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# Untapped Opportunities: Assessment of Organizational Strategies to Improve Border Coordination in California at the U.S. and Mexico Border

## Final Report for California Integrated Border Approach Strategy, Phase 2

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In 2013, The California Department of Transportation-District 11 (Caltrans) launched the California Integrated Border Approach Strategy (CA-IBAS) in response to a need for a better-integrated border transportation system that reduces impacts on border communities. Work was conducted in two phases to identify ways to better address regional mobility needs and the traveler experience in California's communities along the California-Mexico border.

During Phase 1, led by METRANS, the team conducted a preliminary assessment of key institutional and policy issues at California-Mexico land POEs, including an overview of relevant agencies and stakeholders as well as analysis of institutional structures that might be used to improve service delivery, funding, and financing options for multi-agency projects. Building on Phase 1, Phase 2 of the CA-IBAS study was led by UC Berkeley and in collaboration with UCLA, University of Washington and California State University, Long Beach, and the results are presented in this final report. The report specifically evaluates the feasibility of various institutional mechanisms and strategies that could support and advance coordinated strategic planning, project delivery, and funding partnerships to meet mobility and travel needs at the California – Mexico border.

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# **Untapped Opportunities: Assessment of Organizational Strategies to Improve Border Coordination in California at the U.S. and Mexico Border**

California Integrated Border Approach Strategy Study, Phase II: Final Report



Prepared for:  
California Department of Transportation, District 11

Prepared by:  
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2017

# Executive Summary

## Background

In 2013, The California Department of Transportation-District 11 (Caltrans) launched the California Integrated Border Approach Strategy (CA-IBAS) in response to a need for a better-integrated border transportation system that reduces impacts on border communities. Work was conducted in two phases to identify ways to better address regional mobility needs and the traveler experience in California's communities along the California-Mexico border. During Phase 1, led by METRANS Transportation Center, the team conducted a preliminary assessment of key institutional and policy issues at California-Mexico land Port-of Entry (POE)s, including an overview of relevant agencies and stakeholders and an analysis of institutional structures that might be used to improve service delivery, funding, and financing options for multi-agency projects. The key products of the Phase I study were as follows:

1. A description of “who, what, when, where” of California border-related operations, planning, programming, project development and funding.
2. Identification and an examination of best practice models for multi-agency institutional structures and innovative funding and financing strategies for major capital projects.

Specific best practices and findings identified in the Phase I report include:

- Active collaborative structures (federal, state, and local agencies) that implement capital improvement programs and use innovative funding and financing approaches exist in many forms.
- Some of these include Regional Mobility Authorities, Transportation Reinvestment Zones, Single Purpose Agencies, Bi-national Coalitions, Joint Power Authorities, and Special Districts.
- These structures can improve local mobility and planning for future growth, while taking into consideration regional impacts.

Phase 2 of the CA-IBAS study was conducted to evaluate the feasibility and desirability of various institutional mechanisms and strategies that could support and advance coordinated strategic planning, project delivery, and funding partnerships to meet mobility and travel needs at the California-Mexico border. Phase 2 builds upon the findings from Phase 1.

## Final Report

This report presents the key findings of the work conducted in Phase 2. The study's objective is to advise Caltrans and its partners on methods to improve transportation services and reduce impacts of transportation-related activities on border communities by identifying a set of strategies and coordination mechanisms that would increase funding, and improve project delivery and overall regional mobility. The work presented here integrates the key findings from previous deliverables into one report.

The research was carried out in seven tasks. Task 1 included overall project administration, as well as the development of a detailed work plan and meetings with a number of agencies with major responsibilities in the border region. In Task 2, the team reviewed existing conditions at POEs, nearby communities, and the adjacent planning and agency landscape and defined the study area, its boundaries, and the impacts of POE-related activities on surrounding communities. This informed the development of a problem statement that highlights key challenges at the border. The first two tasks in turn informed the development of Task 3, the identification and analysis of the strengths, weaknesses, opportunities, and challenges that would have to be dealt with in developing multi-agency coordination mechanism(s) capable of serving as the lead entity for border-related strategic planning, project delivery, and funding partnerships. The analysis allowed the project team to identify strategies in Task 4 for improving transportation conditions by sharing

resources, expanding funding options, increasing coordination, and/or instituting new institutional arrangements designed to implement a more comprehensive set of improvements to deliver projects more resourcefully. It also allowed the team to flag barriers to implementation and identify strategies to help overcome the barriers.

Drawing on previous studies, discussions with stakeholders, and innovative approaches used in the region and elsewhere in the U.S., the team developed a list of potential strategies for improving transportation conditions at the border. The list included strategies for improving communication and coordination, strategies to share resources, and strategies to develop or tap into additional resources, as well as alternative institutional arrangements for implementing the strategies. As the focus of Task 5, the legislative status of the various strategies and institutional arrangements was documented and assessed to determine the degree of implementation feasibility or need for legislative action. In addition, an assessment of experience with alternative project delivery methods was carried out.

The team's next step was to develop a spreadsheet model for applying multi-criteria analysis to the evaluation of the identified strategies. Criteria included time needed to implement, legislative precedent, project delivery implications, and other "measures of success" such as degree of congestion relief or emissions reduction. The project team then applied the method and criteria to the list of strategies and used the results to combine the strategies into six potential "packages" of strategies that could serve as the overall mechanism for improving transportation conditions at the California-Mexico border. This methodology can be applied by the Policy Advisory Committee (PAC) or other stakeholders who may wish to modify the criteria or weight some criteria higher than others in choosing a final strategy or set of strategies to move forward.

The six packages set forth in the report include two strategies that could be implemented short-term, two that could be implemented in the medium-term, and two that would likely require a longer period for implementation. One or more of the packages could be adopted, while different strategies could be applied to different POEs, reflecting the variations in problems, needs and opportunities at each crossing. Alternatively, stakeholders may wish to apply the findings on the legal status of the various strategies and institutional arrangements to create their own package of strategies for implementation.

An important finding is that numerous strategies could be implemented under existing law, if the parties agree. For example, amongst a multitude of options, agencies could decide to pool and coordinate information about border issues, plans and projects, sign memoranda of understanding or set up joint powers agreements to pool resources to implement complex projects, partner with private sector and nonprofit organizations, or enter into agreements to jointly implement projects, with each agency taking the lead on the elements for which it has primary responsibility.

## Implementation Considerations

Finally, as a part of Task 6, the public and its representatives should be concerned about the comparative costs of delivering projects in different ways, and the role of risk allocation in the realization of those costs. Project development and selection approaches should consider (1) incorporating multi-criteria and multi-modal system design and evaluation, (2) acknowledging differences among places, considering context, and (3) including the full range of modes and project types in seeking to meet overall goals. Such an approach would help stakeholders to select projects that matter most to the public and are appropriate for a given POE and its surrounding communities.



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### iii List of Abbreviations

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| <b>Abbreviation</b> | <b>Definition</b>   |
|---------------------|---|
| AB                  | California Assembly Bill  |
| AMC                 | Arizona-Mexico Commission   |
| BEIF                | Border Environment Infrastructure Fund  |
| BMP                 | Caltrans-SANDAG Service Bureau Border Master Plan   |
| BRC                 | California-Mexico Border Relations Council  |
| CA-IBAS             | California Integrated Border Approach Strategy  |
| Caltrans            | California Department of Transportation   |
| CRA                 | Comprehensive Regional Agency   |
| CEQA                | California Environmental Quality Act  |
| DAC                 | Disadvantaged Communities   |
| DBFOM               | Design-build-finance-operate-maintain   |
| EIFD                | Enhanced Infrastructure Financing District  |
| ICTC                | Imperial County Transportation Commission   |
| JPA                 | Joint Power Authority   |
| LOS                 | Level of Service  |
| MCA                 | Multi Criteria Analysis   |
| METRANS             | Transportation Center: University of Southern California and California State University Long Beach |
| MOU                 | Memoranda of Understanding  |
| MPO                 | Metropolitan Planning Organization  |
| NAFTA               | North American Free Trade Agreement   |
| NEPA                | National Environmental Policy Act   |
| P3                  | Public-Private Partnership  |
| PAC                 | Policy Advisory Committee   |
| POE                 | Port of Entry   |
| RMA                 | Regional Mobility Authority   |
| RPA                 | Regional Plan Association   |
| SANDAG              | AG San Diego Association of Governments   |
| SCH                 | California State Clearinghouse  |
| SCTCA               | Southern California Tribal Chairmen's Association   |
| SWOC                | Strengths, Weaknesses, Opportunities, and Challenges Analysis                                       |
| TBPOC               | Toll Bridge Program Oversight Committee   |
| VMT                 | Vehicle Miles Traveled  |

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## iv Disclosure of Project and Team Description

California Integrated Border Approach Strategy, Phase 2

Principal Investigator: Karen Trapenberg Frick, University of California (UC) Berkeley

\$384,910.57

As a part of the University of California Center on Economic Competitiveness in Transportation, the project team included Karl Anderson, Eleanor Leshner, Elizabeth Deakin of UC Berkeley, Jan Whittington of University of Washington, Mark Garrett of University of California, Los Angeles, and Thomas O'Brien, and Stephen Lantz of California State University (CSU), Long Beach; led by principal investigator Karen Trapenberg Frick of UC Berkeley. Michael Dear, Jaime Lopez, David Weinzimmer, Nathaniel Barlow, and Lee Reis of UC Berkeley and Priyanka Hari of CSU Long Beach also provided assistance as part of the team.

## v Acknowledgments

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U.S. Department of Commerce

U.S. Customs and Border Protection (CBP)

U.S. General Services Administration (GSA)

U.S. Federal Highway Administration (FHWA)

California Department of Transportation (Caltrans)

California Environmental Protection Agency (CalEPA)

Southern California Association of Governments (SCAG)

County of San Diego

Imperial County

San Diego County Board of Supervisors

San Diego Association of Governments (SANDAG)

Imperial County Transportation Commission (ICTC)

San Diego Metropolitan Transportation System (MTS)

City of Calexico

City of Chula Vista

City of Imperial Beach

City of National City

City of San Diego

Community Organizations and Representatives

Private Sector Associations

# 1 The Challenge

California's six ports of entry (POEs) on the border with Mexico facilitated 47 million northbound trips and \$55 billion in total trade from north and southbound freight in 2014 (DOT, 2015a; DOT 2015b). Increasing demand at these facilities, coupled with heightened security measures and constrained project delivery processes, has resulted in increased border wait times and congestion on local roads. The California Department of Transportation-District 11 (Caltrans) launched the California Integrated Border Approach Strategy (CA-IBAS) in response to a need for a better-integrated border transportation system that reduces impacts on border communities. This requires strong inter-agency coordination and collaboration, which currently is hampered by issues common among metropolitan areas, including insufficient funding, divergent planning and programming processes, and differing agency mandates and priorities. The complexity of these challenges is exacerbated by the binational nature of border issues and the fact that neither a single agency nor the border communities themselves have exclusive authority to make decisions and implement change to improve border community conditions (Dear, 2015). The CA-IBAS seeks to provide the tools needed to create an efficient multimodal regional transportation system for people, goods and services in California border communities.

## 1.1 Background

The overall objective of the CA-IBAS study is to identify ways to better address regional mobility needs and the traveler experience in California's communities along the California-Mexico border. During Phase 1 of the study led by METRANS<sup>i</sup>, the project team conducted a preliminary assessment of key institutional and policy issues at California-Mexico land POEs, including an overview of relevant agencies and stakeholders, as well as analysis of institutional structures that might be used to improve service delivery, funding, and financing options for multi-agency projects. Phase 1 also conducted "best practice" case studies, including examples from border communities in other states (Caltrans, 2014a). The key products of the Phase I study were as follows:

1. A description of "who, what, when, where" of California border-related operations, planning, programming, project development and funding.
2. Identification and an examination of best practice models for multi-agency institutional structures and innovative funding and financing strategies for major capital projects.

Specific best practices and findings identified in the Phase I report include:

- Active collaborative structures (federal, state, and local agencies) that implement capital improvement programs and use innovative funding and financing approaches exist in many forms.
- Some of these include Regional Mobility Authorities, Transportation Reinvestment Zones, Single Purpose Agencies, Bi-national Coalitions, Joint Power Authorities, and Special Districts.
- These structures can improve local mobility and planning for future growth, while taking into consideration regional impacts.

## 1.2 Study and Report Outline

The objective of Phase 2 of the CA-IBAS study is to evaluate the feasibility and desirability of various institutional mechanisms and strategies that could support and advance coordinated strategic planning,

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<sup>i</sup> METRANS is a joint partnership of the University of Southern California (USC) and California State University Long Beach (CSULB).

project delivery, and funding partnerships to meet mobility and travel needs at the California–Mexico border. Phase 2 builds upon the findings from Phase 1 and incorporates insights from additional investigations, including a meeting with the project’s Policy Advisory Committee (PAC) and discussions with stakeholders.

This report serves as a summary of the work conducted in Phase 2. It integrates the key findings from five previous deliverables into one report. Section 2 presents a general overview of methodology used in the study. Section 3 provides a description of the problems facing California’s border communities and an overview of existing conditions at the POEs, as well as a description of planned border transportation projects and project delivery methods available in California. Section 4 summarizes key border agencies and organizations in the region, including the challenges and opportunities for establishing border coordination strategies and/or mechanisms. Section 5 provides the initial review and assessment of organizational strategies to improve border coordination. Section 6 evaluates coordination strategies and mechanisms by describing, comparing, and ranking more than twenty distinct strategies. Section 7 develops a menu of options for identifying and delivering projects collaboratively, in ways that fit the identified strategies and mechanisms. Finally, Section 8 provides a summary of key takeaways from the CA-IBAS report. Appendices contain additional detailed information from previous tasks in Phase 2, and full reports from the project’s earlier stages.

## 2 Methodology

Analysis for the project was conducted in five tasks, each with its own standalone deliverable. While task reports were delivered sequentially, work on the tasks overlapped and there was frequent communication among the project team members, allowing the team to share findings as they were being developed. Hence the legal analysis and the assessments of the project delivery task informed the evaluation and packaging of strategies, and vice versa.

### 2.1 Data Collection Methods

Data for the project were collected via field visits and through a broad-ranging review of key documents, academic papers, legislation, traditional news media, and online sources (websites, blogs and social media formats) maintained by public agencies, activists, and other stakeholders. Public agency documents included reports, plans, project lists, board memoranda, letters, presentations, and meeting minutes provided by Caltrans, such as the Caltrans-SANDAG Service Bureau's Border Master Plan 2014 Update (BMP) and the San Diego Association of Governments' (SANDAG) Border Health Equity Transportation Study. In addition, to better understand the existing conditions of border communities, the project team used readily available public data sources such as the 2013 U.S. Census American Community Survey (5 year estimate) and environmental and social indicators as estimated by the California Communities Environmental Health Screening Tool: CalEnviroScreen Version 2.0.

After a detailed review of these documents and data, the project team carried out small group discussions with the PAC, as well as with key stakeholders representing local, state, regional, and federal interests. These discussions explored the challenges California border communities face, regional mobility concerns, and the traveler experience, both in California border communities and at border crossings between California and Mexico.

### 2.2 SWOC and Existing Plan Review

A Strengths, Weaknesses, Opportunities, and Challenges analysis (SWOC) was conducted to fully assess the challenges and opportunities for establishing border coordination strategies and/or mechanisms, and was informed by a preliminary review of existing key border plans.

SWOC analysis is a common method used in both business and government strategic planning processes (Bryson, 2004). The acronym refers to its focus on assessing strengths, weaknesses, opportunities and challenges for a given goal, strategy, organizational entity, or operational model (Bryson, 2004). Strengths and weaknesses are considered internal factors that either aid or hamper achieving the goals of a certain strategy or organizational mission (Bryson & Roering, 1987). Opportunities and challenges refer to external factors that may influence and affect a strategy or organization. SWOC analyses do not simply list items in the four categories; it is a thorough analysis that carefully discusses, analyzes, compares, and contrasts multiple aspects of the study subject.

A review of existing planning documents is commonly used in strategic planning to help identify differences between the current state of operations and a future, desired state (PMI, 2015). This type of analysis can also be used to assess the extent to which goals have been accomplished or issues addressed (Strong, 2014), to map organizational objectives to accomplishments and look for places where things are not going as well as desired, and to identify strengths and weaknesses in the existing operating environment and in the areas for future opportunity (Zack, 1999) Barrella et al. (2013) describe identifying "gaps" as an important pre-step prior to engaging in a SWOT-type exercise in their work, developing a strategic planning tool to help state departments of transportation evolve more sustainable practices.



In this study, this analysis was used as a pre-step to the SWOC analysis, to assess the extent to which border projects described in the BMP address the issues identified in the CA-IBAS Problem Statement. The analysis recognizes that substantial work has already been done to improve conditions at the border, and additional work is in progress, but it also flags areas where goals for the border will not be fully attained without additional action. The SWOC analysis then looks at strengths (e.g., existing authorities, capacities) in the existing operating environment that may facilitate goal attainment, as well as weaknesses (or constraints) that may block goal attainment. As part of the analysis, opportunities for new coordination strategies to achieve desired goals and address major issues are identified, as are challenges that would have to be overcome to successfully implement the new strategies.

The existing plan review and SWOC analysis were based upon an analysis of the documents reviewed for this study, including discussions with stakeholders. The qualitative, textual data collected in the literature review and discussions were coded using classifying words and short phrases to identify larger themes and categorized as to whether it reflected a “strength,” “weakness,” “opportunity”, or “challenge” to improving coordination. The project team worked collaboratively to complete this qualitative coding for accuracy and to provide a check against individual bias (Saldaña, 2012).

### 2.3 Strategy Evaluation and Ranking Process

To determine the level of applicability of potential coordination strategies in the California border region, the project team first developed a list of twenty-two potential coordination strategies, drawn from the Phase 1 report and discussions with PAC members, border area experts and other key stakeholders and the project team members’ professional experience. (These strategies are discussed in detail in section 5)

The project team then evaluated the twenty-two strategies using thirteen “organizational design” comparison criteria, which were selected based on a review of the existing literature, previous work as a part of CA-IBAS Phases 1 and 2, and project team members’ expertise and professional experience. In particular, a review of the literature on organizational design and findings from the existing plan review, as part of the CA-IBAS Phase 2, Task 3 report, informed the development of a list of thirteen organizational design comparison criteria. While each criterion was applied individually to each strategy, the organizational design comparison criteria can be categorized as follows: (1) organizational scope, (2) institutional characteristics, and (3) funding considerations.

*Table 1: Organizational Design Criteria Used to Compare Strategies*

| <b>Categories</b>                    | <b>Criteria</b>        | <b>Comparison Scale</b>                  |
|--------------------------------------|------------------------|--|
| <b>Organizational Scope</b>          | Geographic Scale       | POE/Local, County/Region, State, Federal |
|                                      | Longevity              | Short-, Medium-, Long-term; Indefinite   |
|                                      | Mandate                | Broad, Narrow, Flexible                  |
| <b>Institutional Characteristics</b> | Formality              |  |
|                                      | Authority              |  |
|                                      | Agency Inclusivity     | Low, Medium, High, Varies                |
|                                      | Level of Compromise    |  |
|                                      | Transparency           |  |
| <b>Funding Considerations</b>        | Funding Adequacy       |  |
|                                      | Funding Predictability |  |
|                                      | Funding Stability      | Low, Medium, High, Varies                |
|                                      | Self-Funding           |  |
|                                      | Operating Costs        |  |

Using these criteria, members of the project team collaboratively assessed each strategy against each criterion; this was done collectively as a way to provide a check against individual bias to arrive at an expert consensus. The results of this evaluation are presented in Section 6.

The team then ranked the strategies based on their ability to improve regional mobility and quality of life in border communities by applying multi-criteria analysis (MCA) – a method for evaluating and ranking proposed actions or investments in order of priority. In an MCA, this is done by assigning values to each potential coordination strategy according to a set of criteria for performance, such that each strategy is given a sum of scores or values, and may be comparatively ranked on this basis.

To rank coordination strategies for the border region, a list of twenty performance criteria was developed. The twenty criteria can also be described as “measures of success”. As with the strategy comparison process, the ranking criteria were developed based on a review of academic literature, the professional experience of expert team members, discussions with PAC members, and readily available relevant secondary material, such as case studies.

Table 2: Ranking Criteria to Compare Strategies

| Categories                         | Criteria  |   |
|------------------------------------|---|---|
| <b>Project/Program Development</b> | Issue Inclusive Planning<br>(Blueprint/Anticipatory<br>Planning)                            | Multimodal Benefit<br><br>Project/Program<br>Comprehensiveness                    |
| <b>Project Impacts</b>             | Community Quality of Life<br><br>Environmental Quality<br><br>Equity                        | Place-making<br><br>Safety<br><br>Security  |
| <b>Institutional Criteria</b>      | Agency Inclusivity<br><br>Institutional Flexibility<br><br>Institutional Resilience         | Project/Program<br>Comprehensiveness<br><br>Time to Implement<br><br>Transparency |
| <b>Financial Criteria</b>          | Cost Effective Project/<br>Program Delivery<br><br>Economic Benefit<br><br>Funding Adequacy | Funding Predictability<br><br>Funding Stability<br><br>Revenue Generation         |

Many of these criteria are common indicators of successful project development. For example, criteria like environmental benefit are also employed by the BMP 2014 Update for project ranking. Other criteria like “anticipatory/blueprint planning” and “project/program comprehensiveness” were developed from findings in the CA-IBAS Phase 2 Task 3 Report, which identified these as existing opportunities for border coordination strategies to engage stakeholders (Caltrans & UCCONNECT, 2016b). Finally, using the results of the strategy comparison and the results from an MCA ranking of coordination strategies, the team developed potential packages of strategies to present for the PAC’s consideration.

### 3 Existing Conditions in California's Border Region

As stated in the introduction, the overarching goal for this study is to identify ways to provide a better-integrated border transportation system that improves mobility and reduces negative impacts on border communities. This section provides a detailed description of the issues that have created this larger problem facing California's border communities and an overview of existing conditions in communities affected by the POEs.

