips at the San Ysidro/Puerta México-El Chaparral, Otay Mesa/Mesa de Otay, and Calexico West/Mexicali I POE's. At the Tecate/Tecate, Calexico East/Mexicali II, and Andrade/Los Algodones POEs shopping is the predominate reason for northbound crossers to enter the U.S. Visiting friends and family is the second most common reason reported for crossing the border at the Otay Mesa/Mesa de Otay, Calexico West/Mexicali I, and Calexico East/Mexicali II POEs. Medical visits are the secondary reason for crossings at Andrade/Los Algodones.

[37] Please see Chapter 2 for a description of SENTRI and Ready Lane programs.

Table 6.4 Northbound Purpose

POE	Work	Shopping	Friend/ relatives	Medical	School	Recreation/ entertainment	Other
San Ysidro/Puerta México-El Chaparral[1]	28%	23%	12%	4%	3%		30%
Otay Mesa/ Mesa de Otay[2]	40%	17%	19%	7%	1%	13%	3%
Tecate/Tecate[2]	19%	39%	12%	2%	7%	2%	19%
Calexico West/ Mexicali I[3]	34%	20%	28%		5%	10%	3%
Calexico East/Mexicali II[3]	27%	35%	32%			3%	3%
Andrade/Los Algodnoes[3]	0%	36%	7%	29%	1%	15%	12%

[1] *San Ysidro Land Port of Entry Inspection Facility Expansion* (KOA Corporation, June 2012)
[2] Supplemental Surveys for current study (Fall 2014)
[3] *Imperial County Cross-Border Survey Report* (Rae & Parker Research, June 2007)



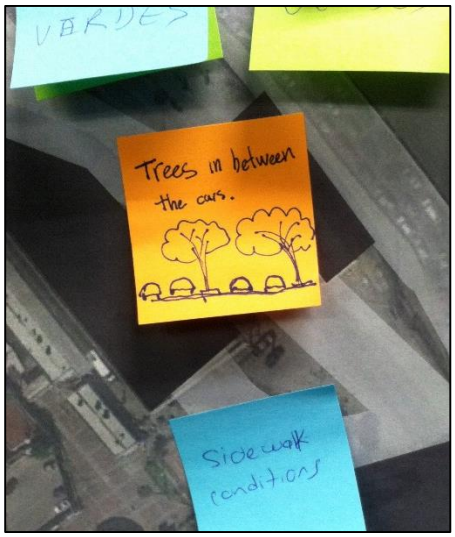
Taxis stage near the Otay Mesa POE

Trip purpose survey results indicate that there is an economic incentive to improve the convenience of crossing the border, since most of the reported trips are related to either work or commerce.

Considering all four travel behavior questions together exposes important information about pedestrian and bicycle border crossers. The composite of previous studies and the surveys conducted as part of this study reveal that the transportation patterns and purposes for pedestrian and bicycle border crossings vary significantly from POE to POE, and that the majority of cross-border trips between California and Baja California are made by frequent border crossers. The survey data provides an indication of what types of transportation accommodations could be most beneficial at each port, including enhanced pedestrian and bicycle systems, parking and pick-up/drop-off opportunities, and convenient transit and shuttle stops. The data also shows that there could be utility in expanding programs which expedite pedestrian and vehicle processing as well as an economic impetus for enhancing active transportation infrastructure near the POEs.

7.0 RECOMMENDED PROJECTS AND POLICIES

Pleasant surroundings for pedestrians at the Los Algodones northbound queuing area



Many recommendations originated with comments from members of the public

This chapter describes the recommended improvements to address pedestrian, bicycle, transit and vehicle deficiencies at each Port of Entry (POE). Projects are organized by travel mode for each port, and maps show key improvements at each POE. This chapter also includes a set of policy recommendations that apply to all locations

The Existing Conditions and Public Outreach phases of this study were used to develop a list of recommended projects to improve pedestrian and bicycle access at the California/Baja California ports of entry. One hundred and two recommended projects and policies were developed through information and input gathered during the On-Site Outreach Workshops, Focus Group Meetings, field work at each of the ports, online input from the eAudit tool, as well as from review of existing plans and studies. Recommended projects were reviewed and revised based on input from local, state, and federal agencies and community groups from both the United States and Mexico. Seventy percent of the recommendations represent pedestrian and bicycle projects, and the rest are policies and transit and vehicle projects.

Mesa de Otay POE taxi stand

Recommended projects are divided by port in the next six sections, followed at the end of the chapter by policy recommendations which address all six POEs. Within each port's subsection, the table of projects for that port is divided by type (pedestrian, bicycle, transit, or vehicle) and by country (Mexico or the United States). Each port's projects are mapped in two maps, a map depicting bicycle projects and a map depicting pedestrian, transit, and vehicle projects. Concept mapping for each project and concept plans developed for select projects can be found in Appendix G. Cost estimates for both the U.S. and Mexico are in U.S. dollars; actual costs for projects in Mexico may vary based on differences in costs for labor, materials, and project implementation in the two countries. Appendix H contains line-item information on cost estimates for each project. The complete matrix of project and policy recommendations, which includes additional details about each project such as jurisdiction, related plans and programs, and the source of each project recommendation, is also available in Appendix H.

"It's not safe to ride the bike on the bridge with the regular cars…and it's forbidden to ride on the pedestrian bridge; there is no space for bikes."

-- Focus Group Participant

Word choice for some of the recommendations should be clarified. "Mounted" bicyclists are on their bicycles and riding, while "dismounted" bicyclists are walking and wheeling their bicycles by hand. A "pedestrian-friendly crossing" includes appropriate signage, striping, and signalization to enhance pedestrian safety in the busy crosswalks around the POEs. "Mobility hubs" offer a variety of mobility services at one location such as shared vehicles and bicycles, bicycle parking, and shuttle and jitney services. It is assumed that projects will be implemented to standards which make them accessible to the disabled.

The concept of designated bicycle border crossing lanes should also be addressed. These lanes have existed before at California/Baja California ports of entry, but issues arose which resulted in their closure. Issues included individuals "cheating" and renting broken bicycles to take advantage of shorter northbound bicycle queues, efficiency considerations involved in converting a vehicle or pedestrian inspection lane to serve bicycle traffic, and safety concerns relating to bicyclists darting among vehicle traffic. Further study is necessary to design appropriate bicycle border crossing facilities at the POEs.

Design Guidelines for POE pedestrian and bicycle access can be found in Appendix I. A transit feasibility report for a bus service between the Calexico East and West POEs was also developed, and can be found in Appendix J. Please see the Design Guidelines in Appendix I for a description of amenities such as informational and directional signage and shade structures that improve the border crossing experience for bicyclists and pedestrians.

7.1 San Ysidro/Puerta México-El Chaparral

Existing bicycle parking in San Ysidro

Nineteen projects are recommended at the San Ysidro/Puerta México-El Chaparral POE: ten in Mexico and nine in the U.S. Six bicycle projects, six pedestrian projects, five transit project, and two vehicle projects are recommended between the two nations. The bicycle recommendations include dedicated inspection lane facilities, bicycle routes, signage, and parking. The pedestrian projects recommend amenities and sidewalk or pathway enhancements in both nations. Transit projects recommend ITCs, mobility hubs, and a formal pedicab pick-up/drop-off zone, while the two Mexican vehicle projects recommend vehicle pick-up/drop-off zones and roundabout improvements.

SAN YSIDRO/ PUERTA MÉXICO-EL CHAPARRAL POE

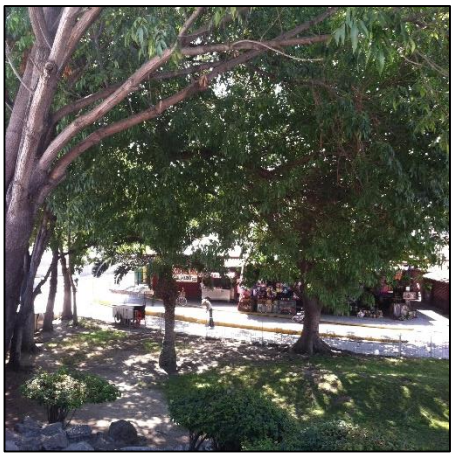
19 Recommended Projects and Policies

- Six Pedestrian Projects
- Six Bicycle Projects
- Five Transit Projects
- Two Vehicle Projects

Mexico	Pedestrian Project Recommendations
Project 1	**Tijuana Pedestrian-Friendly Crossing Improvements**
Various Intersections	Create pedestrian-friendly crossings at intersections of Av Frontera and Av Ferrocarril, Alfonso Reyes and Línea Internacional, and northbound ramp gore at Paseo Centenario Tijuana connecting to Av Ferrocarril. Lead Agency: SIDUE, Ayuntamiento de Tijuana Cost: $218,000
Project 2	**Puerta México-El Chaparral Pedestrian Pathway Enhancements**
Pedestrian processing to Av de la Amistad and Av Frontera	Add restrooms, water fountains, benches, shade for pathways and waiting areas, information kiosks, and informational signage. Add additional directional signage, lighting, shade for queuing area, pedestrian sidewalk ramps, and lane segmentation. Consider widening queue area. As an interim improvement, add additional lighting, shelter, and seating for transit stop. Lead Agency: SIDUE, Ayuntamiento de Tijuana Cost: $982,000
Project 3	**Tijuana Pedestrian-Friendly Sidewalk Improvements**
Av de la Amistad, Paseo Centenario Tijuana, and Línea	Sidewalk rehabilitation and installation of pedestrian ramps, crosswalks, signage, and lighting along Av de la Amistad, Paseo Centenario Tijuana, and Línea Internacional. Lead Agency: SIDUE Cost: $268,000
Mexico	**Bicycle Project Recommendations**
Project 4	**Puerta México - El Chaparral Bicycle Border Crossing**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians. Lead Agency: INDAABIN, Aduanas Cost $300,000

Project 5	Bicycle Routes in Tijuana
Various	Construct planned bicycle routes in Tijuana. Additionally, construct routes to establish connections between planned routes and the POE. Install bicycle-related signage. Lead Agency: SIDUE, Ayuntamiento de Tijuana Cost $584,000
Project 6	**Bicycle Parking in Tijuana**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the Puerta México Este and El Chaparral POE. Consider secure parking and storage where possible. Lead Agency: IMPLAN, SIDUE Cost $7,000
Mexico	**Transit Project Recommendations**
Project 7	**Tijuana Intermodal Transit Center**
Colonia Cuauhtémoc area	Build an ITC with pedestrian, bus, and taxi services and a connected commercial development. Lead Agency: SIDUE Cost $50,000,000
Project 8	**Puerta México-El Chaparral Mobility Hub**
Within a three minute walk of the pedestrian queue	Construct a mobility hub near the POE. Bicycle share is recommended; other appropriate services at this location dependent on further study. Lead Agency: Ayuntamiento de Tijuana Cost $750,000 (Bike Share only)
Mexico	**Vehicle Project Recommendations**
Project 9	**Puerta México Passenger Pick-Up/Drop-Off Zone**
Within a three minute walk of the pedestrian queue	Create sufficient and exclusive pick up/drop off zones at an appropriate location at the POE. Include benches, signage, shade, and lighting. Lead Agency: SIDUE, Ayuntamiento de Tijuana Cost $107,000
Project 10	**Av de la Amistad Roundabout Improvements**
Intersection of Av de la Amistad and Av Frontera	Improve Av de la Amistad and Av Frontera roundabout to be more pedestrian-friendly. Additionally consider installing speed bumps and traffic signals to improve pedestrian safety. Lead Agency: Ayuntamiento de Tijuana Cost $1,925,000

Information booth near the Puerta México-El Chaparral facilities



Landscaping outside the Puerta México POE

United States	Pedestrian Project Recommendations
Project 11	**East San Ysidro Blvd Pedestrian-Friendly Crossing Improvements**
East San Ysidro Blvd	Enhance intersection of East San Ysidro Blvd north of San Ysidro Transit Center to be more pedestrian and bicycle-friendly. Lead Agency: City of San Diego Cost $141,000
Project 12	**San Ysidro Pedestrian Pathway Enhancements**
Pedestrian processing to East San Ysidro Blvd	Add restrooms, information kiosk, shade for queuing area, and informational signage. Add additional directional signage, benches, lighting, and shade for waiting and transit areas. Improve overall design/view of necessary security features. Improve segments of sidewalk. Lead Agency: GSA, CBP, MTS, City of San Diego Cost $1,215,000
Project 13	**San Ysidro Sidewalk Improvements**
East San Ysidro Blvd, Camino de la Plaza	Add missing pedestrian sidewalk ramps, crosswalks, and sidewalk. Lead Agency: City of San Diego Cost $28,000
United States	**Bicycle Project Recommendations**
Project 14	**San Ysidro Bicycle Border Crossing**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians. Lead Agency: GSA, CBP Cost $300,000
Project 15	**Bicycle Routes in San Ysidro**
Various	Construct planned bicycle routes in San Ysidro. Additionally, construct routes to establish connections between planned routes and the POE. Install bicycle-related signage. Lead Agency: City of San Diego, GSA Cost $212,000
Project 16	**Bicycle Parking in San Ysidro**
Within a three minute walk of the pedestrian queue	Construct additional bicycle parking at the east and west facilities of the San Ysidro POE. Consider secure parking and storage where possible. Lead Agency: City of San Diego, GSA Cost $7,000

United States	Transit Project Recommendations
Project 17	**San Ysidro Intermodal Transportation Center**
Current location of ITC plus additional area	Build an ITC to provide a centralized facility for the Trolley, local and long distance buses, taxis, jitneys, and bicycles. Lead Agency: SANDAG Cost $138,200,000
Project 18	**San Ysidro Mobility Hub**
Within a three minute walk of the pedestrian queue	Construct a mobility hub near the POE. Bicycle share is recommended; other appropriate services at this location dependent on further study. Lead Agency: City of San Diego Cost $750,000 (Bike Share only)
Project 19	**Pedicab Passenger Pick-Up/Drop-Off Zone**
East San Ysidro Blvd north of San Ysidro ITC	As an interim improvement, add signage and paint curb to designate pedicab pick-up/drop-off zone north of the San Ysidro Intermodal Transportation Center. Lead Agency: City of San Diego Cost $8,000

"We need to provide dignity to the border crossing process."

