

# Draft Supplemental Recirculated Environmental Impact Report

SCH# 2014041005

*Volume 3  
Appendix E.1*

## GRAPEVINE SPECIFIC AND COMMUNITY PLAN (2019) Tejon Ranchcorp

Specific Plan Amendment No. 157, Map 500  
General Plan Amendment No. 9, Map 202  
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Agricultural Preserve #19 - Exclusion



Kern County  
Planning and Natural Resources Department  
Bakersfield, California

August 2019

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Appendix E.1

# **Supplemental Noise Analysis**

# Appendices

## **NOTE TO REVIEWER OF ELECTRONIC FILES:**

To assist you in reviewing this electronic document, “bookmarks” and/or “links” have been provided for easier navigation between sections. When available, bookmarks are located in the panel to the left. Links are highlighted in **BLUE** in the Table of Contents. Clicking on either the bookmarks or links will take you to the selected item. This document may consist of multiple linked PDF files. If saving this document to your computer, you must save all corresponding files to a directory on your hard drive to maintain the manner in which these PDF documents are linked.

## **E.1 [Supplemental Noise Analysis](#)**

## MEMORANDUM

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**To:** Diana Hurlbert, Director of Environmental Permitting, Tejon Ranch Company  
**From:** Jonathan V. Leech, Environmental Technical Group Manager, Dudek  
Mike Greene, Senior Environmental Specialist/Acoustician, Dudek  
**Subject:** Supplemental Noise Analysis for Grapevine Specific and Community Plan Project  
Supplemental Recirculated Environmental Impact Report  
**Date:** August 1, 2019  
**cc:** Megan Enright, Dudek

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### 1 Introduction

#### 1.1 Background and Overview

This memorandum analyzes potential noise impacts in support of the Grapevine Project (Project) Supplemental Recirculated Environmental Impact Report (SREIR) that is being prepared by the Kern County (County) Planning and Natural Resources Department. The County is the Project's lead agency under the California Environmental Quality Act (CEQA).

The Project consists of an approximately 8,010-acre Specific Plan area located in the southern portion of the San Joaquin Valley and 83 acres of off-site infrastructure improvements. The Specific Plan includes six plan areas, each with a village center providing retail and office uses, schools, parks, community services, and housing linked by bicycle and pedestrian trails, and served by transit. Approximately 4,643 acres are a residential community and employment center, 632 acres are zoned for active recreation and agricultural uses, and 2,734 acres are open areas. At full buildout, the Project would include 12,000 dwelling units, 5,100,000 square feet of commercial/light industrial use, 157 acres of schools, and 96–112 acres of parks. In accordance with the Specific Plan, up to 14,000 dwelling units could be built provided commercial/light industrial uses are commensurately reduced to ensure that total Project vehicular trips do not increase. The most intensive commercial and higher-density residential uses are located closest to Interstate-5 (I-5) along the western border of the Project. Lower-density residential, office, research and development, retail, and light industrial/warehouse uses are located outside of the six village centers.

The purpose of this report is to provide the supplemental analysis of potential Project noise impacts that could be associated with lower internal capture rate (ICR) levels than considered in the FEIR as described in the NOP for this SREIR.

#### 1.2 Approach & Methodology

The FEIR was certified by the County in 2016. Since that time, as described in more detail in the Traffic Impact Analysis by Fehr & Peers (2019 TIA), various traffic-related model methodologies have been updated. To ensure that the SREIR provides a consistent analysis of potential significant adverse effects associated with traffic-related noise, noise levels from the FEIR were first re-assessed based on the Updated 27% HBW ICR scenario as described in the 2019 TIA; this is the Updated 27% HBW ICR analysis. The five lower internal capture rate (ICR)/higher vehicle miles travelled (VMT) scenarios identified in the 2019 TIA were also assessed and evaluated for the potential to

cause significant new or significantly worse impacts than those identified in the 2016 EIR and those caused by the Project as reflected in the Updated 27% HBW ICR analysis.

