EXECUTIVE SUMMARY

This is the San Diego Association of Governments' (SANDAG) Final~~Draft~~ Environmental Impact Report (EIR) for San Diego Forward: The Regional Plan (the proposed Plan). It has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.), and the Guidelines for Implementation of CEQA (CEQA Guidelines) (14 California Code of Regulations Sections 15000 et seq.). The proposed Plan is an update of the Regional Comprehensive Plan for the San Diego Region (RCP) and the 2050 Regional Transportation Plan/Sustainable Communities Strategy (2050 RTP/SCS), combined into one document.

This ~~Draft~~ EIR analyzes the significant environmental impacts of the proposed Plan, mitigation measures to avoid or reduce these impacts, and alternatives to the proposed Plan. It was prepared to disclose this information to decision makers, members of the public and public agencies, so that informed decisions can be made about the proposed Plan. CEQA requires that decision makers make informed decisions on a project, considering the information presented in the EIR, along with social, economic, and other factors.

The~~is~~ Draft EIR was~~is~~ available for a 55-day public review period, from May 21 to July 15, 2015. Following the public review period, SANDAG ~~will~~ prepared written responses to significant environmental concerns raised in the comments on the Draft EIR. The Final EIR will include revisions to the Draft EIR, comments received on the Draft EIR either verbatim or in summary, and SANDAG's responses to significant environmental concerns raised in the public comments (Appendix K-1).

ES.1 SUMMARY OF THE PROPOSED PLAN

The proposed Plan includes a blueprint for a regional transportation system, serving existing and projected residents and workers within the San Diego region (Figure 2.0-1) that further enhances quality of life and offers more mobility options for people and goods. The proposed Plan looks approximately 35 years ahead, accommodating more than 925,000 new residents, nearly half a million new jobs, and over 300,000 new homes. SANDAG developed the following basic project objectives for this EIR:

1. Focus population and employment growth in existing urbanized areas to protect sensitive habitat and natural resource areas.
2. Provide transportation investments that support compact land development patterns.
3. Meet greenhouse gas (GHG) emissions targets for passenger cars and light-duty trucks.
4. Provide transportation investments and land use patterns that promote public health and safety.
5. Use *TransNet* revenue as matching funds to maximize funding from non-*TransNet* sources.
6. Provide access to jobs and key destinations for all communities.
7. Make transportation investments that reduce travel times for all trips.
8. Enhance the efficiency of the transportation network through the deployment of new technologies.

The proposed Plan's sustainable communities strategy (SCS) envisions most of the forecasted new jobs and homes to be situated in sustainable communities, conducive to transit, walking, and bicycling. To achieve this, future growth would be more compact in nature, focused in the western portion of the region and along major transit and transportation corridors. This more compact development pattern would create more active mixed-use communities, while allowing for the protection of more open space land in the eastern portion of the region.

Under Senate Bill (SB) 375, the regional transportation plan must include an SCS consisting of land use, housing, and transportation strategies that, if implemented, would allow the region to meet its regional targets for GHG emissions reductions from passenger vehicle use established by the California Air Resources Board (ARB). The purpose of an SCS is to align regional transportation, housing, and land use planning to attain the regional GHG reduction target.

Building on the current (2012) transportation system with funding anticipated over the next 35 years, the proposed Plan outlines projects for rail and bus services, highways, local streets, bicycling, and walking, as well as systems and demand management. The result would be an integrated, multimodal transportation system by mid-century. The proposed Plan's SCS shows how the region would exceed the SB 375 GHG emissions reductions targets for passenger vehicles established by ARB for 2020 and 2035 by using land in a way that makes development more compact, conserving open space and investing in a transportation network that reduces vehicle miles traveled and gives residents alternative transportation options.

Although SB 375 sets GHG reduction targets for only the years 2020 and 2035, the proposed Plan also includes a longer 2050 time horizon. This was done because a major local transportation funding program (the TransNet Extension Ordinance and Expenditure Plan) extends to almost 2050.

