









## Comprehensive Multimodal Corridor Plan

FINAL | SEPTEMBER 2022









#### South Bay to Sorrento Comprehensive Multimodal Corridor Plan

#### SANDAG & California Department of Transportation

The San Diego Association of Governments (SANDAG) and California Department of Transportation (Caltrans) District 11 have developed a Comprehensive Multimodal Corridor Plan (CMCP) to address the current and future multimodal needs of the region. The CMCP process encourages cross-agency collaboration, seeks out public input, and leverages the knowledge of communities to develop strategies, programs, and projects. This report is a testament to successful collaboration across multiple agencies and community partners.

**Disclaimer:** The information and data contained in this document are for planning purposes only and should not be relied upon for final design of any project. Any information in this Comprehensive Multimodal Corridor Plan (CMCP) is subject to modification as conditions change and new information is obtained. Although planning information is dynamic and continually changing, SANDAG and Caltrans make every effort to ensure the accuracy and timeliness of the information contained in the CMCP. The information in the CMCP does not constitute a standard, specification, or regulation, nor is it intended to address design policies and procedures.

Name:

Hasan Ikhrata

SANDAG Chief Executive Officer

2 Wehr

Sept. 26, 2022

Date

Gustavo Dallarda

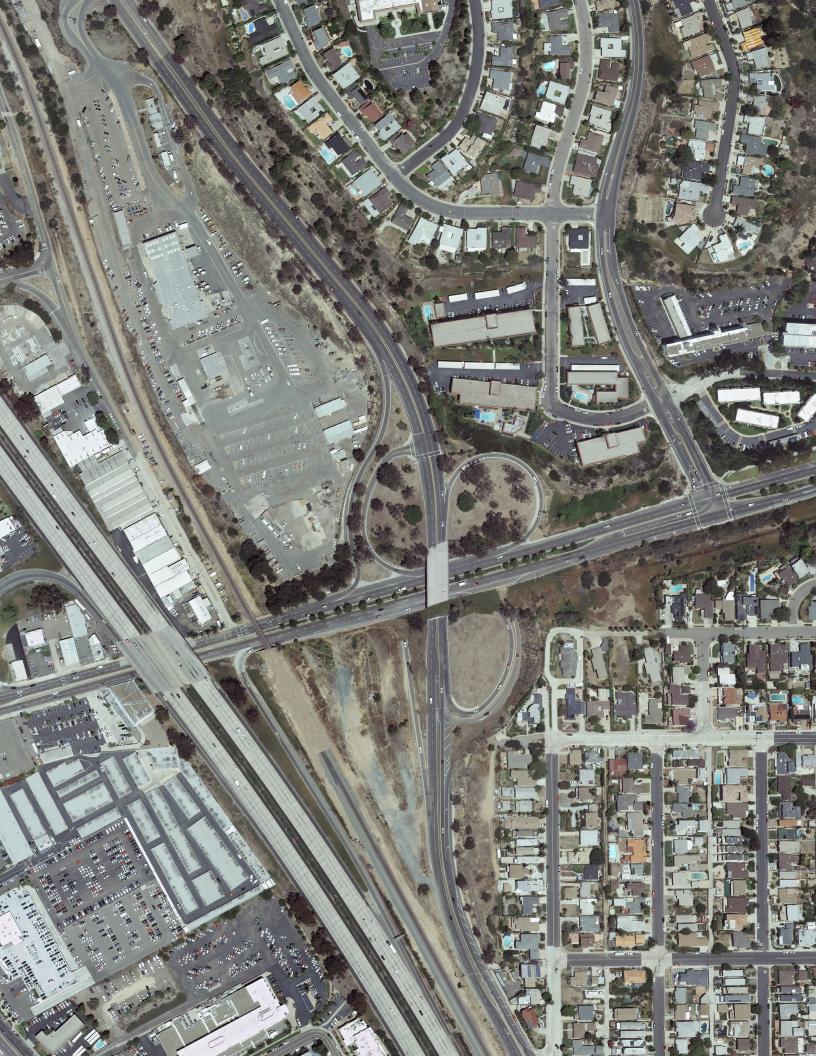
09/26/2022

Name:

Gustavo Dallarda

Caltrans District 11 Director

Date



#### **Table of Contents**

Executive Summary	5
Executive Summary	
Evaluation Framework	8
Chapter 1 Introduction	10
Introduction	
Senate Bill 1 Provides Funds for California Transportation	
Project Development Team	
How Does the Process Work?	
Chapter 2 Corridor Trends	14
2.1 South Bay to Sorrento Corridor	
South Bay to Sorrento by the Numbers Compared to the San Diego Region	
South Bay to Sorrento Corridor Study Area	
2.2 Social Equity Focus Communities	
2.3 Population, Employment, and Housing	
2.4 Land Use	
2.5 Commute Patterns and Trip Generators	
2.6 Performance Overview	
Transit	
Highway/Roadway	
Active Transportation	
Goods Movement	
Next OS	
Military	
Resilience	
Chapter 3 Planning Approach	31
3.1 Goals, Objectives, and Performance Metrics	
3.2 Candidate Strategy Solutions	34
3.3 Evaluation Methodology	36
Stakeholder Input to Evaluate Solutions	36
Evaluation Framework	37
Chapter 4 Community Engagement	38
4.1 Community Engagement Strategy	
Engagement During Various Stages of the Project	39
4.2 Engagement Opportunities	
Stakeholder Advisory Group Meetings	
Stakeholder Advisory Group Poll Results	
Virtual Public Meetings and Engagement Period	40

#### **Table of Contents**

continued

	41
Surveys and Public Feedback	41
Stakeholder Feedback	42
Chapter 5 Recommended Strategies	43
Project Spotlights	
Route 582 (Purple Line) - Sorrento Mesa to National City via City Heights	45
Sorrento Valley Enhanced Service Areas	46
Military Signal and Gate Access Improvements at Naval Base San Diego	
and Naval Base Coronado	
Managed Lane Connectors at I-5 and I-15	
Harbor Drive Multimodal Corridor Improvements	
Otay Mesa East Port of Entry Improvements	
San Ysidro Mobility Hub	48
Chapter 6 Implementation	
6.1 Estimated Cost	
6.2 Strategic Implementation	
6.3 Limitations of the Plan	
6.4 Next Steps	52
or rock diops	
Chapter 7 Conclusion	
·	53
Chapter 7 Conclusion	53
Chapter 7 Conclusion Attachments	53 55
Chapter 7 Conclusion  Attachments  Figures	<b>53</b> <b>55</b>
Chapter 7 Conclusion  Attachments  Figures  Figure 2.1: Population by Subarea	53 55 19
Chapter 7 Conclusion	53551921
Chapter 7 Conclusion	5355192122
Chapter 7 Conclusion	535519212223
Chapter 7 Conclusion  Attachments  Figures  Figure 2.1: Population by Subarea  Figure 2.2: Population 2016  Figure 2.3: Job Centers 2016  Figure 2.4: Forecasted Housing Growth by Subarea  Figure 2.5: Land Use	5355
Chapter 7 Conclusion	5355
Chapter 7 Conclusion	53 55 19 21 23 24 25
Chapter 7 Conclusion  Attachments  Figures  Figure 2.1: Population by Subarea  Figure 2.2: Population 2016  Figure 2.3: Job Centers 2016  Figure 2.4: Forecasted Housing Growth by Subarea  Figure 2.5: Land Use  Figure 2.6: Existing Corridor Travel Options  Figure 2.7: Volume-to-Capacity Ratio AM/PM Peak Hour  Tables  Tables  Table ES-1: SB2S Phased Strategies Summary	5355
Chapter 7 Conclusion	5355

## **Executive Summary**

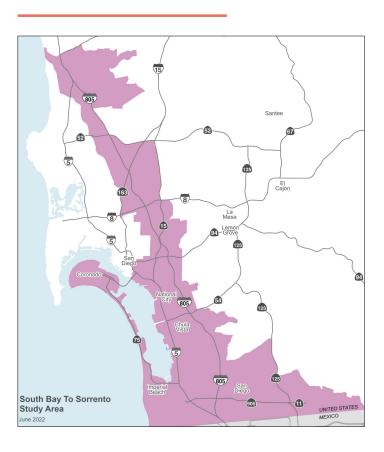
The San Diego Association of Governments (SANDAG) and California Department of Transportation (Caltrans) have developed a Comprehensive Multimodal Corridor Plan (CMCP) to address the current and future multimodal needs of the South Bay to Sorrento corridor (the corridor). The contents of this document directly support the policies and projects outlined in the <a href="2021 Regional Plan">2021 Regional Plan</a> and California Transportation Plan 2050<sup>2</sup> by specifying transportation solutions to be implemented by 2035 within the corridor.

The South Bay to Sorrento corridor includes the diverse cities of San Diego, Chula Vista, Coronado, National City, and Imperial Beach. South Bay to Sorrento comprises many freeway facilities, major arterials, and popular bicycle and pedestrian accommodations such as the Bayshore Bikeway. Existing transit services include the Trolley, multiple *Rapid* bus lines, and more than 25 local bus lines.

This CMCP will be used to facilitate efforts to pursue funding from various state and federal sources such as Senate Bill 1 (SB 1)<sup>3</sup> and the Federal Infrastructure Investment and Jobs Act (IIJA)4. An approved CMCP is a requirement of some SB1 programs. A CMCP strives to create equitable and sustainable transportation solutions for people living in the community and focuses on things such as transit, freight traffic, local roadway connections, highway connections, managed lane priorities, and bicycle and pedestrian transportation connections. Based on the characteristics and needs of the corridor, SANDAG and Caltrans have recommended a package of programs. policies, and projects that the region will invest in to create a safe, equitable, reliable, and intelligent transportation system of the future.

