Members

John Minto, Chair
Councilmember, City of Santee
(Representing East County)

Greg Cox, Vice Chair
Supervisor, County of San Diego

David Alvarez
Councilmember, City of San Diego

John Renison
Supervisor
(Representing Imperial County)

Chuck Lowery
Deputy Mayor
(Representing North County Coastal)

Ed Gallo
Councilmember, City of Escondido
(Representing North County Inland)

Serge Dedina
Mayor, City of Imperial Beach
(Representing South County)

Alternates

Vacant
(Representing East County)

Dianne Jacob
Vice Chair, County of San Diego

Mark Kersey
Councilmember, City of San Diego

Maritza Hurtado
Councilmember, City of Calexico
(Representing Imperial County)

Tasha Boerner Horvath
Councilmember
(Representing North County Coastal)

Jim Cunningham
Deputy Mayor, City of Poway
(Representing North County Inland)

Bill Sandke
Councilmember, City of Coronado
(Representing South County)

Advisory Members

Laurie Berman
District 11 Director, Caltrans

Marcela Celorio
Consul General
Consulate General of Mexico

Jim Ferryman
(Representing Orange County)

Marsha Swanson
City of Wildomar
(Representing Riverside County)

Gary Croucher
San Diego County Water Authority

Michael Garcia (Ewiiaapaayp)
Southern California Tribal Chairmen’s Association

Naresh Amatya
Southern California Association of Governments

Gary L. Gallegos
Executive Director, SANDAG

AGENDA HIGHLIGHTS

• BORDER TO BAYSHORE BIKEWAY
• 2016 FREIGHT UPDATE AND GATEWAY REPORT
• GOODS MOVEMENT BORDER CROSSING STUDY - PHASE II

PLEASE SILENCE ALL ELECTRONIC DEVICES DURING THE MEETING

YOU CAN LISTEN TO THE BORDERS COMMITTEE MEETING BY VISITING OUR WEBSITE AT SANDAG.ORG

MISSION STATEMENT

The Borders Committee provides oversight for planning activities that impact the borders of the San Diego region (Orange, Riverside and Imperial Counties, and the Republic of Mexico) as well as government-to-government relations with tribal nations in San Diego County. The preparation and implementation of SANDAG’s Binational, Interregional, and Tribal Liaison Planning programs are included under this purview. It advises the SANDAG Board of Directors on major interregional planning policy-level matters. Recommendations of the Committee are forwarded to the Board of Directors for action.

San Diego Association of Governments • 401 B Street, Suite 800, San Diego, CA 92101-4231
(619) 699-1900 • Fax (619) 699-1905 • sandag.org
Welcome to SANDAG. Members of the public may speak to the Borders Committee on any item at the time the Committee is considering the item. Please complete a Speaker’s Slip, which is located in the rear of the room, and then present the slip to the Committee Clerk seated at the front table. Members of the public may address the Committee on any issue under the agenda item entitled Public Comments/Communications/Member Comments. Public speakers are limited to three minutes or less per person. The Borders Committee may take action on any item appearing on the agenda.

Public comments regarding the agenda can be sent to SANDAG via comment@sandag.org. Please include the agenda item, your name, and your organization. Email comments should be received no later than 12 noon, two working days prior to the Borders Committee meeting. Any handouts, presentations, or other materials from the public intended for distribution at the Borders Committee meeting should be received by the Committee Clerk no later than 12 noon, two working days prior to the meeting.

In order to keep the public informed in an efficient manner and facilitate public participation, SANDAG also provides access to all agenda and meeting materials online at www.sandag.org/meetings. Additionally, interested persons can sign up for e-notifications via our e-distribution list at either the SANDAG website or by sending an email request to webmaster@sandag.org.

SANDAG operates its programs without regard to race, color, and national origin in compliance with Title VI of the Civil Rights Act. SANDAG has developed procedures for investigating and tracking Title VI complaints and the procedures for filing a complaint are available to the public upon request. Questions concerning SANDAG nondiscrimination obligations or complaint procedures should be directed to SANDAG General Counsel, John Kirk, at (619) 699-1997 or john.kirk@sandag.org. Any person who believes himself or herself or any specific class of persons to be subjected to discrimination prohibited by Title VI also may file a written complaint with the Federal Transit Administration.

In compliance with the Americans with Disabilities Act (ADA), SANDAG will accommodate persons who require assistance in order to participate in SANDAG meetings. If such assistance is required, please contact SANDAG at (619) 699-1900 at least 72 hours in advance of the meeting. To request this document or related reports in an alternative format, please call (619) 699-1900, (619) 699-1904 (TTY), or fax (619) 699-1905.

SANDAG agenda materials can be made available in alternative languages. To make a request call (619) 699-1900 at least 72 hours in advance of the meeting.

Los materiales de la agenda de SANDAG están disponibles en otros idiomas. Para hacer una solicitud, llame al (619) 699-1900 al menos 72 horas antes de la reunión.

如有需要，我们可以把SANDAG议程材料翻译成其他语言。

请在会议前至少72小时打电话(619) 699-1900 提出请求。

**SANDAG offices are accessible by public transit. Phone 511 or see 511sd.com for route information. Bicycle parking is available in the parking garage of the SANDAG offices.**
BORDERS COMMITTEE
Friday, January 27, 2017

ITEM NO.  RECOMMENDATION

+1. APPROVAL OF MEETING MINUTES  APPROVE

The Borders Committee is asked to review and approve the minutes from its October 28, 2016, meeting.

2. PUBLIC COMMENTS/COMMUNICATIONS

Members of the public shall have the opportunity to address the Borders Committee on any issue within the jurisdiction of the Committee that is not on this agenda. Anyone desiring to speak shall reserve time by completing a “Request to Speak” form and giving it to the Clerk prior to speaking. Public speakers should notify the Clerk if they have a handout for distribution to Committee members. Public speakers are limited to three minutes or less per person. Committee members also may provide information and announcements under Agenda Item No. 5.

CONSENT

+3. REVISIONS TO THE CHARTER OF THE INTERAGENCY TECHNICAL WORKING GROUP ON TRIBAL TRANSPORTATION ISSUES (Jane Clough)  INFORMATION

This report provides an overview of revisions made to the Interagency Technical Working Group on Tribal Transportation Issues charter.

+4. 2016 BAJA CALIFORNIA ELECTION OUTCOMES: INTRODUCTION TO NEW ADMINISTRATIONS (Marcial Gutiérrez)  INFORMATION

This report provides an overview of the results of the June 5, 2016, elections in the State of Baja California. Elected for three-year terms, Mayors and Local Representatives (Deputies) were sworn in on November 30, 2016, and October 1, 2016, respectively.

REPORTS

5. SUBREGIONAL REPORTS FROM BORDERS COMMITTEE MEMBERS  INFORMATION

Members of the Borders Committee may report issues and activities within their subregion that are of interest or within the purview of the Borders Committee.

6. BORDER TO BAYSHORE BIKEWAY (Alison Moss)  INFORMATION

Staff will provide an update on the Border to Bayshore Bikeway project, which is part of the Regional Bike Plan Early Action Program.

+7. 2016 FREIGHT UPDATE AND GATEWAY REPORT (Christina Casgar and Scott Strelecki)  INFORMATION

Staff will provide an overview of the Freight Gateway Study, which has been updated to provide baseline and forecasted information about the region’s major freight gateways and major freight corridors.
Southern California Association of Governments (SCAG) recently completed the SCAG Goods Movement Border Crossing Study – Phase II. SCAG staff will provide an overview of this study, which assesses the mobility of commerce at the California–Baja California border, and develops freight planning strategies to address long-term trade and transportation infrastructure needs in the border region.

9. CONTINUED PUBLIC COMMENT

If the five speaker limit for public comments was exceeded at the beginning of this agenda, other public comments will be taken at this time. Subjects of previous agenda items may not again be addressed under public comment.

10. UPCOMING MEETINGS

The next meeting of the Borders Committee is scheduled for Friday, February 24, 2017, at 12:30 p.m.

11. ADJOURNMENT

+ next to an agenda item indicates an attachment
BORDERS COMMITTEE DISCUSSION AND ACTIONS

OCTOBER 28, 2016

The Borders Committee was called to order by Vice Chair Greg Cox (County of San Diego) at 12:32 p.m.

Vice Chair Cox welcomed the Borders Committee, guests and self-introductions were presented. Elsa Saxod (San Diego County Water Authority) announced she would no longer attend the Borders Committee meetings because she will be representing the San Diego Water Authority in Los Angeles.

1. APPROVAL OF MEETING MINUTES (APPROVE)

Action: Upon a motion by Councilmember Ed Gallo (North County Inland), and a second by Mayor Serge Dedina (South County), the Borders Committee approved the minutes from the September 23, 2016, meeting. Yes – Vice Chair Cox, Councilmember Gallo, Mayor Dedina, and Councilmember Ruth Sterling (East County). No – None. Abstain – Imperial County. Absent – City of San Diego and North County Coastal.

2. PUBLIC COMMENTS/COMMUNICATIONS

There were no public/member comments.

REPORTS

3. SUBREGIONAL REPORTS FROM BORDERS COMMITTEE MEMBERS (INFORMATION)

Members of the Borders Committee reported on issues and activities within their subregion that are of interest or under the purview of the Committee.

Vice Chair Cox introduced the item and speakers.

