

**Kings Beach Commercial Core
Improvement Project**

**Final Supplemental
Environmental Impact Statement**

Prepared for:

Tahoe Regional Planning Agency through contract to
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List of Acronyms

ADT	Average Daily Traffic
Assembly Bill 32	California Global Warming Solutions Act of 2006
BMPs	best management practices
BPMP	Lake Tahoe Regional Bicycle and Pedestrian Master Plan
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CEQA	California Environmental Quality Act
CH ₄	methane
CNEL	community noise equivalent level
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ eq	CO ₂ equivalent
dB	decibel
Draft Supplemental EIS	Draft Supplemental Environmental Impact Statement
EA/EIR/EIS	environmental assessment/environmental impact report/environmental impact statement
EIP	Environmental Improvement Project
EIS	Environmental Impact Statement
Final Supplemental EIS	Final Supplemental Environmental Impact Statement
GHG	greenhouse gas
KBCC	Kings Beach Commercial Core
KBCCIP	Kings Beach Commercial Core Improvement Project
KBCP	Kings Beach Community Plan
LCFS	low carbon fuel standard
LDL	Larson David Laboratories
LOS	level of service
MMRP	mitigation monitoring or reporting program
N ₂ O	nitrous oxide
NEPA	National Environmental Policy Act
NOP	Notice of Preparation
NTMP	Neighborhood Traffic Management Plan
proposed action	Kings Beach Commercial Core Improvement Project
TRPA	Tahoe Regional Planning Agency
VMT	vehicle miles traveled

Executive Summary

This public document, prepared in conformance with the Tahoe Regional Planning Agency (TRPA) Compact and all relevant TRPA environmental rules and regulations, serves as a Final Supplement to the Final Environmental Assessment/Environmental Impact Report/Environmental Impact Statement (Final EA/EIR/EIS) prepared for the Kings Beach Commercial Core Improvement Project (KBCCIP). TRPA previously certified the Final EA/EIR/EIS for the KBCCIP on June 25, 2008. However, since certification of the environmental document, TRPA requested additional information relating to the project, and TRPA determined such information warranted the creation and distribution of a Supplemental EIS to satisfy TRPA environmental documentation requirements.

ES.1 Project Description

The Kings Beach Commercial Core Improvement Project (proposed action) is located in the community of Kings Beach, which is situated along the north shore of Lake Tahoe in Placer County, California. Specifically, the proposed action is located in portions of the Northeast ¼ of Section 13, Township 16 North, Range 17 East, Mount Diablo Baseline and Meridian and the West ½ of Section 19, Township 16 North, Range 18 East, MDB&M.

The purpose of the proposed action is to address bicycle and pedestrian circulation, preservation of scenery, and water quality needs within the Kings Beach Commercial Core area in a manner consistent with the Kings Beach Community Plan (KBCP).

As currently proposed, elements of the proposed action include roadway improvements to SR 28 to accommodate anticipated future transit and pedestrian needs; the installation of sidewalks, curbs, gutters, storm drains, and water quality facilities at specific locations; drainage ditch lining and revegetation at specific locations; streetscaping; the designation of specific road sites as on-street parking; and the construction of new, off-street parking

lots at specific locations within the action area. The project is included in the Lake Tahoe Regional Transportation Plan, “Mobility 2030”, and the 2008 Federal Transportation Improvement Program.

Placer County initially studied four alternatives for the improvements to SR 28 within the Draft environmental assessment/environmental impact report/environmental impact statement (EA/EIR/EIS). Two of the build alternatives propose to change the existing four lane roadway to a three lane roadway, while one build alternative maintains a four lane configuration.

In the Final EA/EIR/EIS, Placer County identified a “Hybrid Alternative” as the preferred alternative that includes three travel lanes, bike lanes, seasonal on-street parking and sidewalks. Roundabouts are included at the intersections of SR 28/Bear Street and SR 28/Coon Street. The Hybrid Alternative includes a Neighborhood Traffic Management Plan that incorporates traffic calming and noise-reducing improvements in the adjacent neighborhood to minimize some effects of anticipated cut through traffic identified in the Final EA/EIR/EIS.

ES.2 Project Background and Status

A joint draft EA/EIR/EIS that assessed the potential adverse effects of the Kings Beach Commercial Core Improvement Project was circulated for public review and comment from March 2007, through June 2007. A Final EA/EIR/EIS was completed in May 2008. The draft and final documents were prepared in accordance with the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA), and the TRPA Compact and all relevant TRPA environmental rules and regulations. The draft and final documents were also prepared in compliance with the Council on Environmental Quality Guidelines (*40 Code of Federal Regulations [CFR] 1500 to 1508*), State CEQA Guidelines (*14 California Code of Regulations [CCR] 14000 et seq.*), and the U.S. Department of Transportation’s Environmental Impact and Related Procedures (*23 CFR 771*).

Although the improvement project is on the State Highway System, Caltrans delegated its CEQA lead agency role to Placer County, and Placer County is the project proponent and the lead agency under CEQA. FHWA's responsibility for environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by California Department of Transportation (Caltrans) under its assumption of responsibility pursuant to *23 U.S. Government Code (U.S.C) 327*. Caltrans is the lead agency under NEPA.

Placer County certified the Final EA/EIR/EIS and approved the preferred project alternative (3-lane hybrid) on July 22, 2008, adopted the Final Findings of Fact and Statement of Overriding Considerations for the 3-lane hybrid on September 23, 2008, and approved a community plan amendment recognizing State Route 28 as a 3-lane facility through Kings Beach on September 23, 2008. Placer County (CEQA lead agency) does not have additional discretionary approvals regarding this project and, pursuant to State CEQA Guidelines Section 15162(c), does not intend this document to supplement or augment the already certified CEQA document.

The TRPA Governing Board certified the Final EA/EIR/EIS on June 25, 2008. However, at that meeting, the TRPA Governing Board chose not to approve the preferred "hybrid" project alternative and the corresponding community plan amendments recognizing State Route 28 as a 3-lane facility through Kings Beach. Then, on July 23, 2008, the TRPA Governing Board voted to reconsider their decision on the project.

During deliberations regarding possible reconsideration of the project, TRPA expressed concern that additional traffic in the Kings Beach "grid" neighborhood could affect noise levels and air quality relating to both criteria pollutants within the grid neighborhood and greenhouse gas (GHG) emissions relating to the project as a whole. These environmental resources were evaluated in the Final EA/EIR/EIS, but not necessarily across the geographic area that included the residential "grid" area of Kings Beach where cut-through traffic was expected to occur. TRPA determined that a supplement to the Final EIS should be prepared to examine the effects of noise and air quality identified with the

project's preferred alternative. Related to this concern, TRPA requested additional information relating to key elements of the Neighborhood Traffic Management Plan (NTMP) and asked for more detailed discussion of measures that may be contained within the NTMP.

In the capacity as an applicant, Placer County agreed to prepare a Supplemental EIS to specifically comply with TRPA requests and requirements. The Draft Supplemental EIS was circulated for a public review period from August 19, 2009 to October 18, 2009. This Final Supplemental EIS documents all comments received on the Draft Supplemental EIS during that public review period as well as the responses to those comments. The Final Supplemental EIS clarifies the EIS previously certified by TRPA and supplements the analyses of noise and air quality in the previously certified EIS. Placer County (CEQA lead agency) does not have additional discretionary approvals regarding this project and, pursuant to State CEQA Guidelines Section 15162(c), does not intend this document to supplement or augment the already certified CEQA document.

ES.3 Purpose and Need for Supplemental EIS

Since certification of the environmental document, TRPA requested additional information relating to the project with regards to noise levels. In addition, language relating to air quality has been included in the Final Supplemental EIS to clarify impacts on air quality within the grid neighborhood. As such, TRPA has determined such information warrants the creation and distribution of this Final Supplemental EIS to satisfy TRPA environmental documentation requirements.

ES.4 Public Review Process

In accordance with TRPA Code 5.8.A (4), the Draft Supplemental EIS was distributed for a 60-day public comment period.

The public review period provided the opportunity for agencies, organizations, and members of the public to provide comments on the new analysis and information

published in the Draft Supplemental EIS only. Because it was a supplement document and was not a recirculation of the Draft or Final EA/EIR/EIS, TRPA was not obligated to accept comments on the previously published Draft or Final EA/EIR/EIS; the Draft EA/EIR/EIS document was circulated for a 90-day public comment period, which closed May 26, 2007 to fulfill CEQA and NEPA requirements and June 18, 2007 to fulfill TRPA requirements, and the Final EA/EIR/EIS document was published in May 2008. The comment period for the Draft Supplemental EIS, began on August 19, 2009, and ended on October 18, 2009, was limited only to the new information presented in the Draft Supplemental EIS.

Written comments on the Draft Supplemental EIS are responded to in this Final Supplemental EIS. Any revisions to the Draft Supplemental EIS, made in response to the received comments, will be considered by the TRPA Governing Board prior to rendering a decision on certification of the Final Supplemental EIS and a decision on the preferred project alternative (3-lane hybrid).

ES.5 Key Environmental Issues Addressed

The following key issues are evaluated in this Final Supplemental EIS.

- **Air Quality**—Issues raised include: consideration of emissions from diverted or cut-through traffic in the grid neighborhood of Kings Beach forecasted to occur during high traffic volume periods. Another air quality concern from a cumulative perspective analyzed in the Final Supplemental EIS includes minor amounts of GHG) emissions when compared to existing and future no-build conditions. The evaluation of GHG impacts is evaluated from a cumulative perspective.
- **Noise**—Issues raised include: potential noise impacts associated with cut-through or diverted traffic in the grid neighborhood as a result of forecasted delays in travel times as associated with some of the project alternatives including the preferred alternative.

- **NTMP**—Issues raised include: TRPA requested that the NTMP be developed to a conceptual level before approval of the project, rather than left to the final design stages of the project development as described within the Final EA/EIR/EIS. Consequently, a Conceptual NTMP was drafted, and this Final Supplemental EIS includes an environmental impact analysis of that Plan.

ES.6 Significant Impacts and Mitigation Summary

As stated above, this Final Supplemental EIS has been prepared to evaluate the potential for significant adverse effects on the environment that had not been considered previously in the Final EA/EIR/EIS relating to noise and air quality.

The Final Supplemental EIS analysis concludes that there is the potential for significant noise impacts due to diverted or cut-through traffic in “the grid” neighborhood of Kings Beach. The potential noise impacts are expected to occur during the forecasted high traffic volume periods in 2028 after buildout of the community plans within the region. To mitigate the potential noise impacts, the Final Supplemental EIS suggests overlaying certain roads within “the grid” neighborhood with noise-reducing asphalt material to reduce this impact to less than significant.

Two aspects of air quality have been covered by this Final Supplemental EIS. First, the potential for greenhouse gas emissions impacts caused by the project has been analyzed. In order to adequately consider this issue some information within the Air Quality chapter of the document has been updated to clarify impacts on air quality within the grid neighborhood. The analysis found that there is no significant impact from the project on air quality related to green house gas emissions. Second, it has been determined that clarification is needed to explicitly address air quality impacts within the grid neighborhood finds that no air quality impacts would occur within the grid neighborhood. This supplement concludes that there are no significant air quality impacts will occur within the grid neighborhood. Note that all new analysis done (and included herein) does not change any conclusions within the Air Quality or Cumulative Impacts chapters of the

Final EA/EIR/EIS as approved by TRPA June 25, 2008. No impacts identified in the Final Supplemental EIS were more severe than those identified in the Final EA/EIR/EIS.