-- Focus Group Participant

Entrance to Mexico at the San Ysidro POE

Figure 7.1 San Ysidro/Puerta México-El Chaparral Pedestrian, Transit, and Vehicle Projects

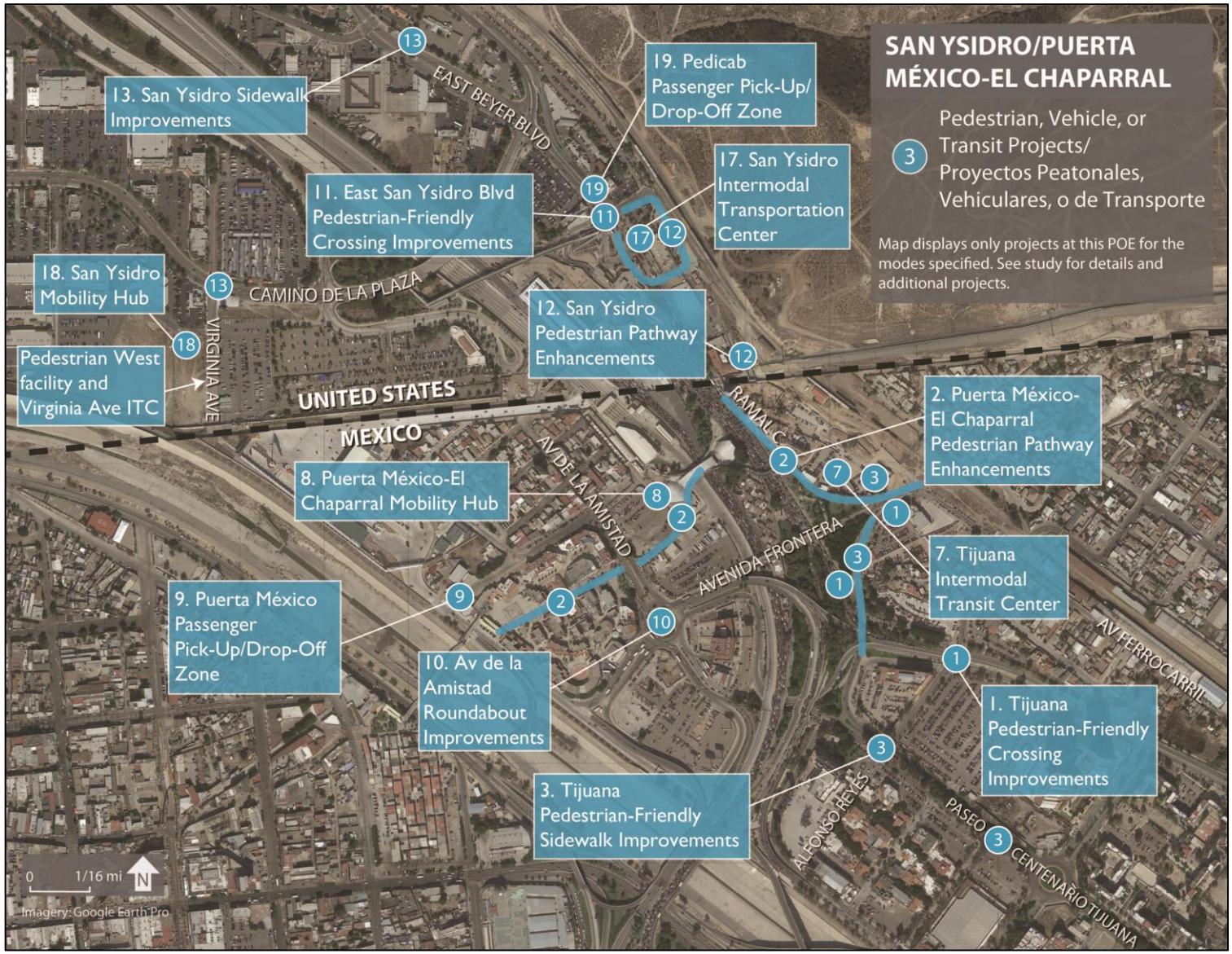
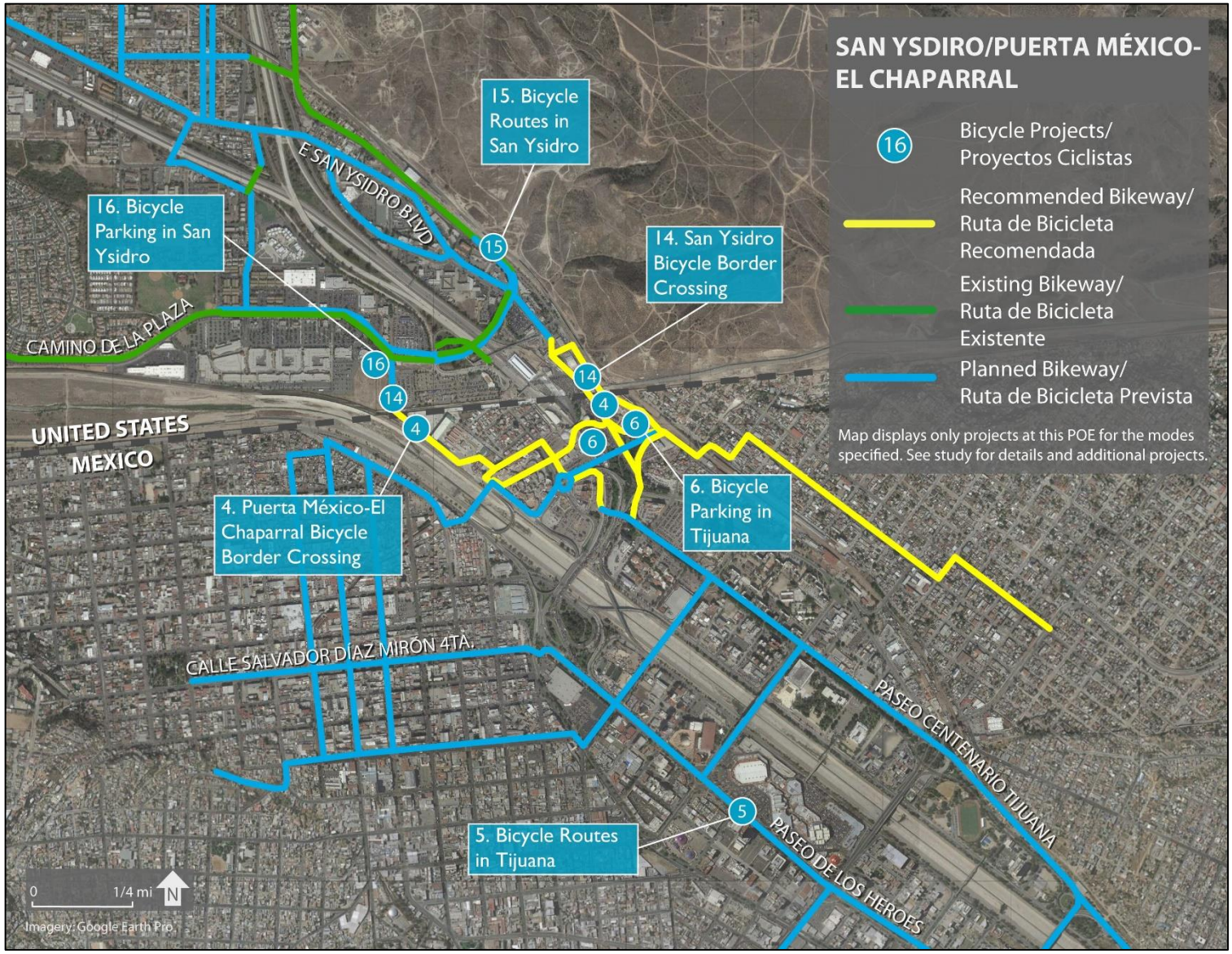


Figure 7.2 San Ysidro/Puerta México-El Chaparral Bicycle Projects



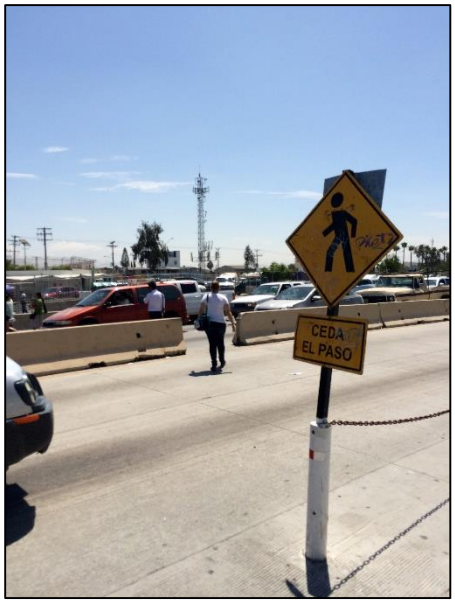
OTAY MESA/MESA DE OTAY POE

21 Recommended Projects and Policies

- Ten Pedestrian Projects
- Six Bicycle Projects
- Two Transit Projects
- Three Vehicle Projects

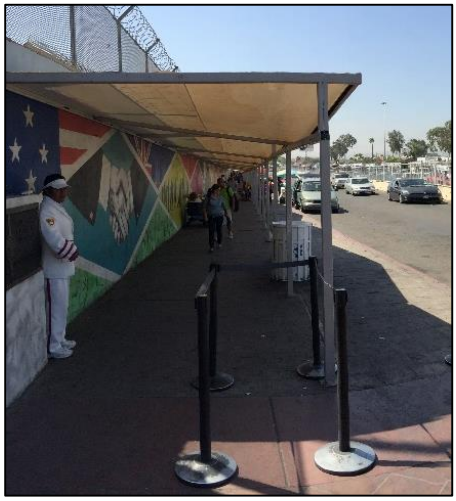
7.2 OTAY MESA/MESA DE OTAY

This study recommends 21 projects at the Otay Mesa/Mesa de Otay POE. Ten of the projects are recommended in the United States and 11 are recommended in Mexico. Binationally there are six bicycle projects, ten pedestrian projects, two transit projects, and three vehicle projects recommended at this POE. The bicycle recommendations include bicycle routes, signage, parking, and inspection lane facilities, and the pedestrian projects recommend amenities, sidewalk construction, and sidewalk or pathway enhancements in both nations. Pedestrian projects also include construction or modification of pedestrian bridges. A transit facility is recommended for both the U.S. and Mexico. Vehicle projects include safety modifications in both countries and a pick-up/drop-off zone in the U.S.



Pedestrians walk through vehicle traffic to cross Boulevard Garita de Otay

Mexico	Pedestrian Project Recommendations
Project 20	**Blvd Garita de Otay Pedestrian Bridge**
Blvd Garita de Otay	Construct east-west pedestrian bridge over Blvd Garita de Otay. Lead Agency: SIDUE, Ayuntamiento de Tijuana Cost: $1,440,000
Project 21	**Colina del Sol Multi-Purpose Path**
Colina del Sol from Sor Juana Inés de la Cruz to Blvd de las Bellas Artes	Construct a multi-purpose path in the median between Calle Colina del Sol and Calle Josefina Rendon Parra from Av Sor Juana Inés de La Cruz to Boulevard de las Bellas Artes. Lead Agency: SIDUE, Ayuntamiento de Tijuana Cost: $189,000
Project 22	**Blvd Garita de Otay Interim Pedestrian Crossing and Two-Way Turnstile Removal**
Blvd Garita de Otay	Add interim solution for pedestrian crossing across Boulevard Garita de Otay until pedestrian bridge project is completed. Remove two-way turnstile on Blvd Garita de Otay which creates a barrier to northbound pedestrian traffic crossing the vehicle SENTRI lane to access pedestrian processing. Lead Agency: SIDUE Cost: $8,000
Project 23	**Mesa de Otay Pedestrian Pathway Enhancements**
Blvd de las Bellas Artes to pedestrian processing	Add restrooms, water fountains, benches, information kiosks, informational and directional signage, lane segmentation, lighting, and shade for pathways and transit areas. Add additional shade for queuing area. Add pedestrian-friendly crossing just south of southbound border crossing. Lead Agency: SIDUE, INDAABIN, Aduanas Cost: $1,929,000

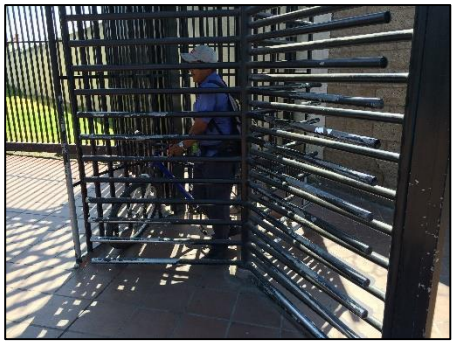


Pedestrian queue at the Mesa de Otay POE

Project 24	**Boulevard Garita de Otay Sidewalk Improvements**
Blvd Garita de Otay from Blvd de las Bellas Artes to pedestrian processing	Construct pedestrian sidewalk ramps and missing sidewalk and crosswalks. Lead Agency: SIDUE Cost: $145,000
Project 25	**Boulevard de las Bellas Artes Crosswalk Improvements**
Intersection of Blvd de las Bellas Artes and Calle Garita de Otay SENTRI	Enhance pedestrian crosswalk visibility, accessibility, and safety where the sidewalk on the east side of Boulevard Aztecas N intersects with Calle Garita de Otay SENTRI. Lead Agency: SIDUE Cost: $7,000
Mexico	**Bicycle Project Recommendations**
Project 26	**Mesa de Otay Bicycle Border Crossing**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians. Lead Agency: INDAABIN, Aduanas Cost: $300,000
Project 27	**Bicycle Routes in Mesa de Otay , Tijuana**
Various	Construct bicycle routes in Mesa de Otay, Tijuana and install bicycle-related signage. Lead Agency: SIDUE, Ayuntamiento de Tijuana Cost: $60,000
Project 28	**Bicycle Parking in Mesa de Otay, Tijuana**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where possible. Lead Agency: SIDUE, Ayuntamiento de Tijuana Cost: $7,000
Mexico	**Transit Project Recommendations**
Project 29	**Colina del Sol Pick-Up/Drop-Off Zone and Transit Stop**
Colina del Sol west of intersection of Sor Juana Inés de la Cruz and Josefina Rendón Parra	Create a passenger pick-up/drop-off zone and transit facility near the northbound pedestrian queuing area. Include shade, lighting, benches, and informational and directional signage. Lead Agency: SIDUE, Ayuntamiento de Tijuana, INDAABIN Cost: $385,000
Mexico	**Vehicle Project Recommendations**
Project 30	**Blvd Garita de Otay Traffic Control**
Blvd Garita de Otay	Add traffic control to prevent wrong-way driving due to passenger drop-off on Blvd Garita de Otay SENTRI lane. Lead Agency: SIDUE Cost: $9,000