Jim Dahl, County of Orange, announced that in the next couple of weeks Caltrans is doing an important lane switch in the area of San Clemente at PICO starting on Saturday, October 29, 2016, morning.
Councilmember Bill Sanke, City of Coronado (South County), spoke about the importance of trade between the CaliBaja region. He briefly mentioned and encouraged members to read a recent article published in the Economist called “In the Shadow of the Wall” and how it tells our story from our perspective.

Mayor Dedina thanked and acknowledged the new Consul General of Mexico in San Diego, Hon. Marcela Celorio, for her assistance with authorities on working with the County of San Diego on the beach and managing the Tijuana River flow during the recent rain storm, and the additional support offered by Consul General’s office and the Baja California State’s Office of Binational Relations in San Diego.

Action: This item was presented for information.

4. REPORT FROM THE CONSUL GENERAL OF MEXICO (INFORMATION)

On April 19, 2016, Hon. Marcela Celorio was appointed by President Enrique Peña Nieto to serve as Consul General of Mexico in San Diego. Borders Committee Vice Chair Cox welcomed and introduced Consul General Celorio to the Borders Committee.

Hon. Marcela Celorio, Consul General of Mexico, presented the item in which she describes the main functions and activities of the Mexican Consular Representative in San Diego.

Action: This item was presented for information.

5. TRIBAL LIAISON PROGRAM STATUS REPORT ON RECENT TRANSPORTATION PLANNING EFFORTS (INFORMATION)

Since 2007, SANDAG and the Southern California Tribal Chairmen’s Association (SCTCA) have had a government-to-government framework in place to coordinate on regional and transportation issues.

Vice Chair Cox introduced the item.

Adam Geisler of La Jolla Band of Luiseño Indians, Tribal Transportation Working Group Co-Chair, along with Claudia Montes from SCTCA, provided an update on the program’s structure and recent activities.

Michael Garcia, SCTCA, and Councilmember Gallo (North County Inland), spoke in support of this item.

Action: This item was presented for information.

6. BINATIONAL MODELING IN THE SAN DIEGO/TIJUANA REGION: BORDER WAIT TIMES (INFORMATION)

Vice Chair Cox introduced the item.
Clint Daniels, Manager of Regional Models, provided an update on the modeling platform that includes the Tijuana, Tecate, and Playas de Rosarito Metropolitan Zone, which is part of the ongoing planning and modeling efforts to strengthen regional collaboration.

**Action**: This item was presented for information.

7. **REGIONAL MOBILITY HUB IMPLEMENTATION STRATEGY (INFORMATION)**

Vice Chair Cox and Executive Director, Mark Baza, Imperial County Transportation Commission introduced the item.

Miriam Kirshner, Senior Regional Planner, and Marisa Mangan, Regional Planner II, presented the Regional Mobility Hub Implementation Strategy, a joint effort of SANDAG and the Imperial County Transportation Commission.

Councilmember Sterling (East County) and Councilmember Gallo (North County Inland), spoke in support of this item.

**Action**: This item was presented for information.

8. **CONTINUED PUBLIC COMMENTS**

There were no additional public comments.

9. **UPCOMING MEETINGS**

The next meeting of the Borders Committee is scheduled for Friday, November 18, 2016, at 12:30 p.m.

10. **ADJOURNMENT**

Vice Chair Cox adjourned the meeting at 2:09 p.m.
## CONFIRMED ATTENDANCE
### SANDAG BORDERS COMMITTEE MEETING
#### OCTOBER 28, 2016

<table>
<thead>
<tr>
<th>JURISDICTION</th>
<th>NAME</th>
<th>MEMBER/ALTERNATE</th>
<th>ATTENDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>South County</td>
<td>Serge Dedina</td>
<td>Member</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Bill Sandke</td>
<td>Alternate</td>
<td>Yes</td>
</tr>
<tr>
<td>North County Coastal</td>
<td>Lorraine Wood</td>
<td>Member</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Al Corti</td>
<td>Alternate</td>
<td>No</td>
</tr>
<tr>
<td>North County Inland</td>
<td>Ed Gallo</td>
<td>Member</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Jim Cunningham</td>
<td>Alternate</td>
<td>No</td>
</tr>
<tr>
<td>East County</td>
<td>John Minto (Chair)</td>
<td>Member</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Ruth Sterling</td>
<td>Alternate</td>
<td>Yes</td>
</tr>
<tr>
<td>City of San Diego</td>
<td>David Alvarez</td>
<td>Member</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Mark Kersey</td>
<td>Alternate</td>
<td>No</td>
</tr>
<tr>
<td>County of San Diego</td>
<td>Greg Cox (Vice Chair)</td>
<td>Member</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Dianne Jacob</td>
<td>Alternate</td>
<td>No</td>
</tr>
<tr>
<td>Imperial County</td>
<td>John Renison</td>
<td>Member</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Maritza Hurtado</td>
<td>Alternate</td>
<td>No</td>
</tr>
<tr>
<td><strong>ADVISORY MEMBERS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>County of Riverside</td>
<td>Marsha Swanson</td>
<td>Member</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Shellie Milne</td>
<td>Alternate</td>
<td>No</td>
</tr>
<tr>
<td>Republic of Mexico</td>
<td>Marcela Celorio</td>
<td>Member</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Rafael Laveaga</td>
<td>Alternate</td>
<td>No</td>
</tr>
<tr>
<td>Southern California Tribal Chairman's Association</td>
<td>Michael Garcia</td>
<td>Member</td>
<td>Yes</td>
</tr>
<tr>
<td>Caltrans</td>
<td>Laurie Berman</td>
<td>Member</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Bill Figge</td>
<td>Alternate</td>
<td>No</td>
</tr>
<tr>
<td>San Diego County Water Authority</td>
<td>Elsa Saxod</td>
<td>Member</td>
<td>Yes</td>
</tr>
<tr>
<td>SCAG</td>
<td>Naresh Amatya</td>
<td>Member</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>David C. Salgado</td>
<td>Alternate</td>
<td>No</td>
</tr>
<tr>
<td>County of Orange</td>
<td>Jim Ferryman</td>
<td>Member</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Jim Dahl</td>
<td>Alternate</td>
<td>Yes</td>
</tr>
</tbody>
</table>
The Interagency Technical Working Group on Tribal Transportation Issues (Working Group) serves as a forum for tribal governments in the San Diego region to discuss and coordinate transportation issues of mutual concern with the various public planning agencies in the region.

Recently, Working Group Co-Chair Adam Geisler presented an update on the Tribal Liaison Program and the Working Group activities to the SANDAG Transportation and Borders Committees. At its November 30, 2016, meeting, the Working Group reviewed the charter and made the following revisions:

- **Reporting:** A key responsibility of the Working Group includes ensuring that the needs and issues of tribal governments are incorporated into the transportation planning process at the regional level. Based on the group’s work focused on transportation issues, there was recognition at the Transportation Committee that the Working Group should report to not only the Borders Committee but also the Transportation Committee.

- **Period of Elections for Tribal Co-Chair:** At its November meeting, the Working Group discussed the option of extending the length of time that the Tribal Co-Chair serves in office, and determined that holding elections every year prevents the Tribal Co-Chair from achieving desired continuity in a leadership position. The Working Group voted to hold elections for the Tribal Co-Chair every two years instead of one.

- **Second Tribal Co-Chair:** The Working Group is currently chaired by two “Co-Chairs” – a Tribal leader and a member of the SANDAG Executive Team. At its November meeting, the Working Group discussed the benefits of institutionalizing a second Tribal leader to serve as an additional Co-Chair, in the capacity of a Vice-Chair, in the event that the first Tribal Co-Chair is unavailable for the meeting. The Working Group voted to add a second Tribal Co-Chair to the leadership of the Working Group.

The revised Charter is attached (Attachment 1).

CHARLES “MUGGS” STOLL  
Director of Transportation and Land Use Planning  

Attachment: 1. Revisions to the Charter of the Interagency Technical Working Group on Tribal Transportation Issues, shown in Track Changes

Key Staff Contact: Jane Clough, (619) 699-1909, jane.clough@sandag.org
CHARTER
Interagency Technical Working Group
on Tribal Transportation Issues

PURPOSE

The purpose of the Interagency Technical Working Group on Tribal Transportation Issues (Working Group) is to serve as a forum for tribal governments in the region to discuss and coordinate transportation issues of mutual concern with the various public planning agencies in the region, including SANDAG, Caltrans, the County of San Diego, and the transit operators. In partnership with the Reservation Transportation Authority (RTA), the Working Group will monitor and provide input on the implementation of the strategies and planning activities related to transportation mutually developed through the San Diego Regional Tribal Summit. There is currently no other working group that can serve this function.

LINE OF REPORTING

The Working Group reports to the Borders Committee and the Transportation Committee, which report to the Board of Directors on tribal-related transportation activities.

RESPONSIBILITIES

The Working Group responsibilities include reviewing current activities and plans being implemented by SANDAG and the tribal governments in an effort to coordinate programs, address issues of concern, and ensure that the needs and issues of tribal governments are being incorporated into the transportation planning process at the regional level. The Working Group will provide feedback and comments on current and planned activities and provide technical advice on the implementation of these activities. The Working Group also assists with the associated outreach to the tribal community on transportation issues of regional significance.