The five lower ICR/higher VMT scenarios identified in the 2019 TIA, and evaluated in this report, are listed below:

- (a) **Scenario 1.** Proposed Project development of 12,000 dwelling units and 5,100,000 square feet of commercial/light industrial uses at 100% of full buildout with a 10% reduction in the daily and peak hour ICRs used in the FEIR
- (b) **Scenario 2.** Proposed Project development of 12,000 dwelling units and 5,100,000 square feet of commercial/light industrial uses at 100% of full buildout with a 20% reduction in the daily and peak hour ICRs used in the FEIR
- (c) **Scenario 4.** Proposed Project development of 12,000 dwelling units and 5,100,000 square feet of commercial/light industrial uses at 75% of full buildout (9,000 dwelling units and 3,185,000 square feet of commercial/light industrial uses) with a 20% reduction in the daily and peak hour ICRs used in the FEIR
- (c) **Scenario 9.** Development of 14,000 dwelling units and schools and parks as required by applicable land use laws and regulations, with no complementary commercial/light industrial amenities or on-site employment-generating land uses
- (d) **Scenario 10.** Development of 12,000 dwelling units and schools and parks as required by applicable land use laws and regulations, with no complementary commercial/light industrial amenities or on-site employment-generating land uses

As explained above, this analysis estimates traffic-related noise levels for the Updated 27% HBW ICR and five identified scenarios. However, to provide context, a summary of the 2016 EIR is provided, as further explained in Section 1.3. The same approach and methodology applied in the 2016 EIR was applied in this RSEIR analysis.

### 1.3 2016 EIR Summary

The DEIR estimated noise levels from future construction of Project components and from operation of the Project, including traffic within the Plan (on-site) and outside the Plan (off-site), as well as stationary noise sources (e.g., commercial, municipal, industrial uses). Construction noise levels and operational noise levels from stationary sources would not be affected by changes to the ICR for Project traffic. The summary of impacts from the 2016 FEIR and the supplemental analysis for the Updated 27% HBW ICR and five scenarios therefore is limited to traffic-related noise.

#### **Kern County Noise Significance Criteria (FEIR Page 4.12-21)**

*As described in Section 4.12.3, Regulatory Setting, Policy 5 of the KCGP Noise Element specifies the exterior noise limit for noise sensitive land uses to be 65 dBA Ldn (or CNEL) within outdoor activity areas or 45 dBA Ldn (or CNEL) within interior living spaces.*

*For transportation-related noise, impacts are considered significant if project-generated traffic exposes existing or potential noise sensitive land uses to sound levels in excess of 65 dBA Ldn (or CNEL). In areas where the ambient noise exceeds 65 dBA Ldn (or CNEL), a three (3) dBA Ldn (or CNEL) or greater increase due to a proposed project is considered significant.*

**Existing Noise Sensitive Land Uses (FEIR Page 4.12-26)**

Traffic-related noise impacts, especially in the context of a proposed specific plan analysis, must primarily evaluate the future noise environment resulting from long-range community buildout (project buildout or project implementation). This is performed using the traffic volumes anticipated from full buildout of the project compared with background or cumulative traffic from all other development in the region. While an extensive level of cumulative development is not anticipated to occur within the project area, many areas accessed via I-5 are anticipated to experience substantial growth, leading to increases in traffic volumes on I-5 and the local interchanges in the study area.

Table 4.12-8, Traffic Related Noise Levels at Existing Noise Sensitive Land Uses (dBA CNEL), compares the traffic-related noise level at the existing noise sensitive land use for existing, existing plus project, cumulative, and cumulative plus proposed project traffic levels.

Receiver	Existing	Existing with Project	Cumulative	Cumulative plus Proposed Project
Residences South of Proposed Project	61.9	64.3	66.2	67.6
Best Western	69	71.1	72.6	73.5
Microtel Inn & Suites	62.4	68.3	64	68.5
Residences west of area 6d <sup>a</sup>	51.1	53.5	51.1	53.5
Residence south of area 6e <sup>a</sup>	57.4	59.8	57.4	59.8

Source: Dudek, 2015b.  
 Notes: <sup>a</sup> Traffic volume estimates based upon Fehr & Peers, 2016 traffic estimate for this segment of Laval Road of approximately 400 ADT (up to 40 AM/PM peak-hour trips) for existing and cumulative, and up to 30 AM/PM peak-hour trips with the project.

Project-related traffic noise increases would be 2.4 dBA CNEL at the residences located between the I-5 northbound and southbound lanes, in the southern portion of the project area. The project would also increase the noise level at these residences by only 1.4 dBA CNEL above the levels associated with cumulative traffic. The project-related traffic noise increase would be 2.1 dBA CNEL at the Best Western, and the implementation of the project would increase the cumulative traffic noise level by 0.9 dBA CNEL. At the residences adjacent to Plan Areas 6d and 6e, the project-related traffic noise increase would be 2.4 dBA CNEL for both exiting and cumulative scenarios. These increases would be below the 3 dBA County threshold and impacts would be less than significant.

