Kimball Junction
ENVIRONMENTAL IMPACT STATEMENT

APPENDIX 3B

Noise Technical Report

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Kimball Junction
ENVIRONMENTAL IMPACT STATEMENT

Noise Technical Report

Kimball Junction Environmental Impact Statement

January 27, 2025

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by UDOT pursuant to 23 USC 327 and a Memorandum of Understanding dated May 26, 2022, and executed by FHWA and UDOT.

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Acronyms and Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
ATMS	advanced traffic management system
CFR	Code of Federal Regulations
CPBR	cost per benefitted receptor
dBA	A-weighted decibel
EIS	environmental impact statement
FHWA	Federal Highway Administration
I-80	Interstate 80
LOS	level of service
ML	monitoring location
N/A	not applicable
NAC	noise-abatement criteria
RV	recreational vehicle
SR-224	State Route 224
TNM	Traffic Noise Model
UDOT	Utah Department of Transportation
VPHPL	vehicles per hour per lane

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1.0 Introduction

This noise analysis was prepared in accordance with the Utah Department of Transportation's (UDOT) Policy 08A2-01, *Noise Abatement* (UDOT 2020), and is consistent with 23 Code of Federal Regulations (CFR) Part 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, and Utah Administrative Code Rule R930-3, *Highway Noise Abatement*.

2.0 Description of Project

UDOT is proposing transportation improvements at the Interstate 80 (I-80) and State Route 224 (SR-224) interchange at Kimball Junction in Summit County, Utah. The proposed improvements would meet the purpose of the project by improving operations and travel times on SR-224 from I-80 through Olympic Parkway, thereby improving safety by reducing vehicle queue lengths on the I-80 off-ramps, improving pedestrian and bicyclist mobility and accessibility in the project area, and maintaining or improving transit travel times in the project area.

The noise evaluation area is the land adjacent to the action alternatives that could be affected by an increase in noise levels (see Figure 2-1). The noise evaluation area is generally no more than 500 feet from the action alternatives. This distance is based on the Federal Highway Administration's (FHWA) performance evaluation of its Traffic Noise Model (TNM), which found that highway traffic noise typically does not cause impacts at distances greater than 500 feet from heavily traveled freeways (FHWA 2010).

This report describes the expected noise impacts from the two action alternatives:

- Alternative A: Split Diamond Interchange with Intersection Improvements
- Alternative C: Intersection Improvements with Pedestrian Enhancements

Detailed information about the action alternatives is provided in Chapter 2, *Alternatives*, of the Kimball Junction Environmental Impact Statement (EIS). With the proposed action alternatives, UDOT would construct sections of new roadway on new alignments, new interchanges or intersections, associated on- and off-ramps or turn lanes, and new active transportation infrastructure.

The Kimball Junction Project would include modifying utilities and storm drains and installing new pavement, traffic signals, advanced traffic management system (ATMS) equipment, and roadway signs. This project would require acquiring additional right-of-way.

2.1 Applicability

UDOT's noise-abatement policy states, "Noise abatement will be considered for all Type I projects where noise impacts are identified." Type I projects are projects that include any of the following:

- the construction of a highway at a new location
- the physical alteration of an existing highway that substantially alters its alignment
- the addition of a through-traffic lane
- the addition of an auxiliary lane
- the addition or relocation of interchange lanes or ramps
- the addition or substantial alteration of a weigh station, rest stop, ride-share lot, or toll plaza

The Kimball Junction Project is considered a Type I project because the action alternatives being evaluated would alter the horizontal and vertical alignments of I-80 and SR-224.

Figure 2-1. Noise Evaluation Area and Noise-monitoring Locations

3.0 Analysis of Traffic Noise Impacts

Traffic noise is measured in A-weighted decibels (dBA). The dBA scale most closely approximates how the human ear hears sounds at different frequencies (**Error! Reference source not found.**). Because traffic noise varies over time, the sound levels for this noise analysis are expressed as "equivalent levels" or L_{eq}, which represent the average sound level over 1 hour. Unless noted otherwise, all sound levels in this noise analysis are expressed in the hourly equivalent noise level.

Table 3-1. Weighted Noise Levels and Human Response

Sound Source	dBA[a]	Response Descriptor
Carrier deck jet operation	140	Limit of amplified speech
—	130	Painfully loud
Jet takeoff (200 feet) Auto horn (3 feet)	120	Threshold of feeling and pain
Riveting machine Jet takeoff (2,000 feet)	110	—
Shout (0.5 foot) New York subway station	100	Very annoying
Heavy truck (50 feet) Pneumatic drill (50 feet)	90	Hearing damage (8-hour exposure)
Passenger train (100 feet) Helicopter (in-flight, 500 feet) Freight train (50 feet)	80	Annoying
Freeway traffic (50 feet)	70	Intrusive
Air conditioning unit (20 feet) Light auto traffic (50 feet)	60	—
Normal speech (15 feet)	50	Quiet
Living room, bedroom, library	40	—
Soft whisper (15 feet)	30	Very quiet
Broadcasting studio	20	—
—	10	Just audible
—	0	Threshold of hearing

Sources: FHWA 2018; CEQ 1970

[a] Typical A-weighted noise levels taken with a sound-level meter and expressed as decibels on the "A" scale. The "A" scale approximates the frequency response of the human ear.

3.1 Noise-abatement Criteria

FHWA has established noise-abatement criteria (NAC) for several categories of land use activities (Table 3-2). FHWA's NAC are based on sound levels that are considered to be an impact to nearby noise-sensitive areas, also known as receptors. According to FHWA guidance, UDOT must give primary consideration for noise abatement to outdoor areas where people could be exposed to traffic noise for extended periods.

UDOT has developed a noise-abatement policy for transportation projects, and this policy conforms to FHWA's noise-abatement requirements in 23 CFR Part 772.

For each land use category, UDOT's noise-abatement criterion is the noise decibel (dBA) value that reflects the approach criterion of 1 dBA below the noise-abatement criterion value listed in 23 CFR Part 772 for that land use category (Table 3-2).

UDOT's noise-abatement policy states that a traffic noise impact occurs when either (1) the future worst-case noise level is equal to or greater than the UDOT noise-abatement criterion for a specified land-use category or (2) the future worst-case noise level is greater than or equal to an increase of 10 dBA over the existing noise level.

Noise impact and abatement analyses are required at locations where the land use activity category is A, B, C, D, or E (Table 3-2) only when development exists or has been permitted (formal building permit issued before the final environmental decision document is approved). Activity categories F and G include lands that are not sensitive to traffic noise. There are no impact criteria for these land use types, and an analysis of noise impacts is not required.

For this noise analysis, UDOT used aerial photographs and conducted on-site visits to identify existing land uses and the locations of structures.

Table 3-2. UDOT's Noise-abatement Criteria

Activity Category	FHWA Criterion L_{eq} (dBA)	L_{eq} Noise Level (dBA)	Evaluation Location	Description of Activity Category
A	57	56	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67	66	Exterior	Residential.
C	67	66	Exterior	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails and trail crossings.
D	52	51	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting room, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72	71	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in categories A–D or F.
F	—	—	—	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	—	—	—	Undeveloped lands that are not permitted.

Source: UDOT 2020

3.2 Noise Sensitive Land Uses

Table 3-3 summarizes the noise-sensitive land uses in each of the activity categories in the noise evaluation area. This evaluation area is a mix of residential developments, trails, commercial properties, and undeveloped land. The properties in the evaluation area are in locations where the land use activity category is B, C, E, F, or G. The predominant source of noise in the evaluation area is automobile and truck traffic on the existing I-80 and SR-224 alignments.

Table 3-3. Noise-sensitive Land Uses

Activity Category	Description of Activity Category in the Evaluation Area
A	• None
B	• Residential areas near I-80 and SR-224, including the Powder Wood Condominiums, Fox Point at Redstone, Spring Creek subdivision, Blackhawk Station subdivision, Canyon Creek Club Homes, Richer Place Apartments, and Newpark Studios.
C	• Park City RV Resort • Pool and tennis courts at the Powder Wood Condominiums • Park area at Junction Commons (formerly Outlets Park City) • Recreational area at the Best Western Hotel • Basin Recreation swimming pool • Creekside Park City Church • Pool at the Canyon Creek Club Homes
D	• None
E	• Restaurants, office buildings, and hotels along Landmark Drive, SR-224, Ute Boulevard, and Newpark Boulevard
F	• Retail and utility properties along Landmark Drive, SR-224, Ute Boulevard, and Newpark Boulevard.
G	• Undeveloped lands south of I-80 and east of Newpark Boulevard; south of I-80 and west of Junction Commons (formerly Outlets Park City); south of I-80 and west of Powder Wood Condominiums; north of I-80 and west of the Spring Creek subdivision; and west of SR-224 and south of Olympic Parkway.

UDOT's noise-abatement policy states that a noise impact analysis is not required for activity categories F and G. However, for activity category G, an estimate of the distance to the approach criteria must be provided to local governments. For more information, see Section 6.0, *Information for Local Officials*.

3.3 Noise Measurements

On-site measurements were taken on October 8, 2023, with a Larson Davis model 824 sound-level meter for a duration of 20 minutes at the locations listed in Table 3-4. See Attachment A, *Noise Monitoring Data Sheets and Existing Noise Receptor Maps*, for data sheets and more-detailed figures showing the noise measurement locations.

Noise measurements were taken at outdoor locations where people could be exposed to traffic noise for extended periods. These locations included residences, a recreational vehicle (RV) park, recreation areas, and commercial areas. Recorded measurements for monitoring locations (ML) ML-1 to ML-7 were used to validate FHWA's TNM and to ensure that it represents existing conditions. Per FHWA's guidance, the purpose of these measurements is not to define the existing

noise levels for impact determination, but to validate the existing model run so that the TNM can then be used with some degree of confidence to predict the noise levels that will be used in impact determination for the two action alternatives. To be considered valid, the field noise measurements must be within 3 dBA of the model's predicted noise. The model validation results range between 0 and 3 dBA, so the TNM is considered valid (Table 3-4).

Table 3-4. Field Noise Measurements and Noise Model Validation

Monitoring Location [a]	Address	Activity Category [b] (dBA L_{eq})	Measured Noise Level (dBA)	Modeled Noise Level (dBA)	Difference (dBA)
ML-1	Park City RV Resort	C	70	71	+1
ML-2	PowderWood by All Seasons Resort	E	70	68	–2
ML-3	Creekside Park City Church	C	72	72	0
ML-4	Canyon Creek Club Homes	E	60	62	+2
ML-5	6078 N. Fox Pointe Circle	B	61	61	0
ML-6	AC Hotel by Marriott	E	61	61	0
ML-7	Del Taco	E	59	56	–3

[a] Noise-monitoring locations are shown in Figure 2-1. *Noise Evaluation Area and Noise-monitoring Locations*, above.

[b] For descriptions of the activity categories, see Table 3-2, *UDOT's Noise-abatement Criteria*, above.

Definition: ML = monitoring location

3.4 Existing Noise Assessment

The primary source of noise in the noise evaluation area is automobile and truck traffic on I-80 and SR-224.

Existing noise levels were determined using noise modeling for receptors adjacent to I-80, SR-224, and other roads in the evaluation area. Existing traffic sound levels for receptors in this area were calculated with FHWA's TNM (version 2.5) using existing conditions (travel lane configurations and the posted speed limit).

To be consistent with the UDOT's noise-abatement policy, level of service (LOS) C traffic volumes were used to determine the greatest/loudest traffic noise conditions likely to occur. LOS C traffic volumes and truck percentages used in the modeling are summarized in Table 3-5.

Table 3-5. Estimates of Fleet Mix and LOS C Traffic Volumes for TNM

Road	Type	Automobile (%)	Medium Truck (%)	Heavy Trucks (%)	Buses or Motorcycles (%)	LOS C Volumes (VPHPL)
I-80	6-lane freeway	83	7	8	2	1,100
I-80 on- and off-ramps	2-lane freeway ramps	83	7	8	2	607
SR-224: Rasmussen Road to Olympic Parkway	4-lane arterial	95	1	1	3	525
SR-224: Olympic Parkway to Canyons Resort Drive	4-lane arterial	95	1	1	3	700
Ute Boulevard, Olympic Parkway, and Landmark Drive (4-lane)	4-lane collector	96	1	0	3	475
Newpark Boulevard and Landmark Drive (2-lane)	2-lane collector	96	1	0	3	400
Rasmussen Road	2-lane collector	96	1	0	3	350
Other local roads	2-lane collector	97	1	0	0	250

Definition: VPHPL = vehicles per hour per lane

The noise model developed for the existing conditions included 321 receptors, consisting of 263 residential receptors (land use activity category B), 47 receptors where the land use activity category is C, 1 receptor where the land use activity category is D, and 10 receptors where the land use activity category is E. With the existing conditions, 139 receptors experience a noise level above the NAC threshold. Overall, noise levels with the existing conditions range from 46 to 75 dBA.

Of the 321 receptors in the noise evaluation area, 139 receptors experience a noise level above the NAC threshold. (See the existing noise levels maps in Attachment A, *Noise Monitoring Data Sheets and Existing Noise Receptor Maps*; Table B-1 in Attachment B, *Noise Levels and Noise Receptor Maps for Alternative A*; and Table C-1 in Attachment C, *Noise Levels and Noise Receptor Maps for Alternative C*)

3.5 Noise Assessment for the Action Alternatives

Projected traffic noise levels for the two action alternatives were calculated with FHWA's TNM (version 2.5) using the future conditions with the Kimball Junction Project (travel lane configurations and traffic volumes). To be consistent with UDOT's noise-abatement policy, LOS C traffic volumes and projected vehicle fleet mixes in 2050 were used to determine the greatest hourly traffic noise conditions that are likely to occur regularly with the project. These conditions are summarized above in Table 3-5.

The results are summarized below by alternative. Attachment B, *Noise Levels and Noise Receptor Maps for Alternative A*, and Attachment C, *Noise Levels and Noise Receptor Maps for Alternative C*, include data tables and figures that show the locations of receptors for each action alternative.

Alternative A. Overall, with Alternative A, noise levels would range from 46 to 75 dBA, which is the same range as the existing conditions.

With Alternative A, 138 of the 321 receptors (101 activity category B and 37 activity category C) would have traffic noise impacts; that is, they would exceed the NAC as defined in Section 3.1, *Noise-abatement Criteria*. None of the 138 impacted receptors would have a future worst-case noise levels greater than or equal to an increase of 10 dBA over the existing noise level. The locations of the receptors that would exceed the NAC are shown in Attachment B, *Noise Levels and Noise Receptor Maps for Alternative A*.

Alternative C. Overall, with Alternative C, noise levels would range from 46 to 75 dBA, which is the same range as the existing conditions.

With Alternative C, 139 of the 321 receptors (105 activity category B and 34 activity category C) would have traffic noise impacts; that is, they would exceed the NAC as defined in Section 3.1, *Noise-abatement Criteria*. None of the 139 impacted receptors would have a future worst-case noise levels greater than or equal to an increase of 10 dBA over the existing noise level. The locations of the receptors that would exceed the NAC are shown in Attachment C, *Noise Levels and Noise Receptor Maps for Alternative C*.

3.6 Summary of the Existing and Action Alternative Noise Levels

Table 3-6 summarizes the noise levels for existing conditions and the No-Action and action alternatives.

Table 3-6. Traffic Noise Impacts for Existing Conditions and the No-Action and Action Alternatives

Receptors with Modeled Noise Greater than UDOT NAC	Alternative A	Alternative C
139 (105)	138 (101)	139 (105)

Note: Impacts to receptors where the land use activity category is B (residential properties) are listed in parentheses.

For detailed information about existing noise levels, noise levels with Alternative A, and noise receptor locations, see the tables and maps in Attachment B, *Noise Levels and Noise Receptor Maps for Alternative A.*

For detailed information about existing noise levels, noise levels with Alternative C, and noise receptor locations, see the tables and maps in Attachment C, *Noise Levels and Noise Receptor Maps for Alternative C.*

4.0 Noise Abatement

According to UDOT's noise-abatement policy, specific conditions must be met before traffic noise abatement is implemented. Noise abatement must be considered both feasible and reasonable.

The following factors are considered when determining whether abatement is feasible:

- **Engineering Considerations.** Engineering considerations such as safety, presence of cross streets, sight distance, access to adjacent properties, barrier height, topography, drainage, utilities, maintenance access, and maintenance of the abatement measure must be taken into account as part of establishing feasibility. Noise-abatement measures are not intended to serve as privacy fences or safety barriers. With the action alternatives, noise-abatement measures installed on structures would not exceed 10 feet in height measured from the top of the deck or roadway to the top of the noise barrier. Noise barriers would not be installed on structures that require retrofitting to accommodate the noise-abatement measure. Noise-abatement measures will be considered if the project meets the criteria established in UDOT's noise-abatement policy if replacing the structure is included as part of the project. Noise-abatement measures will be consistent with general design principles established by the American Association of State Highway and Transportation Officials (AASHTO).
- **Safety on Urban Non-access-controlled Roads.** To avoid a damaged barrier from becoming a safety hazard in the event of a failure, barrier height must be no greater than the distance from the back-of-curb to the face of the proposed barrier. Because the distance from the back-of-curb to the face of a proposed barrier varies, barrier heights that meet this safety requirement might also vary.
- **Acoustic Feasibility.** Noise abatement must be considered acoustically feasible. *Acoustically feasible* is defined as achieving at least a 5-dBA highway traffic noise reduction for at least 50% of front-row receptors.

The following factors are considered when determining whether abatement is reasonable:

- **Noise-abatement Design Goal.** Every reasonable effort should be made to obtain substantial noise reductions. UDOT defines the minimum noise reduction (design goal) from proposed abatement measures to be 7 dBA or greater for at least 35% of front-row receptors.
- **Cost-effectiveness.** The cost of a noise-abatement measure must be deemed reasonable it to be included in a project. Noise-abatement costs are based on a fixed unit cost of $20 per square foot, multiplied by the height and length of the barrier, in addition to the cost of any other item associated with the abatement measure that is critical to safety. The fixed unit cost is based on the historical average cost of noise barriers installed on UDOT projects and is reviewed at regular intervals, not to exceed 5 years. The cost-effectiveness of abatement is determined by analyzing the cost of a barrier that would provide a noise reduction of 5 dBA or more for a benefited receptor. A reasonable cost is considered to be a maximum of $30,000 per benefited receptor for activity category B and $360 per linear foot for activity categories A, C, D, or E. If the anticipated cost of the noise-abatement measure is less than the allowable cost, then the abatement is deemed reasonable.

The cost-effectiveness calculation needs to take into account the cost of any items associated with the abatement measure that is critical to safety, such as snow storage and safety barriers. Costs for additional items are not currently needed for the abatement measures evaluated in this Draft EIS. The cost of constructing items necessary for snow storage and safety barriers will be taken into consideration as part of the cost effectiveness calculation during final design, if applicable.

Viewpoints of Property Owners and Residents. As part of the final design phase for the selected alternative, public balloting would be conducted if noise-abatement measures meet the criteria in UDOT's noise-abatement policy.

Section C.2(c)(1) of UDOT's noise-abatement policy requires balloting for all benefited receptors (property owners or tenants that would receive a 5-dBA or greater reduction in noise from the noise-abatement measure) or receptors whose property would abut the proposed noise-abatement measures. Balloting approval is contingent on at least 75% of the total ballots being returned and 75% of the returned ballots being in favor of the proposed noise-abatement measure.

4.1 Noise Barriers

For a noise barrier to be effective, it must be high enough and long enough to block the view of the noise source from the receptor's perspective. FHWA's *Highway Traffic Noise: Analysis and Abatement Guidance* states that a good rule of thumb is that the noise barrier should extend 4 times as far in each direction as the distance from the receptor to the barrier. For instance, if the receptor is 50 feet from the proposed noise barrier, the barrier needs to extend at least 200 feet on either side of the receptor to shield the receptor from noise traveling past the ends of the barrier.

Openings in noise barriers for driveway and cross street access greatly reduce the effectiveness of noise barriers. For this reason, impacted receptors with direct access onto local streets do not qualify for noise barriers.

For this analysis, UDOT considered barriers up to 17 feet, which is the current approved UDOT standard for noise barrier heights. The 17-foot height is considered a feasible engineering consideration. Barrier heights over 17 feet would require additional review and approval from UDOT's Structures Division.

Barrier heights over 17 feet could be considered in circumstances only where a 17-foot-tall noise barrier meets the acoustic feasibility criteria and does not meet the reasonable design goal or cost-effectiveness criteria. In these circumstances, noise barriers over 17 feet tall would be evaluated to determine whether they would meet the reasonable design goal or cost-effectiveness criteria.

UDOT calculated the anticipated cost of each barrier by multiplying the barrier area and the barrier cost per square foot ($20). The allowable cost was calculated using two variables: (1) activity category B allowable cost and (2) activity category C allowable cost. The activity category B allowable cost was calculated by multiplying the allowable cost per benefited receptor ($30,000) by the number of receptors benefited by the barrier. The activity category C allowable cost was calculated by multiplying the length of the barrier associated with activity category C land use by the allowable cost for activity category C land ($360 per linear foot). These two variables, activity category B allowable cost and activity category C allowable cost, were combined to produce the

allowable cost for each barrier. For detailed barrier analyses, see Attachment E, *Noise Barrier Analysis*.

To provide an objective analysis of traffic noise reduction at impacted receptors, UDOT considered a variety of noise barrier heights in areas with noise impacts that do not have an existing noise barrier. If multiple barrier heights would meet noise-abatement requirements, UDOT considered the number of benefitted receptors and the cost per benefitted receptor to identify the noise barrier height recommended for balloting. Nine noise barriers were considered for the two action alternatives. See the noise barrier maps in Attachment D, *Noise Barrier Maps for Alternative A and Alternative C*.

4.2 Barrier Analysis for Alternative A

The following sections describe three noise barriers (Noise Barriers 1 through 3) evaluated for Alternative A. One of these three barriers (Noise Barrier 1) was found to be both feasible and reasonable for Alternative A, and it is recommended for balloting.

Noise Barrier 1 (NW01)

UDOT evaluated a noise barrier on the south side of I-80 near 2200 West and the Powder Wood Condominiums where noise impacts are expected to 54 residential receptors (003–008, 011, 014–020, 023–029, 032, 035–041, 044, 047–053, 056, 059–064, 066-067, 069–070, 072–073, 075–076, and 078–079) with Alternative A. There are eight front-row residential receptors in this area.

UDOT initially evaluated a noise barrier near the right-of-way line on the south side of I-80 that would be about 3,275 feet long. As shown in Table 4-1, the evaluation determined that none of the 3,275-foot-long noise barriers at heights from 13 feet to 17 feet would meet the UDOT cost-reasonable criterion.

Because these longer barriers would not meet the cost-reasonable criterion, UDOT evaluated a shorter-length noise barrier for Noise Barrier 1. The noise barrier would be near the right-of-way line on the south side of I-80 and would be about 800 feet long (see Attachment D, *Noise Barrier Maps for Alternative A and Alternative C*).

As summarized in Table 4-1, UDOT also evaluated a proposed barrier at a length of 800 feet with heights 14 to 17 feet. For detailed information, see Attachment E, *Noise Barrier Analysis*.

For Noise Barrier 1 for Alternative A, barriers that are 3,275 feet long and 13 feet to 17 feet tall are acoustically feasible and meet the noise-abatement design goal, but they are not cost-reasonable.

For Noise Barrier 1 for Alternative A, barriers that are 800 feet long, and 14 to 17 feet tall are acoustically feasible, meet the noise-abatement design goal, and are cost-reasonable.

Because the cost per benefitted receptor (CPBR) is the lowest for the barrier that is 800 feet long and 16 feet tall, UDOT recommends this barrier for balloting.

Table 4-1. Noise-abatement Analysis for Noise Barrier 1 for Alternative A

Barrier Height (feet)	Feasible		Reasonable					Is Barrier Feasible and Reasonable? (CPBR) [d]
	% Front-row with 5-dBA Reduction	Acoustically Feasible?[a]	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal?[b]	Anticipated Cost	Allowable Cost (Number of Benefitted Receptors)	Cost-effective?[c]	
3,275-Foot-long Barrier								
13	100%	Yes	38%	Yes	$851,500	$240,000 (8)	No	No
14	100%	Yes	75%	Yes	$917,000	$480,000 (16)	No	No
15	100%	Yes	88%	Yes	$982,500	$540,000 (18)	No	No
16	100%	Yes	88%	Yes	$1,048,000	$630,000 (21)	No	No
17	100%	Yes	88%	Yes	$1,113,500	$690,000 (23)	No	No
800-foot-long Barrier								
14	75%	Yes	38%	Yes	$224,000	$270,000 (9)	Yes	Yes ($24,889)
15	75%	Yes	38%	Yes	$240,000	$360,000 (12)	Yes	Yes ($20,000)
16	**75%**	**Yes**	**63%**	**Yes**	**$256,000**	**$450,000 (15)**	**Yes**	**Yes ($17,066.67)**
17	75%	Yes	63%	Yes	$272,000	$450,000 (15)	Yes	Yes ($18,188.33)

[a] 5-dBA reduction for at least 50% of front-row receptors
[b] 7-dBA reduction for at least 35% of front-row receptors
[c] Anticipated cost is less than allowable cost
[d] Definition: cost per benefitted receptor. This calculated by the anticipated cost divided by the number of benefitted receptors.

Noise Barrier 2 (NW02)

A noise barrier on the north side of I-80 west of SR-224 was evaluated where noise impacts are expected to 7 residential receptors (256–261 and 282) with Alternative A. There are 11 front-row residential receptors in this area. The noise barrier would be near the right-of-way line on the north side of the on-ramp from SR-224 to westbound I-80 and would be about 2,031 feet long (see Attachment D, *Noise Barrier Maps for Alternative A and Alternative C*). There would be a gap in NW02 where the pedestrian structure crosses I-80.

As summarized in **Error! Reference source not found.**, UDOT evaluated the proposed barrier at a height of 18 feet. For detailed information, see Attachment E, *Noise Barrier Analysis*.

For Noise Barrier 2 for Alternative A, an 18-foot-tall noise barrier does not meet UDOT's noise-abatement design goal criterion for reasonableness. Because an 18-foot-tall barrier would not meet the noise-abatement design goal, shorter barriers would also not meet the noise-abatement design goal, and shorter noise barriers were not evaluated in this analysis. Therefore, a 2,031-foot-long noise barrier is not reasonable and is not recommended for balloting.

Table 4-2. Noise-abatement Analysis for Noise Barrier 2 for Alternative A

Barrier Height (feet)	Feasible		Reasonable					Is Barrier Feasible and Reasonable?
	% Front-row with 5-dBA Reduction	Acoustically Feasible?[a]	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal?[b]	Anticipated Cost	Allowable Cost (Number of Benefitted Receptors)	Cost-effective?[c]	
18	55%	Yes	9%	No	N/A	N/A	N/A	No

[a] 5-dBA reduction for at least 50% of front-row receptors
[b] 7-dBA reduction for at least 35% of front-row receptors
[c] Anticipated cost is less than allowable cost
Definition: N/A = not applicable

Noise Barrier 3 (NW03)

A noise barrier on the north side of I-80 near the Park City RV Resort was evaluated where noise impacts are expected to 33 recreational (activity category C) receptors (283–292 and 298–320) with Alternative A. There are 4 front-row recreational receptors in this area. The noise barrier would be near the right-of-way line on the north side of I-80 and would be about 2,037 feet long (see Attachment D, *Noise Barrier Maps for Alternative A and Alternative C*).

As summarized in **Error! Reference source not found.**, UDOT evaluated the proposed barrier at heights varying from 11 to 17 feet. For detailed information, see Attachment E, *Noise Barrier Analysis*.

For Noise Barrier 3 for Alternative A, an 11-foot-tall or shorter noise barrier does not meet UDOT's design goal criterion for reasonableness. Barriers ranging in height from 12 feet tall to 17 feet tall are acoustically feasible and meet the noise-abatement design goal, but they are not cost-reasonable (because the anticipated cost is greater than the allowable cost). Therefore, UDOT does not recommend a 2,037-foot-long noise barrier for balloting.

Table 4-3. Noise-abatement Analysis for Noise Barrier 3 for Alternative A

Barrier Height (feet)	Feasible		Reasonable					Is Barrier Feasible and Reasonable?
	% Front-row with 5-dBA Reduction	Acoustically Feasible?[a]	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal?[b]	Anticipated Cost[c]	Allowable Cost (Number of Benefitted Receptors)	Cost-effective?[d]	
11	100%	Yes	0%	No	N/A	N/A	N/A	No
12	100%	Yes	100%	Yes	$488,978	$161,991	No	No
13	100%	Yes	100%	Yes	$529,726	$161,991	No	No
14	100%	Yes	100%	Yes	$570,474	$161,991	No	No
15	100%	Yes	100%	Yes	$611,223	$161,991	No	No
16	100%	Yes	100%	Yes	$651,971	$161,991	No	No
17	100%	Yes	100%	Yes	$692,719	$161,991	No	No

[a] 5-dBA reduction for at least 50% of front-row receptors

[b] 7-dBA reduction for at least 35% of front-row receptors

[c] Allowable cost was calculated by multiplying the length of barrier (449.97 feet) by the allowable cost of $360 per linear foot for activity category C receptors.

[d] Anticipated cost is less than allowable cost

Definition: N/A = not applicable

4.3 Barrier Analysis for Alternative C

The following sections describe six noise barriers (Noise Barriers 1 through 6) evaluated for Alternative C. Two of these six barriers (Noise Barriers 1 and 2) were found to be both feasible and reasonable for Alternative C and are recommended for balloting.