MEMBERSHIP

The voting membership of the Working Group shall be comprised of one representative from each of the federally recognized tribal governments and California tribes in San Diego County. These voting members shall be appointed by the leadership of their respective tribes for a term of one calendar year. Caltrans, the County of San Diego, the Reservation Transportation Authority, Metropolitan Transit System and North County Transit District shall each be entitled to appoint one advisory member of the working group. Each entity represented in the working group, whether voting or advisory, may additionally appoint an alternate representative to serve in the primary member's absence. Any member who misses two meetings in a row or three meetings in a calendar year shall be removed and replaced by that member's alternate, if any. Should a vacancy occur in the position of a primary or alternate member, a represented entity shall be entitled to appoint a replacement representative.
MEETING TIME AND LOCATION

The Working Group will meet quarterly as determined by the group. The location will rotate among tribal reservations, and, when deemed appropriate, at the SANDAG offices. Whenever possible, locations will alternate between southern and northern reservations to allow everyone to attend.

SELECTION OF THE CHAIR

The Working Group shall have two “Co-Chairs” – (a Tribal Leader and a SANDAG Executive Team representative). In addition, the Working Group shall have a second Tribal Co-Chair, to serve in the capacity of Tribal “Vice-Chair,” in the event that the first Tribal Co-Chair is unavailable for the meeting.

The Tribal Co-Chairs who will be chosen-elected by a vote of the voting members of the group on an annual basis every two years, and the representative from SANDAG’s Executive Team will be appointed by its Executive Director.

DURATION OF EXISTENCE

The Working Group will continue as long as the tribal governments and participating agencies determine that it serves as an effective means of communication and coordination, subject to annual review.
2016 BAJA CALIFORNIA ELECTION OUTCOMES: INTRODUCTION TO NEW ADMINISTRATIONS

Introduction

On June 5, 2016, the State of Baja California held elections to elect Mayors and Local Representatives (Deputies). Mayors of the five municipalities and 17 of the 25 Deputies are elected to serve a three-year term (the other eight Deputies are elected by proportional representation depending on the results by parties.) Mayors and Deputies were sworn in on November 30, 2016, and October 1, 2016, respectively. SANDAG staff will work with the new municipal officials to strengthen and develop new and existing partnerships to ensure effective binational collaboration.

Discussion

The State of Baja California is divided into five municipalities: Ensenada, Mexicali (State Capital), Playas de Rosarito, Tecate, and Tijuana. According to the latest National Statistics Institute (Instituto Nacional de Estadística Geografía e Informática, or INEGI) data, in 2010, Baja California had an estimated population of 3,155,070.

The Mexican Constitution of 1917 prohibited consecutive reelections at all levels, but electoral reform approved by the legislature in December of 2013 rendered a number of government offices open to reelection. While consecutive reelection remains prohibited for the President of Mexico and all state governors—both limited to a single six-year term in office—federal senators can now serve two consecutive six-year terms, while federal deputies (the equivalent of United States’ Congressional representatives) can serve up to four consecutive three-year terms. Mayors, city councilmembers, and state legislators may now serve up to two consecutive three-year terms.

In Baja California, the elections are organized by the Electoral State Institute (Instituto Estatal Electoral de Baja California or IEEBC), an autonomous public organization that is independent in its decision-making and administration, which among other responsibilities, includes managing electoral results and providing official evidence for election winners.

In total, during the 2016 elections 13 different political parties entered the various races, with eight candidates running independently for the first time in Baja California’s history and four running in coalition. With a voter turnout rate of 33 percent or 762,491 voters, all mayoral races were won by candidates belonging to the National Action Party (PAN in Spanish) or the coalition led by the Institutional Revolutionary Party (PRI in Spanish).
At the municipal level, the National Action Party (PAN in Spanish) won the State Capital Mexicali and the municipalities of Playas de Rosarito and Tijuana. The Institutional Revolutionary Party (PRI in Spanish)-led Coalition won the municipalities of Ensenada and Tecate. The Mayors listed below began administrations in December of 2016.

Marco Antonio Novelo – Ensenada
Gustavo Sánchez – Mexicali
Mirna Cecilia Rincón – Playas de Rosarito
Nereida Fuentes – Tecate
Juan Manuel Gastélum – Tijuana

The State Congress of Local Representatives or Deputies will be formed as follows:

- PAN – Thirteen representatives, none by Proportional Representation (PR)
- PRI – Four representatives, plus two by PR
- PRD – One representative by PR
- Movimiento Ciudadano – One representative by PR
- Morena – Two representatives by PR
- Morena – One representative by PR
- PEBC – One representative by PR
- PEBC – One representative by PR

VICTORIA STACKWICK
Principal Legislative Analyst

Key Staff Contact: Marcial Gutierrez, (619) 699-7316, marcial.gutierrez@sandag.org
2016 FREIGHT UPDATE AND GATEWAY REPORT

Introduction

In December 2015, Congress passed the Fixing America's Surface Transportation Act, the first federal transportation bill to contain both grant and formula funding for freight projects. Concurrently, at the State level, Caltrans is undertaking an update of the California Freight Mobility Plan, and also is working with several state agencies on the State’s evolving Sustainable Freight Action Plan. Each of these freight initiatives is influencing SANDAG’s freight activities and is helping to shape both the Agency’s freight planning activities and the financing of freight projects. This report describes the update of the Freight Gateway Study and its key findings. The full report can be found on the SANDAG website at: sandag.org/FreightGatewayStudy.

Discussion

The SANDAG freight activities are broadly informed by the regional travel demand model, but there is also a need for a focused freight forecasting tool. Therefore, staff commenced with updating the 2010 Freight Gateway Study. The 2016 Gateway Study provides a forecast of regional freight demand flows, as expressed by freight tonnage and trade value, in San Diego and Imperial Counties through 2050. The primary objective of the 2016 Gateway Study is to give SANDAG, the Imperial County Transportation Commission (ICTC), and other regional stakeholder’s access to timely and thorough freight demand flow information as an estimation tool to better plan and manage a sustainable freight network. Secondary objectives include the identification and analysis of policy and freight transportation system issues impacting regional goods movement (including commercial border crossings, the seaport and airport as primary freight gateways; and pipeline, maritime, air cargo, rail and truck modal demand flows).

The draft 2016 Gateway Study was used to inform the update of the Goods Movement Strategy component of San Diego Forward: The Regional Plan (adopted by the SANDAG Board of Directors in October, 2015), by identifying current and future freight demand flows and by providing insights into how freight investments impact freight flows, industrial development, and related economic activity and sustainability. It is envisioned that the final 2016 Gateway Study will be used for similar purposes by freight stakeholder partner agencies, such as Caltrans, the Port of San Diego, the San Diego County Regional Airport Authority, rail operators in the region, and chambers of commerce.
The U.S. Department of Transportation’s multimodal Freight Analysis Framework (FAF) has been used as the source of historic and forecast data in the 2016 Gateway Study project because it is the most comprehensive publicly available data focusing on freight activity. This annual data covers multimodal freight flows, domestic and international, of the United States, with commodity and origin and destination region detail.

The initial objective of the study was to utilize the FAF freight flow data throughout the development of the freight gateway forecasts including the base year and forecast information. As a means to validate and supplement the FAF data, other public historic data sources have also been used to improve upon the detail available for individual modes and geography of FAF freight flows.

In October 2015, staff and the consultant team, CDM Smith and SD Freight Rail Consulting, completed the first draft of the 2016 Gateway Study, and throughout the course of the year staff refined that draft to include newer federal freight data sources. The Freight Stakeholders Working Group provided input throughout the preparation of the 2016 Gateway Study.

Based on FAF series 4, its policy analysis section and analysis of other data sources, the key findings of the Study for the San Diego region include:

- Currently, internal and domestic tonnage for San Diego County is significant, accounting for nearly 90 percent of all tonnage through the region and anticipated to grow at a 1 percent compound annual growth rate out to 2050.

- International freight tonnage flows for the San Diego region are estimated to grow three to four times faster than domestic tonnage as we look out to 2050. However, internal and domestic tonnage will still account for nearly 60 percent of all tonnage through the region.

- The Otay Mesa Port of Entry will remain the largest commercial international gateway for the San Diego region, and is an important economic generator by facilitating over $42 billion in trade (2015).

- Due to the high content of U.S. and Asian-based production inputs in cross-border trade coming to and from the Inland Empire and Ports of Los Angeles-Long Beach, there are strong supply chain relationships to be understood external to San Diego County.

- The San Diego region, due to a large consumer base, will continue to serve as the center of regional consumption and distribution, therefore driving the preponderance of regional freight flows.

- Many of the freight assets in the San Diego region are concentrated in heavily populated areas of the county, and have to be managed in balance with other transportation assets in a sustainable manner.
Next Steps

The study findings also will be presented to the Borders Committee and ICTC at future meetings. Findings of the 2016 Freight Gateway Study will support regional and statewide freight initiatives.

CHARLES “MUGGS” STOLL
Director of Land Use and Transportation Planning

Attachment: 1. Executive Summary of the 2016 Freight Gateway Study Update

Key Staff Contacts: Christina Casgar, (619) 699-1982, christina.casgar@sandag.org
Scott Strelecki, (619) 699-6954, scott.strelecki@sandag.org

Please note: The full 2016 Freight Gateway Study in electronic format can be downloaded at www.sandag.org/FreightGatewayStudy

Hard copies are available by contacting the Public Information Office at (619) 699-1950 or pio@sandag.org.
FREIGHT GATEWAY STUDY UPDATE

Intended Uses This Study

The goal of the 2016 Freight Gateway Study Update is to give SANDAG and other stakeholders’ access to thorough freight forecast information as an estimation tool to better plan and manage a sustainable freight network. The 2016 Freight Gateway Study Update is primarily intended to inform the Goods Movement Strategy section of the 2050 Regional Transportation Plan by identifying current (2012 baseline) and future freight volumes out to 2050. Additionally, the Gateway Study will provide insights into how freight investments could impact goods movement, industrial development, and freight related economic activity in our region.