For the hotels located within the immediate vicinity (Ramada located at the existing I-5/Grapevine Road interchange and the Microtel and Best Western located at TRCC), the project would increase traffic-related noise levels by 5.9 dBA CNEL and would increase traffic-related noise levels above cumulative traffic noise by 4.5 dBA CNEL. The TRCC hotels are of recent construction, with the Microtel being constructed within the last three years and the Best Western constructed in 2006, employing noise control construction methods to address immediate proximity to I-5 traffic. The TRCC hotels do not have any exterior use areas that would be subject to the County’s 65 dBA CNEL exterior noise criterion. The Ramada Hotel has an internal courtyard with pool that would be subject to the County’s 65 dBA CNEL exterior noise criterion.

**Proposed Noise Sensitive Land Uses (FEIR Page 4.12-27)**

In general, project implementation would include paved travel lanes, parkways, and sidewalks within 50 feet of the proposed roadway centerline. In areas where future roadway traffic noise levels at 50 feet from the roadway centerline

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were determined to be 65 dBA CNEL or less, significant impacts upon adjacent noise sensitive land uses would not be anticipated to occur. In areas where the future traffic noise level is predicted to exceed 65 dBA CNEL at 50 feet from the roadway centerline, potentially significant noise impacts upon adjacent noise sensitive land uses could occur.

Table 4.12-9. Future Roadway Noise Contours: Cumulative Traffic Levels Including the Project			
Street Segment	Land Use Designations	dBA CNEL @ 50 feet from C.L.	Feet to 65 dBA CNEL Boundary
Land Use Area 1			
Street B, from Street C to Street E	Residential	62	25
Street C, from Street B to Street Q	V.C. Residential, Vill. Commercial, Residential	69	150
Land Use Area 2			
Street C, from Industrial Parkway to Street G	Village Center (V.C.) Residential, Village Commercial, Residential	71	250
Street C, from Street G to Street A	Village Commercial, Freeway Commercial	73	400
Street C, from Street A to Street H	Village Commercial, Freeway Commercial	72	300
Street C, from Street H to Street B	V. C. Residential, Village Commercial, Office	69	150
Street E, from Street C to Street B	Residential, Park, School	61	25
Interstate 5	Park, Freeway Commercial, Office/R&D	87	750
Land Use Area 3			
Street A, from Street D to Street I	V.C. Residential, Park, School	74	400
Street B, from Street C to Street E	Village Center Residential, Village Comm.	62	25
Street D, Edmonston PP Rd. to Street B	Village Center Residential, Residential, Park	66	75
Street D, Street B to Street A	V.C. Residential, Village Commercial	71	200
Street D, Street A to Del Oro Dr.	Village Center Residential, Residential	67	100
Street I, Street B to Street A	Village Center Residential, Residential	65	50
Interstate 5	Park, Freeway Commercial, Office/R&D	87	750
Land Use Area 4			
Street A, from Street J to L	Village Center Residential, Village Comm.	71	175
Street A, from Street L to N	Village Center Residential, Residential	68	100
Street B, from Street I to J	Residential	67	75
Street B, from Street J to L	Village Center Residential, Residential	66	75
Street B, from Street L to N	Village Center Residential, Residential	57	10
Street J, from Street A to B	Village Commercial, Residential	67	75
Street J, from Street B to Edmonston PP Rd.	Residential, School, Park	67	75
Street L, from Street A to B	Residential, School, Park	63	25
Land Use Area 5a			
Edmonston PP Rd., Street J to K	Residential	66	75
Land Use Area 5a			
Edmonston PP Rd., East of K Street	Residential	66	75
Land Use Area 6a			
Street D, Del Oro Dr. to Street S	Village Commercial, Office/R&D	66	75
Street T, from Street R to Street S	Village Center Residential, Park	65	50



Table 4.12-9, Future Roadway Noise Contours: Cumulative Traffic Levels Including the Project, shows that 20 of the 27 project roadway segments analyzed for future traffic-related noise would have noise levels that exceed 65 dBA CNEL at 50 feet or more from the roadway centerline, including in areas where the adjacent land uses would be noise-sensitive (i.e., residential uses, parks, and schools). Therefore, future proposed noise sensitive land uses could be exposed to traffic-related noise levels that exceed 65 dBA CNEL, resulting in a potentially significant noise impact. Mitigation Measure MM 4.12-4 would reduce impacts to less than significant levels.