Table ES-1 presents a summary of potential impacts identified, and if there are required mitigation measures based on the analysis presented in the Final Supplemental EIS.

Table ES-1. Significant Impacts and Mitigation Summary

Significant Impacts	Mitigation Measures
Air Quality	
No Impact/less than significant.	No mitigation required.
Noise	
Impact 5-1: Alternative 3 would result in significant noise levels in excess of TRPA standards.	Mitigation Measure 5-1: Employ Traffic Noise-Reduction Design Features into Design of the Proposed Project.

Chapter 1. Introduction

1.1 Project Overview and Status

This public document, prepared in conformance with the TRPA Compact and all relevant TRPA environmental rules and regulations, serves as a Final Supplemental EIS to the Final EA/EIR/EIS prepared for the KBCCIP. TRPA certified the Final EA/EIR/EIS for the KBCCIP on June 25, 2008. However, since certification of the environmental document, TRPA requested additional information relating to the project, and TRPA has determined such information warrants the creation and distribution of this Final Supplemental EIS to satisfy TRPA environmental documentation requirements.

A joint Draft EA/EIR/EIS that assessed the potential adverse effects of the Kings Beach Commercial Core Improvement Project was circulated for public review and comment from March, 2007, through June, 2007. A Final EA/EIR/EIS was completed in May 2008. Placer County certified the Final EA/EIR/EIS and approved the preferred project alternative (3-lane hybrid) on July 22, 2008, adopted the Final Findings of Fact and Statement of Overriding Considerations for the 3-lane hybrid on September 23, 2008, and approved a community plan amendment recognizing State Route 28 as a 3-lane facility through Kings Beach on September 23, 2008.

The TRPA Governing Board certified the Final EA/EIR/EIS on June 25, 2008. However, at that meeting, the TRPA Governing Board chose not to approve the preferred “hybrid” project alternative and the corresponding community plan amendments recognizing State Route 28 as a 3-lane facility through Kings Beach. Then, on July 23, 2008, the TRPA Governing Board voted to reconsider their decision on the project.

During deliberations regarding possible reconsideration of the project, TRPA expressed concern that additional traffic in the Kings Beach “grid” neighborhood could affect noise levels and air quality relating to both criteria pollutants within the grid neighborhood and GHG emissions relating to the project as a whole. These environmental resources were

evaluated in the Final EA/EIR/EIS, but not necessarily across the geographic area that included the residential “grid” area of Kings Beach where cut-through traffic was expected to occur. As a result, TRPA determined that a supplement to the Final EA/EIR/EIS should be prepared to examine the effects of noise and air quality as related to and identified with the project’s preferred alternative.

In the capacity as an applicant, Placer County has agreed to prepare this Final Supplemental EIS to specifically comply with TRPA requests and requirements. With the creation of this document, TRPA intends to comply with all recirculation requirements of the TRPA Compact and all relevant TRPA environmental rules and regulations. The Final Supplemental EIS clarifies the Final EA/EIR/EIS previously certified by TRPA and supplements the analyses of noise and air quality in the previously certified Final EA/EIR/EIS. Placer County (CEQA lead agency) does not have additional discretionary approvals regarding this project and, pursuant to State CEQA Guidelines Section 15162(c), does not intend this document to supplement or augment the already certified CEQA document.

1.2 Purpose and Need for Supplemental EIS

According to Section 6.15, Article 6 of the TRPA Rules of Procedure, a supplemental EIS is required following preparation of an EIS if any of the following circumstances apply:

- (1) Subsequent changes are proposed in the project which involve new significant adverse effects not considered in the prior EIS; or
- (2) Substantial changes occur with respect to circumstances under which the project is undertaken, which involve new significant adverse effects not considered in the prior EIS; or
- (3) New information of substantial importance becomes available that shows any of the following:

- i. The project may have a significant adverse effect not considered in the prior EIS;
- ii. Significant adverse effects would be substantially more severe than previously discussed in the prior EIS; or
- iii. Mitigation measures or alternatives, previously not found to be feasible or not previously discussed, would substantially reduce a significant adverse effect of the project or matter which has not already been reduced to a less than significant level.

The project's preferred alternative results in potentially high traffic volumes that divert off of SR 28 during certain busy times of the year and use local County roadways to avoid congestion on the highway. Traffic impacts were clearly identified in the Final EA/EIR/EIS as significant, and even with proposed traffic calming mitigation, the impact is still considered significant and unavoidable. As a result, TRPA concluded that certain project resources including noise and air quality should be analyzed in the residential/commercial area of Kings Beach (where diverted traffic is forecasted to occur) that were not evaluated as part of the Draft or Final EA/EIR/EIS documents. TRPA determined that a Draft Supplemental EIS shall be prepared to evaluate the potential for significant adverse effects on the environment that have not been considered previously. No impacts identified in the Draft Supplemental EIS were more severe than those identified in the Final EA/EIR/EIS.

Section 6.17, Article 6 of the TRPA Rules of Procedure allows that “[a]ll or part of other documents, including prior EISs, may be incorporated for reference in environmental documents.” This Final Supplemental EIS contains new information regarding environmental impacts not previously evaluated. All information included in the final EA/EIR/EIS, published in May 2008, remains relevant and applicable, unless as noted herein, and is hereby incorporated by reference. This Final Supplemental EIS adds but does not replace the Final EA/EIR/EIS; it supplements the Final EA/EIR/EIS and is not intended as a stand-alone document. Information provided in the Final EA/EIR/EIS about environmental conditions and trends, regulatory considerations, thresholds of

significance, and environmental impact analysis for the project, remains applicable to the analysis contained in this Final Supplemental EIS and is referenced throughout this document, unless as specifically noted. The Final Supplemental EIS does not result in any changes to the Project Description of the Final EA/EIR/EIS. To review the full environmental analysis provided for the project, refer to the Final EA/EIR/EIS along with this Final Supplemental EIS. The Final EA/EIR/EIS is available at Placer County's Public Works office at 10825 Pioneer Trail, Suite 105, Truckee, CA, and is also available online at <http://www.placer.ca.gov/Departments/Works/Projects/KingsBeach/KingsBeachCurrentUpdate.aspx>.

1.3 Contents and Format of the Final Supplemental EIS

As stated above, this Final Supplemental EIS has been prepared to evaluate the potential for significant adverse effects on the environment resulting from the increased vehicular traffic forecasted to occur in the residential “grid” area of Kings Beach during periods of high traffic volume on SR28. The document is organized as follows:

- The Executive Summary presents a summary of proposed project, the purpose and need for the project and this Final Supplemental EIS, and provides a summary of potential environmental impacts and mitigation measures.
- Chapter 1—Introduction: Provides an overview and status of the proposed project, describes the purpose of the original EA/EIR/EIS and the purpose of and need for a Supplemental EIS, and provides information about the public review process for the Supplemental EIS.
- Chapter 2—Project Description: Provides a summary of the purpose and need and description of the proposed project.
- Chapter 3—Air Quality: Provides clarification of air quality impacts (Chapters 3.1, 4, and 5 of the Final EA/EIR/EIS).

- Chapter 4—Neighborhood Traffic Management Plan: Describes the key elements and performance standards of the developed NTMP.
- Chapter 5—Noise: Provides an evaluation of noise impacts within the “grid” neighborhood of Kings Beach (Chapters 3.9, 4, and 5 of the Final EA/EIR/EIS).
- Chapter 6—Cumulative Impacts: Provides an evaluation of cumulative GHG impacts.
- Chapter 7—Comments: Includes all the comment letters received for the Draft Supplemental EIS.
- Chapter 8—Responses to Comments on the Draft Supplemental EIS: Provides the responses to all comments received on the Draft Supplemental EIS.
- Chapter 9—Text Changes to the Draft Supplemental EIS: Provides a summary of the text changes made to the Final EA/EIR/EIS based on the Supplemental EIS and text changes made to the Draft Supplemental EIS based on comments received.
- Chapter 10—List of Preparers: Provides a list of preparers who worked on the Final Supplemental EIS.
- Chapter 11—References Cited: Provides any additional references cited in the Final Supplemental EIS (Chapter 8 of the Final EA/EIR/EIS).
- Appendices: Various appendices are included to offer additional documentation of resources used in preparing this Final Supplemental EIS.

Within each chapter, potential environmental impacts for each resource evaluated are identified and discussed. The existing conditions and the standards that were used to identify potential impacts are not described in this Final Supplemental EIS, unless they differ from the information provided in the original Final EA/EIR/EIS. The information found within this Final Supplemental EIS is consistent with the related chapters of the Final EA/EIR/EIS, unless otherwise specified. The potential significant impacts for each resource evaluated are presented, along with required mitigation measures, followed by the potential non-significant impacts, and then the potential beneficial impacts.

1.4 Public Review Process

In accordance with TRPA Code 5.8.A (4), the Draft Supplemental EIS was distributed for a 60-day public comment period. The Draft Supplemental EIS was distributed to various public agencies, the State Clearinghouse, residents of the Kings Beach community, and other interested individuals for public review. In order to fulfill TRPA requirements, the public review period was open from August 19, 2009 to October 18, 2009. Copies of the Draft Supplemental EIS were available for public review during normal business hours at the Department of Public Works-Tahoe Design Division (Truckee), the Community Development Resource Agency (Tahoe City), the North Tahoe Conference Center (Kings Beach), the North Tahoe Business Association (Kings Beach), the North Tahoe Public Utility District (Tahoe Vista), and the Tahoe Regional Planning Agency Office (South Lake Tahoe). Copies of the Draft Supplemental EIS were also available for review at the Kings Beach, Tahoe City, and Incline Village public libraries; Placer County's website (<http://www.placer.ca.gov/Works/Projects/KingsBeach.aspx>); and various other locations.

The Final Supplemental EIS allows the public and lead agencies to review revisions to the Draft Supplemental EIS in addition to comments received and responses to comments. This Final Supplemental EIS will serve as a supplement to the environmental document used by TRPA when considering whether to approve the project.

Once the Draft Supplemental EIS is circulated and comments have been received, the Final Supplemental EIS is prepared to discuss substantive comments received on the Draft Supplemental EIS, respond adequately to all comments received, and describe any mitigation measures that are to be incorporated into the proposed action.

Chapter 2. Project Description

2.1 Project Location

The Kings Beach Commercial Core Improvement Project is located in the community of Kings Beach, which is situated along the north shore of Lake Tahoe in Placer County, California. Specifically, the proposed action is located in portions of the Northeast $\frac{1}{4}$ of Section 13, Township 16 North, Range 17 East, Mount Diablo Baseline and Meridian and the West $\frac{1}{2}$ of Section 19, Township 16 North, Range 18 East, MDB&M (Figure 2-1).

2.2 Purpose and Need

In summary, the purpose of the proposed action is to address bicycle and pedestrian circulation, preservation of scenery, and water quality needs within the Kings Beach Commercial Core area in a manner consistent with the KBCP.

2.3 Project Elements and Alternatives Considered

The proposed action is located in the community of Kings Beach, which is situated along the north shore of Lake Tahoe in Placer County, California. The action area contains both residential and commercial properties and receives high vehicular and pedestrian traffic year-round.

As currently proposed, elements of the proposed action include roadway improvements to SR 28 to accommodate anticipated future transit and pedestrian needs; the installation of sidewalks, curbs, gutters, storm drains, and water quality facilities at specific locations; drainage ditch lining and revegetation at specific locations; streetscaping; the designation of specific road sites as on-street parking; and the construction of new, off-street parking lots at specific locations within the action area. The project is included in the Lake Tahoe Regional Transportation Plan “Mobility 2030”, and the 2008 Federal Transportation Improvement Program.