#### 3.1 Existing Border Conditions and Impacts to Communities

##### 3.1.1 U.S.–Mexico Border Context

As established by treaties between the U.S. and Mexico, the border extends 1,933 miles on land, and includes maritime boundaries of 18 miles in the Pacific Ocean and 12 miles in the Gulf of Mexico (IBWC, 2014). The region along the boundary is characterized by deserts, rugged mountains, abundant sunshine, and by two major rivers, the Colorado River and Rio Grande. Growth of the maquiladora industry in Mexico and the adoption of the North American Free Trade Agreement (NAFTA) have been major drivers of urban development along the border (Quintana et al., 2015). NAFTA, which took effect in 1994, redefined the economic relationship between the U.S. and Mexico and transformed patterns of trade, investment, and industrial activity.

Today the U.S.-Mexico border has 48 crossings, 47 by land and one at the Tijuana air terminal for ticketed passengers only. At the crossings are fifteen pairs of sister cities sustained by agriculture, import-export trade, service, tourism, and by a strong manufacturing sector (IBWC, 2014). As a result of this diverse economic activity, according to the Good Neighbor Environmental Board, the border hosts “the most demographically dynamic regions of both the United States and of Mexico” (GNEB, 2015). In the second half of the 20th century, population growth occurred faster in both U.S. and Mexican border areas compared to their state and national averages (GNEB, 2015). Table 3 shows the population and growth rates for twelve of the most populous pairs along the border between Mexico and California, Arizona, and Texas.

While the primary purpose of NAFTA was to foster trade and investment in North America, there has been an overwhelming impact on the continental transportation system (Bradbury, 2002). As trade and population continue to grow, there has been increased strain on highways, railroads, and POEs, resulting in massive delays and congestion at key border crossings. Population growth has also contributed to increased traffic and congestion in the border communities themselves. At the border with Mexico, rapid population growth has “outpaced the ability of government to provide adequate infrastructure in these border cities,” especially on the Mexican side of the border (GNEB, 2010). On the U.S. side, colonias –rural U.S. border communities that experience poor housing and infrastructure conditions – have developed, predominately in Texas and New Mexico but also in Arizona and California. Specifically in California, 15 communities are served by the Community Development Block Grant program. These communities can be found in the City of Brawley, City of Calexico, City of El Centro, City of Imperial, and unincorporated areas throughout Imperial County.

Issues that have manifested from population growth and increased trade have been amplified by increased security at the border. As the Border Patrol states on its website, the priority mission of the Border Patrol since 9/11 is preventing terrorists and terrorist weapons, including weapons of mass destruction, from entering the United States. The Border Patrol is also charged with detecting and preventing the illegal entry

of aliens and contraband into the United States. The security and checks needed to accomplish these goals has increased border crossing times (CBP, 2016).

*Table 3: U.S.–Mexico Border Cities Population & Growth Rates\**

| <b>United States</b>  | <b>Mexico</b>                 | <b>Total Population 1990 (U.S.) (Mexico)</b> | <b>Total Population 2000 (U.S.) (Mexico)</b> | <b>1990 to 2000 % Change (U.S.) (Mexico)</b> | <b>Total Population 2010 (U.S.) (Mexico)</b> | <b>2000 to 2010 % Change (U.S.) (Mexico)</b> |
|-----------------------|-------------------------------|--|--|--|--|--|
| San Diego, California | Tijuana, Baja California      | 1,110,549<br>698,752                         | 1,223,400<br>1,148,681                       | 10%<br>64%                                   | 1,307,402<br>1,300,983                       | 7%<br>13%                                    |
| Calexico, California  | Mexicali, Baja California     | 18,633<br>438,377                            | 27,109<br>549,873                            | 45%<br>25%                                   | 38,572<br>689,775                            | 42%<br>25%                                   |
| San Luis, Arizona     | San Luis Rio Colorado, Sonora | 4,212<br>110,530                             | 15,322<br>145,006                            | 264%<br>31%                                  | 25,505<br>178,380                            | 66%<br>23%                                   |
| Nogales, Arizona      | Nogales, Sonora               | 19,489<br>107,936                            | 20,878<br>159,103                            | 7%<br>47%                                    | 20,837<br>220,292                            | 0%<br>38%                                    |
| Douglas, Arizona      | Agua Prieta, Sonora           | 13,137<br>39,120                             | 14,312<br>61,944                             | 9%<br>58%                                    | 17,515<br>79,138                             | 22%<br>28%                                   |
| El Paso, Texas        | Juárez, Chihuahua             | 591,610<br>798,499                           | 679,622<br>1,217,818                         | 15%<br>53%                                   | 800,647<br>1,332,131                         | 18%<br>9%                                    |
| Presidio, Texas       | Ciudad Ojinaga, Chihuahua     | 3,072<br>23,910                              | 4,167<br>24,313                              | 36%<br>2%                                    | 4,426<br>26,304                              | 6%<br>8%                                     |
| Del Rio, Texas        | Ciudad Acuña, Coahuila        | 30,705<br>56,360                             | 33,867<br>110,388                            | 10%<br>96%                                   | 35,591<br>136,755                            | 5%<br>24%                                    |
| Eagle Pass, Texas     | Piedras Negras, Coahuila      | 20,651<br>98,185                             | 22,413<br>127,898                            | 9%<br>30%                                    | 26,248<br>152,806                            | 17%<br>19%                                   |
| Laredo, Texas         | Nuevo Laredo, Tamaulipas      | 133,239<br>219,468                           | 193,117<br>310,277                           | 45%<br>41%                                   | 250,304<br>384,033                           | 30%<br>24%                                   |
| McAllen, Texas        | Reynosa, Tamaulipas           | 383,545<br>282,667                           | 569,463<br>419,776                           | 48%<br>49%                                   | 774,769<br>608,891                           | 36%<br>45%                                   |
| Brownsville, Texas    | Matamoros, Tamaulipas         | 260,120<br>303,293                           | 335,227<br>416,428                           | 29%<br>37%                                   | 406,220<br>489,193                           | 21%<br>17%                                   |

\* Indicates three regions were omitted due to restrictions on data availability.

Source: 1990, 2000, 2010 Decennial Census Survey, U.S. Census Bureau. General Census of Population and Housing, National Institute of Statistics and Geography (INEGI)

### 3.1.2 Challenges at the California-Mexico Border

Despite having the shortest border amongst U.S.–Mexico border states, California accounts for 40% of northbound trips across the border - 47 million northbound trips in 2014. Freight crossing the border north- and southbound that year accounted for \$55 billion in trade (IBWC, 2014; DOT, 2015a).

Most northbound passenger trips crossing the border are for shopping, work, visiting friends and family, or medical purposes. Additionally and frequently overlooked, thousands of U.S. legal residents live in Mexico -- some 50,000 to 60,000 in Tijuana alone -- and cross the border daily for these same purposes. Trip purpose varies among the POEs. For example, 40% of trips are for work at Otay Mesa, whereas nearly 30% are medical at Andrade (SANDAG, 2011a; SCAG, 2007). They typically last four to six hours not including time spent traveling and waiting to cross the border (SANDAG, 2011a).

The largest share of these trips are concentrated and end in U.S. communities near the border; only a small percentage of trips extend beyond the border region or indeed, beyond a handful of census tracts along the border (SANDAG, 2011a; SCAG, 2007). Specifically, 35.5% of survey respondents from the San Ysidro POE, 53% from Otay Mesa, and 61.9% from Tecate ended their trip in communities adjacent to the border (SANDAG, 2011a). In Imperial County, it was found that 92% of northbound passenger vehicles and 95% of pedestrian trips that originate from the Calexico POE ended their trips in the communities adjacent to the border. For the Calexico East POE 96% of northbound passenger vehicles ended their trip in these same areas (SCAG, 2007).

This concentrated traffic at the border is an economic generator for the region, but also adversely affects communities through traffic-generated air and noise pollution, declining traffic safety, congestion, and community disruption (Wilson Center, 2013).

Table 4 documents the average daily trips, wait times, and temperatures at each of the six California crossings. As Table 4 shows, northbound wait times can be significant; they also can be unpredictable. Wait times can vary widely both throughout the day and throughout the year, rising above 2 hours at San Ysidro for private automobiles during peak hours, while at times there may not be a delay to cross at other POEs. Travelers are adversely impacted by these unreliable and often lengthy border wait times, and many have to endure high average temperatures during their waits. Extreme temperatures coupled with lack of shade create an uncomfortable environment for pedestrian border crossers. Long pedestrian wait lines also increase pedestrians' exposure to air pollutants while waiting in line next to idling vehicles (Quintana et al., 2015). Furthermore, due to a lack of adequate public restrooms, border crossers may avoid drinking water, which intensifies the negative impacts of pollution exposure and physical discomfort (ICTC, 2015).

The lengthy and highly variable border wait times can be compared to the average wait time for the Transportation Security Administration screening at San Diego's International Terminal of 12 minutes, with a range from 0 to 52 minutes over the course of January to June 2016 (DHS, 2016). Thus the average time for crossing the border at several of the POEs is approximately the same as the maximum screening time that air passengers experience.

Delays at the border crossings, especially at San Ysidro, have been found to create personal hardship for those making the crossing and impose costs on the regional economy. Travelers and nearby workers and residents also are exposed to high levels of pollutant emissions due to stop and go traffic at the crossings (Quintana et al., 2015).

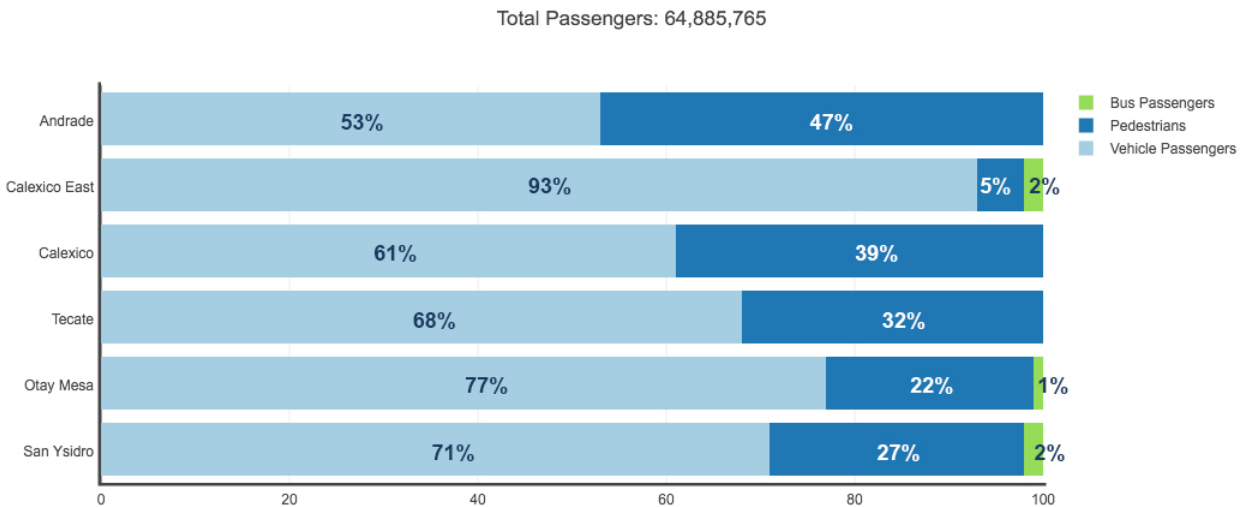
Table 4: Northbound Trips, Reported Wait Times, and Average Yearly Temperature by California POE

| POE                       | Crossing Type          | Avg. Daily Trips | % Share of Avg. Daily trips | Avg. Reported Wait Time: Pedestrian | Avg. Reported Wait Time: Private auto | Avg. Reported Wait Time: Freight | Avg. Yearly Temp. |
|---------------------------|------------------------|------------------|-----------------------------|-------------------------------------|---------------------------------------|----------------------------------|-------------------|
| San Ysidro                | Passenger only         | 54,599           | 43%                         | 44                                  | 91                                    | N/A                              | 70°F              |
| Otay Mesa-Mesa de Otay    | Passenger, Commercial  | 30,624           | 24%                         | 22                                  | 50                                    | 39                               | 72°F              |
| Tecate-Tecate             | Passenger, Commercial  | 4,407            | 3%                          | 4                                   | 32                                    | 8                                | 74°F              |
| Calexico-Mexicali         | Passenger only         | 23,668           | 18%                         | 17                                  | 55                                    | N/A                              | 89°F              |
| Calexico East-Mexicali II | Passenger & Commercial | 11,064           | 9%                          | 0                                   | 50                                    | 31                               | 89°F              |
| Andrade-Los Algodones     | Passenger only         | 3,434            | 3%                          | 4                                   | 24                                    | N/A                              | 88°F              |

Sources: BMP (2014), The Weather Channel LLC.

This situation is due in part to the current state of infrastructure at California’s POEs, which primarily serve to process vehicular traffic. Although the primary mode of crossing the border is by auto, users often arrive and cross by other means, especially walking. The lack of funding for multimodal POEs has hampered the user experience, particularly for communities of concern such as the elderly, families, and persons with disabilities.

Figure 1. Mode Share Distribution of Northbound Passengers in 2014



Source: U.S. DOT, Bureau of Transportation Statistics

In addition, traffic congestion at POEs often spills over into surrounding California community roads, which can lead to negative transportation, economic, environmental and health impacts for those communities. Increased POE-related traffic congestion reduces the mobility of residents of border communities, and can also result in degraded quality of life and loss of economic productivity due to time spent in congestion. Finally, local communities are impacted by degraded air quality due to vehicle idling related to long POE wait times on both sides of the border. This air pollution in turn leads to public health concerns, particularly related to respiratory illnesses. Quintana, et al., (2015) have shown that as a result of “rapid growth, infrastructure shortages, and traffic congestion...border residents suffer disproportionately from environmental health problems, especially asthma.” This is particularly troubling, as border communities along the U.S.-Mexico border are mainly Hispanic and generally poorer, as compared to their respective cities, counties, states, and the U.S. as a whole. This disproportionate effect of port activity on low-income and mostly minority communities has raised concerns in many fields, especially among the environmental justice community.

### 3.2 Issues Facing Border Transportation Planning in California

Table 5 identifies ten major issues and challenges facing the California border region. The first four issues (#1-4) relate mainly to transportation and physical urban planning, whereas the last six issues (#5-10) relate to institutional and political challenges to developing projects addressing these concerns.

*Table 5: Border Region Issues and Challenges*

|   |
|---|
| <p><u>Transportation and Planning Issues</u></p> <ol style="list-style-type: none"> <li>1. Long and unreliable wait times to cross the border</li> <li>2. Improving the POE user experience</li> <li>3. A desire to devote more attention to the needs of pedestrians, cyclists, and transit users at the border</li> <li>4. A desire to support integrated transportation, land use, economic development and social program planning around POEs</li> </ol> <p><u>Institutional and Political Challenges</u></p> <ol style="list-style-type: none"> <li>5. Difficulty balancing the diverse objectives of the agencies that have responsibilities for conditions at the border</li> <li>6. A desire to increase the recognition and promotion of the border as a valuable part of the state and regional economy</li> <li>7. Shared responsibilities among agencies and highly varied perspectives on problem definition</li> <li>8. A need for more consistent, dedicated funding</li> <li>9. Underdeveloped set of performance metrics, and lack of data</li> <li>10. Challenges due to the binational nature of border issues</li> </ol> |
|---|

The key finding is that while border crossings have many benefits, the negative economic, environmental and health impacts of California’s POEs on their surrounding communities warrant serious attention, and creative strategies to increase agency cooperation and coordination are needed to make available funding stretch farther and open up new funding and project opportunities. Working to resolve these issues and challenges can create an efficient multimodal regional transportation system for people, goods and services in California border communities.



Improving regional mobility in the study area is part of the broader goal of:

*“Increasing the efficiency of people and goods travel in a safe, sustainable, and reliable multimodal transportation system that strengthens California's communities and economy.”*

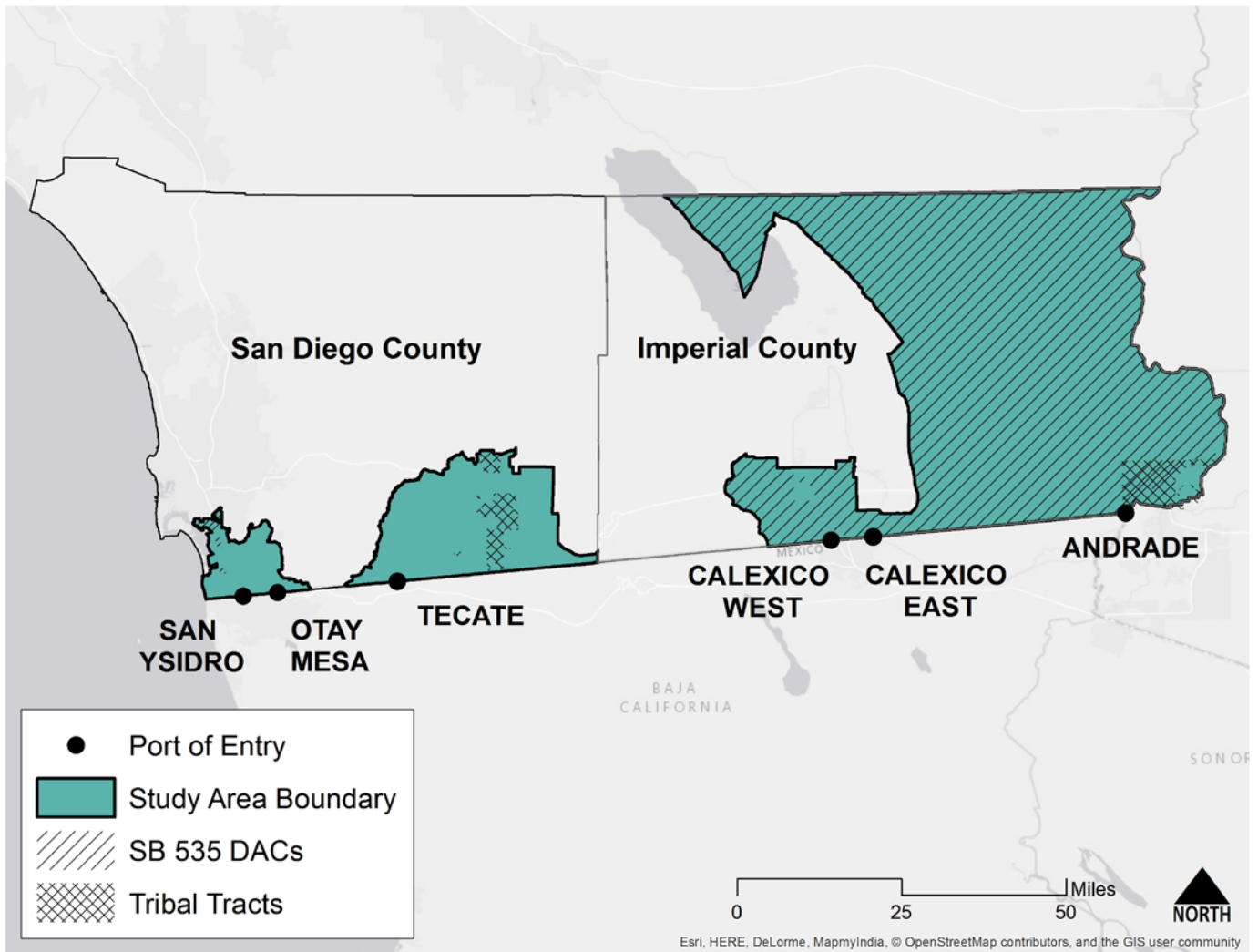
Improving conditions surrounding POEs and at the local level can translate into improved regional mobility for California in the region. As explored by previous reports on the economy and quality of life in the region, it is crucial for both the region’s economic prosperity and overall border community wellbeing for mobility to be improved (Caltrans & SANDAG, 2010). Overall congestion and delays increase transport costs, fuel use, and emissions, which in turn have harmful effects on greenhouse gas emissions and regional pollutants, California and regional competitiveness, local community development opportunities, and public health.

### 3.2.1 Regional Mobility Focus Area

In previous reports such as the BMP 2014 Update, stakeholders defined a “focused study area” as 10 miles north and 10 miles south of the international border, with an additional “area of influence” stretching 60 miles in either direction as defined in the 1983 La Paz Agreement. Because the problems identified around the border impact each border community in distinct ways, the project has developed an additional geographical level of analysis – “zones of impact” around each POE. These zones, defined using census tract boundaries, provide a more precise representation of the geographic subareas where most trips are most concentrated, and ultimately where mobility is impacted for communities within the border region. Figure 2 shows the census tracts where cross border travel was the most concentrated based on reviewing spatial travel time ranges in combination with cross border origin-destination data drawn from the two metropolitan planning organizations (see Figure 2). Specifically, from the San Ysidro (35.5%), Otay Mesa (53%), and Tecate (61.9%) POEs, survey respondents ended their trip in the highlighted tracts (SANDAG, 2011a). For trips that originate from the Calexico POE, 92% of northbound passenger vehicles, and 95% of pedestrians, were found to end their trips in the highlighted tracts. For the Calexico East POE, 96% of northbound passenger vehicles ended their trip in the highlighted tracts (SCAG, 2007).

This focus area also encompasses the majority of disadvantaged community (DACs) census tracts in both border counties, as defined in Senate Bill 535, the California Global Warming Solutions Act of 2006: Greenhouse Gas Reduction Fund. In addition to including DACs, the study area also includes tribal lands for the Ewiiapaayp, La Posta, Manzanita, and Campo communities in San Diego County and the Fort Yuma (Quechan) community in Imperial County.

Figure 2. CA-IBAS Zones of Greatest Traffic Impact \*



\* Census tracts with the highest share of trip ends. Note that In Imperial County Census Tracts cover larger amounts of land as opposed to San Diego County resulting in larger geographic coverage area for this county.

### 3.3 Status of Border Transportation Projects

In the past decade considerable progress has been made in improving transportation in the region, with the development of the first Caltrans-SANDAG Service Bureau Border Master Plan, securing a Presidential Permit for constructing the Otay Mesa East POE, improvements currently in progress at San Ysidro and Calexico West POEs, and the first U.S. cross-border bicycle and pedestrian study. However, there is more to be done. A large number of projects are in the conceptual planning stage, but do not have identified funding, and some have remained unfunded since the last BMP update. Appendix A provides a list of projects that have been put on hold, are in the conceptual stage, or have not secured funding. Indeed, the BMP 2014 Update emphasizes that funding everywhere is in short supply and recommends: “consistent and reliable funding is needed to realize the benefits of the BMP on an ongoing basis” (Caltrans, 2014b). At a time when shrinking federal and state gas tax revenues and negative trust fund account balances have hampered transportation spending, a majority of the projects listed in the BMP may never be fully funded unless creative new ways of financing them are identified.