Paseo Internacional

United States	Pedestrian Project Recommendations
Project 31	**Pedestrian Bridge – Northbound Ramp**
Pedestrian bridge to pedestrian path south of Nicola Tesla Ct	In the absence of new pedestrian bridge projects, add northbound pedestrian ramp to existing pedestrian bridge. Lead Agency: GSA Cost: $780,000
Project 32	**Paseo de la Amistad Pedestrian and Bike International Border Crossing**
Various locations	Improve Paseo Internacional with new, expanded sidewalk and bicycle lane, widen sidewalk and improve existing pick-up/drop-off point at Via de la Amistad, and add pedestrian amenities. Construct a transit center west of SR 905 and improve Nicola Tesla Ct cul de sac. Construct a pedestrian bridge for north-south pedestrian traffic along west side of SR 905. This is a TEA project that remains viable if TEA program or other funding becomes available. Lead Agency: Caltrans Cost: $2,060,000
Project 33	**Paseo Internacional Sidewalk Improvements and Sidewalk Construction**
Pedestrian processing to Roll Drive	Add pedestrian crossing north of POE. In the absence of Paseo de la Amistad Pedestrian and Bike International Border Crossing project, also construct sidewalk on east side of Paseo Internacional and add pedestrian ramps on west side of Paseo Internacional. Lead Agency: GSA, Caltrans Cost: $30,000
Project 34	**Otay Mesa Pedestrian Pathway Enhancements**
Pedestrian processing to Roll Drive, pedestrian processing to Nicola Tesla Ct	Add water fountains, restroom, benches, information kiosk, informational and directional signage, and lighting. Add additional shade for pathways, queuing area, waiting areas, and transit areas. Add shelters, additional benches, and lighting for bus stops. Lead Agency: GSA, CBP, SANDAG, MTS, City of San Diego Cost: $542,000
United States	**Bicycle Project Recommendations**
Project 35	**Otay Mesa Bicycle Border Crossing**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians. Lead Agency: GSA, CBP Cost: $300,000



A bicyclist navigates turnstiles at the Otay Mesa/ Mesa de Otay POE

Project 36	**Bicycle Routes in Otay Mesa**
Various	Construct planned bicycle routes in Otay Mesa. Additionally, construct routes to establish connections between planned routes and the POE. Install bicycle-related signage. Lead Agency: City of San Diego, GSA Cost: $242,000
Project 37	**Bicycle Parking in Otay Mesa**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where possible Lead Agency: City of San Diego, GSA Cost: $7,000
United States	**Transit Project Recommendations**
Project 38	**Otay Mesa Intermodal Transportation Center and Pedestrian Bridge**
Parcel southeast of Nicola Tesla Ct	Construct planned ITC south of Nicola Tesla Ct. Construct planned pedestrian bridge from northbound pedestrian inspections. Lead Agency: SANDAG, GSA Cost: $7,600,000
United States	**Vehicle Project Recommendations**
Project 39	**SR 905 Safety Enhancements**
SR 905 north of vehicle processing facility	Add safety enhancements on SR 905 to prevent passenger drop-off. Lead Agency: Caltrans, GSA, CBP Cost: $8,000
Project 40	**Roll Drive Passenger Pick-Up/Drop-Off Zone**
Intersection of Roll Drive and Via de la Amistad	In the absence of Via de la Amistad pick-up/drop-off improvements identified in Paseo de la Amistad Pedestrian and Bike International Border Crossing project, re-paint curb to create official and sufficient passenger pick-up/drop-off zone at southwestern edge of Roll Drive. Add trees, benches, lighting, and directional signage. Lead Agency: City of San Diego, Caltrans Cost: $42,000

Figure 7.3 Otay Mesa/Mesa de Otay Pedestrian, Transit, and Vehicle Projects

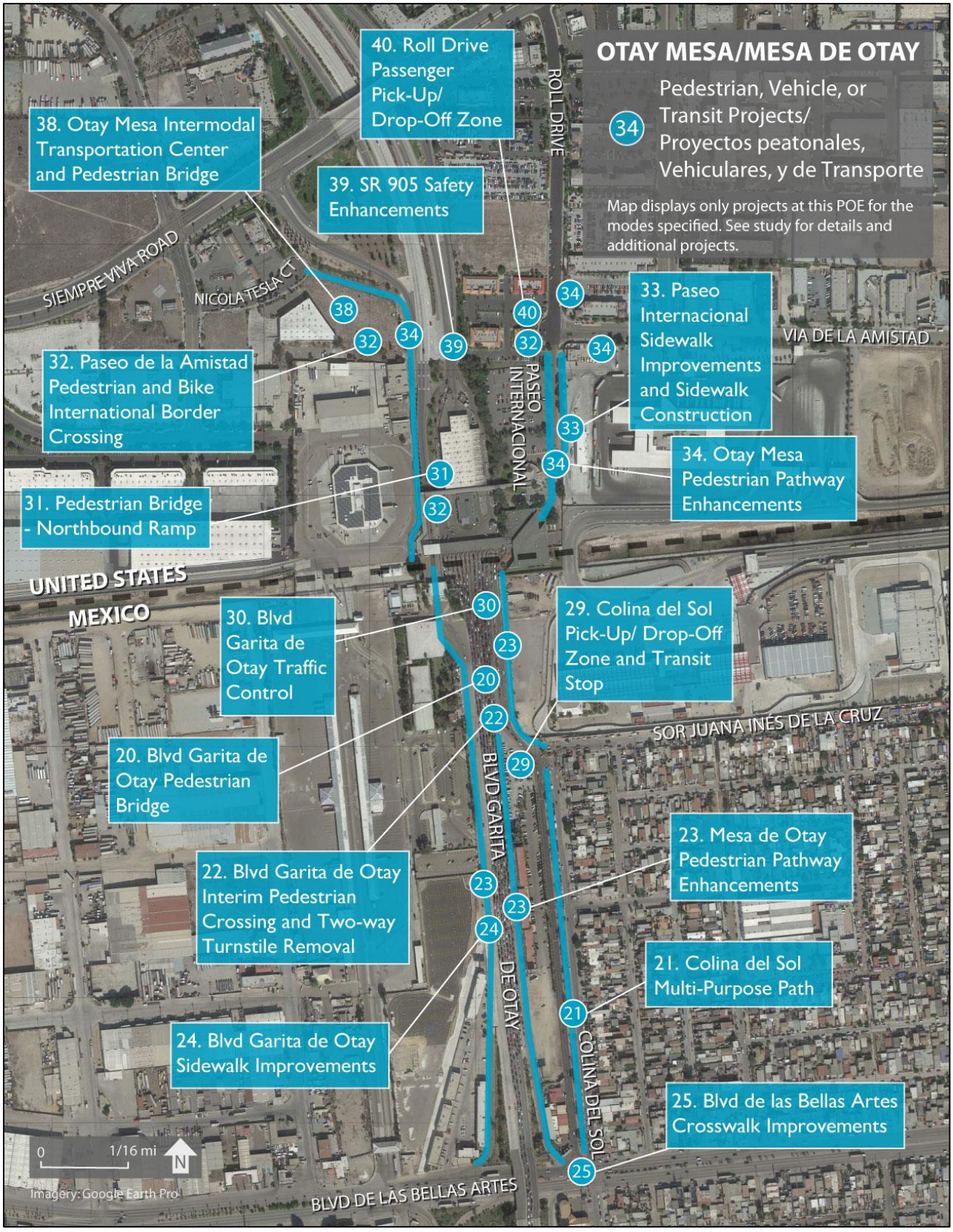


Figure 7.4 Otay Mesa/Mesa de Otay Bicycle Projects

TECATE/ TECATE POE

13 Recommended Projects and Policies

- Five Pedestrian Projects
- Six Bicycle Projects
- One Transit Project
- One Vehicle Project

7.3 TECATE/TECATE

There are 13 projects recommended at the Tecate/Tecate POE, seven in Mexico and six in the United States, with six bicycle projects, five pedestrian projects, one vehicle project, and one transit project between the two nations. The bicycle recommendations include bicycle routes, signage, parking, and inspection lane facilities, and the pedestrian projects recommend amenities and sidewalk or pathway enhancements in both nations. The transit and vehicle projects recommend increased frequency of public transportation in the U.S., as well as the creation of a pick-up/drop-off zone.

Mexico	Pedestrian Project Recommendations
Project 41	**Tecate, Baja California Pedestrian Pathway Enhancements and Passenger Pick-Up/Drop-Off Zone**
Intersection of Callejón Francisco I Madero and Presidente Lázaro Cárdenas	Add water fountain, benches, information kiosk, shade for waiting area, and informational signage. Add additional lighting and directional signage. Create a protected passenger pick-up/drop-off zone at the intersection of Callejón Francisco I Madero and Presidente Lázaro Cárdenas. Lead Agency: SIDUE Cost: $199,000
Project 42	**Tecate, Baja California Sidewalk and Wayfinding Improvements**
POE to Av Hidalgo	Construct additional pedestrian sidewalk ramps and crosswalks, install signage, and rehabilitate sidewalk one block east and west of pedestrian processing as well as along Presidente Lázaro Cardenas and along one block of Av Hidalgo. Lead Agency: SIDUE, Ayuntamiento de Tecate Cost: $145,000
Mexico	**Bicycle Project Recommendations**
Project 43	**Tecate, Baja California Bicycle Border Crossing**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians. Lead Agency: INDAABIN, Aduanas Cost: $300,000
Project 44	**Bicycle Routes in Tecate, Baja California**
Various	Construct bicycle routes in Tecate, Baja California and install bicycle-related signage. Lead Agency: SIDUE, Ayuntamiento de Tecate Cost: $213,000

"We need to connect pedestrians."

– Focus Group Participant

Project 45	**Bicycle Parking in Tecate, Baja California**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where appropriate. Lead Agency: SIDUE, Ayuntamiento de Tecate Cost: $7,000
United States	**Pedestrian Project Recommendations**
Project 46	**SR 188 Pedestrian-Friendly Crossing Improvement**
SR 188 at Thing Rd	In the absence of Kumeyaay Crossing at Tecate International Border Crossing, create north-south pedestrian-friendly crossing across SR 188 at intersection of Thing Road. Lead Agency: Caltrans Cost: $110,000
Project 47	**Kumeyaay Crossing at Tecate International Border Crossing**
SR 188 extending from POE to approximately 1100' north	Replace and widen sidewalk on west side of SR 188 including additional space for pedestrian pathway amenities and signage. Add bike lane. Add pedestrian crosswalks on and across SR 188. This is a TEA project that remains viable if TEA program or other funding becomes available. Lead Agency: Caltrans Cost: $2,382,000
Project 48	**Tecate, California Pedestrian Pathway Enhancements**
Border to MTS bus stop on SR 188	Add restrooms, water fountain, informational kiosks, benches, lighting, and informational and directional signage. Add additional benches behind bus stop and bus shelter. Add additional shade for southbound queuing area. Lead Agency: GSA, CBP, Caltrans, MTS Cost: $326,000
United States	**Bicycle Project Recommendations**
Project 49	**Tecate, California Bicycle Border Crossing**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians. Lead Agency: GSA, CBP Cost: $300,000
Project 50	**Bicycle Routes in Tecate, California**
Various	Construct bicycle routes in Tecate, California and install bicycle-related signage. Lead Agency: San Diego County, GSA Cost: $23,000