Noise Barrier 1 (NW01)

A noise barrier on the south side of I-80 near 2200 West and the Powder Wood Condominiums was evaluated where noise impacts are expected to 52 residential receptors (003–008, 011, 014, 016–020, 023–029, 032, 035–041, 044, 047–053, 056, 059–064, 066–067, 069–070, 072–073, 076, and 078–079) with Alternative C. There are 6 front-row residential receptors in this area. The noise barrier would be near the right-of-way line on the south side of I-80. UDOT evaluated 1,300-foot-long and 1,936-foot-long noise barriers (see Attachment D, *Noise Barrier Maps for Alternative A and Alternative C*).

As summarized in Table 4-4, UDOT evaluated the proposed barrier at a length of 1,936 feet with heights 13 feet to 17 feet and at a length of 1,300 feet with heights 15 to 17 feet. For detailed information, see Attachment E, *Noise Barrier Analysis*.

For Noise Barrier 1 for Alternative C, a noise barrier that is1,936 feet long and 13 feet tall is acoustically feasible, but it does not meet the noise-abatement design goal. At 1,936 feet long, noise barriers that are 14 to 16 feet tall are acoustically feasible and meet the noise-abatement design goal, but they are not cost-reasonable. At 1,936 feet long, a noise barrier that is 17 feet tall is acoustically feasible, meets the noise-abatement design goal, and is cost-reasonable.

At 1,300 feet long, a noise barrier that is 15 feet tall is acoustically feasible, but it does not meet the noise-abatement design goal. At 1,300 feet long, noise barriers that are 16 and 17 feet tall are acoustically feasible, meet the noise-abatement design goal, and are cost-reasonable.

Because the CPBR is the lowest for the 1,300-foot-long and 17-foot-tall barrier, UDOT recommends a 1,300-foot-long noise barrier that is 17 feet tall for balloting.

Table 4-4. Noise-abatement Analysis for Noise Barrier 1 for Alternative C

Barrier Height (feet)	Feasible		Reasonable					Is Barrier Feasible and Reasonable? (CPBR) [d]
	% Front-row with 5-dBA Reduction	Acoustically Feasible?[a]	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal?[b]	Anticipated Cost	Allowable Cost (Number of Benefitted Receptors)	Cost-effective?[c]	
1,936-foot-long Barrier								
13	100%	Yes	0%	No	N/A	N/A	N/A	No
14	100%	Yes	50%	Yes	$542,080	$300,000 (10)	No	No
15	100%	Yes	67%	Yes	$580,800	$420,000 (14)	No	No
16	100%	Yes	67%	Yes	$619,520	$510,000 (17)	No	No
17	100%	Yes	83%	Yes	$658,240	$660,000 (22)	Yes	Yes ($29,920)
1,300-foot-long Barrier								
15	100%	Yes	33%	No	N/A	N/A	N/A	No
16	100%	Yes	50%	Yes	$416,000	$480,000 (16)	Yes	Yes ($26,000)
17	100%	Yes	83%	Yes	$442,000	$570,000 (19)	Yes	Yes ($23,263)

[a] 5-dBA reduction for at least 50% of front-row receptors

[b] 7-dBA reduction for at least 35% of front-row receptors

[c] Anticipated cost is less than allowable cost

[d] Definition: cost per benefitted receptor. This is calculated by the anticipated cost divided by the number of benefitted receptors.

Noise Barrier 2 (NW02)

A noise barrier on the south side of I-80 east of SR-224 near Newpark Studios was evaluated where noise impacts are expected to 27 residential receptors (125–126 and 147–171) with Alternative C. There are 2 front-row residential receptors in this area. The noise barrier would be near the right-of-way line on the south side of the on-ramp to eastbound I-80 from SR-224 and would be about 600 feet long (see Attachment D, *Noise Barrier Maps for Alternative A and Alternative C*).

As summarized in **Error! Reference source not found.**, UDOT evaluated the proposed barrier at heights of 12 feet, 14 feet, and 16 feet. For detailed information, see Attachment E, *Noise Barrier Analysis*.

For Noise Barrier 2 for Alternative C, noise barriers that are 12 feet tall, 14 feet tall, and 16 feet tall are all acoustically feasible, meet the noise-abatement design goal, and are cost-reasonable. Because the CPBR is the lowest for the 14-foot-tall barrier, UDOT recommends a 600-foot-long noise barrier that is 14 feet tall for balloting.

Table 4-5. Noise-abatement Analysis for Noise Barrier 2 for Alternative C

Barrier Height (feet)	Feasible		Reasonable					Is Barrier Feasible and Reasonable? (CPBR) [d]
	% Front-row with 5-dBA Reduction	Acoustically Feasible?[a]	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal?[b]	Anticipated Cost	Allowable Cost (Number of Benefitted Receptors)	Cost-effective?[c]	
12	50%	Yes	50%	Yes	$144,000	$210,000 (7)	Yes	Yes ($20,751)
14	50%	Yes	50%	Yes	$168,000	$390,000 (13)	Yes	Yes ($12,923)
16	50%	Yes	50%	Yes	$192,000	$420,000 (14)	Yes	Yes ($13,714)

[a] 5-dBA reduction for at least 50% of front-row receptors
[b] 7-dBA reduction for at least 35% of front-row receptors
[c] Anticipated cost is less than allowable cost
[d] Definition: cost per benefitted receptor. This calculated by the anticipated cost divided by the number of benefitted receptors.

Noise Barrier 3 (NW03)

A noise barrier on the north side of I-80 east of SR-224 by the Blackhawk Station subdivision and Canyon Creek Club Homes was evaluated where noise impacts are expected to 1 recreational receptor (180) and 10 residential receptors (174–175, 177–178, 182–183, 185–186, and 188–189) with Alternative C. There are 24 front-row residential receptors in this area. The noise barrier would be near the right-of-way line on the north side of I-80 and would be about 2,523 feet long (see Attachment D, *Noise Barrier Maps for Alternative A and Alternative C*).

As summarized in **Error! Reference source not found.**, UDOT evaluated the proposed barrier at a height of 17 feet. For detailed information, see Attachment E, *Noise Barrier Analysis*.

For Noise Barrier 3 for Alternative C, a 17-foot-tall noise barrier is not acoustically feasible. Because a 17-foot-tall noise barrier would not meet the feasibility reduction criterion, shorter barriers would also not meet the feasibility reduction criterion. For this reason, shorter noise barriers were not evaluated in this analysis. Therefore, UDOT does not recommend a 2,523-foot-long noise barrier for balloting.

Table 4-6. Noise-abatement Analysis for Noise Barrier 3 for Alternative C

Barrier Height (feet)	Feasible		Reasonable					Is Barrier Feasible and Reasonable?
	% Front-row with 5-dBA Reduction	Acoustically Feasible?[a]	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal?[b]	Anticipated Cost	Allowable Cost (Number of Benefitted Receptors)	Cost-effective?[c]	
17	42%	No	N/A	N/A	N/A	N/A	N/A	No

[a] 5-dBA reduction for at least 50% of front-row receptors
[b] 7-dBA reduction for at least 35% of front-row receptors
[c] Anticipated cost is less than allowable cost
Definition: N/A = not applicable

Noise Barrier 4 (NW04)

A noise barrier on the north side of I-80 east of SR-224 was evaluated where noise impacts are expected to 3 residential receptors (231–233) and one recreational receptor (229) with Alternative C. There are 15 front-row receptors in this area (14 residential, 1 recreational). The noise barrier would be near the right-of-way line on the north side of the off-ramp from westbound I-80 to SR-224 and would be about 1,825 feet long (see Attachment D, *Noise Barrier Maps for Alternative A and Alternative C*).

As summarized in **Error! Reference source not found.**, UDOT evaluated the proposed barrier at heights varying from 17 to 18 feet. For detailed information, see Attachment E, *Noise Barrier Analysis*.

For Noise Barrier 4 for Alternative C, noise barriers that are 17 or 18 feet tall are not acoustically feasible. Therefore, UDOT does not recommend a 1,825-foot-long for balloting.

Table 4-7. Noise-abatement Analysis for Noise Barrier 4 for Alternative C

Barrier Height (feet)	Feasible		Reasonable					Is Barrier Feasible and Reasonable?
	% Front-row with 5-dBA Reduction	Acoustically Feasible?[a]	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal?[b]	Anticipated Cost	Allowable Cost (Number of Benefitted Receptors)	Cost-effective?[c]	
17	33%	No	N/A	N/A	N/A	N/A	N/A	No
18	40%	No	N/A	N/A	N/A	N/A	N/A	No

[a] 5-dBA reduction for at least 50% of front-row receptors
[b] 7-dBA reduction for at least 35% of front-row receptors
[c] Anticipated cost is less than allowable cost
Definition: N/A = not applicable

Noise Barrier 5 (NW05)

A noise barrier on the north side of I-80 west of SR-224 was evaluated where noise impacts are expected to 13 residential receptors (257–264 and 278–282) with Alternative C. There are 11 front-row residential receptors in this area. The noise barrier would be near the right-of-way line on the north side of the on-ramp from SR-224 to westbound I-80 and would be about 2,296 feet long (see Attachment D, *Noise Barrier Maps for Alternative A and Alternative C*). There would be a gap in NW05 where a pedestrian structure crosses I-80.

As summarized in **Error! Reference source not found.**, UDOT evaluated the proposed barrier at heights varying from 17 to 18 feet. For detailed information, see Attachment E, *Noise Barrier Analysis*.

For Noise Barrier 5 for Alternative C, noise barriers that are 17 feet tall or shorter do not meet UDOT's design goal criterion for reasonableness. An 18-foot-tall barrier is acoustically feasible and meets the noise-abatement design goal, but it is not cost-reasonable (because the anticipated cost is greater than the allowable cost). Therefore, UDOT does not recommend a 2,296-foot-long noise barrier for balloting.

Table 4-8. Noise-abatement Analysis for Noise Barrier 5 for Alternative C

Barrier Height (feet)	Feasible		Reasonable					Is Barrier Feasible and Reasonable?
	% Front-row with 5-dBA Reduction	Acoustically Feasible?[a]	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal?[b]	Anticipated Cost	Allowable Cost (Number of Benefitted Receptors)	Cost-effective?[c]	
17	55%	Yes	27%	No	N/A	N/A	N/A	No
18	55%	Yes	36%	Yes	$826,560	$420,000 (14)	No	No

[a] 5-dBA reduction for at least 50% of front-row receptors
[b] 7-dBA reduction for at least 35% of front-row receptors
[c] Anticipated cost is less than allowable cost
Definition: N/A = not applicable

Noise Barrier 6 (NW06)

A noise barrier on the north side of I-80 near the Park City RV Resort was evaluated where noise impacts are expected to 30 recreational (activity category C) receptors (283–291 and 300–320) with Alternative C. There is 1 front-row recreational receptor in this area. The noise barrier would be near the right-of-way line on the north side of I-80 and would be about 2,484 feet long (see Attachment D, *Noise Barrier Maps for Alternative A and Alternative C*).

As summarized in Table 4-9, UDOT evaluated the proposed barrier at heights varying from 12 to 17 feet. For detailed information, see Attachment E, *Noise Barrier Analysis*.

For Noise Barrier 6 for Alternative C, a noise barrier that is 12 feet tall or shorter does not meet UDOT's design goal criterion for reasonableness. Noise barriers that range from 13 feet tall to 17 feet tall are acoustically feasible and meet the noise-abatement design goal, but they are not cost-reasonable (because the anticipated cost is greater than the allowable cost). For this reason, UDOT does not recommend a 2,484-foot-long noise barrier for balloting.

Table 4-9. Noise-abatement Analysis for Noise Barrier 6 for Alternative C

Barrier Height (feet)	Feasible		Reasonable					Is Barrier Feasible and Reasonable?
	% Front-row with 5-dBA Reduction	Acoustically Feasible?[a]	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal?[b]	Anticipated Cost	Allowable Cost (Number of Benefitted Receptors)	Cost-effective?[c]	
12	100%	Yes	0%	No	N/A	N/A	N/A	No
13	100%	Yes	100%	Yes	$645,532	$161,295	No	No
14	100%	Yes	100%	Yes	$695,532	$161,295	No	No
15	100%	Yes	100%	Yes	$745,213	$161,295	No	No
16	100%	Yes	100%	Yes	$794,894	$161,295	No	No
17	100%	Yes	100%	Yes	$844,575	$161,295	No	No

[a] 5-dBA reduction for at least 50% of front-row receptors
[b] 7-dBA reduction for at least 35% of front-row receptors
[c] Anticipated cost is less than allowable cost
Definition: N/A = not applicable

5.0 Construction Impacts

Construction noise impacts are considered temporary and will be minimized by following UDOT Special Provision 01355M, *Environmental Compliance*, and Special Provision 00555, *Prosecution and Progress*.

6.0 Information for Local Officials

According to UDOT's noise-abatement policy, UDOT must provide local governments with an estimated distance from the edge of pavement to where the worst-hour $L_{eq}(h)$ levels of 66 dBA and 71 dBA would occur in locations where the land use activity category is G.

There are small undeveloped areas near the project alternatives on both sides of I-80 west and east of SR-224, and west of SR-224 south of Olympic Parkway. Table 6-1 lists the distances from the edge of the roadway pavement to the locations where the worst-hour $L_{eq}(h)$ levels of 66 dBA and 71 dBA would occur. The 66-dBA contour line represents the areas that would have residential noise impacts under UDOT's noise-abatement policy. The 71-dBA contour line represents the areas that would have noise impacts at hotels, motels, offices, restaurants and bars, and other undeveloped lands, properties, or activities not included in activity categories A–D or F under UDOT's noise-abatement policy.

Table 6-1. Contour Distances to Future Noise Levels

Alternative	Location	Approximate Distance from Edge of Pavement to Noise-level Contour	
		66-dBA Noise-level Contour (feet)	71-dBA Noise-level Contour (feet)
Alternative A	South of I-80, west of Powder Wood Condominiums	350	240
	North of I-80, west of Spring Creek subdivision	65	50
	West of SR-224 and south of Olympic Parkway	80	10
Alternative C	South of I-80, west of Powder Wood Condominiums	330	210
	South of I-80, east of Newpark Recreation Center	80	10
	West of SR-224 and south of Olympic Parkway	170	115

7.0 Conclusions

Table 7-1 summarizes the modeled noise levels and traffic noise impacts for existing conditions and the two action alternatives.

Table 7-1. Modeled Noise Levels and Traffic Noise Impacts for Existing Conditions and the No-Action and Action Alternatives

Noise Level	Existing Conditions and the No-Action Alternative	Alternative A	Alternative C
Modeled noise levels	46 to 75 dBA	46 to 75 dBA	46 to 75 dBA
Traffic noise impacts	139 (105)[a,b]	138 (101)[a]	139 (105)[a]

[a] Impacts to land use activity category B (residential properties) are listed in parentheses.
[b] For existing conditions, these are the number of receptors with modeled noise that is greater than the UDOT NAC.

Recommended noise barriers in the noise evaluation area that meet the requirements of UDOT's noise-abatement policy are discussed below. UDOT would not decide whether to build a noise barrier until the project design is completed and refined utility and right-of-way costs are available. UDOT would revisit reasonableness using refined costs before balloting residents whose residences would be benefited by a noise barrier. A barrier identified as recommended for balloting is a barrier that has been shown to be both feasible and reasonable. However, that finding is not a commitment by UDOT to build a barrier.

7.1 Summary of Evaluation of Barriers for Alternative A

Table 7-2 summarizes the noise barriers evaluated for Alternative A. One of the three evaluated barriers (Noise Barrier 1) is recommended for balloting.

Table 7-2. Noise Barriers Evaluated for Alternative A

Noise Barrier	Length (feet)	Minimum Height (feet)	Determination
1	800	16	Feasible and reasonable; recommended
2	N/A	N/A	Not reasonable; not recommended
3	N/A	N/A	Not reasonable; not recommended

Definition: N/A: = Not applicable

7.2 Summary of Evaluation of Barriers for Alternative C

Table 7-3 summarizes the noise barriers evaluated for Alternative C. Two of the six evaluated barriers (Noise Barriers 1 and 2) are recommended for balloting.

Table 7-3. Noise Barriers Evaluated for Alternative C

Noise Barrier	Length (feet)	Minimum Height (feet)	Determination
1	1,300	17	Feasible and reasonable; recommended
2	600	14	Feasible and reasonable; recommended
3	N/A	N/A	Not feasible; not recommended
4	N/A	N/A	Not feasible; not recommended
5	N/A	N/A	Not reasonable; not recommended
6	N/A	N/A	Not reasonable; not recommended

8.0 References

[CEQ] Council on Environmental Quality

1970 Environmental Quality: The First Annual Report of the Council on Environmental Quality.

[FHWA] Federal Highway Administration

2010 Ground and Pavement Effects using FHWA's Traffic Noise Model 2.5. FHWA-HEP-10-021. April.

2011 Highway Traffic Noise: Analysis and Abatement Guidance. FHWA-HEP-10-025. https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf. December.

2018 Techniques for Reviewing Noise Analyses and Associated Noise Reports. FHWA-HEP-18-067. https://www.fhwa.dot.gov/Environment/noise/resources/reviewing_noise_analysis/fhwahep18067.pdf. June 1.

[UDOT] Utah Department of Transportation

2020 UDOT Policy 08A2-01, Noise Abatement. https://drive.google.com/file/d/1B6-c6CCTFMuE-KMcfVM9OhjggEhgn37g/view. Revised May 8, 2020.

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ATTACHMENT A

Noise Monitoring Data Sheets and Existing Noise Receptor Maps

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SHORT-TERM TRAFFIC NOISE MONITORING LOG SHEET Reading: ML-1

Project Description: Kimball Junction EIS

Noise Source: Vehicles Date: 10/18/2023 Personnel: JM & HL

Equipment	Type	Serial #
Sound Level Meter	Larson Davis	824A2636
Microphone/Preamp	Larson Davis 2541; PRM902	7490; 2618
Calibrator	Larson Davis CAL200	3669

SLM SETTINGS (circle one) **FAST** SLOW

WEIGHTING (circle one) **A** Lin.

Location Description : Park City RV Resort; 40.73697, -111.55468

SITE SKETCH: Including noise source, receptors, reference distances, North arrow, wind direction arrow, terrain and shielding, roadway profile, and direct lines of sight:

Minimum : 58.6 dBA

Maximum : 81.1 dBA

Leq : 70.1 dBA

Datafile Number : 6

Start Time: 10:42 am Stop Time: 11:02 am Duration: 20 minutes

Wind Speed/Direction: 2-6 mph W Percentiles:

Temperature: 54° Fahrenheit Humidity: 30%

Calibration results before: 113.8 dBA and after 113.8 dBA

Traffic Count Roadway: Interstate 80

Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
West	435	30	61	0	1
East	610	27	75	0	1

Traffic Count Roadway: Rasmussen Road

Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
West	31	1	0	0	1
East	40	0	1	0	0


WGS84
±30ft
40.73697, -111.55468
ft
±20ft
6372
°,T
±11
SW253
ML-1
18Oct23 10:42 Kimball Junction EIS Noise Monitoring
2200 Rasmussen Rd, Park City UT 84098, US 18-Oct-23 10:42:23


WGS84
±12ft
40.73706, -111.55475
ft
±10ft
6388
°,T
±11
S176
ML-1
18Oct23 10:42 Kimball Junction EIS Noise Monitoring
2194–2200 Rasmussen Rd, Park City UT 84098, US 18-Oct-23 10:42:31

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SHORT-TERM TRAFFIC NOISE MONITORING LOG SHEET Reading: ML-2

Project Description: Kimball Junction EIS

Noise Source: Vehicles Date: 10/18/2023 Personnel: JM & HL

Equipment	Type	Serial #
Sound Level Meter	Larson Davis	824A2636
Microphone/Preamp	Larson Davis 2541; PRM902	7490; 2618
Calibrator	Larson Davis CAL200	3669

SLM SETTINGS (circle one) **FAST** SLOW

WEIGHTING (circle one) **A** Lin.

Location Description : PowderWood by All Seasons Resort Lodging; 40.73390, -111.55391

SITE SKETCH: Including noise source, receptors, reference distances, North arrow, wind direction arrow, terrain and shielding, roadway profile, and direct lines of sight:

Minimum : 59.6 dBA

Maximum : 81.8 dBA

Leq : 69.6 dBA

Datafile Number : 7

Start Time: 11:24 am Stop Time: 11:44 am Duration: 20 minutes

Wind Speed/Direction: 3-8 mph WNW Percentiles:

Temperature: 57° Fahrenheit Humidity: 44%

Calibration results before: 113.9 dBA and after 113.8 dBA

Traffic Count Roadway: Interstate 80

Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
West	562	26	42	1	1
East	585	22	71	0	1

Traffic Count Roadway: Kilby Road

Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
West	74	0	0	1	0
East	64	2	0	3	0


WGS84
±15ft
40.73389, -111.55383
ft
±12ft
6419
T
±11
NW301
ML-2
18Oct23 11:22 Kimball Junction EIS Noise Monitoring
7085 Powderwood Dr, Park City UT 84098, US
18-Oct-23 11:22:20


WGS84
±15ft
40.73389, -111.55391
ft
±12ft
6426
T
±11
SE109
ML-2
18Oct23 11:22 Kimball Junction EIS Noise Monitoring
7065 Powderwood Dr, Park City UT 84098, US
18-Oct-23 11:22:30

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SHORT-TERM TRAFFIC NOISE MONITORING LOG SHEET Reading: ML-3

Project Description: Kimball Junction EIS

Noise Source: Vehicles Date: 10/17/2023 Personnel: JM & HL

Equipment	Type	Serial #
Sound Level Meter	Larson Davis	824A2636
Microphone/Preamp	Larson Davis 2541; PRM902	7490; 2618
Calibrator	Larson Davis CAL200	3669

SLM SETTINGS (circle one) **FAST** SLOW

WEIGHTING (circle one) **A** Lin.

Location Description : Creekside Park City Church; 40.72581, -111.53812

SITE SKETCH: Including noise source, receptors, reference distances, North arrow, wind direction arrow, terrain and shielding, roadway profile, and direct lines of sight:

Minimum : 58.3 dBA

Maximum : 82.3 dBA

Leq : 72.1 dBA

Datafile Number : 5

Start Time: 12:17 pm Stop Time: 12:37 pm Duration: 20 minutes

Wind Speed/Direction: 5-10 mph W Percentiles:

Temperature: 65° Fahrenheit Humidity: 31%

Calibration results before: 113.8 dBA and after 113.9 dBA

Traffic Count Roadway: Interstate 80

Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
West	519	26	67	0	2
East	483	30	62	1	0

Traffic Count Roadway: Bitner Road

Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
West	60	2	1	1	0
East	73	3	2	0	0


WGS84
±15ft
40.72581, -111.53814
ft
±12ft
6390
°T
±11
S171
ML-3
17Oct23 12:14 Kimball Junction EIS Noise Monitoring
1400 Bitner Rd, Park City UT 84098, US 17-Oct-23 12:14:26


WGS84
±15ft
40.72574, -111.53815
ft
±12ft
6389
°T
±11
N11
1400
ML-3
17Oct23 12:14 Kimball Junction EIS Noise Monitoring
Bitner, Park City UT 84098, US 17-Oct-23 12:14:33

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SHORT-TERM TRAFFIC NOISE MONITORING LOG SHEET Reading: ML-4

Project Description: Kimball Junction EIS

Noise Source: Vehicles Date: 10/17/2023 Personnel: JM & HL

Equipment	Type	Serial #
Sound Level Meter	Larson Davis	824A2636
Microphone/Preamp	Larson Davis 2541; PRM902	7490; 2618
Calibrator	Larson Davis CAL200	3669

SLM SETTINGS (circle one) **FAST** SLOW

WEIGHTING (circle one) **A** Lin.

Location Description : Canyon Creek Club Homes; 40.72379, -111.52920

SITE SKETCH: Including noise source, receptors, reference distances, North arrow, wind direction arrow, terrain and shielding, roadway profile, and direct lines of sight:

Minimum : 50.7 dBA

Maximum : 81.8 dBA

Leq : 60.0 dBA

Datafile Number : 4

Start Time: 11:23 am Stop Time: 11:43 am Duration: 20 minutes

Wind Speed/Direction: 3-7 mph W Percentiles:

Temperature: 62° Fahrenheit Humidity: 33%

Calibration results before: 113.9 dBA and after 113.8 dBA

Traffic Count Roadway: Interstate 80

Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
West	462	15	55	0	0
East	510	15	67	1	2

Traffic Count Roadway: Bitner Road

Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
West	34	5	0	1	0
East	33	0	1	0	0


WGS84
±12ft
40.72379, -111.52920
ft
±10ft
6395
°T
±11
SW208
ML-4
17Oct23 11:20 Kimball Junction EIS Noise Monitoring
900 Bitner Rd, Park City UT 84098, US 17-Oct-23 11:20:26


WGS84
±15ft
40.72379, -111.52926
ft
±12ft
6405
°T
±11
SE160
ML-4
17Oct23 11:20 Kimball Junction EIS Noise Monitoring
900 Bitner Rd, Park City UT 84098, US 17-Oct-23 11:20:35

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SHORT-TERM TRAFFIC NOISE MONITORING LOG SHEET Reading: ML-5

Project Description: Kimball Junction EIS

Noise Source: Vehicles Date: 10/17/2023 Personnel: JM & HL

Equipment	Type	Serial #
Sound Level Meter	Larson Davis	824A2636
Microphone/Preamp	Larson Davis 2541; PRM902	7490; 2618
Calibrator	Larson Davis CAL200	3669

SLM SETTINGS (circle one) **FAST** SLOW

WEIGHTING (circle one) **A** Lin.

Location Description : 6078 N. Fox Pointe Circle; 40.71843, -111.54410

SITE SKETCH: Including noise source, receptors, reference distances, North arrow, wind direction arrow, terrain and shielding, roadway profile, and direct lines of sight:

Minimum : 44.6 dBA

Maximum : 68.1 dBA

Leq : 60.6 dBA

Datafile Number : 2

Start Time: 10:09 am Stop Time: 10:29 am Duration: 20 minutes

Wind Speed/Direction: 2-6 mph SSW Percentiles:

Temperature: 56° Fahrenheit Humidity: 40%

Calibration results before: 113.8 dBA and after 113.9 dBA

Traffic Count Roadway: SR-224

Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
North	294	8	7	4	1
South	335	18	4	3	1

Traffic Count Roadway: Fox Point Circle

Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
North	0	0	0	0	0
South/East	1	0	0	0	0


WGS84
±12ft
40.71845, -111.54409
ft
±10ft
6421
°T
±11
SW234
ML-5
17Oct23 10:05 Kimball Junction EIS Noise Monitoring
6078 Fox Pointe Cir, Park City UT 84098, US 17-Oct-23 10:05:22


WGS84
±15ft
40.71846, -111.54416
ft
±12ft
6424
°T
±11
SE132
ML-5
17Oct23 10:05 Kimball Junction EIS Noise Monitoring
6078 Fox Pointe Cir, Park City UT 84098, US 17-Oct-23 10:05:31

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SHORT-TERM TRAFFIC NOISE MONITORING LOG SHEET Reading: ML-6

Project Description: Kimball Junction EIS

Noise Source: Vehicles Date: 10/17/2023 Personnel: JM & HL

Equipment	Type	Serial #
Sound Level Meter	Larson Davis	824A2636
Microphone/Preamp	Larson Davis 2541; PRM902	7490; 2618
Calibrator	Larson Davis CAL200	3669

SLM SETTINGS (circle one) **FAST** SLOW

WEIGHTING (circle one) **A** Lin.

Location Description : AC Hotel by Marriott; 40.72785, -111.54879

SITE SKETCH: Including noise source, receptors, reference distances, North arrow, wind direction arrow, terrain and shielding, roadway profile, and direct lines of sight: Crane construction occuring behind the hotel.

Minimum : 48.2 dBA

Maximum : 77.4 dBA

Leq : 61.0 dBA

Datafile Number : 3

Start Time: 10:47 am Stop Time: 11:07 am Duration: 20 minutes

Wind Speed/Direction: 3-6 mph W Percentiles:

Temperature: 60° Fahrenheit Humidity: 35%

Calibration results before: 113.9 dBA and after 113.8 dBA

Traffic Count Roadway: Landmark Drive

Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
North	82	0	0	3	0
South	75	0	0	1	1


WGS84
±12ft
40.72785, -111.54879
ft
±10ft
6425
°,T
±11
N355
MOD PIZZA
ML-6
17Oct23 10:44 Kimball Junction EIS Noise Monitoring
6609 N Landmark Dr, Park City UT 84098, US 17-Oct-23 10:44:11


WGS84
±15ft
40.72786, -111.54884
ft
±12ft
6424
°,T
±11
E78
ML-6
17Oct23 10:44 Kimball Junction EIS Noise Monitoring
6609 N Landmark Dr, Park City UT 84098, US 17-Oct-23 10:44:22

SHORT-TERM TRAFFIC NOISE MONITORING LOG SHEET Reading: ML-7

Project Description: Kimball Junction EIS

Noise Source: Vehicles Date: 10/17/2023 Personnel: JM & HL

Equipment	Type	Serial #
Sound Level Meter	Larson Davis	824A2636
Microphone/Preamp	Larson Davis 2541; PRM902	7490; 2618
Calibrator	Larson Davis CAL200	3669

SLM SETTINGS (circle one) **FAST** SLOW

WEIGHTING (circle one) **A** Lin.

Location Description : Del Taco; 40.72388, -111.54407

SITE SKETCH: Including noise source, receptors, reference distances, North arrow, wind direction arrow, terrain and shielding, roadway profile, and direct lines of sight: Music outside of the Del Taco.