While funding was the most commonly identified hurdle, PAC members and others also cited a lack of integrated planning around POEs as a barrier to problem solving. For example, each agency’s funding is primarily allocated for specific projects and/or specific locations, making it difficult to fund projects cross-jurisdictionally or across programmatic goals. Stakeholders expressed interest in pursuing alternative financing tools and/or partnerships to make funds go farther on capital investments and attract new spending for economic development in the region.

### 3.4 Existing Project Delivery Options for the California–Mexico Border

In California, transportation projects are usually delivered using one of three methods common in the U.S.: (1) design-bid-build, (2) design-build, and (3) public-private partnerships (P3s). There are as many methods of project delivery as there are alternative pairings of public and private participants to tasks in project delivery (e.g., design-build-operate-maintain, build-own-operate-transfer, construction manager/general contractor), but the U.S. and California transportation markets have the most experience with these three.

From one to the next, these methods increase opportunities for the private sector to carry out the tasks of delivery, under public management, with public ownership of the asset. However, there are many risks involved in the delivery of projects, and each method uses very different types of contractual arrangements, all of which offer only partial relief from the cost-effects that occur when risks are realized.

When comparing options for project delivery, it is important to be aware that there are many potential sources of inefficiency in transportation projects that may exist irrespective of the method of delivery. Several assumptions have to be valid to make any transportation investment worthwhile, regardless of the method of delivery:

- the project is designed to meet the needs of users;
- the project is not overdesigned (i.e., designed to serve more than the actual interested users);
- available funding and attention to design are consistent (i.e., avoiding the “shelving” of designs due to budget shortfalls or lack of dedication on the part of the public agency); and
- methods of finance are sensitive to capital market conditions (i.e., locking in and expanding the use of bond financing when available at historically low interest rates).

It also helps for projects to avoid exogenous shocks (i.e., extreme events external to the project, whether man-made, such as the Great Recession, or natural, such as a major earthquake) though doing so is usually beyond the control of any public agency.

When comparing options, the public and its representatives should be concerned about the comparative costs of delivering the project in different ways, and the role of contractual risk allocation in the realization of those costs. Public actors can have other rationales for using alternative delivery methods, such as soliciting ideas for alternative construction technologies in the design phase of a particular project, or engaging the private sector to speed the process of delivering a particular project. Inevitably, however, the development of transportation improvements is limited by the availability of funding. This makes cost – specifically, the total *ex post* cost (after signing the contract) of delivering projects one way or another – the most important factor to analyze when comparing options for project delivery.

#### 3.4.1 Design-Bid-Build Project Delivery

Design-bid-build delivery contains safeguards in the form of rigid procedures *ex ante* (before signing) and *ex post* (after signing the contract) – based on shared designs, unit costs, and unit quantities – that limit the discretion of public and private agents. These features keep costs down if:

- the agreements that impact the design of the project are forged during conceptual and schematic design (0-30% design), when the cost of change is at its lowest point;
- the public agency managing the project does not overstaff;
- the public agency coordinates effectively to produce pre-contract information, such as environmental review and geotechnical analysis;
- the project is not so complex or unique as to be outside the normal scope of public project management and design services (in comparison to the private market for the same services);
- there is a competitive market that results in competitive bids for construction services; and
- there is adequate monitoring of contractors and efficient resolution of *ex post* conflict.

For the cost of projects, these are critical factors.

#### 3.4.2 Design-build Project Delivery

Design-build contracts – which bundle design with construction and are therefore more complex– should be reserved for the public projects that are challenging to design and construct, where the firms that participate in this market can bring about improvements from coordination between designers and construction firms, worthy of the additional margins that are presented in contract prices. Such improvements can include innovation in design, materials and/or construction processes, and also substantially faster delivery. The costs of these contracts to the public are going to be more difficult to control and thus more risky as public investments. This is because public project managers are not going to have access to the information they would need to estimate the actual costs of any changes that occur *ex post*, and would thus be at a disadvantage during *ex post* negotiations. Efficiencies are not realized in the price and ultimately the cost of any public project without public sector efficiencies, competition at the bidding stage, and enough information symmetry to limit the dissipation of *ex ante* efficiencies in bid prices during *ex post* negotiations. So, to be able to reap benefits from a design-build contract, there would have to be competitive bids, sufficient transfer of design and construction risk to the firm, benefits to the paying public worthy of any additional margin paid to the firms, adequate monitoring, and a relative absence of problems during implementation.

Design-build is a preferred form of contract in private markets. However, projects contracted between firms – private contracts for project delivery – do not face the same sets of problems as public projects (and they often attract different contractors). Private investors and developers depend on delivery by a particular date within a particular target price (i.e., turn-key delivery), and can find it easier to specify in advance the performance characteristics that will matter to their private clientele. This is especially the case, for

example, in private markets for buildings. In the developments of airports and seaports, the private investment to develop terminals is organized by the carriers, who then play prominent roles in the selection of these contracts and management of project delivery. These are more like private than public contracts, and also more amenable to design-build delivery.

### 3.4.3 Public-Private Partnership Project Delivery

Under a P3, a private partner usually manages a design-build arrangement and adds financing, operations, and maintenance, including the collection of toll revenues or other user fees, to the contract [i.e., design-build-finance-operate-maintain (DBFOM)]. P3s contain all of the same risks and contractual arrangements found in design-build delivery and more, because private investors depend on the transfer of construction cost and schedule risk to design-build contractors, while expecting a return on their investment. P3 arrangements are much more complex than their design-bid-build or design-build counterparts and, despite the emergence of tools such as “value for money” analyses, it can be very difficult to determine whether a P3 is cost-effective for either the public agency or, in the case of tolls and other user fees, the consumers who pay to use the facilities. Unfortunately, many decision-makers have made the mistake of thinking that P3s allow public transportation agencies to be free from financial liability, treating them as “off-budget” sources of finance. This thinking gives public officials an incentive to engage in such agreements, even when they offer no public financial benefit.

The probable efficiencies to be gained from P3s are predicated on the private sector’s ability to beat the superior financial performance of public bonds with more accurate estimates of user demand and cuts to lifecycle costs. Economic models explain that P3s can offer comparative efficiencies when:

- private firms have to compete for P3s;
- firms will be compensated on the basis of revenue from tolls or traffic (i.e., they are responsible for demand-side risk); and
- firms expect to be held to standards of quality by the users of the product (that is, users have the option of substituting this product for another).

Such models also assume that the public agent is a sophisticated and discerning client, able to foresee the impact of the agreement, verify the quality of the work and enforce the agreement. And, as with design-build agreements, this model assumes that neither the public agent nor the private firm will try, opportunistically, to renegotiate the agreement *ex post*. These are not the conditions found in most P3 agreements, however.

Spectacular failures in public accounting for the impact of the private monopolization of transportation corridors have led public agents to abandon attempts to transfer demand risk to private firms, and instead, to offer “availability payments” in P3s. However, by eliminating the possibility of transferring demand risk to the private sector, public agencies have decreased the likelihood that P3s will confer real economic benefits to the public, and have placed significant pressure on public agents to rely on “value for money” analyses as the basis for selecting a P3 for project delivery. Without demand-side risk, what is left is supply-side risk (i.e., the presumably competitive supply of design-build-finance-operate-maintain bundled into one contract, compared to design-bid-build, where construction and perhaps design are competitively supplied). Analyses of “value for money” – comparing forecasts of the cost of P3 and design-bid-build delivery – are highly sensitive to estimates of the cost savings expected to accrue from competition, the presumed savings or inefficiencies of the public sector, the presumed costs and prices associated with project-related risks, and discount rates for calculating the present value of future expenditures.

Hundreds of P3s have been implemented in the U.K.'s Private Finance Initiative, and a recent review of those projects found that they are not as economically viable today when compared to traditional delivery, mainly because of today's low interest rates on public financing<sup>ii</sup>, but also because:

- the public sector is paying for risk transfer while ultimately retaining the risk of the success of the project,
- private finance is inherently complicated and has necessitated increasing reliance on advisors with long service contracts and high termination costs, and
- commercial risks can be high because of the long contract period and high value of the contracts.

Review of the Private Finance Initiative also found a reliance on poor-quality procurement methods by public agencies, over-complexity in Private Finance Initiative projects, over-specification in agreements, and the transfer of risks inappropriate to private markets, which raised construction costs despite the assurance that risk for construction cost overrun is borne by the private partner.

Given these constraints and market conditions, the gains to be made from P3s are more likely when projects are conceived and packaged to accomplish the integration of products in established private markets with transportation-specific public projects. Opportunities for efficient and effective project development are more likely to be found by packaging the many other purposes for which people and goods travel – essentially, access to private markets – together with the need for mobility and modal choice. Conceived in this way, P3s create opportunities for public agencies to contractually structure the co-development of transportation improvements with partners in established markets for private and/or non-profit goods and services. As suggested in several examples that follow in this report, such partnerships may have the public agency serve as the developer of transportation assets with public revenue sources (i.e., POE-user tolls and/or special assessments for community improvements) in partnership with the broad collection of firms engaged in transport-related markets (e.g., rentals, repairs, the sharing economy, and commercial rail services) and the markets desired by POE-users and border communities as origins and destinations for travel (e.g., commercial, retail, and industrial development).

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<sup>ii</sup> Note that in the US, public or private entities seeking to finance, design, construct, own, or operate an eligible surface transportation project may apply some forms of public financing, e.g., Transportation Infrastructure Finance and Innovation Act (TIFIA) credit assistance. Examples of such entities include state departments of transportation; local governments; transit agencies; special authorities; special districts; railroad companies; and private firms or consortia that may include companies specializing in engineering, construction, materials, and/or the operation of transportation facilities.

## 4 Challenges and Opportunities for Increased Coordination

### 4.1 Key Border Agencies and Organizations

Today more than a dozen federal, state and local agencies have responsibility for transportation and planning in the California-Mexico border region. Table 6 lists agencies and their responsibilities. In addition, both the private sector and non-governmental organizations (NGOs) are active in the region.

One major issue in the border region relates to the difficulty balancing the diverse objectives of the various agencies that have responsibilities for conditions at the border. The various agencies' missions cover a wide range of topics, as shown in Table 6, but each organization's individual mission is relatively narrow in scope (see Appendix B).

Municipalities tend to have lead responsibilities in a large number of categories, including community and economic development, land use planning, health and safety as well as transportation planning. Other groups that work across a variety of topics include Metropolitan Planning Organizations (MPOs), ICTC, and the SCTC, which have key responsibilities for transportation, community development, economic development, health, and safety. Many other agencies, however, focus on only one or two issues, such as security or air quality.

Stakeholders reported that diverse missions among the numerous organizations make it difficult to reach consensus on the most important problems to be solved in the border region. This issue is reflected in the CA-IBAS Problem Statement (#7) as "shared responsibilities among agencies, but differing priorities".

Table 6: Key Border Agencies and their Lead Responsibilities\*

| Key Border Agencies |  | Categories of Focuses and/or Responsibilities |                |            |            |          |                   |        |          |          |       |           |        |          |       |
|---------------------|--|---|----------------|------------|------------|----------|-------------------|--------|----------|----------|-------|-----------|--------|----------|-------|
|                     |  | Air Quality                                   | Built Environ. | Comm. Dev. | Econ. Dev. | Environ. | Foreign Relations | Health | Land Use | Planning | Trade | Transport | Safety | Security | Water |
| <b>Intl.</b>        | North American Development Bank                                      |   |                | X          |            | X        |                   |        |          |          |       |           |        |          |       |
|                     | Border Environment Cooperation Commission                            |   |                | X          |            | X        |                   |        |          |          |       |           |        |          |       |
|                     | International Boundary and Water Commission                          |   |                |            |            | X        |                   |        |          |          |       |           |        |          | X     |
| <b>Federal</b>      | U.S. Customs and Border Protection (Department of Homeland Security) |   |                |            |            |          |                   |        |          |          | X     |           | X      | X        |       |
|                     | U.S. Department of Commerce  |   |                |            | X          |          |                   |        |          |          | X     |           |        |          |       |
|                     | U.S. Department of State   |   |                |            |            |          | X                 |        |          |          |       |           |        | X        |       |
|                     | U.S. Federal Highway Administration (Department of Transportation)   |   |                |            |            |          |                   |        |          |          |       | X         |        |          |       |
|                     | U.S. General Services Administration                                 |   | X              |            |            |          |                   |        |          |          |       |           |        | X        |       |
| <b>Tribal</b>       | Campo Band of Diegueno Mission Indians                               |   |                | X          | X          |          |                   |        |          |          |       |           |        |          |       |
|                     | Ewiiapaayp Band of Kumeyaay Indians                                  |   |                | X          | X          |          |                   |        |          |          |       |           |        |          |       |
|                     | La Posta Band of Diegueno Mission Indians                            |   |                | X          | X          |          |                   |        |          |          |       |           |        |          |       |
|                     | Manzanita Band of Diegueno Mission Indians                           |   |                | X          | X          |          |                   |        |          |          |       |           |        |          |       |
|                     | Quechan Tribe of the Fort Yuma Indian Reservation                    |   |                | X          | X          |          |                   |        |          |          |       |           |        |          |       |
|                     | Southern California Tribal Chairmen's Association                    |   |                | X          | X          |          |                   |        | X        |          |       |           | X      |          |       |
| <b>State</b>        | California Air Resources Board (CARB)                                | X   |                |            |            | X        |                   | X      |          |          |       |           |        |          |       |
|                     | California Department of Public Health                               |   |                |            |            |          |                   | X      |          |          |       |           |        |          |       |
|                     | California Department of Transportation (District 11)                | X   |                |            |            | X        | X                 |        |          |          | X     | X         |        |          | X     |
|                     | California Environmental Protection Agency (Cal EPA)                 |   |                |            | X          | X        |                   | X      |          |          |       |           |        |          |       |
|                     | California Infrastructure and Economic Development Bank              |   | X              | X          | X          |          |                   |        |          |          |       |           |        |          |       |
|                     | California State Transportation Agency                               | X   |                |            |            |          |                   |        |          |          |       | X         | X      |          |       |



| Key Border Agencies |  | Categories of Focuses and/or Responsibilities |               |            |            |         |                   |        |          |          |       |          |        |          |       |
|---------------------|--|---|---------------|------------|------------|---------|-------------------|--------|----------|----------|-------|----------|--------|----------|-------|
|                     |  | Air Quality                                   | Built Enviro. | Comm. Dev. | Econ. Dev. | Enviro. | Foreign Relations | Health | Land Use | Planning | Trade | Transpo. | Safety | Security | Water |
| <b>County</b>       | Imperial County                                    | X   | X             |            | X          | X       |                   | X      | X        | X        |       | X        | X      | X        | X     |
|                     | Imperial County Air Pollution Control District     | X   |               |            |            |         |                   |        |          |          |       |          |        |          |       |
|                     | San Diego County                                   | X   | X             |            | X          | X       |                   | X      | X        | X        |       | X        | X      | X        | X     |
|                     | Air Pollution Control District County of San Diego | X   |               |            |            |         |                   |        |          |          |       |          |        |          |       |
|                     | Imperial County Transportation Commission          |   |               | X          | X          |         |                   |        |          |          |       | X        | X      |          |       |
| <b>Regional</b>     | San Diego Association of Governments               |   |               | X          | X          | X       |                   |        |          | X        |       | X        |        |          |       |
|                     | Imperial Valley Transit                            |   |               | X          |            |         |                   |        |          |          |       | X        |        |          |       |
|                     | San Diego County Regional Airport Authority        |   |               |            | X          |         |                   |        | X        | X        |       | X        |        | X        |       |
|                     | Southern California Association of Governments     |   |               | X          | X          | X       |                   |        |          | X        |       | X        |        |          |       |
|                     | San Diego Regional Water Quality Control Board     |   |               |            |            |         |                   |        |          |          |       |          |        |          | X     |
| <b>Sub-Reg.</b>     | San Diego Metropolitan Transportation System       |   | X             | X          | X          |         |                   |        |          | X        |       | X        | X      |          |       |
|                     | Port of San Diego                                  |   |               |            |            |         |                   |        |          |          | X     | X        |        |          |       |
|                     | North County Transit District                      |   | X             | X          | X          |         |                   |        |          | X        |       | X        | X      |          |       |
| <b>Muni.</b>        | City of Calexico                                   |   | X             | X          | X          | X       | X                 | X      | X        | X        |       | X        | X      | X        |       |
|                     | City of Chula Vista                                |   | X             | X          | X          | X       | X                 | X      | X        | X        |       | X        | X      | X        |       |
|                     | City of Imperial Beach                             |   | X             | X          | X          | X       | X                 | X      | X        | X        |       | X        | X      | X        |       |
|                     | City of National City                              |   | X             | X          | X          | X       | X                 | X      | X        | X        |       | X        | X      | X        |       |
|                     | City of San Diego                                  |   | X             | X          | X          | X       | X                 | X      | X        | X        |       | X        | X      | X        |       |

\*As Identified in the Agencies Mission and Vision Statements

Multiple studies of the border area have resulted in a number of discrete plans and recommendations for improvements of conditions at the California-Mexico border. In meetings with the study team, key stakeholders expressed a desire to speed implementation of the plans and to take advantage of potential synergies and economies that could result from greater cooperation and coordination. While recognizing that there are differences in agency priorities, as well as hard limitations on the use of many funding sources, there was broad agreement across the agencies that by systematically working together, the agencies could speed implementation of plans and projects, improve their effectiveness, make more efficient use of funds, and tap into innovative funding sources to improve conditions at the POEs and in the California-Mexico border communities. Leaders in the region have concluded that a formal process designed to coordinate actions along the border is needed to accomplish coordination.

#### 4.2 SWOC Analysis

Working from the idea that there is a need for some form of network, or coordination mechanism, enabling agencies to work together more effectively to solve these problems, the project team sought to review the strengths, weaknesses, opportunities, and challenges of possible approaches for doing so. This is not a SWOC analysis focused on internal and external factors for a specific agency to address, but rather one that considers the current institutional landscape and assesses the strengths, weaknesses, opportunities and challenges that various strategies for coordination and cooperation among stakeholder agencies might pose. These are factors that the stakeholders would have to consider in deciding whether to move forward with possible coordination actions.

To better understand what could be accomplished by strategies for greater coordination and funding, the project team first conducted an existing plan review that viewed accomplishments to date and compared them to goals identified in the BMP, as an indication of what agencies might wish to improve. The BMP set forth the following goals and objectives:

- Increase the understanding of Port of Entry (POE) and transportation planning on both sides of the border and create a workable plan for prioritizing and advancing POE and related transportation projects
- Develop criteria for prioritizing projects related to existing and new POEs, as well as transportation facilities leading to the California-Baja California POEs; rank mid and long-term projects and services
- Establish a process to institutionalize dialogue among local, state, and federal stakeholders in the U.S. and Mexico to understand their processes to identify those needs as they affect land POEs and connecting transportation infrastructure

The analysis also was informed by direct comments made by stakeholders on ways they would like to improve overall performance.

In the existing plan review, the project team found that while border projects address long wait times at the border, especially those faced by vehicles, many road and intersection projects are not yet funded. Additional projects consider pedestrians, cyclists, and transit users at the border, but also are unfunded. Inconsistencies exist in improving the POE user experience and in integrating land use and economic development planning around POEs with transportation and security functions. Since funding gaps are pervasive across transport modes and planning objectives, the study team flagged funding strategies as a high priority. Additionally, current border plans and projects largely do not address the institutional strategies that might help resolve these issues; institutional innovations also were identified as high priority.

Finally, the project team gave high priority to strategies that could integrate land use and economic development planning with transportation and security planning at the POEs and in border communities, since such strategies were identified by a number of stakeholders as having considerable potential for improving conditions for the border communities.

Approaches that could improve performance with regard to the gaps identified include the following (see also Table 7):

1. Formal Coordination Agreements
2. Coordinated Communications Strategies
3. Formal Collaboration
4. Partnerships for Comprehensive Planning
5. Private & Non-Profit Sector Engagement
6. Strategies to Stretch Existing Funding and Tap New Funding Sources
7. Public Sector Leadership

#### 4.2.1 Opportunities Offered by the Seven Approaches

The various stakeholder agencies have different authorities that often are complementary. Existing relationships among agencies currently involve coordination on a number of specific issues and projects, allowing these complementary authorities to be put to effective use. Building on these successes, the stakeholders could choose to pursue any or all of the seven approaches to increase coordination.

The main strengths of formal coordination agreements would be to solidify relationships and arrangements, which today are often voluntary and ad hoc, and create new partnerships that the agencies could establish and occasionally renew shared goals and objectives, find ways to share and expand resources, and more generally improve decision-making structures and mitigate complex collective action problems as identified in the problem statement. Another benefit of formal coordination strategies and/or mechanisms is their ability to leverage scenario planning and anticipatory governance strategies better than individual organizations can do.

Coordinated communication strategies could be achieved by sharing information through existing organizational channels as well as through increased engagement of the private and non-profit sectors. The advantage of coordinating communication is that messages about the importance of the border to the regional, state and national economies, the need for investment, and the opportunities for improved performance would be more forcefully and clearly enunciated if a number of agencies spoke with one voice. With a number of agencies joining together to get the word out, border community issues could be brought to the attention of larger audiences more effectively than individual agency efforts are likely to accomplish. In addition, coordinated communication strategies involving multiple agencies could reach a wider range of affected interests than individual agencies' communications are likely to do.

Collaboration, working together to produce a desired outcome, can emerge from coordination and communication strategies, taking them a further step forward. Collaborations can be informal and ad hoc, or they can be formal agreements in writing, signed by the parties or even adopted as legal mandates for action. The advantage of formal collaboration agreements is that they provide greater certainty about commitments being made.

Partnerships for comprehensive planning are an activity that could emerge from either coordination or collaboration efforts. For example, agencies could partner to develop plans that cut across sectors like transportation planning, land use planning, and economic development, with different agencies bringing

their own authority, expertise, and funding to the process. Comprehensive planning is an activity currently carried out by cities, counties and, to a more limited extent, by regional agencies. Partnerships for comprehensive planning could bring local comprehensive plans together with regional, state and federal plans to create a border area comprehensive plan. More integrated planning approaches such as this could address issues like improving the POE user experience and providing complementary land uses around POEs that also provide needed economic development. More integrated, coordinated planning could also facilitate data collection across organizations and support the development of more comprehensive performance metrics.

