5 CUMULATIVE IMPACT ANALYSIS

This chapter discusses the cumulative effects of past, present, and reasonably foreseeable future projects and the contribution of the proposed Amendment to these effects. The CEQA Guidelines define a cumulative impact as one in which two or more individual effects, when considered together, are considerable or can compound or increase other environmental impacts. Individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (CEQA Guidelines Section 15355).

5.1 CUMULATIVE IMPACT METHODOLOGY

CEQA Guidelines Section 15130 describes the requirements for the discussion of cumulative impacts in an EIR, and states that an EIR will discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable. The discussion must reflect the severity of impacts and their likelihood of occurrence, but the discussion need not provide as much detail as is provided for the impacts attributable to the project alone. In addition, the CEQA Guidelines allow for a project's contribution to be rendered less than cumulatively considerable with implementation of appropriate mitigation.

According to Section 15130(b) of the CEQA Guidelines, cumulative impact analysis may be conducted using one of two methods: the List Method, which includes "a list of past, present, and probable activities producing related or cumulative impacts," or the Plan Method, which uses "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact." For the purposes of this SEIR, a combination of both methods is used for the cumulative analysis, as described below and consistent with the approved Plan PEIR.

To analyze the cumulative effects of the proposed Amendment per CEQA requirements, the following approach for each resource topic was applied:

1. Summarize the impacts of the proposed Amendment on the resource.
2. Summarize projected impacts of related plans and impacts of probable future projects, as applicable to each resource section, within the geographic scope of the cumulative impact analysis.
3. Discuss combined impacts and conclude whether cumulative impacts are significant, then explain whether the proposed Amendment's incremental contribution to any significant cumulative impact is cumulatively considerable and therefore significant.
4. Where the incremental contribution to a significant cumulative impact is cumulatively considerable, identify mitigation measures that would reduce the incremental effects and determine whether they would make the impact less than significant. If none exist, conclude that the contribution to the cumulative impact remains significant and unavoidable.

5.1.1 CUMULATIVE PROJECTS

Several existing and probable future projects in the San Diego region are forecast to occur within the 2050 timeframe of the proposed Amendment and could contribute to significant cumulative impacts. Past projects

include those that have been recently completed but were not necessarily considered in the baseline for the proposed Amendment and have ongoing impacts with the potential to combine with the impacts of other projects. Present and probable future projects include those that are under construction, in a preconstruction phase, or show a level of assurance that the project will move forward, such as allocated funding or movement through the necessary planning process for project approval. These projects have independent utility from the proposed Amendment, and do not rely on it for their justification. Some of these projects span beyond the boundaries of the San Diego region, have uncertain funding, and/or have no preliminary designs. Refer to Section 5.1.1, *Cumulative Impacts*, of the Final approved Plan PEIR for the complete list and description of cumulative projects. Updates to the listed cumulative projects that have occurred since the adoption of the approved Plan PEIR are described below.

Navy Old Town Campus Revitalization

The U.S. Department of the Navy (Navy) prepared a Draft Environmental Impact Statement (EIS) to evaluate the potential environmental consequences of the proposed modernization of Naval Base Point Loma Old Town Campus (OTC), San Diego, California. OTC is home to the Naval Information Warfare Systems Command (NAVWAR) (Navy 2021). The Navy analyzed five alternatives, and identified Alternative 4—high density development with a transit center—as its preferred alternative. The approved Plan included the transit center as a potential location for the Central Mobility Hub; however, this location is no longer being considered. The exact location of the Central Mobility Hub is unknown at this time.

The proposed modernization of NAVWAR's facilities on OTC would include demolition, construction, and renovation of buildings, utilities, and infrastructure. Modernization would be accomplished in either of two ways:

1. Navy Redevelopment: a Navy-only project that would construct new or renovate existing NAVWAR facilities at OTC. No public-private or mixed-use development would occur on OTC under this scenario.
2. Public-Private Redevelopment: collaboration between the Navy, the private sector, and possibly other government agencies to finance and construct new NAVWAR facilities at OTC. Development would include new facilities for NAVWAR and a range of private mixed-use development (e.g., residential, office, retail, hotel). The developers of the mixed-use development would pay for construction of NAVWAR facilities in exchange for the opportunity to develop the remaining OTC land. Two of the action alternatives analyzed in the EIS include consolidation of a transit center to OTC.

The Navy is currently in the process of selecting the master developer for the project.

Port/Maritime

In November 2022, the Board of Port Commissioners of the San Diego Unified Port District approved the National City Balanced Plan Port Master Plan Amendment and certified the National City Bayfront Projects EIR. The Port Master Plan Amendment is pending approval by the California Coastal Commission.

5.1.2 REGIONAL PLANNING DOCUMENTS

Refer to the regulatory setting in Chapter 5, *Cumulative Impacts*, of the approved Plan PEIR, which includes relevant federal, State, and local regulations still applicable to the proposed Amendment. The regulatory setting included therein is consistent with this evaluation. Updates to the regulatory setting that have occurred since the release of the approved Plan PEIR are described below.

California Air Resources Board 2022 Scoping Plan for Achieving Carbon Neutrality

CARB updated the State Scoping Plan as is required every 5 years by AB 32. The 2022 Scoping Plan for Achieving Carbon Neutrality (CARB 2022) provides an update to California's strategic framework for achieving carbon neutrality and reducing anthropogenic GHG emissions by 85 percent below 1990 levels by 2045 or earlier as directed by AB 1279. The 2017 Scoping Plan was discussed in the approved Plan PEIR. The 2022 Scoping Plan was published after the approved Plan PEIR and was not incorporated into the approved Plan PEIR. For more information, see Sections 4.2, *Energy*, and 4.3, *Greenhouse Gas Emissions*, of this SEIR.

5.1.3 GROWTH PROJECTIONS

This analysis considers population projections gathered from a variety of sources, in addition to the projections contained in adopted plans, to understand and characterize the cumulative setting. Population projections include:

- SANDAG Series 14 Regional Growth Forecast used as the basis for the approved Plan.
- Southern California Association of Governments' (SCAG) 2020 RTP/SCS Growth Forecast (SCAG 2020a).
- California Department of Finance Population Projections (DOF 2019).
- California-Baja California Border Master Plan (Caltrans 2021).

Population projections from these sources are provided in Table 5-1 for the 2025, 2035, and 2050 horizon years.

Table 5-1
Growth Projections Considered in the Cumulative Impacts Analysis

	Population			
Region	**2016**	**2025**	**2035**	**2050**
SANDAG	3,309,510	3,470,848	3,620,348	3,746,073
SCAG Region	18,832,000	19,432,587	21,443,000	20,179,646
Northern Baja California, Mexico	3,484,150	4,169,240	5,357,122	5,617,774
State of California	39,254,339	40,808,001	42,718,403	44,049,015

Sources: SANDAG = SANDAG Series 14 Regional Growth Forecast (SANDAG 2021); SCAG = SCAG 2020-2045 RTP/SCS Demographics and Growth Forecast (for 2016, 2035) (SCAG 2020a), DOF 2021 for 2025 and 2050; Northern Baja = California-Baja California Border Master Plan (Caltrans 2021), SANDAG 2015; State of California = California Department of Finance (DOF 2019).
Note: Northern Baja California generally includes the municipalities of Tijuana, Tecate, Playas de Rosarito, parts of Mexicali, and Ensenada.

5.1.4 GEOGRAPHIC SCOPE

The geographic scope defines the area in which the impacts of the proposed Amendment are analyzed in combination with similar impacts of cumulative projects or impacts associated with approved planning documents to determine if cumulative impacts would occur. The topic-specific geographic scope for the air quality, energy, GHG, noise and vibration, and transportation cumulative impact analysis is presented in Table 5-2. The geographic scopes for the cumulative impact analysis for the proposed Amendment are the same as those presented in the approved Plan PEIR. The cumulative impact analysis section for each resource topic area explains why the specific geographic scope was selected.