ES.2 PROJECT LOCATION

The project boundary of the proposed Plan includes the entire San Diego region, which is composed of more than 4,200 square miles (see Figure 2.0-1). The region's borders are both political and geological. To the north, the region is bordered by Orange and Riverside counties, although largely separated from Orange County by Marine Corps Base Camp Pendleton. To the south of the region is the U.S. border with Mexico. The Pacific Ocean forms a natural border to the west, and the region shares a border with Imperial County to the east. The majority of urban development lies in the western portion of the San Diego region along the coast. The communities located inland in the eastern portion of the region have focused on maintaining a rural character. Over half of the total land area in the region is not available for public development, including public lands, dedicated parks and open space, lands constrained for environmental reasons, and military use. The San Diego region is supported by an existing network of freeways, expressways, regional arterials, transit corridors, regional bus and rail transit corridors, bikeways, commercial and general aviation facilities, seaport facilities, and ports of entry at the United States/Mexico border. The project location and environmental setting are discussed in more detail in Chapter 3.

ES.3 AREAS OF CONTROVERSY

CEQA Guidelines Section 15123(b)(2) requires that an EIR contain a discussion of areas of controversy known to the lead agency, including issues raised by agencies and the public. Several areas of controversy were identified during the EIR scoping process, and through public input on the proposed Plan outside of the Notice of Preparation (NOP) process.

These areas of concern were brought forth through letters and presented at SANDAG board meetings. These issues are addressed throughout the EIR. In no particular order, areas of controversy known to SANDAG include:

- The analysis of alternatives in the EIR. Specifically, can alternatives be included that:
    - Substantially reduce total vehicle miles traveled, air pollutant emissions, and GHG emissions
    - Accelerate smart growth in areas with existing high density and existing or planned transit service
    - Advance transit and active transportation (walking and biking) investments to the first 10-15 years of the Plan
    - Include implementation of transit and active transportation projects from the unconstrained revenue scenario (i.e., for which funding is not identified in the proposed Plan)
    - Fund transit before highways, delaying or eliminating highway investments
    - Convert existing general purpose lanes to managed lanes
    - Greatly expand transportation demand management(TDM) strategies
- The proposed Plan's allocation of funding of transit and active transportation relative to highways
- Comparison of future GHG emissions resulting from implementation of the proposed Plan to statewide GHG reduction targets identified in Assembly Bill 32 and Executive Order S-3-05
- Air quality impacts, especially emissions of particulate matter, and health risks from particulate and toxic air contaminant emissions
- The identification of mitigation measures to avoid or substantially lessen GHG emissions and air quality impacts.
- Equitable distribution of impacts and benefits to all communities on the basis of factors such as race/ethnicity, income, and existing exposure to pollution.
- Modeling techniques and assumptions, and their availability to members of the public

ES.4 ISSUES TO BE RESOLVED

CEQA Guidelines Section 15123(b)(3) requires that an EIR contain a discussion of issues to be resolved. Issues to be resolved in this EIR include choosing among alternatives to the proposed Plan, and deciding whether and how to mitigate the proposed Plan's significant environmental impacts. Additionally, if it adopts the proposed Plan, the SANDAG Board of Directors must decide whether specific social, economic, or other benefits of the proposed Plan outweigh its significant unavoidable environmental impacts; if so, the Board of Directors must adopt a Statement of Overriding Considerations.

ES.5 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table ES-1 provides a summary of environmental impacts, mitigation measures to avoid or reduce significant impacts, and significance of the impact after mitigation is applied, for 2020, 2035, and 2050. This summary is based on the impact analyses provided in Sections 4.1 through 4.16. A detailed analysis of cumulative impacts is provided in Chapter 5. Section 4.17 provides a summary analysis of 2025 and 2030 for each environmental resource area. Chapter 5 identifies probable future projects, as well as regional planning documents and other growth projections, and analyzes the cumulative environmental impacts for each environmental resource area when combined with the proposed Plan. Impacts of proposed Plan alternatives are compared in relation to proposed Plan impacts in Chapter 6; the major components of the alternatives are summarized in Table ES-2.