Forecasting Caveats

This forecast, just as any other forecasting tool, should be used as but one planning tool; a tool that should be used in conjunction with other real time information, comparisons with industry news, and regular re-calibration based upon changing economic conditions. Forecasting freight flows out to 2050 is de facto understood to be a static snapshot, and subject to many and varied unforeseeable policy and or market influences. Notwithstanding these caveats, the study team developed this 2016 Freight Gateway Study Update forecast by analyzing the most comprehensive data sets publicly available and synthesizing that complex information into an executive briefing format.

Forecast Consistency with National Projections

For the most comprehensive publicly available coverage of freight activity, the U.S. Department of Transportation’s (U.S. DOT) multimodal Freight Analysis Framework (FAF) has been used as the default source of historic data in the Freight Gateway Study Update Project. The FAF is published by the U.S. DOT and Federal Highway Administration (FHWA). This annual data covers multimodal freight flows, domestic and international, of the United States, with commodity and origin and destination region detail. This is the most comprehensive and frequently-used public freight flow data source used in public sector planning around the country. The current version is referred to by the FHWA as FAF 4. Every five years, the FHWA releases annual updates.
1. EXECUTIVE SUMMARY AND INTRODUCTION TO FREIGHT DYNAMICS IN THE GATEWAY REGION

Transportation infrastructure networks must accommodate and reflect how resources, goods, and services are distributed. In the short run, the health of the economy drives the demand (volume) of freight moving on the transportation system. In the long run; however, it is the capacity of regional transportation systems to accommodate freight volumes, which result from market expansion and other shifts in the structure of the economy, which can significantly impact the sustainability of economic growth.

1.1 Understanding Freight Movement

As recovery in growth in the U.S. economy continues following the Great Recession of 2008-2009, demand for goods, services, and related freight transportation activity is projected to continue to increase. Growth is projected for heavy shipping industries like energy, farming, and mining as well as sectors such as ecommerce, high tech, and the government, which also impact demand for the movement of goods.

The American freight transportation network has been experiencing tremendous growth in the past decades due to changes in the makeup of the economy and expansion in international trade. While the growth in the past 30 years was fueled by declines in transportation and communication costs, trade is expected to grow further as global economies become increasingly interdependent.

Shifts in established patterns of international trade will contribute to this growth, and that includes a trend towards ‘near-shoring’1 of production to Mexico for the North American market with some shifting away from overseas production that is no longer based only on low labor costs. This trend particularly benefits Mexico as a rapidly growing source for U.S. imports, echoing the boom in crossborder trade that followed the original adoption of the North American Free Trade Agreement (NAFTA) twenty years ago. The recent trend is for the United States and even Asian and European manufacturers to expand production in Mexico, often referred to as “near-shoring” in order to serve the entire North American market, often with advanced technologically manufactured goods.

According to the U.S. Department of Transportation’s (U.S. DOT) Freight Analysis Framework (FAF) version 4, the volume of U.S. NAFTA trade will more than double between 2012 and 2050, as will the volume of all imports and exports over the same period. As a result, there is growing pressure to maintain, upgrade, and expand the current freight transportation network to meet the demands of various U.S. and international markets.

---

1 Dictionary of International Trade definition: “The offshoring of a business process or manufacturing plant to a lower cost foreign location that is in close geographic proximity to the contracting company.”
U.S. energy markets are also undergoing a revolution with the rapid growth in use of natural gas, due to lower prices from increased domestic production of both natural gas and oil, facilitated by new well drilling technologies. The import transportation requirements for U.S. crude oil consumption are falling while the United States expands transportation of natural gas for export, including via pipeline to Mexico. Lower relative energy costs are resulting in increased demand for transportation of North American production of energy-intensive products such as petroleum products and chemicals. Natural gas also is seeing adoption as an alternative fuel source for freight transportation equipment, including for over-the-road heavy trucks, due to the attraction of reduced emissions and reduced costs.

Across industries and across the continent, in order to remain competitive, firms are demanding more timely and flexible delivery services that require the current freight system to become more efficient and reliable. The interconnectedness of various modes of transportation is growing in importance, especially at international gateways such as border crossings, airports, and seaports.

1.2 The Role of Freight Movement in the National and Regional Economy

The relationship between freight transportation and economic growth has long been recognized as an important element in any national or regional development policy.

Enhancing freight transportation networks can lead to significant economic impacts by lowering transportation costs and improving service, particularly with today's just-in-time (JIT) inventory practices. Network improvements can help increase practical distances traveled and the speed of delivery, further expanding supply and distribution networks, resulting in market development and economies of scale.

Improving freight transportation services by reducing transit times and improving reliability enhances inventory and supply chain management. The effects of these time savings and cost reductions can work through the economy via additional efficiency gains due to changes in companies’ logistics processes and operations, also known as “reorganization” effects.

---

2 Dictionary of International Trade definition: “The principle of production and inventory control that prescribes precise controls for the movement of raw materials, component parts, and work-in-progress. Goods arrive when needed (just in time) for production for use rather than becoming expensive inventory that occupies costly warehouse space.”
Figure 1.1: Freight Transportation and Economic Growth

NOTE: VMT is Vehicle Miles Travelled; VHT is Vehicle Hours Traveled

The time and cost savings generated by investments in the freight transportation network can enhance the overall performance of logistics systems, which in turn can increase productivity in manufacturing and distribution, as depicted in Figure 1.1. This enhanced productivity reflects a more efficient use of labor, capital, and materials, all of which lead to improved production and increased economic growth. The concept of productivity enhancement is fundamental in economic theory as it is a key determinant of economic growth and improvement in the standard of living, as exhibited by the close relationship between how much economic output there is per person (measured as Gross Domestic Product [GDP] per capita) and the growth of labor productivity.
In the United States, there is a clear relationship between the size of the country's economy, measured as GDP, and U.S. international trade; this is depicted in Figure 1.2. U.S. GDP and international trade have continued to grow since 2002 (with the Great Recession and global energy correction as the exceptions in 2009 and 2015). As U.S. trade has grown faster than the overall economy over this period, a comparison of U.S. international trade to GDP shows an increasing trend. This represents the increasing importance of trade to the U.S. economy.
The relationship between trade and economic growth of the United States also is found at the global level. Figure 1.3 illustrates the relationship of trade and GDP for the world. Except for the global recession years of 2009 and 2001, the pace of world trade growth has equaled or exceeded overall world economic growth. Despite the 2012-2013 weakness in world trade growth relative to GDP, the International Trade Association forecasts that the world economy reverts to the long-term trend of trade volume outpacing GDP.

*Source: International Trade Association, U.S. Department of Commerce*
The regional economy of the San Diego Metropolitan Statistical Area (MSA)\(^3\) has performed strongly compared to its Los Angeles and Orange County MSA and U.S. Metropolitan peers in recent years. Measured as real regional GDP in the bar graph in Figure 1.4, San Diego's growth has been stronger than that of Los Angeles and Orange County since the recovery from the Great Recession took hold in 2011. In 2015, the annual GDP growth for the Southern California metropolitan regions outperformed that of the U.S. international trade growth in goods. This recent trend is similar to the U.S. GDP and trade as shown in Figure 1.2, as GDP has outpaced trade during the global energy correction.

The effects on the economy of improving freight transportation can be classified into different groups, some of which have been used to quantify benefits for use in economic feasibility analysis\(^4\) of freight transportation projects. Immediate cost reductions to carriers and shippers, including gains to shippers from shorter transit times and better reliability, represent the first group of quantifiable benefits. A second group of quantifiable benefits includes gains associated with reorganization effects (improved logistics), leading to lower prices and higher output. These, in

---

\(^3\) U.S. Census Bureau definition: Metropolitan Statistical Areas are geographic entities delineated by the U.S. Office of Management and Budget for use by federal statistical agencies in collecting, tabulating, and publishing federal statistics. A metro area contains a core urban area of 50,000 or more population. Each metro area consists of one or more counties and includes the counties containing the core urban area as well as any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core.

\(^4\) Economic feasibility analysis of projects is most commonly carried out using Benefit Cost Analysis.
turn, can result in a third group of quantifiable benefits, made up of product/service improvements, or in the development of new products/services.

Finally, investments in freight transportation can lead to higher employment and income, which, in turn, helps to stimulate the economy. The real cost of freight transportation has decreased over the past three decades, primarily as a result of industry restructuring and innovations in supply chain management. However, recent trends such as volatile oil prices, growing environmental concerns, transportation safety regulations, and reductions in public funding available for capacity expansion, may lead to higher freight transportation costs and impede growth in goods movement in the near future. In particular, capacity issues have resulted in congestion problems across major freight corridors and gateway access points. Congestion significantly impacts the supply chains of high-value, time-sensitive commodities, and contributes to higher freight costs, which may ultimately result in higher consumer prices and a reduction in export competitiveness across the economy. Consequently, strategic investments in major freight corridors and gateway access points are essential to contain and/or mitigate rising transportation costs.