The project team evaluated South Bay to Sorrento's existing transportation network, identified future trends for the system, determined where the needs will be in the future and created a system for evaluating candidate transportation solutions to be

#### **South Bay to Sorrento Corridor**



implemented. The horizon year of 2035 was used as the basis to forecast what the landscape of the corridor could look like. Population, jobs, and housing are all expected to increase through 2035. In addition to the growth happening in South Bay to Sorrento, social equity focus communities

<sup>2021</sup> Regional Plan, Published by SANDAG. December 10, 2021. Accessed at: <a href="https://www.sdforward.com/mobility-planning/2021-regional-plan">https://www.sdforward.com/mobility-planning/2021-regional-plan</a>

<sup>2</sup> California Transportation Plan 2050, Published by Caltrans. February 2021. Accessed at: <a href="https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/ctp-2050-v3-a11v.pdf">https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/ctp-2050-v3-a11v.pdf</a>

<sup>3</sup> The Road Repair And Accountability Act of 2017, California Transportation Commission, Accessed at: <a href="https://catc.ca.gov/programs/sb1">https://catc.ca.gov/programs/sb1</a>

H.R.3684 – Infrastructure Investment and Jobs Act, 117th Congress (2021-2022). Accessed at: https://www.congress.gov/bill/117th-congress/house-bill/3684/text



comprised of low income, minority, and senior population are projected to be similar or higher by 2035.

The CMCP team used various socio-economic data to identify where social equity focus communities are located along the corridor. Transportation needs within the South Bay to Sorrento study area vary by neighborhood, so an equitable approach considers the needs of historically underserved communities in different areas of the corridor to ensure that the facilities needed most are located appropriately. Transportation solutions in the South Bay to Sorrento area will help address the transportation challenges of historically underserved communities.

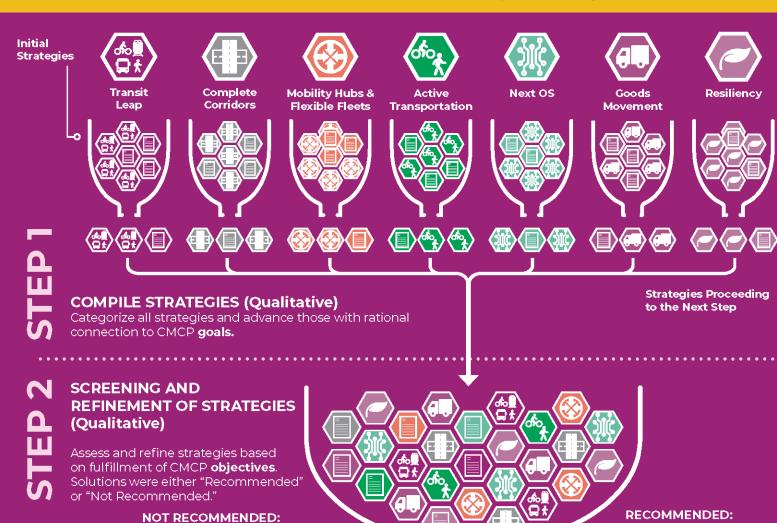
Candidate strategies that were evaluated for inclusion in the recommended list of transportation solutions were obtained from the 2021 Regional Plan (SANDAG)<sup>5</sup>, prior planning studies, subject matter experts, elected officials, the public, and members of the project development team. The project team invited the public to participate in surveys, share their suggestions for transportation solutions, and participate in various meetings with the project team.

Originally, 285 candidate solutions were identified. As meetings with stakeholders were held and input from community members was received, the number of candidate solutions grew to 444. The process for evaluating transportation solutions aligned with the goals, objectives and performance measures identified in the 2021 Regional Plan.

Of the 444 candidate transportation solutions that were evaluated, 328 were recommended to move forward to alternatives evaluation. The 328 strategies were compiled into at least one of three alternatives and evaluated using SANDAG's activity-based model (ABM 2+6), SANDAG's regional

<sup>5 2021</sup> Regional Plan, Published by SANDAG. December 10, 2021. Accessed at: https://www.sdforward.com/mobility-planning/2021-regional-plan

<sup>6</sup> SANDAG ABM2+ Sensitivity Testing Report, Published by SANDAG. September 2020. Accessed at: <a href="https://www.sandag.org/resources/regional\_models/activity\_based\_model/documents/SensitivityReportV3.pdf">https://www.sandag.org/resources/regional\_models/activity\_based\_model/documents/SensitivityReportV3.pdf</a>



CREATE
ALTERNATIVES
(Qualitative)

Group various strategies into three alternatives.



**Alternative 1:** All Recommended Strategies



SCREENING

Alternative 2: Fiscally Constrained Strategies (aligned with strategies in the 2021 Regional Plan)



**328 STRATEGIES** 

Alternatives are Packages of Projects, Programs, and Policies

Alternative 3: Address Areas with the Most Transportation Challenges

### **EVALUATE ALTERNATIVES** (Quantitative)

Use ABM2+ software to evaluate alternatives based on the **performance measures**.

116 STRATEGIES



STEP 4

modeling system. The alternative that included all 328 strategies (Alternative 1) provides the most benefit to the corridor.

This set of transportation strategies were selected because:

- 1. Together, they have the greatest potential to reduce single occupancy vehicle trips by shifting persons to transit and other non-automobile modes, which will reduce greenhouse gas (GHG) emissions.
- 2. This network maximizes the number of trips that can move through the corridor compared to other alternatives.
- 3. The solutions serve the highest proportion of historically underserved populations located within a 30- or 45-minute transit trip of dense employment centers and higher education facilities.
- 4. The solutions improve system performance for populations within 0.5 mile of a high frequency transit stop.

**The overall cost of all 328 strategies recommended is \$59 billion**<sup>7</sup>, with approximately half the cost (\$25B) currently programed in the 2021 Regional Plan by 2035. Securing new funding is necessary to fully implement the SB2S CMCP by 2035. Out of the 328 strategies, 283 (86%) are potential candidates for at least one of the SB 1 programs. Other funding sources to help cover the cost could come from state apportioned transportation funds and other federal funding

The complete list of the recommended transportation strategies is presented in Attachment A.

sources such as competitive grant programs as outlined in the recently passed IIJA8.

SANDAG, Caltrans, and the members of the South Bay to Sorrento project development team will continue to collaborate to advance recommended projects, programs, and policies within their jurisdiction and seek stakeholder input to help refine recommended strategies.

**Table ES-1: SB2S Phased Strategies Summary** 

Phase	No. of Strategies	Cost (Billion Dollars)
Total Recommended Strategies	328	\$59.1
Implementation by 2025	99	\$4.3
Implementation by 2035	229	\$54.8

Not including concepts without sufficient information to prepare a cost estimate

<sup>8</sup> H.R.3684 – Infrastructure Investment and Jobs Act, 117th Congress (2021-2022). Accessed at: https://www.congress.gov/ bill/117th-congress/house-bill/3684/text

Chapter 1

## Introduction

#### 1.0 Introduction

South Bay to Sorrento is one of the most congested and heavily used multimodal corridors in San Diego County. Covering 151 square miles, the corridor represents only 4% of the area in San Diego County, but it accounts for 30% of weekday peak period travel. The corridor passes through diverse communities, employment centers, and recreational areas and is critical for the daily movement of people and goods. These factors make it necessary for SANDAG, Caltrans, local communities, and the people who regularly travel through the area to progress the vision of a technologically advanced. balanced, and integrated multimodal transportation system.

**SANDAG** and Caltrans developed this **Comprehensive Multimodal Corridor Plan** (CMCP) to address the current and future multimodal needs of the South Bay to Sorrento corridor. A CMCP strives to create equitable and sustainable solutions for people living in the community and focuses on things such as transit, goods movement, local roadway connections, highway connections, managed lane priorities, climate impacts, technology and bicycle and pedestrian transportation connections. Based on the characteristics and needs of the corridor. SANDAG and Caltrans have recommended a package of projects, programs, and policies that the region will invest in to create a safe, equitable, reliable, intelligent transportation system of the future. This CMCP highlights the transportation solutions to be implemented and the general timeline and estimated costs for implementation. The attachments of this document provide extensive details on the technical aspects of the project, including how projects were evaluated.



#### **Senate Bill 1 Provides Funds** for California Transportation

The Road and Repair Accountability Act of 2017, also known as Senate Bill (SB) 1<sup>1</sup>, provides a stable funding source for transportation in the state by providing multiple funding sources for transportation. This Act invests \$54 billion through 2027 to fix roads, freeways, and bridges in communities across California. In order for the San Diego region to be eligible to receive qualifying funds from SB 1, a CMCP must be developed and approved. A CMCP can also help access funds from other sources, such as federal dollars

The Road Repair And Accountability Act of 2017, California Transportation Commission, Accessed at: https://catc.ca.gov/programs/sb1



#### **Project Development Team**

SANDAG and Caltrans would like to thank representatives from the following organizations who volunteered their time to serve on the Project Development Team:

**City of Chula Vista City of Coronado** City of San Diego City of Imperial Beach **City of National City Naval Base Coronado Naval Base San Diego** San Diego Metropolitan Transit System (MTS)





A special acknowledgment is extended to all of the community organizations, stakeholders and elected officials that participated in the development of this plan.

#### **How Does the Process Work?**

This CMCP builds on previous and current regional and local efforts to create a comprehensive transportation network that sets the foundation for enhancing multimodal connectivity across the South Bay to Sorrento corridor. Planning documents the CMCP builds off of include the SANDAG 2021 Regional Plan, known as "San Diego Forward", the California Transportation Plan 2050, Caltrans CMCP Guidelines and other plans from municipalities within the CMCP boundaries. After a CMCP is approved, individual projects, programs, and policies outlined in the document can apply for various federal, state, and local funding opportunities such as SB 1 funding. Ordinarily, a package of projects does not receive funding all at the same time; rather funding for individual solutions are received over the course of multiple legislative sessions. Once funding is secured, the project(s) will be added to the Regional Transportation Improvement Program (RTIP), a multi-billion-dollar, five-year program of major transportation projects with secured funding from federal, state, and local governments.