Table 5-2
Topic Specific Geographic Scope of Cumulative Impacts

Cumulative Impact Topic	Geographic Scope
Air Quality	Southern California/Northern Baja California
Energy	Southern California/Northern Baja California
Greenhouse Gas Emissions	Global
Noise and Vibration	Southern California/Northern Baja California
Transportation	Southern California/Northern Baja California

Note: Southern California generally includes the areas encompassed by SANDAG and SCAG jurisdictions. SCAG represents six Southern California counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura) over an area covering more than 38,000 square miles. Northern Baja California generally includes the municipalities of Tijuana, Tecate, Playas de Rosarito, parts of Mexicali, and Ensenada.

5.2 CUMULATIVE IMPACT ANALYSIS

5.2.1 AIR QUALITY

C-AQ-1 MAKE A CUMULATIVELY CONSIDERABLE CONTRIBUTION TO ADVERSE EFFECTS RELATED TO AIR QUALITY

Emissions of criteria air pollutants can travel substantial distances and are not confined by jurisdictional boundaries; rather, they are influenced by large-scale climatic and topographical features. Thus, the geographic scope considered for cumulative impacts on air quality is the Southern California and northern Baja region.

A projection approach to air quality is appropriate given the air pollutant emissions resulting from the future overall transportation network improvements, increases in population, and necessary planned regional development.

The plans considered and relied on for this cumulative analysis include the SCAG 2020–2045 RTP/SCS (SCAG 2020a) and its EIR (SCAG 2020b); the San Diego Air Pollution Control District (SDAPCD) 2022 Revision of the Regional Air Quality Strategy for San Diego County (2022 RAQS) (SDAPCD 2022); SDAPCD 2020 San Diego Ozone State Implementation Plan (2020 SIP) (SDAPCD 2020); SDAPCD 2016 Eight-Hour O_3 Attainment Plan (2016 SIP) (SDAPCD 2016); South Coast Air Quality Management District (SCAQMD) 2016 Air Quality Management Plan (AQMP) (SCAQMD 2016); Imperial County Air Pollution Control District (ICAPCD) 2017 State Implementation Plan (ICAPCD 2017) and Final 2009 8 Hour Ozone Modified Air Quality Management Plan (ICAPCD 2010); U.S. Environmental Protection Agency (EPA) Border 2025 Program (EPA 2021), 2021–2023 Border 2025 Action Plan (EPA 2022); 2034 Tijuana, Tecate, and Playas de Rosarito Metropolitan Strategic Plan (IMPLAN 2013); and California-Baja California Border Master Plan (Caltrans 2021).

Significant cumulative impacts related to air quality would occur if emissions would conflict with or obstruct implementation of the RAQS and/or SIP; result in a cumulatively considerable net increase in nonattainment or attainment criteria pollutants, including volatile organic compounds (VOC), nitrogen oxides (NO_X), particulate matter smaller than or equal to 10 microns in diameter (PM_{10}), particulate matter smaller than or equal to 2.5 microns in diameter ($PM_{2.5}$), and sulfur oxides (SO_X); result in construction-related emissions above regional mass emission thresholds; expose sensitive receptors to substantial PM_{10} and $PM_{2.5}$ concentrations; expose sensitive receptors to substantial toxic air contaminant (TAC) concentrations; expose sensitive

receptors to carbon monoxide hot spots; and result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Impacts of the Proposed Amendment

The approved Plan PEIR identified significant and unavoidable impacts related to construction-related emissions exceeding significance thresholds (Impact AQ-3); exposure of sensitive receptors to substantial respirable particulate matter (PM_{10}) concentrations in 2025, 2035, and 2050 (Impact AQ-4); and exposure of new sensitive receptors to substantial TAC concentrations in 2025, 2035, and 2050 (Impact AQ-5). Mitigation measures **AQ-2a, AQ-3a, AQ-3b, AQ-3c, AQ-4, AQ-5a,** and **AQ-5b,** as well as **GHG-5a, GHG-5b, GHG-5d,** and **GHG-5f,** and **TRA-2** identified in the approved Plan PEIR would apply to the proposed Amendment.

The proposed Amendment would remove the regional road usage charge, which would result in an approximately 2 percent increase in VMT for horizon years 2035 and 2050 compared to what was estimated for the approved Plan, as shown in Section 4.5, *Transportation,* of this SEIR. Compared to the approved Plan PEIR, the proposed Amendment would result in substantially more severe significant impacts in 2025, 2035, and 2050 for Impact AQ-4 and Impact AQ-5. Table 5-3 summarizes the air quality impacts for horizon years 2025, 2035, and 2050 (see Section 4.1, *Air Quality*, of this SEIR).

Table 5-3
Summary of Air Quality Impacts and Mitigation Measures

Impact	2025	2035	2050
AQ-1	Less than Significant	Less than Significant	Less than Significant
AQ-2	Less than Significant	Less than Significant	Significant Mitigation measures required: AQ-2a and AQ-2b; GHG-5a, GHG-5b, GHG-5d, GHG-5f, and GHG-5g; and TRA-2
AQ-4	Significant Mitigation measures required: AQ-2a and AQ-4; GHG-5a, GHG-5b, GHG-5d, GHG-5f, and GHG-5g; and TRA-2	Substantially More Severe Significant Impact in Comparison to the Approved Plan PEIR. Mitigation measures required: AQ-2a and AQ-4; GHG-5a, GHG-5b, GHG-5d, GHG-5f, and GHG-5g; and TRA-2	Substantially More Severe Significant Impact in Comparison to the Approved Plan PEIR. Mitigation measures required: AQ-2a and AQ-4; GHG-5a, GHG-5b, GHG-5d, GHG-5f, and GHG-5g; and TRA-2
AQ-5	Substantially More Severe Significant Impact in Comparison to the Approved Plan PEIR. Mitigation measures required: AQ-2a, AQ-4, AQ-5a, and AQ-5b; GHG-5a, GHG-5b, GHG-5d, GHG-5f, and GHG-5g; TRA-2	Substantially More Severe Significant Impact in Comparison to the Approved Plan PEIR. Mitigation measures required: AQ-2a, AQ-4, AQ-5a, and AQ-5b; GHG-5a, GHG-5b, GHG-5d, GHG-5f, and GHG-5g; TRA-2	Substantially More Severe Significant Impact in Comparison to the Approved Plan PEIR. Mitigation measures required: AQ-2a, AQ-4, AQ-5a, and AQ-5b; GHG-5a, GHG-5b, GHG-5d, GHG-5f, and GHG-5g; TRA-2
AQ-6	Less than Significant	Less than Significant	Less than Significant

As Chapter 1, *Introduction*, of this SEIR explains, the proposed Amendment would not alter the impact conclusions described in the approved Plan PEIR for Impacts AQ-3 and AQ-7; therefore, these impacts were not analyzed in this SEIR.

Impact Projections in Adopted Plans

The approved Plan PEIR identified adopted plans applicable to the cumulative impact analysis, including the 2016 RAQS, 2020 SIP, 2016 AQMP, and ICAPCD 8-Hour Ozone Modified AQMP; the U.S. Mexico Border Environmental Program: Border 2025; the 2034 Tijuana, Tecate, and Playas de Rosarito Metropolitan Strategic Plan; and the California-Baja California Border Master Plan. These plans demonstrate long-term trends towards air quality improvement, but also show that further significant pollution reduction is required for the region to meet various State and federal air quality requirements. See Chapter 5 of the adopted Plan PEIR for further information.