Private sector and nonprofit engagement has the potential to enhance support and build powerful alliances in support of needed actions at and around the border. Engaging the private sector and nonprofits also can be a way to tap into specialized expertise, and in some cases, into funding that would not otherwise be available. This engagement can take a variety of forms, cutting across the other strategies – from coordination and communication to collaboration, engagement in planning, and engagement in project funding and delivery.

Funding strategies for the border could include allocation or reallocation of existing funds to support high priority border projects, new revenue generation through tolls or taxes, or tapping into private sector and nonprofit funds for specific projects and programs. Innovative financing mechanisms offered under federal transportation law, grants from air quality agencies, and revenues from locally sponsored parking districts are just some of the approaches that could be brought to the table by various partners. Finally, public sector leadership, exercised by a single agency or public official, or by several agencies or officials forming a partnership, could be a critical step in making any or all of the preceding alternatives workable. Having a champion can make a huge difference.

Precedents for each of these categories of opportunities exist both in California and from other states, and are discussed in the Task 5 report.

#### 4.2.2 Weaknesses

The SWOC analysis also illustrates some potential weaknesses that the various strategies could exhibit. Overall, the main weaknesses of these strategies relate to their complexity. For example, strong collaboration among organizations is a complex process that may require agencies to compromise and agree to actions which, if acting alone, would not be their highest priority. Change can be difficult for organizations and creating new relationships involves change. In addition, several tasks that could be carried out, such as more comprehensive planning, are substantively complex. Adding roles and responsibilities – like communications leadership – to the current roles and responsibilities of existing agencies and staff could stretch staff too thin, creating a burden that results in other important objectives being given short shrift. In addition, to the extent that increased coordination results in decreased independence of individual organizations, coordination strategies and/or mechanisms may be unpopular. Finally, any operating costs to both create and sustain such strategies would need to be dedicated and reconciled.

#### 4.2.3 Challenges

A major challenge to coordination or collaboration that organizations can face is inertia: the press of daily work makes it difficult to set aside the time for new activities. Challenges that will need to be overcome also include the different priorities that border agencies give to the various issues that arise – congestion, security, emissions, economic development, etc. Agencies often will need to bring along not only their own leadership and staff but those to whom they report to adjust priorities. Limited funding for planning and projects, and existing legal requirements and constraints, could serve as a challenge as well.

Table 7: SWOC Analysis by Category

| Approaches   | INTERNAL FACTORS  |   | EXTERNAL FACTORS   |   |
|--|---|---|--|---|
|  | Strengths   | Weaknesses  | Opportunities  | Challenges  |
| <b>1. Formal Coordination Agreements</b>                                     | Improve Decision Making & Engage Communities                              | Increased Interdependence Requires Decreased Independence | Formalize Coordination<br><br>Develop Better Performance Metrics & Data Collection Across Organizations<br><br>Consolidate Communication with Mexico | Modifying Existing Organizations' Roles and Responsibilities        |
| <b>2. Coordinated Communications Strategies</b>                              | Consolidated Communications   | Additional Responsibility                                 | Promotion of Border's Economic Importance and Community Issues   | Need to Continually Update the Broad Understanding of Border Issues |
| <b>3. Formal Collaboration</b>   | Mitigate Complex Collective Action Problems<br><br>Formalize Partnerships | Complex Process, Requires Internal Trust                  | Reduce Organizational Silos<br><br>Leverage Existing Partnerships  | Elimination of Existing Disconnects Among Organizations             |
| <b>4. Partnerships for Comprehensive Planning</b>                            | More Integrated, Creative Approach to Border Planning                     | Complexity of Scenario Planning & Anticipatory Governance | Focused Scenario Planning & Anticipatory Governance  | Complexity of Comprehensive Systems Approach                        |
| <b>5. Private and Non-Profit Sector Engagement</b>                           | Access to New Partnerships  | Accountability  | Leverage Private & Non-Profit Sectors  | Accommodating Legal Requirements for Private Sector Involvement     |
| <b>6. Strategies to Stretch Existing Funding and Tap New Funding Sources</b> | Expanded Resources  | Operating Costs of Coordination                           | Address Funding Silos; Leverage Private Sector   | Limited Funding Landscape   |
| <b>7. Public Sector Leadership</b>   | Consolidated Leadership for more Effective Planning                       | Pre-Existing Political Disagreement                       | Engaging Public Officials  | Lack of Relevant Political Champion/Will                            |

## 5 Assessing Organizational Strategies to Improve Border Coordination in California

Building directly off the strengths, weaknesses, opportunities, and challenges discussed above, this section evaluates coordination strategies and mechanisms by describing, comparing, and ranking twenty-two distinct strategies. The potential coordination strategies are described in subsection 5.1 and their respective legislative precedents are compared in subsection 5.2. Subsection 5.3 presents results from a review of project delivery options for the strategies.

Additionally, in Appendix C the project team has provided a ranking spreadsheet tool, which includes instructions for use by border stakeholders, and is included to inform a future MCA based ranking exercise that could be conducted by border stakeholders.

### 5.1 Description of Strategies for Coordination

The project team developed a list of twenty-two potential coordination strategies and/or mechanisms capable of addressing regional mobility needs and border community issues. These strategies have been classified as (1) short-term strategies (0-2 years); (2) medium-term strategies (2-5 years); and (3) long-term strategies (5+ years).

#### 5.1.1 Short-Term Strategies

Table 8 provides a brief overview of the strengths and limitations of twelve short-term strategies. The twelve strategies are discussed in detail in the following paragraphs.

##### 5.1.1.1 *Creation of a Study Commission*

The creation of a formal study commission would establish a temporary unit or group of divisions within an agency or multiple agencies for the purpose of accomplishing a definite objective. Often times a study commission allows for higher visibility of the issues at hand for other agencies when resolving a specific problem or concern. An example of a transportation-focused commission was the National Surface Transportation Policy and Revenue Study Commission, which examined the condition and future needs of the nation's surface transportation system, and also identified short and long-term alternatives to replace or supplement the fuel tax as the principal revenue source to support the Highway Trust Fund.

##### 5.1.1.2 *New Border Working Group(s)*

One or more new border working groups could be set up around specific goals or small technical groups appointed to study and report on particular issues and make recommendations based on their findings. This model already exists to a certain extent; Caltrans and other agencies in the region currently utilize working groups to meet, discuss problems, and provide recommendations on border-specific topics. These include groups like the Freight Stakeholders Working Group and the Committee on Binational Regional Opportunities. The new group or groups would focus directly on issues identified in the CA-IBAS Problem Statement that impacts regional mobility (see Table 5).

##### 5.1.1.3 *Additional Responsibilities for the Existing Border Relations Council*

Currently the Border Relations Council has the ability to identify new border priorities and fundable projects in the areas of infrastructure, trade, environment, health, and security while supporting current and ongoing activities such as the Border Governors Conference, trade missions, border workgroups, and coordinating specific future projects with Mexico (Nunez, 2006). Thus far, the Council has primarily focused on environmental issues. An opportunity may exist to incorporate additional topics on program areas of trade, immigration, environment, energy, transportation, health, homeland security, agriculture, education, and tourism.

#### *5.1.1.4 Information Clearinghouse*

A clearinghouse is a central institution or agency for the collection, maintenance, and distribution of materials and information. An example of this type of entity is the California State Clearinghouse (SCH), which functions as a division under the Governor’s Office of Planning and Research. The clearinghouse serves as the “State Single Point of Contact” for coordinating state and local review of applications for federal financial assistance applications, federally required state plans, direct federal development activities, and federal environmental documents (Alex, 2012). The purpose of the process is to afford state and local participation in federal activities occurring within California. A border clearinghouse could operate independently as well as work with the SCH to jointly promote and serve as a single point of contact for coordinating planning and programming efforts along the California–Mexico Border.

#### *5.1.1.5 Increase Public Information*

Communication with the public can be increased to support border planning through existing agencies’ respective public information, public relations, and/or press offices. Alternatively, this strategy could be coordinated through a combination of such offices to increase dialogue with local, state, and national media.

#### *5.1.1.6 Advocate for Additional Funds Earmarked for Border Planning*

This strategy may focus on increasing the amount of funding for border communities and agencies in general, or increasing the amount of earmarked funds for specific border planning projects and/or programming. This is currently a common practice across most levels of government. This strategy could be used individually and in conjunction with other recommended strategies. However, some caution may be in order, as advocating for more attention to the border may result in fewer resources in other areas, so reaching a collective agreement on priorities may be required.

#### *5.1.1.7 Realign Existing Funding and Programming*

Agencies can realign and reprioritize current funding streams to align better with the goals of CA-IBAS and address issues in the CA-IBAS Problem Statement. Again, this will require substantial agreement on resource allocation, and perhaps even some legislative changes to existing funding rules.

#### *5.1.1.8 Expansion of Public Private Partnerships*

Public Private Partnerships (P3s) extend the role of the private sector in the provision of what are generally considered to be public services through contracts with private sector partners to design, finance, build and manage assets and/or deliver associated services. Multiple avenues exist for compensating the private sector, such as user fees paid directly to the private firm, public compensation paid to the private firm for public use of the facility, or direct public payment to the private firm for provision of the facility. The new construction of a tolled State Route 11 that will connect Route 905 with the new Otay Mesa East POE is an example of innovative financing. Tolls will serve as the backbone for financing the project. On the U.S. side, the project team plans to pursue federal credit assistance through the Transportation Infrastructure Finance and Innovation Act (TIFIA). Using this sort of partnership for projects near a California POE is not without risk, but the mechanism has worked successfully in California and numerous other states.

#### *5.1.1.9 Public-Private Initiative*

A formal Public-Private initiative is typically a privately funded group, council, or think tank that focuses on critical economic and policy issues facing a specific region. The most long-standing version of a Public-Private Initiative is the Regional Plan Association (RPA) based in New York City. The RPA is a research and advocacy organization that works to improve the prosperity, infrastructure, sustainability and quality of life of the New York-New Jersey-Connecticut metropolitan region. A border-specific example of this is the Transportation and Trade Corridor Alliance in Arizona. This initiative is comprised of the Governor of Arizona and the Arizona Department of Transportation, working collaboratively with the Arizona-Mexico



Commission (AMC), Arizona Commerce Authority, and Arizona Office of Tourism. The focus is on bringing together the public and private sector, state and local governments, planning organizations, transportation and logistics companies, port authorities and other relevant stakeholders to assess the viability of border-related opportunities for Arizona. The AMC is the leading entity that coordinates other private sector members into the initiative.

#### *5.1.1.10 Memorandum of Understanding*

Memoranda of Understanding (MOUs) are bilateral or multilateral agreements between two or more parties, to act with a common purpose. These are commonly seen throughout California and typically with many agencies involved. For example, Caltrans has entered into MOUs in the environmental planning and preservation sectors, specifically to meet requirements under the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). MOUs have also been created to facilitate fund swapping or exchanges and to fund and operate transit services. As a part of CA-IBAS, an MOU could be employed for project funding where each party agrees to use its own funds to carry out a certain aspect or portion of a project.

#### *5.1.1.11 Appointed Coordinator*

A single individual or entity can be appointed whose function is to coordinate the activities of an inter-organizational system with respect to a given area, issue, problem, or program. This organizational structure is often used in combination with other forms of coordination and does not typically operate as the sole method. Also, it is important to note that the level of effectiveness for this strategy depends on how much authority the coordinator is granted.

#### *5.1.1.12 Implementation Monitoring Evaluation Committee*

This type of committee can monitor growth, transportation demand, and anticipated future development along the border and evaluate the needs for investment. Such a committee would usually be comprised of experts in the field; these experts could be drawn from key agencies, or could be appointed experts who are independent of any of the agencies. Such a committee would offer a data driven, expert perspective on border issues and would advise the agencies and key decision-makers while also informing the public. Currently this strategy is being explored as an option for border planning in Arizona. However, in the Arizona example, the committee has still not been fully funded so its effectiveness remains unknown. Other limitations include sustaining agency commitment, resources required to keep the committee functioning effectively, and the problem of meeting fatigue.



Table 8: Summary of Short-Term Coordination Strategies

| <b>Strategy</b>   | <b>Strengths</b>  | <b>Limitations</b>   |
|---|---|--|
| Study Commission  | <ul style="list-style-type: none"> <li>- A more vetted approach to analyzing the best operational strategy for planning.</li> <li>- Typically more visible at a higher level.</li> <li>- May be viewed as independent and fair minded experts</li> <li>- Research can be more persuasive.</li> <li>- Could be appointed by a single agency, a group of agencies, or a higher level (e.g. the Legislature)</li> </ul>                                  | <ul style="list-style-type: none"> <li>- Requires agreement to appoint</li> <li>- Focus on analyzing options may delay the implementation process, further putting off potential solutions.</li> <li>- Requires budget for commission meetings, staffing</li> <li>- May be viewed as elitist</li> <li>- May not reach consensus or even substantial majority recommendation</li> </ul> |
| Border Working Group  | <ul style="list-style-type: none"> <li>- Can foster on-going communication, information sharing, and the exchange of best practices.</li> </ul>   | <ul style="list-style-type: none"> <li>- Takes on a less formal or even ad hoc approach.</li> <li>- Results dependent on the level of participation.</li> <li>- May increase staff costs for the participating agencies.</li> </ul>  |
| Additional Responsibilities for the Existing Border Relations Council | <ul style="list-style-type: none"> <li>- Coordinate cross-border programs, initiatives, projects and partnerships within California state agencies.</li> <li>- Establish California state agency policies for the collection and sharing of cross-border data.</li> <li>- Identify and recommend changes in the law needed to achieve the goals of the Council.</li> <li>- Provide an annual Council activities report to the Legislature.</li> </ul> | <ul style="list-style-type: none"> <li>- Responsibilities are limited to existing legislation, and are subject to changes in California state legislation.</li> <li>- May not wish to take on additional responsibilities</li> <li>- May require additional legislation to expand areas of responsibility.</li> </ul>  |
| Information Clearinghouse   | <ul style="list-style-type: none"> <li>- One-stop locus for information about border issues, agency actions</li> </ul> <p>Can serve as a repository for reports, meeting minutes, etc.; also may produce newsletter-type summaries of monthly or quarterly issues and actions</p>   | <ul style="list-style-type: none"> <li>- Requires staffing</li> <li>- Only works if agencies are mandated to deposit reports and meeting minutes etc. in the clearinghouse or link to it</li> </ul>  |
| Increased Public Information  | <ul style="list-style-type: none"> <li>- Provides reliable consistent information for border related projects.</li> </ul>   | <ul style="list-style-type: none"> <li>- May increase staffing cost for participating agencies.</li> <li>- Could be combined with clearinghouse function.</li> </ul>   |
| Advocate for Additional Funds/ Earmarked Funds for Border Planning    | <ul style="list-style-type: none"> <li>- Expand funding avoids having to reallocate scarce resources; doesn't upset the existing agency environment.</li> <li>- Could provide larger political voice for region</li> </ul>  | <ul style="list-style-type: none"> <li>- Requires high level of political support and uses up political capital; other projects may have higher priority.</li> <li>- Potential higher costs for individual agencies prioritizing staff for this purpose.</li> </ul>  |
| Realign Funding and Programming                                       | <ul style="list-style-type: none"> <li>- Might not require additional funds to be raised or laws to be changed</li> </ul>   | <ul style="list-style-type: none"> <li>- Earmarked funds, prior commitments of funds, and competing priorities in the broader Southern California region make this difficult to do.</li> <li>- Might require legislative action if agencies lack discretion to reallocate funds.</li> </ul>  |
| Expansion of Currently Authorized Public Private Partnerships         | <ul style="list-style-type: none"> <li>- Could tap private sector funding and project delivery capabilities</li> </ul>  | <ul style="list-style-type: none"> <li>- Private sector may not see profit potentials with respect to some of the problems that need to be solved.</li> <li>- P3s sometimes raise concerns about transparency &amp; accountability.</li> </ul>   |
| Public-Private Initiative   | <ul style="list-style-type: none"> <li>- Leadership/board could be private, nonprofit, public; public agencies could support particular planning efforts or projects.</li> <li>- Faster rate of return on research and studies for the border.</li> </ul>   | <ul style="list-style-type: none"> <li>- Creates another organization in a field that already has many actors; would need solid commitment or likely to fade away after a first effort.</li> </ul>   |
| Memorandum of Understanding   | <ul style="list-style-type: none"> <li>- All agencies would know specific role, scope of work relating to border planning.</li> <li>- No major institutional change needed.</li> </ul>  | <ul style="list-style-type: none"> <li>- Not legally binding.</li> <li>- Signatories would have to agree to a clearly defined set of goals, or priorities, possibly including commitments of agency resources.</li> </ul>  |
| Appointed Coordinator   | <ul style="list-style-type: none"> <li>- Could be advocate for border issues in addition to serving to provide better, earlier information; could be assigned to provide reviews and impact assessments.</li> <li>- Could rotate among agencies or could be a position assumed by one agency e.g. Caltrans.</li> </ul>  | <ul style="list-style-type: none"> <li>- Information and advocacy not necessarily enough if no ability to offer incentives.</li> <li>- Agencies that do not see themselves as needing to be at the table can be problematic.</li> </ul>  |
| Implementation Monitoring Evaluation Committee                        | <ul style="list-style-type: none"> <li>- Stresses the importance of representatives at the highest levels of affected governments.</li> <li>- Also includes appropriate stakeholders with a direct and vested interest in project implementation.</li> </ul>  | <ul style="list-style-type: none"> <li>- Can be difficult to fund, this is the case in AZ.</li> <li>- High level of Agency commitment needed.</li> <li>- Maybe an alternative to the Appointed Coordinator strategy,</li> </ul>  |

### 5.1.2 Medium-Term Strategies

In terms of medium-term strategies, strategies have been identified as viable solutions. In addition to descriptions of the strategies below, Table 9 provides a brief overview of the strengths and limitations of each strategy.

#### 5.1.2.1 *Special District*

Simply put, a special district is a separate local government that delivers a limited number of public services to a geographically limited area (Mizany & Manatt, 2010). Under existing state law special districts can be formed by local residents and landowners supported by the approval of the state for the local performance of governmental or proprietary functions within limited boundaries. Typically, special districts are created to collect taxes to benefit the district's infrastructure or to provide a specific service. Each district has its own governing board. As an example, the Santa Cruz Special Port District is a thirty-five square mile district that collects and appropriates a tax for port infrastructure.

#### 5.1.2.1 *Parking District*

California cities and counties may form a parking district to levy assessments to finance the acquisition of land and the improvement and construction of parking lots and facilities, and to cover operating costs. These parking districts can also issue bonds to finance improvements. For example, the City of San Diego currently has established six parking districts around the city to generate revenue and finance amenities within the district. A parking district could be part of a larger strategy to encourage park and ride or park and walk at the border and/or to support economic development around the border. State legislation (Streets and Highways Code § 31500 et seq., 35100 et seq. and 11000 et seq.) allows cities and counties to set up parking districts and either levy assessments or issue bonds to finance the cost as well as collect meter fees or other user charges. Caltrans can partner with other entities but does not have specific authority to create a Parking District on its own. A city or county could set up a district and Caltrans or other partners could provide other services or facilities as part of an overall plan. For example, Caltrans perhaps could provide the land with an agreement in which the partner would provide an equivalent number of spaces devoted to Park and Ride.

#### 5.1.2.2 *Joint Powers Authority*

A joint powers authority, agency, or administration (JPA) is established when public officials of two or more public agencies with certain powers in common agree to create a separate, common legal entity or establish a joint approach to work on a common problem, fund a project, or act as a representative body for a specific activity (Cypher & Grinell, 2007). Typically JPAs are created to allow agencies to share resources and combine services. This approach saves time and money for member agencies and the local taxpayers benefiting from those services. JPAs may be more effective than MOUs because the JPA is a separate entity and the commitments are binding. Existing California legislation enables multiple JPAs to exist for multiple purposes. While there are no official categories for types of JPAs, topics typically fall into the following five broad groups: public services, financial services, insurance pooling and purchasing discounts, planning services, and regulatory enforcement.

Table 9: Summary of Medium-Term Coordination Strategies

| Strategy               | Strengths   | Limitations   |
|------------------------|---|---|
| Parking District       | <ul style="list-style-type: none"> <li>- Can be used to generate revenue to update and maintain existing facilities.</li> <li>- Capitalizes on the amount of parking surrounding POEs.</li> <li>- Can be tailored to needs of specific POE.</li> </ul>  | <ul style="list-style-type: none"> <li>- More in depth assessment of legal requirements needed for general rule cities</li> <li>- Current law may restrict purpose of money raised</li> </ul> |
| Special District       | <ul style="list-style-type: none"> <li>- Subjects the activity and operation of the special district to the desires of the voters</li> <li>- Increased transparency as opposed to traditional forms of govt.</li> <li>- Localizes investments.</li> <li>- Has the power of taxation and spending like other governmental entities.</li> </ul> | <ul style="list-style-type: none"> <li>- New legal entity requires voter approval, operates under authority granted by the state, and removes authority from local agencies.</li> </ul>       |
| Joint Powers Authority | <ul style="list-style-type: none"> <li>- Decision process is streamlined</li> <li>- Sharing resources and combining services, the member agencies and their taxpayers save time and money.</li> </ul>   | <ul style="list-style-type: none"> <li>- Requires mutual trust, formal agreement between partner agencies that may not exist.</li> </ul>  |

### 5.1.3 Long-Term Strategies

Finally, seven coordination strategies have been identified in the long-term category. In addition to descriptions of the strategies below, Table 10 provides a brief overview of the strengths and limitations of each strategy.

#### 5.1.3.1 New Border Council for Transportation

The creation of a new border council for transportation would be similar to the existing BRC, but the new council would be specifically tasked to update California–Mexico activities and programs with a transportation focus. Since this would also require a legislative change, a new border council has the opportunity to become the central organizing body overseeing and collaborating on California-Mexico border issues.

#### 5.1.3.2 External Peer Review Group

An external peer review group independently reviews and evaluates an authority's planning, engineering, financing, and other elements of the authority's plans. It then issues an analysis of appropriateness and accuracy of the authority's assumptions and an analysis of the viability of the authority's funding plan. The group also can include any observations or evaluations the group deems necessary. A California specific example is the State Legislated creation of the California High Speed Rail Peer Review Group. The formation of the group was included in the State Legislation that created the California High Speed Rail Authority. Depending on the complexity of the coordination mechanism pursued, peer review could be a shorter-term strategy if it is not legislatively established.

