6.0 CUMULATIVE IMPACTS

The proposed Project includes both the Proposed General Plan and the BIG Specific Plan. This chapter analyzes cumulative impacts of implementing the Proposed General Plan through the planning period of 2048. The proposed Project also includes the BIG Specific Plan, which is a development project that has the potential for cumulative environmental impacts that are not necessarily evaluated in each EIR section.

This section of the EIR provides a description of potential cumulative impacts from implementation of BIG. CEQA defines cumulative impacts as two or more individual impacts that, when evaluated together, are considerable or which compound or increase other environmental impacts (State CEQA Guidelines § 15355). Under CEQA, when a project would contribute to a cumulatively significant impact, an EIR must discuss whether the project's incremental effect is cumulatively considerable. Cumulatively considerable means that the project's incremental effect is significant when viewed in the context of past, present, and reasonably probable future projects.

The State CEQA Guidelines provide that cumulative impact analyses should focus on significant cumulative impacts to which a project will contribute and the magnitude of the project's contribution. When the combined cumulative impact associated with the project's incremental effect and other projects' effects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. The discussion of impacts need not provide as much detail as is provided for the effects attributable to the project alone (State CEQA Guidelines § 15130[b]).

6.1 INTRODUCTION

Under CEQA's cumulative impact analysis requirements, the pertinent questions are (1) whether the combined impact of the project and other projects is cumulatively significant, and (2) whether the project's incremental contribution to the significant cumulative impact is cumulatively considerable. Thus, the analysis must assess whether the additional amount of impact resulting from the proposed Project should be considered cumulatively considerable in the context of the cumulative effect. Importantly, a lead agency may find that the cumulative impact that will result from the combination of the project's incremental impact and the effects of other projects is not significant, or that the project's incremental effect is not cumulatively considerable, and that the project's cumulative effect is therefore not significant.

State CEQA Guidelines § 15355 provides the following definition of cumulative impacts:

"Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

a) The individual effects may be changes resulting from a single project or a number of separate projects.

b) The cumulative impact from several projects is the change in the environment which 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.

State CEQA Guidelines § 15130(a) further addresses the discussion of cumulative impacts, as follows:

1. As defined in § 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.
2. When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency shall identify facts and analysis supporting the lead agency's conclusion that the cumulative impact is less than significant.
3. An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The lead agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable.

Pursuant to State CEQA Guidelines § 15130(b), the discussion of cumulative impacts shall be guided by the standards of practicality and reasonableness, and should include the following elements:

1. Either:
   a) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the Agency, or
   b) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, which describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projects may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.
2. When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.
3. Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.

4. A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available.

5. A reasonable analysis of the cumulative impacts of the relevant projects, including examination of reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

6.2 METHODOLOGY

6.2.1 General Plan

To determine the proposed General Plan's potential cumulative impacts, the cumulative analysis relies upon a summary of projections pursuant to State CEQA Guidelines § 15130(b)(1)(B). Unless otherwise described in individual resource Sections 5.3 and 5.8 of this EIR, the baseline for assessment of the project's cumulative contribution to a cumulative impact is the future year (2048) no project conditions, as described in the individual resource analyses in Sections 5.1 through 5.17 of this EIR. Regional growth projections are provided through the California Department of Finance (DOF) for the County of San Bernardino (County) and the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal 2024) for the Southern California Association of Governments (SCAG) region. See also **Appendix 5.13 Proposed GP-1: 2023–2048 Population, Housing, and Employment Projections** and **Section 5.13: Population and Housing** for population, housing, and employment analysis methodologies and projections.

As shown in **Table 5.13-6** in **Section 5.13: Population and Housing**, the City's existing (2024) population was estimated to total 24,669 persons. Based on Connect SoCal 2024 forecasts under the 2015 General Plan, the City's population is forecast to grow to 52,833 persons by 2050, which reflects an approximately 48.1 percent increase over the City's 2023 total population of 24,918 persons; see **Table 5.13-6**.

Connect SoCal 2024 forecasts that the County's total population will increase to approximately 2,623,000 persons by 2050, a growth of approximately 20 percent from the County's existing 2023 population estimate of approximately 2,182,056 persons. Like the City's projection, this County projection assumes the 2015 General Plan.

6.3 BIG

6.1.1 Barstow SOI and BIG Footprint Cumulative Projects

To determine BIG's potential cumulative impacts, the cumulative analysis relies upon a list of past, present, and probable future projects pursuant to State CEQA Guidelines § 15130(b)(1)(A). The past, present, and reasonably probable future projects ("cumulative projects" or "related projects") identified by the County of San Bernardino (County) and City of Barstow (City) in proximity within proximity to the BIG footprint are listed in **Table 6-1: Barstow SOI and BIG Footprint Cumulative Projects List** and depicted on **Figure 6-1: Cumulative Projects: Barstow Vicinity**. It is noted that the County only considers formal applications as cumulative projects (County of San Bernardino, email communication, September 25, 2024). The cumulative impact analyses are provided in **Section 6.4: Environmental Impacts**. These analyses describe the potential environmental changes to the existing physical conditions that may occur as a result of the Project together with the cumulative projects listed in **Table 6-1**.

Table 6-1: Barstow SOI and BIG Footprint Cumulative Projects List			
Project Description	**Location (APN)**	**Distance to BIG**	**Status**
San Bernardino County Projects[1]			
1) Electric Vehicle Charging Station and Logistics Facility ("Logistics Facility"): Construction and operation of an EV charging station to serve light duty/passenger vehicles and medium and heavy-duty trucks and a logistics facility in three buildings (total of 1,341,432 sf) on 99.85 acres. The project requires approval of Conditional Use Permit(s) (CUP[s]) and would include a Countywide Plan/Policy Plan Amendment from Rural Living (RL) to Limited Industrial (LI) and a Zoning Amendment from Rural Living (RL) to Community Industrial (IC).	Located near Lenwood Road and Agate Road on APNs: 0497-142-03; 0497-142-04; 0497-142-14; and 0497-142-15	Adjacent/east of BIG Specific Plan area.	Entitlement In Process; Construction anticipated 2027-2028
2) BNSF Barstow Railyard ("Barstow Yard"): * This existing BNSF facility includes 48 directional tracks and a total area of approximately 600 acres. At this facility, trains processed are made up of non-intermodal railcars (i.e., individual boxcars, gondolas, open and closed hopper cars, automobile railcars, tank cars, etc.) rather than intermodal rail cars.	0181-021-40; 0181-031-09; 0181-041-45; 0182-012-53; 0182-021-01; 0182-021-03; 0182-021-23; 0425-102-51; 0427-011-16; 0427-011-40; 0427-011-41; 0427-051-50; 0427-051-52; 0427-051-56; 0427-051-58; 0427-062-31; 0427-371-09; 0427-371-20; 0427-371-39; 0427-371-40; 0427-371-42; 0427-371-44; 0497-143-34.	Approximately 1.5 miles to the east of the BIG Specific Plan area.	Existing
3) Lynx Cat Quarry: Reclamation Plan Revision to allow expansion of the existing actual quarry from 48.2 acres to 161.7 acres (an increase of 113.5 acres), expand the crushing, screening, processing, and product stockpile areas onto the adjoining 80 acres to the west, and extend the mine's operation life for an additional 50 years until December 31, 2074.	Located near State Highway 58 and Black Canyon Road on APNs 0496-011-75 and 0496-001-76	Approximately 9 miles northwest of the BIG Specific Plan area.	Entitlement In process; Extended reclamation anticipated 2026
4) Rail Loop Project: Construction and operation of a rail loop and aggregate loading facility on a 131-acre privately owned parcel that connects with the BNSF main line track. Includes a land use category change from Rural Living (RL) to Resource/Land Management (RLM) and a zone change from RL-40 to Resource Conservation (RC).	Located off of Santa Fe Avenue on APN 0496-011-07	Approximately 7 miles northwest of the BIG Specific Plan area.	Entitlement In Process; Construction anticipated to begin 2025 through 2026

Table 6-1: Barstow SOI and BIG Footprint Cumulative Projects List			
Project Description	**Location (APN)**	**Distance to BIG**	**Status**
5) **Kramer Junction Borrow Pit #2**: Conditional Use Permit/Reclamation Plan (CUP/RP) to establish the borrow pit on an 8.7-acre parcel to provide fill material for construction of the Caltrans SR-58 expressway.	Located near Salton Road and US Highway 395 on APN: 0491-171-10	Approximately 23 miles northwest of the BIG Specific Plan area.	Approved
6) **Utility Scale Solar:** CUP to develop an 18-megawatt (MW) project on two 40-acre parcels, creating an 80-acre project site along diamond road off of highway 247 south of Barstow.	Located near Townsend Street and Stoddard Wells Road on APN: 042-818-120	5.2 miles southeast of the BIG Specific Plan area	Submitted to San Bernardino County

6.4 CORRIDOR CUMULATIVE PROJECTS

6.4.1 South Coast Air Basin (SCAB)

In addition to the cumulative projects identified in the vicinity of the BIG footprint, to facilitate the analysis of cumulative operational emissions impacts associated with the mainline rail corridor[1] within the South Coast Air Basin (SCAB), as detailed in the Air Quality analysis for BIG below in Section 6.4, cumulative projects were also researched for the Corridor segment within the SCAB.

The Corridor within the SCAB is composed of 29 local municipalities. From the Ports to BIG, there are a variety of residential, commercial, and industrial projects adjacent to or within 1 mile of the Corridor, as shown in detail in **Appendix 6 BIG-1: BIG Cumulative Projects Along the Corridor**. At a distance of 1 mile, which is conservative, given intervening land uses, attenuation patterns, dispersion, etc., it is unlikely any BIG emissions on the corridor could combine with emissions of any cumulative project to result in a significant cumulative air quality impact; therefore, 1 mile is adequate for cumulative project consideration. To identify cumulative projects within one mile of the Corridor, each jurisdiction's website was reviewed for projects listed as either in review, pre-application, under construction, approved, or otherwise noted as a current project on the city's website. For cities without a posted list of projects, each was contacted individually with a request for its project list. Based on this research, a list of cumulative projects within the SCAB Corridor was compiled and is included as **Appendix 6 BIG-1**.

In addition to the current projects included in **Appendix 6 BIG-1**, it should be noted that six other existing railyards exist proximate to the Corridor, all of which may contribute to cumulative air quality impacts.

6.4.2 MDAB

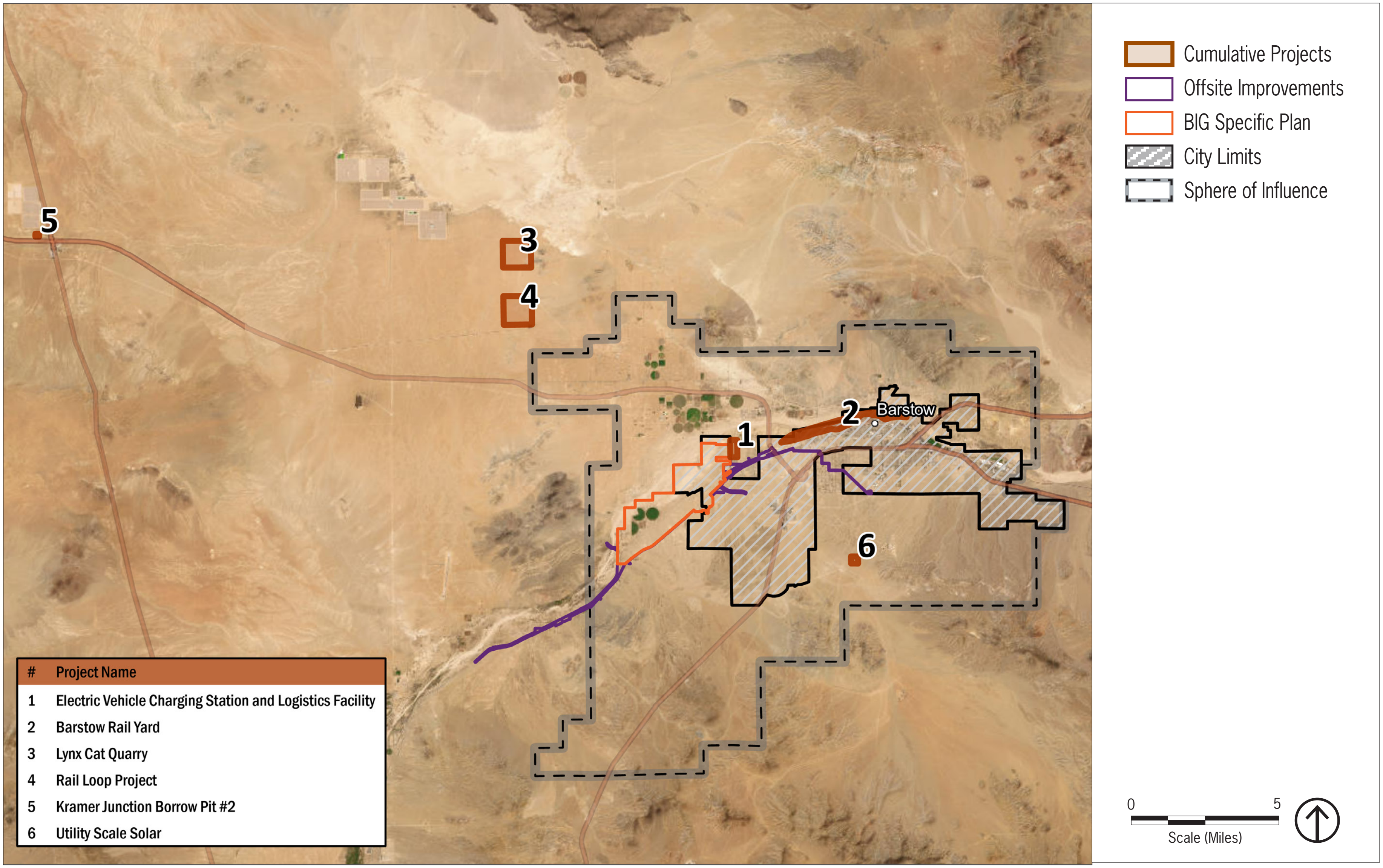
The air quality analysis also considers two Corridor segments within the and Mojave Desert Air Basin (MDAB) – one west of the BIG Footprint and one east of the BIG Footprint. There are fewer monitoring stations in the MDAB, and the Barstow Monitoring Station measured by the MDAQMD has the highest background concentrations and was conservatively used to evaluate impacts in the MDAB. The two locations in the MDAB include a segment west of BIG and a segment east of BIG. Segments east and west

[1] The mainline rail corridor, hereafter "Corridor", is defined as the arterial railroad track that accommodates "long-haul" cross-country moves. For purposes of this analysis, the rail corridor study area spans from the Ports to the California state line at Needles, CA.

of BIG were selected because train volumes and associated emissions at these locations are different. Therefore, both of these segments were analyzed to disclose impacts from different emissions increases east and west of BIG (refer to in **Appendix 5.3, Section 3.2**).

As detailed in Appendix 5.3, Section 3.2, the Corridor located west of BIG lies between the BIG Footprint and the Silver Lakes Community. For the segment west of BIG, cumulative projects were identified within 1-mile of the Corridor segment within the cities of Victorville and Hesperia, as detailed in **Appendix 6 BIG- 1**. No other substantive proximate cumulative projects were identified by San Bernardino County staff in proximity to the Corridor to the west of BIG (San Bernardino, 2024).

East of BIG, the Corridor segment evaluated is a segment located closest to sensitive receptors that are not adjacent to BIG (refer to Table 5.3-34). No substantive proximate cumulative projects were identified by San Bernardino County staff in proximity to the Corridor east of BIG (San Bernardino, 2024).



Source:
Kimley-Horn, 2024.