Placer County initially studied four alternatives for the improvements to SR 28 within the Draft EA/EIR/EIS which was reduced to three build alternatives in the Final EA/EIR/EIS. Two of the build alternatives propose to change the existing four lane roadway to a three lane roadway, while one build alternative maintains a four lane configuration. Please see the Final EA/EIR/EIS for figures and full descriptions of the alternatives considered.

As indicated in the Final EA/EIR/EIS, Placer County has identified a “Hybrid Alternative” as the preferred alternative that includes three travel lanes, bike lanes, seasonal on-street parking and sidewalks. Roundabouts are included at the intersections of SR 28/Bear Street and SR 28/Coon Street. The Hybrid Alternative includes a Neighborhood Traffic Management Plan that incorporates traffic calming and noise-reducing improvements in the adjacent neighborhood to minimize some effects of anticipated cut through traffic identified in the Final EA/EIR/EIS.

The Kings Beach Commercial Core Improvement Project (KBCCIP) is identified in and is consistent with the following adopted plans, including, but not limited to:

- Environmental Improvement Project (EIP) Project Numbers: 15,733, 787, and 10060 – Kings Beach Commercial Core
- Tahoe Regional Planning Agency (TRPA) Regional Plan for the Lake Tahoe Basin
- TRPA Lake Tahoe Regional Bicycle and Pedestrian Master Plan (BPMP)
- Placer County Regional Bikeway Plan
- Kings Beach Community Plan (1996)
- North Lake Tahoe Redevelopment Plan (1995)

The Kings Beach Commercial Core environmental process produced a Notice of Preparation (NOP) in December 2002, a Draft EA/EIR/EIS in March 2007, and a Final EA/EIR/EIS in May 2008.



Figure 2-1
Kings Beach Commercial Core Improvement Project
Vicinity and Location Map

Chapter 3. Air Quality

3.1 Introduction

Section 3.1 of the Draft and Final EA/EIR/EIS for the Kings Beach Commercial Core Improvement Project addresses air quality and the findings from the Draft and Final EA/EIR/EIS and are not repeated here. Please refer to the Draft and Final EA/EIR/EIS. This chapter within the Final Supplemental EIS identifies the potential environmental impacts to air quality from diverted or cut-through traffic in the grid neighborhood of Kings Beach forecasted to occur during high traffic volume periods. This analysis does not conflict with Section 3.1 of the Draft and Final EA/EIR/EIS, unless otherwise noted within this chapter.

TRPA requested clarification relating to impacts on air quality within the grid neighborhood. The document currently states that the worst case scenario does not trigger significance thresholds on the highway itself. Because the source of potential pollutants comes from the highway, moving away from the location of the source will only lessen potential impacts. Therefore, in terms of air quality the grid neighborhood will not be impacted by the project. While this conclusion could be implicitly drawn from the current language within the Final EA/EIR/EIS, TRPA has requested that this analytical step be made explicit with additional clarifying language. Typically this could be done with an addendum to the Final EA/EIR/EIS, but due to the need to discuss noise in a supplemental format, this clarifying language relating to air quality has been included below.

3.2 Changes to Language of Section 3.1 of the Final EA/EIR/EIS

Within Section 3.1 of the Final EA/EIR/EIS, this Final Supplemental EIS clarifies the implicit conclusion within the Final EA/EIR/EIS that there is no impact on air quality within the grid neighborhood:

The second full paragraph on page 3.1-32 of the Final EA/EIR/EIS shall now read:

Increases of CO concentrations at locations near congested intersections affected by the proposed action were modeled with the CALINE4 dispersion model. The modeling was performed at the intersections of SR 28/SR 267, SR 28/Secline Street, SR 28/Deer Street, SR 28/Bear Street, SR 28/Coon Street, SR 28/Fox Street, and SR 28/Chipmunk Street using the highest winter peak hour traffic data. These intersections have substantially higher traffic volumes and congestion levels than the roadways through the grid neighborhood of Kings Beach. The conditions modeled were existing 2008 with project and 2028 with project. It should be noted that the existing conditions had the highest modeled concentrations; emissions under future conditions are anticipated to be lower because of continuing improvements in engine technology and the retirement of older, higher-emitting vehicles. Modeled CO concentrations plus background CO levels from the nearest monitoring station are presented in Table 3.1-6. As shown, emissions of CO hotspots are not anticipated to exceed the federal or state 1- and 8-hour standards. In addition, as previously indicated, the intersections analyzed in this analysis have substantially higher traffic volumes and congestion levels than the roadways through the grid neighborhood of Kings Beach. This analysis represents a worst-case scenario, and as such, as it is anticipated that CO concentrations within the project as a whole and the grid neighborhood of Kings Beach would be lower than those indicated in Table 3.1-6. Consequently, CO concentrations along roadways in the grid neighborhood of Kings Beach are not anticipated to exceed standards.

The last full paragraph on page 3.1-40 of the Final EA/EIR/EIS shall now read:

Modeled CO concentrations associated with implementation of the alternatives are presented in Table 3.1-6. The modeled CO emissions presented in Table 3.1-6 indicate that emissions of CO hotspots are anticipated to comply with TRPA code for intersections along SR 28 and within the grid neighborhood of Kings Beach.

3.3 Changes to Language of Section 4 of the Final EA/EIR/EIS

Within Section 4 of the Final EA/EIR/EIS, this Final Supplemental EIS clarifies the implicit conclusion within the Final EA/EIR/EIS that there is no impact on air quality within the grid neighborhood:

The last full paragraph on page 4-8 of the Final EA/EIR/EIS shall now read:

The carbon monoxide modeling for the proposed action found that existing and future concentrations from vehicle idling would not exceed existing state, federal, or TRPA standards intersections along SR 28 and within the grid neighborhood of Kings Beach. This modeling was based on traffic volumes at intersections with the highest traffic volumes and congestion levels in the KBCCIP area that assumed cumulative growth throughout the northern Lake Tahoe area. Consequently, neither of the alternatives would result in a substantial cumulative effect.

3.4 Changes to Language of Section 5 of the Final EA/EIR/EIS

Within Section 5 of the Final EA/EIR/EIS, this Final Supplemental EIS clarifies the implicit conclusion within the Final EA/EIR/EIS that there is no impact on air quality within the grid neighborhood:

The second full paragraph on page 5-8 of the Final EA/EIR/EIS shall now read:

Table 3.1-6 indicates that CO concentrations resulting from Alternative 1 would not exceed the federal or state 1- and 8- hour standards at intersections along SR 28 and within the grid neighborhood of Kings Beach. Consequently, this impact is considered **less than significant**, and no mitigation is required.

The third full paragraph on page 5-8 of the Final EA/EIR/EIS shall now read:

Modeled CO concentrations plus background CO levels for Alternatives 2, 3, and 4 are presented in Table 3.1-6 and indicate emissions of CO hotspots are not anticipated to exceed the federal or state 1- and 8-hour standards at intersections

along SR 28 and within the grid neighborhood of Kings Beach. Consequently, this impact is considered **less than significant**, and no mitigation is required.

Chapter 4. Neighborhood Traffic Management Plan

4.1 Introduction

Chapter 3.6 of the Final EA/EIR/EIS identified a significant and unavoidable impact in the cumulative condition (2028+) for the proposed project associated with some vehicles choosing to divert through the adjacent residential community in order to avoid traffic congestion on SR 28. While the analysis in Chapter 3.6 indicates that periods when traffic volumes exceed roadway capacity would occur on only a limited number of days per year under current transportation activity levels on State Route 28, potential future growth in traffic volumes could significantly increase the number of hours and days per year that drivers would likely use local streets.

Mitigation measure TRAF-1 identified in the Final EA/EIR/EIS calls for preparation of a NTMP to minimize some of the impacts associated with cut through traffic. The description in the Final EA/EIR/EIS presents some education and enforcement strategies, as well as a general list of potential roadway modifications. Concerns were raised by TRPA relating to the general nature of this Plan. To address this concern, the County added detail to the Plan and completed a more specific conceptual plan in October of 2008. This section of the Final Supplemental EIS describes the development of the Conceptual NTMP, as well as key elements and performance standards of the Conceptual NTMP. No new additional impacts are anticipated with adoption of the Conceptual NTMP. However, if different activities are determined to be necessary during construction of the project, additional environmental review of those measures may be required. The Conceptual NTMP and this Chapter of the Final Supplemental EIS are not in conflict with Chapter 3.6 of the Final EA/EIR/EIS, unless otherwise stated. No changes are needed within the Traffic impacts chapter (Chapter 3.6) of the Final EA/EIR/EIS.

4.2 Development of the Conceptual NTMP

To develop the Conceptual NTMP, a Focus Group was formed with five community members (3-Lane and 4-Lane project advocates), fire officials, transportation professionals, and County staff. This group brainstormed ideas while touring the Kings Beach community that were then incorporated into the NTMP. Although the focus of the NTMP concept was to address the issue of future traffic diverting into the neighborhood, the Focus Group identified current issues that needed to be addressed (particularly in regards to local school traffic). The Conceptual NTMP was developed to enhance current conditions in the residential grid as well as minimize some of the impacts associated with future cut through traffic.

In addition, two public open houses were held in Kings Beach to gain public input on the draft conceptual NTMP. The first, held at the North Tahoe Conference Center on Tuesday, October 7th, 2008, was conducted in English and was attended by approximately 120 persons. A second open house conducted in Spanish was held at the Kings Beach Elementary School on Thursday, October 9th, 2008 and was attended by approximately 15 persons. At both presentations, attendees were encouraged to discuss the conceptual plans with County and consultant staff, and to fill out comment cards. In addition, the draft plan was presented at a meeting of Project MANA at the Family Resource Center on Wednesday, October 16th, 2008. The approximately 80 persons in attendance were given the opportunity to review materials and provide input.

The draft NTMP was subsequently refined based upon the comments received at these public workshops. In particular, additional sidewalks were added along Fox Street, and additional speed humps added along Dolly Varden Avenue and Beaver Street. The draft NTMP, entitled the Conceptual Kings Beach Community Traffic Calming Plan (October 17, 2008) is attached to this Final Supplemental EIS as Appendix A.

4.3 Provisions of the Conceptual NTMP

The Conceptual NTMP proposes to control traffic speeds, minimize any noise and air impacts, and enhance safety by minimizing conflicts between vehicles, pedestrians, and cyclists. It is also intended to maximize the overall “live-ability” of the residential streets, despite any increase in traffic volumes associated with traffic conditions along SR 28.

The Conceptual NTMP will be implemented, and if site conditions or other issues result in significant modification during project design, then subsequent environmental review may be needed.

The proposed Conceptual NTMP includes the following specific components (Figures 4-1 and 4-2):

- Each street entering the “grid” has some form of traffic control (either a 2-lane choker or a traffic circle) to provide all drivers with a physical indication that they are entering a residential neighborhood. Also at these locations, speed limit signs would be installed and speed legends painted on the pavement in the inbound direction.
- Where grades are too steep for installation of traffic circles and where it is desirable to attain consistent spacing between traffic controls, speed humps or raised crosswalks are provided (where feasible given existing driveway and cross-street locations). These devices could either be installed seasonally, or permanently.
- A raised crosswalk will be installed along Dolly Varden Avenue between Deer Street and Wolf Street, at the location of an existing striped crosswalk providing access to the Kings Beach Elementary School. As there is no sidewalk on either side of Dolly Varden Avenue, this would require ramps between the raised crosswalk and existing grade on either side. To reinforce slower speeds along the section adjacent to the school and playfields, a speed hump is also provided along Dolly Varden Avenue west of Deer Street.
- On Coon Street at Loch Levon Avenue, the existing Stop signs facing Loch Levon are to be relocated to stop traffic on Coon Street, in order avoid a three-block-long

segment on Coon Street without traffic controls, as both traffic circles and speed humps cannot be installed along this section of Coon Street.