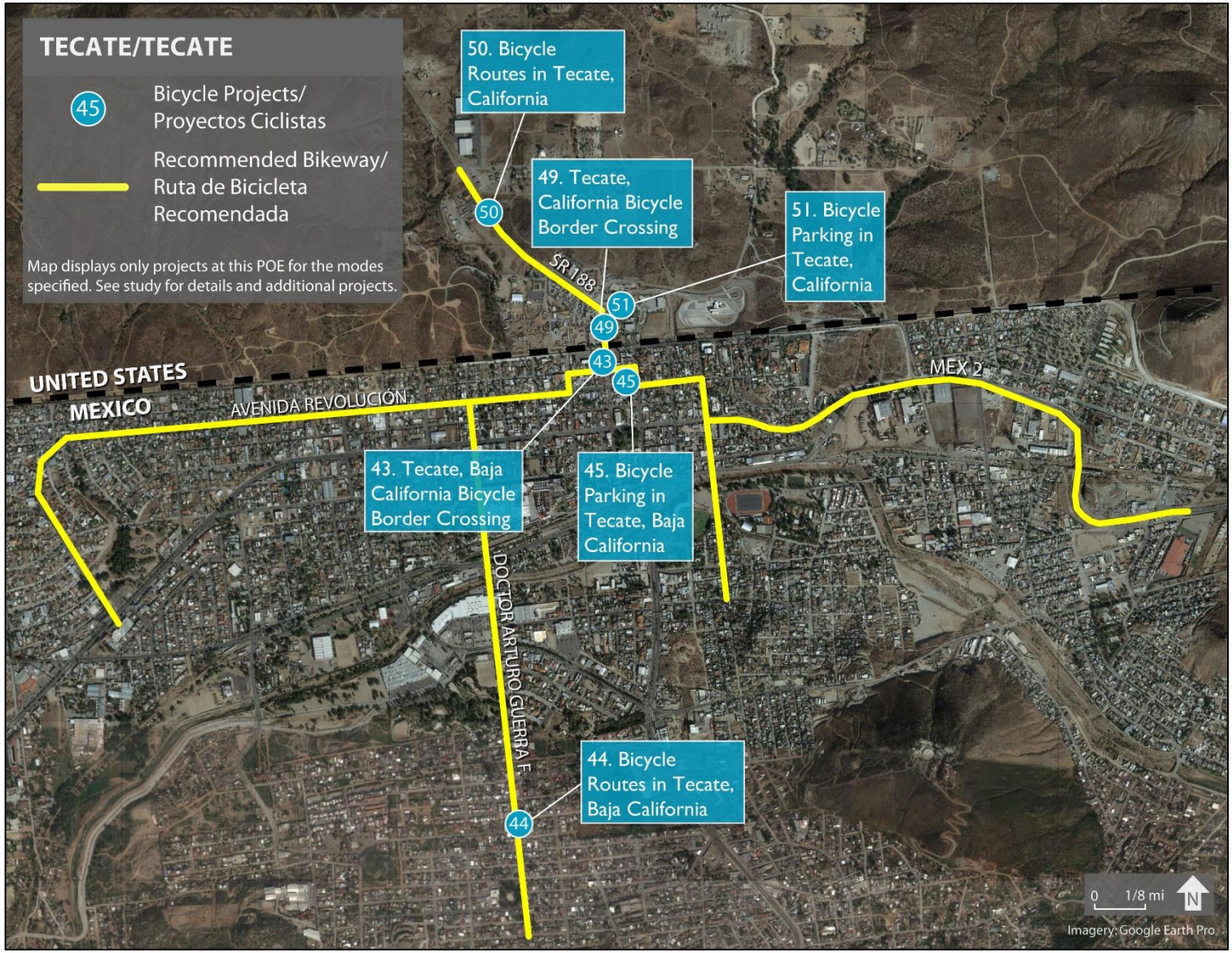
MTS Route 894 stop in Tecate, California

Project 51	**Bicycle Parking in Tecate, California**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where possible. Lead Agency: San Diego County, GSA Cost: $7,000
United States	**Transit Project Recommendations**
Project 52	**Increase Route 894 Frequency**
-	Increase frequency of Route 894 with service to and from Tecate. Lead Agency: MTS Cost: N/A
United States	**Vehicle Project Recommendations**
Project 53	**Tecate, California Passenger Pick-Up/Drop-Off Zone**
SR 188	Create a passenger pick-up/drop-off zone outside of CBP pedestrian processing facility. Add bench, shade, lighting, and signage. Lead Agency: Caltrans, GSA, CBP Cost: $47,000

Looking north in the U.S. from the Tecate POE

Figure 7.5 Tecate/Tecate Pedestrian, Transit, and Vehicle Projects

Figure 7.6 Tecate/Tecate Bicycle Projects



CALEXICO WEST/ MEXICALI I POE

17 Recommended Projects and Policies

- Six Pedestrian Projects
- Seven Bicycle Projects
- Three Transit Projects
- One Vehicle Project

7.4 CALEXICO WEST/MEXICALI I

There are 17 recommended projects at the Calexico West/Mexicali I POE, eight in the U.S. and nine in Mexico. Seven are bicycle projects, six are pedestrian projects, three are transit projects, and one is a vehicle project. The bicycle recommendations include bicycle routes, signage, parking, and inspection lane facilities, as well as a bicycle stairway ramp in Mexicali for access to the pedestrian tunnel. The pedestrian projects recommend amenities and sidewalk or pathway enhancements in both nations, as well as interim improvements in the pedestrian tunnel. Transit projects recommend an ITC in Calexico and mobility hubs on both sides of the border. The sole vehicle project recommends the creation of an interim pick-up/drop-off location in Mexicali.

Streetscape outside of the Mexicali I POE

Mexico	Pedestrian Project Recommendations
Project 54	**Mexicali I Tunnel Modification**
Pedestrian tunnel	As an interim improvement, resolve flooding issues and improve ventilation in pedestrian tunnel. Lead Agency: INDAABIN Cost: $123,000
Project 55	**Mexicali I Pedestrian Pathway Enhancements**
Agustin Melgar to POE and Callejón Zorilla to POE	As interim improvements, add water fountain, information kiosk, and informational signage. Add additional benches, shade for queuing area and waiting area, lighting, and directional signage. Add benches, shade, signage, and lighting for transit stop. Lead Agency: INDAABIN, Aduanas, SIDUE, Ayuntamiento de Mexicali, IMIP Cost: $112,000
Project 56	**Mexicali Pedestrian-Friendly Crossing Improvements, Sidewalk Improvements, and Sidewalk Maintenance**
Various intersections	Add pedestrian-friendly crossing at intersections of Blvd Adolfo López Mateos with Av Francisco I Madero and Ignacio Manuel Altamirano. Add pedestrian sidewalk ramps and crosswalks and conduct sidewalk maintenance on Augustin Melgar, Zorilla, Blvd Adolfo López Mateos, Ignacio Manuel Altamirano, and Av Francisco I Madero. Lead Agency: Ayuntamiento de Mexicali Cost: $725,000
Mexico	**Bicycle Project Recommendations**
Project 57	**Mexicali I Bicycle Border Crossing**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians. Lead Agency: INDAABIN, Aduanas Cost: $300,000

Project 58	Bicycle Routes in Mexicali
Various	Construct planned bicycle routes in Mexicali; consider implementation of some facilities as bicycle lanes. Additionally, construct routes to establish connections between planned routes and the POE. Install bicycle-related signage. Lead Agency: Ayuntamiento de Mexicali, SIDUE Cost: $480,000
Project 59	**Bicycle Ramp for Mexicali I Tunnel**
Pedestrian tunnel	As an interim improvement, construct bicycle ramp alongside western stairway to facilitate bicycle users entering and exiting pedestrian tunnel. Lead Agency: INDAABIN, SIDUE Cost: $38,000
Project 60	**Bicycle Parking in Mexicali**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at or near the POE. Consider secure parking and storage where possible. Lead Agency: Ayuntamiento de Mexicali, SIDUE Cost: $7,000
Mexico	**Transit Project Recommendations**
Project 61	**Mexicali I Mobility Hub**
Within a three minute walk of the pedestrian queue	Construct a mobility hub near the POE. Bicycle share is recommended; other appropriate services at this location dependent on further study. Lead Agency: Ayuntamiento de Mexicali Cost: $750,000 (Bike Share only)
Mexico	**Vehicle Project Recommendations**
Project 62	**Passenger Pick-Up/Drop-Off Zone on Callejón Zorilla**
Callejón Zorilla north of Callejón Reforma	As an interim improvement, use paint and signage to add a passenger pick-up/drop-off zone on Callejón Zorilla. Lead Agency: INDAABIN Cost: $101,000
United States	**Pedestrian Project Recommendations**
Project 63	**Calexico Border Gateway and 1st Street Promenade**
E 1st Street between SR 111 and Heber Ave	Widen sidewalks and add pedestrian amenities on E 1st Street. Improve traffic flow on adjacent streets and add pick-up/drop-off area. This is a TEA project that remains viable if TEA program or other funding becomes available. Lead Agency: Caltrans Cost: $4,184,000

Many modes of transportation converge outside the Mexicali I POE

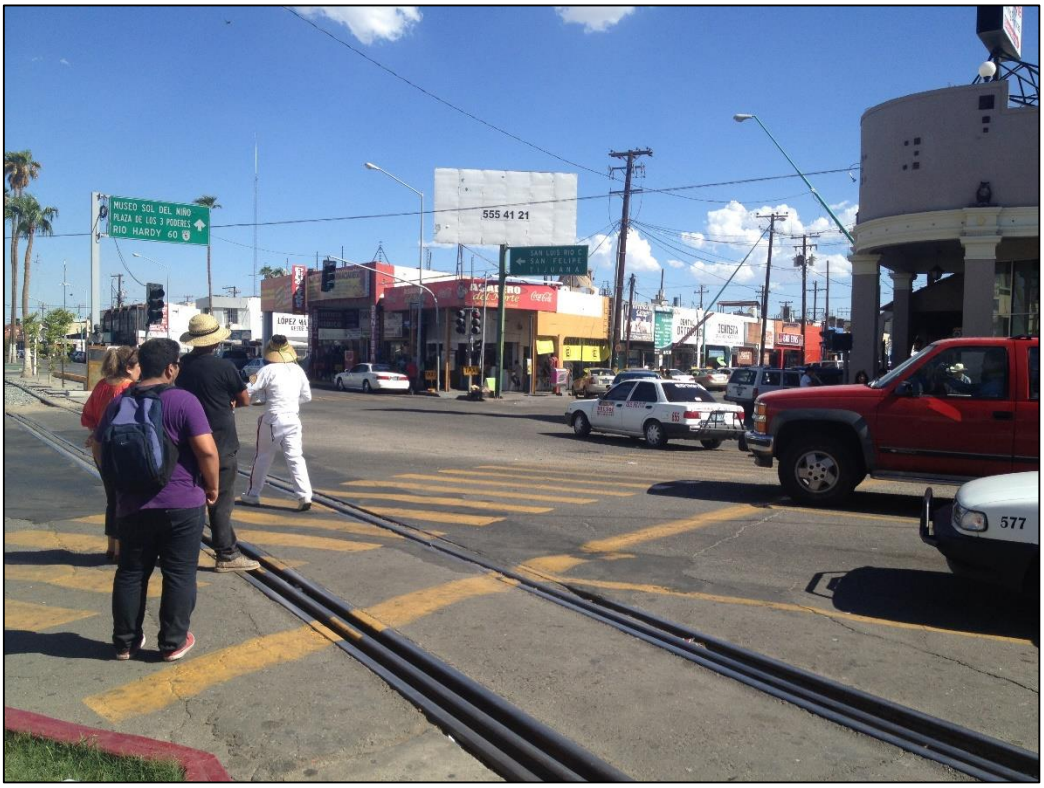
E 1st Street in Calexico outside the POE

"Bikes have to navigate through channels, turnstiles, and up stairs."

-- Focus Group Participant

Project 64	**Calexico Pedestrian Pathway Enhancements**
POE to E 1st Street	As interim improvements, add water fountain, benches, information kiosk, informational and directional signage, and shade for waiting area. Add additional lighting. Add signage and lighting for transit areas. Lead Agency: City of Calexico, GSA, CBP Cost: $114,000
Project 65	**Calexico Pedestrian-Friendly Crossing Improvements and Crosswalk Maintenance**
Various intersections between E 1st Street and E 7th Street	Construct pedestrian-friendly crossings at intersections of E 1st Street and Rockwood Ave and E 2nd Street and Rockwood Ave. Repaint crosswalks on Paulin Ave, Rockwood Ave, Heffernan Ave, and Heber Ave. Lead Agency: City of Calexico Cost: $178,000
United States	**Bicycle Project Recommendations**
Project 66	**Calexico West Bicycle Border Crossing**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians. Lead Agency: GSA, CBP Cost: $300,000
Project 67	**Bicycle Routes in Calexico**
Various	Construct planned bicycle routes in Calexico, including New River Parkway project. Additionally, construct routes to establish connections between planned routes and the POE. Install bicycle-related signage. Lead Agency: City of Calexico, GSA Cost: $480,000
Project 68	**Bicycle Parking in Calexico**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where possible. Lead Agency: City of Calexico, GSA Cost: $7,000
United States	**Transit Project Recommendations**
Project 69	**Calexico Intermodal Transportation Center**
E 3rd St between Rockwood and Heffernan Avenues	Construct an ITC in Calexico near the POE. Lead Agency: ICTC Cost: $10,000,000