Table ES-1
Summary of Environmental Impacts and Mitigation Measures

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
4.1 Aesthetics and Visual Resources				
AES-1 Have a substantial adverse effect on a scenic vista. Significant impact in 2020, 2035, and 2050.	**AES-1A Protect Public Views of Scenic Vistas.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
AES-2 Substantially damage scenic resources, including but not limited to, trees, rocks, outcroppings, and historic bridges within a State scenic highway. Significant impact in 2020, 2035, and 2050.	**AES-2A Reduce Impacts to scenic resources within a state scenic highway.** **AES-2B Reduce Impacts to local scenic resources and public viewsheds.** **AES-1A Protect Public Views of Scenic Vistas.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
AES-3 Substantially degrade the character of an area, including adding a visual element of urban character to an existing rural or open space area or by creating substantial new sources of light or glare that would adversely affect day or nighttime views. Significant impact in 2020, 2035, and 2050.	**AES-3A Reduce impacts to visual character.** **AES-1A Protect Public Views of Scenic Vistas.** **AES-2A Reduce Impacts to scenic resources within a state scenic highway.** **AES-2B Reduce Impacts to local scenic resources and public viewsheds.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.2 Agricultural and Forestry Resources				
AG-1 Convert agricultural lands to nonagricultural use. Significant impact in 2020, 2035, and 2050.	**AG-1A Preserve Existing Agricultural Lands.** **AG-1B Reduce Transportation Network Improvement and Development Conflicts with Agricultural Operations.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
AG-2 Conflict with existing zoning for agricultural use or a Williamson Act contract. Significant impact in 2020, 2035, and 2050.	**AG-1A Preserve Existing Agricultural Lands.** **AG-1B Reduce Transportation Network Improvement and Development Conflicts with Agricultural Operations.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
FR-1 Convert or result in the loss of "Forest Land" as defined in the California Forest Legacy Act of 2007 (PRC Section 12220(g)). Significant impact in 2020, 2035, and 2050.	**FR-1A Reduce Impacts to Forest Lands**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.3 Air Quality				
AQ-1 Conflict with or obstruct implementation of the applicable Air Quality Attainment Plans. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
AQ-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation. Significant impact in 2020, 2035, and 2050.	**GHG-4A Allocate Competitive Grant Funding to Projects that Reduce GHG Emissions.** **GHG-4B Adopt a Detailed Regional Mobility Hub ~~Strategy~~ Implementation Plan to Reduce GHG Emissions.** **GHG-4C Fund Electric Vehicle Charging Infrastructure.** **GHG-4D Adopt a Plan for Transportation Fuels that Reduce GHG Emissions.** **GHG-4E Assist in the Preparation of Climate Action Plans and Other Measures to Reduce GHG Emissions.** **GHG-4F Implement Measures to Reduce GHG Emissions from Transportation Projects.** **GHG-4G Implement Measures to**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
	Reduce GHG Emissions from Transportation Projects. **GHG-4H Implement Measures to Reduce GHG Emissions from Development Projects.** **AQ-2A: Implement Construction Best Management Practices for Fugitive Dust**. **AQ-4A: Reduce Exposure to Localized Particulate and/or TAC Emissions.** **AQ-4B: Reduce diesel emissions during construction from off-road equipment.** **AQ-4C: Reduce diesel particulate emissions from on-road vehicles used in construction.** **EN-3B Develop Energy Demand Calculations and Reduce Energy Demand.**			
AQ-3 Result in a cumulatively considerable net increase of emissions of any criteria pollutant for which the project region is in nonattainment under applicable NAAQS or CAAQS. Significant impact in 2020, 2035, and 2050.	**AQ-2A: Implement Construction Best Management Practices for Fugitive Dust.** **AQ-4A: Reduce Exposure to Localized Particulate and/or TAC Emissions.** **AQ-4B: Reduce diesel emissions during construction from off-road equipment.** **AQ-4C: Reduce diesel particulate emissions from on-road vehicles used in construction.** **GHG-4A Allocate Competitive Grant Funding to Projects that Reduce GHG Emissions.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