The 2022 RAQS was published on March 9, 2023, and supersedes the 2016 RAQS as the applicable RAQS for the proposed Amendment. The 2022 RAQS states that air quality progress is occurring within San Diego County, but that current State and federal ozone standards are not yet attained, and continued emission reduction efforts are needed. Total VOC and NO_X emissions are expected to continue decreasing through 2045 due to ongoing implementation of existing local stationary source rules, as well as State and federal mobile source regulations (SDAPCD 2022).

Cumulative Impacts and Impact Conclusions

2025

A cumulative impact in 2025 would result if the combined impacts of the proposed Amendment and impact projections from adopted plans within Southern California and the northern Baja California region were significant when considered together, even if not independently significant. As described in Section 4.1 of this SEIR, implementation of the proposed Amendment in Year 2025 would reduce the area of threshold exceedance for the annual PM10 California Ambient Air Quality Standards (CAAQS) in Escondido and eliminate exceedances of the 24-hour PM10 CAAQS in Chula Vista. Therefore, the proposed Amendment would result in a significant impact consistent with the approved Plan PEIR (Impact AQ-4). In addition, the proposed Amendment would increase the incremental area of threshold exceedance for new land uses, result in new cancer risk exceedances for new recreational land uses, and result in new chronic hazard exceedances for new recreational and school land uses. Therefore, because implementation of the proposed Amendment in Year 2025 would expose new receptors to substantial TAC emissions, this would result in substantially more severe significant impacts compared to the approved Plan PEIR (Impact AQ-5).

Many of the air quality plans note that air quality across the region has been improving due to implementation of various measures and stricter emission requirements. Nevertheless, given some uncertainty that air quality plans throughout Southern California and northern Baja would all be implemented successfully, and given that the proposed Amendment's direct impacts are significant, cumulative air quality impacts would also be significant due to PM_{10} emissions exceeding thresholds, the exposure of sensitive receptors to substantial PM_{10} concentrations, and exposure of sensitive receptors to TACs. Compared to the approved Plan PEIR, the proposed Amendment would result in more severe cumulative air quality impacts due to the exposure of new areas to exceedances of the annual PM10 thresholds and exposure of new receptors to substantial TAC emissions.

Because cumulative air quality impacts throughout Southern California and northern Baja by 2025 would be significant, and because the proposed Amendment's incremental air quality impacts are significant, the proposed Amendment's incremental air quality impacts are also cumulatively considerable in 2025 (Impact C-AQ-1).

2035

As described in Section 4.1 of this SEIR, implementation of the proposed Amendment in Year 2035 would not change the maximum incremental concentration for any of the PM10 standards and would reduce the area of threshold exceedance for 24-hour PM10 CAAQS in Escondido and eliminate the exceedances of the 24-hour PM10 CAAQS in Chula Vista. However, the proposed Amendment would increase the area of threshold exceedance for the annual PM10 CAAQS in Escondido and expose new areas to exceedances of the annual PM10 CAAQS. As a result, it was determined that the proposed Amendment would result in substantially more severe significant impacts compared to the approved Plan PEIR (Impact AQ-4). In addition, the proposed Amendment would increase the incremental area of threshold exceedance for new sources and new land uses and result in new chronic hazard exceedances for new recreational and school land uses. Therefore, because implementation of the proposed Amendment in Year 2035 would expose new receptors to substantial TAC emissions, this would result in substantially more severe significant impacts compared to the approved Plan PEIR (Impact AQ-5).

Because cumulative air quality impacts throughout Southern California and northern Baja by 2035 would be significant, and because the proposed Amendment's incremental air quality impacts are significant, the proposed Amendment's incremental air quality impacts are also cumulatively considerable in 2035 (Impact C-AQ-1).

2050

As described in Section 4.1 of this SEIR, implementation of the proposed Amendment in Year 2050 would not change the maximum incremental concentration for annual PM10 CAAQS and would decrease maximum incremental concentrations for the 24-hour PM10 CAAQS and 24-hour PM10 CAAQS. However, the proposed Amendment would increase the area of threshold exceedance for the annual PM10 CAAQS and would expose new areas to exceedances of the annual PM10 CAAQS, and therefore would result in substantially more severe significant impacts compared to the approved Plan PEIR (Impact AQ-4). In addition, the proposed Amendment would increase the incremental area of threshold exceedance for new sources and new land uses, result in new cancer risk exceedances for new recreational sources and land uses, result in new chronic hazard exceedances for schools exposed to new sources, and result in new chronic hazard exceedances for new recreational and school land uses. Therefore, because implementation of the proposed Amendment in Year 2050 would expose new receptors to substantial TAC emissions, this would result in substantially more severe significant impacts compared to the approved Plan PEIR (Impact AQ-5).

Because cumulative air quality impacts throughout Southern California and northern Baja by 2050 would be significant, and because the proposed Amendment's incremental air quality impacts are significant, the proposed Amendment's incremental air quality impacts are also cumulatively considerable in 2050 (Impact C-AQ-1).

Mitigation Measures

C-AQ-1 MAKE A CUMULATIVELY CONSIDERABLE CONTRIBUTION TO ADVERSE EFFECTS RELATED TO AIR QUALITY

Implementation of mitigation measures **AQ-2a** through **AQ-5b, GHG-5a**, **GHG-5b**, **GHG-5d**, **GHG-5e**, **GHG-5f**, and **TRA-2,** identified in the approved Plan PEIR, remain applicable and would reduce air quality impacts associated with the proposed Amendment. Section 4.3, *Greenhouse Gas Emissions*, of this SEIR includes an additional mitigation measure, **GHG-5g**, that would also reduce air quality impacts associated with the proposed Amendment.

Similar mitigation measures are specified in other regional plans, such as the SCAG 2020-2045 RTP/SCS EIR. However, that EIR concluded that even with implementation of mitigation measures, some direct air quality impacts would remain significant. Regional air quality planning documents provide short- and long-term strategies for reducing air pollution and control measures to be implemented by applicable jurisdictions and agencies to further reduce air pollutant emissions.

As described in Section 4.1 of this SEIR, mitigation measures **AQ-2a** through **AQ-5b,** as well as **GHG-5a**, **GHG-5b**, **GHG-5d**, **GHG-5e**, **GHG-5f,** and **GHG-5g**, and **TRA-2**, would not reduce the proposed Amendment's incremental impacts to less-than-significant levels. Therefore, the proposed Amendment's incremental contributions to cumulative air quality impacts in years 2025, 2035, and 2050 would remain cumulatively considerable post-mitigation.

5.2.2 ENERGY

C-EN-1 MAKE A CUMULATIVELY CONSIDERABLE CONTRIBUTION TO ADVERSE EFFECTS ON ENERGY

The area of geographic consideration for cumulative energy impacts is the Southern California and northern Baja region. The demand for energy is a common theme throughout the region. Land use change and the transportation system would influence the demand for future energy development or the location and need for new or additional energy infrastructure across the Southern California and northern Baja region. The provision of energy can be linked to jurisdictions, but often service providers and their infrastructure cover large areas. Thus, it is necessary to consider the Southern California and northern Baja region as a whole and the overall amount of development that would generate additional pressure and demand on energy use and generation facilities.

A hybrid approach (see Section 5.1 regarding the methodology for cumulative analysis) to the cumulative energy analysis allows for a discussion of regional impacts associated with general patterns of regional urbanization, growth, and land use changes that would create new or additional energy use, modify demand for the provision of energy, or dictate where new or expanded energy infrastructure is located. Discussion of specific projects also allows for consideration of individual large-scale existing and probable future projects with known impacts on energy resources.

Growth, land use change, and transportation system improvements occurring throughout the Southern California and northern Baja region would impact energy demand, development, and supply. Cumulative energy impacts would result if there were an increase in overall per capita energy consumption or inefficient, wasteful, or unnecessary energy use; or obstruction of state and local renewable energy and energy efficiency plans, regulations, and policies.