#### 5.1.3.3 Border Toll Authority

A border toll authority could implement a border infrastructure-pricing scheme to finance border planning and related infrastructure improvements, similar to the way bridge toll authorities operate in California. This strategy is one that can be considered in the future for POEs. Tolling for access near a POE will take place with the new construction of State Route 11 as part of the Otay Mesa East POE project. Financing for the project includes bonds, financing from both U.S. and Mexican governments, and other sources. Avariant model exists in Northern California -- the Toll Bridge Program Oversight Committee (TBPOC). TBPOC provides project oversight and project control for the Toll Bridge Seismic Retrofit Program in California.

#### *5.1.3.4 Enhanced Infrastructure Financing District*

An Enhanced Infrastructure Financing District (EIFD) allows public infrastructure investments to be repaid through the incremental increase in tax revenue resulting from higher assessed property values of an area as it develops or redevelops. Funds can be used to finance physical redevelopment, infrastructure, and other community-improvement projects. Infrastructure financing districts operate in much the same way as redevelopment activities did while tax increment financing was still a viable option for redevelopment in California, but with higher scrutiny than previously. While still relatively new in California, EIFDs allow cities, counties, special districts, and the private sector to invest in infrastructure and have been formed in Los Angeles and San Jose. This strategy typically tends to cover smaller areas than an entire border region.

#### *5.1.3.5 Infrastructure Border Financing Agency*

A border-financing agency can make infrastructure projects affordable for communities throughout the U.S.-Mexico border region by combining grant funds with loans and other forms of financing. This model exists at the federal level under the North American Development Bank, specifically the Border Environment Infrastructure Fund (BEIF). However, the BEIF only funds infrastructure that alleviates water-specific environmental concerns. A new state or federal version of this agency could be sought by working with state and federal elected officials.

#### *5.1.3.6 Multi-Functional Regional Mobility Authority*

This organizational strategy would allow for the formation of a new political subdivision at the request of one or more counties or cities to finance, acquire, design, construct, operate, maintain, expand or extend transportation projects. This model does not exist in California but Texas has taken on this approach, specifically to address growing concerns of mobility and economic vitality at the Texas-Mexico border. Texas' Regional Mobility Authorities (RMA) fund, develop and operate transportation projects on the United States side that facilitate border movement.

#### *5.1.3.7 Comprehensive Regional Agency (Special Area Commission)*

A comprehensive regional agency (CRA) (sometimes called a special area commission) would be a new governmental entity with integrated land use planning and regulatory authority over border development. The agency would create plans and regulations related to the use of land in a specific zone. The purview of this type of agency would be development activities including the construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to a specific region. In California the most similar organization is the California Coastal Commission. In this model, the commission has regulatory control to make sure all planning efforts are in accordance with state and federal activities and that projects meet the requirements for federally licensed, permitted or assisted activities, wherever they may occur.

Table 10: Summary of Long-Term Coordination Strategies

| Strategy                                     | Strengths  | Limitations   |
|--|--|---|
| Border Council for Transportation            | <ul style="list-style-type: none"> <li>- Could coordinate cross-border programs, initiatives, projects and partnerships within California state agencies.</li> <li>- Establish California state agency policies for the collection and she of cross-border data.</li> <li>- Identify and recommend changes in the law needed to achieve the goals of the Council.</li> <li>- Increased transparency for border transportation planning.</li> </ul> | <ul style="list-style-type: none"> <li>- Would require political sponsorship at the state level.</li> <li>- Responsibilities are limited to existing legislation, and are subject to changes in California state legislation.</li> </ul>  |
| External Peer Review Group                   | <ul style="list-style-type: none"> <li>- Independent external peer experts provide information, intelligence on political experience, implementation experience, lessons learnt, and future recommendations.</li> <li>- Peers provide contacts with experts in other fields that connect overlapping interests.</li> <li>- A "snowball effect" occurs when an initial inquiry generates substantially more information.</li> </ul>                 | <ul style="list-style-type: none"> <li>- Would require legislation and appointments from State Level officials.</li> <li>- Group members would need external experience in border mobility planning and project delivery</li> <li>- Peer review adds time to decision process.</li> </ul> |
| Border Toll Authority                        | <ul style="list-style-type: none"> <li>- Can generate funds with fewer restrictions on spending than current funding sources.</li> </ul>   | <ul style="list-style-type: none"> <li>- May impact populations inequitably.</li> <li>- Requires detailed analysis.</li> <li>- Could be controversial, if Otay II is a success this strategy may be viable.</li> </ul>  |
| Infrastructure Financing District            | <ul style="list-style-type: none"> <li>- Allows investment programs to achieve goals and allows beneficial uses to be integrated—rather than programmatic, grant, or stovepipe investments.</li> <li>- Integrating investments creates multiple revenue streams that can be brought together.</li> </ul>   | <ul style="list-style-type: none"> <li>- EIFDs would require voter approval</li> <li>- May direct property tax revenue from other government districts like counties, education, and special districts.</li> </ul>  |
| Infrastructure Border Financing Agency       | <ul style="list-style-type: none"> <li>- Funds may be used to support projects that serve a single community or regional approaches that serve multiple communities and/or outlying areas.</li> </ul>  | <ul style="list-style-type: none"> <li>- Depending on the scope of the bank some infrastructure projects may not qualify for funding.</li> <li>- Eligibility is based on a set of general project criteria.</li> </ul>  |
| Multi-Functional Regional Mobility Authority | <ul style="list-style-type: none"> <li>- A Regional Mobility Authority (RMA) could fund, develop, and operate transportation. Projects needed to keep up with growth on both sides of the border.</li> </ul>   | <ul style="list-style-type: none"> <li>- State funding can be difficult to obtain.</li> </ul>   |
| Comprehensive Regional Agency                | <ul style="list-style-type: none"> <li>- A Comprehensive Regional Agency (CRA) could provide greater coordination and oversight of land use and transportation planning at the border</li> <li>- CCC model has regulatory control over all federal activities and federally licensed, permitted or assisted activities</li> </ul>  | <ul style="list-style-type: none"> <li>- Time to implement could be lengthy.</li> <li>- May require the most comprehensive legislation</li> <li>- Would likely require existing authorities to cede some responsibilities.</li> </ul>   |

## 5.2 Legislative Frameworks Supporting Coordination Strategies

Generally speaking, the strategies in the short-term category require few or no legal steps or legislative changes to adopt, and present few institutional barriers to implementation. Some of those in the medium-term category could possibly require some legislative changes and present more institutional challenges. The strategies outlined in the long-term category are most likely to require either legislative enactment or major new institutional arrangements. Each of the strategies and mechanisms described below could be used alone or in combination to improve collaboration, planning, funding, and project delivery in the border region. Tables 11 to 13 provide review of the strategies by their respective categories.

Table 11: Review of Short-Term Coordination Strategies

| Strategy or Mechanism   | Can be Implemented Under Existing Legislation? | Would Require New Legislation? | Model Legislation   | Potential New Administrative or Legislative Requirements  |
|---|--|--------------------------------|---|---|
| Study Commission  | Yes  | No                             | N/A   | - Necessary to decide what agencies or individuals would establish the commission and appoint its members, how it would be funded, and what specific issues it would address.   |
| Border Working Group  | Yes  | No                             | N/A   | - Need to determine whether agencies would be willing to participate in groups and can agree on the tasks to be undertaken and individual commitment to the endeavor.   |
| Additional Responsibilities for the Existing Border Relations Council | Yes  | No                             | - AB 3021, Border Relations Council   | - Stakeholders could lobby the Legislature to provide specific additional authority and direction in mobility areas to the BRC.   |
| Information Clearinghouse   | Yes  | Possibly                       | - California Environmental Quality Act<br>- Executive Order 12372, Intergovernmental review of Federal programs | - If this were to take the form of a new agency or organization, then some legal or legislative steps would need to be taken.<br>- Otherwise this strategy would primarily involve the allocation of existing resources to serve this function. |
| Increase Public Information   | Yes  | No                             | N/A   | - Requires some additional staff resources.<br>- Activities could also be coordinated through an individual or individuals at one or more agencies.   |
| Advocate for Additional Funds Earmarked for Border Planning           | Yes  | No                             | N/A   | - Some additional staff resources would be needed to coordinate these efforts and possibly to prepare supporting materials  |
| Realign Funding and Programming                                       | Yes  | No                             | N/A   | - The main challenge here is agreeing on programs and projects that should be prioritized   |
| Expansion of Public Private Partnerships                              | Yes  | No                             | - AB 680  | - Requires participation from transportation agencies and/or cities and counties  |
| Public-Private Initiative   | Yes  | No                             | N/A   | - Requires substantial funding, hiring a director and staff, and establishing a clear agenda.   |

Table 11: Review of Short-Term Coordination Strategies (Continued)

|  |     |          |  |  |
|--|-----|----------|--|--|
|  |     |          |  |  |
| Memorandum of Understanding                    | Yes | No       | N/A  | - These are not legal obligations  |
| Appointed Coordinator                          | Yes | No       | N/A  | - The level of effectiveness for this strategy depends on how much authority the coordinator is granted                                |
| Implementation Monitoring Evaluation Committee | Yes | Possibly | - Policy change within State Department of Transportation (see AZ example) | - The committee would be charged with reporting to higher authorities, which could range from the agency leadership to the Legislature |

The short term strategies present few, if any, legal or institutional challenges to implementation beyond the willingness of the various agencies working on the border to implement them, though forming P3s would require the involvement of the business community.

Table 12: Review of Medium-Term Coordination Strategies

| Strategy or Mechanism  | Can be Implemented Under Existing Legislation? | Would Require New Legislation? | Model Legislation  | Potential New Administrative or Legislative Requirements  |
|------------------------|--|--------------------------------|--|---|
| Parking District       | Yes  | No                             | - Parking District Law of 1943<br>- Parking Law of 1949<br>- Parking District Law of 1951<br>- Parking and Business Improvement Area Law of 1989 | - Requires a charter or general law city to adopt an ordinance for creating a district  |
| Special District       | Yes  | No                             | - Knox-Cortese-Hertzberg Local Government Reorganization Act   | - Requires a 2/3 vote in favor of the district in order to create a district  |
| Joint Powers Authority | Yes  | No                             | - Joint Exercise of Powers Act   | - No particular legal steps are required for a JPA other than the written agreement of the participants stating the purpose of the agreement and the shared powers to be exercised. |

Medium-term strategies may present some moderate challenges in terms of meeting legal requirements to establish parking or special services districts or negotiating the terms of joint powers agreements.

Table 13: Review of Long-Term Coordination Strategies

| Strategy or Mechanism                                   | Can be Implemented Under Existing Legislation? | Would Require New Legislation? | Model Legislation  | Potential New Administrative or Legislative Requirements  |
|---|--|--------------------------------|--|---|
| New Border Council for Transportation                   | No   | Yes                            | - AB 3021, Border Relations Council                          | - Can be modeled after existing legislation that established the current Border Council in CA.  |
| Border Toll Authority                                   | No   | Yes                            | - AB 144, Toll Bridge Program Oversight Committee            | - State level action to establish a new regional program  |
| Infrastructure Financing District                       | Yes  | No                             | - AB 628, Enhanced Infrastructure Financing Districts        | - Requires city or county level adoption for an infrastructure-financing plan.  |
| Infrastructure Border Financing Agency                  | No   | Yes                            | - Border Environment Cooperation Agreement of 1993 (Federal) | - State level action to identify sources of funds for loans, criteria for loans, oversight.   |
| Regional Mobility Authority                             | No   | Yes                            | - Regional Mobility Authority Act (Texas)                    | - State level action to provide local governments with more control over local planning, faster project implementation, improved mobility and safety, and revenue generation.   |
| Comprehensive Regional Agency (Special Area Commission) | No   | Yes                            | - Coastal Commission Act                                     | - New legislation that adopts a Strategic Plan setting forth its vision, mission, core values, and program goals for the border.<br>- Also establish rules for local governments to prepare Local Border Programs to guide development in the border region, in partnership with the Border Commission. |

Long-term strategies present the most challenges, in terms of complexity and time to achievement, and would likely involve legislative action or even voter approval to establish new institutional frameworks.



### 5.3 Fit of Project Delivery Options to Coordination Strategies

This section explores how short-, medium-, and long-term strategies/mechanisms may hold the potential to expand the options and improve the delivery of California border projects. As discussed in section 3.4, design-bid-build, design-build, and P3s in project delivery involve the public and private sector differently, include different risks, and use different forms of contract, which come with their own ways of addressing risk and their own flaws in doing so.

#### 5.3.1 Short-term Strategy Review

Short-term strategies that were evaluated in relation to design-bid-build, design-build, and P3 options for project delivery include: (1) increase public information, (2) creation of a clearinghouse, (3) establishing a public-private initiative, and (4) memoranda of understanding.

Over the short-term, each of these strategies builds on the other to create a more robust basis for project delivery, by strengthening connections between:

- the public organizations managing border development, including information about the projects they are planning to develop;
- the private firms and social organizations that may have the interest in becoming partners on current or future projects; and
- the residents and POE-users that may be asked to pay taxes or tolls for border-area infrastructure.

The increase in public information, the creation of an information clearinghouse, the establishing of a public-private initiative, and an MOU all align well with all three methods of project delivery because they can sharpen and distinguish communications about border plans and projects.

It is worth highlighting the synergistic role these mechanisms can play in enabling options for project delivery and shaping the financial and functional (i.e., design) prospects of border projects.

- If the public information includes ideas and studies that help to shape projects, before the purposes and scopes of those projects have been solidified in agency plans, this information-sharing can broaden the network of public agencies and private firms that assist in meeting border-area goals by inviting them to participate in shaping the projects to be developed at the border. This may assist, for example, the shaping of projects that are more integrated with local land uses, and that expand on opportunities for economic development along with border security and throughput.
- Non-binding Memoranda can be the basis for alliances between public organizations (city-county, state-local, federal-state-local), private firms, or non-profit organizations, in any combination. By building a broader collection of interested public, private, and non-profit organizations in an organized way, along with opportunities to fortify the ideas that are mutually beneficial to multiple parties in Memoranda of Understanding, these mechanisms open the door to more flexible and strategic alliances and strategies for project design, finance, and delivery.
- With a private think-tank and a public information clearinghouse, both the public and private sector can enhance their organizational capacity to develop ideas for border-related projects, develop analytics for evaluating project proposals, and develop preferences for project performance in regard to border issues. Building this capacity is an important step in preparing to address the border issues that may need the best that both the public and private sector have to offer.

- With enhanced organizational capacity, the public and private sector are more likely to share with each other the information that is critical in defining/scoping projects to meet the needs of POE-users. This is key to the arrangement of adequate funding from both public and private sources (i.e., funding may come from multiple sources and require sustained conversations in order to see projects brought through design and construction).
- Other strategies/mechanisms that require more time and organizational input to be developed, such as strategies in the medium-term category, may very well depend on the formation of platforms such as these for sharing ideas that are under development among public agencies and private organizations, but also with the non-profit sector interested in providing social services to POE-users and, importantly, the property owners in the border areas who would conceivably be asked to participate in the formation of a special district.

Together, these short-term mechanisms may set the groundwork for the public sector to ascertain private market interest in border projects and the economic development of land in border areas. Lastly, they provide a platform for communicating with local communities and social and environmental organizations, which may assist in unifying what may currently be disparate interests in border development and operations.

### 5.3.2 Medium-term Strategy Review

Over the medium-term, coordination strategies include JPAs and Special Purpose Districts. On the California side of the border, these medium-term strategies could make it easier to fund and develop projects using the full array of options for project delivery. This could occur, for example, if these mechanisms were used to pool public financial resources and implementation expertise in each area of POE influence. Such an arrangement could play out as follows:

- The CA-IBAS Task 2 report contained a series of maps depicting the areas of influence of border traffic for passengers and cargo in California (Caltrans and UCCONNECT 2016a). Special Assessment Districts in conformance with these boundaries could reflect the principle of having the property owners who benefit from border-area infrastructure pay for infrastructure, and could provide reliable sources of public revenue for well-defined public improvements. Any taxes or regulations that might be imposed within a district should be carefully drafted so as not to unduly burden interstate commerce.
- Together with JPAs to support project implementation, the public infrastructure needed to support economic development and social and environmental well-being would be more assured, and thus may attract more steady and dedicated private market interest. For example, the development of a public parking structure at a POE can become a reliable source of local financing from parking fees. The availability of parking is attractive to private firms whose businesses are likely to align with the interests of the POE-user in retail and commercial opportunities, and with local communities in economic development.
- Predictable public investment and border-oriented JPAs to oversee project development would provide a stronger/consolidated public counterpart to private investment interests. Doing so would enhance the public sector's chances of successful partnerships, such as P3 developments, that serve the public interest.

In particular, these medium-term strategies can be expected to more accurately integrate the interests of local communities with the activities of the collection of public agencies in border developments. Since

local communities (i.e., the specific commuter-sheds identified in the maps provided in the CA-IBAS Task 2 Report) send and receive people and cargo across the border, property owners in these areas are most likely to be interested in fast, reliable, and safe border travel, but also environmentally healthy and economically vital border development.

### 5.3.3 Long-term Strategy Review

Over the long-term, strategies could extend coordinated development across the border with Mexico. These organizational strategies could require the formation of a new political subdivision formed by one or more counties or cities to finance, acquire, design, construct, operate, maintain, expand or extend transportation projects. Texas has taken on this approach to address growing concerns of mobility and economic vitality at the Texas-Mexico border. The state's Regional Mobility Authorities fund, develop and operate transportation projects on the United States side that facilitate border movement (Caltrans and UCCONNECT 2016c, 25). A Comprehensive Regional Agency, on the other hand, would be a more formal partnership with cities, counties, and other governmental institutions. Like the California Coastal Commission, the CRA may have regulatory control to make sure all planning efforts are in accordance with federal activities and that projects meet the requirements for federally licensed, permitted or assisted activities, wherever they may occur (Caltrans and UCCONNECT 2016c, 24). The Comprehensive Regional Agency would perform a regulatory function that integrates land use and transportation, which would complement the focus of a Regional Mobility Authority.

- These long-term strategies raise the prospect of larger and more reliable sources of public financing through border/POE-user tolls or fees, which then, in turn, create more certainty for the firms that are typically involved in large transportation P3 projects as well as the public agencies developing border transportation assets.
- Tolls for POE crossings are an additional and important source of public revenue because they assist border facilities in serving the economic principle of having those who benefit from facilities, pay for facilities. POE-users are comprised of both U.S. residents and foreign visitors/immigrants.
- To be equitably sourced, public revenues for border area development would be sourced from both residents/businesses in the areas impacted by border activities and POE-users traveling across the border.
- Long-term strategies are also more likely to generate a public organization with the border focus needed to effectively examine value for money in long-term (DBFOM) P3 transportation projects at the border.

## 6 Comparison, Evaluation, and Ranking of Strategies

Utilizing critical information from the description of each strategy, legislative review, and the analysis of the fit of project delivery options, the next step in the strategy review process was to systematically evaluate the organizational characteristics of each strategy using “organizational design” comparison criteria. Comparing the twenty-two coordination strategies to the organizational design comparison criteria listed in Table 14 provides an informative way to compare and contrast the different strategies against each other. This process also enabled the project team to gauge applicability and identify synergies across the different strategies, which helped to inform the process of crafting more comprehensive packages of strategies for the PAC’s consideration.

Criteria for organizational design were developed and grouped into three categories: (1) organizational scope, (2) institutional characteristics, and (3) funding considerations. The organizational scope criteria consider location specific issues and mandates that have the ability to align multiple agencies mission statements and objectives over time. Institutional characteristic criteria were derived from literature and previous work that identified strengths, weaknesses, opportunities, and challenges for organizational opportunities that would benefit from leveraging strong existing relationships to formalize coordination, reduce organizational silos, and increase engagement from agencies. Funding considerations were also established from literature and previous work that explored the importance for funding within the existing planning environment, establishing proper channels of funding, and ensuring financial sustainability for the border region. These criteria and their comparison scales are listed in Table 14.

*Table 14: Organizational Design Criteria to Compare Strategies*

| <b>Categories</b>                    | <b>Criteria</b>        | <b>Comparison Scale</b>                  |
|--------------------------------------|------------------------|--|
| <b>Organizational Scope</b>          | Geographic Scale       | POE/Local, County/Region, State, Federal |
|                                      | Longevity              | Short-, Medium-, Long-term; Indefinite   |
|                                      | Mandate                | Broad, Narrow, Flexible                  |
| <b>Institutional Characteristics</b> | Formality              |  |
|                                      | Authority              |  |
|                                      | Agency Inclusivity     | Low, Medium, High, Varies                |
|                                      | Level of Compromise    |  |
|                                      | Transparency           |  |
| <b>Funding Considerations</b>        | Funding Adequacy       |  |
|                                      | Funding Predictability |  |
|                                      | Funding Stability      | Low, Medium, High, Varies                |
|                                      | Self-Funding           |  |
|                                      | Operating Costs        |  |

Organizational scope criteria are the most unique in the overall comparison, resulting in specific scales for evaluation; whereas, institutional and funding considerations are evaluated at the same scale of low, medium, high, and varies. When the twenty-two strategies are compared across the three sets of criteria, differences can be observed between strategies that can be implemented more easily in the short-term, and

those that take longer to put in place. In terms of organizational scope, the short-term strategies (i.e. those that can be implemented in 0-2 years) are more flexible in terms of both geographic scale and mandate compared to medium- and long-term strategies. Long-term strategies tend to operate at more specific geographic scales (e.g. at either POE/Local or County/Regional scales, rather than both) and mandates (e.g. either broad or narrow mandates rather than flexible mandates). In addition, short-term strategies tend to be short-lived, while strategies that take 2 or more years to implement are more likely to last longer.

As for their institutional characteristics, the short-term strategies can be formal or informal but tend to have low or medium levels of authority and require low or medium levels of compromise. It takes time to reach compromise and provide new organizational authority, thus the strategies that take longer to implement tend to have higher formality and authority but are likely to require a greater degree of compromise among participating agencies. On the other hand, short-term strategies tend to create more opportunities to involve multiple agencies that work on the border compared to medium- and long-term strategies.

Finally, looking at funding considerations, the short-term strategies tend to have less potential to address funding-related issues compared to medium- and long-term strategies.