Minimum : 48.4 dBA

Maximum : 79.5 dBA

Leq : 58.5 dBA

Datafile Number : 1

Start Time: 9:28 am Stop Time: 9:48 am Duration: 20 minutes

Wind Speed/Direction: 3-6 mph W Percentiles:

Temperature: 51° Fahrenheit Humidity: 44%

Calibration results before: 113.9 dBA and after 113.8 dBA

Traffic Count Roadway: SR-224

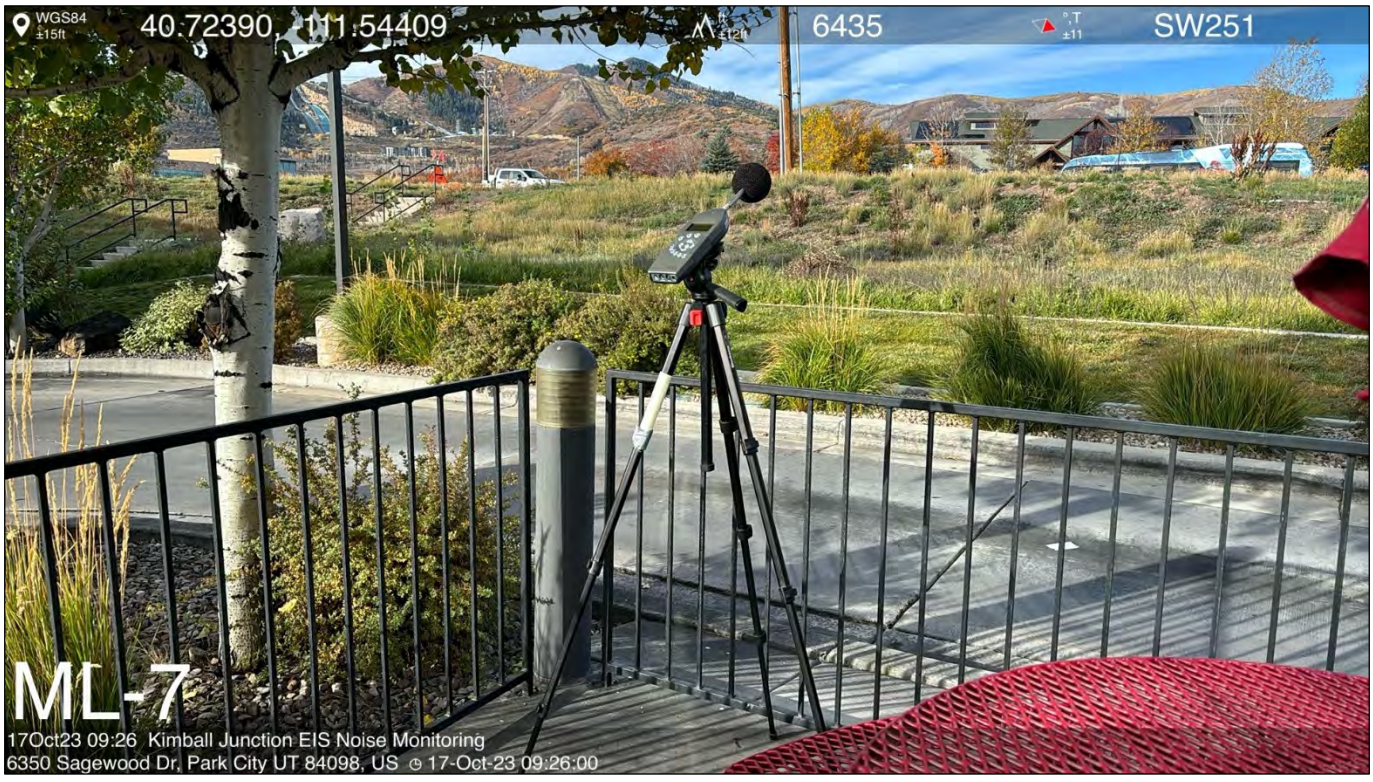
Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
North	253	4	1	0	0
South	435	37	3	1	0

Traffic Count Roadway: Ute Boulevard

Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
East	126	0	0	1	0
West*	0	0	0	0	0

***Did not count westbound traffic leaving the shopping center. Didn't have an effect on ambient noise.**


WGS84
±15ft
40.72388, -111.54407
ft
±12ft
6434
°,T
±11
NW308
ML-7
17Oct23 09:25 Kimball Junction EIS Noise Monitoring
6350 Sagewood Dr, Park City UT 84098, US 17-Oct-23 09:25:53


WGS84
±15ft
40.72390, -111.54409
ft
±12ft
6435
°,T
±11
SW251
ML-7
17Oct23 09:26 Kimball Junction EIS Noise Monitoring
6350 Sagewood Dr, Park City UT 84098, US 17-Oct-23 09:26:00

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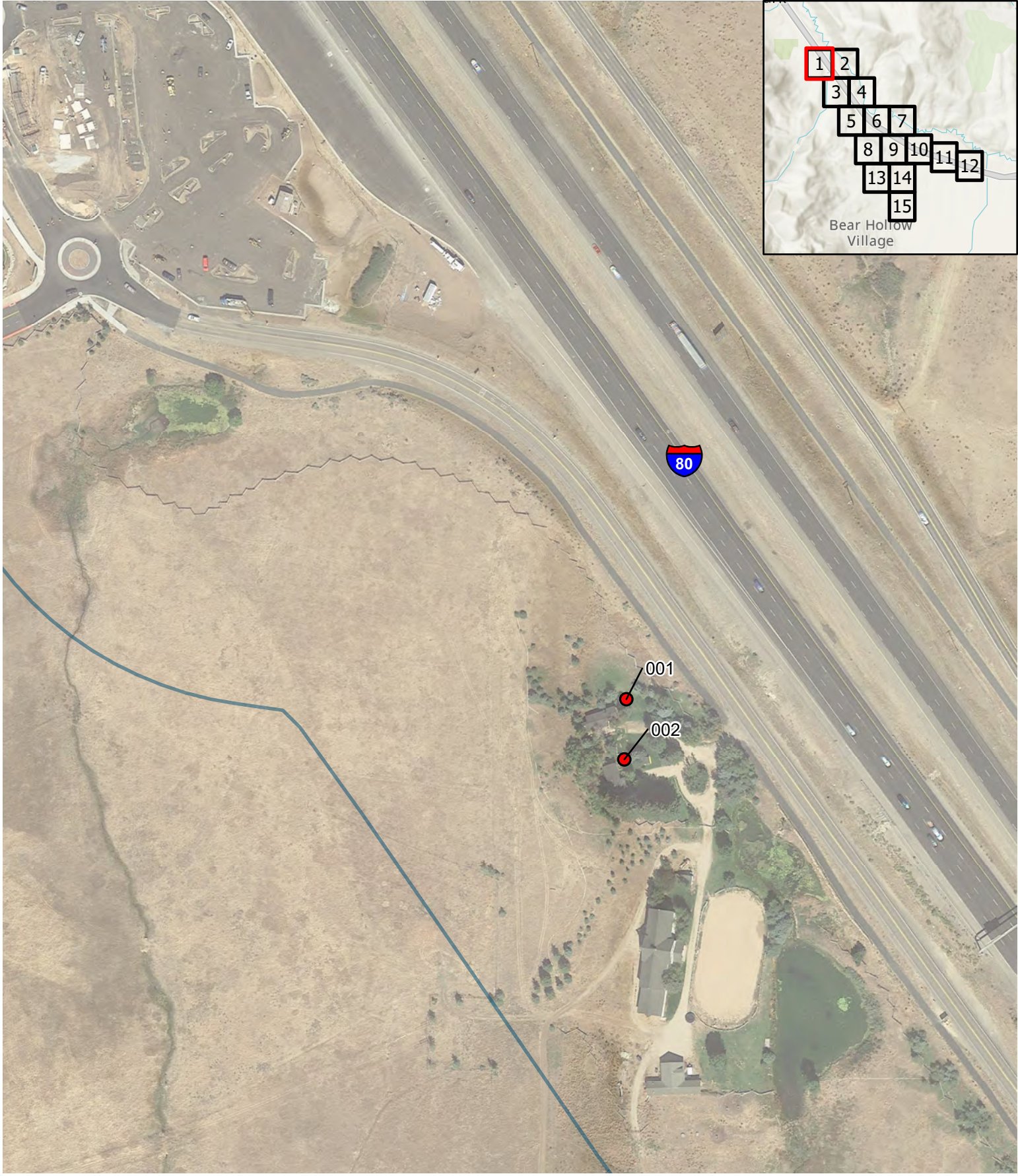
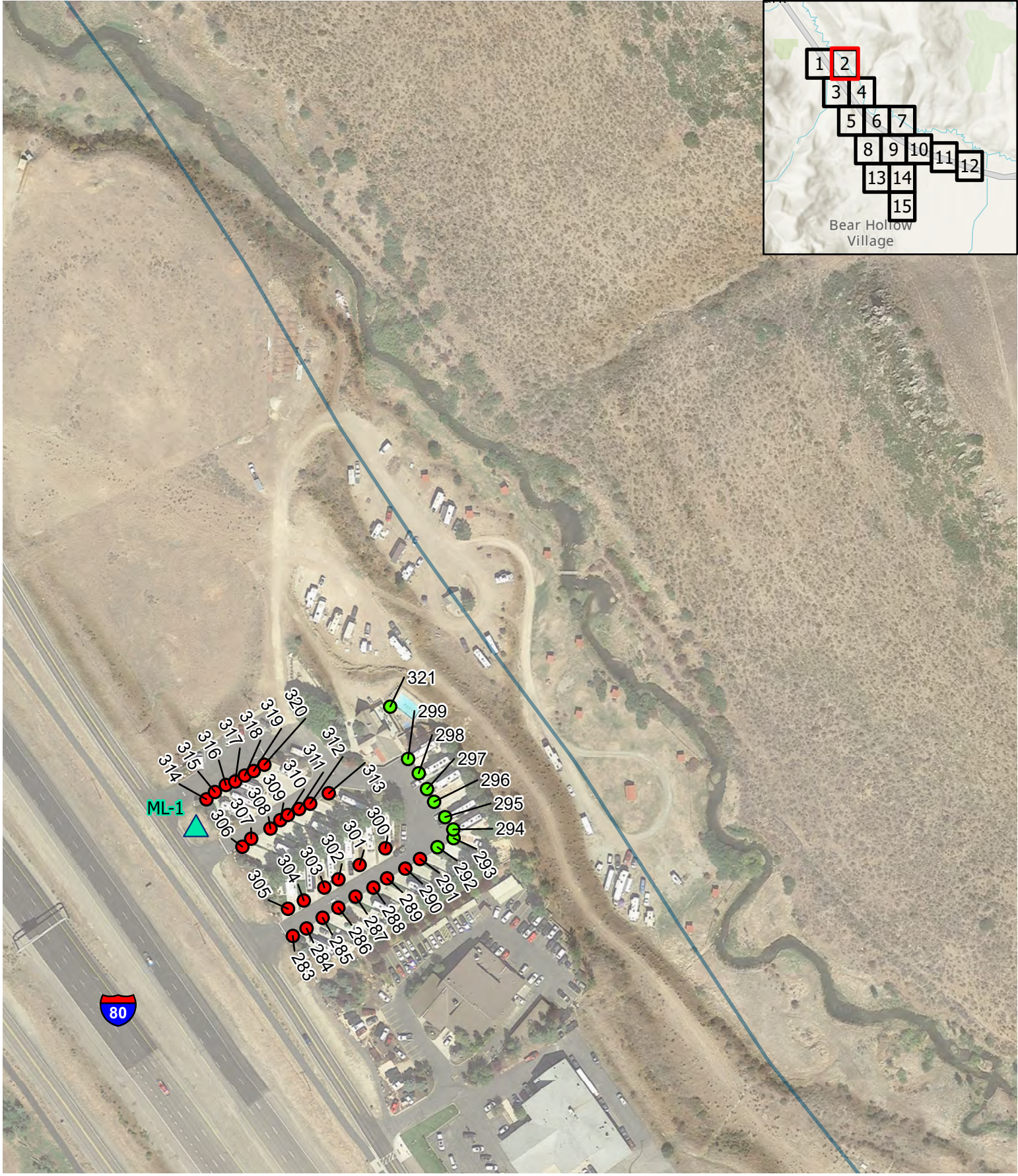


Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction
ENVIRONMENTAL IMPACT STATEMENT

0 Feet 200



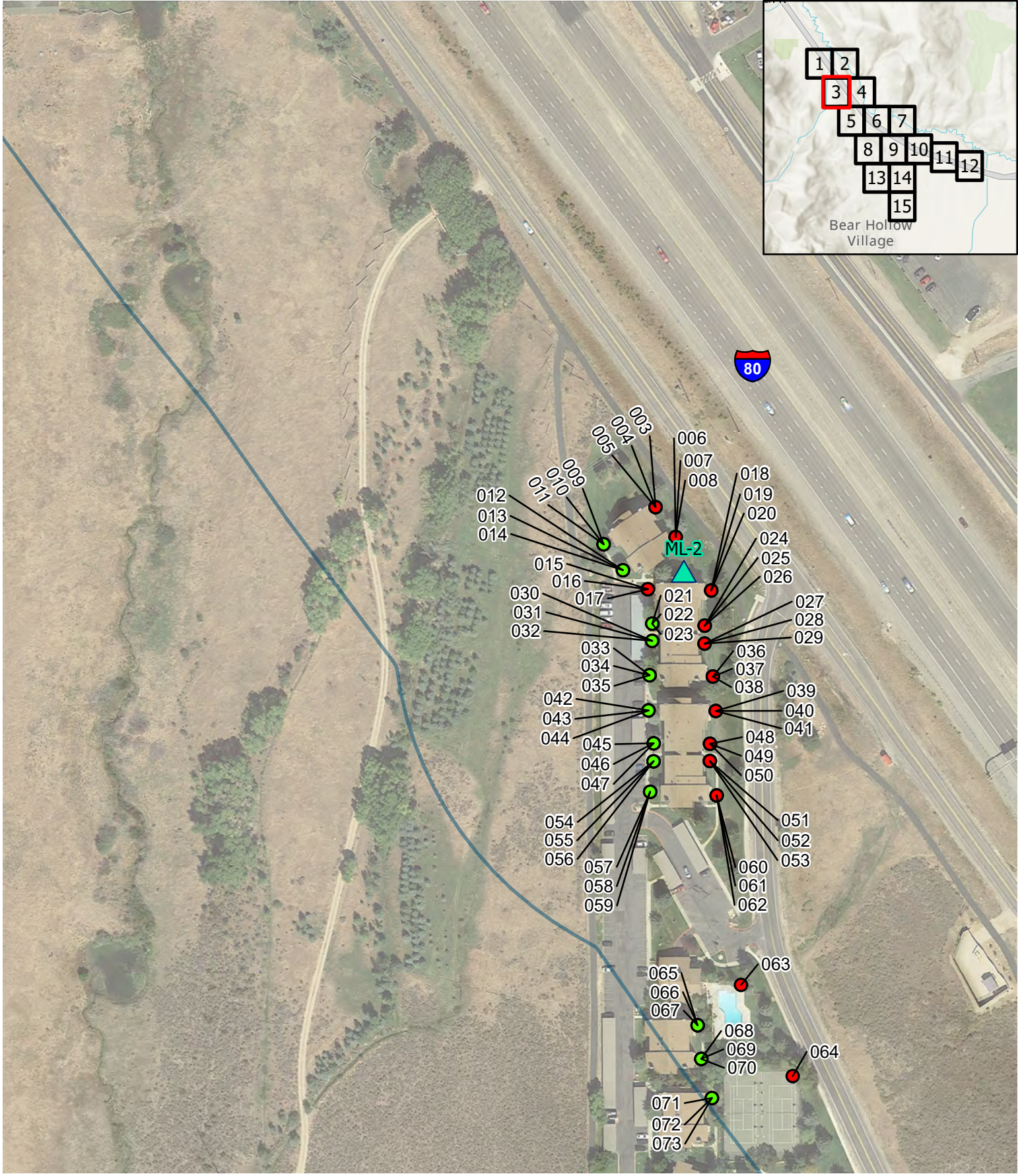
Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

0 Feet 200

Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction
ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200

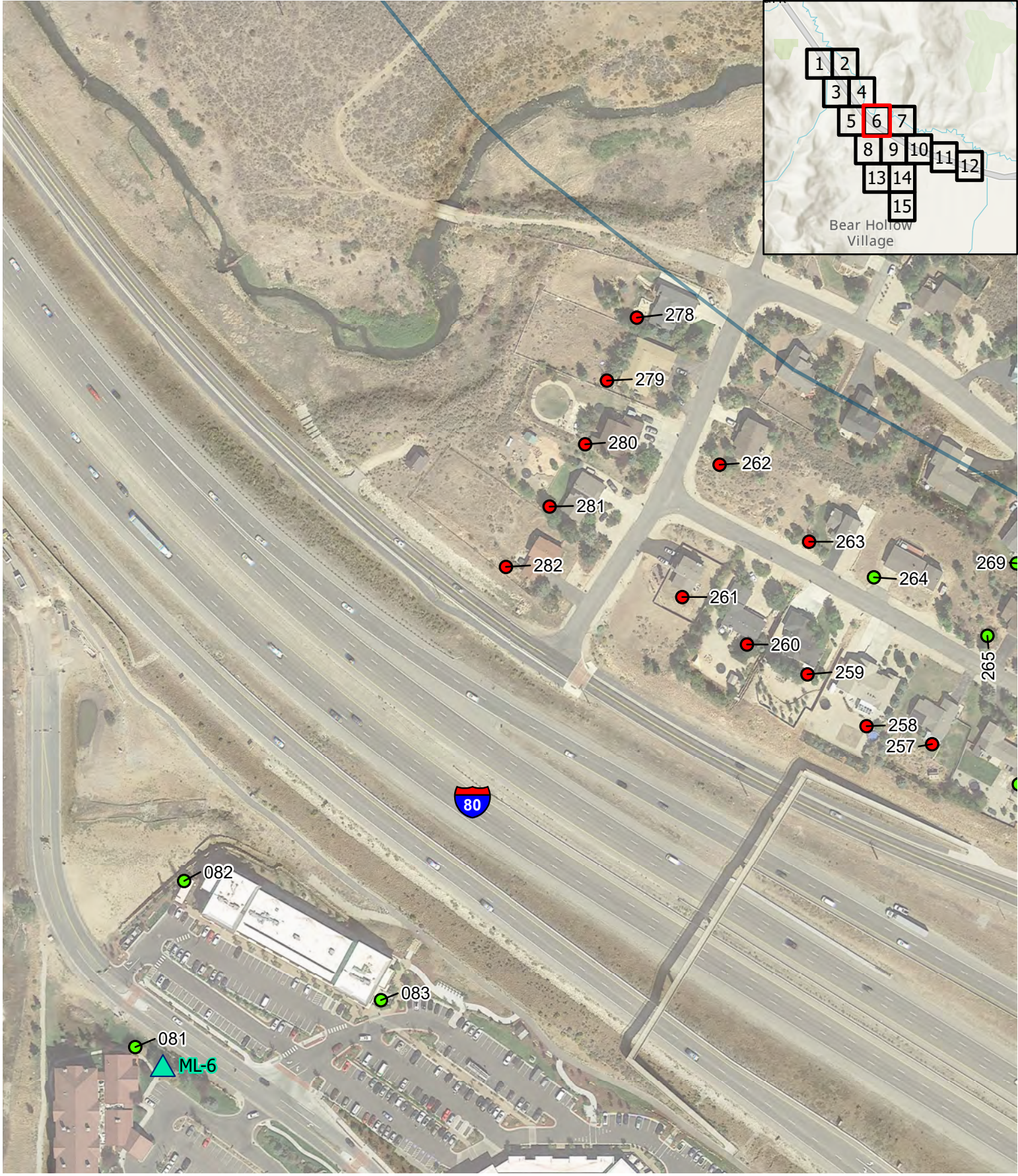
Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction
ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



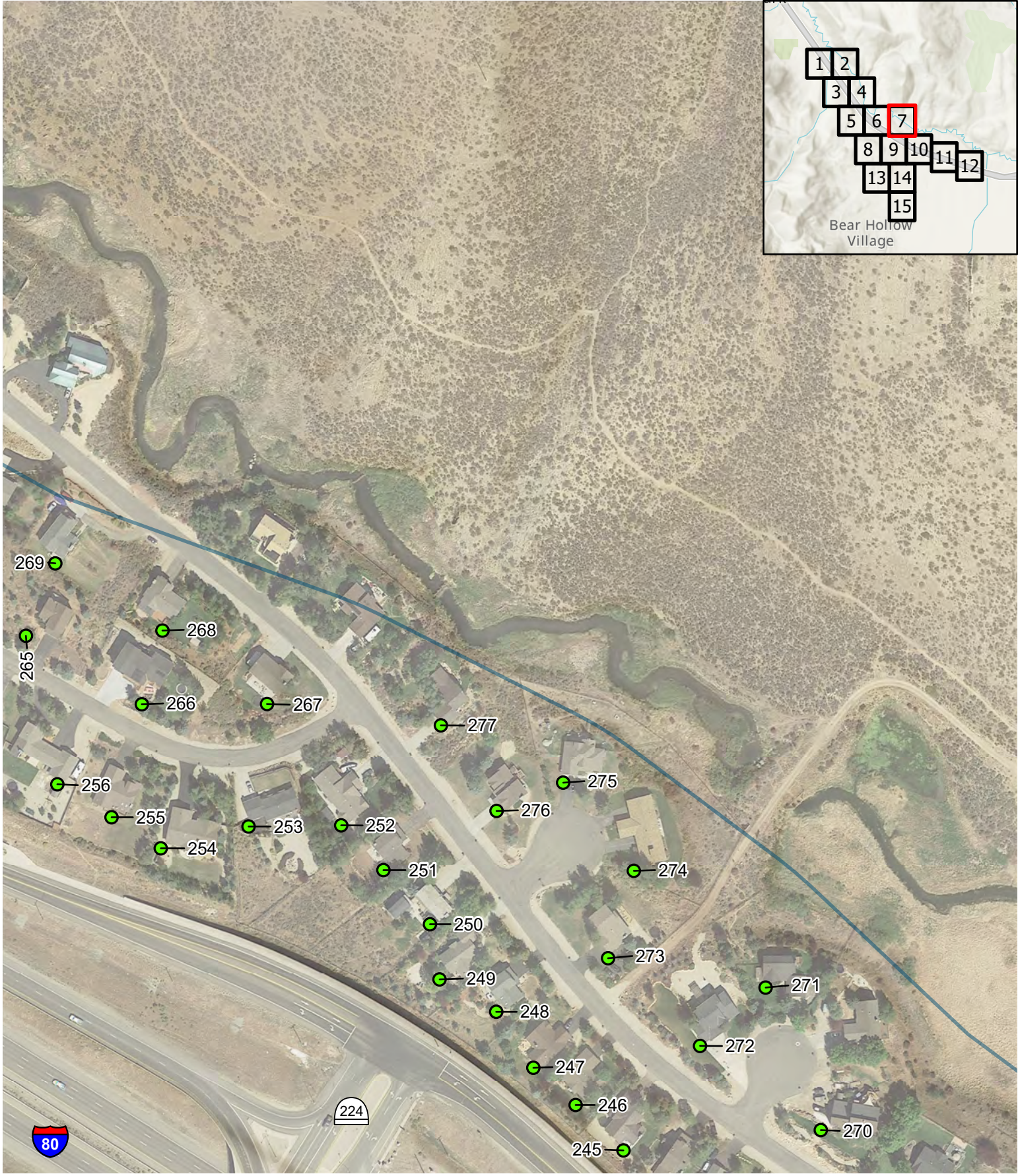
Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction
ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



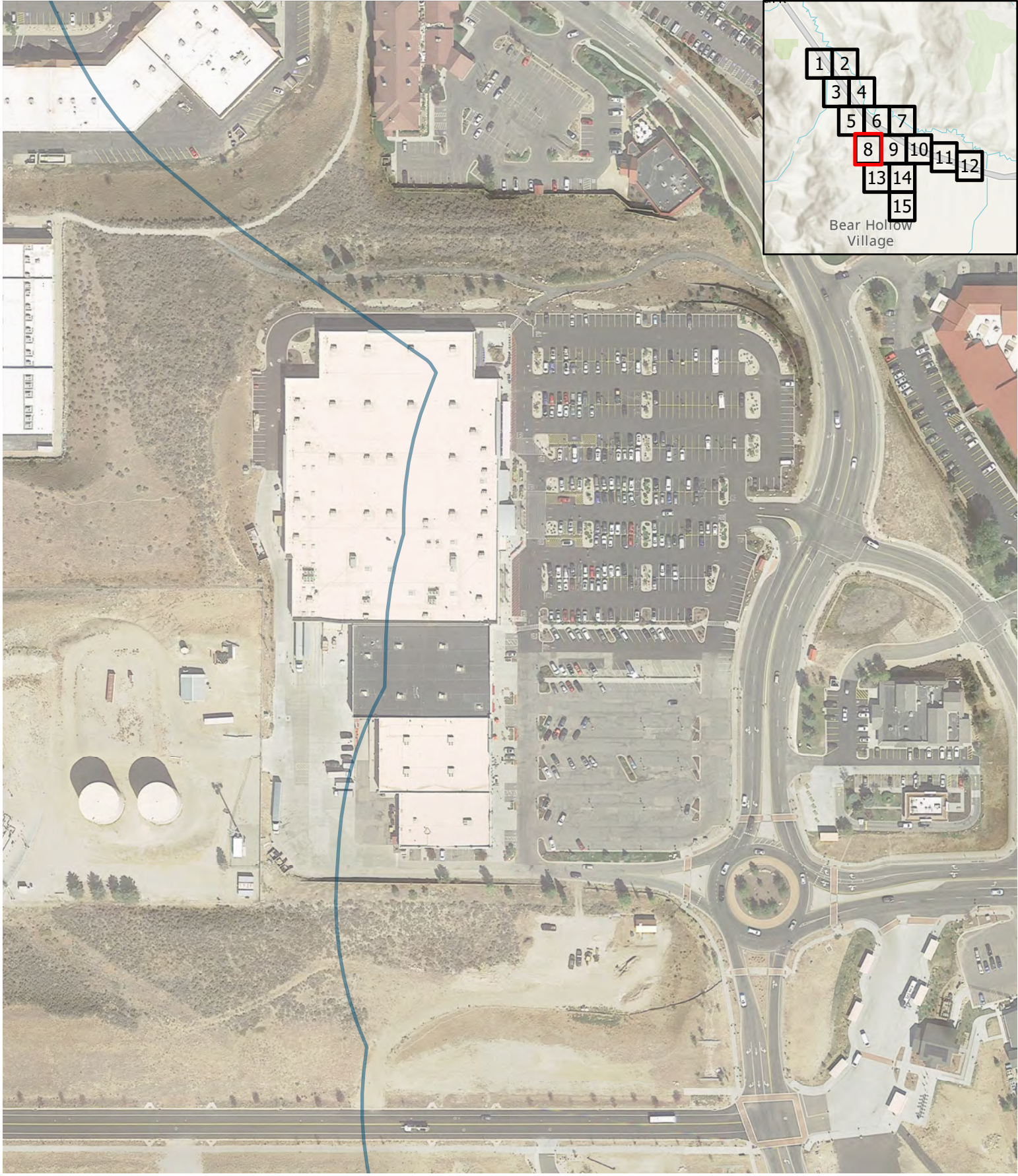
Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction
ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200

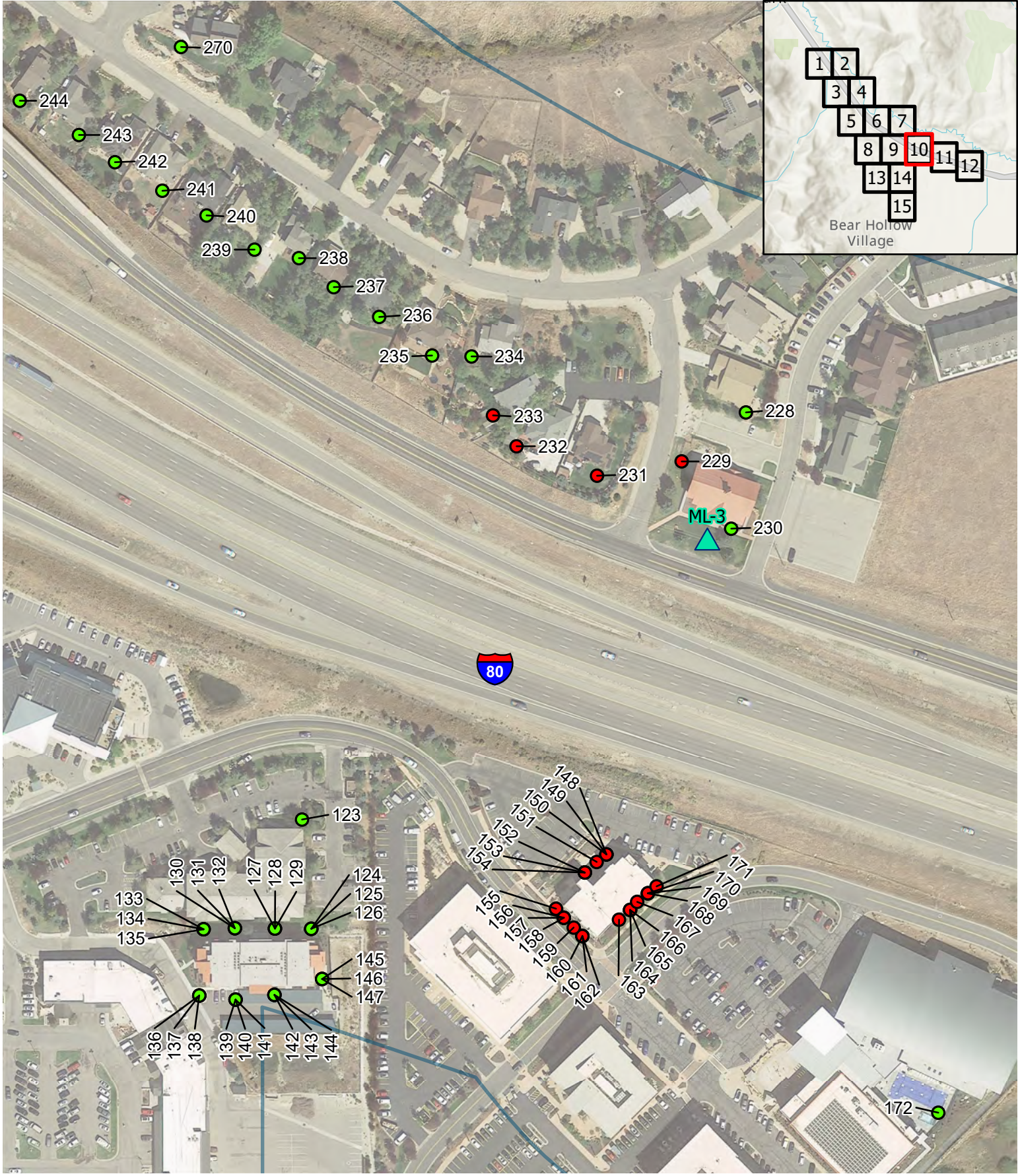
Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction
ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