Figure 6.2-1
Cumulative Projects

6.4.2.1 Barstow Yard

As indicated in discussion of individual cumulative impacts below, there is another nearby existing rail facility that was determined to warrant a more detailed consideration of its potential cumulative impacts along with BIG. The existing Barstow Yard, which is predominantly a classification railyard located approximately 1.85 miles to the east of the boundary of the BIG Specific Plan area. The function of a classification railyard is to "break" arriving non-intermodal trains into sections based on their final destinations, and to "build" new trains that then depart for their ultimate destinations. The other key operation of the Barstow Yard is to perform locomotive maintenance. The current operations at Barstow Yard facility can generally be divided into seven operational areas[2]:

- Locomotive Maintenance Area
- Arrival Tracks
- Departure Tracks
- Hump Yard[3]
- Classification Yard: See definition in Section 3.3.2
- Intermodal Facility: See definition in Section 3.3.2
- Adjacent Main Line

Primary activities at the Barstow Yard include train reconfiguration (classification) operations and locomotive inspections and maintenance. Many trains arriving at the Barstow Yard are scheduled for inspections and maintenance. Depending on the scheduled inspection, locomotives may enter full or partial circles through the inspection yard before being pulled to the ready tracks for departure. Furthermore, depending on the inspection cycle, trains undergo different engine tests at the Barstow Yard. The difference between the Barstow Yard's classification operations and BIG's proposed block swap yard is that the Barstow Yard's classification operations are only for non-intermodal trains, whereas BIG's block swap yard is only for intermodal containers. Thus, the Barstow Yard's classification yard does not process trains that would be processed at BIG's proposed block swap yard.

A number of other activities occur at the Barstow Yard in support or as a result of the primary railyard activities. These include material handling equipment operations near the arrival tracks and the track maintenance equipment operations (used to repair and maintain tracks) throughout the Barstow Yard. The west end of the railyard includes maintenance buildings where a variety of activities may be performed such as sanding and refueling, engine inspections, and engine load and opacity testing.

After receiving service in the maintenance area, the locomotives proceed to the departure tracks located in the north central portion of the Barstow Yard. Once the locomotives are detached from the arriving trains, switcher locomotives push individual rail cars or sets of rail cars from the trains to the top of the

[2] Current operations at the Barstow Yard are sourced from the 2008 CARB HRA for the existing Barstow Classification Yard, updated per communications with BNSF September 2025.

[3] A classification yard that uses gravity to quickly switch and sort out cars. Entire trains are pushed over a small hill, crest, or hump, and then are switched out into various tracks with the use of gravity.

hump in the hump yard. New trains are configured by rolling the rail cars eastward down the hump and switching them onto specific tracks in the western classification yard.

Once a new train has been created in the western part of the classification yard, switcher engines pull the newly configured train into the eastern classification yard and then push the train back onto the departure tracks. Multiple line-haul locomotives are then added to the train, and the train then departs either to the east or west by moving onto the adjacent main line, which runs along the northern boundary of the Barstow Yard.

There is a small intermodal facility component (50 acres) connected to the existing Barstow Yard classification yard (approximately 600 acres) that was put into operation in 2018. The intermodal facility is mainly used to process overflow from other BNSF intermodal facilities and only serves one customer. Equipment used at the intermodal facility includes two rubber-tired gantry cranes (RTGs) and support equipment, including ten hostlers, a forklift and an inter-box connector (IBC) cart. BNSF also operates regular transit signal priority service (other generic intermodal traffic) at this location as well. The existing Barstow Yard would not be conducting intermodal facility activities for BIG.

6.5 ORGANIZATION OF THE CUMULATIVE IMPACT ANALYSIS

The analysis presented in **Section 6.4** is organized by the proposed General Plan and BIG. The cumulative condition describes the affected environment, or study area, for each environmental resource for each component. The CEQA conclusions provide a summary of CEQA determination of significance for construction and operations impacts for each component and resource area.

The analysis includes potential short-term (e.g., concurrent construction activities), long-term, and direct impacts from projections in adopted plans (such as SoCal Connect for the proposed General Plan) and the cumulative projects listed in **Table 6-1** (for BIG).

6.5.1 Resource Study Area

The cumulative study area varies from one environmental topic to another depending upon the nature of impacts related to the topic. Each cumulative resource analysis includes a discussion of the cumulative study area(s) relevant to that resource. The study area is the area in which the environmental analysis specific to each affected resource was studied to determine the resource characteristics and potential cumulative impacts, as detailed below in **Table 6-2: Study Area for Cumulative Analysis of Environmental Issues**. For the BIG analysis, the cumulative projects within each respective cumulative study area are a subset of the cumulative projects listed in **Table 6-2**, depending on the cumulative study area's size and geography for that resource. For cumulative impacts, the study area also includes the geographic extent of each affected resource within which Project impacts would accumulate or interact with the impacts of other related projects. For example, the air basin is considered the cumulative study area for criteria pollutants; however, for more localized impacts, such as hazardous materials upset, the study area may be limited to the BIG footprint.

Table 6-2 presents the geographic context for each study area for the proposed General Plan and BIG. Where only one geographic context is listed, it is assumed to apply to both Project components.

Table 6-2: Study Area for Cumulative Analysis of Environmental Issues	
Environmental Issue Area	**Geographic Context of Analysis**
Aesthetics	Proposed General Plan: City of Barstow (City) and its SOI (hereinafter "proposed General Plan area") ▪ BIG: An approximately 3.0-mile radius from BIG's Specific Plan area to account for visibility of BIG elements from off-site vantage points.
Agricultural and Forestry Resources	▪ Proposed General Plan: General Plan area ▪ BIG: BIG's Zone of Influence (ZOI), as described in **Section 5.2.**
Air Quality	▪ Proposed General Plan: Mojave Desert Air Basin (MDAB) ▪ BIG: City of Barstow, County of San Bernardino, the South Coast Air Basin (SCAB) and MDAB (mass emissions); mainline corridor (Ports to Needles) segments (localized emissions in SCAB and MDAB); BIG footprint and environs (localized emissions)
Biological Resources	▪ Proposed General Plan: Western Mojave Desert Region inclusive of five wildlife movement corridors, defined in Section 5.4 as Terrestrial Connectivity Area of Conservation Emphasis (ACE), California Desert Linkage Network, California Essential Habitat Connectivity (CEHC) Essential Connectivity Area, and CEHC Potential Riparian Connection, and the Mojave River – Barstow/Camp Cody Linkage ▪ BIG: BIG footprint plus the 5 wildlife movement corridors defined above
Cultural Resources	▪ "Region:" The southwest Mojave Desert associated with the extent of the Mojave River and adjacent valleys (western extent includes the Antelope Valley, extends south to the Cajon Pass and then eastward along the base of the San Bernardino Mountains towards the State line, and then west to Ridgecrest).
Energy	▪ Electricity: Service areas of Southern California Edison (SCE) ▪ Natural Gas: Service area of Southwest Gas (SWG) ▪ Transportation Fuels: VMT study area, as defined under "Transportation" below
Geology and Soils and Mineral Resources	▪ Proposed General Plan: General Plan area (seismic, soils); County of San Bernardino (paleontological and mineral resources) ▪ BIG: BIG footprint plus 0.5-mile radius (seismic, soils); County of San Bernardino (paleontological and mineral resources)
Greenhouse Gas Emissions	Global atmosphere
Hazards and Hazardous Materials and Wildfire	Proposed General Plan: General Plan area BIG: 1. Hazardous Materials: BIG footprint and a 0.25-mile buffer around landfills, oil and gas wells, and educational facilities 2. Emergency Response: As defined in Section 5.15.3.1
Hydrology and Water Quality	Proposed General Plan: General Plan area**,** as well as downstream and regional water resources, such as the Mojave River. BIG: 1. Surface Water Study Area (Surface Water Quality; Erosion/ Siltation; Flood Hazard; Tsunami; and Seiche Zones): BIG footprint, plus 250-foot buffer, and downstream water resources that would receive runoff and sediment from BIG footprint. 2. Groundwater Study Area (Groundwater Quality; Supplies; Groundwater Management): BIG footprint and aquifer(s) underlying BIG footprint.

Table 6-2: Study Area for Cumulative Analysis of Environmental Issues

Environmental Issue Area	Geographic Context of Analysis
	Flooding and Stormwater Drainage Study Area (Flooding; Stormwater Drainage Capacity; Flood Flows): BIG footprint, plus 250-foot buffer
Land Use and Planning	Proposed General Plan: General Plan area BIG: City of Barstow and County of San Bernardino
Noise	Proposed General Plan: 1. Stationary sources: General Plan area 2. Mobile sources: study area includes growth outside the City of Barstow and SOI, as described under "Transportation" BIG: one mile radius of BIG footprint
Population and Housing	▪ County of San Bernardino
Public Services and Recreation	▪ Fire Protection: San Bernardino County Fire Protection District (SBC Fire) and Barstow Fire Protection District (BFPD) service area. ▪ Police Protection: The California Highway Patrol (CHP), San Bernardino County Sheriff's Department (SBCSD), and Barstow Police Department (BPD) service area. ▪ Schools: Barstow Unified School District (BUSD) jurisdiction ▪ Parks and Recreation: City of Barstow, County of San Bernardino. ▪ Libraries: City of Barstow
Transportation	▪ Proposed General Plan: 2050 Forecasted volumes based on growth and travel forecasts contained in the Future Year San Bernardino Transportation Analysis Model (SBTAM) outside the City of Barstow and SOI, and projected land use and planned infrastructure within the City of Barstow as proposed in the proposed General Plan. ▪ BIG: 1. VMT: Same as proposed General Plan. 2. Other topics: As defined in Section 5.15.3.1
Tribal Cultural Resources	▪ "Region": The southwest Mojave Desert associated with the extent of the Mojave River and adjacent valleys (western extent includes the Antelope Valley, extends south to the Cajon Pass and then eastward along the base of the San Bernardino Mountains towards the State line, and then west to Ridgecrest). County of San Bernardino
Utilities and Service Systems	▪ Water: Golden State Water Company (GSWC) service area ▪ Sewer: City of Barstow service area ▪ Stormwater: City of Barstow ▪ Electric Power: Southern California Edison (SCE) service area ▪ Natural Gas: Southwest Gas (SWG) service area ▪ Solid Waste: Burrtec Waste Industries (Burrtec) service area and County of San Bernardino landfills (various)
Source: Kimley-Horn and Associates, Inc.	

6.5.2 Cumulative Condition

The combined environmental impacts of the projected household, population, and job growth, and future changes described above in *Regional Growth Projections*, combined with the proposed General Plan is referred to as the "cumulative condition" for the proposed General Plan through 2048. Projected growth and conversion of land to urban uses associated with the cumulative condition, as reflective of adopted

County of San Bernardino Countywide Plan (CWP) and Connect SoCal 2024 are anticipated to have environmental effects in the cumulative study areas for the proposed General Plan through 2048. San Bernardino County's population is forecast to grow approximately 20 percent from the County's existing 2023 population by 2050. This population growth will translate into continued conversion of land not currently used for urban and transportation-focused uses. The urban environment will continue to intensify as a result of population growth and redevelopment of land into residential and non-residential employment-generating land uses. Under the cumulative condition for the proposed General Plan, increases would occur concerning traffic, ambient noise levels, energy and water demands, impervious surface areas (which would affect the quantity and quality of stormwater runoff), and demands for public services, public and recreational facilities, and utility and service systems.

For BIG, the combined environmental influence of the past, present, and future projects described in *Cumulative Projects Considered*, combined with BIG, is referred to as the "cumulative condition" for BIG through 2048.

6.5.3 Contribution of the Project Components

This analysis first considers whether the individual impact of the project components (i.e., the proposed General Plan and BIG) have the potential to combine with regional growth or other cumulative projects listed in **Table 6-1** to determine if there would be a cumulative impact on the resource. If a cumulative impact was identified for a resource, then it was determined whether the project components' incremental contribution to the cumulative impact would be cumulatively considerable. The analysis then describes additional feasible mitigation measures beyond those already identified in the EIR, if need, to address the contribution.[4]

BIG's contribution to cumulative impacts is considered assuming application of mitigation measures identified for BIG in the individual resource analyses in **Sections 5.1** through **5.17**. Where appropriate, additional feasible mitigation measures are proposed that could reduce BIG's cumulatively considerable contribution.

Through the planning horizon of 2048, the Project could have environmental impacts that are cumulatively considerable in some areas and would reduce a potential cumulative impact in other areas, as described in the resource-specific sections.

6.6 ENVIRONMENTAL IMPACTS

The cumulative impacts analyses are provided below. These analyses describe the potential environmental changes to the existing physical conditions that may occur as a result of the Project together with the cumulative growth and projects listed in **Table 6-1**. Not all related projects would contribute to significant cumulative impacts for each resource area. For example, not all cumulative projects would have noise impacts. The cumulative impact analyses in each resource area provides an evaluation of the cumulative projects and how these would contribute to cumulative impacts. Some of the impacts are very site-specific and would not compound the impacts associated with the Project. In

[4] This analysis is included to comply with CEQA, which requires a determination as to whether the project's contribution to cumulative impacts is "cumulatively considerable."

other cases, short-term impacts would not contribute to cumulative impacts because the construction of the cumulative project and the development of the Project would not occur in the same time period or be near to each other. If it is determined there is a potential for cumulative impacts, the analysis then proceeds to determine whether the incremental contributions of the project component to the identified cumulative impacts would be cumulatively considerable. If the incremental effects of the project component would be cumulatively considerable, the analysis then describes additional feasible mitigation measures beyond those already identified in **Section 5.0**, if available, to address the contribution of the project component to a cumulative impact.

6.6.1 AESTHETICS

Impact 5-1	**Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding aesthetics?**

Proposed General Plan

The study area is the General Plan area. The proposed General Plan would increase development in the General Plan area, which would modify the area's existing visual character. To avoid/minimize potential impacts concerning visual character, future development and redevelopment under the CWP and proposed General Plan would require compliance with the Codified Ordinances of the County of San Bernardino (County Code) or the Code of the City of Barstow (Barstow Code) development/design standards and would be subject to review by the appropriate County commissions, committees, or the City Council.

Despite compliance with the County Code or Barstow Code, compared to existing conditions, the amount of light that would be associated with future development under the CWP and the proposed General Plan would substantially alter nighttime views; light and glare impacts would be significant and unavoidable.

Cumulative development in and around the City and associated visual impacts would largely be attributed to buildout of the General Plan, including BIG. Due to the duration of construction, including nighttime activities, BIG would result in significant and unavoidable impacts. As such, implementation of the proposed General Plan would result in significant and unavoidable lighting impacts during construction.

Buildout of the proposed General Plan combined with other growth and development that could occur within the County could contribute to a significant impact relative to aesthetics and nighttime views. The proposed General Plan would result in a cumulatively considerable contribution to significant impacts relative to light and glare. Even with implementation of **MM BIG AES-1**, cumulative impacts would remain significant and unavoidable.

BIG Construction and Operations

The study area is an approximately 3.0-mile radius from BIG's Specific Plan area to account for visibility of BIG elements from off-site vantage points.

BIG would not have a substantial adverse effect on a scenic vista or scenic resources near a scenic highway, and impacts would be less than significant.

Because BIG would substantially alter the site's character, replacing the desert landscape along Main Street with a rail yard and transload warehouse center, BIG would substantially degrade the site's visual character or quality of public views of the site and its surroundings. Substantial construction activity would be required for BIG; therefore, the presence of construction materials, equipment, on-site workers, and other associated improvements would temporarily degrade the existing visual character of public views of BIG's footprint, as experienced from surrounding roadways. The development of BIG also would result in permanent changes to the visual character of the site and its surroundings, as BIG would introduce more urban structures and infrastructure to the BIG aesthetics study area. As such, BIG would substantially degrade the existing visual character or quality of public views of the site and its surroundings. Furthermore, necessary nighttime lighting during BIG construction and operations would create new sources of substantial light or glare that would adversely affect day or nighttime views in the area. To lessen the adverse effects on the degradation of visual character, BIG would implement **MM BIG AES-1**, which would require that contractors develop a Construction Lighting and Screening Plan to ensure visual screening would be erected during construction, as appropriate to minimize visual intrusions. BIG would result in significant unavoidable impacts.