Consistent with the approved Plan PEIR, documents considered in the cumulative energy analysis include the California Energy Commission's (CEC) California Energy Demand 2018-2030 Revised Forecast (CEC 2018), County of San Diego Strategic Energy Plan 2015-2020 (County of San Diego 2015), and San Diego Gas & Electric Company 2012 Long-Term Procurement Plan (SDG&E 2012).

Impacts of the Proposed Amendment

The approved Plan PEIR identified less-than-significant impacts related to the inefficient, wasteful, or unnecessary consumption of energy in 2025, 2035, and 2050. As detailed in Section 4.2, *Energy,* of this SEIR, the proposed Amendment would not change land use, anticipated growth within the region, or proposed transportation facility improvements from what was analyzed in the approved Plan PEIR. The proposed Amendment would remove the regional road usage charge, which would result in an increase in VMT as discussed in Section 4.5, *Transportation,* of this SEIR. As a result, energy use related to on-road vehicle gasoline and diesel during operations would increase compared to the approved Plan PEIR. However, consistent with the approved Plan PEIR, the proposed Amendment would not result in an increase in overall per capita energy consumption in 2025, 2035, or 2050, and the impact would be less than significant (Impact EN-1).

The approved Plan PEIR identified less-than-significant impacts related to compliance with State programs and local plans and policies aimed at reducing energy consumption and promoting renewable energy. As discussed in Section 4.2 of this SEIR, the proposed Amendment would not change land use, anticipated growth within the region, or proposed transportation facility improvements from what was analyzed in the approved Plan PEIR. The removal of the road usage charge would increase energy use from on-road gasoline and diesel vehicles during operations. The county and various cities within the SANDAG region, in accordance with State law, will require the implementation of a variety of energy efficiency and renewable energy measures to decrease fossil fuel energy consumption as a means to reduce GHG emissions. As detailed in Section 4.2 of this SEIR, the proposed Amendment would comply with the State's programs and local plans and policies aimed at reducing energy consumption and promoting renewable energy. Thus, this impact would be less than significant in 2025, 2035, and 2050 (Impact EN-2).

Impacts of Related Projects

Multiple energy projects in various stages of planning, permitting, and construction are ongoing in the Southern California and northern Baja region. Some of these include the Crimson Solar Project in Blythe, California; Palen-Nalep Solar, Victory Pass Solar, and Rice Solar energy projects in Riverside County; Carlsbad NRG and Pio Pico Energy Center in San Diego County; Clean Hydrogen Energy and Comino Solar project in Kern County; and Black Rock 5 & 6 Geothermal Power Project in Imperial County. All energy projects requiring CEC approval or licensing must go through the CEC permitting process, which is a certified regulatory program under CEQA. The CEC license/certification subsumes all requirements of State, local, or regional agencies otherwise required before new infrastructure is constructed.

The California High Speed Train (HST) environmental document states that, while the project would have a potentially significant effect related to long-term electric power consumption when viewed on a system-wide basis, it represents a more energy-efficient mode of transportation than travel by aircraft or car, such that the HST system would result in an overall reduction in total energy consumption. The HST EIR/EIS states that the HST system would reduce energy consumption overall and any localized energy impacts would be avoided through proper planning and design of power distribution systems and their relationship with the overall power grid (HSRA 2005).

Energy impacts were found to be less than significant for the City of San Diego Pure Water North City Project (City of San Diego 2018) and were not addressed in the Navy OTC Revitalization Draft EIS (Navy 2021).

Other land development and infrastructure projects throughout the region and State, such as petroleum pipeline transportation infrastructure, freight rail infrastructure, and energy generation and transmission corridors, would also result in impacts related to energy if these projects occur within the same time frame.

Impact Projections in Adopted Plans

The approved Plan PEIR identified adopted plans applicable to cumulative impact analysis. As discussed, the SCAG 2020-2045 RTP/SCS EIR identified that implementation of the RTP/SCS would contribute to a cumulatively considerable increase in non-renewable energy use that would be significant and unavoidable. The EIR also found that the plan would result in a significant and unavoidable impact related to the use of electricity, natural gas, gasoline, diesel, and other non-renewable energy types in the construction and expansion of the regional transportation system and forecasted development (SCAG 2020a).

The CEC California Energy Demand 2018-2030 Revised Forecast report shows the continued increase in demand for energy supplies in the state over the next 10 years (CEC 2018).

The County of San Diego Strategic Energy Plan's main priorities are to control utility costs, accelerate distributed generation employment, facilitate alternative fuel vehicle deployment, reduce the region's carbon footprint, expand choice for consumer energy supply, and increase the use of information technology to help reach objectives and inform the public (County of San Diego 2015).

SDG&E's 2012 Long-Term Procurement Plan addresses both demand- and supply-side resources and makes recommendations to achieve the appropriate balance between each of these resource types. The plan adds resources in the order of the State's priorities as follows: energy efficiency, demand response, renewable power, distributed generation, and clean and efficient fossil-fired generation (SDG&E 2012).

Cumulative Impacts and Impact Conclusions

2025, 2035, and 2050

As described in Section 4.2 of this SEIR, implementation of the proposed Amendment would not result in an increase in overall per capita energy consumption or use energy in an inefficient, wasteful, or unnecessary manner, or conflict with the State's programs and local plans and policies aimed at reducing energy consumption and promoting renewable energy. Therefore, cumulative energy impacts would not be significant, and the proposed Amendment would not result in cumulatively considerable impacts in 2025, 2035 or 2050. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

5.2.3 GREENHOUSE GAS EMISSIONS

C-GHG-1 MAKE A CUMULATIVELY CONSIDERABLE CONTRIBUTION TO ADVERSE EFFECTS RELATED TO GHG EMISSIONS

Climate change is a global problem and GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Thus, the area of geographic consideration for cumulative impacts of GHG emissions is global. Atmospheric concentrations of GHGs have been increasing since measurements began in the 1970s. As of 2022, the globally averaged annual mean concentration of atmospheric carbon dioxide (CO_2) is approximately 417 parts per million (ppm), methane (CH_4) is approximately 1,911 parts per billion (ppb), and nitrous oxide (N_2O) is approximately 335 ppb (NOAA 2022a, 2022b, 2022c).

The projection approach to GHG considers both forecasted GHG emissions on a global scale, as well as a State and local-level analysis of GHGs. In the SANDAG region, the transportation sector is the largest contributor of GHG emissions. Thus, this analysis takes into consideration the cumulative GHG impacts resulting from the overall future transportation improvements, future increases in population, and planned regional development tied to the proposed Amendment.

From the standpoint of CEQA, GHG impacts on climate change are inherently cumulative on a statewide level. Significant cumulative impacts would occur if the proposed Amendment were to directly or indirectly result in an increase in GHG emissions compared to existing project conditions; conflict with SB 375 GHG emission reduction targets for 2035, SANDAG Board of Directors Resolution No. 2021-17, or Local Climate Action Plans; or be inconsistent with the State's ability to achieve the SB 32 target of reducing statewide GHG emissions to 40 percent below 1990 levels by 2030, the accelerated target of 48 percent below 1990 levels by 2030 under the 2022 Scoping Plan Scenario, and whether the proposed Amendment is inconsistent with the State's ability to achieve the long-term reduction goals of EO S-3-05 and EO B-55-18, and AB 1279.

This cumulative impact assessment considers and relies on the impact analysis within this SEIR for the proposed Amendment, the 2016 GHG Inventory and Projections for the San Diego region (SANDAG 2021), SB 375, the SANDAG Board of Directors Resolution No. 2021-17, and CARB's 2022 Scoping Plan.