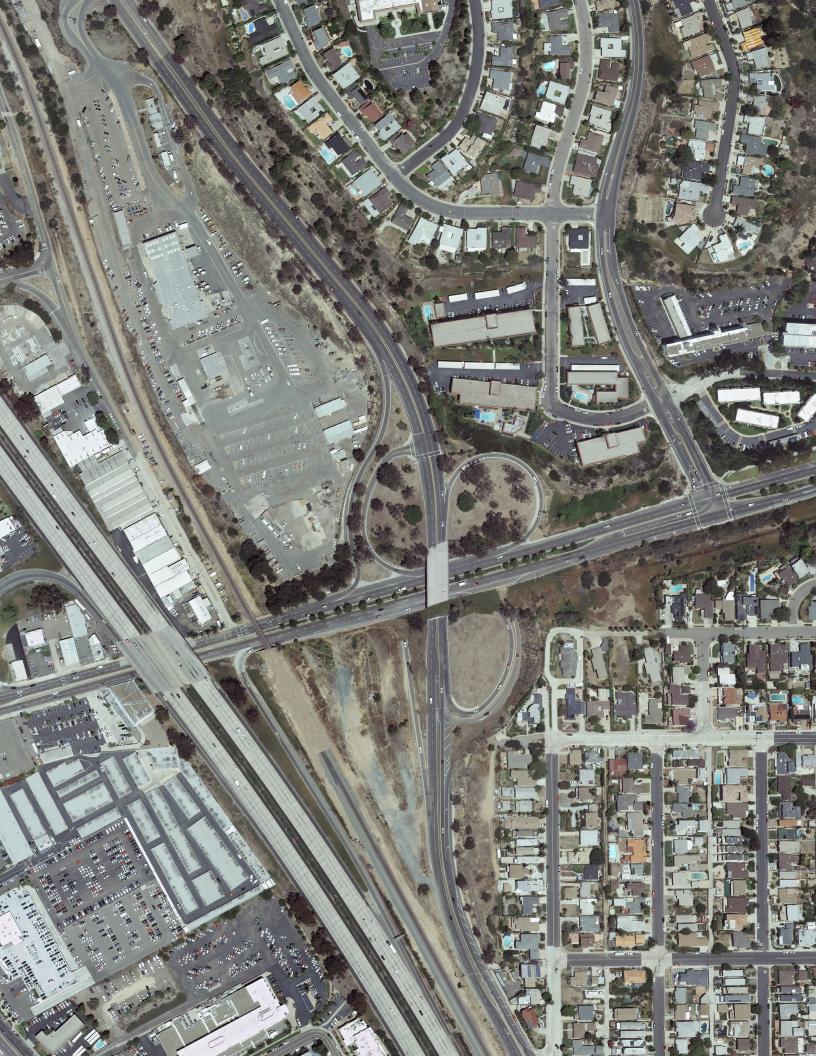


Consistent with SANDAG's federal congestion management process (CMP), the CMP network is monitored through regular State of the Commute reports. Projects that add single occupancy vehicle (SOV) capacity are evaluated for non-SOV inducting alternatives prior to programming. Known bottlenecks and areas of safety concern are exempt from this review requirement.

Design

Chapter 2

## **Corridor Trends**



#### 2.1 South Bay to Sorrento Corridor

The South Bay to Sorrento corridor includes the diverse cities of San Diego, Chula Vista, Coronado, National City, and Imperial Beach. South Bay to Sorrento contains many freeway facilities, major arterials, and popular bicycle and pedestrian accommodations such as the Bayshore Bikeway. Existing transit services include the Trolley, multiple Bus Rapid lines, and more than 25 local bus lines.

Interstate 5 (I-5) and I-805 are two of the most congested roadways in the country, with recurring congestion occurring northbound as early as 5:00 a.m. through 9:00 a.m. and southbound from 2:00 p.m. through 6:00 p.m. (known as peak periods). I-805 serves as the dominant north-south connection within the study area and greater San Diego region and is a major connection for passengers traveling to points north of San Diego County. A portion of I-5 (south of downtown San Diego) is also within the study area. The I-5 and I-805 corridors serve as freight corridors facilitating the movement of goods and people between the United States (U.S.) and Mexico.



## South Bay to Sorrento by the Numbers Compared to the San Diego Region



28% of the total Freeway/ Expressway centerline\* miles



13% of the total roadway centerline\* miles



20% of the bikeway miles



29% of the region's transit stops, including local bus, Rapid Bus, and rail stations



**32%** of the region's transit ridership

#### The corridor also contains:



21 miles of the regional light rail network



103 miles of the *Rapid* Bus network operated by Metropolitan Transit System



8 miles of the COASTER network, operated by the North County Transit District

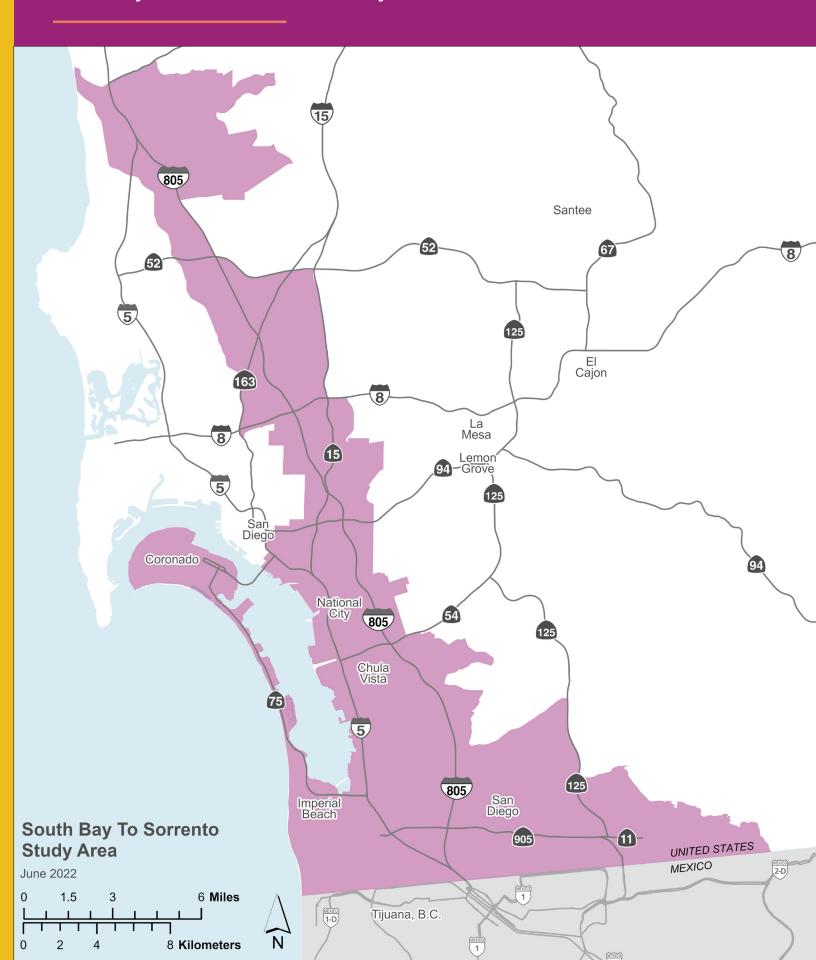


21 miles of freight rail, including Amtrak

Source: SANDAG Estimates (2022)

\*Centerline miles only measure the length of the road at the median, regardless of how many lanes there are.

#### **South Bay to Sorrento Corridor Study Area**





Transit station in the study area.

The study area was divided into seven subareas with distinct land uses, transportation characteristics, demographics, and travel patterns. Dividing the study area into subareas allows for smaller scale analyses to better understand the transportation challenges and needs within a given community.

#### **Social Equity Focus Communities**

Transportation needs within the South Bay to Sorrento study area vary by neighborhood, so an equitable approach considers the different needs of historically underserved communities in different areas of the corridor to ensure that the facilities needed most are located appropriately. Social equity focus communities are defined by SANDAG as low-income, minority, and senior populations. Transportation improvements in these communities are particularly important given that they have been historically underserved in terms of infrastructure and economic opportunities. The CMCP team used various socio-economic data sources, including census data9, to identify where specifically in the corridor social equity focus communities are located. Investments in transit access, enhanced transit services, active transportation (such as biking/walking), and flexible fleet services will improve mobility within the South Bay to Sorrento corridor for those who might not have access to a motor vehicle.

Additional in-depth analysis of the corridor subareas is presented in the Planning Review and Corridor Performance Memorandum included in Attachment B.

<sup>\*</sup>A DEEPER DIVE

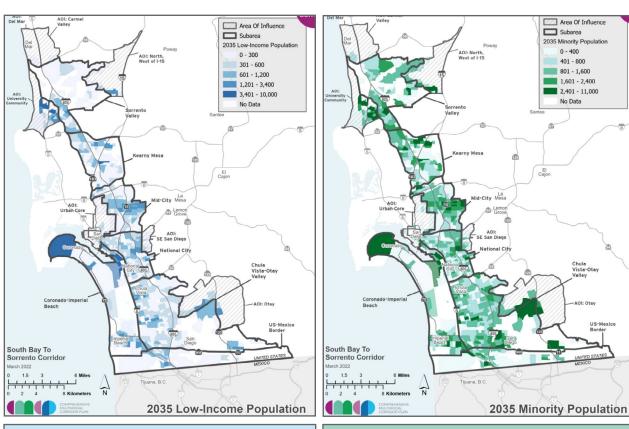
U.S. Census, 2020. Geographic Information System (GIS) data. Obtained 2021. Accessed at: https://www.census.gov/programs-surveys/decennial-census/ decade/2020/2020-census-main.html

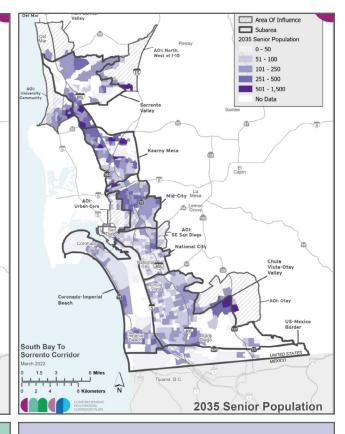
Figure 2.1: Population by Subarea

#### **Low Income Population**

#### **Minority Population**

#### **Senior Population**





Between 2016 and 2035 the low-income population within the corridor is expected to decrease by less than 500. It is anticipated that there will still be significant low-income populations in the Chula Vista/Otay, Southeast San Diego/National City, Mission Valley/Mid-City, and Coronado/Imperial Beach subareas.

Between 2016 and 2035 the minority population within the corridor is expected to increase by approximately 149,000 people with the largest minority populations in the Chula Vista/Otay, Mission Valley/Mid-City, southeast San Diego/National City, and Kearny Mesa subareas.

The senior population within the corridor is expected to double from approximately 39,000 residents in 2016 to approximately 85,000 in 2035. Most are forecasted to live in the Chula Vista/Otay, Mission Valley/Mid-City, and Kearny Mesa subareas.