The proposed Logistics Facility and the Barstow Yard are within the study area for aesthetics. The Logistics Facility is proposed immediately adjacent to BIG, near Lenwood Road within the study area, and also would introduce new additional urban structures, infrastructure and lighting within the study area. Therefore, BIG combined with these applicable cumulative projects would result in a cumulative impact concerning changes to visual character.

Given their locations and proximity to BIG, light and glare generated by the Logistics Facility and the Barstow Yard combined with BIG would result in a cumulative impact concerning the creation of light and glare. Because of the order of magnitude of BIG relative to other cumulative development, BIG would result in a cumulatively considerable contribution to significant impacts relative to visual character and light and glare.

For the reasons above, BIG would have a significant cumulative impact. Even with the implementation of **MM BIG AES-1**, impacts would remain significant and unavoidable.

6.6.2 AGRICULTURE AND FORESTRY RESOURCES

Impact 5-2	Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding agriculture and forestry resources?

Proposed General Plan

The study area for the proposed General Plan is the County.

Given Barstow's arid and desert climate, there are no forestlands and timberlands in the City. Therefore, future development under the proposed General Plan would result in no impact. As such, no cumulative impact would occur.

The majority of the General Plan area is designated "Grazing Land." However, there are 4,574 acres zoned for agricultural use in the General Plan area. While the majority of the General Plan area is not Important

Farmland, there are parcels of land in the western portion of the SOI that are designated "Prime Farmland," "Farmland of Statewide Importance," and "Unique Farmland." There are no Williamson Act contracts in effect in the City; however, there are Williamson Act contracts in effect within the SOI. Future development in the General Plan area has the potential to result in the loss of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland (the three categories of important farmland CEQA considers significant). As explained in **Section 5.11**, SBLAFCO also has agricultural land definitions that are slightly different than the CEQA definitions but must also be considered before annexation can proceed.

As discussed in **Section 5.2: Agriculture and Forestry Resources**, **MM GP AG-1** establishes the requirement to first seek avoidance of development on Agricultural Land and then to utilize a LESA Model to evaluate the conversion of Agricultural Land as a part of future prezoning requests. While avoidance or the use of agricultural easements could reduce potential impacts associated with conversion, if development does occur on agricultural lands, it would not reduce all potentially significant impacts.

The loss of these farmland types under the proposed General Plan would be permanent, and therefore, would be significant and unavoidable. Continued growth within the County under the CWP has the potential to result in direct and indirect loss of farmland over the planning horizon, thus resulting in a cumulative impact when combined with the proposed General Plan. Due to the proposed General Plan's significant and unavoidable impacts associated with farmland conversion, the proposed General Plan's impacts would constitute a cumulatively considerable contribution to overall farmland losses in the County. Cumulative impacts would be significant and unavoidable.

BIG Construction and Operations

The study area for impacts to agriculture resources is the City and its SOI. The majority of the study area is designated "Grazing Land." However, there are 4,574 acres zoned for agricultural use. While the majority of the study area is not important farmland, there are parcels of land in the western portion of the SOI that are designated "Prime Farmland," "Farmland of Statewide Importance," and "Unique Farmland." There are no Williamson Act contracts in effect in the City; however, there are Williamson Act contracts in effect within the SOI. Cumulative projects #1 and #2 are located on "Urban Built-up Land" and cumulative projects #3 through #6 are located on "Grazing Land." No of the cumulative projects are located on a parcel with an active Williamson contract. Therefore, no cumulative impacts to important farmland resources would occur.

BIG would convert approximately 312 acres of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland to non-agricultural use. A LESA was conducted and determined this conversion would be less than significant. Cumulative projects identified would not result in any impacts to agricultural resources. Therefore, no cumulative impact on agricultural resources would occur.

As there are no active Williamson Act Contracts within the BIG footprint, BIG would not result in any impacts relative to Williamson Act lands, forest lands or timberlands, therefore, no cumulative impact would occur.

6.6.3 AIR QUALITY

Impact 5-3	Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding air quality?

Proposed General Plan

The study area for air quality includes the City, County, and the Mojave Desert Air Basin (MDAB). The MDAB is a designated nonattainment area for all State O_3 standards, all State PM_{10} and $PM_{2.5}$ standards, all federal O_3, and the federal 24-hour PM_{10} standard. MDAB is designated as attainment or unclassified for the remaining CAAQS and NAAQS. Cumulative growth in population and vehicle use could inhibit efforts to improve regional air quality and attain the ambient air quality standards.

Emissions of Criteria Pollutants/Cumulative Air Quality Plan Compliance. Emissions generated by cumulative development in addition to existing sources in the General Plan area are considered to cumulatively contribute to the nonattainment designations of the MDAB. Development allowed under the proposed General Plan could contribute to an increase in frequency or severity of air quality violations and delay attainment of the ambient air quality standards (AAQS) or interim emission reductions in an air quality management plan (AQMP). Therefore, the proposed General Plan would conflict with the AQMP.

Application of State and MDAQMD rules and regulations and implementation of the proposed General Plan goals, policies, and actions would contribute to reducing construction-and operation-related criteria air pollutants generated from energy, area, and mobile sources to the extent feasible. The incorporation of **MM GP AQ-1** and **MM GP AQ-2** would also contribute to reducing criteria air pollutants. Implementation of these rules, goals and policies, and mitigation could contribute to reducing construction- and operation-phase regional air quality impacts of future individual projects to a less than significant level. However, the General Plan would result in significant air quality impacts relative to criteria pollutants and, in turn, air quality plan compliance. Criteria pollutant impacts are highly localized; therefore, cumulative impacts would only occur where new development occurred proximate to each other.

Therefore, the proposed General Plan would result in a cumulatively considerable contribution to criteria pollutant emissions, non-attainment within the MDAB and regarding Air Quality Plan Compliance. Cumulative impacts would be significant and unavoidable. Buildout of the proposed General Plan would be subject to **MM GP AQ-1** (construction emissions analysis) and **MM GP AQ-2** (operational emissions analysis), and BIG would be required to comply with project-specific mitigation measures detailed below. Despite these mitigation measures, cumulative impacts would remain significant and unavoidable.

Cumulative CO Hotspots. Implementation of the proposed General Plan would not have the potential to substantially increase carbon monoxide (CO) hotspots at intersections in the vicinity of sensitive receptors in the General Plan area. Additionally, construction and operational odors impacts of the proposed General Plan would be less than significant. Intersection conditions were analyzed based on cumulative traffic; therefore, the proposed General Plan would not result in cumulative CO hot spot impacts.

Cumulative TACs/Health Risks. Buildout of the proposed General Plan could expose sensitive receptors to substantial concentrations of toxic air contaminants (TACs), in addition to those associated with BIG. Buildout could result in new sources of TACs near existing or planned sensitive receptors. Review of development projects by MDAQMD for permitted sources of air toxics (e.g., industrial facilities, dry cleaners, and gasoline dispensing facilities) would ensure that health risks are minimized. Individual development projects would be required to achieve the incremental risk thresholds established by MDAQMD, and TACs would be less than significant. However, implementation of the proposed General Plan would generate TACs that could contribute to elevated levels in the air basin. It is noted that TACs and criteria pollutants result in highly localized health risk impacts, thus, in order for the proposed General Plan to result in cumulatively considerable contributions to a cumulative impact, multiple projects would need to be built within a close proximity. However, given the proposed General Plan is Citywide, the potential for several projects to be built simultaneously and in close proximity to each other is unlikely. Though individual projects would be unlikely to achieve the project-level risk threshold of 10 in one million, several projects built over the life of the proposed General Plan would nonetheless contribute to higher levels of cancer risk in the MDAB and therefore result in a cumulatively considerable impact. Projects that could exceed the 10 in one million threshold under construction or operational scenarios would require their own environmental analysis and consideration prior to approval. It is noted that the 10 in one million threshold is an incremental project-level threshold and not a cumulative threshold. Nonetheless, cumulative impacts are conservatively assumed to be significant and unavoidable, given multiple projects could be constructed and operated in close proximity to each other. Buildout of the proposed General Plan would be subject to **MM GP AQ-1** (construction emissions analysis), **MM GP AQ- 2** (operational emissions analysis), and **MM GP AQ-3** (operational health risk assessment). Despite these mitigation measures, cumulative impacts would remain significant and unavoidable.

Cumulative Odors. Construction-related odors could occur from future development under the proposed General Plan. Construction odors are temporary and would be less than significant. No cumulative construction-related odor-related impacts would result. Industrial land uses, including indoor agricultural uses, are the primary types of land uses that have the potential to generate objectionable odors. Future environmental review could be required for industrial projects to ensure that sensitive land uses are not exposed to nuisance odors. MDAQMD Rule 402 requires abatement of any nuisance generating an odor complaint. Therefore, future land uses would minimize impacts through the application of best practices and/or mitigation during their CEQA review. Operational odor impacts would be less than significant, and cumulative impacts would not result.

BIG Construction and Operations

The cumulative setting for air quality includes the City of Barstow, County of San Bernardino, the MDAB and the South Coast Air Basin (SCAB) (for the portion of the mainline corridor within SCAB).

The MDAB is designated nonattainment area for all state O_3 standards, all state PM_{10} and $PM_{2.5}$ standards, all federal O_3, and the federal 24-hour PM_{10} standard. MDAB is designated as attainment or unclassified for the remaining CAAQS and NAAQS. Cumulative growth in population and vehicle use could inhibit efforts to improve regional air quality and attain the ambient air quality standards.

Although BIG is within the MDAQMD's jurisdiction, it would affect truck and train movements that also occur within the South Coast AQMD's jurisdiction (i.e., the SCAB). The SCAB is in attainment relative to CO, NO_2, SO_2, PM_{10} (NAAQS). $PM_{2.5}$ (NAAQS, 1997 Annual (15.0 µg/m^3), Hydrogen Sulfide, Sulfates and Vinyl Chloride.

1. *Cumulative Air Quality Plan Compliance*

As discussed in **Section 5.3**, the purpose of the consistency finding is to determine if a project is inconsistent with the regional air quality plans' assumptions and objectives, and thus if it would interfere with the region's ability to comply with CAAQS and NAAQS. As such, compliance with the air quality plan is a cumulative evaluation.

As analyzed in **Section 5.3**, BIG is being coordinated with the City's proposed General Plan, which would change the BIG footprint's existing land use designations to Specific Plan. Following the proposed General Plan, BIG would not conflict with any land use plan, policy, or regulation. BIG would not cause population, housing, or job growth projections used to develop the AQMPs to be exceeded. However, BIG would exceed MDAQMD's construction and operational emissions thresholds and could delay the timely attainment of CAAQS and/or NAAQS. Mitigation measures **BIG AQ-1** through **BIG AQ-14** would be required. Despite implementation of the measures, BIG would have a cumulatively considerable contribution to cumulatively significant effects concerning conflicts with air quality plans which are unavoidable. **Section 5.3** includes mitigation measures that were evaluated in terms of whether they were capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. These additional mitigation measures were studied but deemed infeasible.

2. *Cumulative Construction Emissions Effects*

Construction Mass Emissions of Criteria Pollutants

The proposed Logistics Facility project and existing Barstow Yard are located near or adjacent to the eastern edge of the BIG footprint. No other projects listed in **Table 6-1** have the potential to overlap with BIG's construction either geographically or temporally. BIG's construction emissions could combine to result in exceedances of MDAQMD thresholds.

BIG's construction-related mass emissions would exceed MDAQMD thresholds despite compliance with applicable laws, ordinances, and regulations. BIG would be required to implement **MM BIG AQ-1** through **MM BIG AQ-6** to reduce construction emissions and require fugitive dust controls; low VOC architectural coatings; Tier 4 construction equipment and the use of renewable diesel fuel during construction; on-road construction trucks to have an average fleet mix of model year 2010 or newer; and concrete batch plant emissions controls. However, due to BIG's size, construction-related mass emissions would remain above MDAQMD's thresholds despite the implementation of all feasible mitigation.

The regional significance thresholds published by the MDAQMD are designed to ensure compliance with both NAAQS and CAAQS and are based on an inventory of projected emissions in the MDAB. Therefore, any increase in a criteria pollutant for which an air basin is in nonattainment is considered a cumulatively considerable contribution to a cumulative mass emissions impact, regardless of whether project-level thresholds would be exceeded. Here, the MDAB is a federal nonattainment area for O_3 and PM_{10} and a State nonattainment area for O_3, PM_{10}, and $PM_{2.5}$ (see **Table 5.3-2**). As shown in **Table 5.3-21** in Section 5.3, Air Quality, BIG's construction-related mass emissions are positive for VOCs, CO (O_3 [ozone] pre-cursors), PM_{10}, and $PM_{2.5}$, despite all feasible mitigation. Therefore, BIG would generate a cumulatively considerable contribution to cumulative air pollutant emissions of VOCs, CO (O_3 [ozone] pre-cursors), PM_{10}, and $PM_{2.5}$ during construction. This cumulative impact would be significant and unavoidable.

Beyond **MM BIG AQ-1** through **MM BIG AQ-6**, discussed above and identified in **Section 5.3**, no additional mitigation is available to further reduce or avoid BIG's cumulatively considerable contribution to this significant cumulative impact. **Section 5.3** includes discussion of additional construction mitigation measures that were evaluated but deemed infeasible.

<u>Localized Construction Emissions Concentration Impacts (Combined BIG and Other Applicable Cumulative Projects)</u>

The proposed Logistics Facility project and existing Barstow Yard are located near or adjacent to the eastern edge of the BIG footprint. No other projects listed in **Table 6-1** have the potential to overlap with BIG's construction either geographically or temporally. Sensitive receptors are located in close proximity to these project areas to the east and southeast. Therefore, there is the potential for localized construction emissions to overlap within the vicinity of these projects, and for localized cumulative construction emissions impacts to occur.

Table 5.3-28 shows that unmitigated BIG construction PM_{10}, and $PM_{2.5}$ emissions would result in ambient concentrations that exceed applicable PM_{10} and $PM_{2.5}$ NAAQS. BIG would be required to implement **MM BIG AQ-1,** and **MM BIG AQ-3** through **MM BIG AQ-6**, which would reduce construction NO_X, PM_{10}, and $PM_{2.5}$ emissions. These mitigation measures require fugitive dust controls, Tier 4 equipment, use of renewable diesel, clean on-road construction vehicles, and concrete and asphalt batch plant emissions controls. With mitigation measures, BIG would still exceed the PM_{10} (24-hour) NAAQSs, as shown in **Table 5.3-29**. However, once mass grading operations are complete for BIG, construction emissions would decrease substantially.

Nonetheless BIG would exceed the localized construction concentration thresholds (i.e., NAAQSs) for PM_{10} (24-hour), thus, BIG would result in a cumulatively considerable contribution for that pollutant, despite all feasible mitigation. Furthermore, BIG's mitigated construction emissions of criteria pollutants, even if below the individual project-level thresholds, could combine with the Logistics Facility's construction emissions and the Barstow Yard's operational emissions to have a cumulatively considerable contribution at individual receptors. Thus, BIG is conservatively considered to result in a cumulatively considerable contribution for all criteria pollutants and therefore considered to have significant cumulative localized concentration impacts. Localized construction emissions cumulative impacts would be significant and unavoidable. As noted above, beyond **MM BIG AQ-1** through **MM BIG AQ-6**, no additional mitigation is available to further reduce or avoid BIG's cumulatively considerable contribution to this significant cumulative impact. **Section 5.3** includes discussion of additional construction mitigation measures that were evaluated but deemed infeasible.