Impacts of the Proposed Amendment

The approved Plan PEIR identified a significant and unavoidable impact related to inconsistencies with the State's ability to achieve the 2030 reduction target of SB 32 and long-term reduction goals of EO S-3-05, EO B-55-18, and AB 1279 (Impact GHG-5). Mitigation measures **GHG-5a** through **GHG-5f**, as well as **AQ-3b, AQ-3c,** and **AQ-4,** revised **TRA-2, WS-1a,** and **WS-1b** identified in the approved Plan PEIR would remain applicable under the proposed Amendment. Section 4.5, *Transportation*, of this SEIR, includes minor updates to mitigation measure TRA-2. Additional mitigation measure **GHG-5g** is proposed in Section 4.3 of this SEIR to help further reduce regional GHG emissions. Nonetheless, as discussed in Section 4.3, implementation of the proposed Amendment would result in a significant impact because the proposed Amendment would not meet the 85 percent reduction in anthropogenic GHG emissions goal of AB 1279 or the 2022 Scoping Plan. Impacts would be significant and unavoidable (Impact GHG-5).

As previously discussed, the proposed Amendment would not change land use or anticipated growth within the region or introduce new transportation network or facility improvements from what was analyzed in the approved Plan PEIR. The proposed Amendment would not directly or indirectly result in an increase in GHG emissions compared to existing conditions. Implementation of the proposed Amendment would result in a 19 percent reduction in per capita CO_2 emissions from passenger cars and light-duty trucks from 2005 levels by 2035, which meets the 2035 target of a 19 percent reduction for the SANDAG region (Impact GHG-2). GHG emissions reductions under the proposed Amendment would exceed the SANDAG Board Resolution target of a 30 percent reduction by 2035 by 13 percent (Impact GHG-3).

Table 5-4 summarizes the GHG emissions impacts under the proposed Amendment for Horizon Years 2025, 2030, 2035, 2045, and 2050.

Table 5-4
Summary of GHG Emissions Impacts and Mitigation Measures

Impact	2025	2030	2035	2045	2050
GHG-1	Less than Significant	N/A	Less than Significant	N/A	Less than Significant
GHG-2	N/A	N/A	Less than Significant	N/A	N/A; SB 375 does not establish 2050 GHG emissions reduction target
GHG-3	N/A	N/A	Less than Significant	N/A	N/A
GHG-4	Less than Significant	N/A	Less than Significant	N/A	Less than Significant
GHG-5	N/A	Significant impact not identified in approved Plan PEIR; mitigation measures required: GHG-5a through GHG-5g, AQ-3b, AQ-3c, AQ-4, TRA-2, WS-1a, and WS-1b	N/A	Significant impact not identified in approved Plan PEIR; mitigation measures required: GHG-5a through GHG-5g, AQ-3b, AQ-3c, AQ-4, TRA-2, WS-1a, and WS-1b	Significant impact not identified in approved Plan PEIR; mitigation measures required: GHG-5a through GHG-5g, AQ-3b, AQ-3c, AQ-4, TRA-2, WS-1a, and WS-1b

N/A = not applicable.

Impact Projections in Adopted Plans

The approved Plan PEIR identified adopted plans applicable to the cumulative impact analysis. Section 4.8, *Greenhouse Gas Emissions,* of the approved Plan PEIR outlines the various federal, State, and local laws, regulations, and policies that are aimed at reducing GHG emissions. Reports such as the *Climate Change 2014 Synthesis Report* published by the United Nation's Intergovernmental Panel on Climate Change (IPCC) demonstrate that recent climate changes have had widespread impacts on human and natural systems and that cumulative emissions of CO_2 will largely determine global mean surface warming by the late 21st century and beyond.

The State of California has a comprehensive policy and regulation regimen related to GHG reduction, including SB 32, EO S-3-05, EO B-55-18, AB 1279 and the 2022 Scoping Plan. The State is currently on target for achieving GHG emission reductions compared to existing conditions. The 2022 Scoping Plan builds upon and includes additional GHG reduction measures from the previous State Scoping Plan to accelerate the 2030 target to 48 percent below 1990 levels. The 2022 Scoping Plan includes strategies for achieving carbon neutrality in the State by 2045, as well as achieving an 85 percent reduction in anthropogenic emissions by 2045 (CARB 2022). Nonetheless, future statewide cumulative GHG emissions are highly variable and unknown; thus, cumulative impacts related to GHG emissions remain significant. For more information, see Sections 4.2, *Energy*, and 4.3, *Greenhouse Gas Emissions*, of this SEIR.

Cumulative Impacts and Impact Conclusions

2025

A significant cumulative impact in 2025 would result if the combined impacts of the proposed Amendment and impact projections from adopted plans were significant when considered together, even if not independently significant. GHG emissions and impacts on global climate change are inherently cumulative as the quantity of GHGs that it takes to ultimately result in climate change is not precisely known; however, a single project would be unlikely to measurably contribute to a noticeable incremental change in the global average temperature. As described above, a wide variety of plans and regulations at all levels of government, including global, federal, state, and local, provide for regulation and reduction of GHG emissions. However, there is uncertainty about the ability of the nation and world to meet GHG reduction goals. Many of the proposed strategies and mitigation proposed in GHG reduction plans and policies are based on new and developing technology and can be highly dependent upon the global economy and other influencing factors.

As discussed in Section 4.3 of this SEIR, implementation of the proposed Amendment in 2025 would result in a less-than-significant impact. The proposed Amendment would not directly or indirectly result in an increase in GHG emissions compared to existing conditions because total annual regional emissions would be approximately 14 percent lower in 2025 relative to 2016. The proposed Amendment would not conflict with local climate action plans. However, uncertainty about the ability for GHG emissions to be reduced by national and international efforts means that global GHG emissions may not be reduced to 2016 levels. But because the proposed Amendment's GHG emissions decrease between 2016 and 2025, and would not conflict with local climate plans, there is no significant GHG cumulative impact in 2025, and the proposed Amendment's incremental contribution would not be cumulatively considerable.

2030

As described in Section 4.3 of this SEIR, implementation of the proposed Amendment in 2030 would result in a new significant impact because the proposed Amendment would not meet the SB 32 reference point of 13.4 million metric tons (MMT) of carbon dioxide equivalent (CO_2e) emissions, or the accelerated 2022 Scoping Plan reference point of 13.4 $MMTCO_2e$. Because cumulative GHG impacts on a global basis would be significant, and because the proposed Amendment would not meet the 2030 reference points, the proposed Amendment's incremental GHG impacts in 2030 would also be cumulatively considerable (Impact C-GHG-1).

2035

As described in Section 4.3, implementation of the proposed Amendment in 2035 would decrease emissions from 2016 levels. Moreover, the proposed Amendment would not conflict with SB 375 emission reduction targets for 2035 because it would result in a 19 percent reduction in per capita CO_2 emissions from passenger cars and light-duty trucks from 2005 levels by 2035, which meets the 2035 target of a 19 percent reduction for the SANDAG region. Because the proposed Amendment's GHG emissions would decrease between 2016 and 2035 and would not conflict with local climate plans, there is no significant GHG cumulative impact in 2035, and the proposed Amendment's incremental contribution would not be cumulatively considerable.

2045 and 2050

As described in Section 4.3 of this SEIR, implementation of the proposed Amendment in 2045 and 2050 would result in a new significant impact because the proposed Amendment would not meet the 85 percent reduction in anthropogenic emissions goal of AB 1279 or the 2022 Scoping Plan. Because cumulative GHG impacts on a

global basis would be significant, and because the proposed Amendment would not meet the 85 percent reduction in anthropogenic emissions goal of AB 1279 or the 2022 Scoping Plan, the proposed Amendment's incremental GHG impacts in 2045 and 2050 would also be cumulatively considerable (Impact C-GHG-1).