- A speed feedback sign would be provided facing eastbound traffic on Speckled Avenue between Wolf and Deer Streets to address the existing speeding observed along this roadway.
- Edge line striping (“fog lines”) along Fox Street, Coon Street, Speckled Avenue, and Dolly Varden Avenue, designating two ten-foot travel lanes along Fox, Coon, and Dolly Varden, and two twelve-foot travel lanes along Speckled Avenue (with the wider lane width reflecting the higher proportion of truck traffic serving the light industrial uses along Speckled Avenue).
- All striped crosswalks in the grid (such as near the Kings Beach Elementary School) would be repainted.
- Increased traffic enforcement will be considered, focusing on peak traffic periods when cut through traffic would be an issue.
- A rubberized asphalt or open gap asphalt overlay to minimize the effects of road noise on the following roads:
 - Beaver Street from SR 28 to Cutthroat Avenue;
 - Chipmunk Street from SR 28 to Salmon Street;
 - Fox Street from Salmon Street to Dolly Varden Street;
 - Salmon Street from Chipmunk Street to Fox Street;
 - Rainbow Avenue from Fox Street to Secline Street;
 - Dolly Varden Street from Fox Street to SR 267
- A pedestrian path/sidewalk, to be installed on Steelhead Avenue, Coon Street, Fox Street and Secline Street (in addition to the sidewalks to be provided along and immediately off of SR 28 as part of the overall project) to provide pedestrian connectivity (north/south as well as east/west) and thereby encourage walking.



06676.06 (08-09)



Source: LSC Transportation Consultants 2008

Figure 4-1
Kings Beach Neighborhood Traffic Management Program
Potential Mid-Block Traffic Device Locations



06676.06 (08-09)

Source: LSC Transportation Consultants 2008

Figure 4-2
Conceptual Kings Beach Neighborhood Traffic Calming Plan

- An option for east/west pedestrian connectivity is to install one or two one way streets on Steelhead Avenue and/or Loch Levon Avenue. The area no longer being used by cars could be striped for pedestrians and perhaps bicyclists.

4.4 Potential Impacts Associated with the Conceptual NTMP

The NTMP would include the use of traffic controls (2-lane choker or traffic circle), speed humps or raised crosswalks, relocated stop signs, pavement restriping, installation of pedestrian paths/sidewalks, and other measures designed to help alleviate traffic impacts through the grid neighborhood of Kings Beach. In general, most devices will be non-permanent fixtures. The features implemented as part of the NTMP are not anticipated to result in any potentially significant construction or operational impacts within the grid neighborhood.

However, to the extent that any NTMP components, such as potential sidewalks or traffic circles, result in minor alterations to the land, such alterations would be analyzed through TRPA's ministerial review processes. As such, best management practices (BMPs), minor controls, and other related requirements will be implemented to minimize any potential environmental impacts. For example, routine traffic control will be in place during road construction (Mitigation Measure TRA-3 in Section 3.6, Traffic, and Mitigation Measure UT-1 in Section 3.11, Public Services and Utilities of the Final EA/EIR/EIS) and water quality safeguards (Mitigation Measures WQ-1 and WQ-2 in Section 3.13, Water Quality, of the Final EA/EIR/EIS) will similarly be in place to avoid any erosion or release of soil to waterways. If any of the features of the NTMP go beyond the TRPA's ministerial review requirements, additional environmental review would be required by TRPA for such activities to identify and mitigate any potential significant impacts.

The identified significant and unavoidable impact relating to the cumulative condition (2028+) for the proposed project associated with some vehicles choosing to divert through the adjacent residential community in order to avoid traffic congestion on SR 28

still exists. As described above, the specific additions and changes to the Conceptual NTMP will lessen such impacts, but to be conservative TRPA still considers the impact significant.

Chapter 5. Noise

5.1 Introduction

This chapter identifies the potential environmental noise impacts from diverted or cut-through traffic in the grid neighborhood of Kings Beach forecasted to occur during high traffic volume periods. This assessment is based on the supplemental noise technical study—*Revised Environmental Noise Assessment: State Route 28 Internal Trips* (Appendix B). This analysis does not conflict with Section 3.9 of the Draft and Final EA/EIR/EIS, unless otherwise noted within this chapter. The assessment of traffic noise levels was conducted using the Federal Highway Administration Traffic Noise Prediction Model (FHWA RD77-108) and traffic volumes provided LSC Traffic Consultants.

5.2 Regulatory Considerations and Standards of Significance

TRPA has adopted environmental thresholds for the Lake Tahoe Region. The noise standards, or "Thresholds" as they are commonly referred to, are numerical community noise equivalent level (CNEL) values for various land use categories. The CNEL standard includes noise from all sources and is based on a not-to-exceed noise level at any place or time during a 24-hour period within the applicable Plan Area or Transportation Corridor. The TRPA Regional Plan has a noise element which establishes goals and policies for specific land uses. Table 5-1 summarizes TRPA Regional Plan cumulative noise level standards for various land uses.

Table 5-1. TRPA Regional Plan Cumulative Noise Level Standards

Land Use Category	CNEL, dBA
High Density Residential	55
Low Density Residential	50
Hotel/Motel	60
Commercial	60
Industrial	65
Urban Outdoor Recreation	55
Rural Outdoor Recreation	50
Wilderness and Roadless Areas	45
Critical Wildlife Areas	45
Policy Statement: It shall be a policy of the TRPA Governing Board in the development of the Regional Plan to define, locate, and establish CNEL levels for transportation corridors.	
Transportation Corridors	
Highway 50	65
Highways 89, 207, 28, 267 & 431	55
South Lake Tahoe Airport	60
Transportation Corridors ¹	

As a form of zoning, the TRPA has divided the Lake Tahoe Region into more than 175 separate Plan Areas. Boundaries for each of the Plan Areas have been established based on similar land uses and the unique character of each geographic area. For each Plan Area, a "Statement" is made as to how that particular area should be regulated to achieve regional environmental and land use objectives. As a part of each Statement, an outdoor CNEL standard is established. The project site is located within Plan Area 029 (Kings Beach Commercial, Special Area 2) which is covered by the KBCP. In addition, cut through traffic would also occur in Plan Area 031 (Brockway), Plan Area 028 (Kings Beach Residential), and the Kings Beach Industrial Community Plan Area. TRPA has established maximum noise level criteria, as well as standards for stationary or industrial noise (Table 5-2) and Plan Areas (Table 5-3).

Maximum Community Noise Level

1. Where applicable, a maximum 55 CNEL override for the Highway 28 corridor is permissible;
2. The maximum CNEL for Special Areas 3 and 4 is 55 CNEL;
3. The maximum CNEL for all areas of the Community Plan except as noted in 1 and 2 above is 65 CNEL;
4. The maximum CNEL for shorezone tolerance districts 6 and 7 is 55 CNEL and the maximum for the lake zone is 50 CNEL.

Table 5-2. Kings Beach Commercial Community Plan Stationary and Industrial Noise Sources Standards

Noise Level Descriptor	Daytime (7:00 a.m.–7:00 p.m.)	Nighttime (7:00 p.m.–7:00 a.m.)
Hourly L_{eq} , dB	55	45
Maximum Level, dB	75	65

¹ measured at the property line of a noise-sensitive receiving use

Table 5-3. Kings Beach Commercial Community Plan Area Noise Sources Standards

Plan Area Name	Plan Area #	CNEL Standard
Kings Beach Residential	PAS 028	55 dB
Brockway	PAS 031	55 dB
Kings Beach Industrial Community Plan	–	65 dB

Another means of determining a significant noise impact is to judge a person’s reaction to changes in noise levels due to a project. Table 5-4 is commonly used to show expected public reaction to changes in environmental noise levels. This table was developed on the basis of test subjects' reactions to changes in the levels of steady state pure tones or broad band noise and to changes in levels of a given noise source. It is probably most applicable to noise levels in the range of 50 to 70 dB, which is the usual range of voice and interior

noise levels. The TRPA staff policy is that an increase of +3 dB CNEL or more is considered to be significant.

Table 5-4. Subjective Reaction to Changes in Noise Levels of Similar Sources-

Change in Level (dB)	Subjective Reaction	Factor Change In Acoustical Energy
1	Imperceptible (Except for Tones)	1.3
3	Just Barely Perceptible (TRPA Level of Significance)	2.0
6	Clearly Noticeable	4.0
10	About Twice (or Half) as Loud	10.0

Source: Architectural Acoustics, M. David Egan, 1988.

5.3 Existing Noise Conditions and Trends

Existing conditions and trends with respect to noise within “the grid” neighborhood of Kings Beach was evaluated for the Final Supplemental EIS. Continuous hourly background noise level measurements at seven locations within the area where cut-through traffic may occur were conducted over a 24-hour period. Equipment used for the noise measurement surveys included Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters. The meters were calibrated before use with an LDL Model CA200 acoustical calibrator to ensure the accuracy of the measurements. The results of the 24-hour noise monitoring are summarized in Table 5-5.

Table 5-5. Summary of Ambient Noise Measurement Results

Site	Description	GPS Coord.	Plan Area #/ Community Plan	CNEL Standard (dB)	Measurement Date/Day	Measured CNEL (dB)	Attainment	CNEL Delta (dB)
Continuous Noise Measurement Sites								
A	S. of Minnow Ave. and 175' N. of SR 28	39°14'6.76"N 120° 1'6.48"W	K.B. C.P.	65	April 19, 2006/Wednesday	58.0	Yes	-7
B	N. of Salmon St. between Coon and Fox	39°14'10.90"N 120° 1'16.53"W	K.B. C.P.	65	April 21, 2006/Friday	62.3	Yes	-2.7
C	North of Salmon St. between Coon St. and Fox St.	39°14'10.59"N 120° 1'14.18"W	K.B. C.P.	65	Feb. 16, 2008/Saturday	51.9	Yes	-13.1
					Feb. 17, 2008/Sunday	51.5	Yes	-13.5
					Feb. 18, 2008/Monday	50.3	Yes	-14.7
					July 21-22, 2008/Monday/Tuesday	54.1	Yes	-10.9
D	North of Cutthroat Ave. between Deer St. and Bear St.	39°14'33.71"N 120° 1'33.87"W	K.B. Indust. C.P.	65	Feb. 16, 2008/Saturday	46.0	Yes	-19
					Feb. 17, 2008/Sunday	45.1	Yes	-19.1
					Feb. 18, 2008/Monday	44.7	Yes	-20.3
E*	75' N. of SR 28 and S. of Minnow Ave. and E. of Fox St.	39°14'4.58"N 120° 1'2.82"W	K.B. C.P. SR 28 Corridor	65 55	June 25-26, 2008/Wed./Thursday	65.2	No*	0.2
					June 26-27, 2008/Thursday/Friday	65.4	No*	0.4
F	475 Beaver St.	39°14'17.74"N 120° 0'55.72"W	031	55	Dec. 29-30, 2008/Monday/Tuesday	46.9	Yes	-8.1
G	Northeast corner of Golden Ave. and Coon St.	39°14'22.21"N 120° 1'17.91"W	028	55	Dec. 29-30, 2008/Monday/Tuesday	50.4	Yes	-4.6

Source - j.c. brennan & associates, Inc. 2006, 2008, 2009

* This noise measurement site was located inside of the SR 28 300 foot corridor.