### 6.1 Ranking Strategies

As mentioned in the methodology section, the study team used a multi-criteria analysis (MCA) to rank the twenty-two potential coordination strategies. The team does not intend this to be an analysis of what should be done; that is the prerogative and responsibility of the border stakeholders. Instead, the study team carried out this exercise to show how the method could be used.

In this exercise the study team did not apply weights to the criteria, i.e., did not give greater weight to any one criteria over any other. In an actual application, participants would also rank and weight the criteria and once agreement is reached about the weights, apply the weighting factors to the scores. The team developed a hypothetical weighted ranking example to show how this would affect the results. In addition, the team developed a ranking spreadsheet tool, which includes instructions for use by border stakeholders should they wish to conduct their own ranking exercise (see Appendix C).

While the main purpose of the study team's ranking exercise was to provide an example of how border stakeholders could conduct their own evaluations using the MCA, the study team also used its results to inform the development of packages of coordination strategies for the PAC's consideration.

The highest ranked strategies from the team's preliminary ranking exercise are summarized in Table 15. Results were not discussed to determine willingness to implement a given strategy, however the results presented are the findings from the project team's preliminary ranking exercise. In addition to doing the ranking, the stakeholders should also identify their own considerations, which may differ from those listed in Table 15.

The strategy of developing a memorandum of understanding came out as the highest ranked of the short-term strategies in the project team's preliminary ranking exercise, as it is a flexible coordination strategy that could be set up quickly, be employed at different geographic scales, and help clearly lay out agency roles and responsibilities.

The second highest ranked strategy in the short-term is the creation of a Public-Private Initiative – i.e. a privately funded group, council, or think tank that focuses on critical economic and policy issues facing a

specific region. This strategy performed well in the research team’s preliminary ranking exercise since it could add a strong voice to the border region, in addition to being set up quickly.

*Table 15: Highest Ranked Strategies, by short-, medium-, and long-term*

| <b>Strategy</b>                              | <b>Timeline</b> | <b>Considerations</b>   |
|--|-----------------|---|
| Memoranda of Understanding                   | 0-2 years       | Can be implemented quickly and would not conflict with other strategies.  |
| Public-Private Initiative                    | 0-2 years       | Incorporates additional actors and can improve perception of the border outside of the region.                      |
| Joint Powers Authority                       | 2-5 years       | Can be created for 1 or more POEs, requires inter agency participation, may conflict with long-term strategies.     |
| Special District                             | 2-5 years       | Can be created for 1 or more POEs, requires political action, and would most likely conflict with other strategies. |
| Comprehensive Regional Agency                | 5+ years        | Would need to operate independently of medium-term strategies.  |
| Multi-Functional Regional Mobility Authority | 5+ years        | Would need to operate independently of medium-term strategies.  |

In terms of medium-term strategies, special districts and JPAs would be beneficial in the border region, however, given the increased level of formality and new oversight for these strategies, they may be met with resistance. A special district could focus on the needs of people in and around a single, group, or all POEs and address a broader range of problem statement issues, especially if community issues were taken into consideration. A special district would also raise funds and be capable of providing project finance – which is an asset from a project implementation perspective but a liability if the public perceives it as a burdensome new tax.

A JPA would help clarify roles and responsibilities for participating agencies and would be well suited for sharing funds and getting organizations to arrive at a consensus for project-specific objectives. However, its impact would depend on its participants and agreement on critical border issues to be solved.

The top ranking long-term strategies were the Multi-Functional RMA and a new Comprehensive Regional Agency. Drawing inspiration from Texas, a Multi-Functional Regional Mobility Authority could lead to major improvements for comprehensive planning and regional mobility.

A new Comprehensive Regional Agency could also result in a major improvement for comprehensive planning, economic, community and multimodal benefit as well as funding. This strategy has a high potential to be inclusive, innovative, and comprehensive, since it would require significant community input and buy-in to implement. For those reasons, it would take a long time to implement and would likely face some resistance from existing agencies.

## 6.2 Packages of Strategies for Coordination

Building from both the comparison and ranking of coordination strategies, the project team has developed a set of packages of coordination strategies for the PAC’s evaluation and consideration. These packages are presented as examples of ways to combine various coordination strategies to address multiple objectives

for the California-Mexico border region. The six packaged proposals are strategically structured to allow for phased implementation – for example each strategy can be independently implemented in gradual stages – which can serve as an easier approach to resolving issues facing border communities over time. The six packages are based on the best performing strategies in the ranking exercise in combination with complementary strategies as identified in the strategy comparison.

While the project team developed these packages as examples to address issues in the region, each package is presented and classified by how quickly any one solution can be implemented. Additionally, leading stakeholders can create different kinds of solutions for different areas, for instance the JPA package may be more appropriate for one POE versus another, or a long-term solution like the Multi-Functional Regional Mobility Authority package may meet the needs for the entire border as long as no other conflicting packages like the creation of a special district is pursued. This allows for a more nuanced approach that could address various issues across POEs that may not exist for all communities. As stakeholders participate in an iterative MCA process, it is necessary that stakeholders need to think long term about their end goals and pursue the appropriate package/s. This will ensure that agencies will look ahead to the most appropriate solutions.

Following the division of strategies by short-, medium-, and long-term solutions, the packages are presented in the same format. The highest-ranked short-, medium-, and long-term strategies (Table 15 above) serve as the basis for the packages of strategies.

The project team then referred to the comparison exercise to identify strategies that may not have scored highly in any one or two categories, but did "well" in multiple comparison categories, suggesting that they may be useful adjuncts to other solutions.

As sets of packages were compiled, this process was guided by the understanding that the success of any package is dependent on first building substantial agreement across participating agencies. This “first step” would then serve as the foundation if any of the medium- or long-term solutions for coordination were pursued. After developing consensus and shared goals, other important objectives for each package of strategies include: coordination, funding, implementation, and oversight. The strategies that best support the higher ranked strategies are:

- Increase in Public Information
- Information Clearinghouse
- Appointed Coordinator
- Realign Funding and Programming
- Border Toll Authority
- Implementation, Monitoring & Evaluation Committee
- External Peer Review Group

### 6.2.1 Short-Term Proposals

#### 6.2.1.1 *Border Communications Package*

The Border Communications Package is composed of three strategies with a focus on improved communications and promotion of the border. The three strategies are (1) increase in public information, (2) creation of a clearinghouse, and (3) establishing a public-private initiative. This package is perhaps the most accessible of all the proposals since it can be implemented the quickest and can serve as part of any future, medium- or long-term strategies as well. Additionally, this package requires no organizational or



legislative change. Although this package focuses on building consensus and communication, it is a valuable solution due to its highly adaptable nature. The key aspect of this package is that it is designed to be an immediate solution to improve the knowledge base and perception of the border for the region. Specifically pertaining to border planning and concerns for adjacent communities, this package was developed to address issues relating to border communications, which was identified in the Task 3 report as a major theme for different opportunities/challenges for border coordination strategies.

Table 16: Short-term Coordination Package A: Border Communications

| Purpose   | Strategy                    |
|---|-----------------------------|
| Improved Communications & Promotion of the Border | Increase public information |
|   | Clearinghouse               |
|   | Public-Private Initiative   |

6.2.1.2 Phased Memoranda of Understanding Package

Building on the Border Communications package, the second short-term proposal is a phased package that culminates in the use of a single or multiple memoranda of understanding that would characterize multiple aspects of border agency coordination. This combination of strategies focuses on communications, building consensus, funding, coordination, implementation, and oversight goals. The MOU would include any or all strategies from the Border Communications package, assign an appointed coordinator, realign existing funding, and establish a high-level implementation, monitoring and evaluation committee. The MOU package is designed to require no major organizational shift or the need for any legislative action, making it a reasonable solution for the short-term.

Table 17: Short-term Coordination Package B: MOU

| Purpose                    | Strategy  |
|----------------------------|---|
| Communications             | Any or all strategies in previous package         |
| Building Consensus         | Appointed Coordinator                             |
| Funding                    | Realign Existing Funding                          |
| Coordination               | Memorandum of Understanding                       |
| Implementation & Oversight | Implementation, Monitoring & Evaluation Committee |

6.2.2 Medium-Term Proposals

6.2.2.1 Phased Joint Powers Authority Package

Compared to the previous short-term packages, the medium-term proposals include a more rigorous approach to incorporate more formal and authoritative institutional characteristics. The first proposal focuses on the establishment of a JPA for border agencies that would build consensus, establish coordination, and describe the process for project implementation. The successful implementation of a JPA is dependent on thorough communications regarding border-related issues and proper funding. Thus, the



inclusion of any or all strategies focused on communications is vital. Funding is addressed by either realigning the existing distribution of funds or by creating a special purpose district. As the JPA is established, the tenets should target specific goals towards building consensus across the participating agencies, establishing formal coordination, and have it serve as the mechanism for implementation. To provide oversight on the JPA, this package includes an implementation, monitoring and evaluation committee. The use of the JPA proposal allows (but does not necessitate) a more comprehensive geographic scale and has the ability to operate at the port, local, county, region, or state level. JPAs also typically are undertaken to implement more permanent solutions with flexible mandates.

Table 18: Medium-term Coordination Package A: JPA

| Purpose   | Strategy  |
|---|---|
| Communications                                    | Any or all strategies in previous package(s)      |
| Funding   | Realign Funding and/or Special District           |
| Building Consensus, Coordination & Implementation | Joint Powers Authority                            |
| Oversight   | Implementation, Monitoring & Evaluation Committee |

6.2.2.2 Phased Special Purpose District Package

The next medium-term proposal is the use of special purpose districts. Establishing special purpose districts allows border stakeholders to create more localized solutions to border issues. Typically, special districts and/or parking districts operate at smaller geographic scales. Even though the scale would be smaller than that of a JPA, this enables border stakeholders to take on a more focused approach to solving POE specific issues. As explored in the Task 2 report, the issues that San Ysidro faces are drastically different than issues at Andrade. As with the previous JPA package, this proposal incorporates the same communications and oversight strategies. Building consensus can be addressed and monitored by an appointed coordinator, funding would be derived from the special district itself, and coordination and implementation could be achieved with memoranda of understanding or the creation of a JPA, perhaps with fewer agencies involved than in the previous example.

Table 19: Medium-term Coordination Package B: Special District

| Purpose                       | Strategy   |
|-------------------------------|--|
| Communications                | Any or all strategies in previous package(s)         |
| Building Consensus            | Appointed Coordinator                                |
| Funding                       | Special Purpose District                             |
| Coordination & Implementation | Memoranda of Understanding or Joint Powers Authority |
| Oversight                     | Implementation, Monitoring & Evaluation Committee    |

6.2.3 Long-Term Proposals

Both long-term packages contain strategies that can be independently achieved without the need for other strategies. However, for a more comprehensive approach, it is recommended that any and all previous short- and medium-term strategies be considered for successful implementation.

6.2.3.1 Multi-Functional Regional Mobility Authority Package

The first proposal is the creation of a Multi-functional Regional Mobility Authority. The Regional Mobility Authority package scored the highest in the ranking exercise and performed admirably in the comparison analysis across all sectors because, if implemented well, it could lead to major improvements in transportation planning and implementation for the border area.

A regional mobility plan for the border would require coordination across city, county and regional boundaries as well as with federal agencies that carry out border responsibilities. Currently, the cities, counties, transit agencies, and metropolitan planning organizations each have transportation plans and programs that they are implementing; a border region mobility plan would combine and coordinate these plans. One way to handle this heavy coordination requirement would be to begin with the communication and consensus building strategies discussed in the previous packages to help establish shared goals and objectives and resolve conflicts.

Funding for this strategy could be secured through enabling legislation, or through independent funding strategies, including realigning existing funds, the use of one or more special purpose districts, and/or the use of border infrastructure tolling. As the strategy takes form, building consensus as well as establishing coordination and implementation authority can all be built into the framework. Since this is a long-term solution, the project team proposes that oversight be established in the form of an external legislatively-established peer review group.

Table 20: Long-term Coordination Package A: Multi-Functional Regional Mobility Authority

| Purpose   | Strategy  |
|---|---|
| Communications                                    | Any or all strategies in previous package(s)                            |
| Funding   | Realign Funding; Special Purpose District; and/or Border Toll Authority |
| Building Consensus; Coordination & Implementation | Multi-Functional Regional Mobility Authority                            |
| Oversight   | External Peer Review/Oversight Group                                    |

6.2.3.2 Comprehensive Regional Agency Package

A comprehensive regional agency could link plans for transportation, land use, economic development, environmental quality, and community development into a single plan for the border region. The partnership would create plans and regulations related to the use of land in a specific zone, all the while ensuring projects are in accordance with state and federal requirements for federally licensed, permitted or assisted activities, wherever they may occur. While the level of coordination required to make this work is considerable, this strategy has very high potential to be inclusive and innovative, especially if it includes significant community input and support. This package could take the longest to implement and

opposition may arise from existing agencies reluctant to cede jurisdiction or authority. Like the Multi-Functional Regional Mobility Authority package, the Comprehensive Regional Agency performed very well in the ranking and comparison exercise, with the only notable difference being the geographic scale at which a CRA would operate. Because it would have wide responsibilities over the entire border region, this package could develop special overlay plans or would most likely require the cooperation of both counties, compared to the more limited mandate in the Regional Mobility option.

*Table 21: Long-term Coordination Package B: Comprehensive Regional Agency*

| <b>Purpose</b>                                       | <b>Strategy</b>   |
|--|---|
| Communications                                       | Any or all strategies in previous package(s)                            |
| Funding  | Realign Funding; Special Purpose District; and/or Border Toll Authority |
| Building Consensus;<br>Coordination & Implementation | Comprehensive Regional Agency   |
| Oversight  | External Peer Review/Oversight Group                                    |

## 7 Implications for Future Border Transportation Projects

The decisions made as projects are identified, packaged, sorted, evaluated, and procured may be improved to reflect the multiple goals and address the outstanding issues observed today in border development and operations. Such changes have the potential to expand the ability of public agencies to fund as well as improve the efficiency and effectiveness of border improvements.

### 7.1 Delivery Options for Projects in the BMP

As noted in the CA-IBAS Phase 1 Report, the development of a BMP in 2008 created an initial institutional framework for the identification of key projects to improve the border crossing experience for both people and goods. An update to the BMP was released in the summer of 2014 (Caltrans and METRANS 2014, 3-4). The projects listed in the BMP have been submitted, ranked, and agreed upon by stakeholders in the region, and, furthermore, the BMP mentions several improvements on the horizon for the next round of project identification, ranking and selection. Here, the project team uses the content of the existing BMP to illustrate how the different methods of project delivery could function at the border. This analysis is included to serve as a bridge between future areas of opportunity of coordination, as noted in the existing BMP or suggested in CA-IBAS Reports (see Section IV, above) and tangible pipeline projects for the border region. Currently, the BMP update describes over 100 border-related projects and defines these projects as follows (Caltrans and SANDAG 2014, 4-1):

1. Roadway—Capital infrastructure projects for highway and arterial roadways.
2. Interchange—Capital infrastructure projects for interchanges to interconnect roads and bridges.
3. Rail/Mass Transit—Capital infrastructure projects for freight, passengers (bus rapid transit and Trolley), and grade separations. Multi-modal transportation centers are classified as rail/mass transit projects.
4. Non-Motorized Modes of Cross Border Transportation—Walking and bicycling capital infrastructure projects. Bicycle project types include bike paths, bike lanes/routes, signage, support facilities, and other types of bike projects. Pedestrian projects include pedestrian crossings, traffic calming, and sidewalk design projects.
5. Short-term Operational and Minor Capital Improvement Projects to Reduce Border Wait Times—Projects designed to facilitate federal processing of pedestrians and vehicles at the POEs, thereby expediting the flow of people and cargo. The projects have three distinguishing characteristics:
  - a. Completion dates within the short-term timeframe of 2013-2014;
  - b. A clear nexus to reducing northbound and/or southbound border wait times; and
  - c. A capital project cost of less than \$3 million U.S. Dollars (USD).

Projects listed in the first three categories have been ranked. There are 89 ranked projects on the U.S. side of the border. The majority (61%) are roadways which, combined with interchanges comprise 74% of projects. Only 12% are projects for freight, passengers (bus rapid transit and Trolley), and grade separations, including multi-modal centers (Caltrans and UCCONNECT 2016b, 9). Projects listed in the last two categories are unranked, and include short-term projects, projects planned to be under construction by December 31, 2014, projects for non-motorized modes, and short-term operational and minor projects for reducing border wait times. Unranked projects may be in the conceptual phase. There are 28 unranked

projects on the U.S. side of the border, most of which are non-motorized (61%) (Caltrans-SANDAG Service Bureau, 2014, 4-6; Caltrans and UCCONNECT 2016b, 9-10). It is important to note that the BMP Update clearly suggests that the next round of project selection include the ranking of non-motorized projects (Caltrans-SANDAG Service Bureau, 2014, 4-6; Caltrans and UCCONNECT 2016b, 9-10).

It may be important to know that available options for project delivery do not distinguish between motorized and non-motorized delivery. Design-bid-build, design-build, and P3s are equally amenable to motorized and non-motorized capital project implementation. Most recently in the border region, the Cross Border Xpress, a pedestrian bridge connecting a new passenger terminal in Southern San Diego (Otay Mesa) to the Tijuana A.L. Rodriguez International Airport (Tijuana Airport) used a P3. When contemplating which method of project delivery to use, the public and its representatives should be concerned about the comparative costs of delivering the project different ways, and the role of risk allocation in the realization of those costs. Alternative methods of delivery make increasing use of private firms, but use more complex and (likely) incomplete contracts – incomplete for their comparative inability to prepare both the public agency and private contractors to efficiently address risks as they deliver the project. Selecting the most efficient delivery method involves weighing the competitive advantages of the public and private sector for the various tasks, and reserving complex contracts for projects that pose design-build, financing, or operational challenges that can be more efficiently addressed in contract with the private sector than if carried out by the public sector. It is worth noting, too, that the ability of the public or private sector to perform work efficiently is a necessary but insufficient condition – efficiency has to translate into cost-savings for either taxpayers or toll-payers of the facilities for a method of delivery to be more efficient than its alternatives.

The Unfunded Border Project Table listed in Appendix A lists the projects from the 2014 BMP that have not advanced to construction. Projects serve all POEs in San Diego and Imperial Counties. All of the projects in the unfunded border project table may be delivered using design-bid-build methods and public financing. The following paragraphs describe other options that may also bring about some benefits, though more detailed examination of those options would be needed to make any such determination going forward.

## 7.2 Innovative Options for Project Identification, Funding & Delivery

As currently defined, the vast majority of projects in Appendix A are roadways, interchanges, and rail projects that expand throughput. Improvements to existing POEs or the development of new POEs also have that purpose, tempered by the need for security. The throughput of POE-users represents an opportunity to establish a source of funding based on the economic principle that those who benefit from facilities, pay for facilities. Also, although the BMP projects appear to be defined almost entirely for the purpose of the movement of people and goods, the integration of these purposes with others may enhance public revenues and financing, the POE-user experience, and the economic development of communities in the border area.

Furthermore, POE-users would be better served through tolls and fees if an overall financial plan for the border region were developed. Tolls and fees should be set and managed in a way that is equitable for the populations served by these facilities, and such fees should be organized at the level of the border system. It may be best, for example, to provide equitable access to POEs by not instituting charges at one specific POE versus another, but also consider the ability and/or willingness to pay for differential fees. Similarly, airports levy a passenger facility charge, and use the revenues to develop airport-related infrastructure.

Note, too, that with a revenue stream from tolls, public agencies do not have to pledge the full faith and credit of their taxing authority to use general obligation bonds in the financing of POE-related infrastructure. Revenue bonds can be secured against the public revenue stream from tolls. This is the basic mechanism for financing used by utilities and special districts, and it can be just as useful to other government agencies.

POE-users and border communities may ultimately be better—and more efficiently—served if development were packaged to enhance delivery of origins and destinations, as well as improvements for the movement of people and goods. Focus on the movement of people and goods makes good use of design-bid-build procurement for roadways and design-build/private contracts for the development of commercial rail systems. However, focus on the *movement* of people and goods may neglect other purposes of infrastructure that would be useful to POE-users and to the communities that comprise the origins and destinations of POE-related travel. In Appendix A, projects for POEs or POE expansion and multimodal centers, for example, suggest a role for auto and bus parking, pick-up and drop-off areas, transit stations, and several additional types of supporting facilities, some of which are more efficiently delivered by the private and non-profit sectors. Non-profit social service organizations can provide several types of services to POE-users; facilities could be designed with the integration of their services for public health and welfare in mind. Private firms expand opportunities for transport-related services, such as auto rental and bike repair and rental shops. POE-users and local communities may also be effectively and efficiently served by retail and commercial developments that are oriented to their needs. Economic development is fostered by the concentration of *origins and designations* for travel. This concentration of the diversity and density of origins and designations brings about agglomeration economies, which provide economies of scale and scope in both public infrastructure and private facility investment.

The opportunities created by P3s are in the development of origins and destinations, more so than the movement or mobility of people and goods. The fact that economic development occurs with more participation from the private sector should not be confused with the idea that transportation projects would best be procured with P3s. P3s are most successful when they use the complementary strengths of the private sector in markets for retail and commercial development together with the public sector for infrastructure. For decades, municipalities have used such strategic partnerships to revitalize central business districts. For example, one of the most successful P3 developments in the City of Seattle was a partnership with a private retail developer to develop a parcel on the outskirts of downtown, in close proximity to the I-5 corridor. A private retail developer expressed a willingness to develop the site into a mall and cinema with qualities of interest to the City, but the cost to develop underground parking was prohibitive. In this P3 project, the public sector installed the underground parking facility (and owns and operates this facility, bringing in public revenue), and the private developer built the retail development (and owns and operates this facility, providing economic development). Such partnerships are promising for economic development, the integration of land use with transportation facilities and services, enhancing the POE-user experience, and generating public revenue for further public infrastructure development. What this example shows is that P3 agreements should be used to facilitate partnerships that bring together the design and development strengths of the public and private sector to serve multiple objectives. P3s can be more valuable in this regard than in the context of replacing public transport facility ownership with private concession agreements (DBFOM). The public parking facility may still be procured with design-bid-build methods, though the public agencies should also consider the financial needs of their private

partner, and the use of design-build to provide certainty regarding the projected date of completion for the public part of the project.