Mitigation Measures

C-GHG-1 MAKE A CUMULATIVELY CONSIDERABLE CONTRIBUTION TO ADVERSE EFFECTS RELATED TO GHG EMISSIONS

Implementation of mitigation measures **GHG-5a** through **GHG-5f, AQ-3b, AQ-3c, AQ-4, TRA-2, WS-1a,** and **WS-1b** identified in the approved Plan PEIR remain applicable and would reduce direct and indirect GHG emissions associated with the proposed Amendment. Section 4.3 of this SEIR includes an additional mitigation measure, **GHG-5g.** Section 4.5, *Transportation*, of this SEIR, includes updates to mitigation measure **TRA-2**. These mitigation measures include actions such as competitive grant funding for GHG-reducing projects; allocation of additional funding for electric vehicle-charging infrastructure and incentives; allocation of funding to habitat creation, restoration, or enhancement projects that remove carbon dioxide from the atmosphere; implementing a regional carbon offset program; achieving energy savings through a regional energy network; and measures to reduce GHG emissions from transportation and development projects. Additional mitigation measures that would reduce GHG emissions are presented in the air quality, energy, and water supply sections.

While SANDAG has the authority to implement mitigation measures **GHG-5a** through **GHG-5g**, **AQ-3b**, **AQ-3c**, **AQ-4**, **TRA-2**, **WS-1a**, and **WS-1b** and has committed to do so, it has no legal authority to require other transportation project sponsors or local jurisdictions to implement mitigation measures for specific projects for which they have responsibility and jurisdiction. Also, even full implementation of all identified mitigation measures would not be sufficient to reduce the proposed Amendment's GHG emissions below the regional 2030, 2045, and 2050 GHG reduction reference points based on SB 32, EO B-55-18, EO S-3-05, and AB 1279. Mitigation measures **GHG-5a** through **GHG-5g** would help reduce regional GHG emissions by reducing VMT, increasing use of alternative fuels, and other measures; and they would reduce inconsistency of the proposed Amendment's GHG emissions with the State's ability to achieve the SB 32, EO B-55-18, EO S-3-05, and AB 1279 GHG reduction goals. However, full implementation of changes required to achieve the SB 32 target or Executive Orders' goals is beyond SANDAG's or local agencies' current abilities. Because the proposed Amendment's 2030, 2045, and 2050 GHG emissions would remain inconsistent with the State's current ability to achieve the Executive Orders' GHG reduction goals, this impact (Impact GHG-5) remains cumulatively considerable post-mitigation.

5.2.4 NOISE AND VIBRATION

C-NOI-1 MAKE A CUMULATIVELY CONSIDERABLE CONTRIBUTION TO ADVERSE EFFECTS RELATED TO NOISE AND VIBRATION

The geographic scope for the noise and vibration cumulative analysis is the Southern California and northern Baja region. Transportation networks, including facilities such as the regional roadway/interstate networks, rail lines, and airports, are large contributors to environmental noise in the region. Development, growth, population increase, or land use change can cause an increase in ambient noise and vibration directly related to the type of development, increased use of transportation facilities, and the general introduction of new sources of noise and vibration.

This cumulative noise impact assessment considers the impact analysis presented in the SCAG 2020-2045 RTP/SCS and its EIR (SCAG 2020a, 2020b), California-Baja California Border Master Plan (Caltrans 2021), and the 2019 San Diego International Airport Development Plan EIR (SDCRAA 2019a).

Impacts of the Proposed Amendment

The approved Plan PEIR identified a significant and unavoidable impact related to exceeding noise standards during construction and operations. Mitigation measures **NOI-1a, NOI-1b**, and **NOI-c** identified in the approved Plan PEIR would remain applicable under the proposed Amendment. The analysis of the proposed Amendment shows no new significant environmental effect or substantial increase in the severity of previously identified significant effects would occur. As discussed in Section 4.4, *Noise and Vibration*, of this SEIR, the proposed Amendment would not change land use or anticipated growth within the region or introduce any new transportation network or facility improvements from what was analyzed in the approved Plan PEIR, and therefore would not introduce any additional associated impacts related to construction and operational noise. The proposed Amendment would remove the regional road usage charge and would result in an approximately 2 percent increase in VMT for horizon years 2035 and 2050 above what was estimated for the approved Plan, as discussed in Section 4.4 and Section 4.5, *Transportation,* of this SEIR, thereby resulting in an increase in operational noise of less than 0.1 decibel (dB). Therefore, the conclusion for the proposed Amendment would be unchanged from what was identified in the approved Plan PEIR and would remain significant and unavoidable in 2025, 2035, and 2050 (Impact NOI-1).

The approved Plan PEIR also identified a significant and unavoidable impact related to exceeding groundborne vibration criteria. Mitigation measures **NOI-2a** and **NOI-2b** identified in the approved Plan PEIR would remain applicable under the proposed Amendment. The analysis of the proposed Amendment shows that the removal of the regional road usage charge would not result in new or substantially more severe significant vibration impacts at nearby receptors. Therefore, the conclusion for the proposed Amendment would remain unchanged from what was identified in the approved Plan PEIR and would remain significant and unavoidable in 2025, 2035, and 2050 (Impact NOI-2).

As discussed in Chapter 1, *Introduction*, of this SEIR, the proposed Amendment would not alter the impact conclusion described in the approved Plan PEIR for Impact NOI-3; therefore, that impact was not analyzed further in this SEIR.

Impact of Related Projects

Other related regional projects, such as the HST, could have more localized construction and operational noise impacts, which would occur along the project alignment. Other land development and infrastructure projects throughout the region and State, such as petroleum pipeline transportation infrastructure, freight rail infrastructure, and energy generation and transmission corridors, would also result in impacts related to noise if these projects occur close to one another and concurrently. Construction-related noise is generally considered cumulatively considerable if the construction sites for two or more projects are located within 500 feet of each other and if construction activity occurs within similar time frames.

Both the Navy Old Town Campus Revitalization and City of San Diego Pure Water North City Project would result in significant noise-related impacts; however, impacts associated with noise would be significant and

mitigated to a level of less than significant, respectively. Because these projects would be located more than 500 feet from each other, their construction impacts would not be cumulatively considerable.[1]

Operational noise impacts would be associated with increases in traffic volumes and/or increases in noise levels from stationary sources. A doubling of traffic would result in a 3 dB increase in noise levels (Harris 1979). Traffic volumes are not expected to double associated with the proposed and cumulative projects within the region. However cumulative traffic could still result in an impact at noise-sensitive receptors within or surrounding the project areas. Additionally, the proposed and cumulative projects could expose noise-sensitive receptors to increased noise levels from stationary noise sources (e.g., heating, ventilation, and air conditioning systems) that exceed relevant standards. Therefore, related projects that would result in increases in regional traffic or increased stationary noise are considered to result in significant and cumulatively considerable impacts related to operational noise levels.

Impact Projections in Adopted Plans

The approved Plan PEIR identified adopted plans applicable to the cumulative impact analysis. As discussed, the SCAG 2020-2045 RTP/SCS EIR found that construction activities associated with the proposed transportation projects and development projects in the 2020-2045 RTP/SCS would temporarily generate substantial noise and vibration levels above ambient background levels, sometimes for extended durations, and would result in a significant impact. Additionally, noise-sensitive land uses could be exposed to operational noise in excess of normally acceptable noise levels and/or could experience substantial increases in noise as a result of the operation of expanded or new transportation facilities or increased transportation activity. The EIR also found that the 2020-2045 RTP/SCS would contribute to cumulative ambient noise and vibration levels in areas outside the region as a result of the operation of expanded or new transportation facilities (i.e., increased traffic resulting from new infrastructure and use of new and existing transit and rail facilities) (SCAG 2020b).

The California-Baja California Border Master Plan is a binational comprehensive approach to coordinate planning and delivery of projects at land Ports of Entry (POEs) and transportation infrastructure serving those POEs in the California-Baja California region. The Master Plan does not have an associated environmental analysis document; however, projects included in the Master Plan could have adverse noise impacts due to the expansion of existing, and development of new, transportation facilities that could generate noise and vibration in excess of the ambient condition (Caltrans 2021).