3. Cumulative Operational Emissions Effects

SCAB Mainline Rail Corridor: Mass Emissions of Criteria Pollutants Impacts

The SCAQMD has not established separate significance thresholds for cumulative operational emissions. The SCAQMD has provided the following guidance on an acceptable approach to addressing cumulative air quality impacts:[5]

"As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR… Projects that exceed the Project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed. the project-specific thresholds are generally not considered to be cumulatively significant."

The nature of project mass emissions makes them largely a cumulative impact. As a result, no single project is sufficient to, by itself, result in the nonattainment of CAAQS or NAAQS. Instead, individual project emissions contribute to existing cumulatively significant adverse air quality impacts.

The regional significance thresholds published by the SCAQMD are designed to ensure compliance with both NAAQS and CAAQS and are based on an inventory of projected emissions in the SCAB. The SCAB is currently designated as nonattainment for the federal ozone (O_3) and fine particulate matter ($PM_{2.5}$) NAAQS standards and is designated as nonattainment for O_3, $PM_{2.5}$, PM_{10} under the CAAQS (SCAQMD, 2022). Any increase in a criteria pollutant for which an air basin is in nonattainment is considered a cumulatively considerable contribution, regardless of whether project-level thresholds would be exceeded.

As described above in Section 6.2.2, the Corridor within the SCAB is composed of 29 local municipalities. A list of cumulative projects located within the SCAB within one mile of the Corridor was compiled and is included as **Appendix 6 BIG-1.** Although the BIG project itself does not have significant impacts, our review of past, present and probable future cumulative development within the SCAB includes a wide range of industrial, commercial and residential, development, including existing industrial facilities and rail yards within the SCAB, that could result in emissions of criteria pollutants and could contribute to the nonattainment status of the SCAQMD for O3, $PM_{2.5}$, PM_{10} thereby, resulting in cumulative mass emissions impacts within the air basin.

BIG would result in a mode shift from truck to near zero-emission rail on the mainline freight Corridor between the Ports, and BIG and would generally reduce impacts of criteria air pollutants in the SCAB. Specifically, BIG includes a dedicated fleet of Tier 4 linehaul locomotives to move containers between the Ports and BIG's intermodal facility. Further, starting in BIG's opening year, BNSF would increase the renewable diesel composition within the Ports' existing fueling site from 1 percent to 10 percent, a 900 percent increase in renewable diesel. This would improve the emissions of all BNSF trains fueling at the Ports, including those BNSF trains that would not stop at BIG. Together, these would result in a net decrease of all criteria pollutants in the Corridor between the Ports and BIG in 2028 - except CO. In 2033

[5] South Coast Air Quality Management District, *Cumulative Impacts White Paper, Appendix D*, August 2003.

and 2048, net reductions for all criteria pollutants would continue to occur – except for VOCs and CO (see **Table 5.3-25: Unmitigated Operational Emissions within SCAB**). BIG's unmitigated emissions would be below the applicable threshold for all criteria pollutants in all future years (see **Table 5.3-25)**. Although the BIG project itself does not have significant impacts, because BIG would result in an increase in CO and VOCs, both of which are precursors to O_3, along with PM, all pollutants for which the SCAB is in non-attainment, BIG's cumulative contribution to mainline corridor impacts within the SCAB in regard to mass emissions would be cumulatively considerable. This impact would be a significant and unavoidable cumulative impact. **Section 5.3** includes discussion of mitigation measures that were evaluated for whether they were capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. These additional mitigation measures were studied but deemed infeasible.

South Coast AQMD Mainline Rail Corridor Worst-Case Segment (SRA 12): Localized Operational Emissions (Criteria Pollutants) Concentration Impacts

Identification of the worst-case segment within the Corridor within the SCAB was based on the greatest background concentrations of criteria pollutants within the SCAQMD source receptor areas (SRAs) (refer to Appendix 5.3, Section 3.2 (methodology). Based on background concentrations of criteria pollutants, it was determined that the Corridor segment within SRA 12 is the worst case segment in the SCAB (refer to **Table 5.3-32**). The segment within SRA 12 is located within the communities of Compton, East Rancho Dominquez and Long Beach**.** No substantive cumulative projects have been identified in proximity to the worst-case segment of the Corridor within the SCAB.

The SCAQMD has not established separate significance thresholds for cumulative operational emissions. The SCAQMD has provided the following guidance on an acceptable approach to addressing cumulative air quality impacts:[6]

> *"As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR… Projects that exceed the Project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed*. *the project-specific thresholds are generally not considered to be cumulatively significant."*

Although the BIG project itself would not result in exceedances of the CAAQS and NAAQS (see **Table 5.3-32)** and would not have significant impacts, because BIG would result in an increase in CO and VOCs, both of which are precursors to O3, along with PM, all pollutants for which the SCAB is in non-attainment, BIG's cumulative contribution to mainline corridor segment impacts within the SCAB in regard to localized emissions concentrations would be cumulatively considerable.

BIG would result in a cumulatively considerable contribution to significant localized cumulative emissions impacts within the worst-case segment SRA. Although no cumulative projects were identified in proximity to the mainline Corridor in SRA 12, there are cumulative projects in other segments along the Corridor

6 South Coast Air Quality Management District, *Cumulative Impacts White Paper, Appendix D*, August 2003.

and therefore assumed BIG's emissions could result in a cumulatively considerable contribution with other cumulative projects within the SCAB at individual receptors.

Section 5.3 includes discussion of mitigation measures that were evaluated for whether they were capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. These additional mitigation measures were studied but deemed infeasible. Therefore, no additional mitigation for BIG's contribution to these cumulative impacts is available.

MDAB Mass Emissions of Criteria Pollutants Impacts (Corridor and BIG Footprint)

The MDAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of project mass emissions makes them a largely cumulative impact. As a result, no single project is sufficient to, by itself, result in the nonattainment of CAAQS or NAAQS. Instead, individual project emissions contribute to existing cumulatively significant adverse air quality impacts.

The MDAB is a federal nonattainment area for O_3 and PM_{10} and a State nonattainment area for O_3, PM_{10}, and $PM_{2.5}$ (see **Table 5.3-2**). Any increase in a criteria pollutant for which an air basin is in nonattainment is considered a cumulatively considerable impact, regardless of whether project-level thresholds would be exceeded.

BIG would result in a mode shift from truck to near zero-emission rail on the mainline freight corridor between the Ports and BIG and would generally reduce emissions of criteria pollutants in the MDAB. Specifically, BIG includes a dedicated fleet of Tier 4 linehaul locomotives to move containers between the Ports and BIG's intermodal facility. Further, starting in BIG's opening year, BNSF would increase the renewable diesel composition within the Ports' existing fueling site from 1 percent to 10 percent, a 900 percent increase in renewable diesel. This would improve the emissions of all BNSF trains fueling at the Ports, including those BNSF trains that would not stop at BIG. In addition, BIG will implement **MM BIG AQ-7** through **MM BIG AQ-14**.

BIG's net emissions would be above the applicable threshold for VOCs, NOx, CO, $PM_{2.5}$ and PM_{10} for at least one analysis year (see **Table 5.3-23 and 24)**. Because BIG, despite all feasible mitigation, would result in significant impacts for VOCs, NOx, CO, $PM_{2.5}$ and PM_{10} in at least one analysis year, it would have a cumulatively considerable contribution to regional emissions of those pollutants. Furthermore, because BIG would result in an increase in PM_{10}, and $PM_{2.5}$, for which the MDAB is non-attainment, and an increase of CO and VOCs, which are precursors to O3, a pollutant for which the MDAB also is in non-attainment, BIG would have a cumulative contribution to cumulative mass emissions impacts within the MDAB for these pollutants. These impacts would be a significant and unavoidable cumulative impacts.

Section 5.3 includes mitigation measures that were evaluated in terms of whether they were capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. These additional mitigation measures were studied but deemed infeasible. Therefore, no additional mitigation for BIG's contribution to these cumulative impacts is available.

<u>BIG Footprint: Localized Concentrations of Operational Emissions (Criteria Pollutants) Impacts (Combined BIG and Other Applicable Cumulative Projects)</u>

The proposed Logistics Facility project and existing Barstow Yard are located near or adjacent to the eastern edge of the BIG footprint. No emissions from other projects listed in **Table 6-1** have the potential to combine with BIG's operational emissions geographically or temporally to result in concentration impacts at receptors near BIG. While analysis is not yet complete for the Logistics Facility project, due to its proximity to BIG, BIG's localized operational emissions may combine with the proposed Logistics Facility at receptors near BIG. Similarly, while the current emissions from the existing Barstow Yard also are unknown, the localized operational emissions from BIG may combine with the existing Barstow Yard at receptors near BIG.

As shown in **Table 5.3-30** in **Section 5.3**, BIG's localized concentrations of unmitigated operational emissions would exceed MDAQMD project-level thresholds for NO_2 in 2048. As a result, unmitigated operational emissions associated with BIG would result in a cumulatively considerable contribution to significant cumulative localized concentration impacts for these pollutants at individual receptors near BIG. However, BIG would be required to implement **MM BIG AQ-7** through **MM BIG AQ-14**, which require: sweeping of paved areas to reduce fugitive dust; RTG cranes to use renewable diesel; truck idling limits; Tier 4 emergency backup generators; truck efficiency measures such as compliance with CARB's Carl Moyer Efficiency Program and U.S. EPA's Smart Way Program; electric landscaping equipment and the electric truck charging stations and future EV charging infrastructure. With implementation of mitigation, BIG's mitigated emissions would be reduced below MDAQMD's localized concentration thresholds for all criteria pollutants (see **Table 5.3-31**).

Further, while NOx and CO emissions from the existing Barstow Yard should be included in the background concentrations at the location of the monitoring stations, these monitored background concentrations do not disclose existing concentrations at individual receptors near BIG. Thus, because BIG, even after mitigation, would increase concentrations of NOx, CO, $PM_{2.5}$ and PM_{10} beyond existing background concentrations, it is conservatively assumed BIG's emissions could combine with emissions from the proposed Logistics Facility and the existing Barstow Yard and result in cumulatively considerable contribution of these pollutants at individual receptors near BIG. For these reasons, BIG is conservatively considered to result in a cumulatively considerable contribution to cumulative significant localized concentration impacts for all criteria pollutants, and therefore, considered to have cumulative localized operational emissions impacts that would be significant and unavoidable.

Section 5.3 includes mitigation measures that were evaluated in terms of whether they were capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. These additional mitigation measures were studied but deemed infeasible. Therefore, no additional mitigation for BIG's contribution to these cumulative impacts is available.

MDAB Mainline Rail Corridor West of BIG Segment (Silver Lakes to BIG): Localized Concentrations of Operational Emissions (Criteria Pollutants) Impacts

Identification of the Corridor analysis segments within the MDAB took into consideration the east and west directions from BIG and the location of receptors (refer to Appendix 5.3, Section 3.2). Based on these factors, a segment east of the Silver Lakes community in Helendale to just west of the BIG lead tracks was analyzed to determine the Corridor's localized concentrations west of BIG. No cumulative projects were identified within proximity to this segment of the Corridor. Therefore, no cumulative impacts related to localized operational emissions would occur.

The MDAQMD has not established its own thresholds for localized cumulative operational emissions; rather it relies on exceedances of the NAAQSs.

Although BIG would not result in any exceedances of the CAAQS or NAAQS (refer to **Table 5.3-33**) within this Corridor segment, modeled concentrations of one criteria pollutant (or precursors, CO) for which the MDAB is in non-attainment (O_3) would still increase above background concentrations.

Cumulative projects were identified in proximity to this segment of the mainline Corridor within both the cities of Victorville and Hesperia, as detailed in **Appendix 6 BIG-1**. These past, present and future cumulative projects along the Corridor in the MDAB could result in cumulatively considerable contributions of this pollutant to sensitive receptors near the Corridor. Therefore, BIG's cumulative contribution Corridor impacts within the MDAB in regard to localized emissions is conservatively considered to be cumulatively considerable. This impact would be significant and unavoidable.

Section 5.3 includes mitigation measures that were evaluated in terms of whether they were capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. These additional mitigation measures were studied but deemed infeasible. Therefore, no additional mitigation for BIG's contribution to these cumulative impacts is available.

MDAB Mainline Rail Corridor East of BIG Segment (East of BIG's East Lead Tracks): Localized Concentrations of Operational Emissions (Criteria Pollutants) Impacts

As noted above, the Corridor analysis segments within the MDAB consider the east and west directions from BIG and the location of receptors (refer to Appendix 5.3, Section 3.2). Based on these factors, a Corridor segment east of BIG's east lead tracks was analyzed to determine the Corridor's localized concentrations of operational criteria pollutants east of BIG. This segment is located closest to sensitive receptors that are not adjacent to the BIG footprint.

Although BIG would not result in any exceedances of the CAAQS or NAAQS (refer to **Table 5.3-34**) within this Corridor segment, modeled concentrations of criteria pollutants (or precursors, i.e., CO) for which the MDAB is in non-attainment ($O_{3,}$ PM_{10}, and $PM_{2.5}$) would still increase above background concentrations.

No cumulative projects were identified within proximity to this segment of the Corridor. Therefore, no cumulative impacts relative to localized operational emissions would occur. Although no cumulative projects were identified in proximity to this segment of the mainline Corridor, it is conservatively assumed there could be potential past, present and future cumulative projects in other segments along the Corridor in the MDAB, and therefore, it is assumed there are potentially cumulatively considerable contributions of these pollutants to sensitive receptors near the Corridor. Therefore, BIG's cumulative contribution to mainline corridor impacts within the MDAB in regard to localized emissions is conservatively considered to be cumulatively considerable. This impact would be significant and unavoidable.

Section 5.3 includes mitigation measures that were evaluated in terms of whether they were capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. These additional mitigation measures were studied but deemed infeasible. Therefore, no additional mitigation for BIG's contribution to these cumulative impacts is available.

4. Cumulative CO Hotspots

As discussed in **Section 5.3**, the MDAB is in attainment for CO and concentrations in the region have historically been low, and well within compliance with both NAAQS and CAAQS. As analyzed in **Section 5.3** BIG would not create a CO hotspot at any intersections near sensitive receptors or near any BIG study intersections. Further, transport of CO is extremely limited, and it disperses rapidly with distance from the source under normal meteorological conditions. Therefore, BIG would not result in a cumulative impact.

5. Cumulative TACs/Health Risks

BIG Footprint: Cumulative TACs/Health Risks (Combined BIG Footprint, Existing Barstow Yard, and Other Applicable Cumulative Projects)

Nearby uses to BIG are primarily vacant land, with residential dwelling units, and rural industrial and commercial uses. These uses are dispersed over a wide area as the BIG footprint is primarily undeveloped. As discussed in **Section 5.3** BIG implementation could result in localized emissions that would result in the exposure of sensitive receptors to TACs. Other nearby existing and future uses include the proposed Logistics Facility and the existing Barstow Railyard. See **Table 6-1.**

Logistics Facility

Construction and operational emissions from BIG could combine with the proposed Logistics Facility to result in potentially significant TAC-related cumulative impacts in some locations. The Logistics Facility is proposed across Lenwood Road from the BIG footprint. The draft EIR for the Logistics Facility project has not been released and construction and operational releases of TACs associated with the Logistics Facility would be speculative. However, due to its proximity to BIG, BIG may result in a cumulatively considerable contribution to a cumulative impact associated with the proposed Logistics Facility.

Existing Barstow Railyard

Construction and operational emissions from BIG also could combine with the existing Barstow Railyard to result in potentially significant TAC-related cumulative impacts in some locations. The existing Barstow Railyard is approximately two miles northeast of the BIG footprint.