Alternative methods of delivery may prove to be more efficient for very specialized products or sectors. There are just a few other markets tapped by these projects that deserve consideration for alternative delivery options. For example, projects that involve the development and installation of information technology are especially difficult to develop using design-bid-build methods, because of the rapidly changing and highly specialized nature of information technology. These types of projects may be best procured using design-build, turnkey methods, though information asymmetries in design-build methods of procurement suggest that public agencies need to be well supported. Advisors and legal counsel serving the public agencies should be familiar with these technologies and the contractual arrangements that would be necessary to preserve the public interest in both the security and privacy of information, and the transparency of government operations.

Another opportunity may arise when considering the specialized knowledge of how to effectively design transportation projects to serve bicyclists and pedestrians. An apparent backlog of projects to serve bicyclists creates an opportunity to bundle the procurement of these projects across multiple POEs. This may be especially helpful if the BorderWizard<sup>iii</sup> system used to design POEs does not effectively accommodate the features of non-motorized travel. Private firms specializing in architectural and engineering designs for bicyclists and pedestrians may be able to suggest efficient amendments to the BorderWizard system, along with new and efficient facility designs that provide convenience to POE-users without sacrificing security. If procurement of design for bicyclists and/or pedestrians at multiple POEs were bundled together, this would provide economies of scale in design. Such designs could be incorporated in a design-bid-build arrangement or design-build, though the alternatives for procurement deserve additional research for their comparative potential to provide value.

As currently listed, BMP projects appear to be defined almost entirely for the purpose of the movement of people and goods, though the integration of these purposes with others may enhance public revenues and financing, the POE-user experience, and the economic development of communities in the border area.

### 7.3 Options for Evaluating and Ranking BMP Projects

Sections 7.3 and 7.4 examine the potential influence of the same coordination strategy/mechanisms on project development, when projects are identified, given conceptual designs, and prioritized in the plans and budgets of the various public organizations and private firms participating in the development of capital assets in the area of study. This section begins with an examination of the current process for ranking projects in the BMP, followed by a discussion of opportunities for more coordinated project identification and ranking in border area and agency plans. This analysis is included to serve as a bridge between future areas of opportunity of coordination and tangible pipeline projects for the border region. Additionally, these sections were included in response to many stakeholders who expressed the need for more emphasis on ped, bike, and transit options and the criteria that currently heavily weights highway projects.

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<sup>iii</sup> Developed for the FHWA, the BorderWizard is a computer-based model that simulates cross-border movements of autos, buses, trucks, and pedestrians. It can simulate all Federal inspection activities—including customs, immigration, motor carrier, and security procedures—at any land border station to determine infrastructure, facility, and operational needs to ensure safe and secure operations.

Improvements to the evaluation and ranking of projects can occur through changes to the criteria and metrics used in the BMP, and doing so may result in a more flexible system for aligning project delivery options to projects.

The current set of criteria, weights, and measures used in the 2008 and 2014 BMP supports the expansion of facilities to move the most vehicles as fast as possible as opposed to projects that may have high multimodal, environmental, and community and economic benefit. This is at odds with several major border issues identified in the CA-IBAS Problem Statement and Task Reports, because:

- In terms of regional mobility, the region identified differs from the origins and designations that define the purpose of transportation for POE users (i.e., the BMP uses a 10-mile distance from the border, in contrast with the border areas identified in the CA-IBAS Task 2 Report);
- In terms of mobility, the criteria include Level of Service (LOS), sometimes in lieu of Vehicle Miles Travelled (VMT), trips travelled, or counts of POE users/tonnage or value of cargo;
- Many issues raised for the CA-IBAS Problem Statement are either lacking criteria or measured in criteria with limits on scores and weights that are not competitive with vehicular mobility; and
- This system did allow non-motorized projects – many of which would directly benefit border communities – to be ranked (Caltrans and UCCONNECT 2016b, 17-18).

Indeed, the majority of roadway and intersection projects ranked in the BMP do not address the ten issues raised in the CA-IBAS problem statement. This underscores the potential value of the CA-IBAS Reports for future iterations of the BMP.

A concern raised by local stakeholders is that projects that facilitate traffic must also reduce the impacts on local communities (e.g., reduce exposure to noise and emissions as well as reducing spillover traffic) to be an attractive option. Thus, reconsideration of the criteria by which projects are evaluated may be in order.

The ranking of projects in the 2014 BMP began with a sorting of projects into categories as POE projects, road improvements, and rail improvements. These projects were evaluated using different criteria, weights, and measures, in each of these categories. More unified and balanced criteria and metrics could allow the categorization of projects into types to be replaced by a system that ranks projects without categorizing by type, resulting in the possibility for ranking across the modes in a more fluid way, supporting non-motorized and potentially multimodal project designs. The ranking system could, for example, measure users freight value instead of vehicles, and treat all projects – irrespective of mode of travel and therefore equally in terms of mode of travel – with regard to the desired services the project will provide to the users or for the cargo. This would potentially transform “multi-modal benefit” from being a minor addition to a vehicular capacity project to a universally beneficial attribute of project designs.

Project rankings could also be designed to recognize the role of projects in integrating transportation with the origins, designations, and purposes for which we travel and move cargo, and the positive and negative externalities that result, instead of the capacity of the system to handle the movement of people and cargo. To illustrate, it is worth elaborating on one particular point raised in the CA-IBAS Task 2 Report: that the criteria may be inconsistent with current California planning policy and California Environmental Quality Act guidelines that are being released pursuant to SB 743 (Caltrans and UCCONNECT 2016b, 18). SB 743 eliminates the use of LOS from traffic impact studies pursuant to the California Environmental Quality Act. Understandably, the project team recognizes that the latest BMP update was in development at the same



time and before the state's transition to using VMT over LOS. In the next BMP update stakeholders can take into consideration the new state standards. Additionally, stakeholders can turn to studies that have shown that the use of LOS to measure the impact of new development on traffic (and therefore, transportation system capacity) has the perverse effect of inducing growth in VMT for single occupancy vehicles, while discouraging infill, compact mixed-use, multimodal, and pedestrian- and transit-oriented development. People and firms care about access and getting themselves or their cargo to and from origins and destinations, and they are better off if the places they need to access and trips they need to take are across shorter distances (and thus take less time and also use fewer resources or expenses). In other words, a focus on congestion, delay, and capacity can miss what matters most in transportation, and produce projects that lack connections between transportation, modes of travel, and land use. LOS measures also support the types of development that are more fiscally challenging – more expensive for public agencies, taxpayers, and in the case of tolls, users – to develop, operate, and maintain, and that bring about more harmful pollution and environmental degradation, with associated expenses (White, Ganson, and Ajise 2014). These findings reveal a potential opportunity to fine-tune the BMP project ranking evaluation criteria and process to better align with the needs of POE users and current state practices to reduce reliance on metrics like LOS in favor of VMT (Steinberg, 2013; Caltrans and UCCONNECT 2016b, 18).

When considering the overall process for developing the next BMP Update, it may be helpful to recognize that although projects currently go from individual agency plans to the BMP, the implementation of coordination strategies could encourage the flow of project ideas to go in both directions, and to flow more easily across the boundaries and plans of the many agencies and private interests in border developments. This shift in the flow of ideas could benefit the operation as well as the development of POE and border projects.

For example, one message imparted in the CA-IBAS Task 2 report is that border stakeholders have expressed a need for additional performance measures for both POE operations as well as planning surrounding POEs. One idea that gained traction in small group discussions among CA-IBAS PAC members and in other stakeholder discussions is the value of viewing POEs and their surroundings similar to airports. POEs stand to benefit from more concrete policies and standards as seen in airports for wayfinding – both inside and outside of the POEs – and pick-up and drop-off zones. Additionally, airport master planning practices such as comprehensive analyses of surrounding land uses and examining airports' regional setting could also be beneficial (FAA 2015; de Neufville and Odoni 2003, 17). Airport master planning can only be used for inspiration as airports typically have a more balanced approach to mobility and security concerns and the private sector plays a larger role compared to POEs (Caltrans and UCCONNECT 2016a, 16-17), though as a model for translating the use of tolls into efficient and effective mixes of design-bid-build, design-build or P3s, this model is of vital importance. It would be valuable to see how criteria and measures could be designed for POE-area and border-area developments on the basis of desired qualities from airport plans, airport terminal orientation toward providing services with convenience to airport users, airport relationships to service providers, and airport development and project planning for multimodal ease of access.

#### 7.4 Broader Considerations for Project Identification

Three additional considerations are worth mentioning with regard to the existing systems used to prioritize projects in the BMP: (1) multi-criteria system design and evaluation, (2) geography, and (3) convergence. The designs of multi-criteria systems will serve the multiple, often conflicting goals of project prioritization

for development if those goals are represented in the criteria, measures, and scoring and weighting systems in a balanced way.

In an MCA, the normalization of scores places measures of many kinds (e.g., continuous and ordinal variables) on the same scale with one another, prior to the application of weights (Whittington 2015). Doing so helps the users of the system see biases that are inherent in their choice of criteria and measures. Weights should only vary to the extent that the goals reflected in the criteria are supposed to vary. Thus, if the criteria selected are equally important, then an MCA should not use weights at all (and such a system design may actually be preferable, because the effects of scores are easy to see). While it is convenient see a total possible score of 100 points per project, what matters the most in the design of multi-criteria scoring systems is that the scores that are possible in association with each goal reflect the overall public purposes that are desired from the projects to be evaluated.

The three separate ranking systems in the BMP 2014 Update appear to reflect the fact that several different organizations develop and operate POEs, roadways and railways. For the purposes of providing comparative evaluations of projects, however, more consideration of the different geographies of the users and uses of POEs could help shape more balanced outcomes. The origins and destinations of the vast majority of POE trips are quite different from the 10-mile boundary depicted in the BMP. The commuter-sheds identified in the CA-IBAS Task 2 Report suggest the purposes of POE trips and the users of the infrastructure that comprise the public interest in these projects. Projects should be understood and measured for their performance in relation to these people, firms, and geographic areas (and their equivalents on the Mexico side of the border). For example, the purposes of trips are fundamentally different in the more urban coastal (SANDAG-San Diego County) compared to the more rural inland (SCAG-Imperial) areas. What these differing area boundaries and purposes of trips suggest is that they may benefit from having differing criteria and measures, and perhaps separate rankings on this basis, instead of on the basis of POE, POE-area roadways, and POE-area rail. Doing so may then position the resulting capital investments to more accurately mirror the perceptions of needs and priorities already held for each of the POEs.

Lastly, as discussed at length in this section and previous CA-IBAS Task Reports, the BMP multi-criteria systems are not currently designed to address the issues identified in the CA-IBAS Problem Statement (Table 5) and, it is possible that the highly varied perspectives amongst organizations about how to define the problems at the border is in some way related to the design of these multi-criteria systems. It is not reasonable to expect the various organizations with a responsibility for, or interest in, the border region to see a unified vision of border project development implemented through these three systems, which further break down projects into multiple categories, score without normalizing scores, and apply varying weights. Instead of slicing up projects into modes and dividing them into categories, the system for ranking may better serve everyone by representing – in plain view – the many competing goals which organizations strive to manage in border development, and providing a system that allows projects of all kinds to be evaluated *together*, in ways that seamlessly align their prioritization with those goals. In other words, border development may benefit from the *convergence* of the goals, the projects, and the modes, within one ranking system, which can be recognized as serving the interests of the POE users.

## 8 Conclusion

This report serves as a comprehensive overview of work conducted in Phase 2. It has integrated the key findings from 5 previous deliverables into one standalone report. The report's objective is to advise Caltrans and its partners on methods to reduce impacts of transportation-related activities in border communities by identifying a set of strategies or a coordination mechanism that would improve funding, project delivery, and overall regional mobility.

First, the team identified existing conditions at POEs, nearby communities, and the adjacent planning and agency landscape. This was done in order to determine the strengths, weaknesses, opportunities, and challenges facing the border region. This process allowed the project team to further assess whether or not there are opportunities for improving transportation planning conditions by utilizing resource sharing or other forms of coordination to help make the improvements better, happen faster, and/or last longer. During this initial phase of gathering existing information, this informed the team of any barriers to improving conditions that need to be changed, what those barriers are and what strategies could be employed to help resolve these issues.

Prior to selecting potential strategies to serve as a coordination mechanism, a comprehensive assessment, evaluation, and ranking strategy was conducted. The team identified potential solutions, driven by which specific mechanisms could be used to capture opportunities and overcome barriers. Strategies were compared, evaluated, and ranked across numerous organizational design criteria, legislative precedent, project delivery implications, and other "measures of success". This process resulted in the project team selecting six potential individual strategies that exist as a part of a package of other strategies to serve as the overall coordination mechanism for the border. This concept was pursued to include strategies that performed well in addition to the six highest ranked strategies. This packaging technique ensures project success by building consensus across the numerous agencies working in the California border region.

The above process resulted in a set of six packages, two short-term, two medium-term, and two long-term, which could be used as a coordinated mechanism for improving transportation mobility and financing at the border. Which package is best, or indeed whether a different package or set of packages would be preferable, is dependent on the PAC's consideration of goals for the region. The results presented by the project team are based on an unweighted ranking exercise carried out to illustrate the method involved. Stakeholders and PAC members have the opportunity to conduct this exercise themselves to identify their own preferred approach or set of approaches. As part of this study, the legal aspects and implications of alternative project delivery methods of the six example packages also were analyzed.

Moving forward when contemplating which method of project delivery to use, the public and its representatives should be concerned about the comparative costs of delivering the project different ways, and the role of risk allocation in the realization of those costs. To best aid future project delivery, any strategy or coordinated mechanism must focus on (1) multi-criteria system design and evaluation, (2) geographical differences and special needs, and (3) convergence of goals, projects, and modes. Doing so helps stakeholders to select projects that matter most to the public, are appropriate for a given POE and its surrounding communities, and finally providing a system that allows projects of all kinds to be evaluated together, in ways that seamlessly align their prioritization with those goals. In other words, border development may benefit from the convergence of the goals, the projects, and the modes, within one ranking system, that can be recognized as serving the interests of the POE users and the communities at large.

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# APPENDIX

## Appendix A

### Unfunded Border Project Table

| Project # | Project Name                         | Category           | Submitting Agency      | POEs Served       | Programming Status     | Cost 2010 USD |
|-----------|--------------------------------------|--------------------|------------------------|-------------------|------------------------|---------------|
| 1010024   | SR 98 (Phase 1C)                     | Ranked:<br>Roadway | Caltrans               | Calexico          | Final Design           | \$31,000,000  |
| 1010026   | SR 98 1A                             | Ranked:<br>Roadway | Caltrans               | Calexico          | Final Design           | \$11,000,000  |
| 1020043   | Otay Mesa Truck Route<br>4           | Ranked:<br>Roadway | City of San<br>Diego   | Otay Mesa<br>East | Final Design           | \$6,000,000   |
| 1010001   | I-8                                  | Ranked:<br>Roadway | Caltrans               | Calexico          | Conceptual<br>Planning | \$188,700,000 |
| 1010005   | SR 111                               | Ranked:<br>Roadway | Caltrans               | Calexico          | Conceptual<br>Planning | \$500,000,000 |
| 1010008   | SR 115                               | Ranked:<br>Roadway | Caltrans               | Calexico<br>East  | Conceptual<br>Planning | \$146,800,000 |
| 1010009   | Imperial Av. (McCabe<br>Road to I-8) | Ranked:<br>Roadway | Caltrans               | Calexico          | Conceptual<br>Planning | \$28,200,000  |
| 1010011   | Dogwood                              | Ranked:<br>Roadway | Caltrans               | Calexico          | Conceptual<br>Planning | \$182,400,000 |
| 1010015   | Imperial Ave.                        | Ranked:<br>Roadway | Caltrans               | Calexico          | Conceptual<br>Planning | \$26,200,000  |
| 1010016   | 8th St Overpass                      | Ranked:<br>Roadway | Caltrans               | Calexico          | Conceptual<br>Planning | \$4,000,000   |
| 1010019   | SR 98                                | Ranked:<br>Roadway | Caltrans               | Calexico          | Conceptual<br>Planning | \$50,000,000  |
| 1010023   | SR 115                               | Ranked:<br>Roadway | Caltrans               | Calexico<br>East  | Conceptual<br>Planning | \$172,000,000 |
| 1010027   | Forrester Road                       | Ranked:<br>Roadway | Caltrans               | Calexico          | Conceptual<br>Planning | \$300,000,000 |
| 1020003   | I-5                                  | Ranked:<br>Roadway | Caltrans               | San Ysidro        | Conceptual<br>Planning | \$295,000,000 |
| 1020004   | I-5                                  | Ranked:<br>Roadway | Caltrans               | San Ysidro        | Conceptual<br>Planning | \$165,000,000 |
| 1020007   | SR 125                               | Ranked:<br>Roadway | Caltrans               | Otay Mesa         | Conceptual<br>Planning | \$213,930,000 |
| 1020008   | SR 125                               | Ranked:<br>Roadway | Caltrans               | Otay Mesa         | Conceptual<br>Planning | \$21,453,000  |
| 1020009   | I-805                                | Ranked:<br>Roadway | Caltrans               | San Ysidro        | Conceptual<br>Planning | \$288,000,000 |
| 1020012   | SR 905                               | Ranked:<br>Roadway | Caltrans               | Otay Mesa         | Conceptual<br>Planning | \$200,000,000 |
| 1020014   | Airway Road                          | Ranked:<br>Roadway | County of<br>San Diego | Otay Mesa<br>East | Conceptual<br>Planning | \$3,600,000   |
| 1020015   | Airway Road                          | Ranked:<br>Roadway | County of<br>San Diego | Otay Mesa<br>East | Conceptual<br>Planning | \$8,000,000   |
| 1020016   | Airway Road                          | Ranked:<br>Roadway | County of<br>San Diego | Otay Mesa<br>East | Conceptual<br>Planning | \$10,000,000  |
| 1020018   | Alta Road                            | Ranked:<br>Roadway | County of<br>San Diego | Otay Mesa<br>East | Conceptual<br>Planning | \$4,000,000   |
| 1020019   | Alta Road                            | Ranked:<br>Roadway | County of<br>San Diego | Otay Mesa<br>East | Conceptual<br>Planning | \$10,000,000  |
| 1020020   | Alta Road                            | Ranked:<br>Roadway | County of<br>San Diego | Otay Mesa<br>East | Conceptual<br>Planning | \$10,000,000  |
| 1020021   | Enrico Fermi Drive                   | Ranked:<br>Roadway | County of<br>San Diego | Otay Mesa<br>East | Conceptual<br>Planning | \$10,000,000  |
| 1020022   | Enrico Fermi Drive                   | Ranked:<br>Roadway | County of<br>San Diego | Otay Mesa<br>East | Conceptual<br>Planning | \$5,000,000   |



| Project # | Project Name   | Category                 | Submitting Agency   | POEs Served    | Programming Status  | Cost 2010 USD |
|-----------|--|--------------------------|---------------------|----------------|---------------------|---------------|
| 1020023   | Enrico Fermi Drive   | Ranked: Roadway          | County of San Diego | Otay Mesa East | Conceptual Planning | \$5,000,000   |
| 1020024   | Enrico Fermi Drive   | Ranked: Roadway          | County of San Diego | Otay Mesa East | Conceptual Planning | \$4,000,000   |
| 1020025   | Lone Star Road   | Ranked: Roadway          | County of San Diego | Otay Mesa East | Conceptual Planning | \$15,000,000  |
| 1020026   | Lone Star Road   | Ranked: Roadway          | County of San Diego | Otay Mesa East | Conceptual Planning | \$5,000,000   |
| 1020027   | Lone Star Road   | Ranked: Roadway          | County of San Diego | Otay Mesa East | Conceptual Planning | \$10,000,000  |
| 1020028   | Lone Star Road   | Ranked: Roadway          | County of San Diego | Otay Mesa East | Conceptual Planning | \$10,000,000  |
| 1020029   | Lone Star Road   | Ranked: Roadway          | County of San Diego | Otay Mesa East | Conceptual Planning | \$1,650,000   |
| 1020030   | Otay Mesa Road   | Ranked: Roadway          | County of San Diego | Otay Mesa East | Conceptual Planning | \$18,000,000  |
| 1020031   | Otay Mesa Road   | Ranked: Roadway          | County of San Diego | Otay Mesa East | Conceptual Planning | \$8,000,000   |
| 1020032   | Otay Mesa Road   | Ranked: Roadway          | County of San Diego | Otay Mesa East | Conceptual Planning | \$10,000,000  |
| 1020033   | Siempre Viva Road  | Ranked: Roadway          | County of San Diego | Otay Mesa East | Conceptual Planning | \$6,000,000   |
| 1020034   | Siempre Viva Road  | Ranked: Roadway          | County of San Diego | Otay Mesa East | Conceptual Planning | \$15,000,000  |
| 1020044   | La Media Road from Siempre Viva Road to Otay Mesa Road   | Ranked: Roadway          | City of San Diego   | Otay Mesa East | Conceptual Planning | \$32,000,000  |
| 1020046   | Otay Mesa Road from Piper Ranch Road to SR 125; SR 125 to Sanyo Road                           | Ranked: Roadway          | City of San Diego   | Otay Mesa East | Conceptual Planning | \$750,000     |
| 1020047   | Heritage Road from Otay Rio Business Park Frontage to 900 feet north of Otay Rio Business Park | Ranked: Roadway          | City of San Diego   | Otay Mesa East | Conceptual Planning | \$7,100,000   |
| 1020049   | Heritage Rd from Avenida de las Vistas to Airway Road  | Ranked: Roadway          | City of San Diego   | Otay Mesa East | Conceptual Planning | \$71,533,000  |
| 1020050   | SR 54  | Ranked: Roadway          | Caltrans            | San Ysidro     | Conceptual Planning | \$10,000,000  |
| 1020051   | I-5 @ Dairy Mart   | Ranked: Roadway          | Caltrans            | San Ysidro     | Conceptual Planning | \$9,000,000   |
| 2010001   | I-8/Austin Rd.   | Ranked: US Interchange   | Caltrans            | Calexico       | Conceptual Planning | \$30,000,000  |
| 2010002   | I-8/Bowker Rd.   | Ranked: US Interchange   | Caltrans            | Calexico       | Conceptual Planning | \$30,000,000  |
| 2010005   | I-8/SR 186   | Ranked: US Interchange   | Caltrans            | Andrade        | Conceptual Planning | \$55,000,000  |
| 2010007   | SR 7/McCabe Rd.  | Ranked: US Interchange   | Caltrans            | Calexico East  | Conceptual Planning | \$475,000,000 |
| 2020003   | I-805/Main St./Auto Park Dr. Undercrossing   | Ranked: US Interchange   | Caltrans            | San Ysidro     | Conceptual Planning | \$20,000,000  |
| 2020011   | SR 905/Heritage Road   | Ranked: US Interchange   | City of San Diego   | Otay Mesa      | Conceptual Planning | \$23,200,000  |
| 2020013   | SR 11/SR 905 Southbound  | Ranked: US Interchange   | Caltrans            | Otay Mesa East | Conceptual Planning | \$24,000,000  |
| 2070015   | SR 125 / Lonestar Interchange  | Unranked: Inventory List | Caltrans            | Otay Mesa East | Conceptual Planning |               |