5.4 Potential Noise Impacts and Required Mitigation

Impact 5-1: Exposure of Noise Sensitive Land Uses in the Grid Neighborhood to Traffic Noise in Excess of Standards

Traffic noise modeling was performed for roadways within the grid neighborhood of Kings Beach. Table 5-6 summarizes the results traffic noise modeling for Existing No Project and Alternative 2 (Existing + 3 Lane Alternative) conditions, Table 5-7 summarizes the results of traffic noise modeling for the Year 2028 Alternative 1 (No Project) and Year 2028 Alternative 2 (Existing + 3 Lane Alternative) conditions, and Table 5-8 summarizes the results of traffic noise modeling for the Year 2028 Plus 10% Growth for the Year 2028 Alternative 1 (No Project), and the Year 2028 Plus 10% Growth for the Year 2028 Alternative 2 (Existing + 3 Lane Alternative) conditions.

Table 5-6. Predicted Existing and Existing Plus Project Traffic Noise Levels

Roadway	Segment	Distance ¹ (feet)	Traffic Noise Levels (dBA, CNEL)				Distance to Traffic Noise Contours, CNEL (feet) Existing			Distance to Traffic Noise Contours, CNEL (feet) Existing Plus Project		
			Standard (dB)	Existing (dB)	Existing Plus Project (dB)	Change (dB)	70 dB	65 dB	60 dB	70 dB	65 dB	60 dB
Rainbow Ave.	Secline St. to Deer St.	50	55/65 ²	47.5	47.5	0.0	2	3	7	2	3	7
Deer St.	Trout Ave. to Rainbow Ave.	50	65	48.2	48.2	0.0	2	4	8	2	4	8
Bear St.	Trout Ave. to Rainbow Ave.	50	55/65 ²	50.9	51.4	0.5	3	6	12	3	6	13
Coon St.	Trout Ave. to Rainbow Ave.	50	55	49.8	49.5	-0.3	2	5	10	2	5	10
Fox St.	Minnow Ave to Salmon St.	50	65	52.8	52.8	0.0	4	8	16	4	8	16
Fox St.	Brook Ave. to Trout Ave.	50	65	50.2	50.2	0.0	2	5	11	2	5	11
Chipmunk St.	SR 28 to Minnow Ave	50	65	48.8	48.8	0.0	2	4	9	2	4	9
Speckeled Ave.	Secline St. to Deer St.	50	65	47.5	47.5	0.0	2	3	7	2	3	7
Speckeled Ave.	Coon St. to Fox St.	50	55/65 ²	44.5	44.5	0.0	1	2	5	1	2	5
Dolly Varden Ave.	Secline St. to Deer St.	50	55	45.8	45.8	0.0	1	3	6	1	3	6
Dolly Varden Ave.	Coon St. to Fox St.	50	55	42.8	42.8	0.0	1	2	4	1	2	4
Beaver St.	SR 28 to Cutthroat Ave.	50	55/65 ²	47.5	47.5	0.0	2	3	7	2	3	7

¹ Distances are measured in feet from the centerline of the roadway.

² In these instances, these roadway segments traverse through more than one Plan Area or Community Plan which have different CNEL standards.

Table 5-7. Predicted Average August Saturday 2028 Alternatives 1 and 2 Traffic Noise Levels

Roadway	Segment	Distance ¹ (feet)	Traffic Noise Levels (dBA, CNEL)*				Distance to Traffic Noise Contours, CNEL (feet) Alternative 1			Distance to Traffic Noise Contours, CNEL (feet) Alternative 2		
			Standard (dB)	Alt. 1* (dB)	Alt. 2* (dB)	Change (dB)	70 dB	65 dB	60 dB	70 dB	65 dB	60 dB
Rainbow Ave.	Secline St. to Deer St.	50	55/65 ²	48.8	52.5	3.7	2	4	9	3	7	16
Deer St.	Trout Ave. to Rainbow Ave.	50	65	50.2	50.2	0.0	2	5	11	2	5	11
Bear St.	Trout Ave. to Rainbow Ave.	50	55/65 ²	53.0	53.0	0.0	4	8	17	4	8	17
Coon St.	Trout Ave. to Rainbow Ave.	50	55	50.6	52.9	2.3	3	5	12	4	8	17
Fox St.	Minnow Ave to Salmon St.	50	65	54.2	55.9	1.7	4	10	21	6	12	27
Fox St.	Brook Ave. to Trout Ave.	50	65	51.5	54.7	3.2	3	6	14	5	10	22
Chipmunk St.	SR 28 to Minnow Ave	50	65	50.9	54.0	3.1	3	6	12	4	9	20
Speckeled Ave	Secline St. to Deer St.	50	65	49.8	52.6	2.8	2	5	10	3	7	16
Speckeled Ave	Coon St. to Fox St.	50	55/65 ²	46.7	49.1	2.4	1	3	7	2	4	9
Dolly Varden Ave	Secline St. to Deer St.	50	55	46.7	51.1	4.4	1	3	7	3	6	13
Dolly Varden Ave	Coon St. to Fox St.	50	55	42.8	46.7	3.9	1	2	4	1	3	7
Beaver St.	SR 28 to Cutthroat Ave.	50	55/65 ²	47.5	50.6	3.1	2	3	7	3	5	12

¹Distances are measured in feet from the centerline of the roadway.

² In these instances, these roadway segments traverse through more than one Plan Area or Community Plan which have different CNEL standards.

* Alt. 1 is No Project Scenario and Alt. 2 is Plus Project Scenario

Table 5-8. Predicted Average August 2028 Plus 10% Growth Alternatives 1 and 2 Traffic Noise Levels

Roadway	Segment	Distance ¹ (feet)	Traffic Noise Levels (dBA, CNEL)*				Distance to Traffic Noise Contours, CNEL (feet) Alternative 1			Distance to Traffic Noise Contours, CNEL (feet) Alternative 2		
			Standard (dB)	Alt. 1* (dB)	Alt. 2* (dB)	Change (dB)	70 dB	65 dB	60 dB	70 dB	65 dB	60 dB
Rainbow Ave.	Secline St. to Deer St.	50	55/65 ²	48.8	49.3	0.5	2	4	9	2	5	10
Deer St.	Trout Ave. to Rainbow Ave.	50	65	50.2	50.2	0.0	2	5	11	2	5	11
Bear St.	Trout Ave. to Rainbow Ave.	50	55/65 ²	53.0	53.0	0.0	4	8	17	4	8	17
Coon St.	Trout Ave. to Rainbow Ave.	50	55	50.6	50.7	0.1	3	5	12	3	6	12
Fox St.	Minnow Ave to Salmon St.	50	65	54.2	54.5	0.3	4	10	21	5	10	22
Fox St.	Brook Ave. to Trout Ave.	50	65	51.5	51.6	0.1	3	6	14	3	6	14
Chipmunk St.	SR 28 to Minnow Ave	50	65	50.9	51.3	0.4	3	6	12	3	6	13
Speckeled Ave.	Secline St. to Deer St.	50	65	49.8	50.0	0.2	0	1	2	2	5	11
Speckeled Ave.	Coon St. to Fox St.	50	55/65 ²	46.7	46.7	0.0	1	3	7	1	3	7
Dolly Varden Ave	Secline St. to Deer St.	50	55	46.7	47.1	0.4	1	3	7	1	3	7
Dolly Varden Ave	Coon St. to Fox St.	50	55	42.8	42.8	0.0	1	2	4	1	2	4
Beaver St.	SR 28 to Cutthroat Ave.	50	55/65 ²	47.5	48.0	0.5	2	3	7	2	4	8

¹Distances are measured in feet from the centerline of the roadway.

² In these instances, these roadway segments traverse through more than one Plan Area or Community Plan which have different CNEL standards.

* Alt. 1 is No Project Scenario and Alt. 2 is Plus Project Scenario

Based on the results presented in Table 5-7, six roadway segments may experience a 3 dB or more increase in noise levels. This is considered a significant impact by TRPA. Table 5-7, which reflects full buildout of the region's community plans by 2028, indicates that significant noise impacts (an increase of 3 dB or more) may occur on the following roadway sections:

- Beaver Street from SR 28 to Cutthroat Avenue;
- Chipmunk Street from SR 28 to Salmon Street;
- Fox Street from Salmon Street to Dolly Varden Street;
- Salmon Street from Chipmunk Street to Fox Street;
- Rainbow Avenue from Fox Street to Secline Street;
- Dolly Varden Street from Fox Street to SR 267.

Implementation of Mitigation Measure 5-1, paving roadways with rubberized asphalt or open gap asphalt overlays, would reduce this potential impact to less than significant levels. This is because rubberized asphalt or open gap asphalt overlays can achieve a 3-5 dB decrease in traffic-related noise when compared to typical asphalt concrete or Portland cement concrete. Rubberized asphalt consists of regular asphalt concrete mixed ground rubber, while open gap asphalt is porous asphalt that typically has specific aggregate size and cut that helps serve to reduce roadway noise.

Table 5-8 indicates that Year 2028 (+ 10% Growth) and Year 2028 (+ 10% Growth with the project) conditions would result in traffic noise increases less than 1 dBA, which is not considered to be noticeable.

Mitigation Measure 5-1: Employ Traffic Noise-Reduction Design Features into Design of the Proposed Project

The following roadways shall be paved with rubberized asphalt or open gap asphalt overlays.

- Beaver Street from SR 28 to Cutthroat Avenue;

- Chipmunk Street from SR 28 to Salmon Street;
- Fox Street from Salmon Street to Dolly Varden Street;
- Salmon Street from Chipmunk Street to Fox Street;
- Rainbow Avenue from Fox Street to Secline Street;
- Dolly Varden Street from Fox Street to SR 267.

5.4.1 Beneficial Noise Impacts

There would be no beneficial noise impacts.

5.5 Changes to Language of Section 3.9 of the Final EA/EIR/EIS

Within Section 3.9 of the Final EA/EIR/EIS, this Final Supplemental EIS presents additional analysis for the evaluation of noise impacts within the grid neighborhood of Kings Beach:

The bulleted list on page 3.9-13 of the Final EA/EIR/EIS shall now read:

The KBCP establishes maximum noise level standards for the following areas within the Kings Beach area:

- SR 28 corridor: 55 dBA, CNEL (where applicable);
- Special Areas 3 and 4: 55 dBA, CNEL;
- All areas of the KBCP area (except the SR 28 Corridor and Special Areas 3 and 4): 65 dBA, CNEL;
- Shorezone tolerance districts 6 and 7: 55 dBA, CNEL; and
- Lakezone district: ~~55~~55 dBA, CNEL.

The last paragraph on page 3.9-15 of the Final EA/EIR/EIS shall now read:

As a form of zoning, the TRPA has divided the Lake Tahoe Region into more than 175 separate plan areas. Boundaries for each plan area have been established



based upon similar land uses and the unique character of each geographic area. For each plan area, a “Statement” (PAS) is made as to how that particular area should be regulated to achieve regional environmental and land uses objectives. As a part of each Statement, an outdoor CNEL standard is established. The project corridor is located within Plan Areas 029 (Kings Beach Commercial, Special Area 2) which is covered by the KBCP. In addition, cut through traffic would also occur in Plan Area 031 (Brockway), Plan Area 028 (Kings Beach Residential), and the Kings Beach Industrial Community Plan Area. As part of each “Statement,” an outdoor standard of 60 dBA, CNEL is established based upon the “Thresholds.” However, the PAS noise level criterion is the ultimate standard.