In order to analyze the potential combined TAC-related impacts of the existing Barstow Railyard and BIG, publicly available existing sources of emissions data for existing Barstow Railyard was reviewed. The only publicly available existing sources of emissions data for the existing Barstow Railyard found was a 2008 CARB Health Risk Assessment (2008 HRA). BNSF does not collect operational emissions data associated with the Barstow Railyard and more recent emissions information for the Barstow Railyard does not exist (Communication with BNSF, 2025). The known emissions profile of the existing Barstow Railyard, therefore, is based on the 2008 HRA and is described below.

The 2008 HRA inventoried locomotive activity in coordination with BNSF. Approximately 156,516 locomotives arrived or passed through the Barstow Railyard between May 1, 2005, and April 30, 2006. Of those numbers, 32,256 were foreign locomotives; the foreign locomotives count also includes 728 Amtrak transcontinental trains, which are not considered as a part of the freight movements. The number of BNSF freight locomotives that pass through the railyard was 70,159, of which, 54,101 BNSF locomotives were counted as true arrivals and departures from the Barstow Railyard. This equates to about 13,500 trains per year or 37 trains per day, assuming four locomotives per train.

In 2005, the combined DPM[7] emissions from the existing Barstow Railyard (on-site emissions) and other significant emission sources within a one-mile distance from the boundary of the existing Barstow Railyard (off-site emissions) were estimated at about 54 tons per year. Estimated off-site DPM emissions from mobile sources (not generally related to activities at the railyard) were about 26 tons per year, or about 48 percent of the total combined on-site and off-site DPM emissions. Off-site stationary sources DPM emissions were found to be less than 0.1 tons per year, so they were considered to be below de-minimis levels. The existing Barstow Railyard DPM emissions were estimated at about 28 tons per year, which accounted for about 52 percent of the total combined on-site and off-site DPM emissions in 2005.

DPM is not the only TAC emitted in the existing Barstow Railyard. Relatively small amounts of gasoline TACs are also emitted from some of the gasoline fleet vehicles, track maintenance forklifts, on-site gasoline storage and dispensing units, and on-site generators. These TACs emission include 1-3 butadiene, benzene and other TACs. However, using cancer potency weighted factor adjustment, these toxic air contaminant emissions are about a factor of 300 times less than the cancer potency weighted emissions of diesel PM, (i.e., 0.09 vs. 28 tons per year). Therefore, only DPM emissions, the predominant emissions at the existing Barstow Railyard, were presented in the on-site emission analysis and HRA evaluation.

The 2008 HRA identified areas where risk levels would exceed the 10 in one million threshold (CARB, 2008 pp. 67-70). The point of maximum impact (PMI), which is defined as a location or the receptor point with the highest cancer risk level outside of the facility boundary, with or without residential exposure, was predicted to be located at the southeast side of the Railyard fence line. The cancer risk at the PMI was estimated to be about 1,000 chances in a million. In the residential zoned area, the potential cancer risk of maximally exposed individual resident (MEIR) or maximum individual cancer risk (MICR) was estimated at about 450 chances in a million. It is noted that the 2008 HRA was prepared using OEHHA's 2003 health risk methodology. OEHHA updated its methodology in 2015 to include explicit consideration of infants and children. CARB notes that the 2015 methodology results in risk levels approximately 1.5 to 3 times higher than was estimated using the 2003 methodology. An intermodal facility (IMF) component was

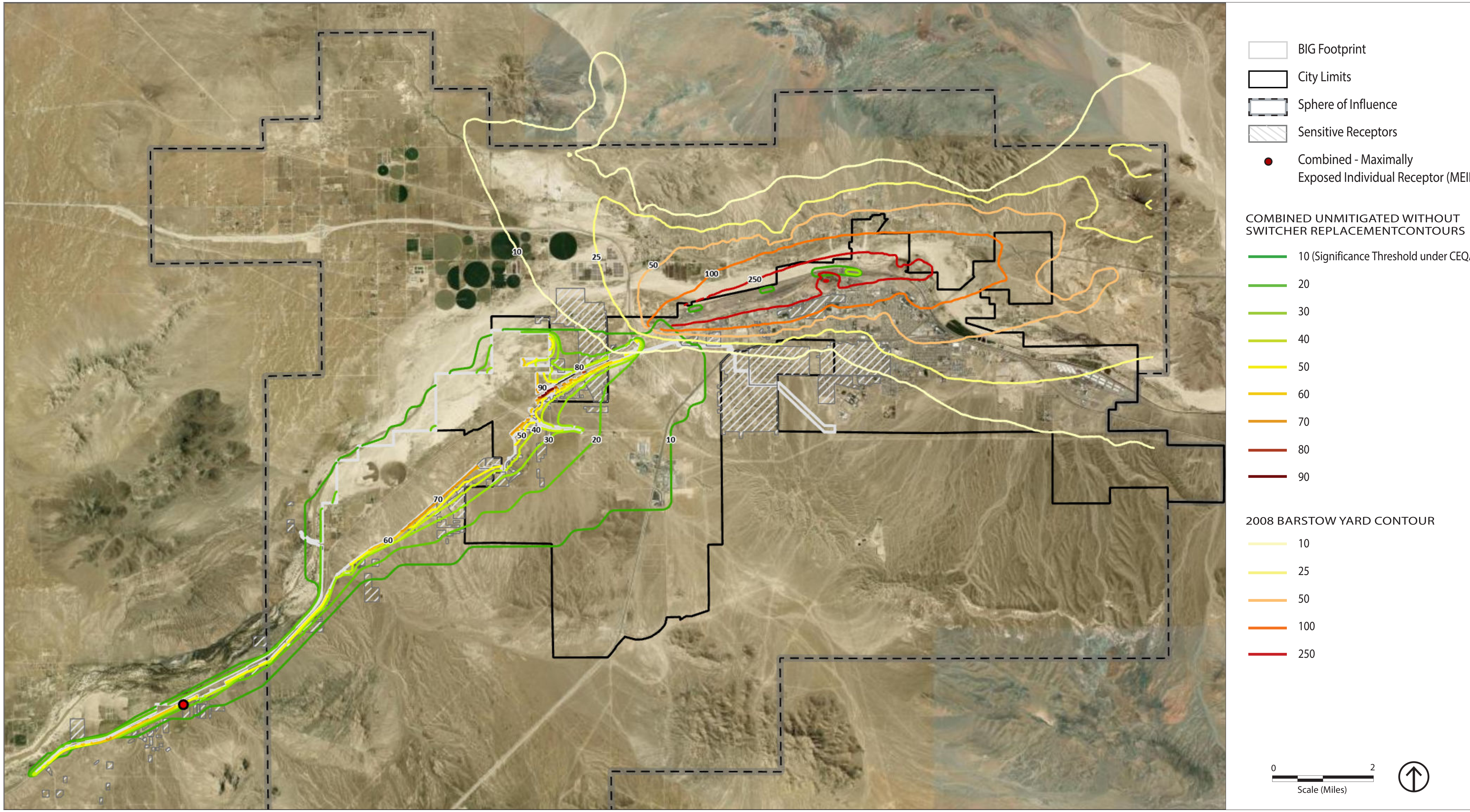
[7] DPM is the primary TAC of concern because it is the most potent TAC emitted from diesel exhaust and includes hundreds of chemicals. DPM is a subset of PM_{10}; however, locomotive emission factors are only available for PM_{10} and not DPM. Therefore, although DPM is a subset of PM_{10} exhaust, this analysis conservatively assumes all PM_{10} exhaust emissions are DPM.

added to the existing Barstow Yard in 2018. This IMF component would result in additional TACs similar to those previously described. Furthermore, there are other potential additional locomotive activities associated with natural growth trends, as described in Attachment B of **Appendix 5.3 BIG-1**. Because there is no available source disclosing or quantifying TAC emissions associated with the Bartow Yard since 2008, any emissions increases would be speculative.

Potential Combined Effects of BIG and the Existing Barstow Railyard

It is important to note that the BIG site layout minimizes TAC exposure to nearby sensitive receptors by buffering the transload warehouses from receptors by 1,000 feet, using electric hostlers to dray containers between the transload warehouses and intermodal facility, voluntarily replacing existing Tier 0/0+/1+ switcher locomotives at the existing Barstow Railyard and replacing them with six Tier 4 switchers, and incorporating mitigation measures.

A review of the existing Barstow Railyard HRA Figure V-2 indicates that its 10 in one million contour would potentially overlap with BIG's TAC emissions. As shown in **Figure 6-2** below, BIG's unmitigated health risk contour without the existing Barstow Railyard switcher replacement would slightly overlap with existing Barstow Railyard's 10 in one million contour. The existing Barstow Railyard's 10 in one million contour extends approximately one mile west of SR-58 and encompasses the northern portion of the Grandview neighborhood (i.e., near the intersection of Jade Road and Birch Road). The 10 in one million contour also encompasses the residential community located south of Main Street and Woodhill Avenue intersection in the City of Barstow. The overlapping contours would largely affect two areas of existing residential development, located to the east and northeast of BIG.



Source: AERMOD View, 2025; ESRI, *World Imagery (Basemap)*, 2024; County of San Bernardino, *Y2023 PUA Cache (Aerial imagery)*, 2023; and City of Barstow, *LAFCO Map*, 2022.

Note: These contours depict 30-year residential exposure with a 3rd trimester start age, age sensitivity factors, and age-specific breathing rates recommended by the California Office of Environmental Health Hazard Assessment (OEHHA). These contours do not represent student or worker risk, which are calculated separately.

Figure 6.6-1
BIG Unmitigated Combined Construction and Operational HRA Contours (without Switcher Replacement) and Barstow Yard 2008 HRA Contours

As part of the project, BIG would reduce emissions at the existing Barstow Railyard through voluntarily removing its existing Tier 0/0+/1+ switcher locomotives at its unrelated existing Barstow Railyard and replacing them with six Tier 4 switchers. Together with other BIG mitigation measures (see **Section 5.3)**, this would result in a substantial reduction in emissions of TACs to nearby sensitive receptors and health risks above significance levels associated with BIG and the 2008 HRA would not overlap in the Grandview neighborhood. Similarly, at the Main Street and Woodhill Avenue neighborhood, the overlap would not occur with the switcher replacement and mitigation measures. Therefore, based on currently known information, the impacts are conservatively assumed to be cumulatively considerable without the switcher replacement; however, with the switcher replacement and BIG mitigation measures the impacts would be reduced.

However, because BIG and the existing Barstow Railyard would be located in proximity to each other, and the addition of the 2018 IMF at the Barstow Railyard may involve additional emission of TACs, the combined TAC and health risk impacts of BIG and the current Barstow Railyard are considered to be cumulatively considerable under the current 2015 OEHHA Guidance and BIG's contribution would be cumulatively considerable with and without the Barstow Railyard switcher replacement. It is important to note, as described in **Appendix 5.3 BIG-1**, the 2015 OEHHA guidelines include significantly more sensitive modeling parameters and its methodology results in risk levels approximately 1.5 to 3 times higher than what was estimated using the 2003 methodology. The increased risk levels are due to the addition of Age Sensitivity Factors, as well as higher breathing rates and time-at-home factors for children. The previous guidance did not include these child-specific adjustments, resulting in lower estimated risks for the same exposure scenarios.

<u>Workers</u>

As shown in **Table 5.3-37,** the unmitigated construction and operations cancer risk (with Barstow Switcher Yard replacement) for the Maximally Exposed Individual Worker (MEIW) would exceed the MDAQMD incremental threshold of 10 in one million at various receptors during construction and operations. With mitigation (**MM BIG AQ-3** through **MM BIG AQ-6** and **MM BIG AQ-8** through **AQ-14**), the cancer risk for the Maximally Exposed Individual Worker MEIW would continue to exceed the threshold despite all feasible mitigation. BIG would make a cumulatively considerable contribution to significant cumulative impacts of TAC emissions on workers.

<u>Students</u>

As shown in **Table 5.3-37,** the unmitigated construction and operations cancer risk (with Barstow Switcher Yard replacement) for the Maximally Exposed Student Receptor would exceed the MDAQMD incremental threshold of 10 in one million at various receptors during construction and operations. With mitigation (**MM BIG AQ-3** through **MM BIG AQ-6** and **MM BIG AQ-8** through **AQ-14**), the Maximally Exposed Student Receptor risk would be reduced to below the threshold. Although BIG would not exceed the project threshold, BIG's emissions could combine with TACs from cumulative projects and therefore it conservatively assumed BIG could result in a cumulatively considerable contribution to significant cumulative impacts of TAC emissions on students.

<u>Chronic Hazard Assessment</u>

The Chronic Hazards Index measures the likelihood that chronic ***noncancer*** health effects and is described in detail in Section 5.3. BIG's unmitigated and mitigated chronic non-carcinogenic impacts are shown in **Table 5.3-39: Chronic Hazard Assessment Results at Peak Receptor** for the worst-case peak receptor. Without mitigation, BIG's non-carcinogenic hazards are calculated to be less than the MDAQMD significance threshold of 1.0 at all receptors, resulting in a less than significant impact. With mitigation the chronic HI would be reduced to 0.06.

Regardless, as described previously, because BIG and the existing Barstow Railyard would be located in proximity to each other, and the addition of the 2018 IMF at the Barstow Railyard may involve additional emission of TACs, the combined TAC and health risk impacts of BIG and the current Barstow Railyard are considered to be cumulatively significant, and BIG is considered to make a cumulatively considerable contribution to that cumulative impact. There is no additional feasible mitigation that is available to BIG to reduce its impacts and cumulative contribution. **Section 5.3** includes mitigation measures that were evaluated in terms of whether they were capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. These additional mitigation measures were studied but deemed infeasible. Therefore, no additional mitigation for BIG's contribution to these cumulative impacts is available.

Conclusion

Based on the above, despite mitigation, BIG would result in a cumulatively considerable contribution of TACs emissions and combined effects of BIG and applicable cumulative projects would be a significant and unavoidable cumulative impact. Additional mitigation was analyzed and deemed infeasible, as described **in Section 5.3**.

SCAB Mainline Rail Corridor: TAC/Health Risk Impacts

Past, present and reasonably foreseeable projects and development in proximity to the Corridor would have a significant cumulative impact if individual projects exceed the SCAQMD's thresholds. The SCAQMD has provided the following guidance on an acceptable approach to addressing cumulative air quality impacts:[8]

> *"As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR… Projects that exceed the Project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."*

As shown in **Table 5.3-40**, there would be a net decrease of DPM in the Corridor in the SCAB. Accordingly, there are no potential health risk impacts in the SCAB portion of the Corridor and BIG would not contribute

8 South Coast Air Quality Management District, *Cumulative Impacts White Paper, Appendix D*, August 2003.

to cumulative impacts along the Corridor. Cumulative Corridor impacts relative to TACs would be less than significant.

MDAB Mainline Rail Corridor – West of BIG (within MDAB): TAC/Health Risk

The Corridor segment within the MDAB west of BIG would also benefit from the use of Tier 4 dedicated fleet and increased use of renewable diesel. As a result, Corridor DPM emissions west of BIG would result in a net decrease (see **Table 5.3-40**). Accordingly, there are no potential health risk impacts in the MDAB portion of the Corridor west of BIG, and BIG would not contribute to cumulative impacts along the Corridor. Cumulative Corridor impacts relative to TACs would be less than significant.

MDAB Mainline Corridor East of BIG (within MDAB): TAC/Health Risk

Along the Corridor east of BIG to the Stateline (Needles), no cumulative projects were identified, for which emissions would combine with BIG's mainline operations. Nonetheless, BIG would result in a DPM emissions increase within the Corridor east of BIG due to container moves associated with the cross-dock intermodal move not benefitting from the Tier 4 dedicated fleet. The Corridor DPM increase would not exceed the MDAQMD's 10 in one million health risk threshold, and incremental impacts would be less than significant. Therefore, because no cumulative projects were identified near this portion of the Corridor, BIG's impacts would not be cumulatively considerable, and BIG's contribution to TAC-related impacts along the mainline corridor east of BIG would be less than significant.