	GHG-4B Adopt a Detailed Regional Mobility Hub ~~Strategy~~ Implementation Plan to Reduce GHG Emissions. **GHG-4C Fund Electric Vehicle Charging Infrastructure.** **GHG-4D Adopt a Plan for Transportation Fuels that Reduce GHG Emissions.** **GHG-4E Assist in the Preparation of Climate Action Plans and Other Measures to Reduce GHG Emissions.** **GHG-4F Implement Measures to Reduce GHG Emissions from Transportation Projects.** **GHG-4G Implement Measures to Reduce GHG Emissions from Transportation Projects.** **GHG-4H Implement Measures to Reduce GHG Emissions from Development Projects.** **EN-3B Develop Energy Demand Calculations and Reduce Energy Demand.**			
AQ-4 Expose sensitive receptors to substantial pollutant concentrations. Significant impact in 2020, 2035, and 2050.	**GHG-4A Allocate Competitive Grant Funding to Projects that Reduce GHG Emissions.** **GHG-4B Adopt a Detailed Regional Mobility Hub ~~Strategy~~ Implementation Plan to Reduce GHG Emissions.** **GHG-4C Fund Electric Vehicle Charging Infrastructure.** **GHG-4D Adopt a Plan for**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
	Transportation Fuels that Reduce GHG Emissions. **GHG-4E Assist in the Preparation of Climate Action Plans and Other Measures to Reduce GHG Emissions.** **GHG-4F Implement Measures to Reduce GHG Emissions from Transportation Projects.** **GHG-4G Implement Measures to Reduce GHG Emissions from Transportation Projects.** **GHG-4H Implement Measures to Reduce GHG Emissions from Development Projects.** **AQ-4A: Reduce Exposure to Localized Particulate and/or TAC Emissions.** **AQ-4B Reduce diesel emissions during construction from off-road equipment.** **AQ-4C Reduce diesel particulate emissions from on-road vehicles used in construction.** **AQ-2A Implement Construction Best Management Practices for Fugitive Dust.** **EN-3B Develop Energy Demand Calculations and Reduce Energy Demand.**			
AQ-5 Expose a substantial number of people to objectionable odors. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
4.4 Biological Resources				
BIO-1 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act or on resources regulated by CDFW under Section 1600 et seq. of the CFGC. Significant Impact in 2020, 2035, and 2050.	**BIO 1A Implement Design and Avoidance Measures for Vegetation and Regulated Waters.** **BIO 1B Provide Compensatory Mitigation.** **BIO 1C Prepare a Mitigation and Monitoring Plan.** **BIO 1D Implement Best Management Practices to Avoid Indirect Impacts.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
BIO-2 Have a substantial adverse effect, either directly or indirectly, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS, or species that meet the criteria for endangered, rare, or threatened in CEQA Guidelines §15380. Significant Impact in 2020, 2035, and 2050.	**BIO-2A Implement Design and Avoidance Measures for Special Status Species.** **BIO-2B Provide Compensatory Mitigation for Special Status Plant Species.** **BIO-2C Provide Compensatory Mitigation for Special Status Wildlife Species.** **BIO 1A Implement Design and Avoidance Measures for Vegetation and Regulated Waters.** **BIO 1B Provide Compensatory Mitigation.** **BIO 1C Prepare a Mitigation and Monitoring Plan.** **BIO 1D Implement Best Management Practices to Avoid Indirect Impacts.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
BIO-3 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Significant Impact in 2020, 2035, and 2050.	**BIO 3A Facilitate Wildlife Movement.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
BIO-4 Conflict with the provisions of an adopted HCP, NCCP, or other conservation plan, or with any local policies or ordinances protecting biological resources. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
4.5 Cultural and Paleontological Resources				
CULT-1 Cause a substantial adverse change in the significance of a historical resource or unique archaeological resource. Significant impact in 2020, 2035, and 2050.	**CULT–1A Develop Project-Level Measures.** **CULT–1B Implement Monitoring and Data Recovery Programs.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
CULT-2 Disturb any human remains, including those interred outside of formal cemeteries, in violation of existing laws and regulations protecting human remains. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