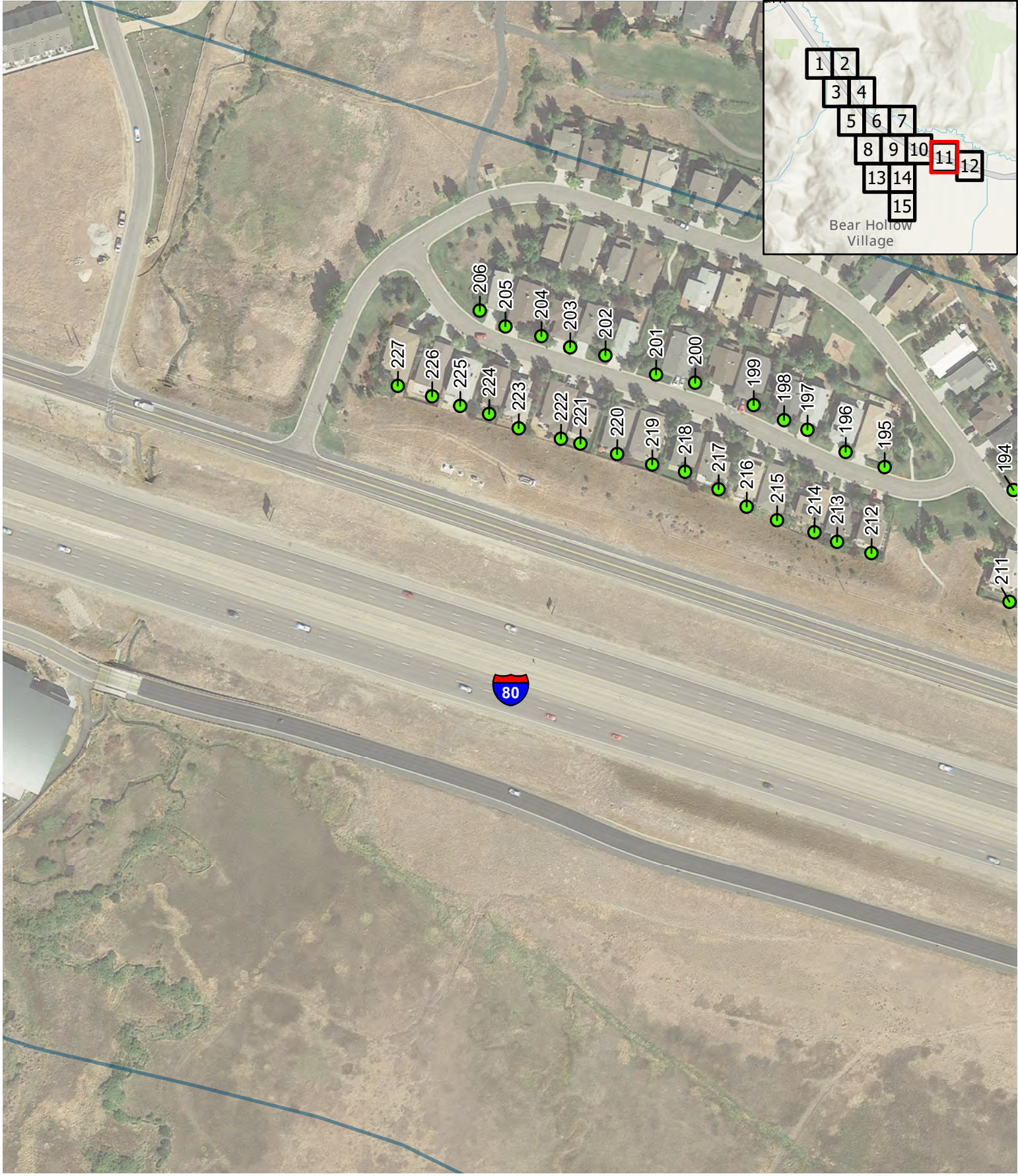
Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



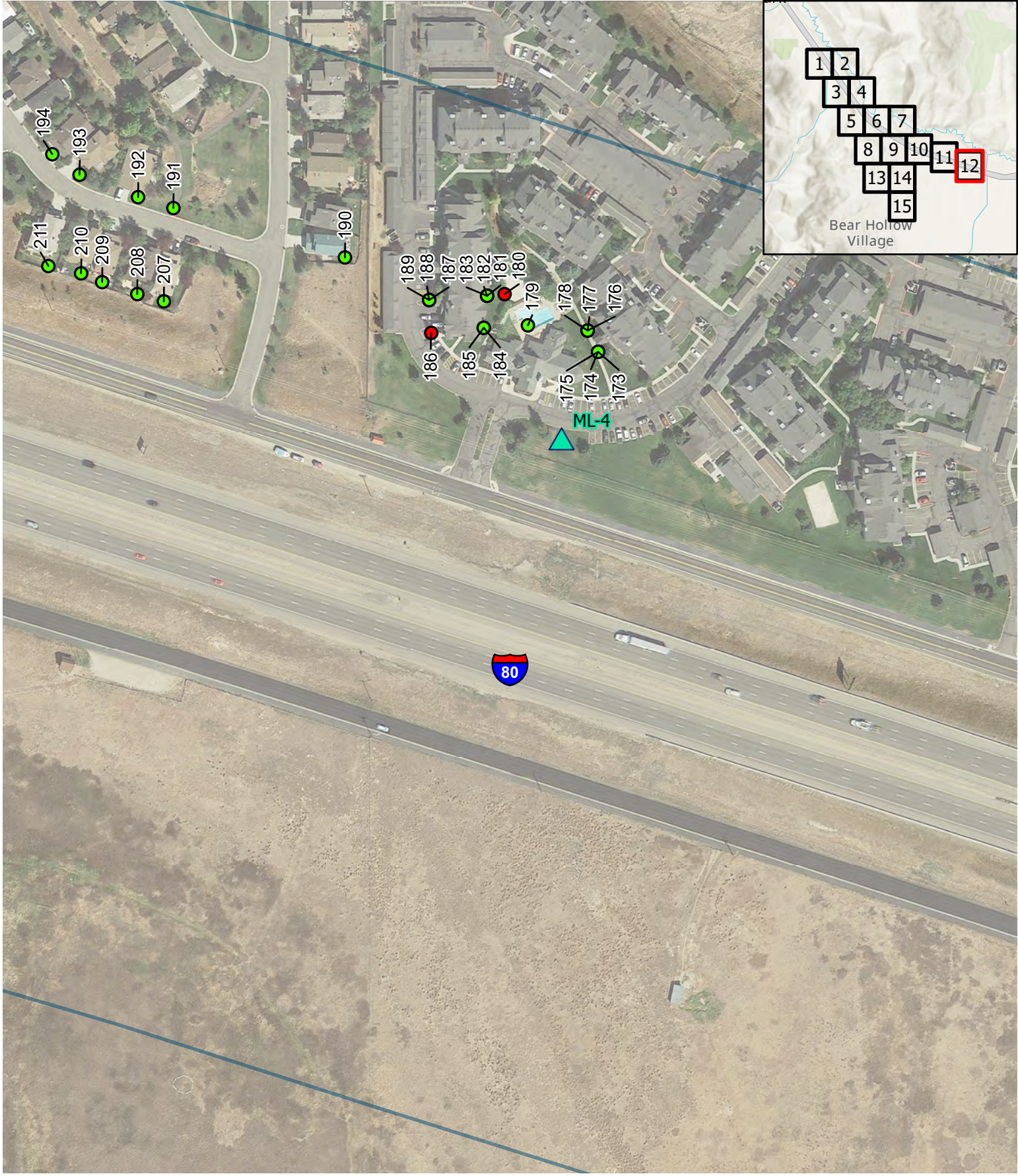
Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200

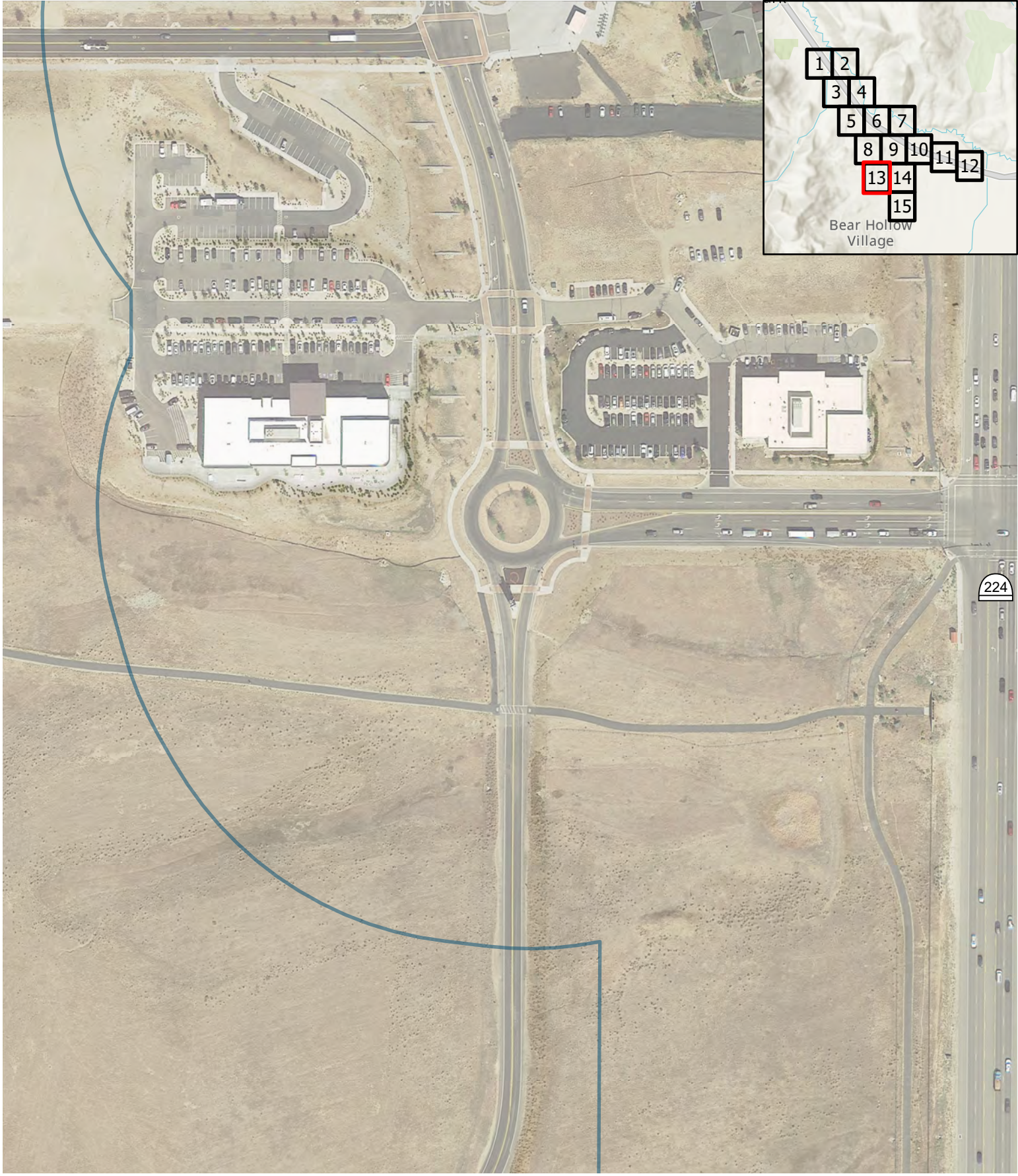


Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

0 Feet 200



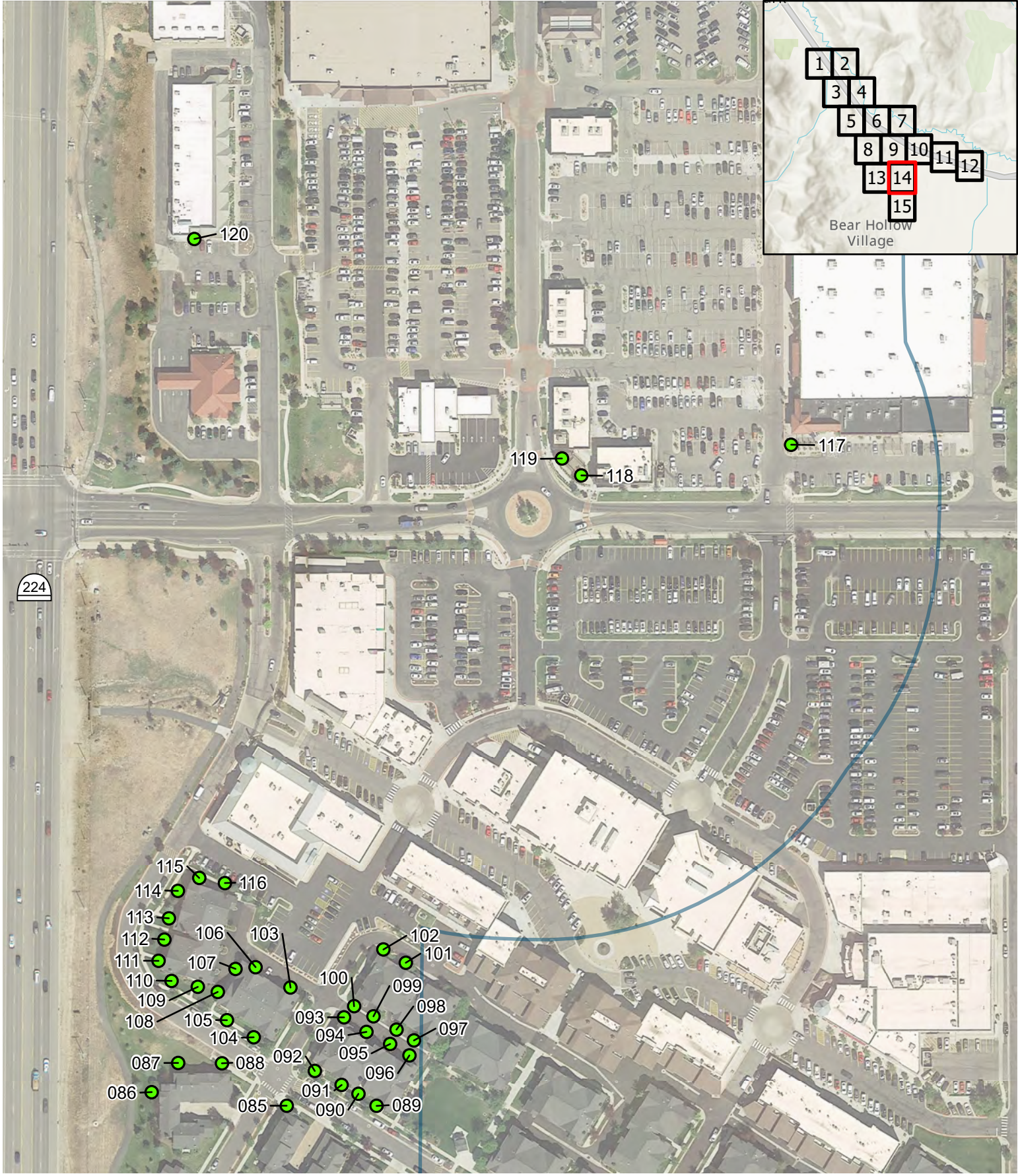
Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction
ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



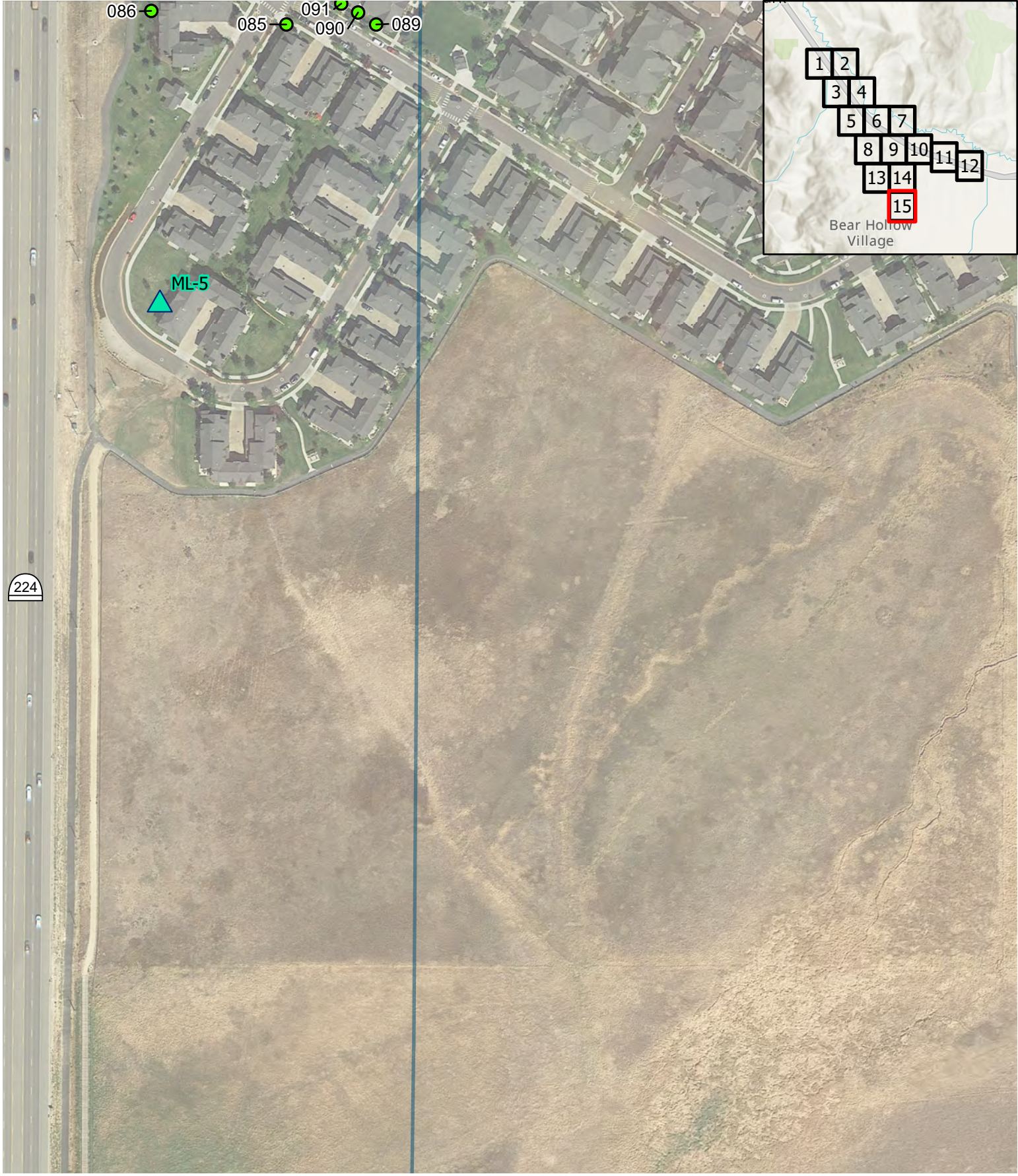
Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



Existing Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- NOISE EVALUATION AREA

Kimball Junction
ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200

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ATTACHMENT B

Noise Levels and Noise Receptor Maps for Alternative A

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Table 1. Existing Conditions and Alternative A Noise Levels

Receptor	Existing				With Action Alternative A			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
001	B	66	67	Yes	68	No	Yes	1
002	B	66	70	Yes	69	No	Yes	–1
003	B	66	74	Yes	74	No	Yes	0
004	B	66	74	Yes	75	No	Yes	1
005	B	66	75	Yes	75	No	Yes	0
006	B	66	74	Yes	74	No	Yes	0
007	B	66	74	Yes	75	No	Yes	1
008	B	66	75	Yes	75	No	Yes	0
009	B	66	64	No	64	No	No	0
010	B	66	65	No	65	No	No	0
011	B	66	66	Yes	67	No	Yes	1
012	B	66	60	No	61	No	No	1
013	B	66	62	No	62	No	No	0
014	B	66	67	Yes	67	No	Yes	0
015	B	66	66	Yes	66	No	Yes	0
016	B	66	67	Yes	67	No	Yes	0
017	B	66	70	Yes	71	No	Yes	1
018	B	66	73	Yes	74	No	Yes	1
019	B	66	74	Yes	75	No	Yes	1
020	B	66	75	Yes	75	No	Yes	0
021	B	66	58	No	59	No	No	1
022	B	66	61	No	62	No	No	1
023	B	66	70	Yes	70	No	Yes	0
024	B	66	72	Yes	72	No	Yes	0
025	B	66	73	Yes	73	No	Yes	0
026	B	66	74	Yes	74	No	Yes	0
027	B	66	72	Yes	72	No	Yes	0
028	B	66	73	Yes	73	No	Yes	0
029	B	66	73	Yes	73	No	Yes	0
030	B	66	59	No	59	No	No	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative A Noise Levels

Receptor	Existing				With Action Alternative A			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
031	B	66	62	No	62	No	No	0
032	B	66	70	Yes	70	No	Yes	0
033	B	66	60	No	60	No	No	0
034	B	66	62	No	62	No	No	0
035	B	66	69	Yes	69	No	Yes	0
036	B	66	71	Yes	71	No	Yes	0
037	B	66	73	Yes	73	No	Yes	0
038	B	66	73	Yes	73	No	Yes	0
039	B	66	72	Yes	72	No	Yes	0
040	B	66	72	Yes	72	No	Yes	0
041	B	66	73	Yes	73	No	Yes	0
042	B	66	59	No	59	No	No	0
043	B	66	61	No	61	No	No	0
044	B	66	66	Yes	66	No	Yes	0
045	B	66	59	No	59	No	No	0
046	B	66	61	No	61	No	No	0
047	B	66	67	Yes	67	No	Yes	0
048	B	66	71	Yes	71	No	Yes	0
049	B	66	72	Yes	72	No	Yes	0
050	B	66	72	Yes	72	No	Yes	0
051	B	66	70	Yes	70	No	Yes	0
052	B	66	71	Yes	71	No	Yes	0
053	B	66	72	Yes	72	No	Yes	0
054	B	66	59	No	59	No	No	0
055	B	66	61	No	61	No	No	0
056	B	66	67	Yes	68	No	Yes	1
057	B	66	59	No	59	No	No	0
058	B	66	61	No	61	No	No	0
059	B	66	66	Yes	66	No	Yes	0
060	B	66	70	Yes	70	No	Yes	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative A Noise Levels

Receptor	Existing				With Action Alternative A			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
061	B	66	71	Yes	71	No	Yes	0
062	B	66	71	Yes	72	No	Yes	1
063	C	66	67	Yes	67	No	Yes	0
064	C	66	67	Yes	67	No	Yes	0
065	B	66	63	No	64	No	No	1
066	B	66	67	Yes	67	No	Yes	0
067	B	66	69	Yes	69	No	Yes	0
068	B	66	61	No	62	No	No	1
069	B	66	66	Yes	66	No	Yes	0
070	B	66	68	Yes	68	No	Yes	0
071	B	66	61	No	62	No	No	1
072	B	66	66	Yes	66	No	Yes	0
073	B	66	68	Yes	68	No	Yes	0
074	B	66	60	No	60	No	No	0
075	B	66	65	No	66	No	Yes	1
076	B	66	68	Yes	68	No	Yes	0
077	B	66	62	No	62	No	No	0
078	B	66	67	Yes	67	No	Yes	0
079	B	66	69	Yes	69	No	Yes	0
080	C	66	59	No	59	No	No	0
081	E	71	64	No	66	No	No	2
082	E	71	70	No	67	No	No	–3
083	E	71	67	No	66	No	No	–1
084	C	66	59	No	59	No	No	0
085	B	66	55	No	55	No	No	0
086	B	66	62	No	62	No	No	0
087	B	66	60	No	60	No	No	0
088	B	66	55	No	56	No	No	1
089	B	66	49	No	50	No	No	1
090	B	66	49	No	51	No	No	2

(*Continued on next page*)

Table 1. Existing Conditions and Alternative A Noise Levels

Receptor	Existing				With Action Alternative A			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
091	B	66	50	No	52	No	No	2
092	B	66	54	No	54	No	No	0
093	B	66	53	No	55	No	No	2
094	B	66	50	No	50	No	No	0
095	B	66	51	No	50	No	No	–1
096	B	66	49	No	50	No	No	1
097	B	66	46	No	46	No	No	0
098	B	66	47	No	47	No	No	0
099	B	66	48	No	50	No	No	2
100	B	66	54	No	56	No	No	2
101	B	66	51	No	52	No	No	1
102	B	66	53	No	54	No	No	1
103	B	66	53	No	52	No	No	–1
104	B	66	55	No	56	No	No	1
105	B	66	56	No	57	No	No	1
106	B	66	52	No	51	No	No	–1
107	B	66	56	No	55	No	No	–1
108	B	66	58	No	58	No	No	0
109	B	66	58	No	59	No	No	1
110	B	66	61	No	61	No	No	0
111	B	66	62	No	63	No	No	1
112	B	66	62	No	63	No	No	1
113	B	66	62	No	63	No	No	1
114	B	66	62	No	62	No	No	0
115	B	66	60	No	61	No	No	1
116	B	66	58	No	59	No	No	1
117	E	71	54	No	54	No	No	0
118	E	71	59	No	59	No	No	0
119	E	71	59	No	59	No	No	0
120	E	71	54	No	55	No	No	1

(*Continued on next page*)

Table 1. Existing Conditions and Alternative A Noise Levels

Receptor	Existing				With Action Alternative A			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
121	E	71	59	No	64	No	No	5
122	E	71	61	No	61	No	No	0
123	E	71	67	No	67	No	No	0
124	B	66	63	No	63	No	No	0
125	B	66	66	Yes	66	No	Yes	0
126	B	66	68	Yes	68	No	Yes	0
127	B	66	60	No	60	No	No	0
128	B	66	63	No	63	No	No	0
129	B	66	64	No	64	No	No	0
130	B	66	56	No	56	No	No	0
131	B	66	57	No	57	No	No	0
132	B	66	59	No	59	No	No	0
133	B	66	53	No	54	No	No	1
134	B	66	54	No	54	No	No	0
135	B	66	57	No	57	No	No	0
136	B	66	52	No	52	No	No	0
137	B	66	53	No	53	No	No	0
138	B	66	56	No	56	No	No	0
139	B	66	52	No	52	No	No	0
140	B	66	52	No	52	No	No	0
141	B	66	56	No	56	No	No	0
142	B	66	52	No	52	No	No	0
143	B	66	52	No	53	No	No	1
144	B	66	57	No	57	No	No	0
145	B	66	61	No	61	No	No	0
146	B	66	64	No	64	No	No	0
147	B	66	66	Yes	66	No	Yes	0
148	B	66	72	Yes	72	No	Yes	0
149	B	66	75	Yes	75	No	Yes	0
150	B	66	75	Yes	75	No	Yes	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative A Noise Levels

Receptor	Existing				With Action Alternative A			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
151	B	66	71	Yes	71	No	Yes	0
152	B	66	70	Yes	70	No	Yes	0
153	B	66	73	Yes	73	No	Yes	0
154	B	66	74	Yes	74	No	Yes	0
155	B	66	69	Yes	69	No	Yes	0
156	B	66	68	Yes	68	No	Yes	0
157	B	66	69	Yes	69	No	Yes	0
158	B	66	70	Yes	70	No	Yes	0
159	B	66	68	Yes	68	No	Yes	0
160	B	66	70	Yes	70	No	Yes	0
161	B	66	71	Yes	71	No	Yes	0
162	B	66	71	Yes	71	No	Yes	0
163	B	66	69	Yes	69	No	Yes	0
164	B	66	69	Yes	69	No	Yes	0
165	B	66	70	Yes	71	No	Yes	1
166	B	66	71	Yes	71	No	Yes	0
167	B	66	69	Yes	70	No	Yes	1
168	B	66	70	Yes	71	No	Yes	1
169	B	66	72	Yes	72	No	Yes	0
170	B	66	72	Yes	73	No	Yes	1
171	B	66	72	Yes	72	No	Yes	0
172	C	66	63	No	63	No	No	0
173	B	66	64	No	64	No	No	0
174	B	66	68	Yes	68	No	Yes	0
175	B	66	70	Yes	70	No	Yes	0
176	B	66	63	No	63	No	No	0
177	B	66	66	Yes	66	No	Yes	0
178	B	66	70	Yes	70	No	Yes	0
179	C	66	60	No	60	No	No	0
180	C	66	68	Yes	68	No	Yes	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative A Noise Levels