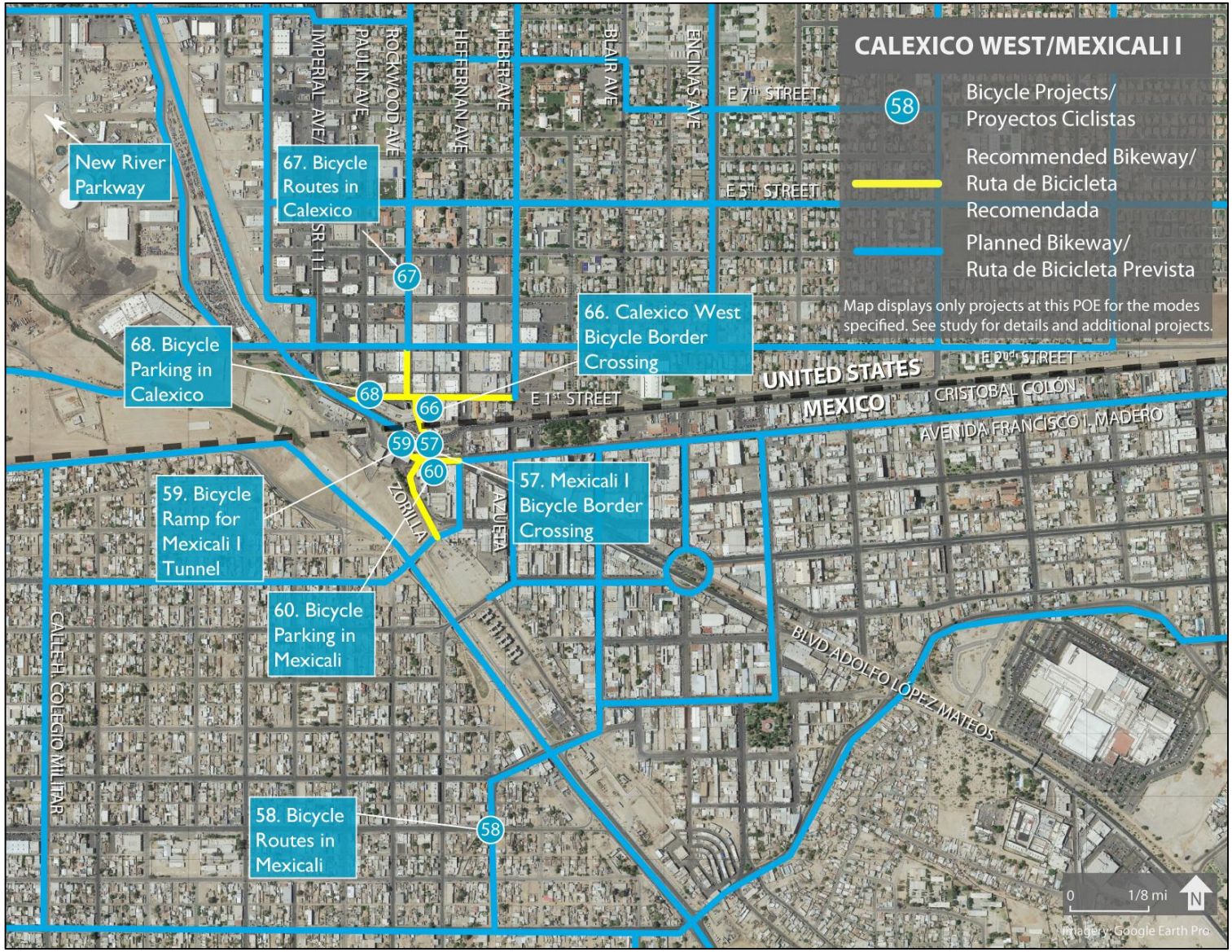
Project 70	Calexico West Mobility Hub
Within a three minute walk of the pedestrian queue	Construct a mobility hub near the POE. Bicycle share is recommended; other appropriate services at this location dependent on further study. Lead Agency: ICTC Cost: $750,000 (Bike Share only)



Busy intersection outside of the Mexicali I POE

Figure 7.7 Calexico West/Mexicali I Pedestrian, Transit, and Vehicle Projects

Figure 7.8 Calexico West/Mexicali I Bicycle Projects



CALEXICO EAST/ MEXICALI II POE

15 Recommended Projects and Policies

- Four Pedestrian Projects
- Six Bicycle Projects
- One Transit Project
- Four Vehicle Projects

7.5 CALEXICO EAST/MEXICALI II

This study recommends 15 projects at the Calexico East/Mexicali II POE: seven in Mexico and eight in the United States, with a total of six bicycle projects, four pedestrian projects, one transit project, and four vehicle projects recommended. The six bicycle projects recommend bicycle routes, signage, parking, and inspection lane infrastructure in both the United States and Mexico. Pedestrian projects recommend amenities and sidewalk or pathway enhancements in both nations. Vehicle projects recommend the creation of pick-up/drop-off zones in both nations, as well as a relocation of the vehicle SENTRI lane and creation of a parking lot in Mexico. The sole transit project recommends the creation of an intermodal transportation center (ITC) in the U.S.

Landscaping at the Calexico East/Mexicali II POE

Mexico	Pedestrian Project Recommendations
Project 71	**Mexicali II Pedestrian Pathway Enhancements**
Calzada Abelardo L. Rodríguez to pedestrian processing	Add water fountains, benches, information kiosks, lighting, and informational and directional signage. Add shade for queuing areas, waiting area, and pathways. Add additional restroom, crosswalks, and pedestrian sidewalk ramps. Add more shade for departure pathway. If new northerly pick-up/drop-off zone is not constructed, improve existing passenger pick-up/drop-off zone with shade structure, benches, and information kiosk. Lead Agency: INDAABIN, Aduanas, SIDUE Cost: $1,097,000
Project 72	**Calzada Abelardo L. Rodríguez Sidewalk Improvements**
Intersection of Calzada Abelardo L. Rodríguez and POE access roads	Add pedestrian sidewalk ramps and sidewalk and crosswalks connecting northbound and southbound pedestrian pathways along north side of Calzada Abelardo L. Rodríguez. Lead Agency: SIDUE, IMIP Cost: $58,000
Mexico	**Bicycle Project Recommendations**
Project 73	**Mexicali II Bicycle Border Crossing**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians. Lead Agency: INDAABIN, Aduanas Cost: $300,000
Project 74	**Bicycle Routes in Mexicali**
Various	Construct planned bicycle routes in Mexicali. Additionally, construct routes to establish connections between planned routes and the POE. Install bicycle-related signage. Lead Agency: Ayuntamiento de Mexicali, SIDUE Cost: $375,000

"Even a 30-minute wait can be inhumane in certain weather conditions."

– Focus Group Participant

Unshaded sidewalk at the Calexico East POE

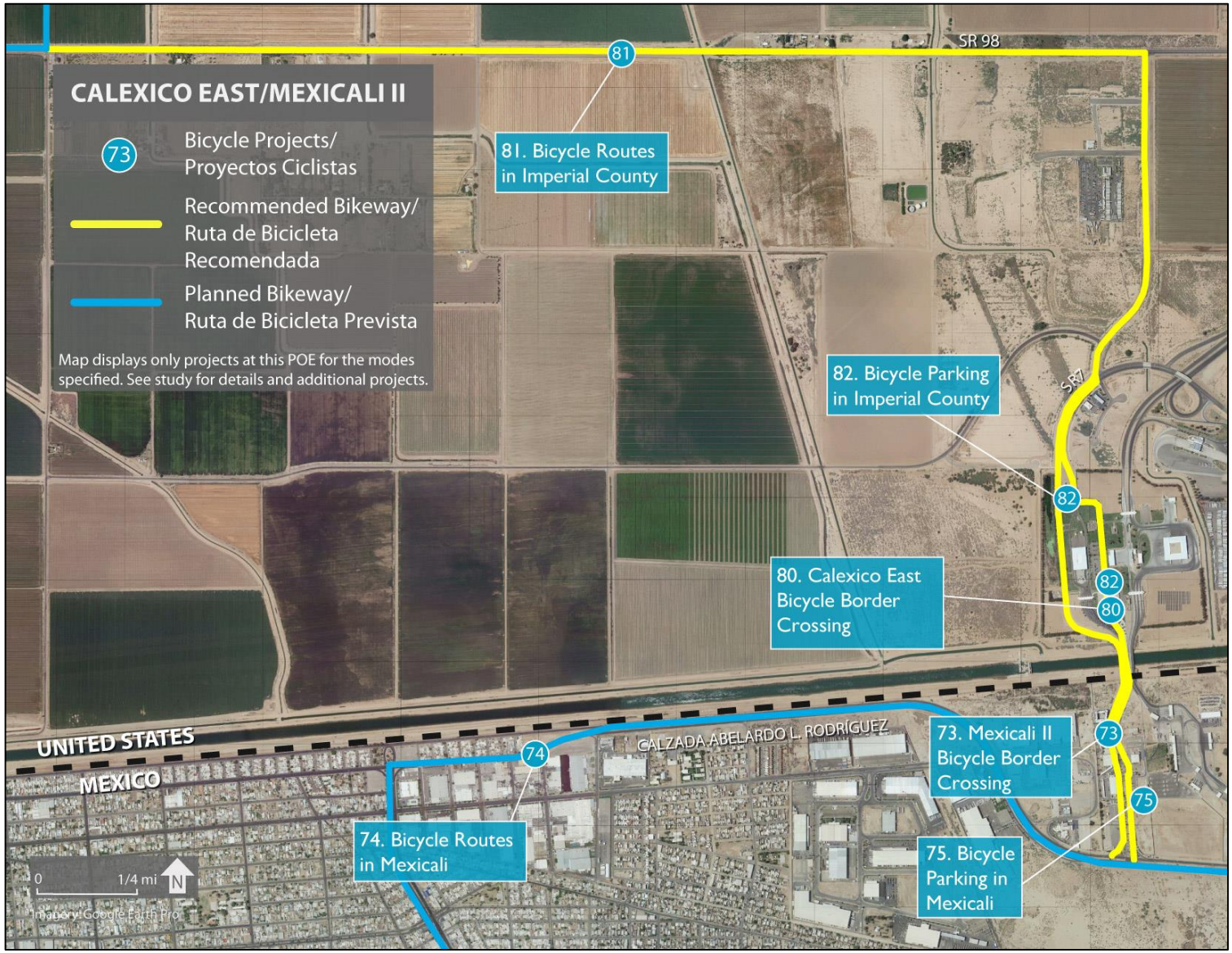
Project 75	Bicycle Parking in Mexicali
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where possible. Lead Agency: Ayuntamiento de Mexicali, SIDUE Cost: $7,000
Mexico	**Vehicle Project Recommendations**
Project 76	**Mexicali II Passenger Pick-Up/Drop-Off Zone**
South of bridge that crosses All-American Canal	Create passenger pick-up/drop-off zone approximately 800' north of current location to reduce pedestrian walking distance to border crossing. Include lighting and informational and directional signage. Lead Agency: INDAABIN, Aduanas, SIDUE Cost: $580,000
Project 77	**Overnight Parking on Calzada Abelardo L. Rodríguez**
Calzada Abelardo L. Rodríguez southeast of POE	Create one overnight parking lot on Calzada Abelardo L. Rodríguez southeast of POE. Lead Agency: SIDUE, Ayuntamiento de Mexicali Cost: $287,000
United States	**Pedestrian Project Recommendations**
Project 78	**Calexico East Pedestrian Path**
Pedestrian processing building to 900' north	Add pedestrian path on west side of roadway, adjacent to existing trees. Or, add trees to provide shade to existing sidewalk. Lead Agency: GSA Cost: $44,000
Project 79	**Calexico East Pedestrian Pathway Enhancements**
Border to SR 7	Add restroom, water fountains, information kiosks, lighting, benches, and informational and directional signage. Add shade and benches for waiting area. Add shade to waiting area, queuing area, and southbound pathway. Create pedestrian-friendly crossing just north of pedestrian processing facility Lead Agency: GSA, CBP Cost: $1,072,000
United States	**Bicycle Project Recommendations**
Project 80	**Calexico East Bicycle Border Crossing**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians. Lead Agency: GSA, CBP Cost: $300,000

Project 81	Bicycle Routes in Imperial County
Various	Construct bicycle routes in Imperial County and install bicycle-related signage. Lead Agency: Imperial County, GSA Cost: $163,000
Project 82	**Bicycle Parking in Imperial County**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where possible. Lead Agency: Imperial County, GSA Cost: $7,000
United States	**Transit Project Recommendations**
Project 83	**Calexico East ITC and Relocation of Southbound Pedestrian Pathway Access**
Potentially at parcel located at split of SR 7 northbound and southbound vehicle lanes, or other location as appropriate	Create an ITC and include shade, lighting, benches, and restroom. Add pedestrian-friendly crossings across northbound and southbound SR 7 to connect northbound and southbound pedestrian pathways adjacent to the ITC. Consider providing connections to other transit routes within Imperial County. Lead Agency: GSA, CBP, Caltrans, ICTC Cost: $5,000,000
United States	**Vehicle Project Recommendations**
Project 84	**Calexico East Passenger Pick-Up/Drop-Off Zone**
Southern terminus of Menvielle Rd	As an interim improvement, create a passenger pick-up/drop-off zone at the southern terminus of Menvielle Rd. Add benches, signage, a shade structure, and a sidewalk to connect to the northbound pedestrian pathway. Lead Agency: ICTC, Imperial County Cost: $125,000
Project 85	**Relocate Calexico East SENTRI Lane**
POE	Assign vehicle lane closest to POE (eastern-most northbound lane) as SENTRI lane and create SENTRI pedestrian drop off on curb adjacent to northbound pedestrian entrance to POE. This project is contingent on the expansion plans for this POE as it cannot be completed with existing passenger lane configuration. Lead Agency: GSA, CBP, Aduanas, INDAABIN Cost: N/A

Directional signage at the Calexico East/Mexicali II POE

Figure 7.9 Calexico East/Mexicali II Pedestrian, Transit, and Vehicle Projects

Figure 7.10 Calexico East/Mexicali II Bicycle Projects



ANDRADE/LOS ALGODONES POE

10 Recommended Projects and Policies

- Three Pedestrian Projects
- Six Bicycle Projects
- One Vehicle Project

7.6 ANDRADE/LOS ALGODONES

This study recommends ten projects at the Andrade/Los Algodones POE: five in Mexico and five in the United States, with a total of six bicycle projects, three pedestrian projects, and one vehicle project recommended. The six bicycle projects recommend bicycle routes, signage, parking, and inspection lane infrastructure in both the United States and Mexico. The three proposed pedestrian projects complement high-quality work that has already been completed on both sides of the border to install amenities for pedestrians such as benches and breathable shade structures. The one recommended vehicle project in the United States is proposed to create a passenger pick-up/drop-off zone.

Recommended projects for the Andrade/Los Algodones POE are presented in the table on the next page, followed by two maps depicting project locations at or near the POE. U.S. and Mexican pedestrian and vehicle projects are presented in the first map, with bicycle projects displayed in the second map.