The 2019 San Diego International Airport Development Plan EIR (SDCRAA 2019a) considered potential aviation, surface transportation, construction, and cumulative noise impacts associated with the Airport Development Plan and its alternatives. The EIR found that the Airport Development Plan's cumulative noise impact would be cumulatively considerable in combination with aircraft and roadway noise exposure levels. Construction noise changes due to the Airport Development Plan were found to be less than significant.

[1] Noise attenuates at a rate of 6 dB per doubling of distance. Additionally, a noise level that is 10 dB or more below another reference noise level (i.e. one noise level at 60 A-weighted decibels [dBA] vs. one that is 50 dBA) would not appreciably increase the cumulative noise level. Therefore, two noise sources that are over 500 feet apart would attenuate to below a level at which noise would be cumulatively considerable.

Cumulative Impacts and Impact Conclusions

2025, 2035, 2050

A significant cumulative impact in 2025, 2035, and 2050 would result if the combination of impacts of the proposed Amendment and impact projections from adopted plans were significant when considered together, even if not independently significant. As described above, the proposed Amendment's impacts related to exposure to or generation of noise levels in excess of standards, substantial temporary and permanent increases in noise levels, and excessive groundborne vibration and groundborne noise in 2025, 2035, and 2050 would remain unchanged from what was identified in the approved Plan PEIR and would remain significant and unavoidable. In addition, significant noise impacts have been identified in other regional environmental analysis documents. The combination of the direct noise impacts from the approved Plan as amended by the proposed Amendment and other adopted plans that would affect the San Diego and northern Baja region would therefore result in significant cumulative noise impacts, based on exposure to or generation of noise levels in excess of standards, substantial temporary and permanent increases in noise levels, and excessive groundborne vibration and groundborne noise. Because cumulative noise impacts throughout the San Diego and northern Baja region in horizon years 2025, 2035, and 2050 would be significant, and because the proposed Amendment's incremental noise impacts are significant, the proposed Amendment would result in incremental noise impacts that are also cumulatively considerable. (Impact C-NOI-1).

Mitigation Measures

C-NOI-1 MAKE A CUMULATIVELY CONSIDERABLE CONTRIBUTION TO ADVERSE EFFECTS RELATED TO NOISE AND VIBRATION

Implementation of mitigation measures **NOI-1a, NOI-1b,** and **NOI-1c** identified in the approved Plan PEIR remain applicable and would reduce construction and operational noise and vibration impacts associated with the proposed Amendment. Mitigation measure **NOI-1a** calls for construction noise reduction measures to meet local noise standards and reduce temporary noise levels during construction, and mitigation measures **NOI-1b** and **NOI-1c** call for operational noise reduction measures for transportation network improvements and development projects, respectively, to be implemented to meet local standards and reduce permanent noise levels during operations. As outlined in Section 4.4 of this SEIR, mitigation measures would reduce noise impacts but would not guarantee reduction of all proposed Amendment noise impacts below a level of significance for all projects. Therefore, the proposed Amendment's incremental contributions to cumulative noise impacts in horizon years 2025, 2035, and 2050 would remain cumulatively considerable post-mitigation.

Mitigation measure **NOI-2a** calls for groundborne vibration and groundborne noise reduction measures to be implemented during construction activities, and mitigation measure **NOI-2b** requires groundborne vibration and groundborne noise-reducing measures for rail operations. As outlined in Section 4.4 of this SEIR, mitigation measures would reduce significant increases in groundborne vibration and groundborne noise for some projects; however, it cannot be guaranteed that all future project-level impacts can be mitigated to a less-than-significant level. Therefore, the proposed Amendment's incremental contributions to cumulative groundborne vibration and groundborne noise impacts in horizon years 2025, 2035, and 2050 would remain cumulatively considerable post-mitigation.

5.2.5 TRANSPORTATION

C-TRA-1 MAKE A CUMULATIVELY CONSIDERABLE CONTRIBUTION TO ADVERSE EFFECTS TO TRANSPORTATION

The geographic scope for the transportation cumulative analysis is the Southern California and northern Baja region. Urban development and transportation systems are not bound by jurisdictional boundaries as movement within, through, and beyond the region is necessary for commuters, personal travel, and goods movement. Thus, it is important to consider both the Southern California region as well as the connection with northern Baja California.[2]

A hybrid approach for the cumulative analysis of transportation allows for an overarching discussion of regional impacts associated with general patterns of regional urbanization, growth, and land use change and how the transportation network both influences, and is affected by, those regional development patterns. Discussion of specific existing and probable future projects will also allow for consideration of individual projects with known impacts on traffic and transportation.

Cumulative impacts related to transportation would occur if future operating conditions of the regional transportation system, including the SANDAG, SCAG, and northern Baja regions, conflict with a program, plan, ordinance or policy addressing the circulation system; conflict with CEQA Guidelines Section 15064.3 by not achieving the substantial VMT reductions needed to help achieve statewide GHG reduction goals; substantially increase hazards due to design features; or result in loss of parking that causes significant adverse environmental impacts not evaluated elsewhere in the SEIR.

This cumulative impact assessment relies on the impact analysis within this SEIR for the proposed Amendment; SCAG 2020-2045 RTP/SCS EIR (SCAG 2020a, SCAG 2020b); SCAG 2021 Federal Transportation Improvement Program (SCAG 2021); San Diego County Regional Airport Authority 2008 Airport Master Plan, San Diego International Airport and associated EIR (SDCRAA 2008); San Diego International Airport Aviation Activity Forecast (SDCRAA 2019b); Regional Aviation Strategic Plan Update (SDCRAA 2011); Border 2025 Program, 2021-2023 Border 2025 Action Plan (EPA 2021, EPA 2022); California-Baja California Border Master Plan (Caltrans 2021); and 2034 Tijuana, Tecate, and Playas de Rosarito Metropolitan Strategic Plan (IMPLAN 2013).

Impacts of the Proposed Amendment

The approved Plan PEIR identified a significant impact related to the inability of the approved Plan to achieve the substantial VMT reductions needed to meet statewide GHG reduction goals for horizon years 2025, 2035, and 2050. Mitigation measures **GHG-5a, GHG-5d, GHG-5f,** and **TRA-2** identified in the approved Plan PEIR would remain applicable under the proposed Amendment. Nonetheless, the proposed Amendment would remove the regional road usage charge, thereby resulting in an approximately 2 percent increase in VMT for horizon years 2035 and 2050 above what was estimated for the approved Plan PEIR. Therefore, as with the approved Plan PEIR, impacts under 2035 and 2050 conditions would remain significant under the proposed Amendment (Impact TRA-2). Year 2030 and 2045 conditions were not analyzed in the approved Plan PEIR; however, because implementation of the proposed Amendment was determined to result in a substantial

[2] It should be noted that the SANDAG model only tracks VMT that occurs within the San Diego region.

increase in the severity of this significant impact under 2035 and 2050 conditions, the same should be assumed for 2030 and 2045 conditions.

As previously stated, the proposed Amendment would not change land use or anticipated growth within the region; nor would it include additional transportation improvements from what was analyzed in the approved Plan PEIR. Therefore, implementation of the proposed Amendment would not conflict with a program, plan, ordinance, or policy addressing the circulation system in 2025, 2030, or 2050. The proposed Amendment would not result in hazardous design features because no transportation network improvements are proposed. Nor would the proposed Amendment result in loss of parking that causes significant adverse environmental impacts not evaluated elsewhere in the SEIR. These impacts would be less than significant in 2025, 2035, and 2050 (Impacts TRA-1, TRA-3, and TRA-4).