Another means of determining a significant noise impact is to judge a person’s reaction to changes in noise levels due to a project. Table 3.9-7 is commonly used to show expected public reaction to changes in environmental noise levels. This table was developed on the basis of test subjects' reactions to changes in the levels of steady state pure tones or broad band noise and to changes in levels of a given noise source. It is probably most applicable to noise levels in the range of 50 to 70 dB, which is the usual range of voice and interior noise levels. The TRPA staff policy is that an increase of +3 dB CNEL or more is considered to be significant.

Table 3.9-7. Subjective Reaction to Changes in Noise Levels of Similar Sources

<u>Change in Level (dB)</u>	<u>Subjective Reaction</u>	<u>Factor Change In Acoustical Energy</u>
<u>1</u>	<u>Imperceptible (Except for Tones)</u>	<u>1.3</u>
<u>3</u>	<u>Just Barely Perceptible (TRPA Level of Significance)</u>	<u>2.0</u>
<u>6</u>	<u>Clearly Noticeable</u>	<u>4.0</u>
<u>10</u>	<u>About Twice (or Half) as Loud</u>	<u>10.0</u>

Source: Architectural Acoustics, M. David Egan, 1988.

The following text will be added after the second full paragraph on page 3.9-23 of the Final EA/EIR/EIS:

Impact 3.9-3: Exposure of Noise Sensitive Land Uses in the Grid Neighborhood to Traffic Noise in Excess of Standards

Traffic noise modeling was performed for roadways within the grid neighborhood of Kings Beach. Table 3.9-10 summarizes the results traffic noise modeling for Existing No Project and Alternative 2 (Existing + 3 Lane Alternative) conditions, Table 3.9-11 summarizes the results of traffic noise modeling for the Year 2028 Alternative 1 (No Project) and Year 2028 Alternative 2 (Existing + 3 Lane Alternative) conditions, and Table 3.9-12 summarizes the results of traffic noise modeling for the Year 2028 Plus 10% Growth for the Year 2028 Alternative 1 (No Project), and the Year 2028 Plus 10% Growth for the Year 2028 Alternative 2 (Existing + 3 Lane Alternative) conditions.

Table 3.9-10. Predicted Existing and Existing Plus Project Traffic Noise Levels

Roadway	Segment	Distance ¹ (feet)	Traffic Noise Levels (dBA, CNEL)				Distance to Traffic Noise Contours, CNEL (feet) Existing			Distance to Traffic Noise Contours, CNEL (feet) Existing Plus Project		
			Standard (dB)	Existing (dB)	Existing Plus Project (dB)	Change (dB)	70 dB	65 dB	60 dB	70 dB	65 dB	60 dB
Rainbow Ave.	Secline St. to Deer St.	50	55/65 ²	47.5	47.5	0.0	2	3	7	2	3	7
Deer St.	Trout Ave. to Rainbow Ave.	50	65	48.2	48.2	0.0	2	4	8	2	4	8
Bear St.	Trout Ave. to Rainbow Ave.	50	55/65 ²	50.9	51.4	0.5	3	6	12	3	6	13
Coon St.	Trout Ave. to Rainbow Ave.	50	55	49.8	49.5	-0.3	2	5	10	2	5	10
Fox St.	Minnow Ave to Salmon St.	50	65	52.8	52.8	0.0	4	8	16	4	8	16
Fox St.	Brook Ave. to Trout Ave.	50	65	50.2	50.2	0.0	2	5	11	2	5	11
Chipmunk St.	SR 28 to Minnow Ave	50	65	48.8	48.8	0.0	2	4	9	2	4	9
Speckeled Ave.	Secline St. to Deer St.	50	65	47.5	47.5	0.0	2	3	7	2	3	7
Speckeled Ave.	Coon St. to Fox St.	50	55/65 ²	44.5	44.5	0.0	1	2	5	1	2	5
Dolly Varden Ave.	Secline St. to Deer St.	50	55	45.8	45.8	0.0	1	3	6	1	3	6
Dolly Varden Ave.	Coon St. to Fox St.	50	55	42.8	42.8	0.0	1	2	4	1	2	4
Beaver St.	SR 28 to Cutthroat Ave.	50	55/65 ²	47.5	47.5	0.0	2	3	7	2	3	7

¹ Distances are measured in feet from the centerline of the roadway.

² In these instances, these roadway segments traverse through more than one Plan Area or Community Plan which have different CNEL standards.

Table 3.9-11. Predicted Average August Saturday 2028 Alternatives 1 and 2 Traffic Noise Levels

Roadway	Segment	Distance ¹ (feet)	Traffic Noise Levels (dBA, CNEL)*				Distance to Traffic Noise Contours, CNEL (feet) Alternative 1			Distance to Traffic Noise Contours, CNEL (feet) Alternative 2		
			Standard (dB)	Alt. 1* (dB)	Alt. 2* (dB)	Change (dB)	70 dB	65 dB	60 dB	70 dB	65 dB	60 dB
Rainbow Ave.	Secline St. to Deer St.	50	55/65 ²	48.8	52.5	3.7	2	4	9	3	7	16
Deer St.	Trout Ave. to Rainbow Ave.	50	65	50.2	50.2	0.0	2	5	11	2	5	11
Bear St.	Trout Ave. to Rainbow Ave.	50	55/65 ²	53.0	53.0	0.0	4	8	17	4	8	17
Coon St.	Trout Ave. to Rainbow Ave.	50	55	50.6	52.9	2.3	3	5	12	4	8	17
Fox St.	Minnow Ave to Salmon St.	50	65	54.2	55.9	1.7	4	10	21	6	12	27
Fox St.	Brook Ave. to Trout Ave.	50	65	51.5	54.7	3.2	3	6	14	5	10	22
Chipmunk St.	SR 28 to Minnow Ave	50	65	50.9	54.0	3.1	3	6	12	4	9	20
Speckeled Ave	Secline St. to Deer St.	50	65	49.8	52.6	2.8	2	5	10	3	7	16
Speckeled Ave	Coon St. to Fox St.	50	55/65 ²	46.7	49.1	2.4	1	3	7	2	4	9
Dolly Varden Ave	Secline St. to Deer St.	50	55	46.7	51.1	4.4	1	3	7	3	6	13
Dolly Varden Ave	Coon St. to Fox St.	50	55	42.8	46.7	3.9	1	2	4	1	3	7
Beaver St.	SR 28 to Cutthroat Ave.	50	55/65 ²	47.5	50.6	3.1	2	3	7	3	5	12

¹Distances are measured in feet from the centerline of the roadway.

² In these instances, these roadway segments traverse through more than one Plan Area or Community Plan which have different CNEL standards.

* Alt. 1 is No Project Scenario and Alt. 2 is Plus Project Scenario

Table 3.9-12. Predicted Average August 2028 Plus 10% Growth Alternatives 1 and 2 Traffic Noise Levels

Roadway	Segment	Distance ¹ (feet)	Traffic Noise Levels (dBA, CNEL)*				Distance to Traffic Noise Contours, CNEL (feet) Alternative 1			Distance to Traffic Noise Contours, CNEL (feet) Alternative 2		
			Standard (dB)	Alt. 1* (dB)	Alt. 2* (dB)	Change (dB)	70 dB	65 dB	60 dB	70 dB	65 dB	60 dB
Rainbow Ave.	Secline St. to Deer St.	50	55/65 ²	48.8	49.3	0.5	2	4	9	2	5	10
Deer St.	Trout Ave. to Rainbow Ave.	50	65	50.2	50.2	0.0	2	5	11	2	5	11
Bear St.	Trout Ave. to Rainbow Ave.	50	55/65 ²	53.0	53.0	0.0	4	8	17	4	8	17
Coon St.	Trout Ave. to Rainbow Ave.	50	55	50.6	50.7	0.1	3	5	12	3	6	12
Fox St.	Minnow Ave to Salmon St.	50	65	54.2	54.5	0.3	4	10	21	5	10	22
Fox St.	Brook Ave. to Trout Ave.	50	65	51.5	51.6	0.1	3	6	14	3	6	14
Chipmunk St.	SR 28 to Minnow Ave	50	65	50.9	51.3	0.4	3	6	12	3	6	13
Speckeled Ave.	Secline St. to Deer St.	50	65	49.8	50.0	0.2	0	1	2	2	5	11
Speckeled Ave.	Coon St. to Fox St.	50	55/65 ²	46.7	46.7	0.0	1	3	7	1	3	7
Dolly Varden Ave	Secline St. to Deer St.	50	55	46.7	47.1	0.4	1	3	7	1	3	7
Dolly Varden Ave	Coon St. to Fox St.	50	55	42.8	42.8	0.0	1	2	4	1	2	4
Beaver St.	SR 28 to Cutthroat Ave.	50	55/65 ²	47.5	48.0	0.5	2	3	7	2	4	8

¹Distances are measured in feet from the centerline of the roadway.

² In these instances, these roadway segments traverse through more than one Plan Area or Community Plan which have different CNEL standards.

* Alt. 1 is No Project Scenario and Alt. 2 is Plus Project Scenario

Based on the results presented in Table 3.9-11, six roadway segments may experience a 3 dB or more increase in noise levels. This is considered a significant impact by TRPA. Table 3.9-11, which reflects full buildout of the region's community plans by 2028, indicates that significant noise impacts (an increase of 3 dB or more) may occur on the following roadway sections:

- Beaver Street from SR 28 to Cutthroat Avenue;
- Chipmunk Street from SR 28 to Salmon Street;
- Fox Street from Salmon Street to Dolly Varden Street;
- Salmon Street from Chipmunk Street to Fox Street;
- Rainbow Avenue from Fox Street to Secline Street;
- Dolly Varden Street from Fox Street to SR 267.

Implementation of Mitigation Measure NZ-4, paving roadways with rubberized asphalt or open gap asphalt overlays, would reduce this potential impact to less than significant levels. This is because rubberized asphalt or open gap asphalt overlays can achieve a 3-5 dB decrease in traffic-related noise when compared to typical asphalt concrete or Portland cement concrete. Rubberized asphalt consists of regular asphalt concrete mixed ground rubber, while open gap asphalt is porous asphalt that typically has specific aggregate size and cut that helps serve to reduce roadway noise.

Table 3.9-12 indicates that Year 2028 (+ 10% Growth) and Year 2028 (+ 10% Growth with the project) conditions would result in traffic noise increases less than 1 dBA, which is not considered to be noticeable.

Mitigation Measure NZ-4: Employ Traffic Noise-Reduction Design Features into Design of the Proposed Project

The following roadways shall be paved with rubberized asphalt or open gap asphalt overlays.

- Beaver Street from SR 28 to Cutthroat Avenue;
- Chipmunk Street from SR 28 to Salmon Street;
- Fox Street from Salmon Street to Dolly Varden Street;
- Salmon Street from Chipmunk Street to Fox Street;

- Rainbow Avenue from Fox Street to Secline Street;
- Dolly Varden Street from Fox Street to SR 267

5.6 Changes to Language of Section 4 of the Final EA/EIR/EIS

Within Section 4.3.2.9 of the Final EA/EIR/EIS, this Final Supplemental EIS presents additional analysis for the evaluation of noise impacts within the grid neighborhood of Kings Beach:

The following paragraph will be revised in Section 4.3.2.9 on page 4-12 of the Final EA/EIR/EIS:

The noise analysis (*Section 3.9*) was based primarily on traffic volumes estimated for the traffic analysis (*Section 3.6*). The traffic volumes in the traffic analysis were based on cumulative growth in the northern Lake Tahoe area.