6. Cumulative Odors

As discussed in **Section 5.3**, BIG does not include odorous uses and would not generate odors that would be noticeable to any of the surrounding sensitive receptors. Therefore, BIG does not have the potential to emit odors that would combine with past, present, and probably future projects that would result in a substantial effect from odors. BIG would not result in a cumulatively considerable impact concerning odors and there be a less than significant impact.

6.6.4 BIOLOGICAL RESOURCES

Impact 5-4	**Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding biological resources?**

Proposed General Plan

The study area for the proposed General Plan is the Western Mojave Desert Region inclusive of five wildlife movement corridors, defined in **Section 5.4: Biological Resources** as the Terrestrial Connectivity Area of Conservation Emphasis (ACE), California Desert Linkage Network, CEHC Essential Connectivity Area, and CEHC Potential Riparian Connection, and the Mojave River – Barstow/Camp Cody Linkage.

The proposed General Plan would redesignate almost 1,200 acres of resource open space and approximately 1,500 acres of interim open space to urban land uses. Future development on undeveloped land could potentially include sensitive biological resources and previously undisturbed habitats and could result in habitat fragmentation and constrain wildlife movement that has regional significance. Sensitive natural communities could potentially be impacted by future development. Finally, development areas adjacent to the Mojave River could impede movement of native or migratory species as a result of an increase in noise and human activity. The proposed General Plan includes policies to ensure that future development projects within the West Mojave Habitat Conservation Plan areas do not conflict with the Conservation Plan or impede the protection of sensitive species. Impacts would be less than significant through compliance with local, State, and federal regulations, as well as implementation of the proposed General Plan policies.

The Western Mojave Desert Region is composed of geomorphic features that provide unique habitat value due to their physical structure and diverse environments that offer food and shelter for wildlife. The study area is appropriate for analyzing cumulative impacts because it was identified to allow for a landscape-level analysis of impacts and is based on ecoregion, watershed, and County boundaries. The cumulative study area is expected to capture regional impacts on biological and aquatic resources associated with projected development affecting similar land cover types and occurring within neighboring watersheds.

Under the cumulative condition, ongoing urban development is expected to continue within the cumulative study area. Urban development stemming from the household, population, and employment increases projected through 2048 would result in the conversion of land to accommodate urban land uses. The projected growth within the study area combined with future development under the proposed General Plan would result in incremental habitat loss and fragmentation and loss of sensitive species. However, compliance with adopted conservation plans, along with local, State and federal regulations for all future development, would ensure that biological resources impacts remain less than significant. While cumulative impacts to biological resources may result from projected growth in the region, the proposed General Plan would not result in a cumulatively considerable contribution to significant impacts given the mitigating effects of compliance with the established regulatory framework.

BIG Construction and Operations

The study area for BIG is the BIG footprint plus the five wildlife movement corridors defined above for the General Plan area.

BIG construction would result in potentially significant impacts to special status species, riparian and sensitive natural communities, wetlands, and wildlife movement. BIG would avoid or minimize potential impacts to these resources, but they would remain potentially significant, thus, requiring mitigation.

With mitigation measures, **BIG BIO-1** through **BIG BIO-32** requiring compliance with best management practices, oversight by approved biologists, species specific surveys and avoidance, and compliance with regulatory permits, potentially significant impacts would be reduced to less than significant. BIG would have a less than significant impact concerning the potential to conflict with local polices or ordinances protecting biological resources and adopted habitat conservation plans.

Cumulative projects could result in impacts to similar resources within the study area. Construction of these projects could result in land disturbance, increased vehicle traffic, and topography alteration, which could lead to disturbance, injury, or mortality of various special-status wildlife species and their respective habitats, riparian and sensitive natural communities, wetlands, and wildlife movement. Furthermore, the ability of wildlife species to move freely within the cumulative study area would continue to be diminished through construction of developments under the CWP. Impacts to sensitive species, habitats, waters and wetlands, and migratory species would be mitigated on a project-by-project basis and subject to compliance with the established regulatory framework, thereby reducing impacts from cumulative development to a less than significant level. With mitigation measures incorporated; BIG would not result in a cumulatively considerable contribution to biological resources impacts. Cumulative impacts would be less than significant.

6.6.5 CULTURAL RESOURCES

Impact 5-5	**Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding cultural resources?**

Proposed General Plan

The study area for the proposed General Plan is the "region," a term used to describe the general geographical boundary of a broader archaeological context, usually one with a distinct cultural affiliation. The "region" for the proposed General Plan is generally defined as the southwest Mojave Desert associated with the extent of the Mojave River and adjacent valleys (western extent includes the Antelope Valley, extends south to the Cajon Pass and then eastward along the base of the San Bernardino Mountains towards the State line, and then west to Ridgecrest). The proposed General Plan would redesignate almost 1,200 acres of resource open space and approximately 1,500 acres of interim open space to urban land uses, thereby creating the potential for impacts on cultural resources in areas previously less likely to be disturbed. Future development under the proposed General Plan could impact historical resources through changes to access, visibility, vibration, visual context, renovations, or modifications, which could alter or destroy the characteristics that make potentially historic buildings significant. As buildings age, they may become eligible for historic designation during the proposed General Plan horizon and could be impacted by development in the future. Additionally, grading and intensive excavation that could occur as a result of future development could potentially disturb or unearth previously unknown archaeological resources or impact known sites. Despite implementation of the proposed General Plan policies and mitigation measures, the permanent loss or alteration of cultural resources is identified as a significant and unavoidable impact.

Development planned under CWP and proposed General Plan, and relevant planned and future transportation projects constitute the cumulative condition relevant to cultural resources. Under the cumulative condition, future development projects are expected to continue within the cumulative study area. Large portions of the cumulative study area are rural areas that have not been subject to development and are currently designated as open space. It is anticipated that undisturbed archaeological resources could be present in these largely undisturbed areas. In the more urban portion of the cumulative study area, where the landscape has been used historically, historic archaeological deposits can be expected to occur anywhere within that landscape in both disturbed and intact contexts. Due to the potential for substantial unknown resources to be present with the study area and the potential for new development to occur largely within previously undisturbed sites, cumulative impacts would result.

The proposed General Plan includes changes in land use designations from open space to a variety of urban uses and also facilitates further industrial growth inclusive of BIG in vacant areas; therefore, even with implementation of **MM GP CUL-1** through **MM CUL-4** and **MM GP CUL-8**, development under the proposed General Plan would constitute a cumulatively considerable impact on cultural resources throughout the study area. This cumulative impact is significant and unavoidable.

BIG Construction and Operations

The study area for BIG is the "region," as defined for the proposed General Plan. Evaluations conducted for the 206 cultural resources identified within the BIG footprint determined that 19 prehistoric archaeological sites qualify as "historical resources" and "unique archaeological resources" under CEQA. Additionally, P-36-2910/Route 66/National Trails Highway is listed in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) and, as such, qualifies as a "historical resource" under CEQA. Therefore, BIG could cause a substantial adverse change in the significance of a cultural resource (i.e., historical resources and unique archaeological resources). BIG would be subject to compliance with the applicable regulations and proposed General Plan policies and would incorporate mitigation measures (**MM BIG CUL-1** through **MM CUL-8**) to avoid/reduce impacts to cultural resources. However, while such measures could mitigate impacts on identified resources, the likelihood that unidentified buried resources within the BIG footprint could be impacted as a result of BIG remains. As such, BIG's impacts on cultural resources would remain significant and unavoidable.

Given the degree of past disturbances and nature of the Lynx Cat Quarry and Borrow Pit #2 project sites, no impact to cultural resources is anticipated concerning these cumulative projects. Therefore, no cumulative impact to cultural resources would occur concerning these cumulative projects. Development of the Logistics Facility and Rail Loop projects could cause a substantial adverse change in the significance of a cultural resource.

Therefore BIG, combined with these proposed cumulative projects, would result in a cumulative impact concerning impacts to cultural resources. Beyond **MM BIG CUL-1** through **MM BIG CUL-8**, discussed above, and identified in **Section 5.5**, no additional mitigation is available to further reduce or avoid BIG's cumulatively considerable contribution to this significant cumulative impact. Thus, BIG would result in a cumulatively considerable contribution to significant unavoidable impacts on cultural resources.

6.6.6 ENERGY

Impact 5-6	Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding energy?

Proposed General Plan

The study area for the proposed General Plan is the service area of Southern California Edison (SCE). The proposed General Plan includes policies related to land use and transportation planning and design, energy efficiency, public and active transit, and renewable energy generation that would contribute to minimizing building and transportation-related energy demands overall and demands on nonrenewable sources of energy. Implementation of policies under the proposed General Plan in conjunction with and complementary to regulatory requirements would ensure that energy demand associated with growth under the proposed General Plan would not be inefficient, wasteful, or unnecessary. The proposed General Plan also includes policies that would support energy conservation, renewable energy use, and increased energy efficiency, including those that would support the continued implementation of California's Energy Action Plan and Long-Term Energy Efficiency Strategic Plan. Therefore, energy impacts associated with implementation and operation of land uses accommodated under the proposed General Plan would be less than significant.

Similarly, urban development within the cumulative study area would be subject to the same State regulatory framework, such as CalGreen, which would reduce energy demands of future development. Cumulative growth in the study area would be subject to the same regulatory compliance (e.g., Building Energy Efficiency Standards, CalGreen, and CAFE standards) as the proposed General Plan, and while energy consumption would likely increase with future growth, cumulative urban development is not anticipated to result in the inefficient, or unnecessary consumption of energy resources or the obstruction of energy plan implementation. Cumulative energy impacts would be less than significant.

BIG Construction and Operations

Although BIG would require substantial energy demand during construction and operations, BIG would implement energy-saving features, such as Tier 4 locomotives and facilities that meet or exceed CALGreen Tier 2 standards and implement best practices to reduce the potential for wasteful or inefficient use of energy. BIG would also develop a 21-MW solar farm to decrease its demand on the grid. BIG would comply with all applicable regulations and laws regarding sustainability and incorporate mitigation measures, which would also reduce energy demand. Therefore, BIG would not result in a potentially significant impact associated with the wasteful or inefficient consumption of energy nor conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Impacts related to energy would be less than significant.

Other cumulative projects would result in additional demand for energy resources, including electricity and fuels (diesel, gasoline). Like BIG, cumulative projects would be required to comply with the regulatory setting, as described in **Section 5.6**, which would avoid wasteful or inefficient consumption of energy or potential conflicts with a plan for renewable energy. Therefore, cumulative impacts in regard to energy would be less than significant.

BIG would rely on renewable energy to the extent feasible, and with mitigation (**MM BIG AQ-1** through **AQ-6**, **MM BIG AQ-8**, **MM BIG AQ-10**, **MM BIG EN-1** and **MM BIG EN-2**), its impacts would be less than significant. Therefore, while BIG and cumulative projects would result in an increase in demand for energy resources, no wasteful use of energy resources would occur and with mitigation measures incorporated, cumulative impacts would be less than significant.

6.6.7 GEOLOGY, SOILS, AND MINERAL RESOURCES

Impact 5-7	Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding geology and soils and mineral resources?

Proposed General Plan

The study area is the proposed General Plan area for seismic and soil-related issues, as these issues are site-specific. Typically, impacts associated with seismic and soil conditions are localized in nature and do not combine with other cumulative projects to create a cumulative impact. Buildout under the proposed General Plan would comply with local, State, and federal regulations that govern the construction of development in geologically hazardous areas, such as the CBC and Barstow Code Title 15, along with General Plan policies pertaining to geologic hazards, and therefore, would not exacerbate any existing geologic hazards within the study area related to seismic or soils conditions. Thus, development under the proposed General Plan would not contribute to cumulative seismic or soils-related impacts.

The study area for paleontological and mineral resources would be the County. Impacts on paleontological resources under the proposed General Plan could occur but would be mitigated through project-level mitigation, per General Plan Policy OSC-7.7. Policy OSC-7.7 protects paleontological resources by requiring new development to implement mitigation to avoid paleontological resources whenever possible, and, if unavoidable, require the appropriate treatment of paleontological resources. Likewise, impacts attributed to other cumulative development in the County would be mitigated through similar measures, and therefore, cumulative impacts to paleontological resources would be less than significant.

The region is rich with aggregate deposits, the loss of which over the course of buildout of urban uses under the proposed General Plan would be considered a significant and unavoidable impact. Other development that would occur throughout the County under the CWP could similarly result in a loss of mineral resources, as land is committed to various types of urban development, resulting in a cumulative loss of mineral resources across the County. Therefore, the proposed General Plan would result in a cumulatively considerable impact to mineral resources. The only feasible mitigation would be to preclude development on important mineral resources sites in order that extraction of the mineral(s) could occur in the future. While it is possible that a development could be redesigned to accommodate mineral extraction (most typically in an open-pit quarry), it is unlikely given the visual, dust, noise, heavy vehicle, and vibration impacts associated with such land use. Therefore, preclusion of development within mineral resource zones is not a feasible mitigation, and cumulative impacts would remain significant and unavoidable.

BIG Construction and Operations

The study area is the BIG footprint plus 0.5-mile boundary for seismic and soil-related issues, which are site-specific. The study area for paleontological and mineral resources would be the County. Impacts associated with geologic hazards are typically localized, and impacts of one project would not in most circumstances combine with impacts of nearby projects to create a cumulative impact. BIG would not exacerbate any existing geologic hazards within the study area related to seismic or soils conditions.

Impacts to paleontological resources could occur but would be mitigated through project-level mitigation, **BIG GEO-1 through BIG GEO-3,** by BIG and the identified cumulative projects, resulting in a less than significant cumulative impact.

The region is rich with aggregate deposits, and there are known mineral resources within the BIG footprint. However, BIG would not result in the loss of availability of a locally important mineral resource recovery site. Therefore, while continued urban development would incrementally contribute a cumulative loss of important mineral resources, BIG would not result in a cumulatively considerable contribution to that impact.

6.6.8 GREENHOUSE GAS EMISSIONS

Impact 5-8	Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding greenhouse gas emissions?

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have much longer atmospheric lifetimes of one year to several thousand years that allow them to be dispersed around the globe.

It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory (CAPCOA, 2008, p. 31). State CEQA Guidelines generally address GHG emissions as a cumulative impact because of the global nature of climate change (PRC § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself" (*Cleveland National Forest Foundation v. San Diego Association of Governments*, 2017). As such, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective.

Proposed General Plan

The proposed General Plan would increase GHG emissions in California by 134,471MTCO$_2$e/yr (41 percent) from existing levels in California without mitigation. This net increase would exceed MDAQMD's significance threshold of 90,718 MTCO$_2$e/yr (100,000 tons/yr), and emissions at year 2048 would not achieve the GHG reduction targets of Assembly Bill (AB) 1279 (i.e., 85 percent below 1990 levels by 2045). When considering BIG emissions reductions achieved as result of a reduction in national TMT, in addition to **MM BIG AQ-1** through **MM BIG AQ-14**, the proposed Project would result in an increase in community emissions of 42,045 MTCO$_2$e per year (13 percent increase) from existing levels. This net increase would not exceed MDAQMD's significance threshold of 90,718 MTCO$_2$e/yr (100,000 tons/yr) but would still not achieve the plan-level GHG reduction target of AB 1279 for year 2048.

The increase in emissions would primarily be from mobile-source emissions and energy sector emissions. The overall increases would be due to the anticipated growth under the proposed General Plan. In addition to comparison with the MDAQMD significance GHG threshold, the proposed General Plan is evaluated on whether it would be consistent with the State's 2045 GHG emissions reduction target of 85 percent below 1990 levels by 2045. As shown in **Table 5.8-10**, implementation of the proposed General Plan would increase emissions by 41 percent and would not achieve the 85 percent reduction target; see **Table 5.8-10**.