Impacts of Related Projects

As discussed in the approved Plan PEIR, related infrastructure improvement projects, such as the HST, the expansion of San Diego International Airport Terminals 1 and 2, and cross-border projects such as the State Route 11 (SR 11)/Otay Mesa East Port of Entry Project, would result in potentially significant transportation impacts. The environmental document for the HST project found that the project would have a system-wide positive effect, but localized traffic conditions around some HST system stations would experience a decrease in level of service and some added delays, and transit lines serving the station areas would experience increases in passengers during peak hours. The recirculated EIR for the Airport Development Plan concluded that implementation of that plan would result in significant and unavoidable traffic impacts (SDCRAA 2019a).

Recent cross-border and POE projects have been completed along the U.S./Mexico border including the San Diego-Tijuana Airport Cross Border Facility, which opened in 2015, and the San Ysidro Port of Entry Expansion Project, the last phase of which opened in December 2019. The State Route 11 (SR 11)/Otay Mesa East Port of Entry Project (OME POE) would create a new land POE connecting to a new four-lane toll road along SR 11. The OME POE project is intended to reduce border crossing congestion (Caltrans 2023).

Impact Projections in Adopted Plans

The approved Plan PEIR identified adopted plans applicable to the cumulative impact analysis. As discussed, the EIR prepared for the 2020-2045 SCAG RTP/SCS identified a significant and unavoidable impact regarding conflicts or inconsistencies with CEQA Guidelines Section 15064.3(b), as well as a significant cumulative impact resulting from implementation of the 2020-2045 SCAG RTP/SCS to a cumulatively considerable amount of transportation impacts in areas outside of the SCAG region (SCAG 2020b). The SCAG 2021 Federal Transportation Improvement Program is prepared to implement projects and programs listed in the RTP and is developed in compliance with State and federal requirements (SCAG 2021).

The 2008 Airport Master Plan, San Diego International Airport EIR identified that all traffic-related impacts related to implementation of the Airport Master Plan would be reduced to less than significant with mitigation. The EIR analyzed parking supply and did not identify significant parking impacts related to implementation of the plan or alternatives (SDCRAA 2008).

The San Diego County Regional Airport Authority (SDCRAA) Aviation Activity Forecast Update found that, by 2021 through 2035, the San Diego International Airport would not have capacity to handle forecasted growth in aircraft operations and relieve runway congestion. The RASP was prepared by SDCRAA to assess the long-

range capabilities of all public-use airports in the county with the goal of improving the performance of the regional airport system (SDCRAA 2011).

While there is no associated environmental documentation for the Border 2025 Program and Action Plan (EPA 2022) or the 2034 Tijuana, Tecate, and Playas de Rosarito Metropolitan Strategic Plan (IMPLAN 2013), they include actions to improve air quality through better traffic operations and opportunities, which would benefit regional border transportation issues.

The California-Baja California Border Master Plan concludes that cross-border travel demand would continue to increase and identifies the importance of improving the capacity and operations of the current infrastructure in the border region (Caltrans 2021).

Cumulative Impacts and Impact Conclusions

2025

As described in Section 4.5, *Transportation*, of this SEIR, implementation of the proposed Amendment in 2025 would result in a significant impact because of an approximately 1.03 percent increase in daily VMT within the San Diego region compared to Starting Year – Year 2019 conditions. Additionally, implementation of the proposed Amendment, under Year 2025 conditions, would result in a 4.04 percent decrease in the region's VMT per capita, as compared to Starting Year – Year 2019 conditions. This is less than the 13.64 percent reduction in VMT per capita necessary to maintain the pace needed to meet the State's 2030 VMT per capita reduction goal of 25 percent. Therefore, cumulative transportation impacts throughout the Southern California and northern Baja region by 2025 would be significant, and the proposed Amendment's contribution to VMT impacts would be cumulatively considerable in 2025 (Impact C-TRA-1).

2030

As described in Section 4.5 of this SEIR, implementation of the proposed Amendment in 2030 would result in a significant impact because of an approximately 2.33 percent increase in daily VMT within the San Diego region compared to Starting Year – Year 2019 conditions. Additionally, implementation of the proposed Amendment, under Year 2030 conditions, would result in a 6.09 percent decrease in the region's VMT per capita, as compared to Starting Year – Year 2019 conditions. This is less than the 25 percent reduction needed to meet the State's 2030 VMT per capita reduction goal. Therefore, cumulative transportation impacts throughout the Southern California and northern Baja region by 2030 would be significant, and the proposed Amendment's contribution to VMT impacts would be cumulatively considerable in 2030 (Impact C-TRA-1).

2035

As described in Section 4.5 of this SEIR, implementation of the proposed Amendment in 2035 would result in a significant impact because of a 3.64 percent increase in daily VMT compared to Starting Year – Year 2019 conditions. Additionally, implementation of the proposed Amendment, under Year 2035 conditions, would result in an 8.14 percent decrease in the region's VMT per capita, as compared to Starting Year – Year 2019 conditions. This is less than the 26.64 percent reduction in VMT per capita necessary to maintain the pace needed to meet the State's 2045 VMT per capita reduction goal of 30 percent. Therefore, cumulative transportation impacts throughout the Southern California and northern Baja region by 2035 would be significant, and the proposed Amendment's contribution to VMT impacts would be cumulatively considerable in 2035 (Impact C-TRA-1).

2045

As described in Section 4.5 of this SEIR, implementation of the proposed Amendment in 2045 would result in a significant impact because of an approximately 5.79 percent increase in daily VMT within the San Diego region compared to Starting Year – Year 2019 conditions. Additionally, implementation of the proposed Amendment, under Year 2030 conditions, would result in a 10.29 percent decrease in the region's VMT per capita, as compared to Starting Year – Year 2019 conditions. This is less than the 30 percent reduction needed to meet the State's 2045 VMT per capita reduction goal. Therefore, cumulative transportation impacts throughout the Southern California and northern Baja region by 2045 would be significant, and the proposed Amendment's contribution to VMT impacts would be cumulatively considerable in 2045 (Impact C-TRA-1).

2050

As described in Section 4.5 of this SEIR, implementation of the proposed Amendment in 2050 would result in a significant impact because of a 6.87 percent increase in daily VMT compared to Starting Year – Year 2019 conditions. Additionally, implementation of the proposed Amendment, under Year 2050 conditions, would result in an 11.37 percent decrease in the region's VMT per capita, as compared to Starting Year – Year 2019 conditions. This is less than the 30 percent reduction in VMT per capita that is needed to maintain the State's 2045 VMT per capita reduction goal of 30 percent. Therefore, cumulative transportation impacts throughout the Southern California and northern Baja region by 2050 would be significant, and the proposed Amendment's contribution to VMT impacts would be cumulatively considerable in 2050 (Impact C-TRA-1).

Mitigation Measures

C-TRA-1 MAKE A CUMULATIVELY CONSIDERABLE CONTRIBUTION TO ADVERSE EFFECTS TO TRANSPORTATION

Implementation of mitigation measures **TRA-2, GHG-5a, GHG-5d,** and **GHG-5f** identified in the approved Plan PEIR remain applicable and would reduce transportation impacts associated with the proposed Amendment. As detailed in Section 4.5 of this SEIR, mitigation measure **TRA-2** would further reduce total VMT through implementation of transportation demand management strategies, reducing parking minimums, implementing additional active transportation facilities not identified in the proposed Amendment (i.e., Complete Street investments and bicycle and pedestrian facilities), and implementation of road diet and traffic calming measures. In addition, GHG mitigation measures **GHG-5a**, **GHG-5d**, and **GHG-5f** include VMT reduction measures that SANDAG or other agencies could implement.

However, these mitigation measures would not reduce this impact to a less-than-significant level. Based on the above analysis and lack of further feasible mitigation, the proposed Amendment's incremental contributions to cumulative transportation impacts in years 2025, 2030, 2035, 2045, and 2050 would remain significant and cumulatively considerable post-mitigation.