Mexico	Pedestrian Project Recommendations
Project 86	**Los Algodones Pedestrian Pathway Enhancements**
Saratoga, from east of canal to pedestrian processing	Add water fountains, information kiosk, and shade for waiting area. Widen pedestrian sidewalk ramps. Add additional pedestrian sidewalk ramps, benches, shade for northbound queuing area, and informational and directional signage. Lead Agency: Ayuntamiento de Mexicali Cost: $60,000
Project 87	**Los Algodones Sidewalk Improvements**
Border to 16 de Septiembre	Rehabilitate crosswalks and sidewalk and add pedestrian sidewalk ramp along Calle 2, 5 de Mayo, and 16 de Septiembre. Lead Agency: Ayuntamiento de Mexicali Cost: $81,000
Mexico	**Bicycle Project Recommendations**
Project 88	**Bicycle Routes in Los Algodones**
Various	Construct bicycle routes in Los Algodones and install bicycle-related signage. Lead Agency: SIDUE Cost: $95,000
Project 89	**Los Algodones Bicycle Border Crossing**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians. Lead Agency: INDAABIN, Aduanas Cost: $300,000

Signage at the Andrade POE

Project 90	**Bicycle Parking in Los Algodones**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage Lead Agency: SIDUE Cost: $7,000
United States	**Pedestrian Project Recommendations**
Project 91	**Andrade Pedestrian Pathway Enhancements**
Border to SR 186 just north of northbound pedestrian exit	Add waiting area with benches, shade, and information kiosk on eastern side of SR 186. Add informational signage, water fountain, and restroom. Add information kiosk and shade and bench for southbound queuing area. Lead Agency: Caltrans Cost: $594,000
United States	**Bicycle Project Recommendations**
Project 92	**Bicycle Route and Signage in Andrade**
Various	Install bicycle wayfinding signage and construct bicycle route in Andrade providing connection to Arizona. Lead Agency: Imperial County Cost: $458,000
Project 93	**Andrade Bicycle Border Crossing**
POE	Create northbound and southbound bicycle-only inspection lanes with appropriate amenities. Appropriate amenities depend on whether lanes are designed for mounted bicyclists or bicyclists who are dismounted and crossing as pedestrians. Lead Agency: GSA, CBP Cost: $300,000
Project 94	**Bicycle Parking in Andrade**
Within a three minute walk of the pedestrian queue	Construct bicycle parking at the POE. Consider secure parking and storage where possible. Lead Agency: GSA Cost: $7,000
United States	**Vehicle Project Recommendations**
Project 95	**SR 186 Pullover**
SR 186 just north of northbound pedestrian exit	Create shoulder on SR 186 for passenger pick-up and drop-off. Lead Agency: Caltrans Cost: $188,000

Figure 7.11 Andrade/Los Algodones Pedestrian, Transit, and Vehicle Projects

Figure 7.12 Andrade/Los Algodones Bicycle Projects

7.7 POLICIES

There are seven policy recommendations that were developed during this study, covering a wide range of subjects from bicycle lanes and access for the elderly and disabled to public art and landscaping. Implementation of these policies will depend on a cooperative effort from binational stakeholders.

Public art inlaid in the paving of the Los Algodones northbound pedestrian queue

Binational	Policies
Project 96	**Increase SENTRI Access for Bicyclists and Pedestrians**
	Increase education about SENTRI and Ready Lanes and create a less costly pedestrian and bicycle-only SENTRI program.
Project 97	**Design Guidelines**
	Institute or update design guidelines for POEs to guide future construction and modification of border crossings to promote pedestrian-friendly and bicycle-friendly infrastructure. See design guidelines appendix for recommendations.
Project 98	**Operable Bicycles in Bicycle Border Crossing Lanes**
	A bicycle must be ridden to the crossing in order for the bicyclist to cross in the bicycle border crossing lane. If bicycle is not operable, the individual will have to cross the border through pedestrian inspection.
Project 99	**Landscaping and Public Art**
	Add landscaping and public art to all border crossings.
Project 100	**Thirty Minute Wait Times**
	Strive for maximum 30 minute wait times at all ports up to primary inspection facility, with expedited service for the elderly and disabled.
Project 101	**Senior/Disability Lanes**
	Study feasibility of instituting pedestrian crossing lanes for senior citizens and the disabled at existing and future ports.
Project 102	**Maintenance Districts**
	Explore the creation of Maintenance Commitments executed through a Memorandum of Understanding that prioritizes maintenance of influence areas around all POEs.

8.0 FUNDING AND IMPLEMENTATION OPPORTUNITIES

Existing bus stop in Calexico

$235.7 million

Combined cost estimate for all 95 recommended projects

This chapter describes funding and implementation opportunities for the study recommendations. A brief description is given for federal, state, tribal, local, and private funding opportunities as applicable in the U.S., in Mexico, and binationally.

Securing project funding is a crucial step to turning recommended projects into reality at the border. This chapter identifies a variety of funding opportunities that could provide financial resources for border projects. These projects seek to encourage bicycle and pedestrian travel and decrease vehicle travel and emissions, though they have broader impact beyond improving the transportation system. Increased walking and biking trips improve health outcomes by reducing instance of issues such as cardiac disease and obesity, and also reduces traffic congestion and air pollution (see Chapter 2 Introduction for further details on health and environmental impacts of increasing walking and bicycling trips).

The programs in the sections that follow represent opportunities for lead agencies to find initial and continued funding sources relevant for their priority projects. As would be expected, each source has unique guidelines and criteria that must be paid close attention to when determining project eligibility.

8.2 Federal Funding Programs – U.S.

Federal transportation funding is provided for by federal statute and administered through the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA). Moving Ahead for Progress in the 21st Century, otherwise known as MAP-21, is the current federal surface transportation funding bill. Though the authorization of MAP-21 expires on September 30th, 2015, it is expected that the programs included in MAP-21 will go largely unchanged whether the bill is reauthorized or a new transportation funding bill is passed. Stakeholder agencies should be highly attuned to the funding opportunities and requirements of the future bill.

Community Development Block Grants (CDBG)

Starting in 1974, the CDBG program is one of the longest continuously run programs at the Department of Housing and Urban Development. The CDBG entitlement program allocates annual grants to larger cities and urban counties to develop communities by providing decent housing, a suitable living environment, and opportunities to expand economic opportunities, principally for low- and moderate- income persons. This is not a MAP-21 transportation program.

Eligible Recipients and Activities: Bicycle and pedestrian facilities are eligible uses of these funds, and public infrastructure projects have received a substantial portion of CDBG funding in the past. Eligible applicants include states, cities in Metropolitan Areas, and qualified urban counties of at least 200,000 people.
Adapted from https://www.cfda.gov/index?s=program&mode=form&tab=core&id=0e00e957ae7f6cfdc0fee169cba45020, http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs, and https://calbike.org/tools-for-advocates/funding-sources/

Congestion Mitigation and Air Quality Improvement Program (CMAQ)

The origin of this program is the link between transportation and air quality. From its inception in 1991 through the close of the SAFETEA-LU period in 2012, the CMAQ program has provided nearly $30 billion in just under 29,000 transportation-environmental projects to state DOTs, metropolitan planning organizations, and other sponsors across the country. MAP-21 reauthorized the program and provides funding to areas in nonattainment or maintenance for air quality standards including ozone, carbon monoxide, and/or particulate matter. As defined by the EPA, San Diego County is a maintenance area and Imperial County is a nonattainment area, making both counties eligible for this program (http://www.epa.gov/oaqps001/greenbk/map/map8hrnm.pdf).

Eligible Recipients and Activities: CMAQ provides a flexible funding source to State and local governments for transportation projects and programs to help

meet the requirements of the Clean Air Act. Bicycle and pedestrian projects have been and continue to be eligible for CMAQ funding.

Adapted from http://www.fhwa.dot.gov/map21/summaryinfo.cfm, http://www.fhwa.dot.gov/environment/air_quality/cmaq, and http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/cmaqfunds.cfm

Funding Appropriations from Congress

Congress annually considers providing discretionary funding for numerous activities—for example, national defense, education, and homeland security—as well as general government operations. Opportunities for obtaining discretionary funds can best be coordinated through Senate and Congressional Representatives.

Adapted from http://www.cbo.gov/about/products/ce-faq

Highway Safety Improvement Program (HSIP)

MAP-21 continues the Highway Safety Improvement Program (HSIP) to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance. A highway safety improvement project is any strategy, activity or project on a public road that is consistent with the data-driven State Strategic Highway Safety Plan (SHSP) and corrects or improves a hazardous road location or feature or addresses a highway safety problem. Estimated funding for fiscal year (FY) 2014 was $2.41 billion.

Eligible Recipients and Activities: Caltrans Division of Local Assistance (DLA) manages California's local agency share of HSIP funds. California's Local HSIP focuses on infrastructure projects with nationally recognized crash reduction factors (CRFs). Local HSIP projects must be identified on the basis of crash experience, crash potential, crash rate, or other data-supported means. Federal eligibility guidelines indicate that bicycle lanes on roads, shared use paths, and sidewalks, among other pedestrian and bicycle activities can be funded through HSIP.

Adapted from http://www.fhwa.dot.gov/map21/factsheets/hsip.cfm, http://dot.ca.gov/hq/LocalPrograms/hsip.html, and http://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.cfm,

National Highway Performance Program (NHPP)

The purposes of the NHPP are (1) to provide support for the condition and performance of the National Highway System (NHS); (2) to provide support for the construction of new facilities on the NHS; and (3) to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in

a State's asset management plan for the NHS. Under MAP-21, over $43 billion in NHPP funding was available in FY 2013 and 2014.

Eligible Recipients and Activities: The FHWA apportions NHPP funds to States. States are responsible for selecting projects. A State may request that NHPP funds be transferred to FTA for an eligible public transportation project. Transferred funds may be awarded to States or local governmental entities eligible for assistance under FTA programs. Bicycle transportation and pedestrian walkways are public transportation projects that meet the program criteria and may be eligible for funding.

Adapted from http://www.fta.dot.gov/documents/MAP-21_Fact_Sheet_-_Flexible_Funding_Programs_-_National_Highway_Performance_Program_(NHPP).pdf

Recreational Trails Program (RTP)

The RTP provides funds annually for recreational trails and trails-related projects. The RTP is administered at the federal level by the Federal Highway Administration (FHWA) as a MAP-21 program. Non-motorized projects are administered at the state level by the California Department of Parks and Recreation Office of Grants and Local Services.

Eligible Recipients and Activities: Bicycling and hiking are considered recreation under this program, among other motorized and non-motorized activities. Cities and counties, districts, state agencies, federal agencies, and non-profit organizations with management responsibilities of public lands are all eligible applicants.

Adapted from http://www.parks.ca.gov/?page_id=24324 and http://www.fhwa.dot.gov/environment/recreational_trails/

Rural Area Formula Grants

This program and the Urbanized Area Formula Grants are the principal Federal Transit Administration (FTA) programs which support bicycle access improvements. These two FTA program allows many activities that support bicycling to be funded as Transit Enhancements including bicycle and pedestrian access, historic preservation of transportation facilities, bus shelters, landscaping and scenic beautification, and public art, among others. Bicycle improvements that are eligible for transit enhancement funds include bicycle paths at a transit station, bicycle routes in the vicinity of transit stations, bicycle parking and storage equipment at stations and equipment for transporting bicycles on public transportation vehicles. In FY 2014, $608 million in Rural Area Formula Grants was authorized by MAP-21. Funding under this program is available for rural areas with populations less than 50,000.

Eligible Recipients and Activities: Eligible recipients include states, Indian tribes, state DOTs for local rural transit providers, including private non-profits. Eligible subrecipients include state or local government authorities, nonprofit organizations, and operators of public transportation. Eligible bicycle activities

include bicycle routes to transit, bike racks, shelters and equipment for public transportation vehicles.

Adapted from http://www.fta.dot.gov/documents/MAP21_essay_style_summary_v5_MASTER.pdf and http://www.fta.dot.gov/documents/Flyer_BikesandTransit_MAP21_FINAL.pdf

Safe Routes to School (SRTS)

This program is intended to encourage children to walk or bike to school by providing funding for education, enforcement, encouragement, and engineering solutions to improve safety and active transportation for K-8 students. The program is intended to involve students, school officials, parents, and the community as a whole. Note: Authorization may expire September 30, 2014.

Eligible Recipients and Activities: Eligible sponsors for the program may include state, local, and regional agencies and Native American Tribes. Non-profit organizations, school districts, and public health departments must partner with a city, county, Metropolitan Planning Organization (MPO), or Regional Transportation Planning Agency (RTPA) to serve as the responsible agency for their project. Eligible Activities may include programs for education and encouragement, and infrastructure improvement project that relate to improved safety or connectivity of school walking or biking routes.

Adapted from http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm

Surface Transportation Program (STP)

The STP provides funding that may be used by States and localities for a wide range of projects to preserve and improve the conditions and performance of surface transportation, including bicycle and pedestrian projects. Under MAP-21, over $20.1 billion dollars in funding was available in FY 2013 and 2014.

Eligible Recipients and Activities: The FHWA apportions STP funds to States, and a State may request that STP funds be transferred to FTA for an eligible public transportation project. Transferred funds may be awarded to States or local governmental entities eligible for assistance under FTA programs. Bicycle facilities and pedestrian projects having a nexus to public transportation are eligible transit-related activities.

Adapted from http://www.fta.dot.gov/documents/MAP-21_Fact_Sheet_-_Flexible_Funding_Programs_-_Surface_Transportation_Program_(STP).pdf

Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant Program

The TIGER program has provided $4.1 billion over six funding cycles to fund a variety of transportation programs which promise to achieve critical national objectives. The highly competitive structure of the TIGER program and its broad eligibility allow project sponsors at the State and local level to avoid narrow, formula-based categories, and fund multi-modal, multi-jurisdictional projects not eligible for funding through traditional DOT programs. Applicants must detail the benefits their project would deliver for five long-term outcomes:

safety, economic competitiveness, state of good repair, livability and environmental sustainability.

Eligible Recipients and Activities: TIGER can provide capital funding directly to any public entity, including municipalities, counties, port authorities, tribal governments, MPOs, or others. Road, transit and port projects are all eligible for funding; over $150 million in bicycle and pedestrian funding was awarded through 2013.
Adapted from http://www.dot.gov/tiger/about

Urbanized Area Formula Grants

Consolidated under MAP-21, this FTA program funds activities that support bicycling as Transit Enhancements. Please see Rural Area Formula Grants above for a list of activities defined as Transit Enhancements. Urban areas with a population of at least 200,000 must spend at least one percent of their Urbanized Area Formula funding on transit enhancements. This program is the FTA's largest, with $5 billion in funding available in FY 2014.