1.3 Characteristics of and the Challenges to the Regional Freight Network

Uniquely located between major production, trade, and population centers, the San Diego and Imperial Valley region – the Gateway region – possesses a wide array of transportation infrastructure assets. These include major ports of entry (POEs) along the border with Mexico (including Calexico East’s unique aggregate only conveyor belt), interstate highways and state routes, Class I and short line railroads, marine cargo terminals, pipelines, and a modern air cargo system.

The location of the Gateway region contributes greatly to its role in global supply chains and the facilitation of international trade. The border crossings are critical assets for the physical movement of goods, as they serve as gateways to and from the U.S./NAFTA trading partner Mexico; similarly the two marine terminals are gateways for waterborne commerce and the San Diego International Airport (SDIA) hosts a significant amount of air cargo and courier services, and some air cargo is handles at the Imperial County Airport. Links to the gateways (highways, pipelines, and rail lines) are equally important, as they provide the connection to the gateways that facilitate the circulation of goods between producers and consumers.

The freight infrastructure network serving trade is critical, given how significant trade is to the economy. Because of the integration of production and distribution processes across the California/Mexico border, the growth in international trade not only benefits the national economy, but the regional economy as well. Economic growth in the region has been closely related to international trade and more specifically to NAFTA trade, for decades. Figures 1.5 and 1.6 show the value of the San Diego economy (as Gross Regional Product) and trade (as Otay Mesa trade for San Diego) between 2001 and 2013. The figures suggest a strong correlation between trade and the economy of the San Diego region, both having recovered from the declines during the Great Recession.

5 NAFTA is the North American Free Trade Agreement covering the U.S., Mexico, and Canada, in force since 1994.
The value of trade at the Otay Mesa POE (California’s largest POE with Mexico) is large, valued at $42.7 billion in 2015. This trade consists of northbound U.S. imports ($28.2 billion) dominating the two-way trade as observed in the pie chart in Figure 1.6 as well as southbound exports ($14.5 billion). This trade is carried by over 1.6 million northbound and southbound truck crossings annually. Among the key commodities in this two-way trade are electronics, agricultural goods, vehicles, and medical devices.
U.S./Mexico trade has grown substantially since the adoption of NAFTA over two decades ago in 1994. As seen in the next Figure 1.7, the U.S. Department of Commerce statistics show the total value of this bilateral trade has increased 552 percent from 1993 before the beginning of NAFTA to 2015. Both imports and exports rebounded strongly after the 2008-2009 recession to record high levels.
The trade in intermediate goods, those used as inputs to manufacturing production, is substantial between the United States and its North American trade partners. The integration of North American manufacturing supply chains is demonstrated by the high share of the value of goods imported into the United States comprised of components and inputs that originated in the United States. Examples would be electronic products assembled in Mexico with electronic parts made in and imported into Mexico from the U.S. This production sharing across countries is evidence of the economic integration between two economies, and the dependence on the crossborder transportation system to enable this commerce to occur. In Figure 1.8, Mexico is by far the leading “production sharing” trade partner country of the United States with 40 percent of the value of U.S. imports from Mexico comprised of U.S. content. The key U.S. trade partners across the Pacific Ocean, in contrast, all have less than 10 percent U.S. content in the goods the U.S. imports from them.
A well-functioning freight transportation system (gateways and links between the gateways) also is essential to satisfying local demand for consumer products and maintaining standards of living. This is particularly true of terminating markets such as the Gateway region. Goods movements terminating in the region (“inbound” freight flows) exceed goods movements originating in the region (“outbound” freight flows). In order to accommodate the projected growth in population and employment - and the associated growth in consumption – it is important to understand that more inbound freight flows and overall freight volumes are implicit in enabling that growth.

Currently, the highway system carries the vast majority of regional freight, but the system is strained at key bottlenecks. Congestion at the border crossings between California and Mexico is hindering the region’s economic growth.

Other factors are restraining the region from reaching its potential for prosperity and improvements in standards of living. One of the main problems is the limited growth in regional income, attributed to an increasing proportion of low-wage employment. There also has been a widening gap between average wages for high and low earners. And a relatively high cost of living from housing and energy expenses has challenged the economic standing for a majority of the population.
Regional policymakers are faced with a complicated set of challenges to the region’s growth and to the realization of its goals for greater prosperity. On the one hand, inefficiency in the movement of freight threatens the rate of growth in economic productivity, thereby posing a risk to regional competitiveness, employment, and real household incomes. On the other hand, facilitating the unconstrained demand for freight transportation can bring with it environmental and other social costs that diminish overall prosperity and well-being. How to respond to the future growth in freight transportation demand will thus require a balance in planning decisions, as depicted in the Regional Vision in Figure 1.9.

1.4 Policies and Potential Impacts of Sustainable Goods Movement in the Region

Gateway region policymakers face the complex task of enhancing mobility for the region’s residents, workers, and businesses while at the same time promoting international trade by improving the efficiency of the Gateway region’s airports, seaport, and border-crossings. To assist in this task, it is helpful to identify types of infrastructure investments that will best contribute to economic growth. To enhance efficiency at the international gateways, the strategies adopted must accommodate growing needs to reduce congestion and waiting times. Finally, businesses must be able to take advantage of scale economies as well as agglomeration economies from consolidation of production and warehousing facilities. Ultimately, a more efficient and improved Gateway region transportation system will support mobility and trade growth.
When considering options for improving the region’s standard of living, planners and policymakers in the Gateway region have an interest in promoting a wider understanding of the impact of improving freight infrastructure, policies and services, and in addressing related economic, environmental, and social issues. Example questions include:

- What investments would help support trade among sectors of the economy associated with higher wage employment and higher value products?
- Should the region promote growth in more value-adding activities? And if so, of what types?

Strategies for improving the region’s transportation system generally fall into three categories:

- What policy actions can promote local business connections or access to labor and other inputs?
- What policy actions are needed to promote environmental benefits and/or community sensitive responses?
- Which infrastructure investments can alleviate bottlenecks, improve efficiencies, and/or lower costs?

Whatever combination of strategies is pursued, regional policy makers will want to focus on how to improve the region’s comparative advantage (e.g., proximity to Mexico’s manufacturing industry, high quality labor force, attractive location for tourism) while ensuring that their policies are consistent with the strategies and initiatives pursued on the Mexican side of the border.

To address the need for planning for a more efficient and reliable transportation system that will better serve the region’s growing population, SANDAG is seeking to better integrate existing transportation system components in the updated Regional Transportation Plan (RTP), titled San Diego Forward: The Regional Plan. Among other elements, the plan includes an extensive set of managed lanes to accommodate transportation services as well as carpools, vanpools, and fee-paying patrons. It would help improve accessibility for various traffic types and – indirectly – activities, and provide funding incentives for transit-oriented, sustainable land use and development.

SANDAG’s planning also is taking into consideration the new federal freight-planning guidance, as recommended by the U.S. DOT in their implementation of the latest federal surface transportation program, known as the Fixing America’s Surface Transportation Act or “FAST Act”, legislation. Along with a continued emphasis on freight planning and performance management in general, this legislation calls for the implementation of shovel-ready projects through both discretionary grant and state-issued formula fund programs. The legislation endorses the type of freight-planning already established and underway by SANDAG, and through the State of California, provides implementation funding opportunities.

In response to the need to maintain and improve the region’s access to domestic and international markets, SANDAG includes a goods movement discussion in the Regional Plan. This section aims to assess the region’s goods movement system, and identify opportunities and needs for freight system improvement. SANDAG freight-planning also works with Caltrans, neighboring planning agencies,
and the U.S. DOT in establishing definitions of a national freight network that can be used to help guide inter-regional corridor planning. The U.S. DOT has defined a national Primary Highway Freight System (PHFS) that is called for in the FAST Act legislation to also help guide freight transportation policy decisions.

Additionally, as part of the recovery from the Great Recession, federal government stimulus project funding such as from the DOT Transportation Infrastructure Generating Economic Recovery (TIGER) program has provided funds for some freight-related projects in the region. The TIGER program was continued with grant funding of $600 million in 2014, which may again prove a source of support for the region’s project needs. The State of California Proposition 1B Bond funding also included freight-specific project funds, especially for rail. Traditional federal funding opportunities are challenging for any sort of systemic freight improvements; in the San Diego and Imperial County region this is particularly true for border infrastructure needs due to budget constraints. Regarding border financing, there is a new tool that addresses this problem; Section 559 of the Consolidated Appropriations Act, 2014, is a component of CBP’s alternative sources of funding. This authority allows CBP to support requests for expanded services as well as improvements to infrastructure through both reimbursable service agreements and donation acceptance authority, respectively.

Through innovative financing mechanisms such as public-public partnerships, SANDAG, Caltrans, and the U.S. Customs and Border Protection, together with counterpart agencies in Mexico are exploring new infrastructure investment partnerships. Similarly, the freight infrastructure challenges for the SDIA and the seaport are often the landside access issues, where unique partnerships and blended funding solutions have to be developed. Although such partnerships usually require lengthy negotiations among the participants on issues concerning design, construction, and control over operation and maintenance, they could help pay for building and maintaining infrastructure networks that the region cannot otherwise afford.

While policies aimed at encouraging international trade could improve the efficiency of the transportation network and support sustainable growth in the region, they might also lead to business restructuring and re-allocation that could eventually shift jobs and production. This speaks to why SANDAG will be balancing three basic goals: maintaining a vibrant economy, encouraging innovative mobility and planning, and maintaining a healthy environment and communities.