**Mitigation Measures (FEIR Page 4.12-34)**

**MM 4.12-4**

- a. Prior to approval of any subdivision map that would authorize residential development, park site, or other sensitive noise receptor within 1,000 feet of the centerline of Interstate 5, the project proponent shall provide to the County a noise assessment prepared by a qualified, County-approved acoustical engineer. The noise assessment shall identify noise reduction measures necessary to ensure that sensitive noise receptors located adjacent to Interstate-5 will not be exposed to ambient noise levels that exceed 65 dBA (outside) and 45 dBA (inside) respectively. Acceptable noise reduction measures could include, but not be limited to, sound barriers, vegetated buffers, ventilation filters, noise attenuating window glazing, and noise attenuating insulation. Noise reduction measures identified in the required noise assessment shall be required as conditions of approval to the final subdivision map, commercial site plan, and/or building permit to assure compliance with the County's ambient noise standards.
- b. Prior to approval of any subdivision map that would authorize residential development, park site, or other sensitive noise receptor within 500 feet of the centerline of any internal roadway, the project proponent shall provide to the County a noise assessment prepared by a qualified, County-approved acoustical engineer. The noise assessment shall identify noise reduction measures necessary to ensure sensitive noise receptors located adjacent to internal project roadways will not be exposed to ambient noise levels that exceed 65 dBA (outside) and 45 dBA (inside) respectively. Acceptable noise reduction measures could include, but not be limited to, sound barriers, vegetated buffers, ventilation filters, noise attenuating window glazing, and noise attenuating insulation. Noise reduction measures identified in the required noise assessment shall be required as conditions of approval to the final subdivision map, commercial site plan, and/or building permit to assure compliance with the County's ambient noise standards.

**Level of Significance after Mitigation**

Impacts would be less than significant.

## 2 Supplemental Traffic Noise Analysis

### 2.1 Traffic Assessment Overview

As stated in Section 1.2, Fehr & Peers re-calculated the FEIR Project trip generation as described in more detail in the Traffic Impact Analysis (Fehr & Peers 2019 TIA), to arrive at "Adjusted FEIR" roadway volumes. Fehr & Peers also evaluated a total of 22 additional alternate internal capture rate (ICR) scenarios to evaluate the potential for a greater number of total trips, increased VMT, or a greater percentage of medium and/or heavy truck trips to occur. Fehr & Peers identified five scenarios with the potential to increase the percentage of medium or heavy trucks:

Scenario 1, Scenario 2, Scenario 4, Scenario 9, and Scenario 10. The description of these scenarios is provided under Section 1.2. For the analysis of the Updated 27% HBW ICR and five ICR scenarios, the traffic study examined the same 10 signalized intersections that were evaluated in the DEIR and FEIR (Appendix JJ) for Cumulative Plus Project Conditions at Laval / Wheeler and Grapevine interchange areas for AM and PM peak hour conditions. These intersections with relatively direct connection to I-5 interchanges were identified as having the potential to experience a greater percentage of medium and heavy trucks, as compared to the FEIR analysis:

<b>Intersections Evaluated for Increased Medium / Heavy Truck Traffic</b>	
1	Dennis McCarthy Drive/Laval Road
2	I-5 Southbound Ramps/Laval Road
3	I-5 Northbound Ramps/S. Wheeler Ridge Road
4	S. Wheeler Ridge Road/Laval Road
5	Street C/Street A
6	I-5 SB Off-Ramp/Street A
7	I-5 NB Off-Ramp/Street A
8	Street D/Street A
9	Street C/Street G
10	Street C/Street H

Fehr & Peers provided the peak hour intersection turn movement volumes, including percentage of medium trucks and heavy trucks, for each of the above 10 intersections under the Updated 27% HBW ICR and five ICR scenarios. Dudek used these intersection turn movement volumes to determine vehicle volumes for the road comprising each leg of each intersection. The roadway traffic volumes determined under the Updated 27% HBW ICR scenario were compared against the volumes used in the FEIR traffic noise analysis, to assess whether the updated methodology would alter any of the FEIR conclusions. Roadway segment volumes and resulting noise levels for the remaining five ICR scenarios were then individually compared to the Updated 27% HBW ICR noise levels.