PALEO-1 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Significant impact in 2020, 2035, and 2050.	**PALEO -1A Identify Potential for Unique Paleontological Resources or Unique Geologic Features.** **PALEO-1B Avoid or Reduce Impacts to Unique Paleontological Resources or Unique Geologic Features.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.6 Energy				
EN-1 Result in an increase in overall per capita energy consumption relative to baseline conditions, or otherwise use energy in an inefficient, wasteful, or unnecessary manner. Less than significant impact in 2020, 2035, and 2050	Not applicable	Not applicable	Not applicable	Not applicable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
EN-2 Result in an increased reliance on fossil fuels and decreased reliance on renewable energy sources. Less than significant impact in 2020, 2035, and 2050	Not applicable	Not applicable	Not applicable	Not applicable
EN-3 Require or result in the construction of new energy facilities or the expansion of such facilities to adequately meet projected demands, the construction of which could cause a significant environmental effect. Significant impact in 2020, 2035, and 2050	**EN-3A Mitigate Impacts of New or Expanded Energy Facilities.** **EN-3B Develop Energy Demand Calculations and Reduce Energy Demand.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.7 Geology, Soils, and Mineral Resources				
GEO-1 Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;** **Strong seismic ground shaking; Seismic-related ground failure, including liquefaction; and Seismically-induced landslides.** Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
GEO-2 Locate projects on a geologic unit or soil that is expansive or unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
GEO-3 Result in substantial soil erosion or the loss of topsoil. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
GEO-4 Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water, potentially causing adverse groundwater impacts. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
MR-1 Result in the loss of availability of known aggregate and mineral resources that would be of value to the region and the residents of the state, or result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Significant impact in 2020, 2035, and 2050.	**MR-1A Conserve Aggregate and Mineral Resources.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.8 Greenhouse Gas Emissions				
GHG-1 Directly or indirectly result in an increase in GHG emissions compared to existing conditions (2012). Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
GHG-2 Conflict with AB 32, SANDAG Climate Action Strategy, or Local Climate Action Plans. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
GHG-3 Conflict with SB 375 GHG Reduction Targets. Less than significant impact in 2020 and 2035. No SB 375 emission reduction target exists for 2050, therefore the impact was not analyzed	Not applicable	Not applicable	Not applicable	Not applicable
GHG-4 Be inconsistent with the State's ability to achieve the Executive Order B-30-15 and S-3-05 goals of reducing California's GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. Significant impact in 2035 and 2050. Impact not applicable to 2020, however AB 32 emission reductions are analyzed under impact GHG-2.	**GHG-4A Allocate Competitive Grant Funding to Projects that Reduce GHG Emissions (SANDAG).** **GHG-4B Adopt a Detailed Regional Mobility Hub ~~Strategy~~ Implementation Plan to Reduce GHG Emissions (SANDAG).** **GHG-4C Fund Electric Vehicle Charging**	Not applicable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
	Infrastructure (SANDAG). **GHG-4D Adopt a Plan for Transportation Fuels that Reduce GHG Emissions (SANDAG).** **GHG-4E Assist in the Preparation of Climate Action Plans and Other Measures to Reduce GHG Emissions (SANDAG).** **GHG-4F Implement Measures to Reduce GHG Emissions from Transportation Projects (SANDAG).** **GHG-4G Implement Measures to Reduce GHG Emissions from Transportation Projects (Other Transportation Project Sponsors).** **GHG-4H Implement Measures to Reduce GHG Emissions from Development Projects (Local Governments).** **AQ-4A Reduce Exposure to Localized Particulate and/or TAC Emissions.** **AQ-4B Reduce diesel emissions during construction from off-road equipment.** **AQ-4C Reduce diesel emissions during construction from on-road vehicles.** **EN-3B Develop Energy Demand Calculations and Reduce Energy Demand.** **WS-1A Implement Water Conservation Measures.**			