SANDAG will use this updated Freight Gateway study in partnership with organizations such as the Southern California Association of Governments (SCAG), the Imperial County Transportation Commission (ICTC), the San Bernardino Associated Governments (SANBAG) the Orange County Transportation Authority, the California DOT (Caltrans), and the Unified Port of San Diego and San Diego International Airport Authority in order to jointly work towards advancing public support for trade and the infrastructure needed to accommodate trade. For example, joint efforts could involve raising the public’s awareness and understanding of trade negotiations in conjunction with labor and environmental policies, and other policies to protect intellectual property rights or domestic industries.

There is a clear interdependency between SANDAG, SCAG, and ICTC in planning for crossborder freight movements and regional intermodal freight. The diagram in Figure 1.10 shows an example of regional distribution schematic of crossborder, international, and domestic intermodal freight in which the capacity links, nodes, and bottlenecks exist across planning jurisdictional lines. In
Southern California, National Distributions Centers (NDCs) and Regional Distribution Centers (RDCs) are located in the Los Angeles Basin and the Inland Empire. They are connected to the major Southern California container port gateways of Long Beach and Los Angeles by truck, and in turn connected to the rest of the country via truck and intermodal rail service. Mexico traffic connects through San Diego at Otay Mesa POE to the seaports, the distribution centers, and the intermodal rail terminals in the Los Angeles Basin. There also are intermediate freight handling facilities in the region used in the network, depicted by the orange boxes in the diagram. The depiction of interdependency of the many relationships across the border is conceptual in Figure 1.10. A major goal of this update study is to: illustrate the complexity of global supply chains, suggest the region’s role in facilitating those supply chains, and how to forge cooperative approaches for researching and planning for these supply chain flows.

**Figure 1.10: Los Angeles Basin/San Diego Truck Distribution Interdependency**

![Diagram of Los Angeles Basin/San Diego Truck Distribution Interdependency]

**NOTE: NDC: National Distribution Centers; RDC: Regional Distribution Centers**

With limits on funding, it is imperative that freight infrastructure investments be prioritized and allocated efficiently. Such planning not only requires a clear understanding of existing capacity and current capacity utilization, but more importantly, an accurate and reliable forecast of future transportation and infrastructure needs.
1.5 Study Objective and Plan of this Report

The objective of this study is to update the 2010 SANDAG Comprehensive Freight Gateway Study to provide an accurate, reliable, and credible forecast of future freight movements, to better plan for the various facilities and infrastructure improvements in the Gateway region. This updated Freight Gateway Study gives the region benchmarks to assist with the freight investment and freight policy issues noted earlier. The study will also underpin San Diego Forward: The Regional Plan.

Another critical component of this update is to identify and annotate the impacts of the Great Recession and then update the future forecasts.

After this introductory chapter, Chapter 2 provides an updated detailed description of existing infrastructure and capacity constraints in the region. Chapter 3 provides new estimates of existing freight flows; the chapter also includes snapshot information about major commodities, and mode of conveyance. The policy constraints, market conditions, and regulatory issues affecting the transportation under this study are addressed in Chapter 4. The technical appendices include several items:

- An overview of the methodology and a list of data sources
- The updated 2050 freight forecast gateway tables; a compendium report distilling mode of conveyance, and volume and value illustrating various commodities and gateways
- Freight vignettes – perishables, electronics, and automobiles

1.6 Gateway Tables: Summary Snapshots of Regional Freight

As noted in Section 1.4, the subsequent chapters delve into greater detail on regional freight issues, but the following summary snapshots will inform the reader of key freight issues. It is important to note in this introductory section that most of the freight data in this report used a common metric, which is measuring freight dynamics by cargo weight in tons.\(^6\) Assessing freight flows by tons is a very useful metric that is common to all modes and to all gateways. So rather than counting containers, train carloads, truckloads or pallets of air cargo, in this report we will focus on tons. By using tons, we then have a study whereby gateways can be compared and understood through a common lens. It is important to understand that this is a Comprehensive Freight Gateway Study and is not intended to be used as a project-specific traffic study.

\(^6\) Tons measured as short tons of 2000 pounds
Figure 1.11 Summary of Freight Flows through the Region’s International Gateways in Volume: 2050 Forecast

In Figure 1.11, it is clear that both San Diego and Imperial Counties land ports of entry reflect the highest amount of combined import and export tonnage and highest annual average growth rates between the 2012 baseline and 2050 conservative and aggressive forecasts. A substantial majority of total tonnage for these counties are moved through the Otay Mesa (over 90 percent) and Calexico East (over 95 percent) POEs. The San Diego International Airport’s tonnage is not comparable (due to the high value commodities that move by air freight) to the other major international gateways; all other international gateways witnessed over 1 million tons moved during the 2012 baseline, but the airport only witnessed six thousand.

Source: FAF 4, U.S. Army Corps of Engineers and San Diego International Airport,
Similarly, as with tonnage, in Figure 1.12, San Diego and Imperial Counties LPOEs are substantially leading the region’s gateways in combined import and export trade value. During 2015, the Otay Mesa POE witnessed over $42 billion in total trade value. By 2050, this POE is estimated to witness a significant increase as San Diego County is forecasted to generate total trade value between $113 to $237 billion. The Port of San Diego is estimated to generate between $8 to $29 billion in value for its imports and exports by 2050; followed by $4.5 to $9.5 billion from the San Diego International Airport.
As a mode, in Figure 1.13, truck freight flows within, from and to San Diego County reflect over 20 times more volume when compared to other modes in the 2050 conservative and aggressive forecast years. This clearly illustrates the importance of the need for continued investments and maintenance in regional highway networks in order to support these truck volumes.
Similar to the situation where the Otay Mesa and Calexico East international gateways are the highest generators in value, the truck mode substantially provides the highest amount of domestic freight flows moving within, from and to San Diego County of the modes of transport. This is depicted for 2012 and 2050 conservative and aggressive forecasts in Figure 1.14.
For perspective on the composition of truck demand within, from and to the San Diego region, understanding domestic freight tonnage (in contrast to international tonnage which is identified as Gateway tonnage) is an important part of the overall freight flow picture. The domestic tonnage is important for an understanding of all truck traffic in the region whether it originates at a gateway or is simply the flow of goods to consumers in the San Diego region.

To illustrate the relative importance of domestic truck flows, consider that the international border POEs are estimated to generate between nearly 40 to 55 million tons of import and export truck freight flow demand in 2050 (Figure 1.13), domestic truck freight flows are estimated to generate between 68 to 83 million tons of goods moved as shown in Figure 1.15. Domestic freight flows include internal truck moves within the County of San Diego as well as inbound and outbound truck moves to and from the region and generated domestically within the United States. This domestic freight tonnage, borne by truck, has important implications for maintaining capacity on I-5 and I-15.
DATE: September 29, 2016

TO: Transportation Committee (TC)

FROM: Mike Jones, Senior Regional Planner, (213) 236-1978, jonesm@scag.ca.gov

SUBJECT: SCAG Goods Movement Border Crossing Study - Phase II

EXECUTIVE DIRECTOR’S APPROVAL: [Signature]

RECOMMENDED ACTION:
For Information Only – No Action Required.

EXECUTIVE SUMMARY:
SCAG recently completed the SCAG Goods Movement Border Crossing Study – Phase II to assess the mobility of commerce at the California – Baja California border, and develop freight planning strategies to address long-term trade and transportation infrastructure needs in the border region. The study gathered and synthesized information on goods moving across the U.S. – Mexico border through the Imperial County and San Diego County international land ports-of-entry (POEs). The effort developed and tested three different scenarios - baseline, optimistic, and pessimistic – to evaluate future trade projections of freight flows to assist SCAG and other regional stakeholders in their assessment of future infrastructure needs and general planning efforts. Major steps included the comprehensive study of bi-national trade and emerging business decisions and logistics strategies that affect the border region, transportation data collection (drayage and true origin - destination data by truck, rail, and intermodal transfers), and conceptualization and analysis of transportation infrastructure needs for regional ports-of-entry based on the potential trade flow scenarios. The project also assessed the nexus between the most critical commercial ports-of-entry, seaports (e.g., San Pedro Bay Ports), and areas of high freight concentrations such as warehouse and distribution clusters in the Inland Empire. SCAG staff will present an overview of the study and results and recommendations from the effort.

STRATEGIC PLAN:
This item supports SCAG’s Strategic Plan Goal 1: Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies, Objective a: Create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans.

BACKGROUND:
Mexico is the third largest trading partner of the U.S. behind Canada and China with $531 billion in trade in 2015. This trade volume accounted for over 14 percent of total U.S. foreign trade, growing by more than 2 percent since 2008. Annually, a total of $50 billion in two-way trade, or 13 percent of U.S. land exports to, and imports from, Mexico passes through the California – Baja California border (both San Diego and Imperial County ports-of-entry). California is the second largest exporter to Mexico amongst the 50 U.S. states (behind only Texas). In 2015, the state exported $26.8 billion worth of goods to Mexico accounting for over 16.2 percent of California’s overall goods exports. California is also the second largest domestic U.S. importer of Mexican goods, accounting for almost 15.3 percent of all
Mexican imports. Trucking is the dominant mode of transportation for cross-border trade. Trade value by truck increased by over 22 percent between 2005 and 2015. Incoming trucks at the California – Baja California border increased by approximately 8 percent over the past decade to 1.22 million trucks in 2015.