It should be noted this updated traffic noise analysis focuses primarily on local roadway segments, and does not include I-5. The reason for this is that I-5 already carries approximately 80,000 average daily trips (ADT) along the segments which are adjacent to the Specific Plan (Caltrans 2016). The minor changes to the percentage of heavy or medium trucks represented in Project traffic volumes under the five ICR scenarios would not have the potential to alter the overall traffic noise levels associated with I-5, because total Project trip volumes would be a very slight percentage of the existing ADTs travelling along I-5.

## 2.1 Traffic Noise Assessment

Based upon roadway segment volumes determined for roads adjacent to the 10 intersections with increased heavy and/or medium truck volumes (refer to Section 2.1), Dudek calculated the changes to project traffic noise levels consistent with the FEIR scope and analysis for traffic noise. Further discussion is provided below.

## 2.1.2 Existing Noise Sensitive Land Uses

Table 1, *Traffic Related Noise Levels at Existing Noise Sensitive Land Uses*, compares the traffic-related noise level at the existing noise sensitive land use for the FEIR, Updated 27% HBW ICR, Scenario 1, Scenario 2, Scenario 4, Scenario 9, and Scenario 10 traffic levels.

As indicated in Table 1, the maximum change in noise levels at existing noise sensitive land uses (NSLUs) between the FEIR and Updated 27% HBW ICR analyses is 0.1 dBA CNEL. This magnitude of change is not detectable by the human ear, even in carefully controlled laboratory conditions. Consequently, the FEIR analysis of traffic noise on existing NSLUs remains accurate. However, the Updated 27% HBW ICR noise levels are used as the basis for comparison of the five ICR scenario noise levels.

Traffic noise increases would be 1.4 dBA CNEL at the residences located between the I-5 northbound and southbound lanes, comparing all scenarios against the FEIR cumulative traffic without Project noise level. This is due to the very small percentage of total Project traffic compared to the very large balance of traffic on I-5, regardless of the analysis scenario. Since the increase attributed to the Project under any scenario would remain below the 3 dBA County threshold, impacts to these residences would be less than significant.

The project-related traffic noise increase would be 0.9 dBA CNEL at the Best Western, comparing all scenarios against the FEIR cumulative traffic without Project noise level. Since the increase attributed to the Project under any scenario would remain below the 3 dBA County threshold, impacts to the Best Western would be less than significant.

At the residences adjacent to Plan Areas 6d and 6e, the project-related traffic noise increase would range from 2.5 to 3.4 dBA CNEL, dependent upon a given scenario, and when said scenario is compared against the FEIR cumulative traffic without Project cumulative scenario. These increases would each round to 3 dBA, and would therefore not trigger the County significance threshold; impacts would therefore be less than significant for the residences adjacent to Plan Areas 6d and 6e.

For the Microtel located at TRCC, the project would increase traffic-related noise levels between 4.6 and 6.2 dBA CNEL, dependent upon a given scenario, and when said scenario is compared against the FEIR cumulative traffic without Project cumulative scenario. The Microtel is of recent age, being constructed within the last three years, employing noise control construction methods to address immediate proximity to I-5 traffic. The TRCC hotels do not have any exterior use areas that would be subject to the County's 65 dBA CNEL exterior noise criterion. The original Project contribution was determined to be 5.9 dBA CNEL under the existing plus project scenario, and 4.5 under the cumulative plus project scenario. Hence the range of increases from 4.6 to 6.2 dBA CNEL are approximately equivalent to the range in the FEIR, and the differences would again not be discernible to the human ear. Therefore, increases in noise levels associated with Project traffic at the Microtel, under all of the scenarios, is considered less than significant (consistent with the FEIR conclusion).