Receptor	Existing				With Action Alternative A			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
181	B	66	62	No	62	No	No	0
182	B	66	67	Yes	67	No	Yes	0
183	B	66	68	Yes	68	No	Yes	0
184	B	66	63	No	63	No	No	0
185	B	66	69	Yes	70	No	Yes	1
186	B	66	71	Yes	71	No	Yes	0
187	B	66	63	No	63	No	No	0
188	B	66	69	Yes	69	No	Yes	0
189	B	66	70	Yes	70	No	Yes	0
190	B	66	61	No	62	No	No	1
191	B	66	59	No	60	No	No	1
192	B	66	58	No	58	No	No	0
193	B	66	58	No	58	No	No	0
194	B	66	58	No	58	No	No	0
195	B	66	57	No	57	No	No	0
196	B	66	56	No	56	No	No	0
197	B	66	56	No	56	No	No	0
198	B	66	55	No	55	No	No	0
199	B	66	56	No	56	No	No	0
200	B	66	56	No	56	No	No	0
201	B	66	55	No	56	No	No	1
202	B	66	55	No	55	No	No	0
203	B	66	55	No	55	No	No	0
204	B	66	56	No	56	No	No	0
205	B	66	56	No	57	No	No	1
206	B	66	59	No	59	No	No	0
207	B	66	61	No	61	No	No	0
208	B	66	61	No	61	No	No	0
209	B	66	61	No	61	No	No	0
210	B	66	60	No	60	No	No	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative A Noise Levels

Receptor	Existing				With Action Alternative A			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
211	B	66	60	No	60	No	No	0
212	B	66	59	No	59	No	No	0
213	B	66	58	No	58	No	No	0
214	B	66	58	No	58	No	No	0
215	B	66	58	No	58	No	No	0
216	B	66	58	No	58	No	No	0
217	B	66	58	No	58	No	No	0
218	B	66	58	No	58	No	No	0
219	B	66	59	No	59	No	No	0
220	B	66	59	No	59	No	No	0
221	B	66	59	No	59	No	No	0
222	B	66	59	No	59	No	No	0
223	B	66	59	No	60	No	No	1
224	B	66	60	No	60	No	No	0
225	B	66	60	No	60	No	No	0
226	B	66	61	No	61	No	No	0
227	B	66	61	No	61	No	No	0
228	B	66	65	No	65	No	No	0
229	C	66	67	Yes	67	No	Yes	0
230	D	51	49	No	49	No	No	0
231	B	66	72	Yes	72	No	Yes	0
232	B	66	72	Yes	72	No	Yes	0
233	B	66	70	Yes	71	No	Yes	1
234	B	66	63	No	64	No	No	1
235	B	66	65	No	65	No	No	0
236	B	66	64	No	65	No	No	1
237	B	66	65	No	65	No	No	0
238	B	66	64	No	64	No	No	0
239	B	66	64	No	64	No	No	0
240	B	66	64	No	64	No	No	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative A Noise Levels

Receptor	Existing				With Action Alternative A			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
241	B	66	63	No	64	No	No	1
242	B	66	62	No	63	No	No	1
243	B	66	62	No	62	No	No	0
244	B	66	61	No	62	No	No	1
245	B	66	59	No	59	No	No	0
246	B	66	59	No	59	No	No	0
247	B	66	59	No	59	No	No	0
248	B	66	59	No	59	No	No	0
249	B	66	60	No	61	No	No	1
250	B	66	58	No	58	No	No	0
251	B	66	57	No	58	No	No	1
252	B	66	55	No	56	No	No	1
253	B	66	57	No	57	No	No	0
254	B	66	62	No	63	No	No	1
255	B	66	63	No	63	No	No	0
256	B	66	65	No	66	No	Yes	1
257	B	66	68	Yes	68	No	Yes	0
258	B	66	70	Yes	69	No	Yes	–1
259	B	66	69	Yes	68	No	Yes	–1
260	B	66	70	Yes	68	No	Yes	–2
261	B	66	70	Yes	66	No	Yes	–4
262	B	66	67	Yes	63	No	No	–4
263	B	66	67	Yes	64	No	No	–3
264	B	66	65	No	63	No	No	–2
265	B	66	63	No	62	No	No	–1
266	B	66	60	No	59	No	No	–1
267	B	66	54	No	54	No	No	0
268	B	66	55	No	55	No	No	0
269	B	66	55	No	55	No	No	0
270	B	66	59	No	59	No	No	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative A Noise Levels

Receptor	Existing				With Action Alternative A			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
271	B	66	56	No	56	No	No	0
272	B	66	58	No	58	No	No	0
273	B	66	58	No	58	No	No	0
274	B	66	55	No	56	No	No	1
275	B	66	55	No	55	No	No	0
276	B	66	55	No	55	No	No	0
277	B	66	54	No	54	No	No	0
278	B	66	67	Yes	61	No	No	–6
279	B	66	68	Yes	62	No	No	–6
280	B	66	69	Yes	64	No	No	–5
281	B	66	71	Yes	65	No	No	–6
282	B	66	73	Yes	67	No	Yes	–6
283	C	66	73	Yes	74	No	Yes	1
284	C	66	72	Yes	73	No	Yes	1
285	C	66	71	Yes	72	No	Yes	1
286	C	66	70	Yes	71	No	Yes	1
287	C	66	69	Yes	70	No	Yes	1
288	C	66	68	Yes	69	No	Yes	1
289	C	66	67	Yes	68	No	Yes	1
290	C	66	67	Yes	68	No	Yes	1
291	C	66	66	Yes	67	No	Yes	1
292	C	66	65	No	66	No	Yes	1
293	C	66	65	No	65	No	No	0
294	C	66	64	No	65	No	No	1
295	C	66	65	No	65	No	No	0
296	C	66	65	No	65	No	No	0
297	C	66	65	No	65	No	No	0
298	C	66	65	No	66	No	Yes	1
299	C	66	65	No	66	No	Yes	1
300	C	66	67	Yes	68	No	Yes	1

(*Continued on next page*)

Table 1. Existing Conditions and Alternative A Noise Levels

Receptor	Existing				With Action Alternative A			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
301	C	66	68	Yes	69	No	Yes	1
302	C	66	69	Yes	70	No	Yes	1
303	C	66	70	Yes	71	No	Yes	1
304	C	66	71	Yes	72	No	Yes	1
305	C	66	72	Yes	73	No	Yes	1
306	C	66	72	Yes	73	No	Yes	1
307	C	66	71	Yes	72	No	Yes	1
308	C	66	70	Yes	71	No	Yes	1
309	C	66	69	Yes	70	No	Yes	1
310	C	66	69	Yes	70	No	Yes	1
311	C	66	69	Yes	69	No	Yes	0
312	C	66	68	Yes	69	No	Yes	1
313	C	66	67	Yes	68	No	Yes	1
314	C	66	72	Yes	73	No	Yes	1
315	C	66	72	Yes	72	No	Yes	0
316	C	66	71	Yes	72	No	Yes	1
317	C	66	70	Yes	71	No	Yes	1
318	C	66	70	Yes	71	No	Yes	1
319	C	66	70	Yes	70	No	Yes	0
320	C	66	69	Yes	70	No	Yes	1
321	C	66	63	No	64	No	No	1

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Alternative A Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE A NOISE EVALUATION AREA

ALTERNATIVE A FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200

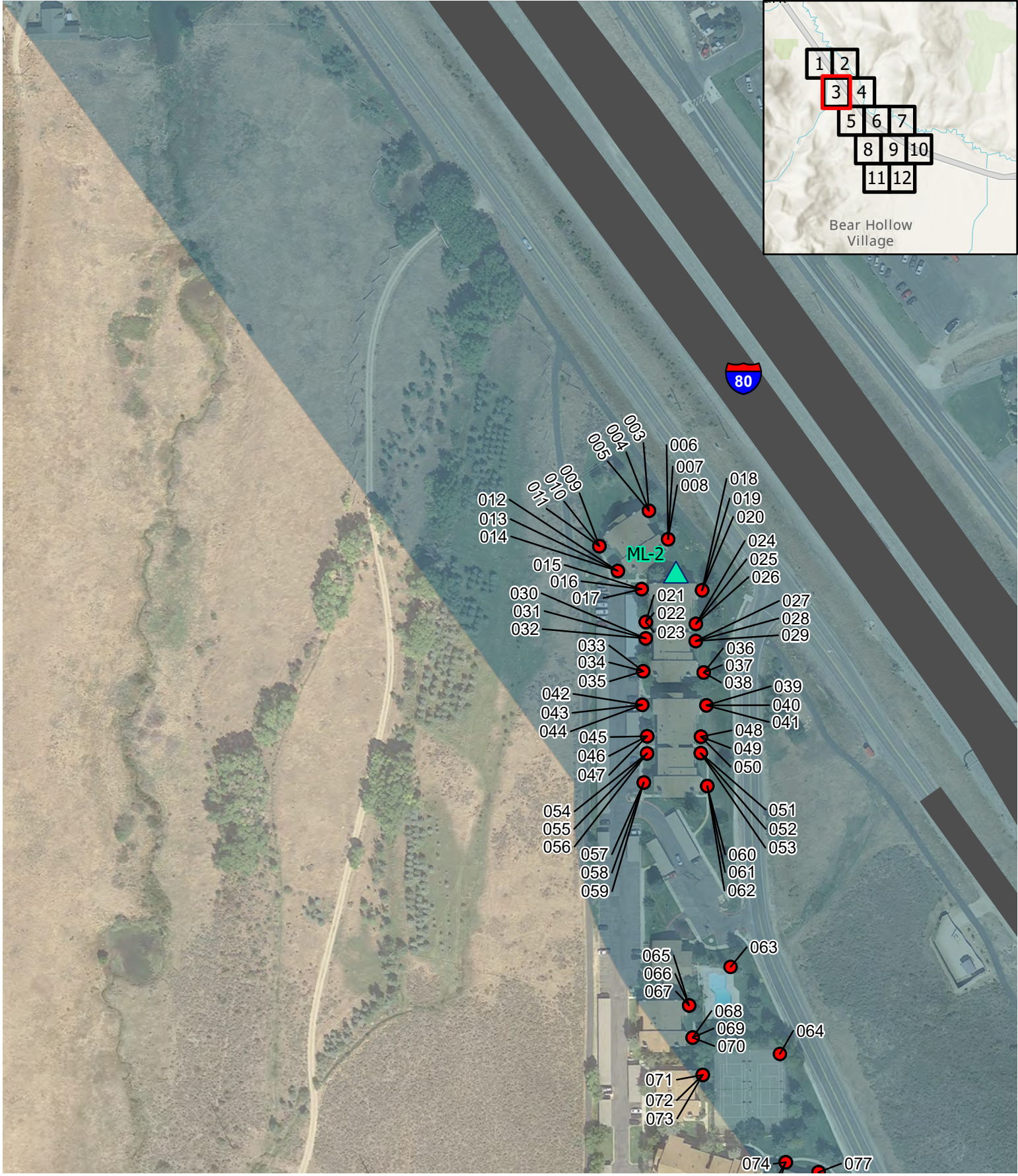
Alternative A Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- ALTERNATIVE A NOISE EVALUATION AREA
- ALTERNATIVE A FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



Alternative A Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE A NOISE EVALUATION AREA

ALTERNATIVE A FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200

Alternative A Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE A NOISE EVALUATION AREA

ALTERNATIVE A FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200

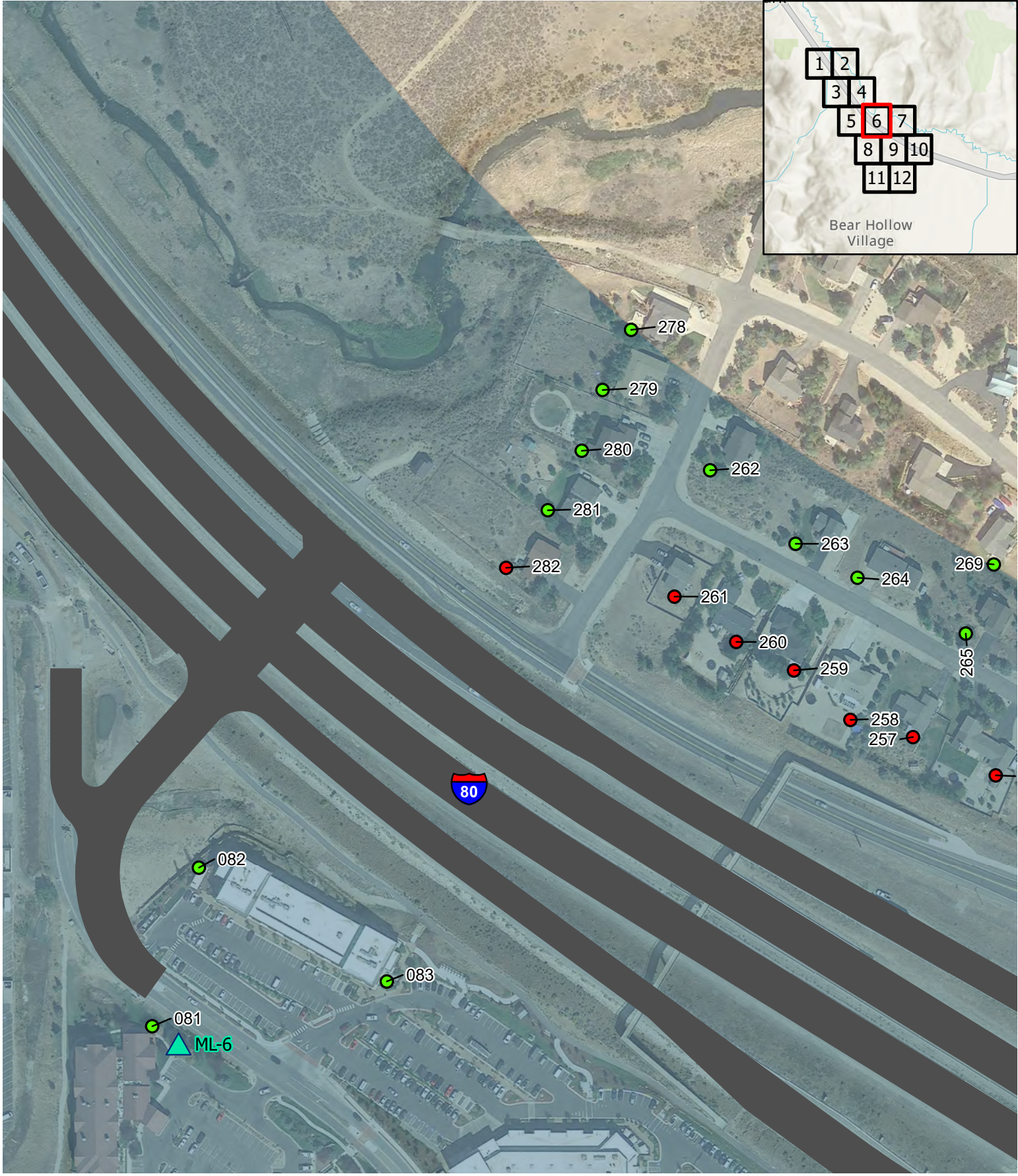
Alternative A Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- ALTERNATIVE A NOISE EVALUATION AREA
- ALTERNATIVE A FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



Alternative A Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

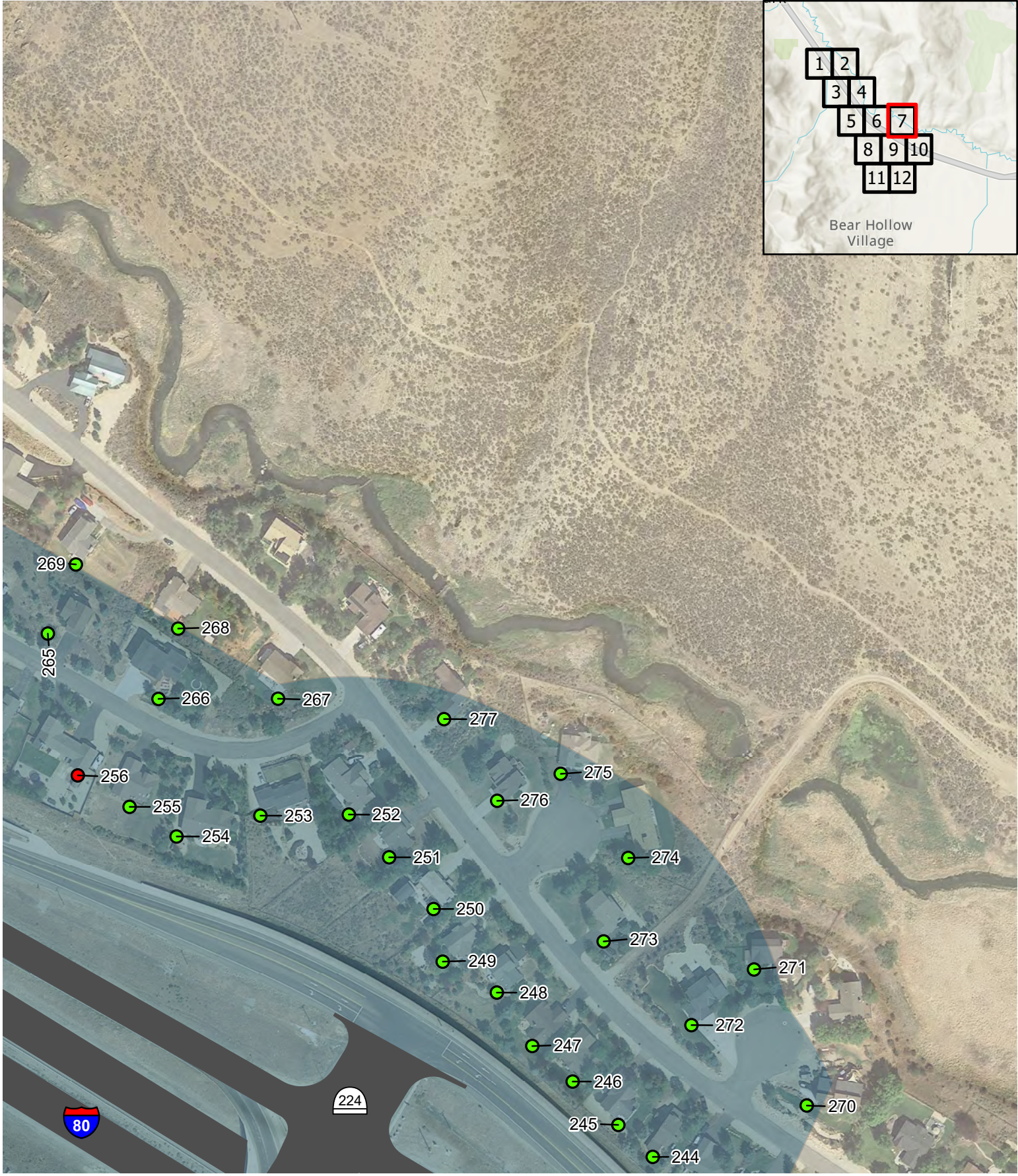
ALTERNATIVE A NOISE EVALUATION AREA

ALTERNATIVE A FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



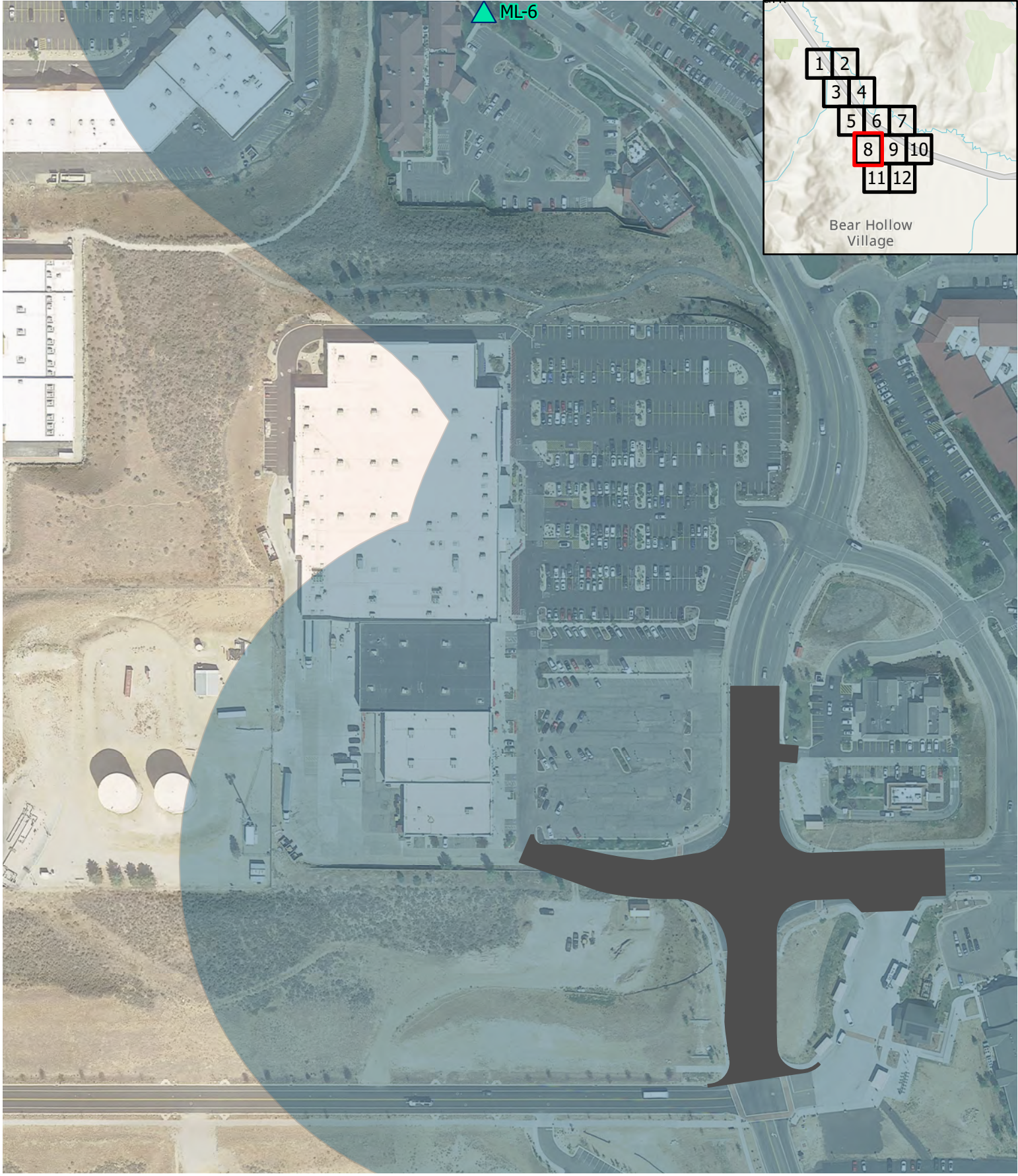
Alternative A Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- ALTERNATIVE A NOISE EVALUATION AREA
- ALTERNATIVE A FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



Alternative A Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

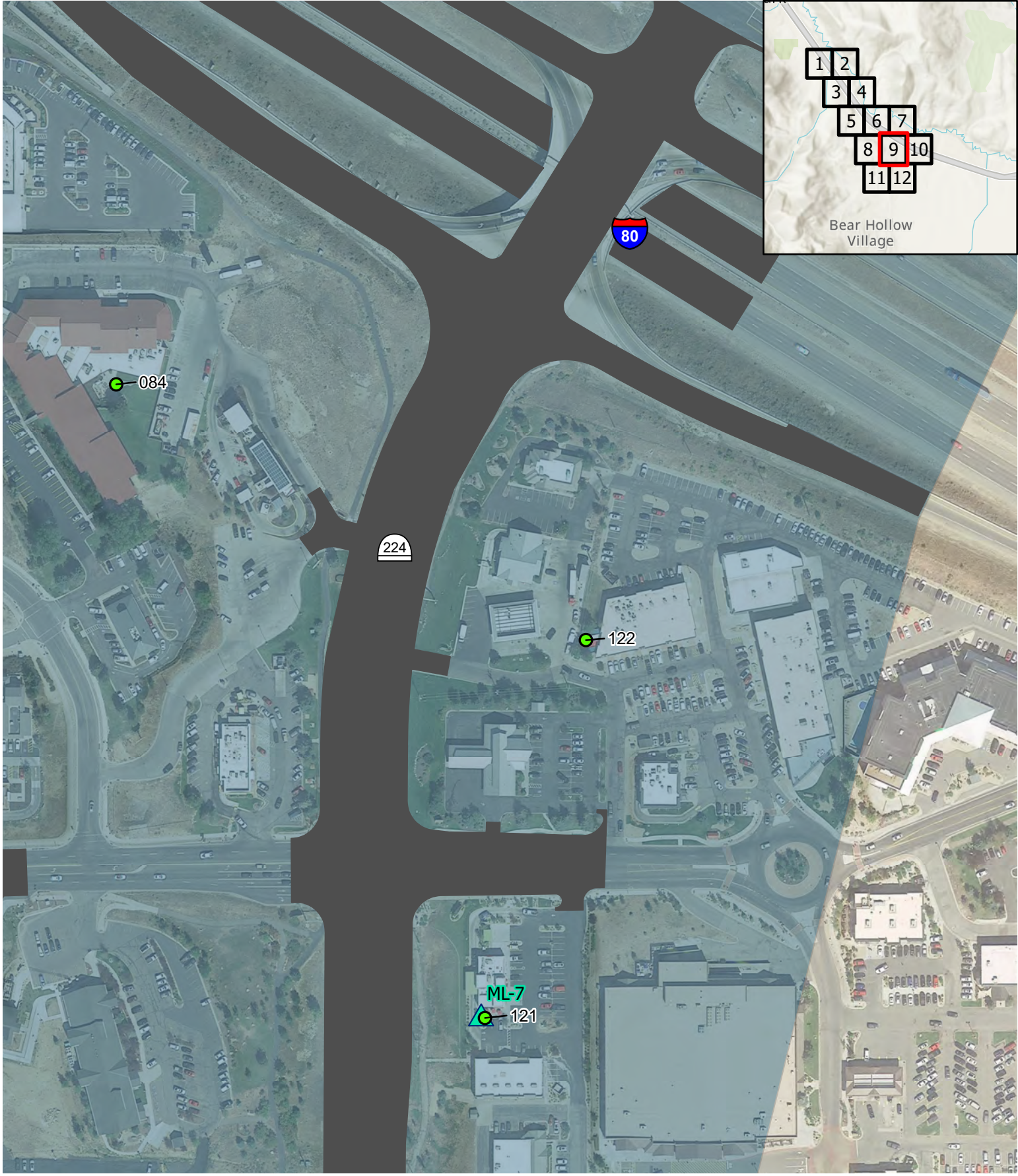
ALTERNATIVE A NOISE EVALUATION AREA

ALTERNATIVE A FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



Alternative A Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE A NOISE EVALUATION AREA