Eligible Recipients and Activities: FTA apportions funds to designated recipients, which then suballocate funds to state and local governmental authorities, including public transportation providers. Among other transit-related activities, capital projects are available for funding.
Adapted from http://www.fta.dot.gov/documents/MAP21_essay_style_summary_v5_MASTER.pdf and http://www.fta.dot.gov/documents/Flyer_BikesandTransit_MAP21_FINAL.pdf

8.3 Federal Funding Programs – Mexico

Federal funding in Mexico comes from a variety of secretariats to support each body's distinct goals.

Fondo Metropolitano

The Fondo Metropolitano funds plans and projects, including infrastructure projects, which promote economic competitiveness, sustainability, economic capacity, resilience to natural disasters, and competitive advantage of metropolitan areas. Eligible projects include those that are new, in progress, or ready to complete. Funding for the program comes from the federal government and is administered by the states.

Eligible Recipients and Activities: All projects must align with existing plans, and funds can be used for active transportation programs. Both the cities of Tijuana and Mexicali are part of metropolitan zones eligible for project funding ("Zona Metropolitana Tijuana-Tecate-Playas de Rosarito-Ensenada" and "Zona Metropolitana Mexicali.")
Adapted from http://dof.gob.mx/nota_detalle.php?codigo=5334587&fecha=04/03/2014

Fondo Nacional de Fomento al Turismo (FONATUR)

FONATUR is responsible for the planning and development of sustainable tourism projects of national impact. FONATUR is run through the Secretariat of Tourism (SECTUR). An important goal of this fund is to be an influential force in sustainable, competitive, and adequately financed national development and projects that are in accordance with the dynamic demands of the market – that generate income and promote Mexico's image abroad and overseas; but, fundamentally, with a social awareness that not only favors regional development and creates permanent jobs, but allows them to be appropriately-remunerated as well.

Eligible Recipients and Activities: Projects seek to promote investment and training of the tourism sector, with regions, states, and municipalities along with small- and medium-sized businesses benefitting from FONATUR's expertise.
Adapted from http://www.fonatur.gob.mx/en/quienes_somos/index.asp?modsec=01-MV&sec=2

Fondo Nacional De Infraestructura (FONADIN)

FONADIN is a fiduciary institution of the National Bank of Public Works and Services (BANOBRAS). FONDADIN is the vehicle for coordination of the Government of Mexico for infrastructure development in the areas of communications, transportation, water, environment, and tourism. FONADIN supports private sector involvement in the planning, design, construction, and transfer of infrastructure projects with social impact and economic profitability by making the projects more attractive to private financing. Initial resources for the fund at its inception in 2008 totaled $40 billion pesos.

Eligible Recipients and Activities: FONADIN provides financial contributions and subsidies to offices and entities of the federal government, state governments, and cities for investments related to the execution of infrastructure projects. Funding is also available to corporate entities involved in public-private partnerships.
Adapted from http://www.fonadin.gob.mx/wb/fni/inicio

Programa para el Desarrollo Regional Turístico Sustentable (PRODERETUS)

PRODERETUS is a SECTUR program to strengthen the competitive advantage of Mexican tourism through projects that support the development and use of tourist areas. Among the specific objectives of the program is to modernize the infrastructure and facilities of these areas. This program has not yet been authorized for FY 2015, though authorization is likely.

Eligible Recipients and Activities: State and municipal governments are able to apply for this program. Eligible projects must be focused on benefitting tourist activities and be able to demonstrate their projected impact in terms such as generation of tourist activity or generation of employment or economic benefits.

Adapted from http://dof.gob.mx/nota_detalle.php?codigo=5327875&fecha=24/12/2013

Programa K-027 de Mantenimiento de Infraestructura

This is a specific FONATUR program which seeks to facilitate financing and investment in public-private projects with the potential to impact the tourism sector. Funding is part of the FONATUR budget. Over one billion pesos in funding was approved for the program between 2010 and 2014.

Eligible Activities: Eligible projects must have potential to impact FONATUR centers of tourism.

Adapted from http://www.apartados.hacienda.gob.mx/contabilidad/documentos/informe_cuenta/2013/doc/t7/W3N/W3N.03.01.02.vd.pdf and http://www.sistemas.hacienda.gob.mx/ptpsed/datosPrograma.do?ciclo=2014&r=21&ip=K&p=027&msd=3.54945

Programa México Norte

This program is run through SECTUR. The objective of this program is to position the states of Mexico's northern border as attractive tourist destinations that have safe, quality services with clear national identity in addition to helping to create jobs and foreign exchange earnings and promoting economic and social development in the region. Program actions include:

- Strengthen and coordinate binational mechanisms to expedite the admission of visitors from both borders.
- Strengthen corridors and routes to facilitate the admission of tourists.
- Strengthen the image of the northern border.
- Promote the strengthening of values through regional, culinary and craft culture
- Strengthen mechanisms for assistance to tourists.
- Support the creation and development of attractions that complement tourism in the cities of the states of the northern border.
- To promote the sustainability of tourist destinations on the northern border.
- Support the creation and development of attractions that complement tourism in the cities of the states of the northern border.

Eligible Recipients and Activities: Actions that will increase the number of visitors to the region, increasing their length of stay and spending are carried out jointly with state and municipal governments as well as with private enterprises.

Adapted from http://www.sectur.gob.mx/programas/programas-regionales/programa-mexico-norte/

Rescate de Espacios Públicos

This program, run by the Secretariat of Agrarian, Territorial, and Urban Development (SEDATU) seeks to help improve citizens' quality of life and public safety, especially that of marginalized populations, by rescuing public spaces in cities and metropolitan areas. Public spaces nationwide suffer from deterioration, neglect, and insecurity and can be rehabilitated for the use and enjoyment of the community, thereby promoting healthy lifestyles. Regulations for the year 2015 have just been released.

Eligible Recipients and Activities: The program coordinates with local governments to promote projects with physical and social benefit to the community in cities and metropolitan zones.
Adapted from
http://www.sedatu.gob.mx/sraweb/datastore/programas/2015/rescate_espacios_publicos/RO_PREP_2015_DOF.pdf

Additional Federal Funding

The Mexican Tributary Administration Service (SAT) and Institute of Management and Appraisals of Domestic Goods (INDAABIN) programs and funds are available for projects conducted through those particular ministries. Additional funding from other federal sources may become available later in the calendar year 2015.

8.4 State Funding Programs – U.S.

Active Transportation Program (ATP)

California's Active Transportation Program (ATP) seeks to encourage increased use of active modes of transportation such as bicycling and walking. This program consolidates existing federal and state programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to Schools (SR2S) into a single program. Funding for cycle 1 of the ATP was adopted in 2014.

Eligible Recipients and Activities: As of winter 2015, guidelines for cycle 2 are still under revision. Under cycle 1 of the program, the following entities (among others) could apply for funding: local, state, or regional agencies; Caltrans; Transit Agencies; Natural Resource or Public Land Agencies; and Tribal Governments. Both infrastructure and non-infrastructure projects had to meet one or more of the ATP program goals to be eligible for funding.
Adapted from http://www.catc.ca.gov/programs/ATP/2014_ATP_Guidelines_adopted_032014.pdf

ARB/EPA Cap-and-Trade Auction Proceeds

The Global Warming Solutions Act of 2006 directed the Air Resources Board (ARB) to address climate change using multi-year programs to reduce greenhouse gas (GHG) emissions. A portion of the GHG emissions permits (allowances) are sold at quarterly auctions and reserve sales. The Legislature

and Governor appropriate proceeds from the sale of State-owned allowances for projects that support the goals of Global Warming Solutions Act.

Adapted from http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/auctionproceeds.htm

Caltrans Americans with Disabilities Act (ADA) Program

Caltrans has created an ADA Infrastructure program to address ADA related access to Caltrans infrastructure such as sidewalks, signals, park and ride lots, etc. This is not a grant program but rather is a program for addressing ADA concerns through which Caltrans will make reasonable modifications to its policies and procedures to ensure persons with disabilities have equal access to Caltrans programs, services, and activities; will provide upon request, appropriate aids, and accommodations, to support effective communication for persons with disabilities, so that they can participate equally in Caltrans programs, services, and activities at no cost to the individual; and will address inquiries and resolve accessibility grievances related to Caltrans programs, services and activities.

Adapted from http://www.dot.ca.gov/hq/bep/ada_program.htm

Caltrans Environmental Justice & Community-Based Transportation Planning Grants Program

The Caltrans Environmental Justice (EJ) and Community Based Transportation Planning (CBTP) Grants are discretionary programs that provide for California communities to plan for closer connection between transportation and land use. EJ grants must include public participation that considers the interests of low-income, minority, Native American, and other under-represented communities. CBTP grants are intended to support livable and sustainable community concepts with emphasis on mobility and promoting community identity and quality of life.

Eligible Recipients and Activities: Caltrans provides these planning grant funds to MPOs, RTPAs, cities, counties, transit agencies, and Native American Tribal Governments.

Adapted from http://www.dot.ca.gov/hq/tpp/offices/ocp/cbtp.html

Caltrans Sustainable Transportation Planning Grant Program

The sustainable Transportation Grant program is intended to promote a balanced, comprehensive multimodal transportation system. These grants may be used for a wide range of transportation planning purposes which address local and regional transportation needs and issues. The program offers transportation planning grants for Strategic partnerships and for Sustainable Communities.

Eligible Recipients and Activities: Strategic Partnership Primary grant recipients may be MPOs/RTPAs with sub-recipients being transit agencies, universities, community colleges, Native American Tribal Governments, cities, counties,

community based organizations, non-profit organizations, and other public entities with the purpose of identifying and addressing statewide and interregional transportation deficiencies in the state highway system.

Sustainable Communities grants fund transportation planning projects intended to address mobility deficiencies in multi-modal transportation systems through active stakeholder collaboration. Primary recipients of the grants may be MPOs/RTPAs, transit agencies, cities, counties, and Native American Tribal Governments.

Adapted from http://www.dot.ca.gov/hq/tpp/grants.html

ICTC Measure D Sales Tax Program

Measure D, is a one-half cent transportation sales tax that was approved by Imperial County voters in 1989 for county transportation improvement projects. Measure D requires a board comprised of representatives of local cities and the County of Imperial to oversee the use of funds.

Adapted from http://www.selfhelpcounties.org/focus/counties/Imperial.pdf

Interregional Transportation Improvement Program (ITIP)

The interregional Transportation Improvement Program (ITIP) is intended to fund projects that improve interregional mobility of people and goods in California via strategically important highway and rail corridors. The purpose of the program is to fund projects that improve state highways, intercity passenger rail systems, and the interregional movement of people, vehicles, and goods.

Eligible Recipients and Activities: The distribution of funding is determined by Caltrans consistent with the Streets and Highways Code Section 164(a), with at least 60 percent of the program assigned to projects outside urbanized areas on the interregional road system and for intercity rail. At least nine percent must be dedicated to intercity rail and grade separations. Up to 40 percent may be programmed to projects anywhere in the state.

Adapted from http://www.dot.ca.gov/hq/transprog/ocip/archives/stip2014/2014_itip.pdf

Proposition 1B – Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006

California voters approved Proposition 1B in 2006, authorizing $19.93 billion in state general obligation bonds for specific transportation programs intended to relieve congestion, improve air quality, and enhance the safety of the state's transportation system. After the December 2014 funding allocations, remaining funds include $290 million for public transit projects and $50 million for local streets and roads. Local agencies have two years left to request remaining funds.

Eligible Recipients and Activities: Local agencies are eligible to receive funds based on the requirements of each of the programs named in the Proposition. Bus stop improvements, bike path, and transportation center projects have all received Proposition 1B funding in the past.

Adapted from http://www.catc.ca.gov/programs/Prop1B.htm and http://la.streetsblog.org/2014/12/04/caltrans-grants-550-million-to-transit-projects-statewide

State Highway Operation and Protection Program (SHOPP) and Minor Program

These programs are administered by Caltrans for State Highway maintenance projects. These are not project grant programs, but are ongoing programing of maintenance projects for the State Highway System.
Adapted from http://www.dot.ca.gov/hq/transprog/shopp.html

Trade Corridor Improvement Fund (TCIF)

This program is intended to provide for infrastructure improvements along federally designated Trade Corridors of National Significance within California that have a high volume of freight movement.

Eligible Recipients and Activities: Eligible applicants may include Caltrans, regional agencies, counties, cities, and port authorities. Eligible projects may include highway capacity improvements, freight rail system improvements, port capacity and efficiency projects, truck corridor improvements, improvements that maximize state access to federal border infrastructure funds, and airport ground access improvements.
Adapted from http://www.catc.ca.gov/programs/TCIF/TCIF_Guidelines_112707.pdf

Transportation Development Act (TDA) Article 3 (SB 821)

These funds are state block grants awarded annually to local jurisdictions for transit, bicycle, and pedestrian projects in California. Funds originate from the Local Transportation Fund (LTF), which is derived from a quarter-cent of the general state sales tax. LTF funds are returned to each county based on sales tax revenues. Eligible pedestrian and bicycle projects include construction and engineering for capital projects and maintenance of bikeways.