<b>Table 1</b> <b>Traffic Related Noise Levels at Existing Noise Sensitive Land Uses</b> <b>Comparison of FEIR, Updated 27% HBW ICR and ICR Scenarios</b>						
		Residences B/twn I-5 NB & SB Lanes	Best Western	Microtel Inn & Suites	Residences West of area 6d	Residences West of area 6e
FEIR Cumulative	CNEL	66.2	72.6	64	51.1	57.4
FEIR Cumulative Plus Project (CPP)	CNEL	67.6	73.5	68.5	53.5	59.8
Project Contribution (FEIR)	dB	1.4	0.9	4.5	2.4	2.4
Updated 27% HBW ICR CPP	CNEL	67.6	73.5	68.6	53.6	59.9
<b>Updated 27% HBW ICR change from FEIR CPP</b>	dB	<b>0</b>	<b>0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
<b>Net Increase FEIR cumulative to Updated 27% HBW ICR CPP</b>	dB	<b>1.4</b>	<b>0.9</b>	<b>4.6</b>	<b>2.5</b>	<b>2.5</b>
Scenario 1	CNEL	67.6	73.5	69.8	54.3	60.6
Scenario 1 Change from Updated 27% HBW ICR CPP	dB	0	0	1.2	0.7	0.7
<b>Net Increase FEIR cumulative to Scenario 1 CPP</b>	dB	<b>1.4</b>	<b>0.9</b>	<b>5.7</b>	<b>3.1</b>	<b>3.1</b>
Scenario 2	CNEL	67.6	73.5	70.5	54.5	60.8
Scenario 2 Change from Updated 27% HBW ICR CPP	dB	0	0	1.9	1.0	1.0
<b>Net Increase FEIR cumulative to Scenario 2 CPP</b>	dB	<b>1.4</b>	<b>0.9</b>	<b>6.5</b>	<b>3.4</b>	<b>3.4</b>
Scenario 4	CNEL	67.6	73.5	70.4	54.1	60.4
Scenario 4 Change from Updated 27% HBW ICR CPP	dB	0	0	1.8	0.5	0.5
<b>Net Increase FEIR cumulative to Scenario 3 CPP</b>	dB	<b>1.4</b>	<b>0.9</b>	<b>6.4</b>	<b>3.0</b>	<b>3.0</b>
Scenario 9	CNEL	67.6	73.5	70.2	54.3	60.6
Scenario 9 Change from Updated 27% HBW ICR CPP	dB	0	0	1.6	0.7	0.7
<b>Net Increase FEIR cumulative to Scenario 4 CPP</b>	dB	<b>1.4</b>	<b>0.9</b>	<b>6.2</b>	<b>3.2</b>	<b>3.2</b>
Scenario 10	CNEL	67.6	73.5	69.8	53.9	60.2
Scenario 10 Change from Updated 27% HBW ICR CPP	dB	0	0	1.2	0.3	0.3
<b>Net Increase FEIR cumulative to Scenario 5 CPP</b>	dB	<b>1.4</b>	<b>0.9</b>	<b>5.8</b>	<b>2.8</b>	<b>2.8</b>

2.1.2 Proposed Noise Sensitive Land Uses

Table 2, *On-Site Future Roadway Noise Levels: CNEL at 50 Feet From Roadway Centerline*, compares the traffic-related noise level along future roadways within the Plan area based upon FEIR, Updated 27% HBW ICR, Scenario 1, Scenario 2, Scenario 4, Scenario 9, and Scenario 10 traffic levels. Only roadways associated with the 10 intersections examined for greater percentage medium and/or heavy trucks are included in the noise analysis, and therefore represented in Table 2.