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
4.9 Hazards and Hazardous Materials				
HAZ-1 Create a significant hazard by generating hazardous emissions or handling hazardous materials during pre-construction, demolition, and/or construction activities. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
HAZ-2 Create a significant hazard to the public or the environment through the routine use, handling, transport, or disposal of hazardous materials. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
HAZ-3 Result in an air traffic hazard for people residing or working within an airport land use plan or within 2 miles of a public or private airport, airstrip, or helipad, or result in a change in air traffic patterns, including either an increase in traffic levels or a change in location which results in substantial safety risks. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
HAZ-4 Impede implementation of an adopted emergency response plan or emergency evacuation plan or result in inadequate emergency access. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
HAZ-5 Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. Significant impact in 2020, 2035, and 2050.	**HAZ-5A Reduce Wildfire Risk.** **HAZ-5B Ensure Emergency Response Services.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.10 Hydrology and Water Quality				
HWQ-1 Substantially degrade water quality in violation of any water quality standards or waste discharge requirements. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
HWQ-2 Substantially reduce groundwater quantity or quality. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
HWQ-3 Substantially alter the existing drainage pattern of an area such that flood risk, erosion, or siltation would increase. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
HWQ-4 Expose people, structures, or facilities to a significant risk of loss, injury, or death involving flooding, including within 100-year flood hazard areas and flooding as a result of the failure of a levee or dam. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
HWQ-5 Expose people or structures to a significant risk of inundation by seiche, tsunami, or mudflow. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
4.11 Land Use				
LU-1 Physically divide an established community. Significant impact in 2035 and 2050. Less than significant impact in 2020.	**LU-1A Provide Access and Connections.**	Not applicable	Significant and unavoidable	Significant and unavoidable
LU-2 Conflict with the land use portion of adopted local general plans or other applicable land use plans, including specific plans and community plans adopted for the purpose of avoiding or mitigating an environmental effect. Significant impact in 2035 and 2050. Less than significant impact in 2020	**LU-2A Reduce Conflicts with Land Use Plans.** **POP-2A Design Projects to Reduce Displacement.**	Not applicable	Significant and unavoidable	Significant and unavoidable
4.12 Noise and Vibration				
N-1 Expose persons to or generation of noise levels in excess of standards established in local general plans or noise ordinances, or applicable standards of other agencies. Significant impact in 2020, 2035, and 2050.	**N-1A Implement Construction Noise Reduction Measures.** **N-1B Implement Operational Noise Reduction Measures.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
N-2 Cause a substantial temporary or periodic increase in ambient noise levels. Significant impact in 2020, 2035, and 2050.	**N-1A Implement Construction Noise Reduction Measures.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
N-3 Cause a substantial permanent increase in ambient noise levels. Significant impact in 2020, 2035, and 2050.	**N-1B Implement Operational Noise Reduction Measures.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
N-4 Expose persons to or generation of excessive groundborne vibration or groundborne noise levels. Significant impact in 2020, 2035, and 2050.	**N-4A Implement Construction Vibration Reduction Measures.** **N-4B Implement Vibration-reducing Measures for Rail Operations.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
N-5 Expose people residing or working near airports, private airstrips, or helipads to excessive noise levels. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
4.13 Population and Housing				
POP-1 Induce substantial increases in population, either directly (for example, by proposing new homes or businesses), or indirectly (for example, through extension of roads or other infrastructure). Significant impact in 2020, 2035, and 2050.	No feasible mitigation measures available.	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
POP-2 Displace substantial numbers of people or housing units, which would necessitate the construction of replacement housing elsewhere. Significant impact in 2020, 2035, and 2050.	**POP-2A Design Projects to Reduce Displacement.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
4.14 Public Services and Utilities				
PS-1 Result in the substantial physical deterioration of public facilities or cause substantial adverse physical impacts associated with the provision of or need for new or physically altered (i.e. expanded) public facilities, in order to maintain adequate fire and police protection, emergency services, schools, libraries, and recreation facilities. Significant impact in 2020, 2035, and 2050.	**PS-1A Implement Mitigation Measures for New/Expanded Public Service Facilities.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
U-1 Result in the expansion or construction of wastewater collection and treatment facilities to adequately meet projected capacity needs, the construction of which could cause significant environmental impacts. Significant impact in 2020, 2035, and 2050.	**U-1A Implement Mitigation Measures for New/Expanded Wastewater Facilities.** **WS-1A Implement Water Conservation Measures.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
U-2 Require or result in the construction of new storm water drainage facilities or the expansion of existing facilities, the construction of which could cause significant environmental impacts. Significant impact in 2020, 2035, and 2050.	**U-2A Implement Mitigation Measures for New/Expanded Storm Water Drainage Facilities.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
U-3 Require or result in the construction of new solid waste disposal facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects. Significant impact in 2035 and 2050. Less than significant impact in 2020.	**U-3A Implement Mitigation Measures for New/Expanded Solid Waste Facilities.** **U-3B Reduce Construction Waste.** **U-3C Implement Green Building Measures.**	Not applicable	Significant and unavoidable	Significant and unavoidable
4.15 Transportation				
T-1 Increase average daily vehicle miles traveled per capita or total vehicle miles traveled. Significant impact in 2020, 2035, and 2050.	**GHG-4A Allocate Competitive Grant Funding to Projects that Reduce GHG Emissions.** **GHG-4B Adopt a Detailed Regional Mobility Hub ~~Strategy~~ Implementation Plan to Reduce GHG Emissions.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
	GHG-4E Assist in the Preparation of Climate Action Plans and Other Measures to Reduce GHG Emissions. **GHG-4H Implement Measures to Reduce GHG Emissions from Development Projects.**			
T-2 Induce substantial vehicle travel. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
T-3 Decrease the performance of public transit, bicycle, or pedestrian facilities. Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
T-4 Result in substantially higher rate of systemwide accidents, collisions, injuries, or fatalities (by mode). Less than significant impact in 2020, 2035, and 2050.	Not applicable	Not applicable	Not applicable	Not applicable
T-5 Result in the loss of parking supply that causes significant adverse environmental impacts. Less than significant impact in 2020, 2035, and 2050.	Not Applicable	Not applicable	Not applicable	Not applicable
4.16 Water Supply				
WS-1 Increase demands on existing water supplies such that they would be inadequate to serve future demands, and new or expanded water supplies or entitlements would be needed. Significant impact in 2020, 2035, and 2050.	**WS-1A Implement Water Conservation Measures.** **WS-1B Use Reclaimed Water.** **WS-1C Ensure Adequate Water Supply.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
WS-2 Require or result in the construction of new water treatment or distribution facilities or the expansion of existing facilities to adequately meet forecast demand or capacity needs, the construction of which could cause a significant environmental effect. Significant impact in 2020, 2035, and 2050.	**WS-2A Mitigation Measures for New or Expanded Water Facilities.** **WS-1A Implement Water Conservation Measures.** **WS-1B Use Reclaimed Water.** **WS-1C Ensure Adequate Water Supply.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