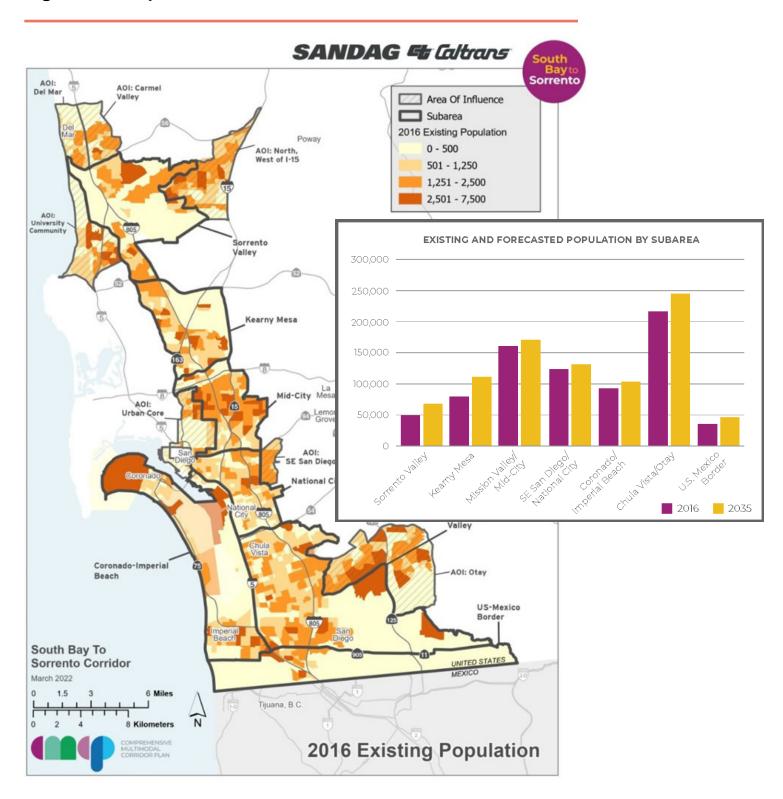
Note: Subareas and areas of influence are defined in Attachment B.



#### 2.3 Population, Employment, and Housing

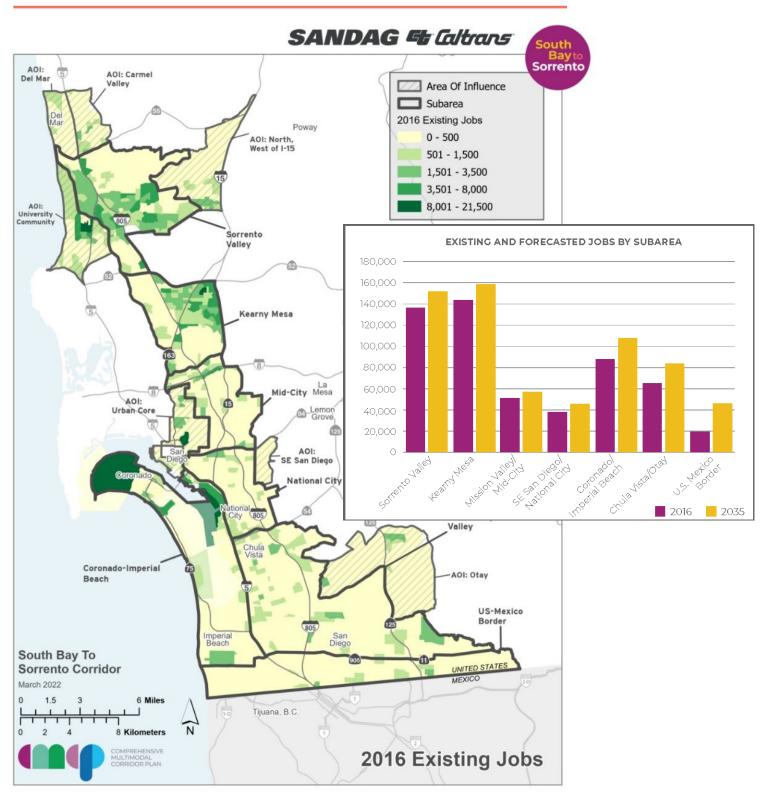
Population and job growth<sup>10</sup> is expected along the entire South Bay to Sorrento corridor, increasing transportation needs in every subarea. In addition, the lack of regional jobs-housing balance along the corridor, where population is concentrated in the southern portion of the corridor and jobs are concentrated in the north, will continue into 2035. There will continue to be a strong demand for longer trips to and from regional job centers in the middle and northern portions of the corridor. As such, it was important for the project team to identify and advance strategies that enhance mobility for both shorter and longer trips and for varying trip types.

Figure 2.2: Population 2016



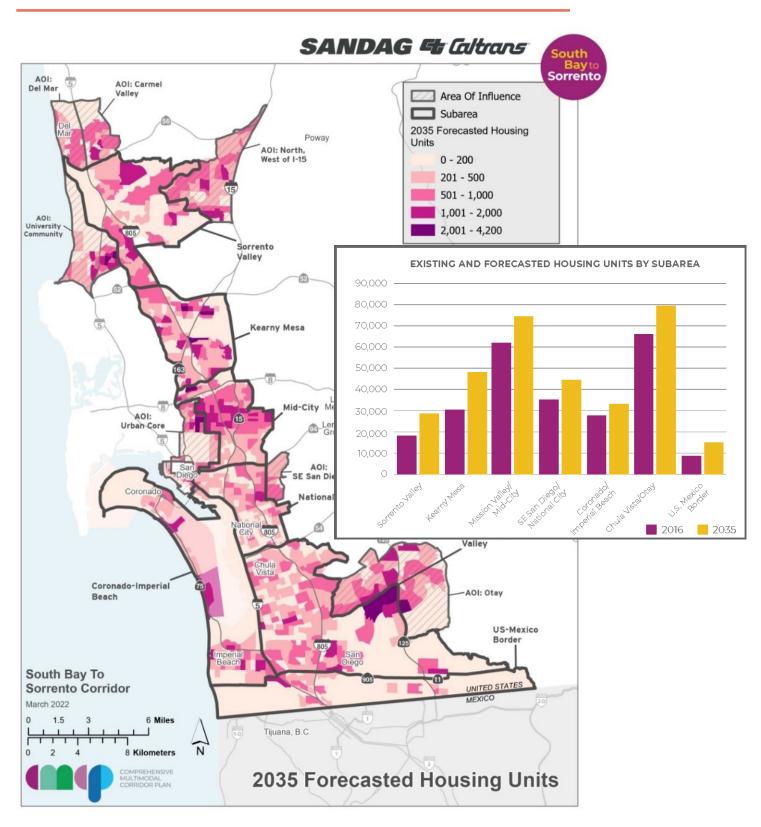
By 2035, corridor population is expected to increase by nearly 175,000 people, mostly in the Kearny Mesa, Mission Valley/Mid-City, and Chula Vista/Otay subareas. The total number of jobs within the corridor is expected to increase by approximately 165,000.

Figure 2.3: Job Centers 2016



The largest rate of job growth is expected in the U.S.-Mexico Border and Chula Vista/Otay subareas; however, the vast majority of jobs within the corridor will continue to be in the Sorrento Valley, Kearny Mesa, and Coronado/Imperial Beach subareas. The lack of jobs in areas of high residential concentration leads to a jobs-housing imbalance.

Figure 2.4: Forecasted Housing Growth by Subarea



Approximately 100,000 housing units are expected to be added by 2035. The largest increase in housing units is expected in Mission Valley/Mid-City (12,000 units), Kearny Mesa (17,000 units), and Chula Vista/Otay (14,000 units).

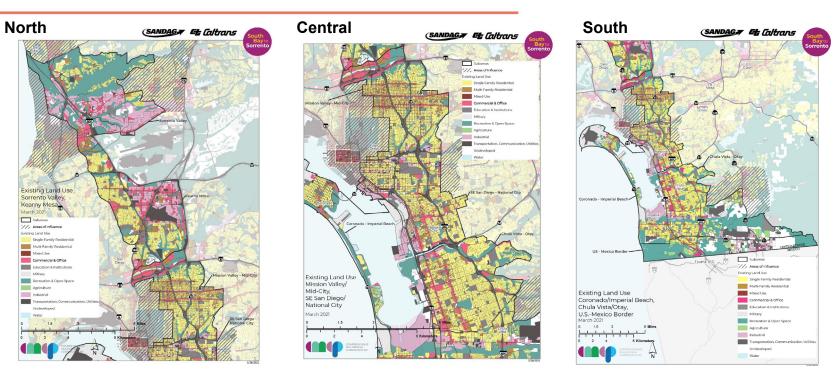
#### 2.4 Land Use

Land use<sup>11</sup> within the study area is expected to be similar in 2035 to existing conditions, although the density within most land uses is expected to increase. It is important to note that:

- Major employment centers exist in the northern part of the corridor (UTC/Sorrento Valley/Kearny Mesa) and at military installations. Because a high volume of commuters is coming from outside these areas, enhanced high-capacity transit services, managed lanes, and mobility hubs are a vital component to reliable regional mobility.
- Areas with industrial land uses (including ports, warehouses, and distribution centers) must implement strategies to enhance goods movements that can lighten demand on

- corridor freeways and roadways. Further, given the increase of delivery services, strategies that facilitate delivery are important in all land uses.
- Clusters of high- density land uses will be needed to support mobility hubs, rail transit, flexible fleet services, and active transportation.
- Much of the study area will continue to be low density with a lack of diversity and with challenges in topography, making it more challenging for alternatives to the automobile to be successful. High quality pedestrian and bicycle facilities and flexible fleets are needed to support mode choice and access to high quality transit in lower density areas.

Figure 2.5: Land Use



Land Use and Regional Growth, SANDAG. 2021. Accessed at: <a href="https://www.sandag.org/index.asp?classid=12&fuseaction=home.classhome">https://www.sandag.org/index.asp?classid=12&fuseaction=home.classhome</a>
South Bay to Sorrento CMCP | 24

#### 2.5 Commute Patterns and Trip Generators

During times in the morning and afternoon when traffic is at its highest, approximately 30% of all regional trips start or end within the corridor. Daily vehicle miles traveled within the study area is expected to increase through 2035. <sup>12</sup> Usage of all modes of transportation are expected to increase through 2035. Transit trips for commuting purposes are expected to increase by the largest percentage.

Mobility issues (i.e., available transportation choices for people to travel), will continue to exist, and in many cases worsen by 2035, unless a series of mobility improvements are designed that make commuters less auto dependent and provide more efficient movement throughout the corridor.