ALTERNATIVE A FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200

Alternative A Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

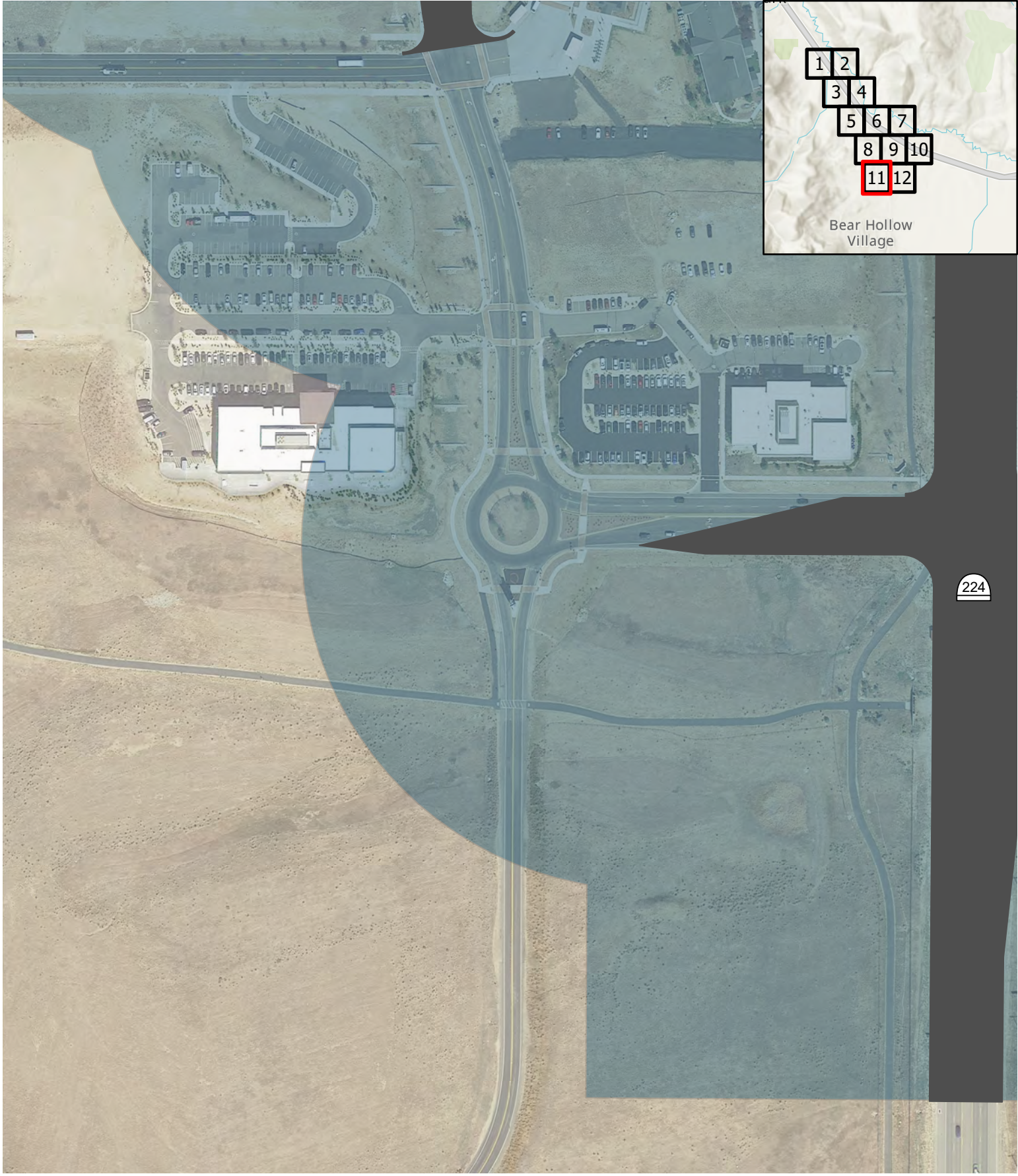
ALTERNATIVE A NOISE EVALUATION AREA

ALTERNATIVE A FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



Alternative A Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

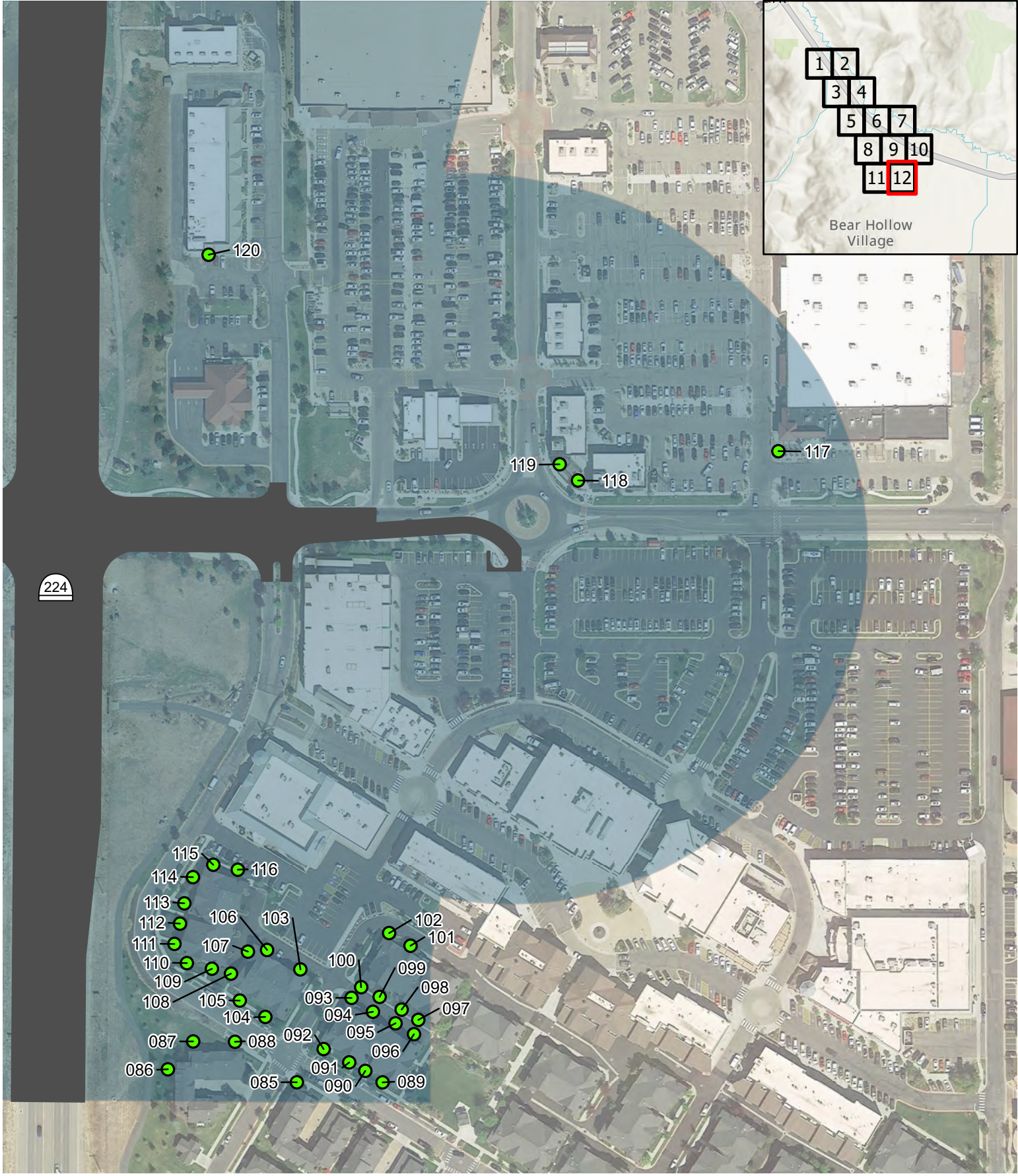
ALTERNATIVE A NOISE EVALUATION AREA

ALTERNATIVE A FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



Alternative A Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE A NOISE EVALUATION AREA

ALTERNATIVE A FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200

ATTACHMENT C

Noise Levels and Noise Receptor Maps for Alternative C

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Table 1. Existing Conditions and Alternative C Noise Levels

Receptor [a]	Existing				With Action Alternative C			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
001	B	66	67	Yes	68	No	Yes	1
002	B	66	70	Yes	69	No	Yes	–1
003	B	66	74	Yes	73	No	Yes	–1
004	B	66	74	Yes	74	No	Yes	0
005	B	66	75	Yes	75	No	Yes	0
006	B	66	74	Yes	73	No	Yes	–1
007	B	66	74	Yes	74	No	Yes	0
008	B	66	75	Yes	75	No	Yes	0
009	B	66	64	No	63	No	No	–1
010	B	66	65	No	65	No	No	0
011	B	66	66	Yes	66	No	Yes	0
012	B	66	60	No	60	No	No	0
013	B	66	62	No	62	No	No	0
014	B	66	67	Yes	67	No	Yes	0
015	B	66	66	Yes	65	No	No	–1
016	B	66	67	Yes	67	No	Yes	0
017	B	66	70	Yes	70	No	Yes	0
018	B	66	73	Yes	73	No	Yes	0
019	B	66	74	Yes	74	No	Yes	0
020	B	66	75	Yes	75	No	Yes	0
021	B	66	58	No	58	No	No	0
022	B	66	61	No	62	No	No	1
023	B	66	70	Yes	70	No	Yes	0
024	B	66	72	Yes	72	No	Yes	0
025	B	66	73	Yes	73	No	Yes	0
026	B	66	74	Yes	74	No	Yes	0
027	B	66	72	Yes	71	No	Yes	–1
028	B	66	73	Yes	73	No	Yes	0
029	B	66	73	Yes	73	No	Yes	0
030	B	66	59	No	59	No	No	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative C Noise Levels

Receptor [a]	Existing				With Action Alternative C			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
031	B	66	62	No	62	No	No	0
032	B	66	70	Yes	70	No	Yes	0
033	B	66	60	No	60	No	No	0
034	B	66	62	No	62	No	No	0
035	B	66	69	Yes	69	No	Yes	0
036	B	66	71	Yes	71	No	Yes	0
037	B	66	73	Yes	72	No	Yes	–1
038	B	66	73	Yes	73	No	Yes	0
039	B	66	72	Yes	71	No	Yes	–1
040	B	66	72	Yes	72	No	Yes	0
041	B	66	73	Yes	73	No	Yes	0
042	B	66	59	No	59	No	No	0
043	B	66	61	No	61	No	No	0
044	B	66	66	Yes	66	No	Yes	0
045	B	66	59	No	59	No	No	0
046	B	66	61	No	61	No	No	0
047	B	66	67	Yes	67	No	Yes	0
048	B	66	71	Yes	71	No	Yes	0
049	B	66	72	Yes	71	No	Yes	–1
050	B	66	72	Yes	72	No	Yes	0
051	B	66	70	Yes	70	No	Yes	0
052	B	66	71	Yes	71	No	Yes	0
053	B	66	72	Yes	72	No	Yes	0
054	B	66	59	No	59	No	No	0
055	B	66	61	No	61	No	No	0
056	B	66	67	Yes	68	No	Yes	1
057	B	66	59	No	59	No	No	0
058	B	66	61	No	61	No	No	0
059	B	66	66	Yes	66	No	Yes	0
060	B	66	70	Yes	70	No	Yes	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative C Noise Levels

Receptor [a]	Existing				With Action Alternative C			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
061	B	66	71	Yes	71	No	Yes	0
062	B	66	71	Yes	71	No	Yes	0
063	C	66	67	Yes	68	No	Yes	1
064	C	66	67	Yes	67	No	Yes	0
065	B	66	63	No	64	No	No	1
066	B	66	67	Yes	67	No	Yes	0
067	B	66	69	Yes	69	No	Yes	0
068	B	66	61	No	62	No	No	1
069	B	66	66	Yes	66	No	Yes	0
070	B	66	68	Yes	68	No	Yes	0
071	B	66	61	No	62	No	No	1
072	B	66	66	Yes	66	No	Yes	0
073	B	66	68	Yes	68	No	Yes	0
074	B	66	60	No	60	No	No	0
075	B	66	65	No	65	No	No	0
076	B	66	68	Yes	68	No	Yes	0
077	B	66	62	No	62	No	No	0
078	B	66	67	Yes	67	No	Yes	0
079	B	66	69	Yes	69	No	Yes	0
080	C	66	59	No	60	No	No	1
081	E	71	64	No	64	No	No	0
082	E	71	70	No	70	No	No	0
083	E	71	67	No	67	No	No	0
084	C	66	59	No	59	No	No	0
085	B	66	55	No	55	No	No	0
086	B	66	62	No	62	No	No	0
087	B	66	60	No	60	No	No	0
088	B	66	55	No	56	No	No	1
089	B	66	49	No	50	No	No	1
090	B	66	49	No	51	No	No	2

(*Continued on next page*)

Table 1. Existing Conditions and Alternative C Noise Levels

Receptor [a]	Existing				With Action Alternative C			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
091	B	66	50	No	51	No	No	1
092	B	66	54	No	54	No	No	0
093	B	66	53	No	55	No	No	2
094	B	66	50	No	50	No	No	0
095	B	66	51	No	50	No	No	–1
096	B	66	49	No	50	No	No	1
097	B	66	46	No	46	No	No	0
098	B	66	47	No	47	No	No	0
099	B	66	48	No	50	No	No	2
100	B	66	54	No	56	No	No	2
101	B	66	51	No	53	No	No	2
102	B	66	53	No	54	No	No	1
103	B	66	53	No	52	No	No	–1
104	B	66	55	No	56	No	No	1
105	B	66	56	No	57	No	No	1
106	B	66	52	No	51	No	No	–1
107	B	66	56	No	55	No	No	–1
108	B	66	58	No	58	No	No	0
109	B	66	58	No	59	No	No	1
110	B	66	61	No	61	No	No	0
111	B	66	62	No	63	No	No	1
112	B	66	62	No	63	No	No	1
113	B	66	62	No	63	No	No	1
114	B	66	62	No	62	No	No	0
115	B	66	60	No	61	No	No	1
116	B	66	58	No	59	No	No	1
117	E	71	54	No	54	No	No	0
118	E	71	59	No	59	No	No	0
119	E	71	59	No	60	No	No	1
120	E	71	54	No	55	No	No	1

(*Continued on next page*)

Table 1. Existing Conditions and Alternative C Noise Levels

Receptor [a]	Existing				With Action Alternative C			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
121	E	71	59	No	64	No	No	5
122	E	71	61	No	61	No	No	0
123	E	71	67	No	67	No	No	0
124	B	66	63	No	63	No	No	0
125	B	66	66	Yes	66	No	Yes	0
126	B	66	68	Yes	68	No	Yes	0
127	B	66	60	No	61	No	No	1
128	B	66	63	No	63	No	No	0
129	B	66	64	No	64	No	No	0
130	B	66	56	No	56	No	No	0
131	B	66	57	No	57	No	No	0
132	B	66	59	No	59	No	No	0
133	B	66	53	No	54	No	No	1
134	B	66	54	No	54	No	No	0
135	B	66	57	No	57	No	No	0
136	B	66	52	No	52	No	No	0
137	B	66	53	No	53	No	No	0
138	B	66	56	No	56	No	No	0
139	B	66	52	No	52	No	No	0
140	B	66	52	No	52	No	No	0
141	B	66	56	No	56	No	No	0
142	B	66	52	No	52	No	No	0
143	B	66	52	No	53	No	No	1
144	B	66	57	No	57	No	No	0
145	B	66	61	No	61	No	No	0
146	B	66	64	No	64	No	No	0
147	B	66	66	Yes	66	No	Yes	0
148	B	66	72	Yes	73	No	Yes	1
149	B	66	75	Yes	75	No	Yes	0
150	B	66	75	Yes	75	No	Yes	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative C Noise Levels

Receptor [a]	Existing				With Action Alternative C			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
151	B	66	71	Yes	71	No	Yes	0
152	B	66	70	Yes	70	No	Yes	0
153	B	66	73	Yes	73	No	Yes	0
154	B	66	74	Yes	74	No	Yes	0
155	B	66	69	Yes	69	No	Yes	0
156	B	66	68	Yes	68	No	Yes	0
157	B	66	69	Yes	69	No	Yes	0
158	B	66	70	Yes	70	No	Yes	0
159	B	66	68	Yes	68	No	Yes	0
160	B	66	70	Yes	70	No	Yes	0
161	B	66	71	Yes	71	No	Yes	0
162	B	66	71	Yes	72	No	Yes	1
163	B	66	69	Yes	69	No	Yes	0
164	B	66	69	Yes	69	No	Yes	0
165	B	66	70	Yes	71	No	Yes	1
166	B	66	71	Yes	71	No	Yes	0
167	B	66	69	Yes	70	No	Yes	1
168	B	66	70	Yes	71	No	Yes	1
169	B	66	72	Yes	72	No	Yes	0
170	B	66	72	Yes	73	No	Yes	1
171	B	66	72	Yes	72	No	Yes	0
172	C	66	63	No	63	No	No	0
173	B	66	64	No	64	No	No	0
174	B	66	68	Yes	68	No	Yes	0
175	B	66	70	Yes	70	No	Yes	0
176	B	66	63	No	63	No	No	0
177	B	66	66	Yes	66	No	Yes	0
178	B	66	70	Yes	70	No	Yes	0
179	C	66	60	No	60	No	No	0
180	C	66	68	Yes	68	No	Yes	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative C Noise Levels

Receptor [a]	Existing				With Action Alternative C			
	NAC	UDOT NAC $L_{eq}(h)$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
181	B	66	62	No	62	No	No	0
182	B	66	67	Yes	67	No	Yes	0
183	B	66	68	Yes	68	No	Yes	0
184	B	66	63	No	63	No	No	0
185	B	66	69	Yes	69	No	Yes	0
186	B	66	71	Yes	71	No	Yes	0
187	B	66	63	No	63	No	No	0
188	B	66	69	Yes	69	No	Yes	0
189	B	66	70	Yes	70	No	Yes	0
190	B	66	61	No	61	No	No	0
191	B	66	59	No	59	No	No	0
192	B	66	58	No	58	No	No	0
193	B	66	58	No	58	No	No	0
194	B	66	58	No	58	No	No	0
195	B	66	57	No	57	No	No	0
196	B	66	56	No	56	No	No	0
197	B	66	56	No	56	No	No	0
198	B	66	55	No	55	No	No	0
199	B	66	56	No	56	No	No	0
200	B	66	56	No	56	No	No	0
201	B	66	55	No	56	No	No	1
202	B	66	55	No	55	No	No	0
203	B	66	55	No	55	No	No	0
204	B	66	56	No	56	No	No	0
205	B	66	56	No	57	No	No	1
206	B	66	59	No	59	No	No	0
207	B	66	61	No	61	No	No	0
208	B	66	61	No	61	No	No	0
209	B	66	61	No	61	No	No	0
210	B	66	60	No	60	No	No	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative C Noise Levels

Receptor [a]	Existing				With Action Alternative C			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
211	B	66	60	No	60	No	No	0
212	B	66	59	No	59	No	No	0
213	B	66	58	No	58	No	No	0
214	B	66	58	No	58	No	No	0
215	B	66	58	No	58	No	No	0
216	B	66	58	No	58	No	No	0
217	B	66	58	No	58	No	No	0
218	B	66	58	No	59	No	No	1
219	B	66	59	No	59	No	No	0
220	B	66	59	No	59	No	No	0
221	B	66	59	No	59	No	No	0
222	B	66	59	No	59	No	No	0
223	B	66	59	No	60	No	No	1
224	B	66	60	No	60	No	No	0
225	B	66	60	No	61	No	No	1
226	B	66	61	No	61	No	No	0
227	B	66	61	No	62	No	No	1
228	B	66	65	No	65	No	No	0
229	C	66	67	Yes	67	No	Yes	0
230	D	51	49	No	49	No	No	0
231	B	66	72	Yes	72	No	Yes	0
232	B	66	72	Yes	72	No	Yes	0
233	B	66	70	Yes	70	No	Yes	0
234	B	66	63	No	64	No	No	1
235	B	66	65	No	65	No	No	0
236	B	66	64	No	64	No	No	0
237	B	66	65	No	65	No	No	0
238	B	66	64	No	64	No	No	0
239	B	66	64	No	64	No	No	0
240	B	66	64	No	64	No	No	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative C Noise Levels

Receptor [a]	Existing				With Action Alternative C			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
241	B	66	63	No	63	No	No	0
242	B	66	62	No	62	No	No	0
243	B	66	62	No	62	No	No	0
244	B	66	61	No	61	No	No	0
245	B	66	59	No	59	No	No	0
246	B	66	59	No	59	No	No	0
247	B	66	59	No	59	No	No	0
248	B	66	59	No	59	No	No	0
249	B	66	60	No	60	No	No	0
250	B	66	58	No	58	No	No	0
251	B	66	57	No	57	No	No	0
252	B	66	55	No	55	No	No	0
253	B	66	57	No	57	No	No	0
254	B	66	62	No	62	No	No	0
255	B	66	63	No	63	No	No	0
256	B	66	65	No	65	No	No	0
257	B	66	68	Yes	68	No	Yes	0
258	B	66	70	Yes	70	No	Yes	0
259	B	66	69	Yes	69	No	Yes	0
260	B	66	70	Yes	70	No	Yes	0
261	B	66	70	Yes	71	No	Yes	1
262	B	66	67	Yes	67	No	Yes	0
263	B	66	67	Yes	67	No	Yes	0
264	B	66	65	No	66	No	Yes	1
265	B	66	63	No	63	No	No	0
266	B	66	60	No	60	No	No	0
267	B	66	54	No	54	No	No	0
268	B	66	55	No	55	No	No	0
269	B	66	55	No	55	No	No	0
270	B	66	59	No	59	No	No	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative C Noise Levels

Receptor [a]	Existing				With Action Alternative C			
	NAC	UDOT NAC $L_{eq(h)}$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
271	B	66	56	No	56	No	No	0
272	B	66	58	No	58	No	No	0
273	B	66	58	No	58	No	No	0
274	B	66	55	No	55	No	No	0
275	B	66	55	No	55	No	No	0
276	B	66	55	No	55	No	No	0
277	B	66	54	No	54	No	No	0
278	B	66	67	Yes	67	No	Yes	0
279	B	66	68	Yes	68	No	Yes	0
280	B	66	69	Yes	70	No	Yes	1
281	B	66	71	Yes	71	No	Yes	0
282	B	66	73	Yes	73	No	Yes	0
283	C	66	73	Yes	73	No	Yes	0
284	C	66	72	Yes	72	No	Yes	0
285	C	66	71	Yes	71	No	Yes	0
286	C	66	70	Yes	70	No	Yes	0
287	C	66	69	Yes	69	No	Yes	0
288	C	66	68	Yes	68	No	Yes	0
289	C	66	67	Yes	67	No	Yes	0
290	C	66	67	Yes	67	No	Yes	0
291	C	66	66	Yes	66	No	Yes	0
292	C	66	65	No	65	No	No	0
293	C	66	65	No	65	No	No	0
294	C	66	64	No	64	No	No	0
295	C	66	65	No	65	No	No	0
296	C	66	65	No	65	No	No	0
297	C	66	65	No	65	No	No	0
298	C	66	65	No	65	No	No	0
299	C	66	65	No	65	No	No	0
300	C	66	67	Yes	67	No	Yes	0

(*Continued on next page*)

Table 1. Existing Conditions and Alternative C Noise Levels

Receptor [a]	Existing				With Action Alternative C			
	NAC	UDOT NAC $L_{eq}(h)$	Existing Noise Level (dBA)	Existing ≥ NAC?	Noise Level (dBA)	≥ 10 dBA Increase over Existing Noise Level?	≥ UDOT NAC?	Difference (dBA)
301	C	66	68	Yes	68	No	Yes	0
302	C	66	69	Yes	69	No	Yes	0
303	C	66	70	Yes	70	No	Yes	0
304	C	66	71	Yes	71	No	Yes	0
305	C	66	72	Yes	72	No	Yes	0
306	C	66	72	Yes	72	No	Yes	0
307	C	66	71	Yes	71	No	Yes	0
308	C	66	70	Yes	70	No	Yes	0
309	C	66	69	Yes	69	No	Yes	0
310	C	66	69	Yes	69	No	Yes	0
311	C	66	69	Yes	69	No	Yes	0
312	C	66	68	Yes	68	No	Yes	0
313	C	66	67	Yes	67	No	Yes	0
314	C	66	72	Yes	72	No	Yes	0
315	C	66	72	Yes	72	No	Yes	0
316	C	66	71	Yes	71	No	Yes	0
317	C	66	70	Yes	70	No	Yes	0
318	C	66	70	Yes	70	No	Yes	0
319	C	66	70	Yes	70	No	Yes	0
320	C	66	69	Yes	69	No	Yes	0
321	C	66	63	No	63	No	No	0

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Alternative C Noise Levels

- NOISE MONITORING LOCATIONS
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- ALTERNATIVE C NOISE EVALUATION AREA
- ALTERNATIVE C FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

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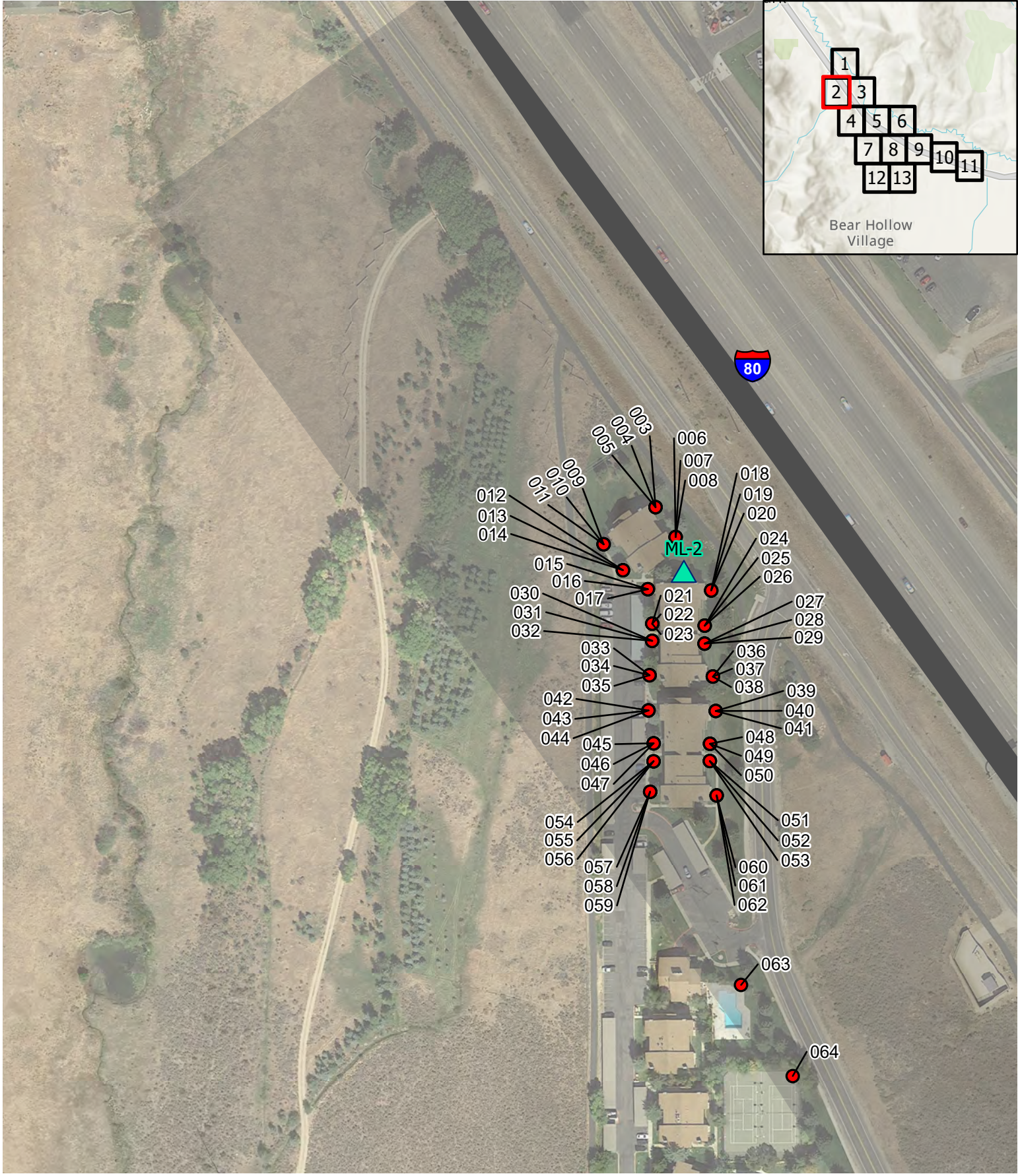

Alternative C Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE C NOISE EVALUATION AREA

ALTERNATIVE C FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200

Alternative C Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE C NOISE EVALUATION AREA

ALTERNATIVE C FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200

Alternative C Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE C NOISE EVALUATION AREA

ALTERNATIVE C FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

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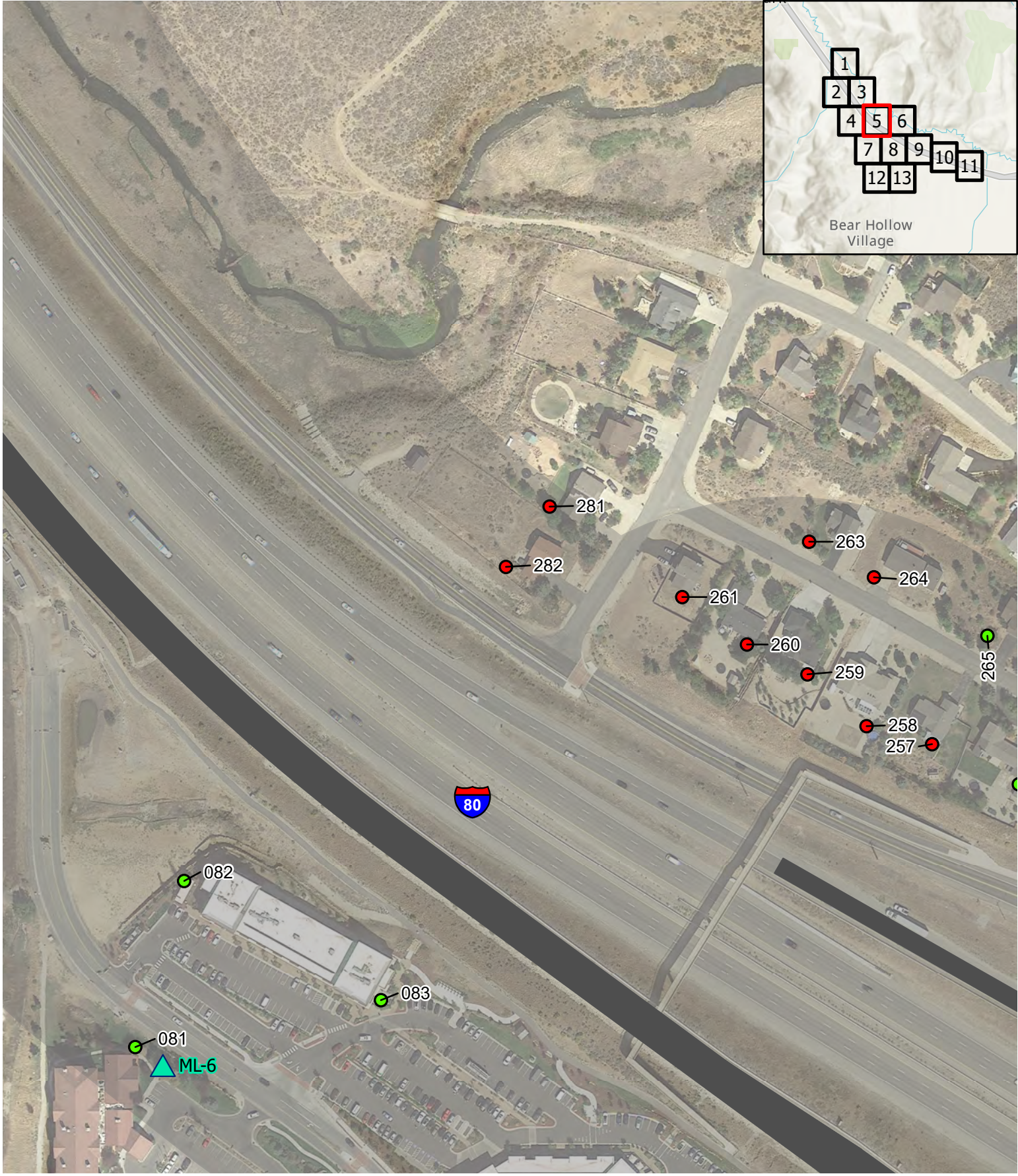