ES.6 ALTERNATIVES TO THE PROPOSED PLAN

Chapter 6 in this EIR analyzes eight alternatives to the proposed Plan in detail. The analysis determines which alternatives are capable of avoiding or substantially lessening the significant environmental effects of the proposed Plan to a less-than-significant level. Chapter 6 also explains why other alternatives were considered but rejected from detailed consideration. The eight alternatives analyzed in detail are listed below and summarized in Table ES-2:

Alternative 1: No Project Alternative
Alternative 2: SCS Land Use/Advanced Revenue Constrained Transit + Revenue Constrained Highway (SCS + Trans Alt 2)
Alternative 3: SCS Land Use /Advanced Revenue Constrained Transit + Delayed Revenue Constrained Highway (SCS + Trans Alt 3)
Alternative 4: Intensified Smart Growth Land Use/Advanced Revenue Unconstrained Transit + Modified Managed Lanes (SG Intensification + Trans Alt 4)
Alternative 5A: SCS Land Use /Advanced Revenue Unconstrained Transit + Highway General Purpose Lane Conversion (SCS + Trans Alt 5A)
Alternative 5B: Multiple Dense Cores Land Use/Advanced Revenue Unconstrained Transit + Highway General Purpose Lane Conversion (Multi Dense Cores + Trans Alt 5A)
Alternative 5C: Multiple Dense Cores Land Use/Advanced Revenue Unconstrained Transit + Highway General Purpose Lane Conversion + New Transit and Parking Policies (Multi Dense Cores + Trans Alt 5C)
Alternative 5D: Multiple Dense Cores Land Use/Advanced Revenue Unconstrained Transit + Highway General Purpose Lane Conversion + New Transit and Parking Policies + New Driving Fee (Multi Dense Cores + Trans Alt 5D)

These alternatives respond to public suggestions for alternatives that reduce vehicle miles traveled, air pollutant emissions, and GHG emission, and include a number of specific components suggested by the public. The alternatives were developed based on public input from the NOP scoping period and during the development of the proposed Plan. Therefore, there is a large focus on avoiding or lessening GHG emissions and air quality impacts by reducing total vehicle miles traveled.