Table 2 On-Site Future Roadway Noise Levels: CNEL at 50 Feet From Roadway Centerline Comparison of FEIR, Updated 27% HBW ICR and ICR Scenarios									
	Street C G to A	Street C A to H	Street C H to B	Street A D to I	Street A J to L	Street A L to N	Street D B to A	Street D A to Del Oro	Street D Edmnd. To B
FEIR Cumulative Plus Project (CPP)	73	72	69	74	71	68	71	67	66
<b>Updated 27% HBW ICR CPP</b>	<b>72.8</b>	<b>71.9</b>	<b>68.9</b>	<b>73.9</b>	<b>70.9</b>	<b>67.9</b>	<b>70.9</b>	<b>66.9</b>	<b>65.9</b>
Updated 27% HBW ICR change from FEIR CPP	(-0.2)	(-0.1)	(-0.1)	(-0.1)	(-0.1)	(-0.1)	(-0.1)	(-0.1)	(-0.1)
<b>Scenario 1</b>	<b>72.7</b>	<b>71.7</b>	<b>68.7</b>	<b>73.9</b>	<b>70.9</b>	<b>67.9</b>	<b>70.8</b>	<b>66.8</b>	<b>65.8</b>
Scenario 1 Change from Updated 27% HBW ICR CPP	(-0.1)	(-0.2)	(-0.2)	0	0	0	0.1	0.2	0.1
<b>Scenario 2</b>	<b>72.8</b>	<b>71.7</b>	<b>68.7</b>	<b>74.1</b>	<b>71.1</b>	<b>68.1</b>	<b>71.1</b>	<b>67.2</b>	<b>66.1</b>
Scenario 2 Change from Updated 27% HBW ICR CPP	0	(-0.2)	(-0.2)	0.2	0.2	0.2	0.2	0.3	0.2
<b>Scenario 4</b>	<b>72.9</b>	<b>72.1</b>	<b>69.0</b>	<b>73.7</b>	<b>70.7</b>	<b>67.7</b>	<b>70.7</b>	<b>66.7</b>	<b>65.7</b>
Scenario 4 Change from Updated 27% HBW ICR CPP	0.1	0.2	0.1	(-0.2)	(-0.2)	(-0.2)	(-0.2)	(-0.2)	(-0.2)
<b>Scenario 9</b>	<b>73.0</b>	<b>71.4</b>	<b>68.3</b>	<b>74.0</b>	<b>71.0</b>	<b>68.0</b>	<b>70.8</b>	<b>66.6</b>	<b>65.8</b>
Scenario 9 Change from Updated 27% HBW ICR CPP	0.2	(-0.5)	(-0.6)	0.1	0.1	0.1	(-0.1)	(-0.3)	(-0.1)
<b>Scenario 10</b>	<b>72.6</b>	<b>71.1</b>	<b>68.1</b>	<b>73.4</b>	<b>70.4</b>	<b>67.4</b>	<b>70.1</b>	<b>66.2</b>	<b>65.1</b>
Scenario 10 Change from Updated 27% HBW ICR CPP	(-0.2)	(-0.8)	(-0.8)	(-0.5)	(-0.5)	(-0.5)	(-0.8)	(-0.7)	(-0.8)

As illustrated in Table 2, roadway segment traffic noise increases would in every case remain well below 1 dBA, when comparing each scenario against the FEIR values. For many of the segments, a noise level decrease is calculated to occur, also less than 1 dB in magnitude. Because all of the noise level differences represented in Table 2 are well below perceptibility by the human ear, the noise levels reported in the FEIR for future on-site roadways remain accurate. Consequently, as with the FEIR, future proposed noise sensitive land uses under any of the examined scenarios could be exposed to traffic-related noise levels that exceed 65 dBA CNEL, resulting in a potentially significant noise impact. Mitigation Measure MM 4.12-4 would continue to apply, and would reduce impacts to less than significant levels.

## 3 Conclusion

### 3.1 Existing Noise Sensitive Land Uses

Project traffic noise contributions at the cumulative level have been demonstrated not to trigger the significance threshold of an increase greater than 3 dBA CNEL at existing noise sensitive uses in the project vicinity. In most cases, the ICR scenarios would contribute moderate increases of less than 2 dBA, when compared to the levels identified in the FEIR. The conclusions of the FEIR remain accurate with respect to traffic noise exposure for existing NSLU; Project traffic noise, even under each of the analyzed ICR scenarios, would remain a less than significant impact. No mitigation is required.

### 3.1 Proposed Noise Sensitive Land Uses

Changes to Project traffic noise contributions at the cumulative level along future on-site roadways under all analysis scenarios were found to be less than 1 dBA CNEL, compared to the values reported in the FEIR. In most cases, the ICR scenarios would contribute increases of less than 0.5 dBA, and in many cases the change is a reduction in the noise level. However, noise exposure levels along all roadway segment evaluated would be greater than 65 dBA CNEL at 50 feet from the roadway centerline. The conclusions of the FEIR remain accurate with respect to future on-site roadway traffic noise exposure, namely that potentially significant impacts could occur. Mitigation Measure MM 4.12-4 is applicable, and implementation would reduce impacts to less than significant levels.

## 4 References

- Caltrans. 2016. *2016 Traffic Volumes on the California State Highway System*, Caltrans Division of Traffic Operations.
- Fehr & Peers. 2019. *Supplemental Recirculated Transportation Impact Study Technical Report for the Grapevine Specific and Community Plan Project*.
- Kern County. 2016. *Final Environmental Impact Report for Grapevine Project (SCH No. 2014041005)*. October 2016.