**Figure 2.6** summarizes the modes that serve key origin/destination pairs within the study area. As shown, most travel within the corridor must be made by private vehicle because of longer distances between origins and destinations and a lack of high-quality transit service.

**Figure 2.6: Existing Corridor Travel Options** 

Travel Routes	Distance	Private Vehicle	Commuter Rail	Trolley	Bus	Walking	Bicycling
Peak hour commute from Chula Vista to Sorrento Valley	20+ miles	Yes	(No)	(No)	No	No	No
Peak hour commute from Sorrento Valley to Chula Vista	20+ miles	Yes	(No.)	(No.)	No	No	No
Off-peak travel from Chula Vista to Sorrento Valley	20+ miles	Yes	No	(No)	No	No	No
Travel between Southeast San Diego and Sorrento Valley	15 miles	Yes	No	(No)	No	No	No
Travel between Mid City and Kearny Mesa	5 miles	Yes	No	No	Yes	No	(No)
Travel between Southeast San Diego and National City	3 miles	Yes	No	(No)	Yes	Yes	Yes

No = Because of excessive travel time, number of transfers, or inadequate facilities/connections

No = Possible, but requires use of infrequent service and/or a number of transfers



#### **Performance Overview** 2.6

The following subsection outlines the performance of the South Bay to Sorrento corridor by specific transportation-related categories and identifies the general needs for improvement.

#### **Transit**

Approximately 32% of the region's transit ridership occurs in the study area.<sup>13</sup> Nearly half of the region's transit routes and approximately 30% of the region's transit stops (including local bus, Rapid Bus, and rail stations) are located in the study area. Of the routes that are within or intersect the study area, on-time performance is just under 60%. As of 2016, approximately 67% of the study area population has access to transit. By 2035, the percentage of the population within the overall study area, including social equity focus populations, with access to transit is expected to remain unchanged unless additional investments are made.

Given the wide range of trip types and rider characteristics within the corridor, the development of a high-quality and reliable transit network that can facilitate short-, medium-, and long-distance trips will both enhance mobility for current transit users and attract choice riders who might otherwise drive.

Nine of the region's top 10 rail and bus routes intersect or operate within the study area, and they are ranked in terms of ridership as follows:

- 1. Route 510: Blue Line Trolley
- 2. Route 530: Green Line Trolley
- 3. Route 520: Orange Line Trolley
- 4. Route 7: Downtown to University and College
- 5. Route 929: Iris Transit Center to 12th and Imperial
- 6. Route 215: San Diego State University to Downtown
- 7. Route 13: Kaiser Hospital/Grantville Trolley to 24th Street Trolley
- 8. Route 3: UC San Diego Medical Center/Hillcrest to Euclid Trolley
- 9. Route 235: Downtown San Diego to **Escondido Transit Center**

#### Highway/Roadway

Recurring congestion on I-805 and I-5, State Route (SR)-52, I-8, SR-94, SR-54, and the major arterials is expected to worsen through 2035. Providing strategies such as managed lanes will encourage travelers to carpool and/or use other modes of transportation, thereby improving operations along corridor highways. Enhancing other types of mobility (e.g., transit, bicycle, and pedestrian) will help improve operations along local arterial roadways.

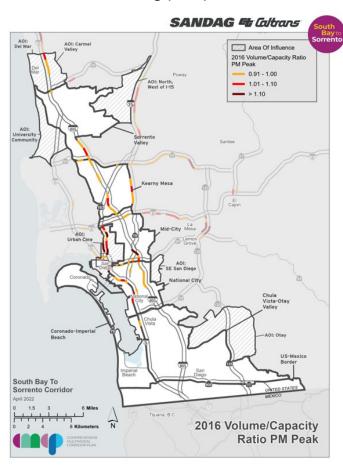
Figure 2.7: Volume-to-Capacity Ratio AM/PM Peak Hour

SANDAG Ft Caltrans

#### Existing (2016) AM

# AOI: North, West of I-15 AOI: North, West of I-15 AOI: North West of I-15 Capon County I-10 Capon Capon County I-10 Capon Ca

#### Existing (2016) PM



When the Volume/Capacity Ratio is greater than "1," it means that the roadway is congested, and severe gridlock is occurring during peak travel times.

2016 Volume/Capacity

Ratio AM Peak

<sup>14</sup> SANDAG (2021), ABM2+

<sup>15</sup> Lanes used to control traffic movement on highways to minimize congestion and provide travelers with options.



Additional information about active transportation can be found in the Planning Review and Corridor Performance Memo in **Attachment B.** 

#### **Active Transportation**

Pedestrian and bicycle miles traveled and the average peak commute time to work by cycling is projected to increase in 2035. The most significant challenge for pedestrian and bicycle trips within the study area is the lack of continuity in facilities that offer direct connections to key activity centers, particularly near freeway ramps or freeway interchanges. These gaps present safety issues, make long distance walking/bicycling difficult, and create challenges when trying to access transit.

Given the variety of trip types and distances taken by travelers within the corridor, improvements to pedestrian and bicycle facilities that focus on connections within and between mobility hubs should be implemented to improve community connectivity and to enhance first- and last-mile access to transit.

#### **Goods Movement**

The San Diego region has a distinct competitive advantage because of its proximity to the U.S.-Mexico border and port access at locations such as the National City Marine Terminal. In 2019, more than two million trucks crossed bi-directionally through San Diego's Otay Mesa and Tecate ports of entry. This high volume of freight activity contributes to traffic jams along many key regional corridors, including I-805, I-5, I-15, and major arterials, which adversely affects communities and business districts. In addition to commercial freight movements, the increased popularity of home delivery services has also impacted performance on major arterials and local roadways.

To balance the transportation needs of vehicles transporting freight with vehicles transporting individuals, managed lanes should be implemented on the key regional corridors. California law states that trucks with more than two axles cannot use the managed lanes, however, managed lanes could increase the roadway's ability to handle more freight vehicles by reducing personal travel and the main travel lanes. The provision of parcel lockers at transit stations and other key destinations could allow delivery services to use smaller vehicles, which may be more appealing for local communities and businesses. Major corridors should also support alternative fuel infrastructure, such as electric vehicle charging stations, to encourage truck fleet conversion to a cleaner fuel source. Technology can also improve movement at freight destinations and various international crossings along the U.S.-Mexico border.





Freight includes all the following elements: trucks of various sizes, rail corridors, land ports of entry, maritime ports, and international airports.

#### **Next OS**

Next OS will build on Intelligent
Transportation Systems (ITS) across the
region. The Regional Architecture Development for
Intelligent Transportation (RAD-IT) is the foundation
for developing the region's Next OS, a digital platform
that compiles information from multiple transportation
services, like vehicles and delivery trucks, to help



optimize traffic flow. Next OS integrates solutions such as traffic signal control, variable speed limit, congestion pricing, high-occupancy vehicle/high-occupancy toll lane management, integrated multimodal travel planning with fare payments, and connected vehicle system monitoring with management service packages throughout the corridor. Integration will allow for transportation information to be consolidated into one source. I-805 Active Traffic and Demand Management Concept of Operations<sup>17</sup> and the I-805 Transportation Systems Management & Operational (TSMO)<sup>18</sup> Plan are examples of first steps to be taken for Next OS development.

#### **Military**

San Diego has the largest concentration of naval personnel in the country. Bases include Naval Base Coronado and Naval Base San Diego, both of which are located within the South Bay to Sorrento study area. Roadways providing access to each site experience congestion during peak and off-peak hours, delaying commuters and adversely affecting neighboring



communities. The San Diego Bay creates a natural obstacle for accessing Naval Base Coronado, which limits access to only two locations: across the Coronado Bridge or through Imperial Beach. Strategies that improve entering and leaving military facilities such as increasing transit availability during military peak hours - which are different than traditional peak periods - will alleviate congestion along corridor roadways and freeways, including Harbor Drive and the 3rd Street/4th Street couplet in Coronado.

#### Resilience

Due to climate change, the region is increasingly under threat from storm surges, coastal erosion, sea level rise, landslides, flooding, severe storms and weather, wildfires, and extreme heat. Resilience strategies, such as elevated bike paths and hazard mitigation plans, should be incorporated into related projects, programs, and strategies wherever feasible.



<sup>17</sup> I-805 Active Traffic and Demand Management Concept of Operations, Published by SANDAG. June 2016. Accessed at: https://www.sandag.org/uploads/publicationid/publicationid\_2111\_21859.pdf

<sup>18</sup> Continuing Action - Develop a regional Transportation Systems Management & Operational (TSMO) strategy, Published by SANDAG. 2021. Accessed at: <a href="https://www.sdforward.com/2019-federal-rtp/continuing-action-11">https://www.sdforward.com/2019-federal-rtp/continuing-action-11</a>

Chapter 3

## **Planning Approach**



To select the preferred projects, policies, and programs to be implemented through 2035, the project team developed a detailed, step-by-step process to evaluate proposed transportation solutions. Determining goals, objectives, and performance metrics were the first step in the process, followed by identifying the universal list of strategies, and then evaluating those strategies using the process identified in the evaluation framework.

#### 3.1 Goals, Objectives, and Performance Metrics

The South Bay to Sorrento CMCP is one of many CMCPs being completed in the greater San Diego region. To ensure the evaluation process is consistent with all CMCPs, SANDAG and Caltrans selected the goals, objectives, and performance measures that align with the 2021 Regional Plan. Individual CMCPs can also consider additional performance measures, in addition to the standard region-wide measures, depending on the needs of the specific study corridor.

The public provided feedback on how to balance the goals when evaluating transportation solutions. In one of many ways used to create an impartial planning process for all stakeholders, the public was asked in a series of survey questions to rank and provide their

**Goal** – A broad idea that a transportation solution should advance

**Objective** – Specific focus areas of the goal

Performance Measure –
How the objectives will
be evaluated in order to
determine if the transportation
solution will benefit the
corridor in the future

thoughts on what should be the primary factor(s) in determining appropriate transportation solutions. The project team made every effort to make the process as fair as possible by providing multiple platforms of communication and by providing participation options in English and Spanish, as well as online and non-digital formats (see **Chapter 4** for information about engagement tools).