Alternative C Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE C NOISE EVALUATION AREA

ALTERNATIVE C FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

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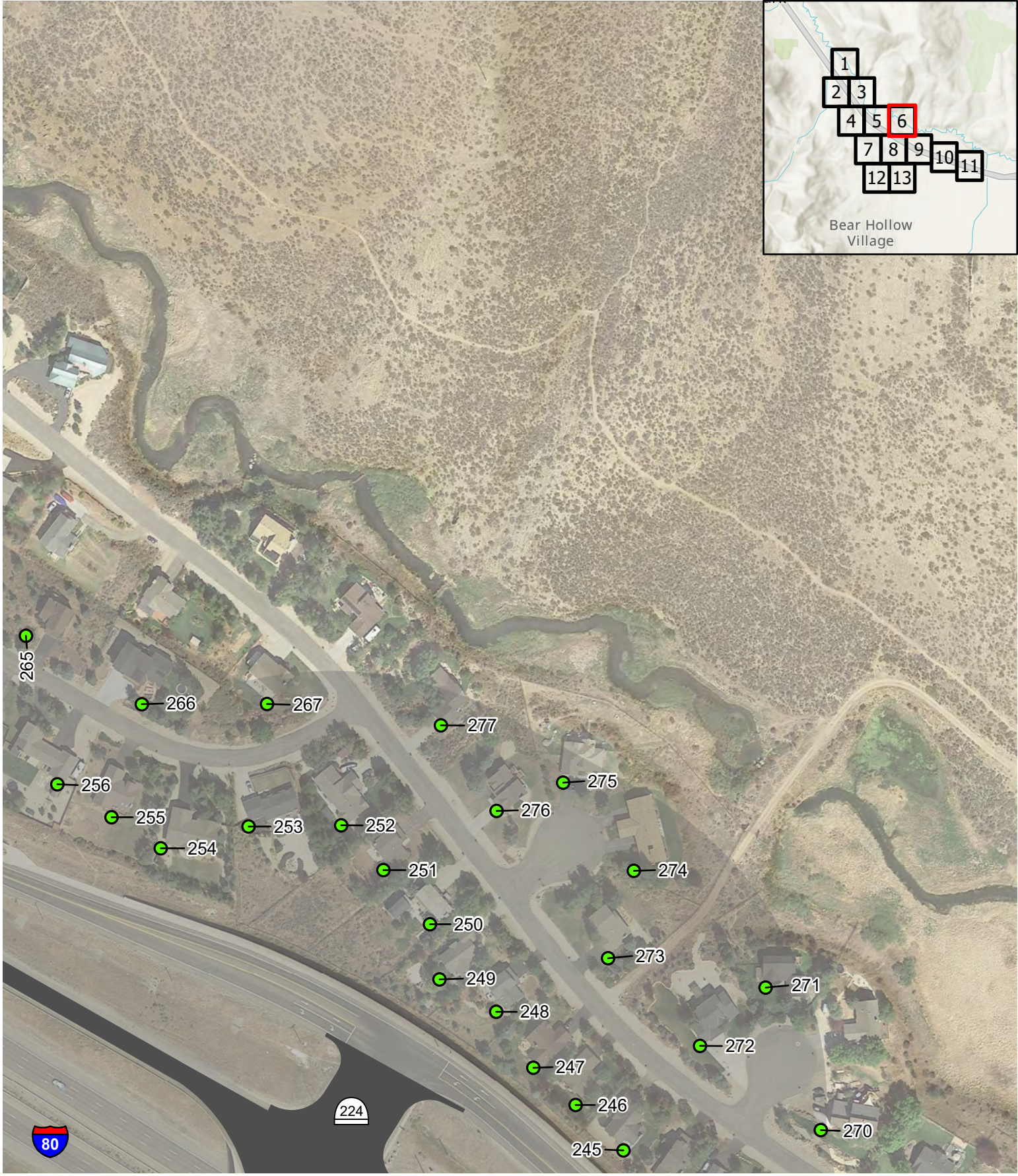

Alternative C Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE C NOISE EVALUATION AREA

ALTERNATIVE C FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

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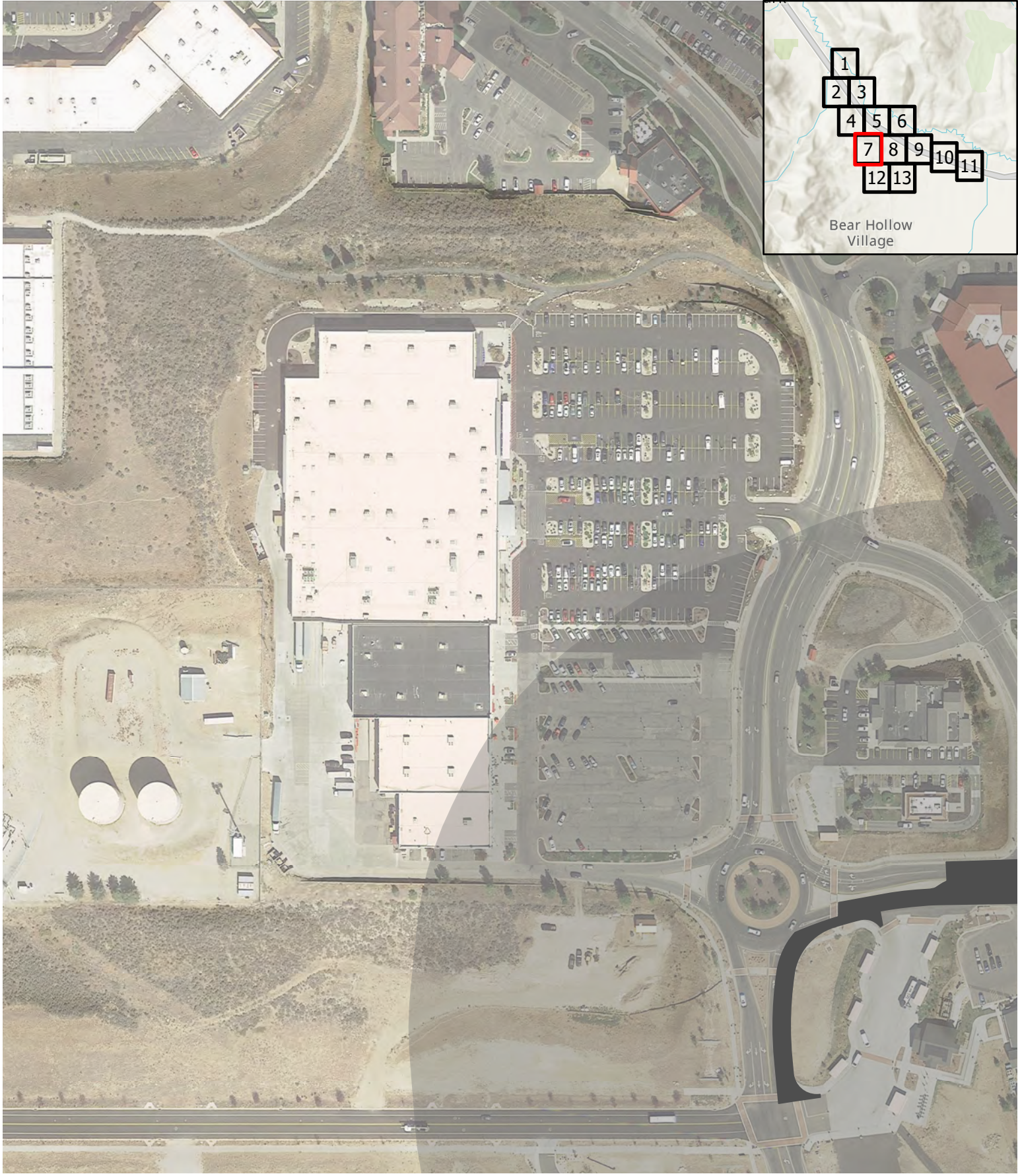

Alternative C Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE C NOISE EVALUATION AREA

ALTERNATIVE C FOOTPRINT

Kimball Junction
ENVIRONMENTAL
IMPACT STATEMENT

N

0 Feet 200

Alternative C Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE C NOISE EVALUATION AREA

ALTERNATIVE C FOOTPRINT

Kimball Junction
ENVIRONMENTAL IMPACT STATEMENT

N

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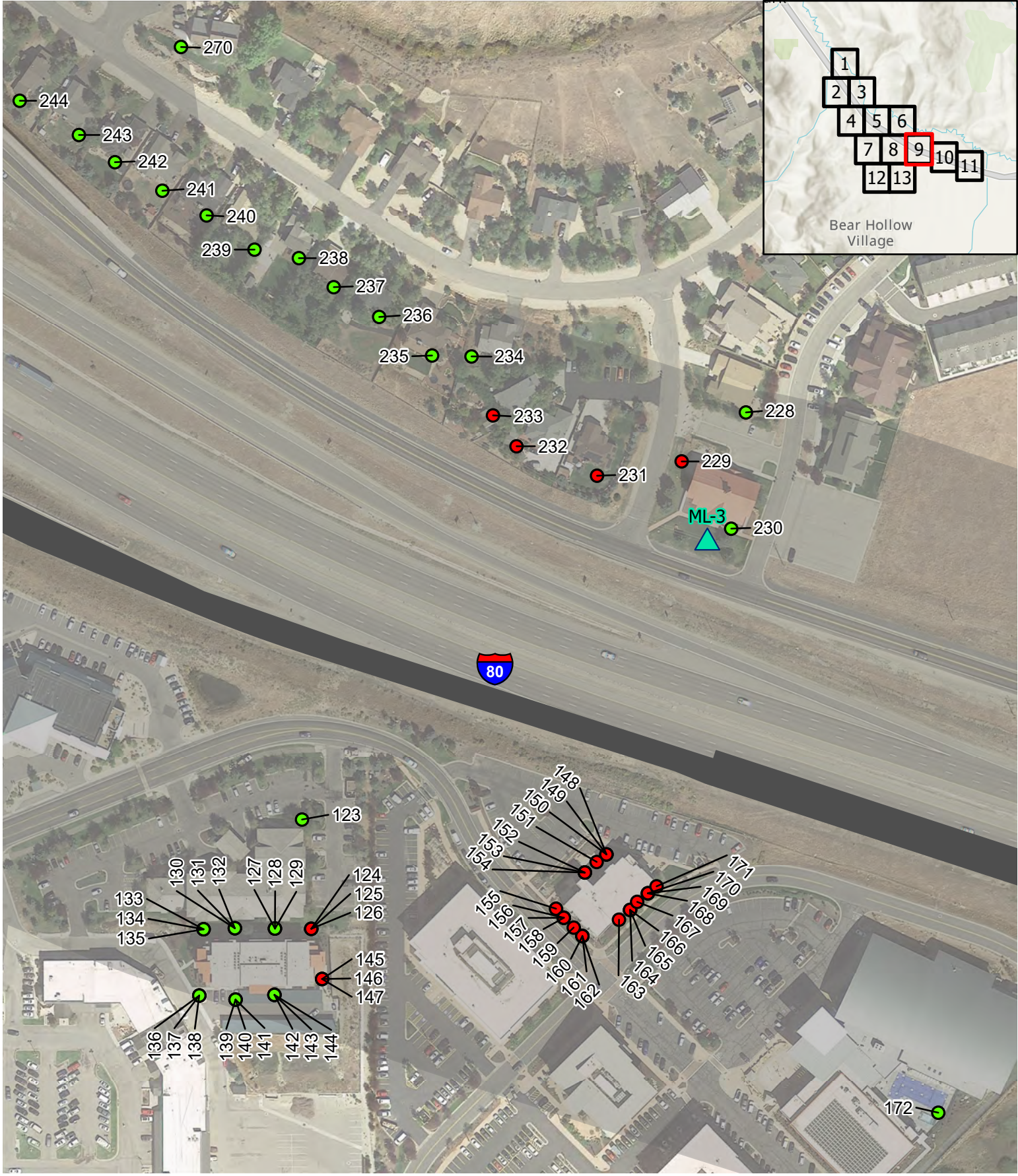

Alternative C Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE C NOISE EVALUATION AREA

ALTERNATIVE C FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200

Alternative C Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE C NOISE EVALUATION AREA

ALTERNATIVE C FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

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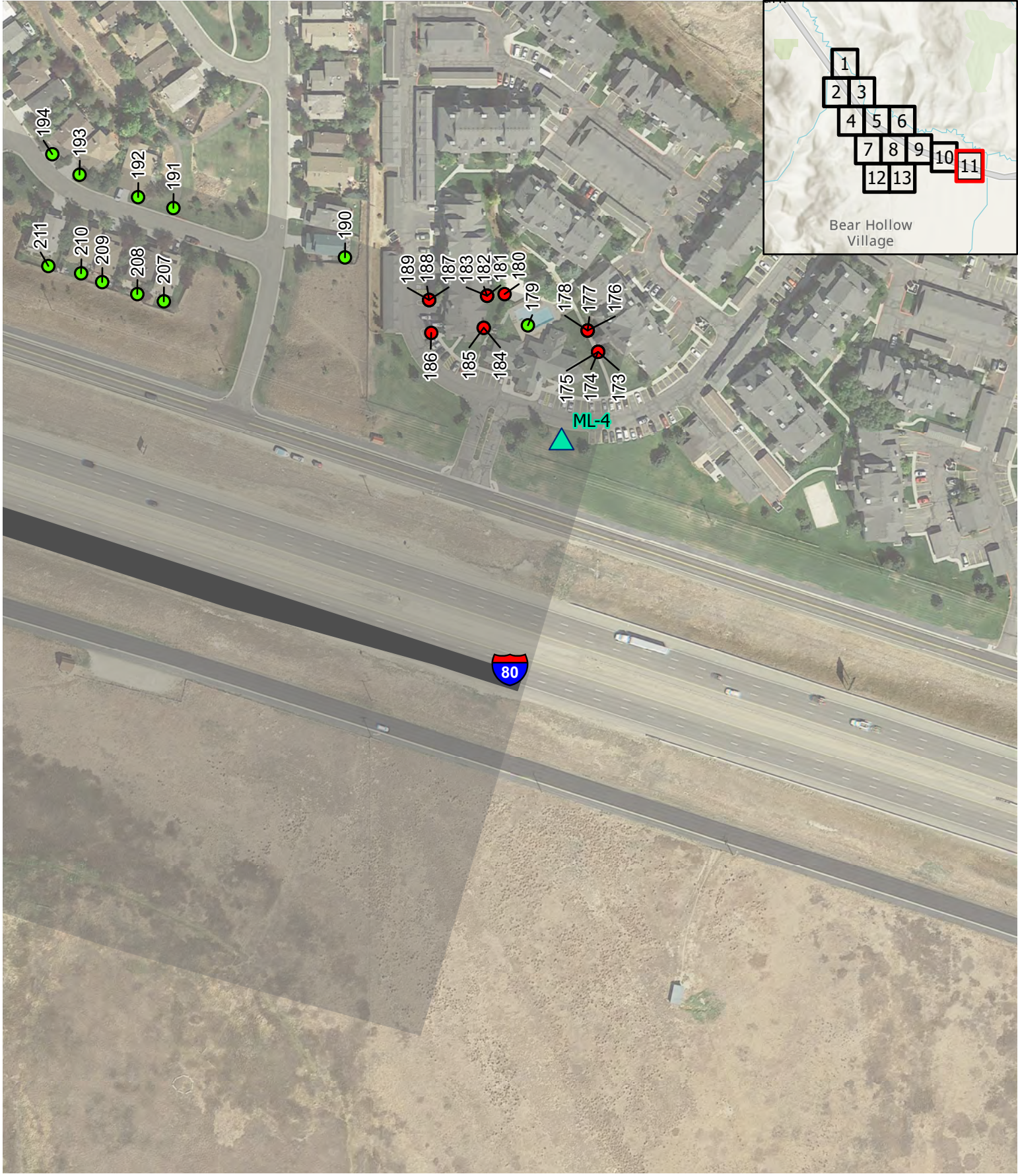


Alternative C Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

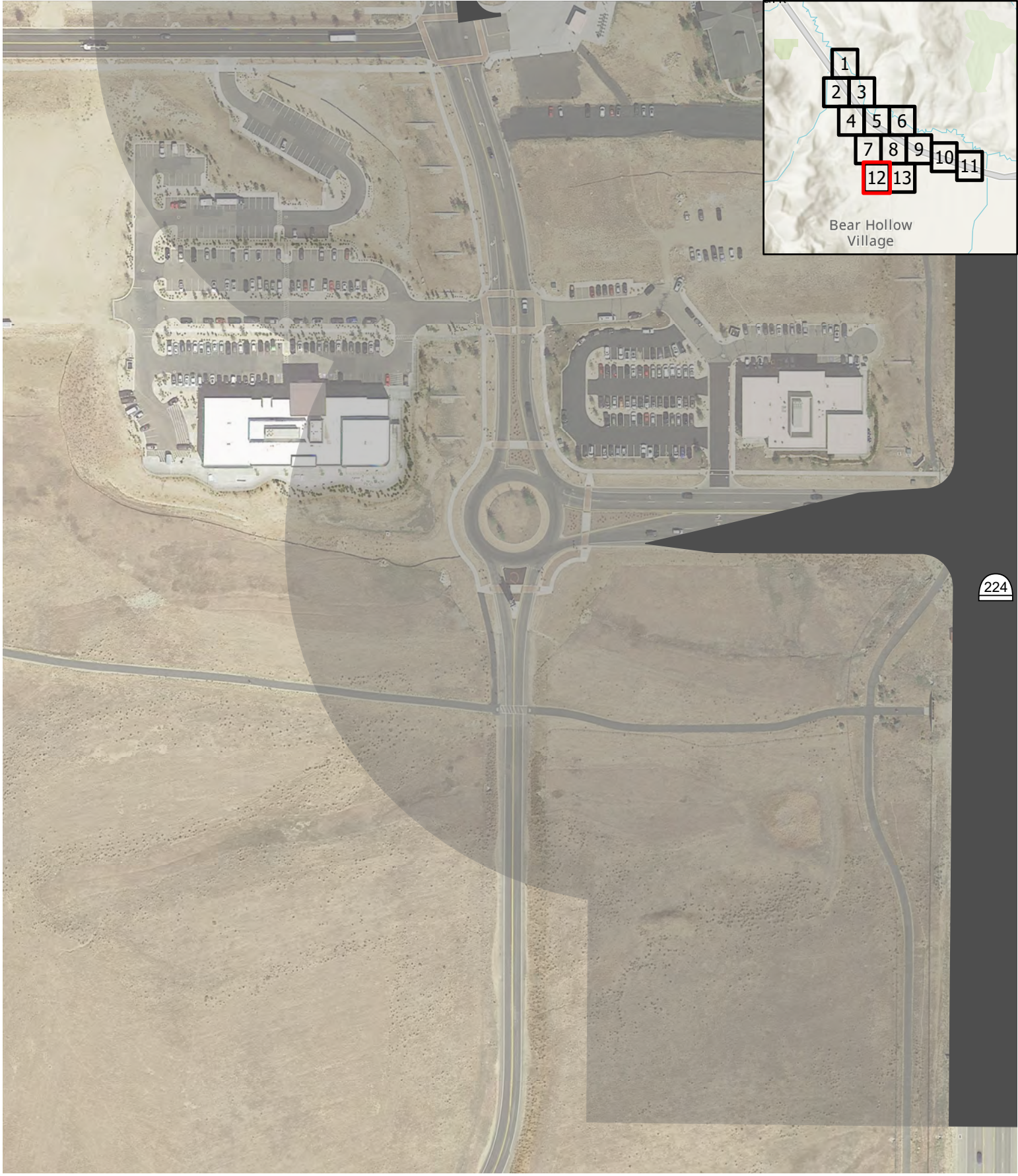
ALTERNATIVE C NOISE EVALUATION AREA

ALTERNATIVE C FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200



Alternative C Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE C NOISE EVALUATION AREA

ALTERNATIVE C FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

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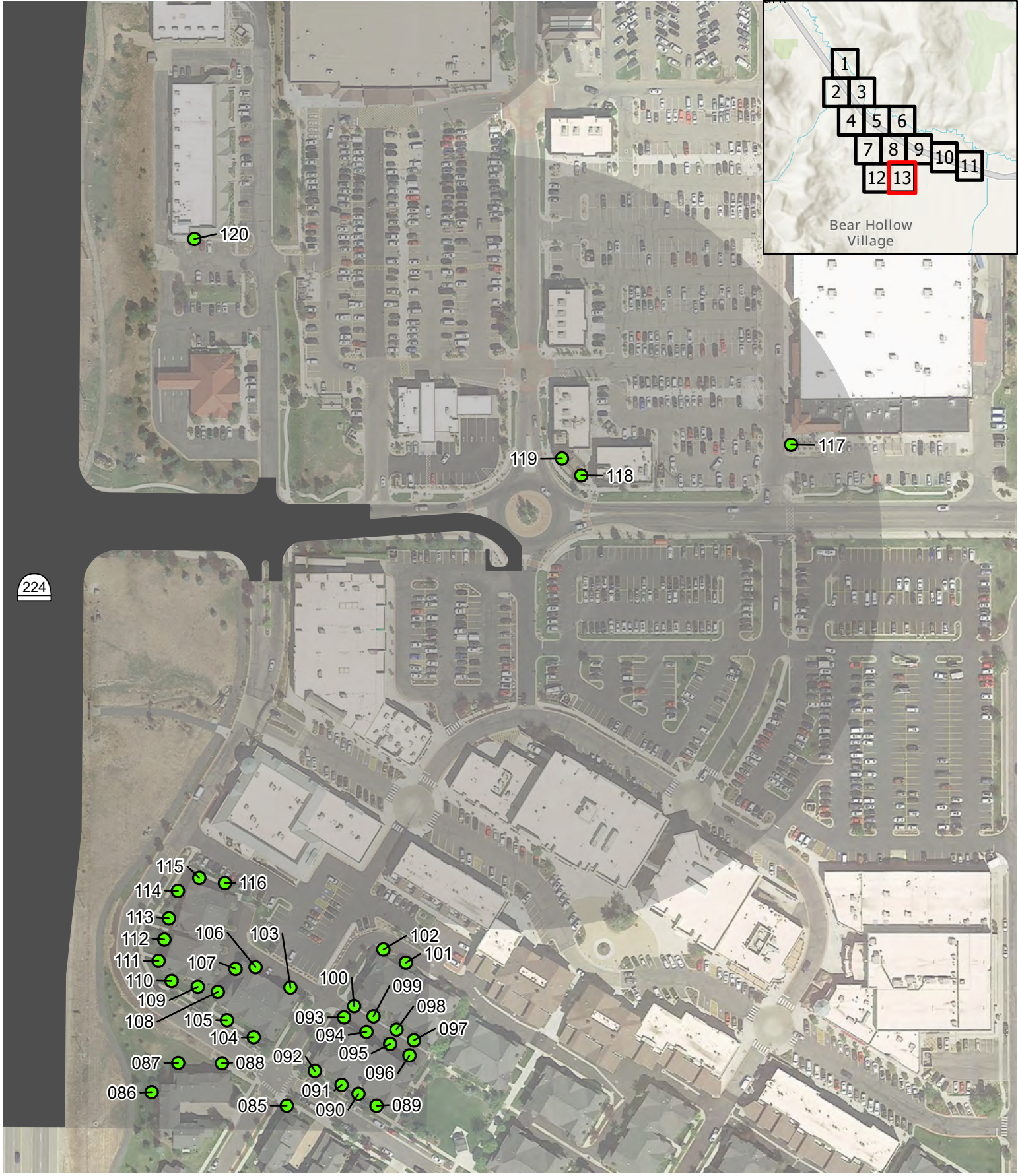

Alternative C Noise Levels

NOISE MONITORING LOCATIONS

NOISE RECEPTOR WITH VALUE ABOVE NAC

NOISE RECEPTOR WITH VALUE BELOW NAC

ALTERNATIVE C NOISE EVALUATION AREA

ALTERNATIVE C FOOTPRINT

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 200

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ATTACHMENT D

Noise Barrier Maps for Alternative A and Alternative C

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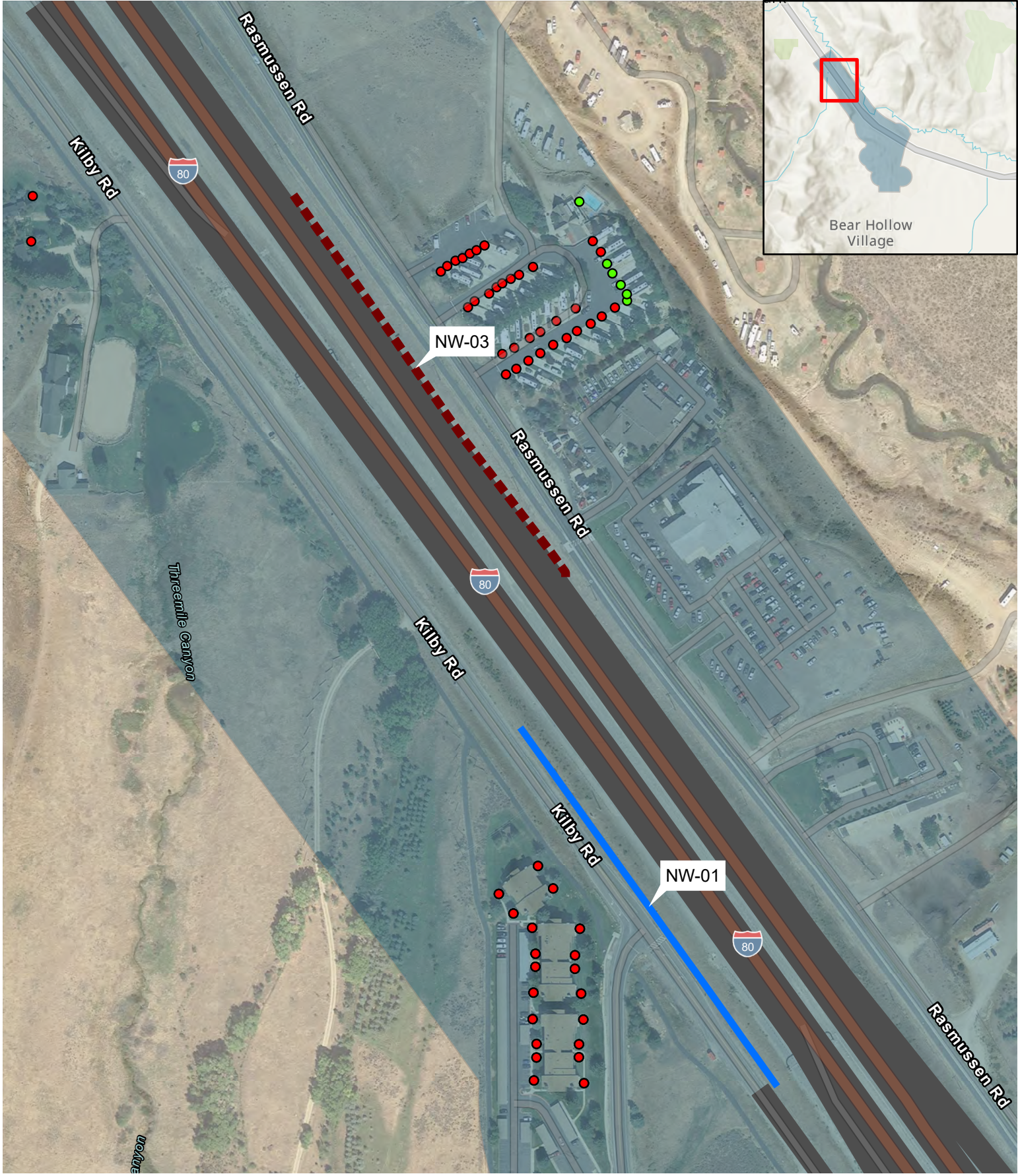