Today’s global economy and time-based competition demand efficient freight transportation networks serve as extremely critical links between manufacturers, distributors, and consumers. Agencies across the U.S. are faced with the difficult task of proactively planning for adequate transportation infrastructure and freight facilities that enhance goods movement in their region. This is particularly challenging for border regions with limited information on true origin-destination patterns and end-to-end travel times. Effective planning requires identification of true origin and destination points, because freight network commodity flows often utilize secondary and tertiary points that do not originate or end in the area of jurisdiction of the responsible planning authority. Such planning should not only seek to understand freight flows, reduce current congestion delay, and improve travel time reliability and safety, but also anticipate potential shifts of commodity flows and traffic, and the associated ramifications, across modes, routes, and ports-of-entry. The completed study aimed to assess the mobility of commerce at the California – Baja California border, and develop freight planning strategies to address long-term trade and transportation infrastructure potential needs in the border region.

The key findings from the study included:

- Border crossing traffic flows are large, but are not as significant, in terms of volume, compared to the domestic flows of goods in the region.
- Bottlenecks in the SCAG and SANDAG region are not the result of border-crossing flows, but are affected by them.
- The economic impact of drayage in the SCAG and SANDAG region is considerable.
- The movement of goods across the California – Baja California is of national significance.

Using key findings, a number of recommendations were developed. These include, but are not limited to:

- Prioritizing investment in projects to remove identified highway bottlenecks.
- Investing in greater capacity at land ports-of-entry.
- Promoting modal diversification in the region to leverage the region’s strategic location.
- Promoting the use of streamlined processes and state-of-the-art technological advances.
- Promoting higher levels of coordination between agencies and stakeholders to achieve the efficient shipment of goods across the border.

FISCAL IMPACT:
No fiscal impact.

ATTACHMENT:
PowerPoint Presentation: SCAG Goods Movement Border Crossing Study – Phase II
BORDER TO BAYSHORE BIKEWAY

SANDAG Borders Committee
January 27, 2017

REGIONAL BIKE PLAN
EARLY ACTION PROGRAM

• Adopted by the SANDAG Board of Directors in September 2013
• 41 projects with cost totaling $200 million
• 36 projects funded through construction phase
• FY 2017 CIP includes 25 high-priority projects
EVERYDAY PEOPLE, EVERYDAY TRIPS

No way

Interested, but concerned
(potential bikeway users)

Anywhere, anytime

BIKE EAP DESIGN PRINCIPLES

SAFE “LOW STRESS” STREETS

• Safe movement of people
• Protected bikeways provide separation
• Traffic calming to reduce speeds
• Challenges in urban areas due to limited space and competing uses
BORDER TO BAYSHORE BIKEWAY
EXISTING CONDITIONS

GObyBIKEsd.com

BORDER TO BAYSHORE BIKEWAY
EXISTING CONDITIONS

GObyBIKEsd.com
BORDER TO BAYSHORE BIKEWAY EXISTING CONDITIONS
TENTATIVE PROJECT TIMELINE

ONGOING COMMUNITY OUTREACH

- PLANNING (2017)
- PRELIMINARY ENGINEERING/ENVIRONMENTAL CLEARANCE (2018)

NOTICES / UPDATES

- FINAL DESIGN (2019)
- CONSTRUCTION (2021)

DIFFUSION COMUNITARIA CONTINUA

- PLANIFICACIÓN (2017)
- INGENIERÍA PRELIMINAR/AUTORIZACIÓN AMBIENTAL (2018)

ANUNCIOS / NOTICIAS

- DISEÑO FINAL (2019)
- CONSTRUCCIÓN (2021)

QUESTIONS?

Alison Moss
Project Manager
San Diego Association of Governments
(619) 595-5354 / alison.moss@sandag.org

KeepSanDiegoMoving.com/GObyBIKE
BORDER TO BAYSHORE BIKEWAY PROJECT AREA
Freight in the FAST Act

Federal

State
- California Freight Mobility Plan
- Sustainable Freight Action Plan

Local
- San Diego Forward: The Regional Plan
- Sustainable Freight Strategy
SAN DIEGO FORWARD: SUSTAINABLE FREIGHT STRATEGY

SAN DIEGO AND IMPERIAL COUNTIES FREIGHT GATEWAY NETWORK

In billions of current dollars

United States GDP
United States International Trade in Goods


- United States GDP
- United States International Trade in Goods

U.S. GDP and Trade (2015)

- United States GDP
- United States International Trade in Goods

EXTERNAL SUPPLY CHAIN RELATIONSHIPS

EXTERNAL SUPPLY CHAIN RELATIONSHIPS

EXTERNAL SUPPLY CHAIN RELATIONSHIPS
OTAY MESA 2015 TRADE VALUE

Import/Export Values

- $14.5 Billion Exports
- $28.2 Billion Imports

$42.7 Billion Trade Value Crossing Through Otay Mesa in 2015

- Otay Mesa largest commercial POE crossing between CA and MX
- > 1.6 million truck crossings/year
- Key two-way trade commodities
  - Electronics
  - Agricultural products
  - Vehicles
  - Medical devices

FREIGHT DATA SNAPSHOTS

- **Domestic:**
  - Within and in/out of San Diego
- **International trade:**
  - Land ports of entry
  - Port of San Diego
  - San Diego International Airport
SUMMARY OF FREIGHT FLOW TRADE VALUE IN THE REGION’S GATEWAYS

SUMMARY OF FREIGHT FLOW TRADE TONNAGE THROUGH THE REGION’S GATEWAYS
SUMMARY OF FREIGHT FLOW DOMESTIC VALUE FOR THE REGION

<table>
<thead>
<tr>
<th></th>
<th>2012 Baseline</th>
<th>2020 Baseline</th>
<th>2050 Conservative Forecast</th>
<th>2050 Midpoint Forecast</th>
<th>2050 Aggressive Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port of SD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipeline</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD Intl. Airport</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SUMMARY OF FREIGHT FLOW DOMESTIC TONNAGE FOR THE REGION

<table>
<thead>
<tr>
<th></th>
<th>2012 Baseline</th>
<th>2020 Baseline</th>
<th>2050 Conservative Forecast</th>
<th>2050 Midpoint Forecast</th>
<th>2050 Aggressive Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD Intl. Airport</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port of SD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipeline</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2012 DOMESTIC TRUCK TONNAGE AND INTERNATIONAL TRUCK TONNAGE

- Domestic: 87%
- International: 13%

2050 DOMESTIC TRUCK TONNAGE AND INTERNATIONAL TRUCK TONNAGE

- Domestic: 61%
- International: 39%

2050 Midpoint Forecast
SUMMARY OF PLANNING ISSUES AND ACTIONS

- Domestic flows are significant
  - Truck tonnage is the dominant mode
- Freight gateways are important to the regional economy
  - Gateways facilitate about 20 percent of GDP
  - Planning new port of entry, Otay Mesa East
- Freight corridors are critical arteries for distribution
  - Double tracking the rail system
  - Investing in Managed Lanes
  - Testing and applying sustainable strategies for freight

SUMMARY OF PLANNING ISSUES AND ACTIONS

- There are strong supply chain connections that are external to the region
  - Planning infrastructure with adjacent counties and states
  - Leading binational planning and implementation efforts at the border
  - Mega regional perspective
- San Diego Forward: The Regional Plan is the region’s freight blueprint
  - Outlines regional transportation investments and needs
  - Encourages smart freight strategies
  - Promotes preservation of existing freight network assets
  - Addresses bottleneck investments
- Optimization of the existing freight infrastructure is necessary to encourage economic growth
Goods Movement Border Crossing Study – Phase II

Borders Committee
January 27, 2017

Mike Jones, Senior Regional Planner
Goods Movement and Transportation Finance

Presentation Outline

• Data Collection
• Scenarios and Forecasts
• Bottleneck Analysis
• Findings and Recommendations
• Next Steps
Data Collection

Truck O-D
Interviews with cargo generators (manufacturing firms, agriculture firms, commercial importers/exporters) as well as main suppliers and customers of these cargo generators

Truck Drayage O-D
Interviews with transportation companies that specialize in drayage

Rail Operations
Interview with railroads operating on both sides of the border to identify cargo moved

Emerging Trends
Interviews with experts in bi-national trade and supply chains to identify future trends

Origin/ Destinations - Mexicali

Northbound Movement - City of Mexicali

Southbound Movement - City of Mexicali
Logistics of Most Common Drayage Movements

Tijuana
- NB: from MX-Based Manufacturer or MX-Based Warehouse/3PL to US-Based Warehouse/3PL
- SB: from US-Based Warehouse/3PL to MX-Based Manufacturer or MX-Based Warehouse/3PL

Mexicali
- NB: from MX-Based Manufacturer to Truck/Container Parking Lot
- from US-Based Manufacturer or Truck/Container Parking Lot to MX-Based Manufacturer