#### **Table 3.1: Goals, Objectives and Performance Measures**

Goal: Improve Travel Safety	
OBJECTIVE	PERFORMANCE MEASURE
<ul> <li>Reduce fatal and injury collisions</li> <li>Improve safety for motorized and non-motorized users</li> </ul>	Qualitatively assessed based on the FHWA Safe System approach

Goal: Improve Mobility (Traffic Congestion and Transportation Choices)		
OBJECTIVE		PERFORMANCE MEASURE
Improve mode share for non single-o (SOV)     Reduce congestion     Increase number of trips completed by transportation	, ,	<ul> <li>Percentage of the change in mode share (commute trips, short trips)</li> <li>Person trips by mode</li> <li>Daily vehicle hour delay by vehicle class</li> <li>Daily vehicle delay per capita (minutes)</li> <li>Bicycle and pedestrian miles traveled</li> <li>Percentage of the population engaged in 20 minutes or more of transportation-related physical activity</li> <li>Corridor total person throughput (by screenline)</li> <li>System completeness</li> </ul>

Goal: Social Equity/Fairness	
OBJECTIVE	PERFORMANCE MEASURE
Increase access to frequent transit for social equity focus populations     Increase access to active transportation options for social equity focus populations     Increase access to flexible fleet options for social equity focus populations     Improve connectivity to employment centers and higher education	<ul> <li>Percentage of the population within 0.5 mile of a high frequency transit stop</li> <li>Percentage of social equity focus population within 0.25 miles of an active transportation facility</li> <li>Percentage of social equity focus population with access to flexible fleet options</li> <li>Accessible investments in disadvantaged communities (investment amount and percentage)</li> <li>Near-roadway population exposure</li> </ul>

Soal: Support Economic Opportunity		
OBJECTIVE	PERFORMANCE MEASURE	
<ul> <li>Improve access to employment centers and higher education</li> <li>Improve access to border crossings</li> <li>Improve freight efficiency</li> </ul>	<ul> <li>Percentage of the residents that can access Tiers* 1 and 2 employment centers or higher education facilities within 30 and 45 minutes by transit</li> <li>Frequency of high-quality transit service options to border crossings</li> <li>Average amount of time freight spends in congestion</li> </ul>	

Goal: Efficient Land Use		
OBJECTIVE	PERFORMANCE MEASURE	
Provide multimodal choices to mixed-use and in-fill development	<ul> <li>Population in multifamily residences within 0.25 mile of a transit stop</li> <li>Multifamily housing within 0.5 mile of high frequency transit</li> <li>Average peak period commute time to work (minutes)</li> <li>Employment within 0.25 mile of a transit stop</li> </ul>	

Goal: Sustainability, Health and Resilience		
OBJECTIVE	PERFORMANCE MEASURE	
<ul> <li>Reduce Greenhouse Gas (GHG) and criteria pollutants</li> <li>Reduce impacts to water, habitat, community, or recreational resources</li> <li>Improve the resilience and state of good repair of the transportation system</li> </ul>	<ul> <li>Daily vehicle miles traveled per resident, per employee, and per lane mile</li> <li>Reduction in GHG emissions</li> <li>On-road smog-forming pollutants (pounds per day) per capita (reactive organic gases (ROG) and oxides of nitrogen (NOx) (summer)</li> <li>Average particulate matter (PM)2.5 exposure</li> <li>Reduction in GHG emissions from zero-emission vehicles</li> </ul>	

**Bold** indicates performance measures suggested in addition to SANDAG/Caltrans common measures

\* SANDAG identifies employment center across the San Diego region and classifies each center in tiers. Tiers 1 and 2 are the largest employment centers

#### 3.2 Candidate Strategy Solutions

Strategies were obtained from the 2021 Regional Plan (SANDAG)<sup>19</sup>, prior planning studies, subject matter experts, elected officials, the public, and members of the project development team. The project team invited the public to participate in surveys, share their thoughts and suggestions to an interactive map on the project website, and participate in various meetings with the project team.

Originally, 285 solutions were identified. As meetings with stakeholders were held and input from community members was received, the number of candidate solutions grew to 444. Seven categories were identified to ensure the set of solutions was comprehensive. All the 2021 Regional Vision's 5 Big Moves<sup>20</sup> were used as categories among others that also aligned with the goals of the CMCP, summarized as follows:



Commuter rail, light rail, next generation Rapid Bus, local bus, park and rides, and increased frequencies and service spans on existing routes. Can also include technology and guideway improvements such as transit signal priority, flex lanes, and grade separations.



Managed Lanes, Direct Access Ramps to Managed lanes, and Direct Connectors between managed lanes of two different roadways. Also includes arterial improvements for military-related strategies. Accounts for the updated Regional Arterial System that includes improvements to selected state highways, primary arterials, and other major streets as needed, including active transportation.



A range of features and services that provide intermodal connectivity across a geographic area. Local hubs can include a few elements such as a bikeshare station next to a fixed-route bus stop, while larger hubs can include a major transit station supported by carshare, package delivery lockers, electric vehicle charging stations, rideshare facilities, etc.

<sup>19 2021</sup> Regional Plan, Published by SANDAG. December 10, 2021. Accessed at: https://www.sdforward.com/mobility-planning/2021-regional-plan

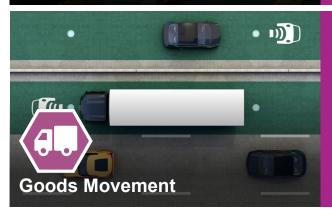
A Transformative Transportation Vision for the 2021 Regional Plan, Published by SANDAG. 2021. Accessed at: <a href="https://sandag.maps.arcgis.com/apps/Cascade/index.">https://sandag.maps.arcgis.com/apps/Cascade/index.</a> <a href="https://sandag.maps.arcgis.com/apps/Cascade/index.">https://sandag.maps.arcgis.com/apps/Cascade/index.</a> <a href="https://sandag.maps.arcgis.com/apps/Cascade/index.">https://sandag.maps.arcgis.com/apps/Cascade/index.</a>



Also associated with bicycles and walkability. Active transportation focuses on providing safe facilities (i.e. bike lanes, bike boulevards, or multipurpose trails) that are interconnected and directly access mobility hubs. Providing safe facilities will make this growing mode of travel more realistic and equitable for commuters.



Using technology to create an integrated transportation system that allows for booking multiple modes of travel, managing pickup-drop off locations, optimizing transit/passenger car routing, coordinating intersection signalization on a corridor, and improving border connections and crossings.



Moving goods throughout the region in an efficient manner using trucking, rail, air, maritime, and pipelines. Freight movement at the U.S. – Mexico border and its impacts on the freeway system is also considered as part of this category.



Preparing for future human and environmental risks such as earthquakes, storm surges, coastal erosion, sea level rise, landslides, flooding, severe storms, wildfires, and extreme heat.

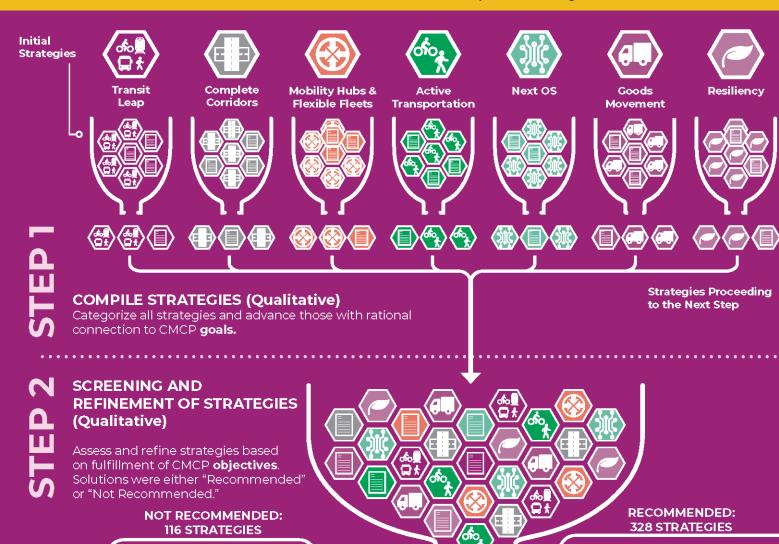


#### **Evaluation Methodology**

A structured, data-driven evaluation of all transportation strategies that considered public feedback was completed to ensure the ones that best aligned with the goals and objectives of the CMCP were recommended. Because transportation strategies can consist of projects, programs, and policies, qualitative and quantitative methods were used to ensure all strategies received a fair evaluation. Strategies that met the goals and objectives of the CMCP were added to at least one of the three alternative packages so that the study team could evaluate how well solutions would perform together if they were operational in 2035. The public was invited to suggest strategies and evaluate the full list of strategies at various stages of the project. While the process presented in this document is a high-level overview, the detailed evaluation approach is presented in Attachment C.

#### Stakeholder Input to Evaluate **Solutions**

Stakeholders were offered the opportunity to review and suggest potential transportation solutions to be included in the CMCP. To communicate the process, the team contacted community advocacy groups, elected officials, media outlets, and a variety of other stakeholders to share the information with the public. Interactive maps on the project website and printed copies of transportation solutions were made available to stakeholders in the South Bay to Sorrento area in both English and Spanish. People were encouraged to comment on proposed solutions and suggest other solutions for the project development team to review.



#### **CREATE ALTERNATIVES** (Qualitative)

Group various strategies into three alternatives.



Alternative 1: All Recommended Strategies



SCREENING 

Alternative 2: Fiscally Constrained Strategies (aligned with strategies in the 2021 Regional Plan)



**Alternatives** are Packages of Projects, Programs, and Policies

Resiliency

Alternative 3: Address Areas with the Most Transportation Challenges

#### **EVALUATE ALTERNATIVES** (Quantitative)

Use ABM2+ software to evaluate alternatives based on the performance measures.