Implementation of **MM GP GHG-1** would ensure that the City prepares a Climate Action Plan (CAP) to align GHG emissions targets in the City with the State's carbon neutrality goal set by AB 1279. **MM GP GHG-1** would also ensure that the City is tracking the City's GHG emissions. However, given the growth in population and employment within the City and SOI and the magnitude of emissions reductions needed to achieve the GHG reduction target, GHG emissions would be significant after mitigation, and the proposed General Plan would result in a cumulatively considerable contribution to GHG emissions.

The General Plan would be consistent with the goals of SCAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), SoCal Connect 2024. However, the proposed General Plan may conflict with the Natural and Working Lands actions and strategies in CARB's Scoping Plan pertaining to croplands due to the anticipated loss of farmlands. Implementation of **MM GP AG-1** would reduce the loss of farmland to the extent feasible. However, it would not fully avoid or reduce the conversion of farmland to nonagricultural uses. Thus, the proposed General Plan may still conflict after mitigation with the 2022 Scoping Plan as it pertains to the Natural and Working Lands strategies regarding croplands.

Cumulative GHG emissions impacts would be significant and unavoidable.

BIG Construction and Operations

The additive effect of BIG-related GHG emissions would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. BIG would provide critical supply chain efficiencies that would reduce GHG emissions in the South Coast AQMD by removing approximately 800,000 truck trips per year (hundreds of millions of truck miles traveled each year) from regional roadways, converting those container moves from truck trips to train trips, in furtherance of the State Rail Plan (BIG is noted in the State Rail Plan as the solution needed for goods movement in California). Also, BIG would not conflict with the RTP/SCS or the CARB Scoping Plan. As such, BIG would be consistent with the State's long-term goal to achieve statewide carbon neutrality by 2045 through compliance with the strategies, plans, and policies in the 2022 Scoping Plan. In addition, BIG as well as other cumulative related projects would also be subject to all applicable regulatory requirements, which would further reduce GHG emissions.

BIG includes using dedicated Tier 4 locomotives to transport cross-dock intermodal containers from the Ports to BIG's intermodal facility, Tier 4 switcher locomotives, the retirement of all existing switcher locomotives at the existing Barstow classification yard and the addition of six Tier 4 switcher locomotives and increasing the renewable diesel composition within the BNSF's existing Southern California fueling sites and use electric cargo handling equipment. Despite this, total unmitigated construction and operational emissions would result in a net increase in GHG in 2048. Mitigation Measures identified in Air Quality and Energy (**MM BIG AQ-3**, **MM BIG AQ-4, MM BIG AQ-5, MM BIG AQ-8, MM BIG AQ-9, MM BIG AQ-10, MM BIG AQ-13, MM BIG AQ-14, MM BIG EN-1** and **MM BIG EN-2)** would reduce construction and operational emissions, and result in net negative GHG emissions for all study years (refer to **Table 5.8-12**).

With mitigation, BIG would reduce GHG emissions below a net zero threshold, therefore, BIG would not make a cumulatively considerable contribution to significant cumulative GHG impacts.

6.6.9 HAZARDS, HAZARDOUS MATERIALS, AND WILDFIRE

Impact 5-9	Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding hazards and hazardous materials and wildfire?

Proposed General Plan

The study area is the General Plan area. Future development under the proposed General Plan would be subject to substantial federal, State and local regulatory context, ensuring that impacts associated with the accidental release or upset of hazardous materials would result in a less than significant impacts. Furthermore, the City is not located in a State Responsibility Area and does not contain lands classified as "very high fire hazard severity zone." Impacts associated with the proposed General Plan would be less than significant. Projected growth within the study area would be subject to the same regulatory framework and would be evaluated on a project-by-project basis. Therefore, no cumulative hazards and hazardous materials impacts would result from the proposed General Plan and cumulative growth within the area.

BIG Construction and Operations

The study area for hazardous materials is the BIG footprint with a 0.25-mile buffer. BIG construction could result in temporary significant impacts regarding hazards to the public or environment from the routine transport, use, or disposal of hazardous materials; however, impacts would be less than significant with incorporation of mitigation, including preparation of a limited soil management plan (**MM BIG HAZ-1**) that addresses procedures for the identification and management of impacted soil. BIG operations also would involve the routine transport, use, or disposal of hazardous materials; however, compliance with established regulatory framework and existing BNSF policies and procedures would reduce impacts to less than significant.

BIG could also result in the release of hazardous materials through accidental upset during both construction and operations. Furthermore, one open Cortese list site is located within the BIG footprint. Mitigation measures **MM BIG AQ-1**, which requires daily watering of exposed soil; **MM BIG HAZ-1, MM BIG HAZ-2**, which addresses well abandonment procedures; **MM BIG HAZ-3**, which addresses removal of under or above ground storage tanks and **MM BIG HAZ-4**, which requires additional assessment of Potential Environmental Concern Parcels (PEC), would ensure that impacts would be less than significant.

Typically, impacts associated with hazardous materials are localized in nature and do not combine with other cumulative projects to create a cumulative impact. The cumulative projects would be subject to the same regulatory framework as BIG and would be evaluated on a project-by-project basis. Therefore, no cumulative construction or operational hazardous materials impact would occur.

The study area for emergency response involves the transportation network surrounding BIG, which provides connectivity to the BIG Specific Plan area and its surroundings. BIG construction could temporarily impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; however, preparation of a construction Traffic Control Plan (TCP)) would ensure impacts would be less than significant. BIG construction would occur over approximately three years. Construction of the Logistics Facility is anticipated to occur during 2027 and 2028. Because BIG and Logistics facility construction could occur concurrently, cumulative impacts concerning impairment of an emergency response plan could occur. BIG construction would be required to comply with the TCP, which would be prepared by the contractor prior to construction and would address traffic conditions on surrounding roadways (including what may be attributed to surrounding development). Compliance with this plan would ensure that BIG would not contribute to cumulative conditions that could impair an emergency response plan. Cumulative impacts would be less than significant.

6.6.10 HYDROLOGY AND WATER QUALITY

Impact 5-10	**Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding hydrology and water quality?**

Proposed General Plan

The study area for the proposed General Plan is the General Plan area**,** as well as downstream and regional water resources, such as the Mojave River. Future development under the proposed General Plan would result in potential impacts to surface and groundwater quality; however, compliance with regulations, including BMPs; Barstow Code Chapter 15.14: Stormwater and Urban Runoff Pollution Control and Chapter 15.16: Floodplain Management; Municipal National Pollutant Discharge Elimination System (NPDES) permit; and Stormwater Pollution Prevention Plan (SWPPP) requirements would reduce impacts to groundwater, drainage, flood hazards, hydrology, and water quality by reducing erosion, runoff, and ensuring adequate design of drainage infrastructure. The projected development within the basin under the CWP would be required to adhere to similar regulatory requirements, as well as CWP policies and County Code standards. Compliance with the established regulatory framework would ensure that cumulative impacts would be less than significant.

BIG Construction and Operations

Three hydrology and water-quality-related study areas have been defined for BIG; see **Table 6-1**. BIG would be required to comply with federal, State and local regulatory requirements relative to water quality, flood plains, and drainage, which would be verified through the appropriate plan check agencies. Furthermore, through the use of best management practices and low impact development practices identified within BIG's specific water quality management plan, BIG construction and operations would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. BIG would not adversely affect groundwater through changes in recharge. BIG would alter the site's existing drainage pattern through addition of impervious surfaces thus increasing surface run-off but would not result in on- or off-site flooding since BIG would be designed and constructed to accommodate the 100-year storm events and storm flows would be directed into on-site detention basins. Additionally, the general existing drainage pattern, including flood flows, for the BIG footprint would be maintained during construction and operations. Overall, BIG would result in less than significant impacts. Cumulative projects would similarly be required to comply with the established regulatory framework as BIG, as well as City or County requirements. Cumulative impacts would be less than significant.

6.6.11 LAND USE AND PLANNING

Impact 5-11	Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding land use and planning?

Proposed General Plan

The study area is the General Plan area. The proposed General Plan would construct new roadways; however, the improvements would enhance connectivity and not physically divide an established community. The proposed General Plan also would not conflict with any plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Future development under the CWP and proposed General Plan would be reviewed for conformance with applicable plans, policies and regulations, including those that mitigate environmental impacts. No cumulative impacts would occur relative to land use.

BIG Construction and Operations

Neither BIG nor its off-site improvements would physically divide an established community, as there are no established communities within the BIG footprint. Additionally, BIG would not conflict with Connect SoCal 2024, SBLAFCO, the CWP or County Code, or proposed General Plan or Barstow Code goals, policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect and no impact would occur. Therefore, no cumulative impact would occur.

6.6.12 NOISE

Impact 5-12	Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding noise and vibration?

Proposed General Plan Construction and Operations

The study area for the proposed General Plan for stationary source noise impacts is the General Plan area. The mobile source study area is defined by the transportation modeling for vehicular travel, which for the proposed General Plan is volumes based on growth and travel forecasts contained in the Future Year San Bernardino Transportation Analysis Model (SBTAM) outside the City and SOI, and projected land use and planned infrastructure within the City as proposed in the proposed General Plan.

With no airport or large industrial base, Barstow is a quiet community with few noise sources other than the vehicles on roadways and freeways and train movement on train tracks located within the existing Barstow Yard. As the City grows, more construction noise would occur, along with the potential to disturb sensitive receptors. Implementation of **MM GP NOI-1** would reduce potential noise impacts during construction to the extent feasible. However, due to the potential for proximity of construction activities to sensitive uses, the number of construction projects occurring simultaneously, and the potential duration of construction activities, Impact NOI-1 (construction noise) could result in a temporary substantial increase in noise levels above ambient conditions.

Design elements can be used to mitigate noise in future development projects; however, roadway noise increases over buildout of the proposed General Plan can affect existing uses. **MM GP NOI-2** could reduce future traffic noise levels, however, there may not be feasible or practical mitigation measures available to reduce project-generated traffic noise to less-than-significant levels for existing residences along the affected roadways. For this reason, both the proposed General Plan's construction and traffic noise impacts remain significant and unavoidable.

Buildout of the proposed General Plan, combined with BIG, would be the main contributor of new noise source generation within the study areas. The CWP planned land use surrounding the City and SOI is primarily Rural Living (1 dwelling unit/2.5 acres) or Resource/Land Management (RLM) designation, neither of which would contribute substantial noise either stationary source or traffic related. Therefore, the proposed General Plan would result in a cumulatively considerable contribution to significant noise impacts. Cumulative noise impacts would be significant and unavoidable.

BIG Construction and Operations

The cumulative noise and vibration study area for construction and operations is defined as a one-mile radius from the BIG footprint (inclusive of off-site improvements) and includes all sensitive receptors that could be exposed to noise impacts. Cumulative construction and operational noise impacts could result from proximate projects within study area. A one-mile distance was selected for cumulative study area as this is the distance BIG noise levels would attenuate below the lowest measured ambient level and would not interact with cumulative projects beyond this distance.

A cumulative noise effect would occur if activities related to BIG combined with the noise generated by other planned development and transportation projects to expose people to significantly adverse noise levels. Cumulative noise impacts could occur from both temporary and permanent increases in ambient noise levels within the study area and result from noise-generating activities combining during construction or operation of any of these projects. These impacts would be considered a cumulative impact if the noise levels from BIG combined with noise emissions from other projects to exceed local noise standards, or to substantially increase noise levels above preexisting levels.

BIG would result in a significant and unavoidable impact concerning construction noise. Nighttime construction noise levels associated with the east lead tracks, solar farm, Lenwood Channel improvements, and 33 kV line would exceed the FTA's 70 dBA $L_{eq(8\text{-hour})}$ nighttime construction noise standard for residential uses. BIG would incorporate **MM NOI-1**, which requires preparation of a Construction Noise Logistics Plan. While incorporation of **MM NOI-1** would reduce nighttime construction noise levels to the extent feasible, the precise details regarding the proposed schedule, duration/hours, equipment type/quantity, and specific location of construction for nighttime construction activities are unknown at this time. Therefore, BIG nighttime construction noise could result in a significant and unavoidable impact despite incorporation of **MM NOI-1**. There are reasonably foreseeable projects within the vicinity of BIG for which construction of various elements may temporarily overlap with BIG project construction; specifically, construction of the Logistics Facility adjacent to the BIG footprint, could contribute cumulative construction traffic to local roadways and result in cumulative construction noise impacts. To a large degree, relatively short construction timeframes would reduce the amount of overlap with project construction, and the low density of sensitive noise receptors directly surrounding BIG would limit the amount of exposure of noise levels that exceed noise thresholds to highly sensitive individuals. Combined with BIG construction, construction of the Logistics Facility project could exceed significance thresholds for noise at sensitive receivers. BIG would include a mitigation measure to minimize noise levels (**MM BIG NOI-1**). However, noise generated by construction activities could still exceed thresholds at nearby sensitive receptors during construction of BIG.

As discussed in **Section 5.12**, Noise and Vibration, BIG operational noise, when added to future baseline noise conditions, without BIG, modeled to include foreseeable increases in noise from existing sources in the vicinity of BIG, would result in significant and unavoidable exterior and interior noise level impacts compared to the absolute noise level standards in applicable local ordinances. Thus BIG, along with those other existing noise sources, would contribute to significant cumulative exterior and interior noise level impacts.

As also discussed in **Section 5.12**, BIG operation noise would also result in substantial incremental increases in exterior and interior noise levels, compared to future baseline noise conditions without BIG. Thus, BIG would make a cumulatively considerable contribution to those significant cumulative exterior and interior noise level impacts.

Additionally, as also discussed in **Section 5.12**, BIG would result, in combination with anticipated noise from existing noise sources to significant cumulative roadway traffic noise impacts under a "windows open" condition.

Buildout of other new adjacent land uses under the proposed General Plan would also contribute to the ambient noise environment, and therefore would be likely also to contribute, along with BIG and existing noise sources, to the significant cumulative operational noise level impacts described above. The proposed Logistics Facility would also contribute truck traffic to surrounding roadways, resulting in further contributions, along with BIG, to the significant cumulative roadway traffic noise impact described above.

Because of the above factors, both BIG's construction and operation would constitute a cumulatively considerable contribution to significant cumulative noise impacts. As discussed in **Section 5.12**, all feasible mitigation for BIG's significant noise impacts would not fully reduce or avoid those impacts. Therefore, despite the application of **MM BIG NOI-2**, the above-described cumulative operational noise impacts would remain significant and unavoidable, and BIG's contribution to those impacts would remain cumulatively considerable.

6.6.13 POPULATION AND HOUSING

Impact 5-13	Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding population and housing?

Proposed General Plan

The study area is the County. The proposed General Plan would induce population and job growth directly through the update to the Land Use Plan that would facilitate construction of new homes and businesses. Through advanced utility/resource/facility planning directed by the proposed General Plan policies, there is no potential for unplanned growth to occur indirectly through the extension of infrastructure. Nothing in the proposed General Plan would require displacement of existing people or the reduction of housing that would necessitate the construction of replacement housing elsewhere. Therefore, the proposed General Plan would not result in unplanned growth or displace substantial numbers of existing people or housing. Impacts would be less than significant.

Buildout of the proposed General Plan combined with other growth and development that could occur within the unincorporated County would result in household, population, and job growth. Development within the County would conform to the Countywide Plan, and therefore, would not be unplanned. There are no known cumulative projects that would result in the displacement of substantial numbers of people or housing. Therefore, cumulative population and housing impacts would be less than significant.

BIG Construction and Operations

BIG does not propose housing and therefore would not result in population growth directly by proposing new homes. BIG does propose employment-generating uses, which could result in unplanned population growth indirectly. BIG's population growth from the employment-generating uses is not considered substantial or unplanned given it is anticipated those jobs would be filled by the County's existing unemployed workforce and BIG is proposed alongside the proposed General Plan. Additionally, BIG proposes roadways, circulation, and other infrastructure, but these would be sized to only serve BIG, thus, would not induce indirect population growth. BIG would result in a less than significant impact concerning unplanned population growth.