Ensenada
- All movements between US-Based Manufacturers

Economic Impacts of Drayage in the Border Region

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total employment in truck transportation</td>
<td>11,672</td>
</tr>
<tr>
<td>Number of firms in truck transportation</td>
<td>967</td>
</tr>
<tr>
<td>Average number of employees per firm in truck transportation</td>
<td>12</td>
</tr>
<tr>
<td>Number of drayage companies</td>
<td>159</td>
</tr>
<tr>
<td>Estimate of the number of employees in the drayage industry</td>
<td>1,919</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact Metric</th>
<th>Direct</th>
<th>Indirect</th>
<th>Induced</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>$284.0</td>
<td>$124.8</td>
<td>$101.8</td>
<td>$510.5</td>
</tr>
<tr>
<td>Value Added</td>
<td>$115.8</td>
<td>$74.8</td>
<td>$62.4</td>
<td>$253.1</td>
</tr>
<tr>
<td>Labor Income</td>
<td>$104.2</td>
<td>$47.0</td>
<td>$34.9</td>
<td>$186.2</td>
</tr>
<tr>
<td>Employment</td>
<td>1,919</td>
<td>834</td>
<td>743</td>
<td>3,496</td>
</tr>
<tr>
<td>Taxes</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$58.0</td>
</tr>
<tr>
<td>Federal Taxes</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$37.2</td>
</tr>
<tr>
<td>State/Local Taxes</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$20.8</td>
</tr>
</tbody>
</table>
Summary of Opportunities Identified

• Growth in high-end manufacturing
  – Fueled by high local economic growth and potential near-shoring
  – Potential to generate jobs, output and value added in region
  – Wages likely above those for average manufacturing job
• Increased demand for transportation of goods into, out of and within the California–Baja California border region and warehousing/storage services
  – Fueled by potential increase in manufacturing production in binational region
  – Link producers of border-crossing goods with input and consumer markets
  – Specific opportunities in transportation services include: intermodal and rail border-crossing transportation services; air cargo services; expansion of port capacity in Mexico
  – Construction of cold storage facilities in Imperial County to better handle agricultural goods that cross the border

Crossborder Goods Movement Scenario Development

<table>
<thead>
<tr>
<th>Baseline</th>
<th>High Volume</th>
<th>Low Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Most likely future “macro” conditions and progression of “micro” events</td>
<td>• Higher growth in the “macro” variables compared to the baseline scenario</td>
<td>• Lower growth in the “macro” variables compared to the baseline scenario</td>
</tr>
<tr>
<td>• Southbound flows are assumed to equal northbound flows on an annual basis</td>
<td>• Development of border-crossing “micro” events in the region that impact positively volumes reflected in the baseline</td>
<td>• Development of border-crossing “micro” events in the region that impact negatively volumes reflected in the baseline</td>
</tr>
<tr>
<td>• Forecast of northbound rail movements developed using historical data and forecasts from FAF3</td>
<td>• Generating a larger movement of goods across the border</td>
<td>• Generating a smaller movement of goods across the border</td>
</tr>
</tbody>
</table>
Emerging Trends Survey
Identification of Trends at the Regional Level

<table>
<thead>
<tr>
<th>Category</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td>• Expansion of the port of Ensenada</td>
</tr>
<tr>
<td></td>
<td>• Construction of an intermodal facility in Tijuana</td>
</tr>
<tr>
<td></td>
<td>• Construction of cold-storage facilities in Imperial County</td>
</tr>
<tr>
<td></td>
<td>• Reconstruction of the Desert Line (railroad)</td>
</tr>
<tr>
<td></td>
<td>• Congestion at the ports of Los Angeles/Long Beach</td>
</tr>
<tr>
<td></td>
<td>• Modernization of short-line between Tijuana and Tecate, including expansion of freight yards in San Ysidro and Tijuana (railroad)</td>
</tr>
<tr>
<td></td>
<td>• Expansion of capacity at the Land Ports of Entry (LPOEs) in San Luis Rio Colorado</td>
</tr>
<tr>
<td></td>
<td>• Construction of Otay Mesa East LPOE</td>
</tr>
<tr>
<td></td>
<td>• Repurposing of Hotville Airport to handle freight</td>
</tr>
<tr>
<td>Border-Crossing Operations</td>
<td>• Higher efficiency in LPOEs in California compared to those in Arizona</td>
</tr>
<tr>
<td></td>
<td>• Introduction of pre-inspection &amp; other technology-based operational improvements at California LPOEs</td>
</tr>
<tr>
<td>Regional Production Capability</td>
<td>• Relocation of cargo-generating companies from China to Tijuana and Mexicali due to quality concerns (particularly furniture cluster)</td>
</tr>
<tr>
<td></td>
<td>• Relocation of suppliers of large maquiladoras to Tijuana and Mexicali</td>
</tr>
<tr>
<td></td>
<td>• Manufacturing activities in Tijuana and Mexicali involve larger share of high-volume activities</td>
</tr>
<tr>
<td>Policy</td>
<td>• Baja California State policy to retain and expand maquiladoras in region</td>
</tr>
<tr>
<td></td>
<td>• Baja California State policy to promote relocation (to the area) of companies supplying to maquiladoras</td>
</tr>
<tr>
<td></td>
<td>• Mexico’s Federal policy to promote domestic suppliers to maquiladoras</td>
</tr>
<tr>
<td></td>
<td>• Mexico’s Federal fiscal incentives policy towards maquiladoras</td>
</tr>
</tbody>
</table>

Baseline and Alternative Scenario Forecasts

"Macro" NB Truck Volume for San Diego

"Macro" NB Truck Volume for Imperial County

NB Rail Volume for San Diego

NB Rail Volume for Imperial County
### Scenario Comparison - Average Heavy Duty Truck Flows by Region

- 7,800 additional trucks would be on regional roadways under ‘High’ Scenario with 4,900 fewer under the ‘Low’
- About 1/3 of trips are between San Diego and Tijuana and just under 1/3 from/to SCAG region (north of Imperial County) - most of these SCAG trips are from/to Tijuana POE (i.e., potentially impacting I-5, I-15, I-215)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Annual Trucks</td>
<td></td>
<td></td>
<td>Annual Trucks</td>
<td></td>
<td></td>
<td>Annual Trucks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Imperial County (SCAG)</td>
<td>353,002</td>
<td>1,412</td>
<td>572,944</td>
<td>2,292</td>
<td>886,954</td>
<td>3,548</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From/To/Thru Remaining SCAG Region</td>
<td>363,733</td>
<td>1,456</td>
<td>525,442</td>
<td>2,102</td>
<td>749,065</td>
<td>2,996</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Diego County</td>
<td>25,006</td>
<td>100</td>
<td>33,904</td>
<td>136</td>
<td>45,567</td>
<td>182</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>States East of California</td>
<td>292,828</td>
<td>1,171</td>
<td>420,133</td>
<td>1,681</td>
<td>574,846</td>
<td>2,299</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tijuana</td>
<td>12,487</td>
<td>50</td>
<td>14,556</td>
<td>58</td>
<td>18,725</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From/To/Thru Remaining SCAG Region</td>
<td>950,850</td>
<td>3,803</td>
<td>1,170,466</td>
<td>4,882</td>
<td>1,572,474</td>
<td>6,290</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Diego County</td>
<td>1,082,173</td>
<td>4,329</td>
<td>1,421,812</td>
<td>5,687</td>
<td>2,036,397</td>
<td>8,146</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>States East of California</td>
<td>491,230</td>
<td>1,965</td>
<td>638,135</td>
<td>2,553</td>
<td>854,934</td>
<td>3,420</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Cross Border Truck Trips</strong></td>
<td><strong>3,571,309</strong></td>
<td><strong>14,285</strong></td>
<td><strong>4,797,393</strong></td>
<td><strong>19,190</strong></td>
<td><strong>6,738,961</strong></td>
<td><strong>26,956</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Main Findings

1. Border-crossing traffic flows are large, but not significant compared to domestic flows of goods in region
2. Bottlenecks in SCAG and SANDAG region are not the result of border-crossing flows
   - If improvements to the efficiency of international flows are sought, these bottlenecks (generated by internal flows) need to be removed
3. Economic impact of drayage in the SCAG and SANDAG region is important
4. Main economic development opportunities in region are linked to potential for growing high-end manufacturing production and increase in offering of transportation and warehousing services to link producers of border-crossing goods with final input and consumer markets
5. Movement of goods across California - Baja California is of national relevance, as evidenced by important share of origins and destinations of truck trips that go beyond the Southern California region (averaging 22% for San Diego-Tijuana area and 35% for Calexico-Mexicali area*)
Study Recommendations

• Truck anticipated to be main transportation mode in foreseeable future for border-crossing goods in region
  – Prioritize investment in projects that will remove highway bottlenecks (identified in bottleneck analysis)
  – Invest in augmenting LPOE capacity
  – Promote construction of cold storage facilities in Imperial County to improve quality of agricultural goods moved by truck
• Cali-Baja is competing with other border regions to attract and retain companies that want to be closer to final consumer market but with ease of access to global networks
  – Promote modal diversification in region to leverage region’s strategic location
• Performance and level of integration of supply chains in the region is directly linked to characteristics of border-crossing processes
  – Promote use of streamlined processes and state-of-the-art technological advances

Study Recommendations

• A large number of agencies and stakeholders on both sides of the border are involved in the movement of goods
  – Promote higher levels of coordination to achieve efficient shipment of goods across the border
• The State of Baja California is aggressively trying to attract producers and their suppliers to the region
  – Harmonize policies on both sides of the border to make the argument more appealing
• Supply chains are constantly evolving, looking for ways to minimize cost and/or reach markets faster
  – Continue funding goods movement studies to better understand their characteristics
Thank You

For more information, please visit the SCAG FreightWorks website: http://www.freightworks.org or contact Mike Jones at jonesm@scag.ca.gov or (213) 236-1978