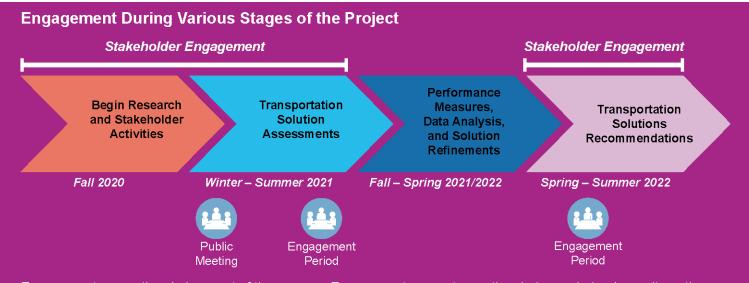


Chapter 4

# **Community Engagement**

#### 4.1 Community Engagement Strategy

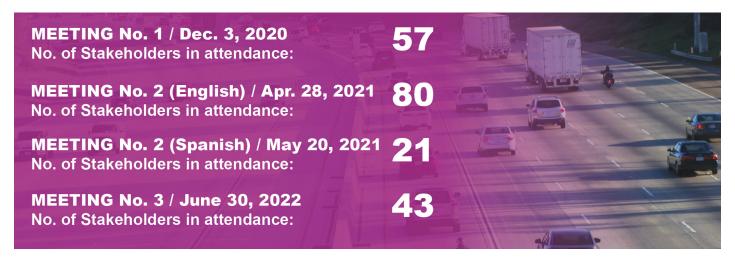
The social distancing requirements of the COVID-19 pandemic brought unique challenges to public engagement. Creating impartial engagement opportunities during the pandemic was vital, so that those who have limited English proficiency, live in under-resourced areas, and/or have unreliable or no access to the internet had the opportunity to comment about the needs of their community. Engagement opportunities were publicized online, through local papers, and through community advocacy groups. Instead of in-person open houses, public meetings were held by video conference with a telephone participation option. For those with unreliable access to the internet, telephone office hours were set up for people to call in and discuss the project with a team member. Online surveys provided the most convenient way for people to provide feedback; however, paper surveys were also distributed to those who needed them. All public engagement events and materials were available in both English and Spanish.



Engagement was active during most of the process. Engagement was not as active during periods where alternative modeling and evaluation were being conducted by the team.

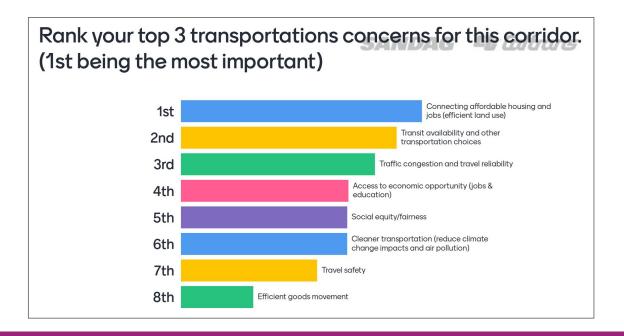
#### 4.2 Engagement Opportunities

#### **Stakeholder Advisory Group Meetings**



#### Stakeholder Advisory Group Poll Results

Polls taken at Stakeholder Advisory Group Meetings and Virtual Public Meetings were used to determine how to prioritize the transportation solutions being evaluated.



#### **Virtual Public Meetings and Engagement Period**

Virtual Public Meeting No. 1: January 28, 2021

**Attendees:** 109

Virtual Engagement Period:

May 28 – July 12, 2021

Visits to Project Website:

3,586

Survey Responses: (Online and hardcopy) 64

Office Hours: One-on-one office-hour sessions were conducted by phone during the public engagement period and were conducted in English and Spanish from June 1 through July 16, 2021.

**Project Briefings:** The project team conducted briefings with community-based organizations to promote the CMCP. Briefings were scheduled upon request.

Virtual Engagement Hub: The CMCP website, also known as the "Virtual Engagement Hub", was the primary location to stay up to date with the latest information about the CMCP. Available in both English and Spanish, the Virtual Engagement Hub provided information about the overall CMCP process, project updates, links to previous presentations, how to communicate with project team members, access to view the proposed transportation solutions, and how to participate in other surveys.

#### **Media and Promotions**



Various media and promotional outlets were used to get the word out about the CMCP."

The following media and promotional outlets were used:

- Social Media Posts

   Facebook, Twitter,
   Instagram
- Email Blasts to Stakeholders in the Project Database
- Community Calendar Posts
- Television News Outlets
- Newspaper Outlets

#### **Surveys and Public Feedback**

Comments from the public came in the form of suggesting projects, supporting a proposed transportation solution, and providing thoughts about issues in the South Bay to Sorrento study area. These comments were evaluated by the CMCP team and considered when qualitatively evaluating the universe of transportation solutions. During the final engagement phase of CMCP development, the public was invited to comment on the following CMCP document. The comprehensive list of comments can be found in **Attachment E**. Common comments received included requests for new or reprioritized goals and objectives, adding more performance measures, concerns on environmental impacts of strategies, requests for additional analysis, addition of more strategies and other general comments. Each person or organization was provided a response to their comment if they indicated that they would like one.

Phase One Survey Responses:

December 3, 2020 – May 12, 2021

Comments
Collected: 251

Phase One Interactive Map Comments:

December 3, 2020 – May 12, 2021

Responses and Comments: 76

Virtual Engagement Period Survey:

May 28 – July 12, 2021

Views: 3,586

Online and Hardcopy Survey Responses Collected: 64 Phase Three Draft CMCP Document Review:

June 17, 2022 – July 29, 2022

Views: 2,118

Total Comment Forms and Letters Collected: 50

#### SANDAG **SE** Cultrans



### **Feedback**

BRT along Mira Mesa Blvd with connections to Coaster/Intercity station and UTC. Include bus-only lanes and pedestrian improvements.





Poor pavement condition and narrow bike lanes. Please restripe the bike and remove one lane of traffic to make it more accommodating.

We desperately need relief for the 805 HOV lane (an extension to I-8 and making it for 3 or more people).





Goods movement in San Diego is extremely important and the vast majority in our region is intertwined between Otay Mesa and the LA Maritime Ports. You should consider developing a separate project for trade corridors that is fluid with how trade flows.

-FI Cainn (14) La Presa

Interactive map on the project website provided the public with the opportunity to comment on transportation solutions that they would like to see implemented in the corridor.

Surveys and printed copy were made available in English and Spanish on the project website.

			Bay to Sorre	nto Comprehe	ensive Mu	ultimodal Co			<b>t</b> Caltrans
Survey	Section A:	Section B: What study goals align with this strategy? [Check all that apply]							
Reference Number	How do you feel about this strategy? [Mark your choice below]	Safety	Traffic Congestion & Travel Reliability	Transit Availability & Other Transportation Choices	Social Equity/ Fairness	Access to Economic Opportunity (Jobs & Education)	Commercial (Package) Deliveries	Connecting Affordable Housing & Jobs	Cleaner Transportation (Climate Change & Air Pollution)
	Section C: General Comments								
Reference Number	<b>○</b> □ □ <b>○ ○</b>								
Reference Number	<b>0</b> • • • •								
Reference Number	••••								

Chapter 5

## Recommended Strategies

A total of 328 strategies were considered for performance measure analysis using ABM 2+<sup>21</sup>, SANDAG's regional modeling system. The modeling system comprises the transportation network in the San Diego region and can simulate traffic conditions assuming certain scenarios, such as improvements to certain roadways. Some strategies, such as policy changes, that cannot be modeled in ABM 2+ were evaluated using other methods. Strategies to be modeled were grouped into the following four alternatives for performance measure analysis:

- **No-Build Alternative** assumes that none of the 328 strategies will be built or implemented. This alternative is used to provide a baseline to the other alternatives showing how improved conditions would be in 2035 compared to if nothing was done.
- Alternative 1 includes all 328 strategies that made it through the screening process.
- **Alternative 2** includes a subset of the strategies in Alternative 1 that approximate the level of funding expected to be available by 2035 in the 2021 Regional Plan<sup>22</sup>.
- **Alternative 3** is also a subset of strategies from Alternative 1 that is focused on multimodal solutions aimed at reducing congestion bottlenecks on critical freeway segments.

### Alternative 1 was chosen as the recommended solution set for the CMCP for the following reasons:

- The solutions, together, have the greatest potential to reduce single occupancy vehicle trips by shifting trips (or person trips) to transit and other non-automobile modes, which will reduce GHG emissions.
- 2. The solutions maximize the number of trips that can move through the corridor compared to any of the other alternatives.
- 3. The solutions serve the highest proportion of historically underserved populations located within a 30- or 45-minute transit trip of dense employment centers and higher education facilities.
- 4. The solutions improve system performance for populations within 0.5 mile of a high frequency transit stop.

**Table 5.1: Priority Focus Area Summary** 

PRIMARY FOCUS AREAS	NUMBER OF STRATEGIES
Transit Leap	177
Complete Corridors	211
Mobility Hubs/Flexible Fleets	130
Active Transportation	140
Next OS	175
Goods Movement	98
Resilience	32
Military	44

Note: Strategies may fit with multiple transportation solution categories, so the number of strategies will not total 328.

<sup>21</sup> SANDAG ABM2+ Sensitivity Testing Report, Published by SANDAG. September 2020. Accessed at: <a href="https://www.sandag.org/resources/regional-models/activity-based-model/documents/SensitivityReportV3.pdf">https://www.sandag.org/resources/regional-models/activity-based-model/documents/SensitivityReportV3.pdf</a>

<sup>22 2021</sup> Regional Plan, Published by SANDAG. December 10, 2021. Accessed at: https://www.sdforward.com/mobility-planning/2021-regional-plan

The alternative that best aligns with the most goals and objectives (see Chapter 3) defined at the beginning of the CMCP process was the one selected as the recommended solution set. Alternative 1 provided the greatest improvements for social equity focus populations, whereas the other two alternatives were not able to make as significant of an impact in this area.

The complete list of the recommended transportation strategies is presented in Attachment A.

The complete list of the recommended transportation strategies is presented in Attachment A. If a recommended strategy is a project that can be identified on a map, a hyperlink is provided in the strategy table to show where it is located in the study area. **Table 5.1** summarizes how many strategies fit into specific solution categories described in this document. Since many strategies were found to help address challenges in more than one area, solutions may fit multiple categories.

#### **Project Spotlights**

The proposed transportation solutions often overlap or work in conjunction with other strategies in the CMCP. This is not by coincidence, rather it is a strategically thought-out process to create an interconnected network that prioritizes multiple modes of travel and reliability, creating a more equitable system region-wide. The following information provides examples of proposed transportation solutions (Attachment A) that will have a dynamic impact on the South Bay to Sorrento corridor.



#### Route 582 (Purple Line) - Sorrento Mesa to National City via City Heights (3)

This project will add a high-capacity transit line from Sorrento Mesa to National City via Kearny Mesa and City Heights. The line will be supported by technology advancements and strategic stops that will help expedite service times. Model results show that including the direct high speed transit connection from National City to Sorrento Mesa will improve travel times enough to transition commuters from their cars and onto transit, moderately reducing regional GHG emissions in the process. This improvement will overlap with identified mobility hubs, active transportation networks, and other technological system improvements as recommended in this CMCP to enhance network benefits and seamless travel.