| Project # | Project Name   | Category                 | Submitting Agency   | POEs Served   | Programming Status  | Cost 2010 USD   |
|-----------|--|--------------------------|---------------------|---------------|---------------------|-----------------|
| 3010083   | McCabe Rd./Dogwood Ave. Grade Separation                                       | Ranked: US Rail          | City of El Centro   | Calexico      | Conceptual Planning | \$30,000,000    |
| 3010084   | City of El Centro Grade Separations  | Ranked: US Rail          | City of El Centro   | Calexico      | Conceptual Planning | \$16,000,000    |
| 3010085   | Calexico Intermodal Transportation Center                                      | Ranked: US Rail          | ICTC                | Calexico      | Conceptual Planning | \$10,000,000    |
| 3010086   | Calexico East Intermodal Transportation Center                                 | Ranked: US Rail          | ICTC                | Calexico East | Conceptual Planning | \$7,000,000     |
| 3020004   | Desert Line Improvements   | Ranked: US Rail          | SANDAG              | San Ysidro    | Conceptual Planning | \$15,800,000    |
| 3020020   | I-805 Corridor Transit Routes 680, 688, 689                                    | Ranked: US Rail          | SANDAG              | Otay Mesa     | Conceptual Planning | \$425,000,000   |
| 3020021   | San Ysidro to Downtown San Diego   | Ranked: US Rail          | SANDAG              | San Ysidro    | Conceptual Planning | \$90,000,000    |
| 3020023   | Blue Line Express (540)  | Ranked: US Rail          | SANDAG              | San Ysidro    | Conceptual Planning | \$455,000,000   |
| 3020024   | UTC to San Ysidro (562)  | Ranked: US Rail          | SANDAG              | San Ysidro    | Conceptual Planning | \$2,548,000,000 |
| 3020030   | San Ysidro to Otay Mesa (638)  | Ranked: US Rail          | SANDAG              | San Ysidro    | Conceptual Planning | \$53,000,000    |
| 3020032   | San Ysidro Intermodal Transportation Center                                    | Ranked: US Rail          | SANDAG              | San Ysidro    | Conceptual Planning | \$175,000,000   |
| 4010004   | Calexico East – Additional NB POV Primary Inspection Lanes                     | Ranked: US POE           | GSA                 | Calexico East | Conceptual Planning | \$9,800,000     |
| 4010006   | Calexico East – Additional NB Commercial Primary Inspection Lanes & Exit Booth | Ranked: US POE           | GSA                 | Calexico East | Conceptual Planning | \$11,300,000    |
| 4020011   | Otay Mesa Commercial Facilities Modernization                                  | Ranked: US POE           | GSA                 | Otay Mesa     | Conceptual Planning | \$63,000,000    |
| 4020012   | Otay Mesa Non-Commercial Facilities Modernization                              | Ranked: US POE           | GSA                 | Otay Mesa     | Conceptual Planning | \$87,000,000    |
| 4020015   | Jacumba New POE  | Unranked: Inventory List | SANDAG              | Jacumba       | Conceptual Planning |                 |
| 5010003   | Pedestrian/Transit Facilities  | Unranked: Non-Motorized  | Caltrans            | Andrade       | Conceptual Planning | \$1,535,000     |
| 5020001   | Bay to Ranch Bikeway   | Unranked: Non-Motorized  | SANDAG              | San Ysidro    | Conceptual Planning | \$502,750       |
| 5020002   | Border Bike Share  | Unranked: Non-Motorized  | City of Chula Vista | San Ysidro    | Conceptual Planning | \$500,000       |
| 5020003   | Border Bike Lanes  | Unranked: Non-Motorized  | City of Chula Vista | San Ysidro    | Conceptual Planning | \$500,000       |
| 5020004   | Trolley Bike Train   | Unranked: Non-Motorized  | City of Chula Vista | San Ysidro    | Conceptual Planning | \$500,000       |
| 5020006   | Border Access Corridor (Preferred Alternative)                                 | Unranked: Non-Motorized  | SANDAG              | San Ysidro    | Conceptual Planning | \$93,000        |
| 5020008   | Imperial Beach Connector   | Unranked: Non-Motorized  | SANDAG              | San Ysidro    | Conceptual Planning | \$127,950       |
| 5020010   | Chula Vista Corridor - Mission Valley  | Unranked: Non-Motorized  | SANDAG              | San Ysidro    | Conceptual Planning | \$2,811,810     |
| 5020012   | Chula Vista Greenbelt, Otay River Preferred Alternative                        | Unranked: Non-Motorized  | SANDAG              | San Ysidro    | Conceptual Planning | \$376,500       |

| Project # | Project Name  | Category                              | Submitting Agency | POEs Served    | Programming Status  | Cost 2010 USD |
|-----------|---|---------------------------------------|-------------------|----------------|---------------------|---------------|
| 5020013   | Sweetwater River Bikeway  | Unranked: Non-Motorized               | SANDAG            | San Ysidro     | Conceptual Planning | \$1,584,000   |
| 5020014   | SR-125 Corridor   | Unranked: Non-Motorized               | SANDAG            | Otay Mesa      | Conceptual Planning | \$29,579,000  |
| 5020015   | I-805 Connector   | Unranked: Non-Motorized               | SANDAG            | San Ysidro     | Conceptual Planning | \$4,752,000   |
| 5020016   | SR-905 Corridor   | Unranked: Non-Motorized               | SANDAG            | Otay Mesa      | Conceptual Planning | \$23,760,000  |
| 5020018   | Willow St Ped. Overcrossing                                     | Unranked: Non-Motorized               | Caltrans          | San Ysidro     | Conceptual Planning | \$2,800,000   |
| 5020019   | Tecate Ped/Transit Facilities                                   | Unranked: Non-Motorized               | Caltrans          | Tecate, CA     | Conceptual Planning | \$1,550,000   |
| 5020020   | West Camino De La Plaza Sidewalk                                | Unranked: Non-Motorized               | City of San Diego | San Ysidro     | Conceptual Planning | \$1,095,000   |
| 5020021   | West San Ysidro Blvd Bikeway                                    | Unranked: Non-Motorized               | City of San Diego | San Ysidro     | Conceptual Planning | \$1,850,000   |
| 6010001   | Calexico East POE Transit Services                              | Unranked: Short Term Operations       | ICTC              | Calexico East  | Conceptual Planning | \$400,000     |
| 6020001   | Southbound border wait times detection system at San Ysidro POE | Unranked: Short Term Operations       | SANDAG            | San Ysidro     | Conceptual Planning | \$900,000     |
| 6020002   | Southbound border wait times detection system at Otay Mesa POE  | Unranked: Inventory List - Operations | SANDAG            | Otay Mesa      | Conceptual Planning | \$900,000     |
| 1010017   | SR 98 East  | Ranked: Roadway                       | Caltrans          | Calexico       | Advanced Planning   | \$150,000,000 |
| 1010018   | SR 111  | Ranked: Roadway                       | Caltrans          | Calexico       | Advanced Planning   | \$456,000,000 |
| 1010025   | SR 98 Phase 2   | Ranked: Roadway                       | Caltrans          | Calexico       | Advanced Planning   | \$19,000,000  |
| 1020041   | Siempre Viva Rd from Britannia Blvd to La Media Rd              | Ranked: Roadway                       | City of San Diego | Otay Mesa East | Advanced Planning   | \$12,000,000  |
| 1020048   | Britannia Blvd Improvements                                     | Ranked: Roadway                       | City of San Diego | Otay Mesa East | Advanced Planning   | \$200,000     |
| 2010004   | SR 111/Jasper Rd.   | Ranked: US Interchange                | Caltrans          | Calexico       | Advanced Planning   | \$43,000,000  |
| 2020010   | I-805/Palm Ave.   | Ranked: US Interchange                | City of San Diego | San Ysidro     | Advanced Planning   | \$12,000,000  |
| 4010003   | Calexico West – Phase 2 of Major Expansion & Reconfiguration    | Ranked: US POE                        | GSA               | Calexico West  | Advanced Planning   | \$295,000,000 |
| 4020001   | Otay Mesa East--New POE   | Ranked: US POE                        | Caltrans          | Otay Mesa East | Advanced Planning   | \$350,000,000 |

## Appendix B

### Agency Missions

Table B - 1. Missions of Border Agencies and Organizations

| Organization   | Scale         | Jurisdiction   | Mission  | Source (mission)  |
|--|---------------|--|--|---|
| North American Development Bank                                      | International | The US-Mexico Border Region (100 kilometers north of the international boundary) | "...to preserve and enhance environmental conditions and the quality of life of people living along the U.S.-Mexico border."   | North American Development Bank (2016) Accessed at <a href="http://www.nadb.org/about/mission.asp">http://www.nadb.org/about/mission.asp</a>  |
| Border Environment Cooperation Commission                            | International | The US-Mexico Border Region  | "... to preserve and enhance environmental conditions and the quality of life of people living along the U.S.-Mexico border."  | North American Development Bank (2016) Accessed at <a href="http://www.nadb.org/about/mission.asp">http://www.nadb.org/about/mission.asp</a>  |
| International Boundary and Water Commission                          | International | The US-Mexico Border   | "Provide binational solutions to issues that arise during the application of United States – Mexico treaties regarding boundary demarcation, national ownership of waters, sanitation, water quality, and flood control in the border region." | International Boundary and Water Commission (2011) <a href="http://www.ibwc.state.gov/Files/Strategic_Plan.pdf">http://www.ibwc.state.gov/Files/Strategic_Plan.pdf</a>                  |
| U.S. Customs and Border Protection (Department of Homeland Security) | Federal       | America's Borders At and Between U.S. Ports of Entry                             | "To safeguard America's borders thereby protecting the public from dangerous people and materials while enhancing the Nation's global economic competitiveness by enabling legitimate trade and travel."                                       | U.S. Customs and Border Protection (2016). About us. Accessed at <a href="http://www.cbp.gov/about">http://www.cbp.gov/about</a>  |
| U.S. Department of Commerce  | Federal       | The U.S. and Foreign Relations   | "... to create the conditions for economic growth and opportunity."  | U.S. Department of Commerce (2016). About Commerce. Accessed at <a href="https://www.commerce.gov/page/about-commerce#mission">https://www.commerce.gov/page/about-commerce#mission</a> |

| Organization   | Scale   | Jurisdiction                   | Mission  | Source (mission)  |
|--|---------|--------------------------------|--|---|
| U.S. Department of State                                   | Federal | The U.S. and Foreign Relations | "... to shape and sustain a peaceful, prosperous, just, and democratic world and foster conditions for stability and progress for the benefit of the American people and people everywhere." | U.S. Department of State (2015). FY 2015 Agency Financial Report. Accessed at <a href="http://www.state.gov/documents/organization/249770.pdf">http://www.state.gov/documents/organization/249770.pdf</a> |
| U.S. Federal Administration (Department of Transportation) | Federal | U.S.                           | "To improve mobility on our through national leadership, innovation, and program   | U.S. Federal Highway Administration (2012). About. Accessed at <a href="https://www.fhwa.dot.gov/about/">https://www.fhwa.dot.gov/about/</a>  |
| U.S. General Administration                                | Federal | U.S. Ports of Entry            | "... to deliver the best value acquisition, and technology services to the government and the people"  | GSA (2015) Background and History, Accessed at <a href="http://www.gsa.gov/portal/category/21354">http://www.gsa.gov/portal/category/21354</a>  |
| Campo Band of Diegueno                                     | Tribal  | Campo Indian                   | n/a  | n/a   |
| Ewiiapaayp Band of Kumeyaay                                | Tribal  | Ewiiapaayp Indian Reservation  | n/a  | n/a   |
| La Posta Band of Diegueno                                  | Tribal  | La Posta Reservation           | n/a  | n/a   |
| Manzanita Band of Diegueno                                 | Tribal  | Manzanita Reservation          | n/a  | n/a   |
| Quechan Tribe of the Fort                                  | Tribal  | Fort Yuma Indian               | n/a  | n/a   |
| Southern California Tribal Chairmen's Association          | Tribal  | San Diego County               | "... to serve the health, welfare, safety, education, cultural, economic and employment needs of its tribal members and descendants in the San Diego County urban areas."                    | Southern California Tribal Chairmen's Association (2014). Southern California Tribal Chairmen's Association. Accessed at <a href="http://www.sctca.net/">http://www.sctca.net/</a>                        |
| California Air Board (CARB)                                | State   | State of                       | "... to promote and protect and ecological resources and efficient reduction of air recognition and the economy of the state."   | California Air Resources Board (2012). ARB Mission and Goals. Accessed at <a href="http://www.arb.ca.gov/html/mission.htm">http://www.arb.ca.gov/html/mission.htm</a>                                     |
| California Department of Public Health                     | State   | State of California            | "... optimizing the health and well-being of the people in California."  | California Department of Public Health (2016). About us. Accessed at <a href="https://www.cdph.ca.gov/Pages/AboutUs.aspx">https://www.cdph.ca.gov/Pages/AboutUs.aspx</a>                                  |

| Organization  | Scale  | Jurisdiction   | Mission   | Source (mission)   |
|---|--------|--|---|--|
| California Department of Transportation (District 11)   | State  | Highways and state roadways in the state of California; Caltrans District 11 operates in San Diego | "Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability."   | California Department of Transportation (2016). Mission, Vision, Goals & Values. Accessed at <a href="http://www.dot.ca.gov/hq/paffairs/about/mission.htm">http://www.dot.ca.gov/hq/paffairs/about/mission.htm</a> |
| California Environmental Protection Agency (Cal EPA)    | State  | State of California  | "... to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality."  | California Environmental Protection Agency (2016). About us. Accessed at <a href="http://www.calepa.ca.gov/About">http://www.calepa.ca.gov/About</a>   |
| California Infrastructure and Economic Development Bank | State  | State of California  | "... finance public infrastructure and private development that promote a healthy climate for jobs, contribute to a strong economy and improve the quality of life in California communities."    | California Infrastructure and Economic Development Bank (2007). About us. Accessed at <a href="http://www.ibank.ca.gov/">http://www.ibank.ca.gov/</a>  |
| California State Transportation Agency                  | State  | State of California  | "...to develop and coordinate the policies and programs of the state's transportation entities to achieve the state's mobility, safety and air quality objectives from its transportation system" | California State Transportation Agency (2010). About us. Accessed at <a href="http://www.calsta.ca.gov/AboutUs.htm">http://www.calsta.ca.gov/AboutUs.htm</a>   |
| Imperial County   | County | Imperial County  | 2020 Vision for Imperial County: "Building opportunity by leading California's renewable energy future while remaining true to our rich agricultural heritage"                                    | Imperial County (2015) Imperial County 2020 Strategic Plan. Accessed at <a href="http://www.co.imperial.ca.us/otherpdfs/2020Plan.pdf">http://www.co.imperial.ca.us/otherpdfs/2020Plan.pdf</a>                      |
| Imperial County Air Pollution Control District          | County | Imperial County  | n/a   | n/a  |

| Organization                                       | Scale    | Jurisdiction     | Mission  | Source (mission)  |
|--|----------|------------------|--|---|
| San Diego County                                   | County   | San Diego County | "To efficiently provide public services that build strong and Live Well San Diego sustainable communities" (VISION: "A region that is Building Better Health, Living Safely and Thriving")   | San Diego County (2015). San Diego County 2016-2021 Strategic Plan. Accessed at <a href="http://www.sandiegocounty.gov/cao/docs/stratplan.pdf">http://www.sandiegocounty.gov/cao/docs/stratplan.pdf</a>   |
| Air Pollution Control District County of San Diego | County   | San Diego County | "...to protect the public from the harmful effects of air pollution, achieve and maintain air quality standards, foster community involvement and develop and implement cost-effective programs meeting state and federal mandates, considering environmental and economic impacts." | County of San Diego (2016). Air Pollution Control District. Accessed at <a href="http://www.sdapcd.org/">http://www.sdapcd.org/</a>   |
| Imperial County Transportation Commission          | Regional | Imperial County  | To enhance the quality of life and regional economy of Imperial County by ensuring safe, responsive and efficient transportation and transit solutions   | Imperial County Transportation Commission (2014). ICTC, Fiscal Year 2014/2015 Overall Work Plan & Budget. Accessed at <a href="http://www.ivtransit.com/media/module/content_item/FY_2014_2015_OWP_AND_BUDGET_REPORT_final_report_adopted_6_25_14.pdf">http://www.ivtransit.com/media/module/content_item/FY_2014_2015_OWP_AND_BUDGET_REPORT_final_report_adopted_6_25_14.pdf</a> |
| San Diego Association of Governments (SANDAG)      | Regional | San Diego County | SANDAG builds consensus; makes strategic plans; obtains and allocates resources; plans, engineers, and builds public transportation, and provides information on a broad range of topics pertinent to the region's quality of life.  | San Diego Association of Governments (2016). About SANDAG. Accessed at <a href="http://www.sandag.org/index.asp?fuseaction=about.home">http://www.sandag.org/index.asp?fuseaction=about.home</a>  |

| Organization                                 | Scale    | Jurisdiction                                     | Mission   | Source (mission)  |
|--|----------|--|---|---|
| San Diego Metropolitan Transportation System | Regional | San Diego County                                 | <p>"... to enhance the personal mobility of San Diego metropolitan residents and visitors by:</p> <p>Obtaining maximum benefit for every dollar spent.</p> <ul style="list-style-type: none"> <li>- Being the community's major public transportation advocate.</li> <li>- Increasing public transportation usage per capita.</li> <li>- Taking a customer-oriented approach.</li> <li>- Implementing capital projects on schedule and within budget.</li> </ul> <p>Offering high-quality public transportation service.</p> <ul style="list-style-type: none"> <li>- Responding to the community's socio-economic interests." </li></ul> | <p>San Diego Metropolitan Transportation System (2015). MTS Comprehensive Annual Financial Report for the Fiscal Year ending June 30, 2015. Accessed at <a href="http://www.sdmts.com/sites/default/files/attachments/fy15-cafr-final.pdf">http://www.sdmts.com/sites/default/files/attachments/fy15-cafr-final.pdf</a></p> |
| Imperial Valley Transit                      | Regional | Imperial Valley Region (Central Imperial County) | <p>"... to improve the quality of life for the residents of Imperial County through a coordinated, accessible, affordable and efficient countywide transportation system."</p>  | <p>Imperial Valley Transit (2012). VISION - MISSION – GOALS. Accessed at <a href="http://www.ivtransit.com/about/vision---mission---goals">http://www.ivtransit.com/about/vision---mission---goals</a></p>  |
| San Diego County Regional Airport Authority  | Regional | Airports in San Diego County                     | <p>"We will plan for and provide air transportation services to the region with safe, effective facilities that exceed our customer expectations. We are committed to operating San Diego's air transportation gateways in a manner that promotes the region's prosperity and protects its quality of life."</p>  | <p>San Diego County Regional Airport Authority (2016). About The Airport Authority. Accessed at <a href="http://www.san.org/Airport-Authority/About-the-Authority#sthash.fyi6gAOk.dpuf">http://www.san.org/Airport-Authority/About-the-Authority#sthash.fyi6gAOk.dpuf</a></p>   |



| <b>Organization</b>                            | <b>Scale</b> | <b>Jurisdiction</b>                           | <b>Mission</b>  | <b>Source (mission)</b>   |
|--|--------------|---|---|---|
| Southern California Association of Governments | Regional     | Imperial, Los Angeles, Orange, Riverside, San | "... to facilitate a forum to develop and foster the realization of regional plans that improve the quality of life for Southern Californians."   | Southern California Association of Governments (2016). About SCAG. Accessed at <a href="https://www.scag.ca.gov/about/Pages/Home.aspx">https://www.scag.ca.gov/about/Pages/Home.aspx</a>                        |
| San Diego Regional Water Quality Control Board | Regional     | San Diego County                              | "... developing and enforcing water quality objectives and implementing plans that will best protect the area's waters while recognizing our local differences in climate, topography, geology and hydrology."                      | San Diego Regional Water Quality Control Board (2016). San Diego Region - About Us. Accessed at <a href="http://www.waterboards.ca.gov/sandiego/about_us/">http://www.waterboards.ca.gov/sandiego/about_us/</a> |
| San Diego Unified Port District                | Sub-regional | Port District (in San Diego municipality)     | "... protect the Tidelands Trust resources by providing economic vitality and community benefit through a balanced approach to maritime industry, tourism, water and land recreation, environmental stewardship and public safety." | San Diego Unified Port District (2016). Port of San Diego Overview. Accessed at <a href="https://www.portofsandiego.org/about-us.html">https://www.portofsandiego.org/about-us.html</a>                         |
| North County Transit District                  | Sub-regional | North San Diego County                        | "... to deliver safe, convenient, reliable and user- friendly public transportation services."  | North County Transit District (2016). NCTD OVERVIEW. Accessed at <a href="http://www.gonctd.com/nctd-overview">http://www.gonctd.com/nctd-overview</a>  |
| City of Calexico                               | Municipal    | City of Calexico                              | n/a   | n/a   |
| City of San Diego                              | Municipal    | City of San Diego (Charter)                   | "To effectively serve and support our communities"  | City of San Diego (n.d.). City of San Diego Strategic Plan. Accessed at <a href="http://www.sandiego.gov/pad/pdf/citystrategicplan.pdf">http://www.sandiego.gov/pad/pdf/citystrategicplan.pdf</a>               |
| City of Chula Vista                            | Municipal    | City of Chula Vista                           | n/a   | n/a   |
| City of National City                          | Municipal    | City of National City (General Law)           | n/a   | n/a   |

## Appendix C

### Ranking Strategies and Mechanisms Tool