BIG in combination with other ambient growth and development that could occur within the unincorporated County, along with cumulative projects, such as the Logistics Facility, would result in new job growth within the City and its SOI. This job growth could result in pressure for increased housing development within the City. The proposed General Plan includes the potential for 6,608 new housing units, which would be adequate to house the new labor force needed for BIG and other cumulative development. Therefore, no cumulative inducement of unplanned growth would occur.

BIG would displace people and housing through removal of approximately 108 dwelling units and approximately 93,724 square feet of non-residential land uses but would not necessitate construction of replacement housing given the City's existing housing stock and vacancies, thus, resulting in a less than significant impact. Other cumulative growth could result in some loss of housing but given the amount of vacant land available for development, it is unlikely that any substantial displacement of existing housing would occur. Cumulative impacts would be less than significant.

6.6.14 PUBLIC SERVICES

Impact 5-14	**Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding public services and recreation?**

Proposed General Plan

The study area varies by service provider; see **Table 6-1**. While the proposed General Plan would provide for additional housing in the City, it would not directly necessitate the construction of new or substantially altered police protection, school, or library facilities, and therefore, would not result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered, police protection, school, or library facilities, the construction of which could cause significant environmental impacts. Also, the development of new housing, under the proposed General Plan, would result in population growth that would result in an increased demand for parks or other recreational facilities. However, this demand has been contemplated, and the proposed General Plan includes policies that seek to ensure adequate and safe park and recreational facilities, apply parkland requirements for a wider variety of new residential development, and move forward with a more feasible parkland standard. Policy OSC-1.1 requires developers of new residential and mixed-use residential projects to provide or pay fees equivalent to a ratio of three acres of public parklands per 1,000 persons for new residential development and Policy OSC-1.2 aims to design, maintain, and enhance parks and recreation facilities to cater to the diverse recreational needs and interests of the community. This is a change from existing standards and future implementation would need to revise the City's development standards to ensure the parkland requirement is consistent for residential development subject to the Quimby Act (primarily single-family homes) and to add the requirement for all other types of residential (e.g., multifamily development, whether standalone or as part of a mixed-use project). These policies and code updates would ensure that adequate park facilities are phased accordingly with future development.

Cumulative development within the service areas of various providers could result in an additive increase in demand for services. Future development within the City and County would be required to demonstrate adequate availability of police, fire protection, schools, and park facilities. Any new or expanded facilities would be required to undergo their own CEQA review, thereby impacts from the proposed General Plan and cumulative development would be mitigated to a level less than significant.

BIG Construction and Operations

BIG would result in a substantial new employment population within the area, along with new development, facilities, and increased vehicular and truck trips, along with off-site improvements, all of which could contribute to an increased demand for fire protection and police protection services. However, the Barstow Fire Protection District and Barstow Police Department confirmed that no new fire protection or police facilities would be required to serve BIG. Cumulative projects could result in additional demand, and those would be reviewed by the districts for adequate capacity. Should cumulative projects result in the need for new facilities, those would undergo environmental review at the time of permitting. Therefore, cumulative impacts would be less than significant relative to fire and police protection.

Although BIG may indirectly result in increased demand for school facilities, payment of impact fees in compliance with CGC § 65995 would reduce impacts to less than significant, and such would be the same for cumulative projects. Therefore, because BIG would not result in the need for new or physically altered school facilities, BIG and cumulative projects would not result in significant cumulative impacts due to construction of school facilities.

Demand for park and recreational facilities would increase with the proposed General Plan inclusive of BIG. As concluded above, the proposed General Plan accounts for adequate park and recreational facilities, and new facilities would undergo their own CEQA review. Therefore, no cumulative impacts from BIG and other development would result.

6.6.15 TRANSPORTATION

Impact 5-15	**Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding transportation?**

Proposed General Plan

The study area for the General Plan for cumulative year (2050) consists of forecasted volumes based on growth and travel forecasts contained in the Future Year San Bernardino Transportation Analysis Model (SBTAM) outside the City and SOI, and projected land use and planned infrastructure within the City as proposed in the proposed General Plan.

Conflicts with programs, plans, policies. The proposed General Plan provides policies on reducing VMT as well as improving mobility options consistent with local and statewide requirements, as detailed in Section 5.15.6. With implementation of these policies, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system. Therefore, impacts would be less than significant.

Similarly, growth throughout the County would seek to implement CWP policies, including TM-3.1 through 3.3 and TM-4.1 through TM-4.11, consistent with regional and Statewide requirements and initiatives. Therefore, the proposed General Plan update in conjunction with other developments in the County would not result in a cumulative impact associated with program, plan or ordinance conflicts addressing the circulation system.

CEQA Guidelines §15064.3(b). The City has developed a cumulative VMT threshold as follows: a significant impact would occur if the project caused total daily VMT per service population within the City to be higher than the no project alternative under cumulative conditions.

The proposed General Plan is beneficial from a VMT efficiency perspective. However, the uncertainty related to future fuel prices, driving habits of residents, and future legislative policy could influence VMT production in the City during the horizon of this General Plan. Furthermore, while the proposed General Plan would improve connectivity by expanding pathways, road extensions, and removing existing barriers to access, policies will take time to implement. It is probable that some development projects may be proposed and considered before the citywide improvements envisioned by the General Plan can be completed. As the modeling assumes a fully implemented General Plan that will reduce VMT, projects that occur before buildout may increase VMT until the cumulative condition is reached. Therefore, the proposed General Plan would result in a significant impact in the short term. Development in areas surrounding the City would likely also result in similar impacts for the same reasons, all of which would contribute to cumulatively considerable VMT impacts in the short term, until buildout, when contemplated improvements would be fully funded and in place within the City. Therefore, buildout of the proposed General Plan would result in a cumulatively considerable contribution to VMT impacts, as growth and economic generators are centered around Barstow, until buildout of the General Plan is ultimately in place. This cumulative impact would be significant and unavoidable.

Substantially increase hazards. The City has adopted street improvement standards as approved by the City's Engineering Services Division, to ensure consistency in the geometric design of their roads and driveways. As the proposed General Plan would not alter this process, and all future projects would be subject to these reviews, the proposed General Plan would not substantially increase hazards due to a geometric design feature or incompatible uses. This impact is considered less than significant. As future development under the proposed General Plan would comply with this standard, and cumulative development would similarly comply with County standards, no cumulative impacts would result relative to increased roadway hazards.

Inadequate emergency access. While construction of future development projects may result in temporary road closures, the proposed General Plan does not change circulation or access or create impediments to emergency access that results in longer emergency response times. Therefore, impacts would be less than significant relative to emergency response. Development outside the City would be required to comply with CWP emergency access requirements. Therefore, no cumulative impacts would result relative to inadequate emergency access.

BIG Construction and Operations

BIG's proposed land use, employment, and truck trip data is included in the City's proposed General Plan and incorporated into the Cumulative Year 2048 Conditions; therefore, the VMT study area for BIG is the same as defined above for the proposed General Plan. The study area for other transportation topics is defined in **Section 5.15.3.1**.

Conflicts with programs, plans, policies. BIG's construction activities would result in increased heavy-duty truck traffic within the study area and may result in temporary lane or roadway closures. BIG would develop a detailed construction TCP for the purpose of minimizing the impact of construction and construction traffic on adjoining and nearby roadways in close consultation with the City. This would ensure that BIG construction activities would not conflict with a program, ordinance, or policy addressing transit, roadway, bicycle, or pedestrian facilities. Operational impacts also would be less than significant, as BIG proposes to construct, as needed, the planned bicycle and pedestrian facilities that are identified in the relevant adopted policies, plans, ordinances, and programs along BIG's Specific Plan Area frontage where BIG proposes to add substantial traffic. Therefore, impacts relative to conflicts with programs, plans or ordinances addressing the circulation system would be less than significant. Similarly, other cumulative projects would be similarly conditioned to include such improvements. Therefore, no cumulative impacts would occur.

CEQA Guidelines §15064.3(b). The City has developed a cumulative VMT threshold as follows: a significant impact would occur if the project VMT/SP (for the land use plan) exceeds the Countywide/Citywide] average under General Plan Buildout Conditions.

BIG's Home-Based Work VMT per Worker is forecast to be less than the citywide average Home-Based Work VMT per Worker under Horizon Year 2048 conditions. Therefore, BIG would have a less than significant VMT impact according to the City's Project Threshold. Additionally, the citywide total VMT per service population is forecast to be lower with BIG than the No BIG baseline under the Horizon Year 2048 conditions using the 'boundary' method. Therefore, BIG would not make a cumulatively considerable contribution to a cumulative VMT impact according to the City's Cumulative Threshold.

Substantially increase hazards. Construction plans and design specifications for BIG would be designed to meet relevant design criteria (City, County, and Caltrans). Therefore, BIG would not increase hazards due to a geometric design feature or incompatible uses. Furthermore, BIG proposes to remove the at-grade crossing at Hinkley Road, which would reduce potential conflicts between vehicles and trains, and replace the existing Main Street low-water crossing over Lenwood Channel with a four-lane bridge, reducing hazards. Cumulative projects within the City would be required to comply with the same design criteria. Therefore, no cumulative impacts would result relative to increased roadway hazards.

Inadequate emergency access. The contractor would prepare a detailed construction TCP to minimize the impact of construction and construction traffic on adjoining and nearby roadways, and emergency vehicle access would be maintained at all times, during both construction and operations. BIG would result in less than significant impacts relative to emergency vehicle access. Cumulative projects would be conditioned similarly; therefore, no cumulative impacts would result relative to emergency access.

6.6.16 TRIBAL CULTURAL RESOURCES

Impact 5-16	**Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding tribal cultural resources?**

Proposed General Plan

The study area includes the "region" as defined for Cultural Resources. Future development that would occur within the General Plan area would include ground-disturbing activities in areas that may have currently unknown tribal cultural resources. Even with mitigation measures (**MM GP CUL-1** through **MM GP-3**) and regulations designed to minimize impacts, there is a possibility that construction activities could have a significant impact on tribal cultural resources. The permanent loss or alteration of tribal cultural resources is identified as a significant and unavoidable impact.

Development planned under the general plans of San Bernardino County and Barstow, and relevant planned and future residential, commercial, industrial, and transportation projects constitute the cumulative condition relevant to cultural resources. Under the cumulative condition, ongoing development projects are expected to continue within the cumulative study area. Large portions of the cumulative study area are rural areas that have not been subject to development and are currently designated as open space. It is anticipated that undisturbed tribal cultural resources could be present in these largely undisturbed areas. Due to the potential for substantial unknown resources to be present with the study area and the potential for new development to occur largely within previously undisturbed sites, cumulative impacts would result.

The proposed General Plan includes changes in land use designations from open space to a variety of urban uses and also facilitates further industrial growth inclusive of BIG in vacant areas; therefore, development under the proposed General Plan would constitute a cumulatively considerable contribution to impacts on tribal cultural resources throughout the study area. This cumulative impact would be significant and unavoidable.

BIG Construction and Operations

Impacts to tribal cultural resources that would occur as a result of BIG was assessed through consultation with Native American tribes. The results of consultation indicate that all prehistoric archaeological resources, which include the 19 eligible resources, are tribal cultural resources. Additionally, BIG maintains a high sensitivity for previously unrecorded buried or surface-level tribal cultural resources to be impacted by construction activities. As such, despite compliance with the established regulatory framework and implementation of mitigation (**MM BIG CUL-1** through **MM BIG CUL-8**), BIG would cause a substantial adverse change in the significance of a tribal cultural resource, and impacts would be significant and unavoidable.

Similar to the proposed General Plan, cumulative development within the unincorporated County and City would contribute to the cumulative loss of tribal cultural resources within the study area. BIG represents a transition in the area from vacant land and open space to urban uses. Because of the order of magnitude of BIG relative to other cumulative development, despite mitigation BIG would result in a cumulatively considerable contribution to significant unavoidable impacts to tribal cultural resources. Regardless of mitigation, due to the high likelihood of previously unidentified tribal cultural resources that could be impacted by ground-disturbing activities, and given physical impacts may cause adverse effects to said resources even with processes in place to address inadvertent discoveries, construction impacts to these resources could occur. No additional feasible mitigation exists.

6.6.17 UTILITIES AND SERVICE SYSTEMS

Impact 5-17	Would the Project make a cumulatively considerable contribution to a significant cumulative impact regarding utilities and service systems?

Proposed General Plan

The study area for utilities is unique to each service, as detailed in **Table 6-1**. Future development projects under the proposed General Plan would create additional demand for water and energy and would generate additional wastewater, solid waste, and stormwater runoff. However, the existing infrastructure, service providers, and compliance with federal, State, and local regulations are projected to meet future growth for the proposed General Plan area. In addition, the proposed General Plan includes policies related to land use, water quality, solid waste, water conservation, and utility coordination that would contribute to minimizing impacts to utilities and service systems. The environmental impacts resulting from the physical construction needed for the upgrade and maintenance of utilities and service systems that are needed to accommodate projected growth in the General Plan are discussed in **Sections 5.1** through **5.17**. While most of the impacts can be mitigated to a less than significant level, certain impacts (i.e., concerning aesthetics, air quality, cultural resources, noise and vibration, tribal cultural resources) would remain significant despite the application of mitigation measures. Therefore, the physical impacts of utility upgrade and maintenance consistent with the proposed General Plan would be significant and unavoidable.

Cumulative development within the service area of each provider also would be required to comply with applicable State and local regulations, the CWP or General Plan policy and undergo subsequent CEQA review. Because all development outside the Plan Area cannot be known at this time, it is possible that future cumulative development could result in significant impacts related to water supply, water waste treatment, solid waste disposal capacity or stormwater and drainage systems. Also, cumulative projects could result in similar impacts as the project related to the construction of new utility infrastructure. However, the proposed General Plan would not result in a cumulatively considerable contribution to significant impacts given the mitigating effects of compliance with the established regulatory framework.

BIG Construction and Operations

The study area for utilities is unique to each service, as detailed in **Table 6-1**. BIG construction and operations would require relocation and construction of new or expanded water, wastewater, stormwater drainage, electric power, natural gas, and telecommunications facilities. BIG would be subject to compliance with utility construction-centric standards. Notwithstanding, construction and/or relocation of these facilities would cause significant environmental effects, as detailed for BIG's overall environmental analyses in **Sections 5.1** through **5.17**. As concluded in these sections, BIG's environmental impacts have been mitigated to the extent feasible with incorporation of the mitigation measures specified in **Sections 5.1** through **5.17**. However, certain impacts (i.e., concerning aesthetics, air quality, cultural resources, noise and vibration, tribal cultural resources) would remain significant despite mitigation, thus would result in significant unavoidable environmental impacts.

Water purveyors have concluded that sufficient water supplies would be available to serve BIG and reasonably foreseeable future development, and the local wastewater treatment facility would have adequate capacity to serve BIG's projected construction and operational demands in addition to the plant's existing commitments, resulting in a less than significant impact. Solid waste generated during BIG construction and operations would be within the capacity of the Barstow Sanitary Landfill.

Future development within the City and County would be required to demonstrate adequate availability of water supply, wastewater treatment capacity and landfill capacity. Nonetheless, cumulative development within the service areas of various utility providers could result in an additive increase in demand for water supply, wastewater treatment, storm drain capacity and solid waste disposal. Also, cumulative projects could result in similar impacts as the project related to the construction of new utility infrastructure, and contribute to significant impacts to various resource areas as the project. Because of the order of magnitude of BIG relative to other cumulative development, despite mitigation BIG would result in a cumulatively considerable contribution to significant unavoidable impacts associated with utilities. Mitigation is detailed in **Sections 5.1** through **5.17.** No additional feasible mitigation has been identified for cumulative impacts to those resources areas.

6.7 REFERENCES

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