Eligible Recipients and Activities: SANDAG administers TDA funds in San Diego County to transit operators and other member agencies. ICTC administers TDA funds in Imperial County to member agencies. Annually, two to three percent of TDA funds are set aside for facilities for the exclusive use of pedestrians and bicyclists.
Adapted from http://www.dot.ca.gov/hq/MassTrans/State-TDA.html, http://www.sandag.org/index.asp?projectid=17&fuseaction=projects.detail, and http://www.imperialctc.org/media/managed/news/FY-2014-2015-OWP-AND-BUDGET-REPORT-final-report-adopted-6-25-14.pdf

8.5 Local Funding Programs – U.S.

Benefit Assessment Districts

Local benefit assessment districts can fund bike paths, bicycle lanes, bicycle parking, and related facilities. Defining the boundaries of the benefit district can pose a challenge, as bikeways will have specific citywide or regional benefits. These districts can also fund pedestrian amenities and streetscape maintenance.
Adapted from https://calbike.org/tools-for-advocates/funding-sources/

Business Improvement Districts

Business Improvement Districts (BIDs) can benefit businesses and improve access for customers by collecting levies on businesses to fund local public improvements. In the geographically-defined area of the BID, property owners agree to pay an assessment which could include provisions for bicycle and pedestrian improvements such as bicycle parking or shower and clothing locker amenities, sidewalk improvements, and pedestrian crossings.
Adapted from https://calbike.org/tools-for-advocates/funding-sources/ and http://www.downtownvisions.org/about/what-is-a-bid

General Funds

Local cities and counties have general funds which can appropriate funds for special projects. Working with local municipalities general funds, various bicycle, pedestrian, or trails projects could be approved and funded through the local general funds and then matched with other available funding.
Adapted from https://calbike.org/tools-for-advocates/funding-sources/

Impact Fees and Developer Mitigation

As another form of funding, transportation projects can be paid by impact fees, which are charges assessed on new development for public facilities. It is important that the connection between the fees and the project's impacts are clearly transparent to avoid potential litigation. Developers may pay for traffic improvements to mitigate impacts caused by new development. The Cities of San Diego and Calexico both currently assess impact fees.
Adapted from https://calbike.org/tools-for-advocates/funding-sources/, http://www.sandiego.gov/facilitiesfinancing/fees/index.shtml, and http://www.calexico.ca.gov/images/stories/dept/engineering/ImpactFees%20OD%20No1036.pdf

New Construction and Integration into Larger Projects

Standards and guidelines presented in local master plans include measures to widen roadways to enhance bicycle mobility. Thus, future road construction projects are another means of providing sustainable funds for bike lanes, pedestrian improvements, and trails. "Routine accommodation" policies at Caltrans also require agencies to design, construct, operate, and maintain transportation facilities using best practices for pedestrians and bicyclists. It is possible that local jurisdictions can begin to expect some portion of pedestrian

and bicyclist project costs, when they are built as part of larger transportation projects, to be covered in project construction budgets.

Adapted from https://calbike.org/tools-for-advocates/funding-sources/ and http://catsip.berkeley.edu/funding-opportunities

Property Taxes and Bonds

A distinguishing feature of the U.S. is its extensive use of municipal bonds (and notes) to raise capital. Bonds can be sold by local cities and counties near POEs to pay for projects such as bikeways, pedestrian facilities, and amenities related to such projects. Also, local property taxes can be designated for bicycle and pedestrian facilities. Two-thirds of the voters in that jurisdiction must vote to levy property taxes to repay the bonds.

Adapted from https://calbike.org/tools-for-advocates/funding-sources/ and http://www.citymayors.com/finance/bonds.html

TransNet

In 2004, San Diego voters approved an extension of the 20-year TransNet program initially approved in 1987. As one of the largest transportation improvement programs in California, TransNet provides funding for highway, transit and local road projects in San Diego County through a voter-approved half-cent sales tax. Transnet is expected to raise $14 billion for transportation improvements over the 40 year life of the program.

Eligible Recipients and Activities: SANDAG develops criteria to help evaluate and select projects. Among other project types, TransNet funds local roads, bike and pedestrian paths, and smart growth projects. San Diego County border infrastructure projects may qualify for available local funds and grants.

Adapted from http://www.keepsandiegomoving.com/transnet-about.aspx, http://www.sandag.org/uploads/publicationid/publicationid_1870_17951.pdf, and http://www.sandag.org/uploads/publicationid/publicationid_1236_5646.pdf

8.6 Private Investments – Binational

The following funding sources are specific to cross border partnerships. Funding for the following sources is provided by Mexico and the United States.

North American Development Bank (NADB)

The North American Development Bank (NADB) and its sister institution, the Border Environment Cooperation Commission (BECC), were created under the auspices of the North American Free Trade Agreement to address environmental issues in the U.S.-Mexico border region. NADB provides low-interest financing for projects which remedy an environmental and/or human health problem. Specifically, NADB is authorized to finance projects that will prevent, control or reduce environmental pollutants or contaminants, improve the drinking water supply, or protect flora and fauna, to improve human health, promote sustainable development, or contribute to a higher quality of life.

Projects financed through NADB must be certified by the BECC. The scope of the BECC includes projects that focus on the production of goods and services designed to protect the environment. In 2011, BECC and NADB recommended to its Board of Directors an expansion of project sectors. The expanded sectors include but not limited to improvements to energy transmission or energy distribution infrastructure and public transportation infrastructure, including international border crossings.

Eligible Recipients and Activities: Air quality improvements are an eligible project category, including projects in public transportation, street paving, roadway improvements, ports of entry, and emissions reduction. The project must be located within the U.S.-Mexico border region, which they define as 100 kilometers (62 miles) north of the international boundary in California and within 300 kilometers (about 186 miles) south of the border in Baja California. NADB makes loans to public and private sector borrowers and administers Community Assistance Program (CAP) grants to public entities.
Adapted from http://www.nadbank.org/default.asp

Public-Private Partnerships (P3s)

Public-private partnerships are contractual agreements formed between a public agency and a private sector entity that allow for greater private sector participation in the delivery and financing of transportation projects. There are many different P3 structures, and the degree to which the private sector assumes responsibility - including financial risk - differs from one application to another. Additionally, different types of P3s lend themselves to the development of new facilities and others to the operation or expansion of existing assets.

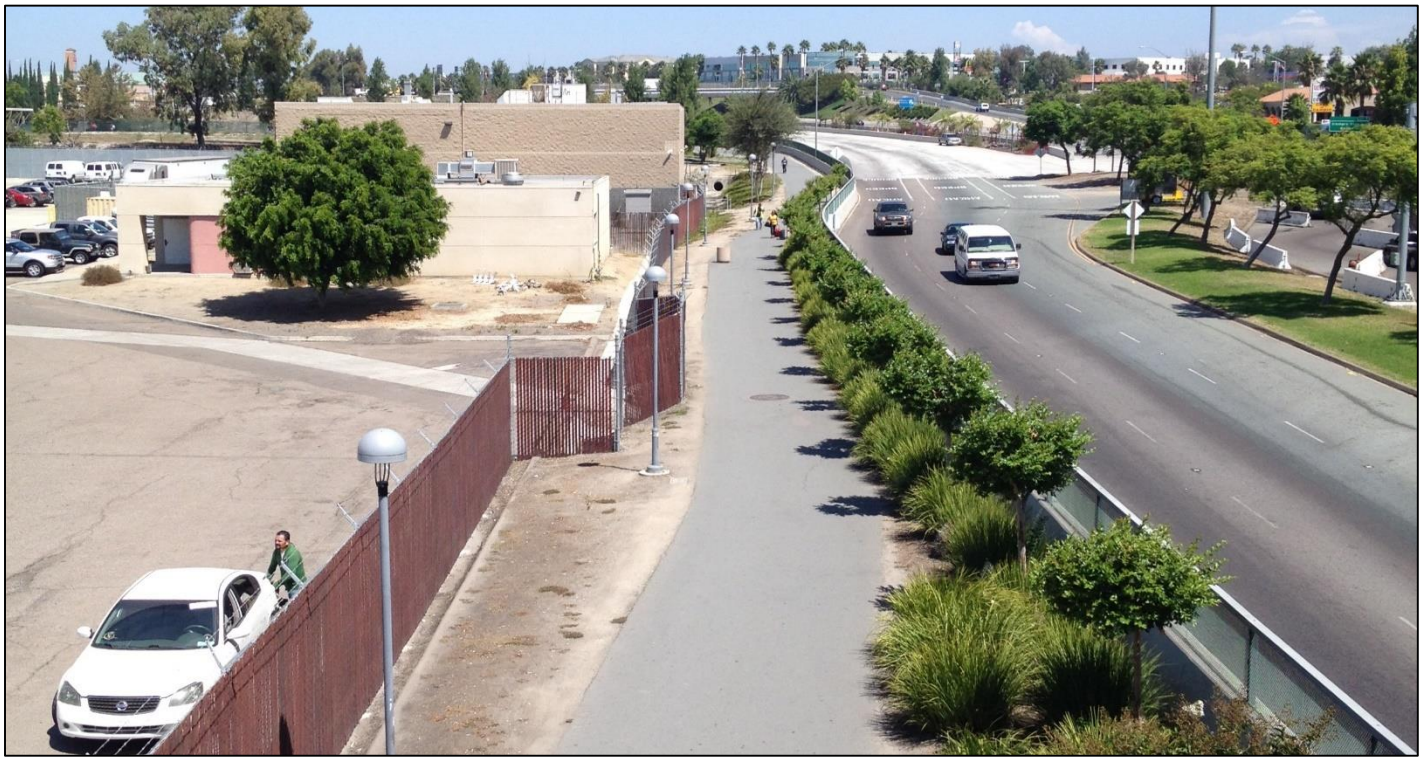
P3s have often been used in the past to fund revenue-generating transportation projects such as toll roads, though this type of funding is being looked to for implementation of projects that do not generate revenue. The California legislature has approved regional transportation agencies and Caltrans to enter into an unlimited number of P3s until January 1st, 2017. This funding opportunity may also be available in Baja California.
Adapted from http://www.dot.ca.gov/hq/innovfinance/public-private-partnerships/PPP_main.html, http://www.fhwa.dot.gov/ipd/p3/defined/, and http://www.imperialctc.org/media/managed/news/Draft_Final_Report_Calexico_ITC_September_2014.pdf

8.7 TRIBAL FUNDING PROGRAMS

Tribal Investments

Much like Public Private Partnerships, Native American Tribal Nations are significant investors in business enterprises that have a potential for generating ongoing revenue. The California Tribal Business Alliance (CTBA) was formed to address a variety of public policy matters of importance to the diverse business interests of the founding tribes, including business, housing, transportation, agriculture and environmental issues.
Adapted from http://www.caltba.org/

9.0 NEXT STEPS



Multiuse pathway at the Otay Mesa POE

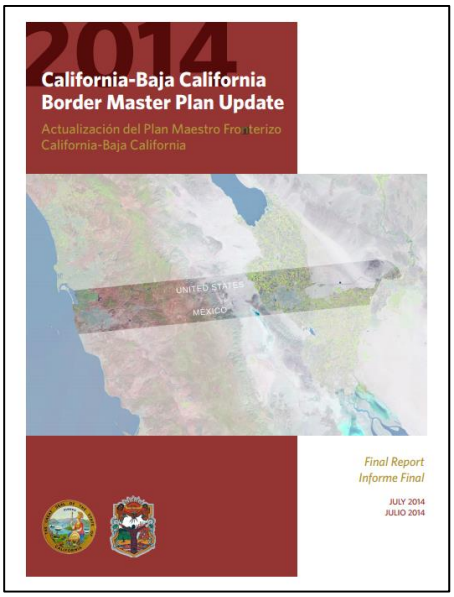
Recently completed pathway project in Andrade

This chapter briefly discusses the overall vision and strategy of this study, provides potential criteria for a future effort to prioritize the study's recommended projects, and concludes with a discussion of next steps.

9.1 VISION AND STRATEGY

This study was conducted with the vision of making walking and biking trips easy, safe, and comfortable around the six California/Baja California POEs, planning for users of all ages and abilities and balancing user comfort with national security priorities. Individually and as a whole, the 102 recommended projects and policies have the capacity to improve the border crossing experience for non-motorized users. Implementation of these recommendations will require participation from a variety of local, state, and federal agencies on both sides of the border, as well as continued engagement with private enterprises, community groups, and the public. Incorporating the recommended projects into federal, state, regional, and local plans, especially into the next California/Baja California Border Master Plan Update, is a crucial step towards project implementation.

For recommended projects to reach implementation, local agencies need to be opportunistic and creative in applying for and securing funding for their priority projects. Lead agencies are responsible for evaluating the components of each project against funding opportunity selection criteria. Creativity and flexibility are key, as a single project could receive funding from multiple sources, or one funding source could fund only some components of one projects.



California/Baja California 2014 Border Master Plan Update

9.2 Project Prioritization

The California/Baja California Border Master Plan update completed in 2014 included projects for non-motorized modes of crossborder travel but did not include these projects in the prioritized lists developed for each POE. The projects and policies described in this study are intended to become a part of the prioritized project catalogs in the next BMP update.

Prioritization is complex ranking process where binational goals direct weighing of qualitative and quantitative factors for each project. Agency members present at this study's fourth Agency Working Group meeting in January 2015 had input on factors that they would like to see included in the project prioritization process. These factors were:

- **Increasing safety**, especially to reduce conflicts between vehicles and pedestrians and bicycles
- **Reducing exposure to poor air quality** caused by vehicle emissions
- **Improving access for disabled and elderly individuals**
- **Adding amenities** such as restrooms, breathable shade structures, and water fountains at the POEs and using landscaping in site design as well as to improve air quality
- **Reducing walking distance for pedestrians**
- **Reducing queues and wait times**
- **Enhancing port capacity**
- **Addressing security issues**
- **Providing for emergency access**
- **Encouraging sustainability of the border zone**

9.3 Concluding the Study

ICTC, Caltrans, SANDAG, SIDUE, IMPLAN, IMIP, and the other integral partners in this study have a vision for improved access for the millions of bicycle and pedestrian border crossers. The binational goal for the

California/Baja California POEs is to facilitate safe, easy, and comfortable cross-border trips for pedestrians and bicyclists. Projects and policies that support this vision must be included in local, state, and federal plans in both the United States and Mexico, especially in the subsequent updates of the California/Baja California Border Master Plan.

The last step in the study process was to present the Final Study to ICTC in February 2015 and the SANDAG Board of Directors in March 2015. Subsequently, implementation of projects identified in the Final Study will be dependent on funding secured by stakeholder agencies and will also be submitted during the next BMP update process, as discussed above.

Community organization Tijuana Te Quiero deliberately adds beauty to the border.