Consequently, the noise analysis was also based on cumulative growth and represents cumulative effect conditions. As indicated in Tables 3.9-7 and 3.9-8, implementation of the build alternatives is not expected to result in noise increases relative to the no-project alternative. However, Table 3.9-11, indicates six roadway segments in the grid neighborhood of Kings Beach may experience a significant noise increase of 3 dB or more with regards to TRPA standards.

Consequently, implementation of Mitigation Measure NZ-4 is required to mitigate this cumulative impact to less than significant~~because no noise increases are associated with the build alternatives, implementation of the proposed project would not result in a cumulative increase in traffic noise.~~

5.7 Changes to Language of Section 5 of the Final EA/EIR/EIS

Within Section 5 of the Final EA/EIR/EIS, this Final Supplemental EIS presents additional analysis for the evaluation of noise impacts within the grid neighborhood of Kings Beach:

The following paragraph will be added after the last paragraph on page 5-58 of the Final EA/EIR/EIS:

The results of future-year traffic noise modeling for the grid neighborhood of Kings Beach indicates that six roadway segments may experience a significant noise increase of 3 dB or more with regards to TRPA standards. Consequently, implementation of Mitigation Measure NZ-4 is required to mitigate this cumulative impact to less than significant.

Mitigation Measure NZ-4: Employ Traffic Noise-Reduction Design Features into Design of the Proposed Project

The following roadways shall be paved with rubberized asphalt or open gap asphalt overlays.

- Beaver Street from SR 28 to Cutthroat Avenue;
- Chipmunk Street from SR 28 to Salmon Street;
- Fox Street from Salmon Street to Dolly Varden Street;
- Salmon Street from Chipmunk Street to Fox Street;
- Rainbow Avenue from Fox Street to Secline Street;
- Dolly Varden Street from Fox Street to SR 267.

Chapter 6. Cumulative Impacts

6.1 Introduction

Section 5.5 of the Draft and Final EA/EIR/EIS for the Kings Beach Commercial Core Improvement Project addresses GHG emissions. TRPA has requested the cumulative impacts analysis of the Final Supplemental EIS examine and disclose GHG emissions in more detail. The information provided in this analysis augments, and is in addition to, the existing information found in the cumulative impacts section of the Draft and Final EA/EIR/EIS. No changes are needed within the Cumulative Impacts chapter (Chapter 4) of the Final EA/EIR/EIS.

This chapter provides a discussion on the potential GHG emissions from the Kings Beach Commercial Core Improvement Project. This assessment is based on the supplemental GHG emissions technical study—*Kings Beach Commercial Core Improvement Project, Climate Change Analysis* (Appendix C). This analysis does not conflict with Section 5.5 of the Draft and Final EA/EIR/EIS. Normally the addition of this information could be done with an addendum to the Final EA/EIR/EIS, but due to the need to discuss noise in a supplemental format, this clarifying language relating to GHG emissions has been included below.

6.2 Regulatory Considerations

Gases that trap heat in the atmosphere are often called greenhouse gases. Both natural processes and human activities emit GHGs. The accumulation of GHGs in the atmosphere regulates the earth's temperature; however, emissions of GHGs from human activities such as electricity production and the burning of fossil fuel in vehicles have elevated the concentration of these gases in the atmosphere. This accumulation of GHGs may have contributed to an increase in the temperature of the earth's atmosphere and played a part in climate change. The principal GHGs are carbon dioxide (CO₂), methane

(CH₄), nitrous oxide (N₂O), ozone, and water vapor. Carbon dioxide is the reference gas for climate change and is expressed as CO₂ equivalent (CO₂eq).

6.2.1 Federal

There are no federal regulations regarding GHG, per se. In April 2007, the U.S. Supreme Court ruled 5-4 in the case of *Massachusetts v. EPA* that the U.S. EPA has the authority under the Clean Air Act to regulate GHG emissions from new motor vehicles. However, as of this writing (August 2009), the U.S. EPA has not enacted any such regulations.

On June 30, 2009, the U.S. EPA granted California's waiver of Clean Air Act preemption to enforce new GHG emission standards for passenger cars and light-duty trucks beginning with the 2009 model year. The new regulations add four new GHG pollutants (CO₂, CH₄, N₂O), and hydrofluorocarbons to the existing regulations for criteria, criteria-precursor, and Toxic Air Contaminants. On July 11, 2008, U.S. EPA issued an Advance Notice of Proposed Rulemaking soliciting public comment to address concerns from other federal agencies as to whether global warming poses a threat to people's health within the meaning of the Clean Air Act. The public comment period ended on November 28, 2008 and the EPA is reviewing the comments.

6.2.2 State

In 2005, Governor Schwarzenegger established Executive Order S-3-05, which sets forth a series of target dates by which statewide emission of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

In 2006, California passed Assembly Bill No. 32, the California Global Warming Solutions Act of 2006 (California Health and Safety Code Division 25.5, Sections 38500, et seq.). The regulation requires ARB to reduce statewide GHG emissions to 1990 levels

by 2020 through feasible and cost-effective means. The ARB has estimated that California's 1990 GHG emissions totaled 470 million tons and that "business as usual" will result in 2020 emissions of 661 million tons (California Air Resources Board 2007). The ARB will design and implement emission limits, regulations, and other measures to accomplish this reduction in emissions.

The California Global Warming Solutions Act of 2006 establishes a timetable for the ARB to adopt emission limits, rules, and regulations designed to achieve the intent of the Act, as follows:

- Publish a list of discrete early action GHG emission reduction measures by June 30, 2007.
- Establish a statewide GHG emissions cap for 2020, equivalent to the 1990 emissions level by January 1, 2008.
- Adopt mandatory reporting rules for significant sources of GHGs by January 1, 2008.
- Adopt a scoping plan by January 1, 2009, indicating how GHG emission reductions will be achieved from significant GHG sources via regulations, market-based compliance mechanisms and other actions, including the recommendation of a *de minimus* threshold for GHG emissions, below which emission reduction requirements would not apply.

Adopt regulations by January 1, 2011 to achieve the maximum technologically feasible and cost-effective reductions in GHGs, including provisions for using both market-based and alternative compliance mechanisms.

- Establish January 1, 2012 as the date by which all regulations adopted prior to January 1, 2010 are to become operative (enforceable).

The ARB has proposed "Early Action Measures" in three groups, and together these measures will make a substantial contribution to the overall 2020 statewide GHG

emission reduction goal of approximately 174 million metric tons (tonnes) of CO₂eq gases. These measures are summarized as follows:

Group 1: Three new GHG-only regulations are proposed to meet the narrow legal definition of “discrete early action GHG reduction measures”: a low-carbon fuel standard, reduction of refrigerant losses from motor vehicle air conditioning system maintenance, and increased CH₄ capture from landfills. These regulations are expected to take effect by January 1, 2010.

Group 2: The ARB is initiating work on 23 other GHG emission-reducing measures between 2007 and 2009. Applicable rulemaking will occur as soon as possible. These GHG measures relate to the following sectors: agriculture, commerce, education, energy efficiency, fire suppression, forestry, oil and gas, and transportation.

Group 3: The ARB is initiating work on 10 conventional air pollution controls aimed at criteria and toxic air pollutants, but with concurrent climate co-benefits through reductions in CO₂ or non-Kyoto pollutants (i.e., diesel particulate matter, other light-absorbing compounds, and/or ozone precursors) that contribute to global warming.

None of the Group 1 measures specifically relates to construction or operation of infrastructure projects, such as the proposed project. Proposed Groups 2 and 3 measures that could become effective during implementation of the proposed project and could pertain to construction-related equipment operations include the following actions:

- Measure 2-6, Education: guidance/protocols for local governments to facilitate GHG emission reductions;
- Measures 2-14, 3-2, 3-4, Transportation: emission reductions for heavy-duty vehicles, on-road diesel trucks, and off-road diesel equipment (non-agricultural); efficiency improvements;
- Measure 2-20, Transportation: tire inflation program; and

- Measure 3-10, Fuels: evaporative standards for aboveground tanks.

Some proposed measures will require new legislation for implementation; some will require subsidies; some are already developed; some will require additional effort to evaluate and quantify. Applicable early action measures that are ultimately adopted from Groups 2 and 3 may become effective during implementation of the proposed project and the proposed project may be subject to these requirements, depending on their timing.

Pursuant to Senate Bill 97 (Chapter 185, 2007) the Natural Resources Agency is developing CEQA guidelines “for the mitigation of GHG emissions or the effects of GHG emissions.” The draft guidelines are now proceeding through the regulatory rulemaking process. The Resources Agency is to certify and adopt the guidelines on or before January 1, 2010.

6.2.3 Tahoe Regional Planning Agency

The TRPA has not adopted environmental thresholds or regulations with respect to GHG emissions. Currently, regulatory efforts to control and reduce greenhouse emissions are being developed by local, state, and federal agencies. However, the TRPA is currently implementing programs and strategies (ex. expanded public transit, sidewalks, bike lanes) to reduce reliance on the automobile, which should also result in reduced GHG emissions.

While the TRPA does not have specific standards on GHG emissions, the TRPA recognizes the growing concern over increased GHG emissions, and has requested Placer County examine and disclose the potential for such emissions as a part of this Final Supplemental EIS.

TRPA has previously evaluated impacts associated with GHG emissions in the Sierra Colina Village Project Final EIS (EDAW 2009) and the Addendum to the EIS for the Lake Tahoe Shorezone Ordinance Amendments (Tahoe Regional Planning Agency 2008). These two documents also state that TRPA has not adopted thresholds or regulations with respect to GHG emissions. The Sierra Colina Village Project Final EIS

found that construction activities would be temporary and would not result in a considerable contribution to GHG impacts (EDAW 2009), while the evaluation of operational impacts analyzed in the Addendum to the EIS for the Lake Tahoe Shorezone Ordinance Amendments found that GHG impacts would be less than significant (Tahoe Regional Planning Agency 2008). It should be noted that construction and operational GHG emissions associated with the KBCCIP are less than those associated with the Sierra Colina Village and Tahoe Shorezone Ordinance projects, respectively.

6.3 Existing Air Quality Conditions and Trends

Existing conditions and trends with respect to GHG emissions were evaluated within the Draft Supplemental EIS. While the Draft Supplemental EIS analysis examines the potential emissions of CO₂, currently there is no available method to model the specific effects of GHG emissions (primarily CO₂) that may result from this proposed project. Modeled emissions of CO₂ within the project area for existing year (2002) are presented in Table 6-1. In addition, a U.C. Davis study in 2001 estimated mobile emissions in the Lake Tahoe Air Basin at 890 tonnes per day (U.C. Davis 2001). This equates to an annual average of 324,850 tonnes per year of CO₂.