Alternative 5D is considered the environmentally superior alternative. While it would not reduce any of the proposed Plan's significant impacts to less than significant levels, it would have reduced environmental impacts compared to the proposed Plan impacts for the following resource topics: aesthetics and visual resources; agricultural and forestry resources; air quality; biological resources; cultural and paleontological resources; energy; geology, soils and mineral resources; greenhouse gas emissions; hazards and hazardous materials; public services and utilities; transportation; and water supply. Among the alternatives considered in detail, Alternative 5D would achieve the greatest reductions in total VMT, GHG emissions, and air pollutant emissions. Even though Alternative 5D would result in the greatest reduction in VMT compared to the proposed Plan among the alternatives analyzed, VMT in 2050 would still exceed VMT in 2012, creating a significant environmental impact (Impact T-1).
To be implemented, this alternative would require a major State road pricing policy change, and major changes in land use policies, parking policies, and transit funding.

The results indicate that total reductions in VMT below the 2012 level are not feasible in light of the forecasted increase of nearly one million people in the region by 2050. Implementing an alternative that reduces VMT to below 2012 levels would require additional measures to reduce total VMT beyond those in Alternative 5D: even more compact development than a multiple dense cores scenario, further substantial increases in the cost of driving, and further substantial transit service improvements, additional measures like these may ultimately be needed to reduce VMT, but currently are considered infeasible for several reasons, including the further changes needed in legislation and policy; lack of availability and allowable uses of funding for the transit service improvements; severe economic and social impacts to residents and businesses caused by substantial increases in driving costs; and lack of authority of SANDAG or local governments to implement these types of measures. In addition, population growth is the main cause of increases in total VMT, and SANDAG has no authority to control population growth in the region.

Table ES-2
Summary of Action Alternatives Considered in the EIR

Alternative	Assumptions[1]				
	A. Transit[2]	B. Active[3]	C. Managed Lanes[4]	D. Highway[5]	E. Land Use
2	All revenue constrained by 2025	All projects by 2025	If support *Rapid*, same as column A. If not, same as column D.	No change	SCS Land Use
3	All revenue constrained by 2025	All projects by 2025	If support *Rapid*, same as column A. If not, same as column D.	Delay all to 2050	SCS Land Use
4	All revenue constrained and unconstrained by 2025	All projects by 2025	If support *Rapid*, same as column A. If not, same as column D. Reduce scope of MLs: Eliminate proposed increases to 4ML where 2ML already exist, Reduce proposed increases to 4ML to 2ML	Eliminate	Smart Growth Area Intensification
5A	All revenue constrained and unconstrained by 2025	All projects by 2025	Eliminate. Convert existing general purpose lanes to managed lanes to operate proposed *Rapid* routes.	Eliminate	SCS Land Use
5B	Same as Alternative 5A				Dense Cores
5C	Same as Alternative 5A + New Transit and Parking Policies				Dense Cores
5D	Same as Alternative 5A + New Transit and Parking Policies + Increased Auto Operating Cost				Dense Cores

[1] Each action alternative makes the following assumptions: Advance Urban Core bus route 10-minute all-day frequency improvements to 2025 (2035 under proposed Plan). New toll lanes remain the same as the proposed Plan. Removal of tolls on SR 125 remains the same as the proposed Plan.
[2] Transit = COASTER, SPRINTER, Trolley, *Rapid*, Streetcar, San Marcos Shuttle, Airport Express, Intermodal, and Other (vehicles, system rehabilitation, regulatory compliance, park-and-ride).
[3] Active = Regional Bike Network Project List.
[4] Managed Lanes (ML) = managed lanes and managed lane connectors.
[5] Highway = general purpose lanes, operational improvements, freeway connectors.

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