Estimated Cost: \$12.7B











CON KEY:





Complete Corridors



**Mobility Hubs &** Flexible Fleets



Military



Transit Leap



**Next OS** 



**Goods Movement** 





#### Sorrento Valley Enhanced Service Areas (384)

This solution is the first step toward implementation of the entire Sorrento Valley Mobility Hub (see strategy 618). Improved pedestrian and bicycle connectivity and accommodations for flexible fleets will be established in the areas around the planned passenger rail station and the existing Sorrento Valley COASTER station. Improved services in these areas within the next 5 years creates opportunities to refine the 2035 vision of the Sorrento Valley Mobility Hub.

**Estimated Cost:** Not determined apart of the overall Sorrento Valley Mobility Hub









#### Access Improvements to Naval Base San Diego and Naval Base Coronado (528)

Congestion in South Bay to Sorrento is not limited to commuters in traditional morning and afternoon peak periods. Military facilities also have peak travel periods outside of the traditional times. These regularly create congestion issues for military personnel trying to access the facility. Technology improvements at the points of entry and exit to each naval base will help streamline access to these facilities and improve reliability on the supporting transportation network.

Estimated Cost: \$5.5M per Base











Active **Transportation** 



Complete Corridors



**Mobility Hubs &** Flexible Fleets



Military



Transit Leap



Next OS



**Goods Movement** 





#### Managed Lane Connectors at SR-15 and I-805 (557)

One of many strategies to address operational issues in the heart of the South Bay to Sorrento study area is to provide access to managed lanes. Managed lanes can come in multiple forms, including dynamic pricing to access a lane, high-occupancy vehicle lanes, or transit only lanes. Transit vehicles will be able to access managed lanes to improve commute times for the users of the service. Commuters using their personal vehicle can access the managed lane's reliable service time by paying a variable rate, depending on the level of congestion on the corridor.

Estimated Cost: \$300M







## **Harbor Drive Multimodal Corridor Improvements** (600)

As one of many proposed solutions to Harbor Drive, outlined in the CMCP list of solutions, these specific project improvements include intersection upgrades, Intelligent Transportation System (ITS) improvements, expanding the designated freight route, removing height and weight conflicts along the truck route, pedestrian crossings and bridges, various truck improvements, bikeway accommodations, streetscape design, safety considerations and parking improvements. Other improvements outlined in the CMCP for Harbor Drive will focus on mitigating impacts caused by erosion and sea level rise.

Estimated Cost: \$192M











CON KEY:



Active Transportation





Complete Corridors





Mobility Hubs & Flexible Fleets



Military



Goods Movement





#### **Otay Mesa East Port of Entry Improvements (1283)**

The U.S. and Mexico continue to improve existing border infrastructure, but increasing demands on today's border crossings are impeding mobility. Insufficient capacity at the border crossings costs both countries billions of dollars annually in foregone economic output. Improvements will be added to the Port of Entry to help reduce the very high wait times for vehicles entering and exiting the United States.

Office Clates.

Estimated Cost: \$482M









#### San Ysidro Mobility Hub (1310)

This solution includes mobility hub solutions surrounding the San Ysidro Transit Center. Near-term solutions address pedestrian safety and connectivity as well as capacity constraints for the Blue Line Trolley Service. Long-term solutions integrate shared mobility services, transit supportive land uses, and supporting technology to increase mobility options and enhance equity, safety, and accessibility at the U.S.-Mexico border.

Estimated Cost: \$200M











CON KEY:



Active Transportation



**Complete Corridors** 



Mobility Hubs & Flexible Fleets



Military



**Transit Leap** 



Next OS

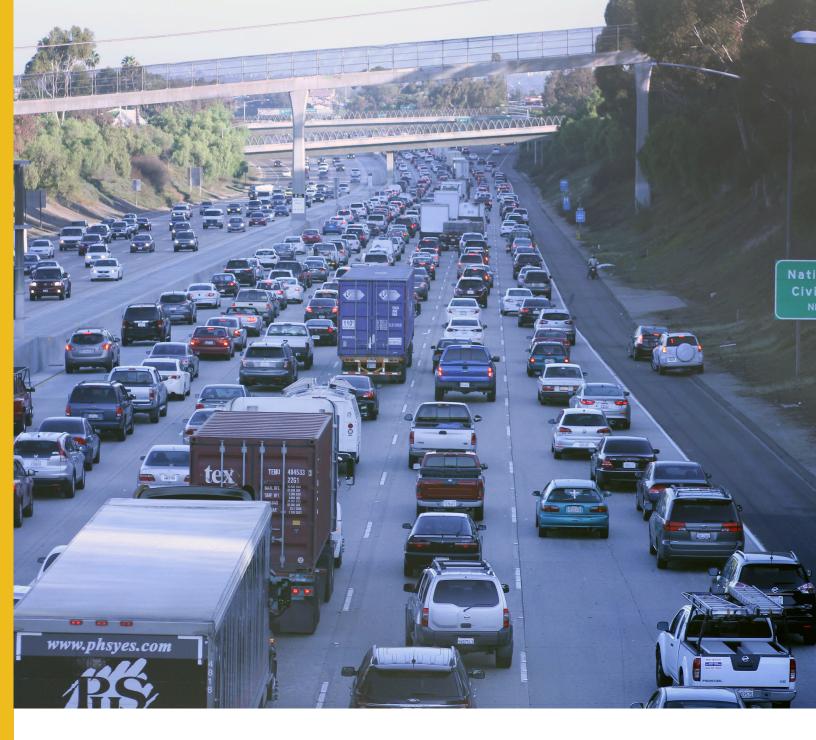


**Goods Movement** 



Chapter 6

## Implementation



#### 6.1 Estimated Cost

The overall cost of all 328 strategies recommended is \$59 billion<sup>23</sup>, with approximately half the cost (\$25B) currently programed in the 2021 Regional Plan. Securing new funding is necessary to fully implement the SB2S CMCP by 2035. Out of the 328 strategies, 283 (86%) are potential candidates for at least one of the SB 1 programs. Other funding sources to help cover the cost could come from state apportioned transportation funds and other federal funding sources such as competitive grant programs as outlined in the recently passed IIJA<sup>24</sup>.

<sup>23</sup> Not including concepts without sufficient information to prepare a cost estimate

<sup>24</sup> H.R.3684 – Infrastructure Investment and Jobs Act, 117th Congress (2021-2022). Accessed at: https://www.congress.gov/ bill/117th-congress/house-bill/3684/text

#### 6.2 Strategic Implementation

The recommended 328 strategies cannot all be reasonably implemented at once; therefore, a phasing approach was used to identify which strategies could be reasonably implemented by 2025 or by 2035. The comprehensive list of transportation solutions presented in **Attachment A** identifies the year when a specific strategy could be implemented if funding and other resources are available.

The 2025 network includes the following:

- Strategies in the 2021 Regional Plan that were identified to be built by 2025 and some strategies phased for 2035 that could be reasonably accelerated if funding was available.
- Other strategies not in the 2021 Regional Plan that could reasonably undergo environmental review within 5 years.

All remaining strategies were phased for 2035, including 50 strategies that are identified in the 2021 Regional Plan either on the 2050 horizon or on the "unconstrained needs list," meaning that it is a project of need with no identified source of funding. **Table 6.1** summarizes the number of strategies and cost for the 2025 and 2035 implementation.

**Table 6.1: SB2S Phased Strategies Summary** 

PHASE	NO. OF STRATEGIES	COST (BILLION DOLLARS)		
Total Recommended Strategies	328	\$59.1		
Implementation by 2025	99	\$4.3		
Implementation by 2035	229	\$54.8		

#### 6.3 Limitations of the Plan

The CMCP is an integrated set of transportation projects, programs, and strategies that will support equitable, resilient, and safe travel across the corridor resulting in a more comprehensive set of travel choices for the South Bay to Sorrento corridor through 2035. The process to develop this transportation solution set included collaboration among local, regional, and state transportation agencies, elected officials, community-based organizations, and the general public. The majority of the projects described in this CMCP are high-level concepts that will require further study to proceed through future stages in the planning process and to secure funding. The analysis performed for this study can help prioritize and advance solutions, but each project must individually undergo each step in the environmental review, design, and construction stages, providing many more opportunities for public engagement to ensure the community has an opportunity to shape our future infrastructure.



Up to the point it is published, the CMCP contains the most up to date information to identify transportation solutions for the South Bay to Sorrento corridor through 2035. However, as technological advances influence the world around us and the way people and goods travel evolves, the work in this document will need to be re-evaluated to adapt to changing conditions.

### 6.4 Next Steps

SANDAG, Caltrans, and the members of the South Bay to Sorrento project development team will continue to collaborate to advance recommended projects, programs, and policies within their jurisdiction and seek stakeholder input to help refine recommended strategies. The CMCP can now be used as a mechanism to compete for and secure the funding needed to advance specific strategies by highlighting the corridor needs and the importance of this comprehensive set of strategies to address such challenges. The CMCP can also be used to develop and refine future local and regional plans, including the 2025 Regional Plan. Local municipalities can start to update their Capital Improvements Programs to account for projects outlined in the CMCP that are within their city limits. Throughout all future actions, stakeholders will have many more opportunities to help refine recommended strategies.

Chapter 7

## Conclusion



The South Bay to Sorrento CMCP is one of 11 other CMCP's to be completed for the San Diego region. It was developed by people with vision – people with the foresight to understand that what we do today will shape the quality of life for future generations. This document provides a clear understanding of the current conditions of the South Bay to Sorrento corridor, where it is forecasted to be in the future, and the transportation solutions needed to create equitable mobility options for the people who live, work, or play in this vital corridor.

The South Bay to Sorrento corridor now has an established plan to put into action. While the recommendations of this plan will be implemented over many years, the people that rely on the transportation system in this corridor will begin to see progress being made on an integrated, equitable, and more reliable transportation system.

# Attachments

#### **Attachments**

Attachment A: Recommended Transportation Solution Set

Attachment B: Planning Review and Corridor Performance Technical Memo

Attachment C: Transportation Solution Strategy Technical Memo

**Attachment D: New Concepts** 

Attachment E: Public Comments from Draft CMCP