Table 6-1. Operational Carbon Dioxide (CO₂) Emissions (tonnes per year)

Traffic Scenario	Future—Base Growth Assumption				Future—10% Growth Assumption		
	Existing	Future No Project	Alternatives 2 and 4 ¹	Alternative 3 ²	Future No Project	Alternatives 2 and 4 ¹	Alternative 3 ²
On SR 28: free flow	2,631	3,697	4,039	3,697	2,918	3,246	2,918
On SR 28: congested flow	0	677	782	677	6	104	6
On SR 267: free flow	394	617	476	617	445	438	445
On local streets	0	0	917	0	0	47	0
Total	3,025	4,991	6,213	4,991	3,368	3,834	3,368
Comparison of Alternatives							
Base growth assumption			Increase in CO ₂ emissions		Increase in VMT		
Alternatives 2/4 minus Existing			3,187		3,958,300		
Alternative 3 minus Existing			1,966		3,844,600		
Alternatives 2/4 minus Future no project			1,221		113,700		
Alternative 3 minus Future no project			0		0		
10% Growth assumption							
Alternatives 2/4 minus Existing			809		721,500		
Alternative 3 minus Existing			343		715,600		
Alternatives 2/4 minus Future no project			466		5,900		
Alternative 3 minus Future no project			0		0		

Notes:

Alternatives 2 and 4 represent the 3-lane alternatives.

Alternative 3 represents the 4-lane alternative.

Source: Emissions calculations based on CT-EMFAC Model and traffic data from LSC Transportation Consultants 2009

6.4 Standards of Significance

As previously discussed, no standards of significance currently exist to determine if a project would result in a significant impact with regards to climate change. However, consensus exists within the scientific community that emissions of CO₂ and other GHGs are the prime factors contributing to climate change.

6.5 Evaluation Methodology

The estimation of construction and operational GHG emissions described within Sections 6.5.1 and 6.5.2 are consistent with current accepted professional practices and modeling methodologies.

6.5.1 Construction Emissions

Construction emissions of CO₂ were estimated using the Sacramento Metropolitan Air Quality Management's Road Construction Emissions Model (Version 6.3.1). The model estimates emissions for load hauling (on-road heavy-duty vehicle trips), worker commute trips, construction site fugitive PM10 dust, and off-road construction vehicles. This analysis is based on anticipated construction equipment calculated by the Road Construction Emissions Model, which estimates construction equipment based on project size, duration of construction activities, and level of daily construction activities.

Alternatives 2, 3, and 4 represent the build alternatives. The following discussion focuses on the build alternatives, and it was assumed construction emissions would not differ substantially, as no substantial differences in overall project lengths or area to be paved would occur between the build alternatives. It is anticipated that construction activities would begin in 2010 and would occur for 12 hours per day over a 6-month period for 3 years. The total project length was assumed to be 1.1 miles, with a total acreage of 9.0 acres and a maximum of 1 acre disturbed per day.

6.5.2 Operational Emissions

Modeled traffic volumes and operating conditions were obtained from the traffic data prepared by the project traffic engineers, LSC Transportation Consultants (LSC Transportation Consultants 2009). Emissions of CO₂ were modeled for existing year (2002) and future year (2028) with- and without-project conditions. The future year analysis evaluated future year growth rates associated with full buildout of all general and community plans in the region, and an alternative based on recent trend (0.5% growth per year) of 10% growth over 20 years.

Traffic data used in the CT-EMFAC model include yearly VMT and roadway speeds. The traffic conditions modeled in the analysis included vehicle activity for affected roadways in the immediate project region for a variety of traffic conditions. These conditions include free flow and congested flow conditions on SR 28, free flow conditions on SR 267, and diverted traffic through local streets. The traffic data used for emissions modeling is summarized in Table 6-2.

Vehicle emission rates were determined using Caltrans' CT-EMFAC model. Vehicle speeds were based on traffic data provided by the project traffic engineers, LSC Transportation Consultants (LSC Transportation Consultants 2009), and are presented in Table 6-2. Table 6-3 presents a summary of CO₂ emission rates from the CT-EMFAC model used to estimate project emissions. The CT-EMFAC emission rate data presented in Table 6-3 corresponds with the speed data presented in Table 6-2: emission rates are typically highest at lower and higher speeds, with the lowest emission rate around 40-45 mph.

Table 6-2. Summary of Operational Traffic Data

Traffic Scenario	Existing	Future—Base Growth Assumption			Future—10% Growth Assumption		
		Future No Project	Alternatives 2 and 4 ¹	Alternative 3 ²	Future No Project	Alternatives 2 and 4 ¹	Alternative 3 ²
Vehicle Miles Traveled							
On SR 28: free flow	6,080,400	8,465,500	8,176,300	8,465,500	6,680,600	6,571,000	6,680,600
On SR 28: congested flow	0	958,200	661,800	958,200	7,800	87,700	7,800
On SR 267: free flow	911,700	1,413,000	1,089,600	1,413,000	1,019,300	1,002,900	1,019,300
On local streets	0	0	1,022,700	0	0	52,000	0
Total	6,992,100	10,836,700	10,950,400	10,836,700	7,707,700	7,713,600	7,707,700
Traffic Scenario	Existing	Future—Base Growth Assumption			Future—10% Growth Assumption		
		Existing	Alternatives 2 and 4 ¹	Alternative 3 ²	Existing	Alternatives 2 and 4 ¹	Alternative 3 ²
Speed (miles per hour)							
On SR 28: free flow	30	30	26	32	30	26	32
On SR 28: congested flow	16	16	4	18	16	4	18
On SR 267: free flow	30	30	30	30	30	30	30
On local streets	17	17	13	13	17	13	13

Notes:

¹ Alternatives 2 and 4 represent the 3-lane alternatives.

² Alternative 3 represents the 4-lane alternative.

Source: LSC Transportation Consultants 2009

Table 6-3. Summary of CT-EMFAC Emission Factor Data (grams CO₂ per mile)

Traffic Scenario	Existing	Future—Base Growth Assumption			Future—10% Growth Assumption		
		Future No Project	Alternatives 2 and 4 ¹	Alternative 3 ²	Future No Project	Alternatives 2 and 4 ¹	Alternative 3 ²
Vehicle Miles Traveled							
On SR 28: free flow	432.67	436.72	493.94	436.72	436.72	493.94	436.72
On SR 28: congested flow	0	706.92	1,180.95	706.92	706.92	1,180.95	706.92
On SR 267: free flow	432.67	436.72	436.72	436.72	436.72	436.72	436.72
On local streets	0	0	896.29	0	0	896.29	0

Notes:

¹ Alternatives 2 and 4 represent the 3-lane alternatives.

² Alternative 3 represents the 4-lane alternative.

Source: CT-EMFAC (version 2.6)

6.6 Potential Greenhouse Gas Emissions Impacts

6.6.1 Construction Emissions

Construction modeling results are presented in Table 6-4.

Table 6-4. Construction Emission Estimates (tonnes per year)

Construction Phase	Carbon Dioxide Emissions
Grubbing/land clearing	26.6
Grading/excavation	136.0
Drainage/utilities/sub-grade	74.3
Paving	16.2
Total	253.2

Note: Emissions calculations based on Sacramento Metropolitan Air Quality Management District Road Construction Emissions Model (Version 6.3.1)

Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing traffic management during construction phases which are part of this project. Also, innovations such as longer pavement life, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be minimized. As a result of the features inherent to the project that just have been described, GHG emissions will be minimized to a level that is considered less than significant. While not necessary to reduce the minimal GHG impact caused by construction, Mitigation Measure TRA-3 in Section 3.6, Traffic, Mitigation Measure UT-1 in Section 3.11, Public Services and Utilities, and Mitigation Measures AIR-1 through AIR-4 in Section 3.1, Air Quality, of the Final EA/EIR/EIS would also help to minimize air quality impacts from construction activities. In conclusion, the GHG emissions produced during construction are considered to be less than significant.

6.6.2 Operational Emissions

Modeled emissions of CO₂ for existing year (2002) and future year (2028) with- and without-project conditions (including both sets of growth projections) are presented in Table 6-1.

Table 6-1 indicates that Alternatives 2 and 4 are anticipated to result in an additional 1,221 tonnes per year under the base growth assumption and an additional 466 tonnes per year under the 10 percent growth assumption. This is equivalent to an increase in approximately 235 passenger cars under the base growth assumption and 90 passenger cars under the 10 percent growth assumption, assuming the average United States passenger vehicle emits approximately 5.20 tonnes CO₂ (United States Environmental Protection Agency 2005). The CO₂ emission increases are predominantly the result of increased VMT associated with diverted traffic through the surrounding neighborhood local streets and decreases in overall speeds along SR 28 (Table 6-2).

Currently, no thresholds have been established by ARB, Caltrans, PCAPCD, or the Tahoe Regional Planning Agency to identify significant impacts with regards to GHG emissions. A U.C. Davis study, in 2001, estimated mobile GHG emissions in the Lake Tahoe Air Basin at 890 tonnes per day (U.C. Davis 2001). This equates to an annual average of 324,850 tonnes per year of CO₂. The project will result in an additional 1,221 tonnes per year of additional CO₂ under the Base growth assumption. Under the 10 percent growth assumption, an additional 466 tonnes per year of CO₂ is anticipated. This represents a 0.3 percent increase in CO₂ emissions at buildout and a 0.1 percent increase in CO₂ emissions after experiencing a 10 percent growth in traffic. All of these scenarios assume business as usual, only consider mobile emissions, and assume no other strategies are implemented to minimize GHG emissions.

Other facts that reduce the project's future GHG emissions include:

Carbon dioxide emissions from combustion of fossil fuel are a function of the carbon content of the fuel being burned. The low carbon fuel standard (LCFS) adopted by CARB

on April 23, 2009 establishes performance standards for the amount of carbon in transportation fuels. The LCFS requires reduction of at least 10 percent in the carbon intensity of transportation fuels in California. With the carbon reductions achieved through the LCFS, it is anticipated that any increases in vehicle miles traveled (VMT) would be partially offset by reductions in the CO₂ emission rates from vehicles due to reduced carbon content in the fuels combusted.

A major goal for the project as well as the Regional Plan for the Lake Tahoe Basin is to reduce dependency on the automobile by improving bicycle and pedestrian mobility through downtown Kings Beach. The project's pedestrian and bicycle features and NTMP will encourage walking and bicycling within Kings Beach. The intent is that these improved transportation alternatives will reduce and shorten some vehicle trips (reduction of VMT) thereby reducing some GHG emissions.

The KBCP specifically calls out VMT reduction measures that would have a direct effect on GHG emissions. Two key strategies described in the CP include constructing pedestrian improvements on SR28 and the back streets, and constructing bike/recreation trails on SR28. These two VMT reduction strategies comprise major elements of the project and should translate into future GHG emissions as well.

The California Air Pollution Control Officers Association (CAPCOA) produced a white paper (California Air Pollution Control Officers Association 2008) which discusses a variety of potential significance thresholds based largely on requirements of the California Global Warming Solutions Act of 2006 (Assembly Bill 32). Assembly Bill 32 is anticipated to require a 28-33 percent reduction in emissions below "business as usual" in 2020. The CAPCOA white paper discusses the merits of various non-zero thresholds that could be implemented for environmental purposes. One element of their alternatives included a "green list" of projects that would be deemed, by definition, as having an impact as less than significant. The CAPCOA initial list of green list projects includes "development of bicycle, pedestrian, or zero-emission transportation infrastructure to serve existing regions". The major project element is the installation of bicycle and

pedestrian (sidewalks) facilities along SR 28. Although not quantified, the green list recognizes the need to encourage alternative modes of transportation as a significant strategy in reducing GHG emissions.

- In addition, agencies, including Placer County, will need to develop climate action plans pursuant to SB 375 and AB 32, particularly as more guidance is provided by ARB, to comprehensively address how GHG targets will be addressed and met.

In conclusion, while no thresholds current exist, based on the above analysis and minor amounts of emissions associated with implementation of the build alternatives (Table 6-1), this impact is considered less than significant.

6.6.3 Beneficial Greenhouse Gas Impacts

There would be no beneficial GHG emissions impacts.