Alternative A Noise Barriers

- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- ALTERNATIVE A NOISE EVALUATION AREA
- ALTERNATIVE A FOOTPRINT

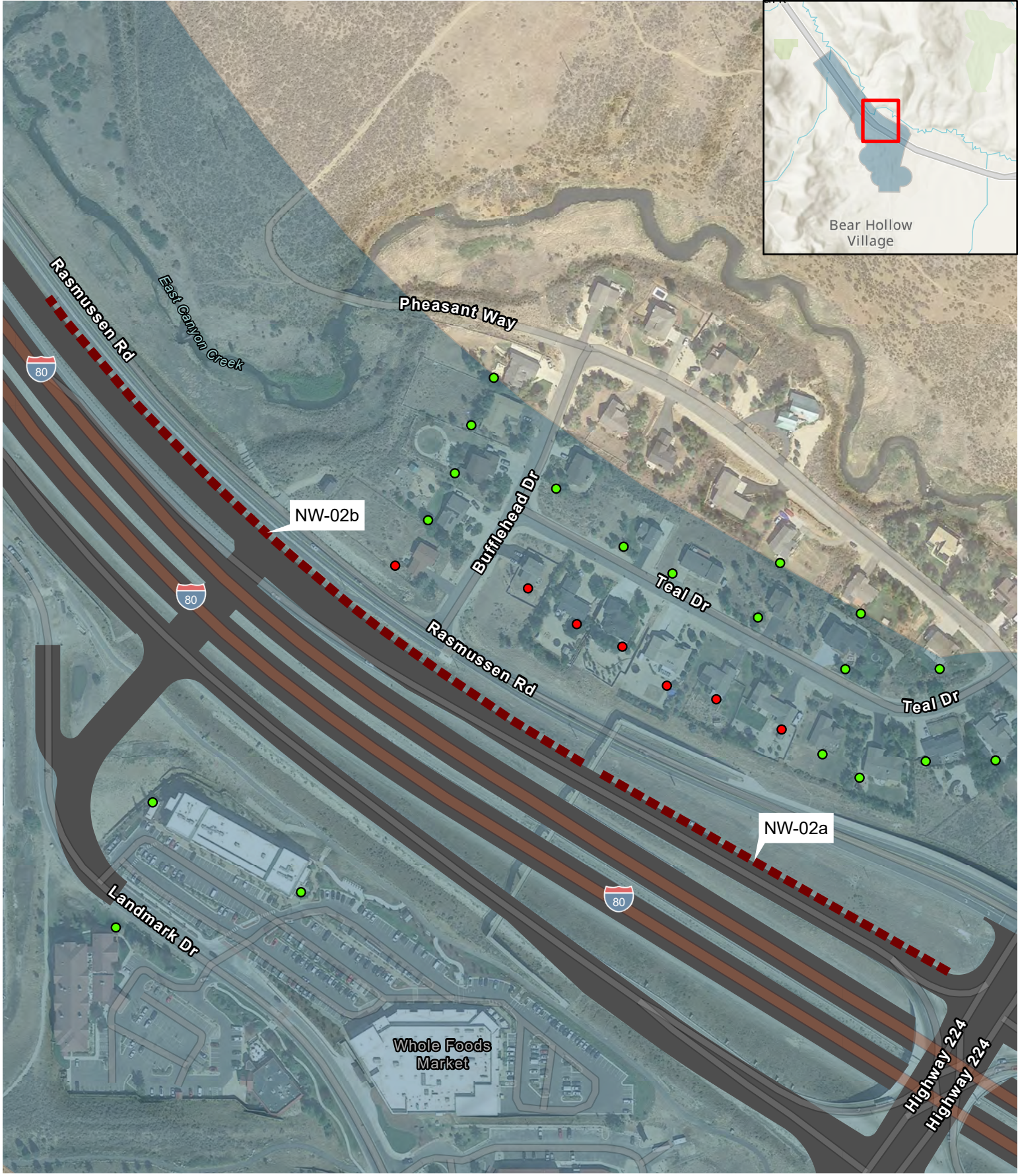
NOISE BARRIERS

- EVALUATED, NOT RECOMMENDED
- RECOMMENDED FOR BALLOTING

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

N

0 Feet 300



Alternative A Noise Barriers

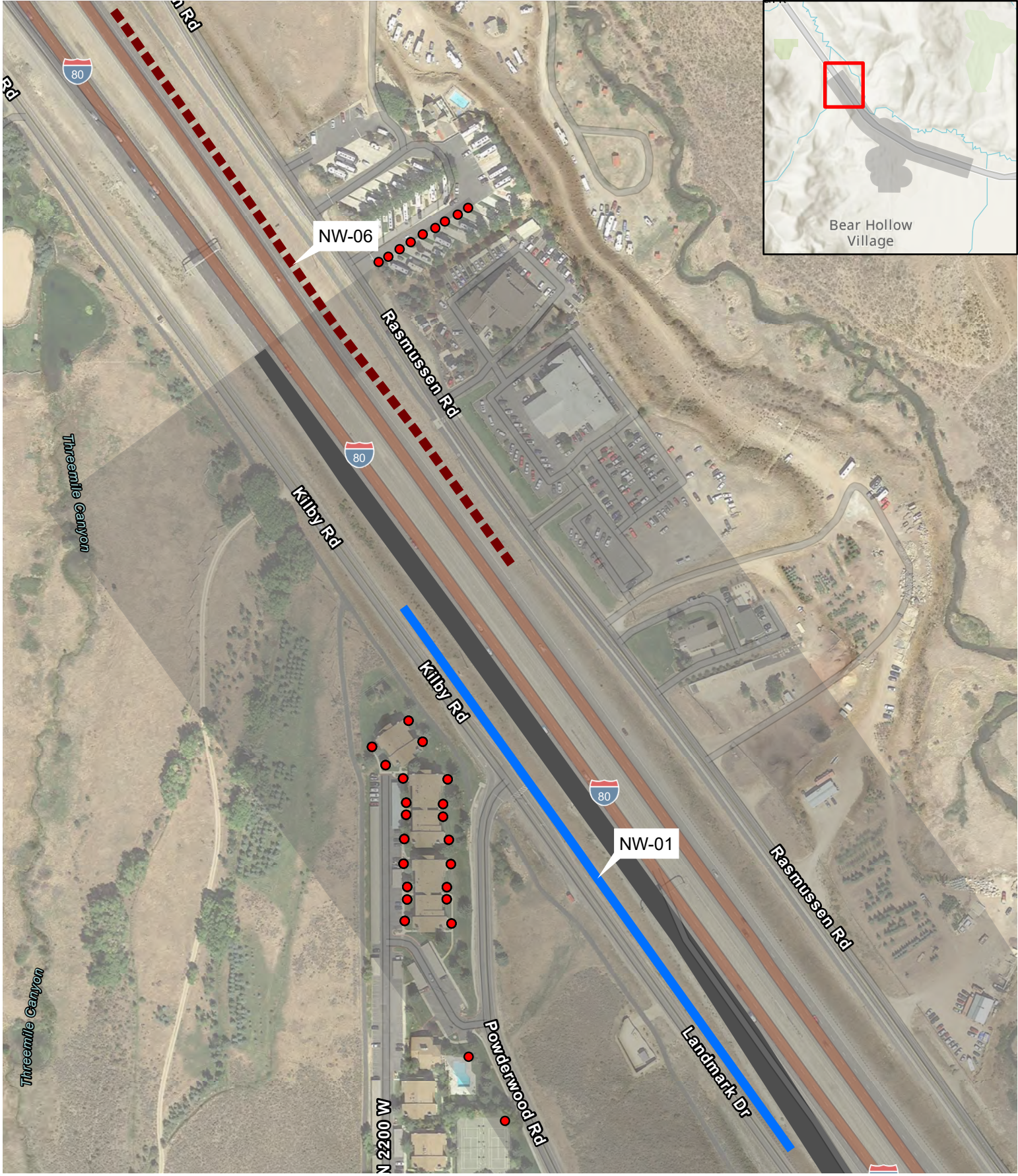
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- ALTERNATIVE A NOISE EVALUATION AREA
- ALTERNATIVE A FOOTPRINT

NOISE BARRIERS

- EVALUATED, NOT RECOMMENDED
- RECOMMENDED FOR BALLOTING

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

0 Feet 300



Alternative C Noise Barriers

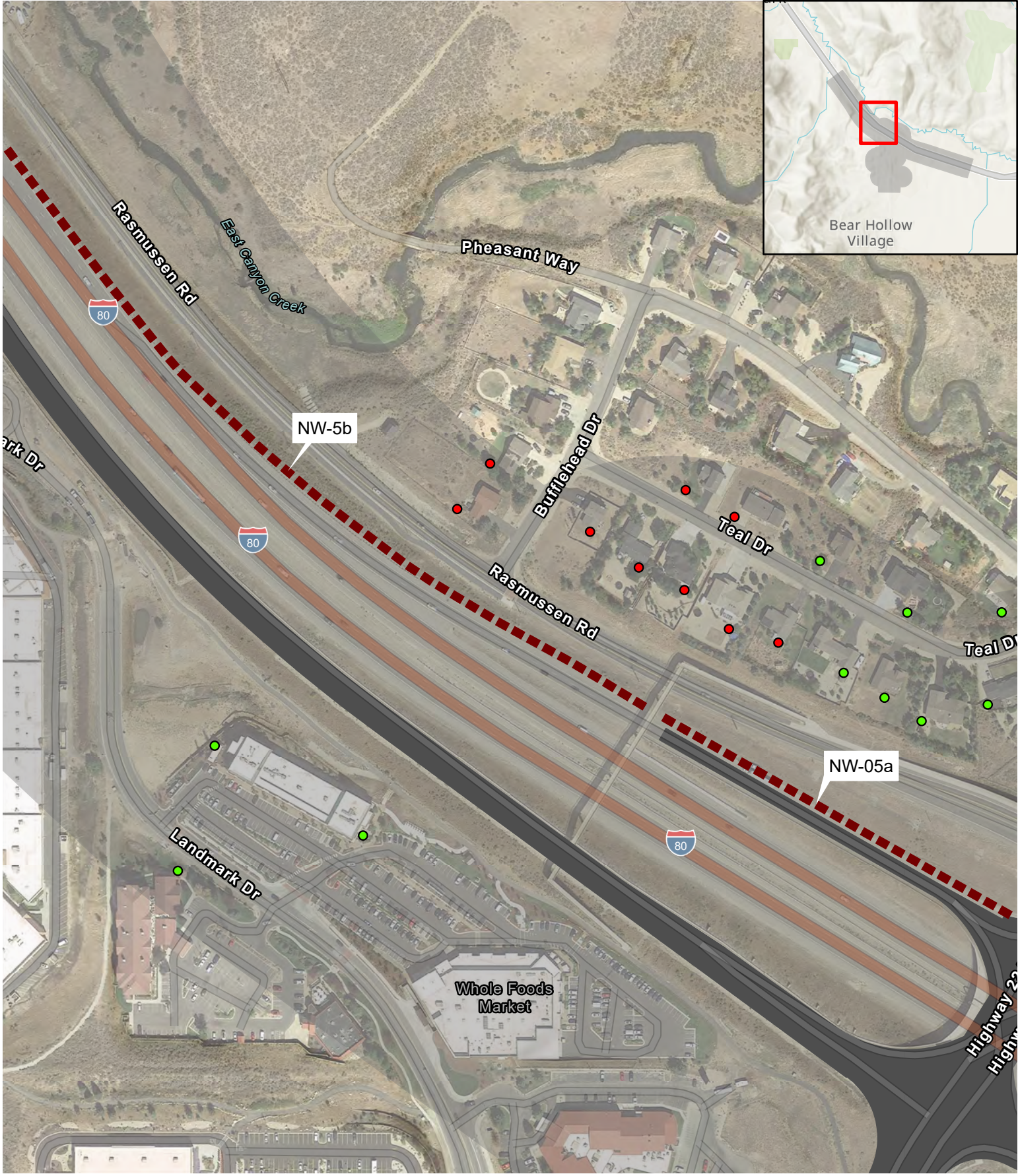
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- ALTERNATIVE C NOISE EVALUATION AREA
- ALTERNATIVE C FOOTPRINT

NOISE BARRIERS

- EVALUATED, NOT RECOMMENDED
- RECOMMENDED FOR BALLOTING

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

0 Feet 300



Alternative C Noise Barriers

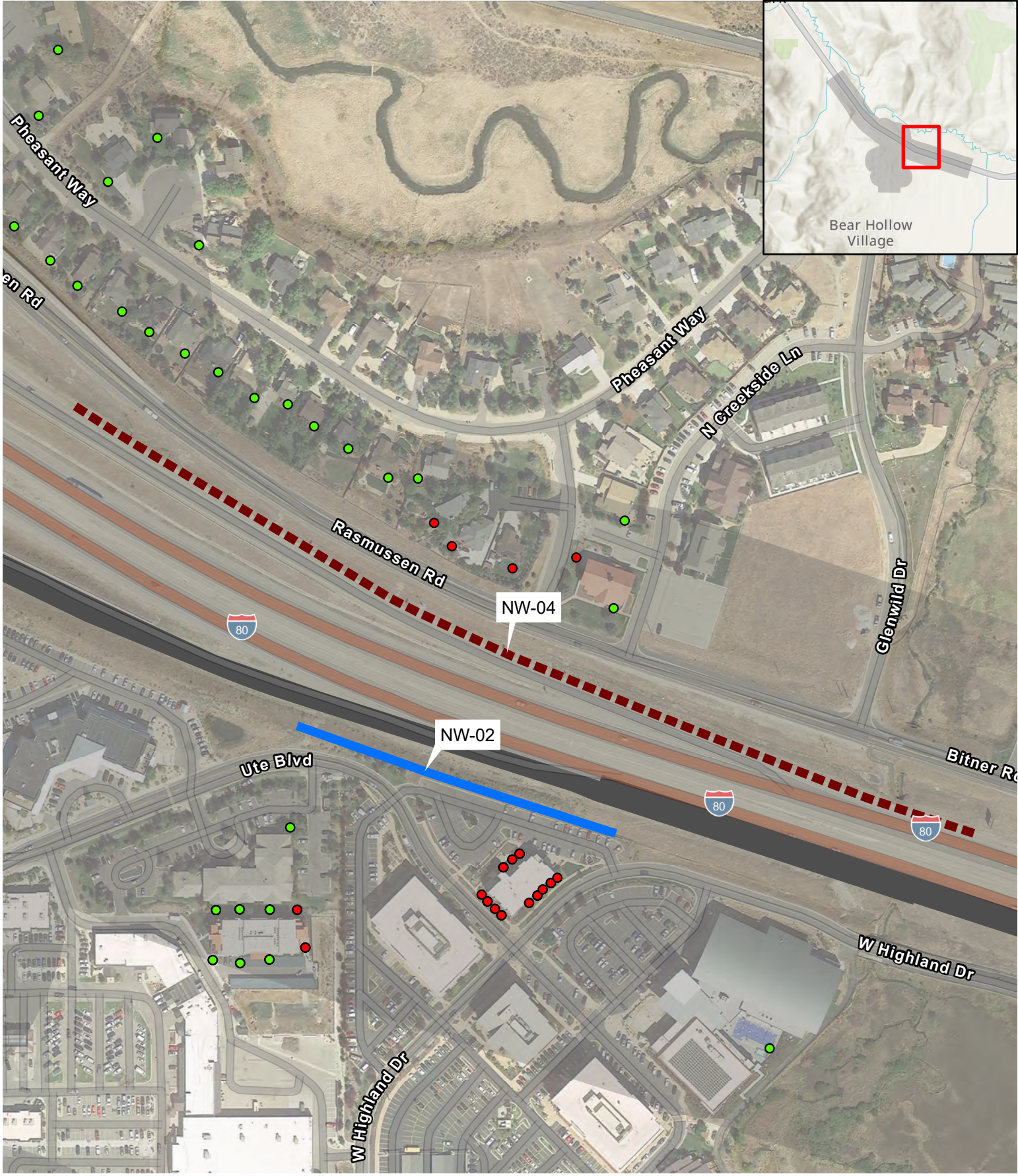
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- ALTERNATIVE C NOISE EVALUATION AREA
- ALTERNATIVE C FOOTPRINT

NOISE BARRIERS

- EVALUATED, NOT RECOMMENDED
- RECOMMENDED FOR BALLOTING

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

0 Feet 300



Alternative C Noise Barriers

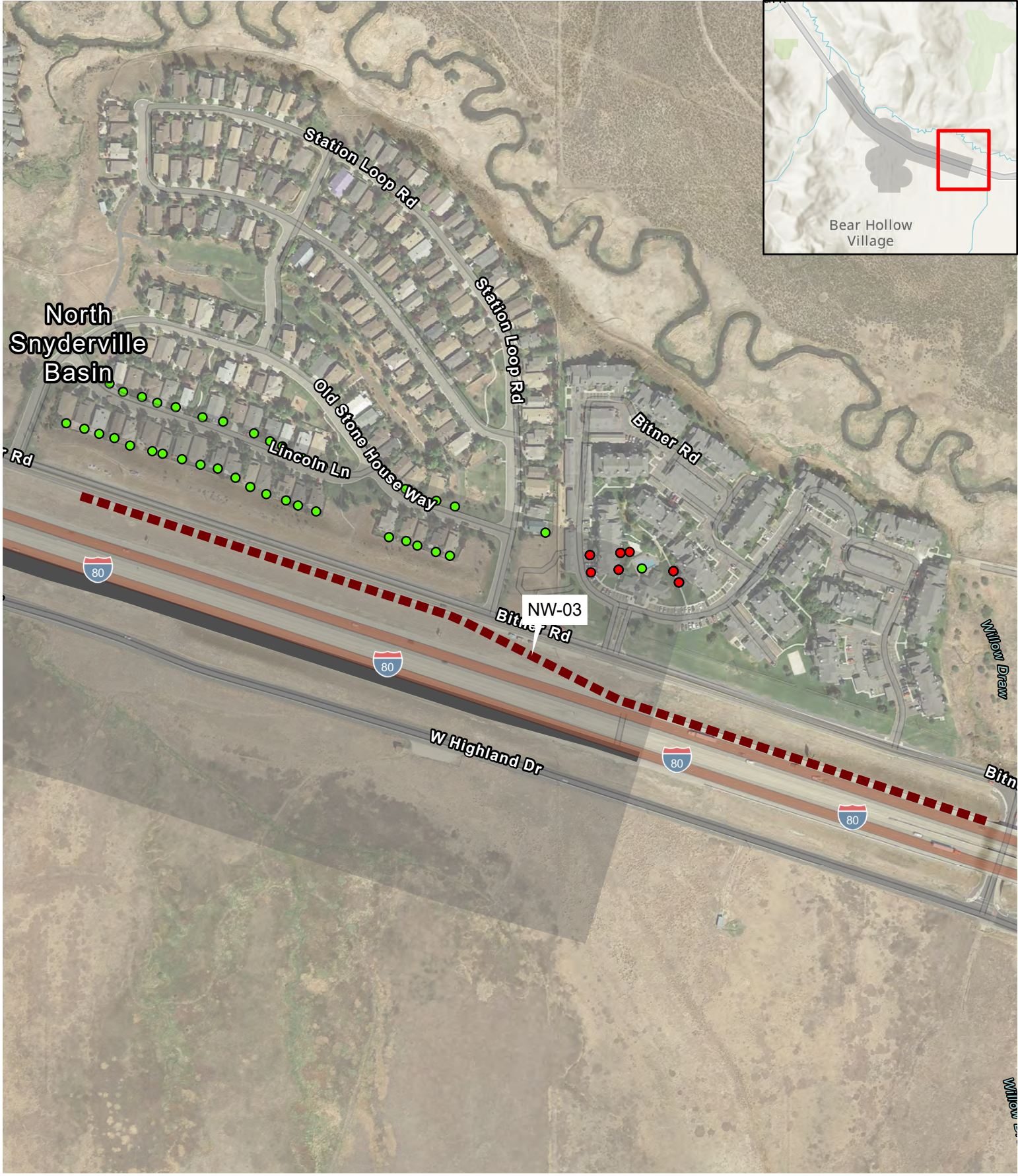
- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- ALTERNATIVE C NOISE EVALUATION AREA
- ALTERNATIVE C FOOTPRINT

NOISE BARRIERS

- EVALUATED, NOT RECOMMENDED
- RECOMMENDED FOR BALLOTING

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

0 Feet 300



Alternative C Noise Barriers

- NOISE RECEPTOR WITH VALUE ABOVE NAC
- NOISE RECEPTOR WITH VALUE BELOW NAC
- ALTERNATIVE C NOISE EVALUATION AREA
- ALTERNATIVE C FOOTPRINT

NOISE BARRIERS

- EVALUATED, NOT RECOMMENDED
- RECOMMENDED FOR BALLOTING

Kimball Junction ENVIRONMENTAL IMPACT STATEMENT

0 Feet 400

Kimball Junction
ENVIRONMENTAL IMPACT STATEMENT

ATTACHMENT E

Noise Barrier Analysis

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Alternative A

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Kimball Junction EIS - Alternative A - Noise Wall 1 (NW01) 3,275 feet length

Wall Height:	17 ft	16 ft	15 ft	14 ft	13 ft
Wall Length:	3,275 ft	3,275 ft	3,275 ft	3,275 ft	3,275 ft
Wall Cost per sq ft:	$20				
Cost of items critical to safety:					
# of First-Row Receivers:	8				

Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	17-ft Noise Level	17-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	16-ft Noise Level	16-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	15-ft Noise Level	15-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	14-ft Noise Level	14-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	13-ft Noise Level	13-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
001	1		Yes	1	68	61	7	Yes	Yes	Yes	Yes	61	7	Yes	Yes	Yes	Yes	61	7	Yes	Yes	Yes	Yes	62	6	Yes	No	Yes	No	62	6	Yes	No	Yes	No
002	1		Yes	1	69	60	9	Yes	Yes	Yes	Yes	61	8	Yes	Yes	Yes	Yes	61	8	Yes	Yes	Yes	Yes	61	8	Yes	Yes	Yes	Yes	62	7	Yes	Yes	Yes	Yes
003	1		Yes	1	74	65	9	Yes	Yes	Yes	Yes	66	8	Yes	Yes	Yes	Yes	66	8	Yes	Yes	Yes	Yes	67	7	Yes	Yes	Yes	Yes	67	7	Yes	Yes	Yes	Yes
004	1			0	75	69	6	Yes	No	No	No	70	5	Yes	No	No	No	70	5	Yes	No	No	No	71	4	No	No	No	No	72	3	No	No	No	No
005	1			0	75	73	2	No	No	No	No	73	2	No	No	No	No	74	1	No	No	No	No	74	1	No	No	No	No	74	1	No	No	No	No
006	1		Yes	1	74	65	9	Yes	Yes	Yes	Yes	66	8	Yes	Yes	Yes	Yes	66	8	Yes	Yes	Yes	Yes	67	7	Yes	Yes	Yes	Yes	68	6	Yes	No	Yes	No
007	1			0	75	69	6	Yes	No	No	No	70	5	Yes	No	No	No	71	4	No	No	No	No	72	3	No	No	No	No	72	3	No	No	No	No
008	1			0	75	73	2	No	No	No	No	73	2	No	No	No	No	74	1	No	No	No	No	74	1	No	No	No	No	74	1	No	No	No	No
009	1			0	64	59	5	Yes	No	No	No	60	4	No	No	No	No	60	4	No	No	No	No	60	4	No	No	No	No	61	3	No	No	No	No
010	1			0	65	61	4	No	No	No	No	62	3	No	No	No	No	62	3	No	No	No	No	63	2	No	No	No	No	63	2	No	No	No	No
011	1			0	67	65	2	No	No	No	No	65	2	No	No	No	No	65	2	No	No	No	No	65	2	No	No	No	No	65	2	No	No	No	No
012	1			0	61	58	3	No	No	No	No	58	3	No	No	No	No	58	3	No	No	No	No	59	2	No	No	No	No	59	2	No	No	No	No
013	1			0	62	60	2	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
014	1			0	67	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No
015	1			0	66	59	7	Yes	Yes	No	No	60	6	Yes	No	No	No	60	6	Yes	No	No	No	61	5	Yes	No	No	No	62	4	No	No	No	No
016	1			0	67	63	4	No	No	No	No	64	3	No	No	No	No	65	2	No	No	No	No	65	2	No	No	No	No	65	2	No	No	No	No
017	1			0	71	69	2	No	No	No	No	69	2	No	No	No	No	70	1	No	No	No	No	70	1	No	No	No	No	70	1	No	No	No	No
018	1		Yes	1	74	65	9	Yes	Yes	Yes	Yes	66	8	Yes	Yes	Yes	Yes	66	8	Yes	Yes	Yes	Yes	66	8	Yes	Yes	Yes	Yes	67	7	Yes	Yes	Yes	Yes
019	1			0	75	68	7	Yes	Yes	No	No	69	6	Yes	No	No	No	69	6	Yes	No	No	No	70	5	Yes	No	No	No	71	4	No	No	No	No
020	1			0	75	72	3	No	No	No	No	73	2	No	No	No	No	73	2	No	No	No	No	73	2	No	No	No	No	74	1	No	No	No	No
021	1			0	59	57	2	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No
022	1			0	62	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
023	1			0	70	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No	70	0	No	No	No	No
024	1		Yes	1	72	64	8	Yes	Yes	Yes	Yes	65	7	Yes	Yes	Yes	Yes	65	7	Yes	Yes	Yes	Yes	65	7	Yes	Yes	Yes	Yes	66	6	Yes	No	Yes	No
025	1			0	73	67	6	Yes	No	No	No	67	6	Yes	No	No	No	68	5	Yes	No	No	No	68	5	Yes	No	No	No	69	4	No	No	No	No
026	1			0	74	70	4	No	No	No	No	71	3	No	No	No	No	71	3	No	No	No	No	72	2	No	No	No	No	72	2	No	No	No	No
027	1		Yes	1	72	64	8	Yes	Yes	Yes	Yes	65	7	Yes	Yes	Yes	Yes	65	7	Yes	Yes	Yes	Yes	65	7	Yes	Yes	Yes	Yes	66	6	Yes	No	Yes	No
028	1			0	73	67	6	Yes	No	No	No	67	6	Yes	No	No	No	68	5	Yes	No	No	No	68	5	Yes	No	No	No	69	4	No	No	No	No
029	1			0	73	69	4	No	No	No	No	70	3	No	No	No	No	71	2	No	No	No	No	71	2	No	No	No	No	71	2	No	No	No	No
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034	1			0	62	60	2	No	No	No	No	60	2	No	No	No	No	60	2	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
035	1			0	69	68	1	No	No	No	No	68	1	No	No	No	No	68	1	No	No	No	No	68	1	No	No	No	No	68	1	No	No	No	No
036	1		Yes	1	71	65	6	Yes	No	Yes	No	65	6	Yes	No	Yes	No	65	6	Yes	No	Yes	No	66	5	Yes	No	Yes	No	66	5	Yes	No	Yes	No
037	1			0	73	67	6	Yes	No	No	No	67	6	Yes	No	No	No	68	5	Yes	No	No	No	68	5	Yes	No	No	No	69	4	No	No	No	No
038	1			0	73	69	4	No	No	No	No	70	3	No	No	No	No	70	3	No	No	No	No	71	2	No	No	No	No	71	2	No	No	No	No
039	1			0	72	66	6	Yes	No	No	No	66	6	Yes	No	No	No	67	5	Yes	No	No	No	67	5	Yes	No	No	No	68	4	No	No	No	No
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Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	17-ft Noise Level	17-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	16-ft Noise Level	16-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	15-ft Noise Level	15-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	14-ft Noise Level	14-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	13-ft Noise Level	13-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
068	1			0	62	58	4	No	No	No	No	58	4	No	No	No	No	58	4	No	No	No	No	59	3	No	No	No	No	59	3	No	No	No	No
069	1			0	66	63	3	No	No	No	No	63	3	No	No	No	No	64	2	No	No	No	No	64	2	No	No	No	No	64	2	No	No	No	No
070	1			0	68	65	3	No	No	No	No	65	3	No	No	No	No	66	2	No	No	No	No	66	2	No	No	No	No	66	2	No	No	No	No
071	1			0	62	58	4	No	No	No	No	59	3	No	No	No	No	59	3	No	No	No	No	59	3	No	No	No	No	60	2	No	No	No	No
072	1			0	66	63	3	No	No	No	No	64	2	No	No	No	No	64	2	No	No	No	No	64	2	No	No	No	No	64	2	No	No	No	No
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074	1			0	60	58	2	No	No	No	No	58	2	No	No	No	No	58	2	No	No	No	No	58	2	No	No	No	No	59	1	No	No	No	No
075	1			0	66	63	3	No	No	No	No	64	2	No	No	No	No	64	2	No	No	No	No	64	2	No	No	No	No	64	2	No	No	No	No
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Feasibility Factors:																																			
# of First-Row >=5 dBA Reduction:								8						8						8						8						8			
% of First-Row >=5 dBA Reduction:								100%						100%						100%						100%						100%			
Acoustic Feasibility (>=5 dBA reduction for >=50% of front-row):								Yes						Yes						Yes						Yes						Yes			
Reasonableness Factors:																																			
# of First-Row Design Goal >=7 dBA Reduction:								7						7						7						6						3			
% of First-Row Design Goal >=7 dBA Reduction:								88%						88%						88%						75%						38%			
Noise Abatement Design Goal (>=7dBA reduction for >=35% of front-row):								Yes						Yes						Yes						Yes						Yes			
# of Benefited:								23						21						18						16						8			
Cost of Noise Wall (Length x Height x $20 per sq ft):								$1,113,500						$1,048,000						$982,500						$917,000						$851,500			
Cost of any other items critical to safety:								0						0						0						0						0			
Anticipated Cost of Noise Abatement:								$1,113,500						$1,048,000						$982,500						$917,000						$851,500			
Allowable Cost ($30,000 per benefited receptor):								$690,000						$630,000						$540,000						$480,000						$240,000			
Cost Effective (Anticipated Cost < Allowable Cost):								No						No						No						No						No			
Feasible and Reasonable:								No						No						No						No						No			

Kimball Junction EIS -Alternative A Noise Wall 1 (NW01) 800 foot length

Wall Height:	17 ft	16 ft	15 ft	14 ft
Wall Length:	800 ft	800 ft	800 ft	800 ft
Wall Cost per sq ft:	$20			
Cost of items critical to safety:				
# of First-Row Receivers:	8			

Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	17-ft Noise Level	17-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	16-ft Noise Level	16-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	15-ft Noise Level	15-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	14-ft Noise Level	14-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
001	1		Yes	1	68	69	-1	No	No	No	No	69	-1	No	No	No	No	69	-1	No	No	No	No	69	-1	No	No	No	No
002	1		Yes	1	69	69	0	No	No	No	No	69	0	No	No	No	No	69	0	No	No	No	No	69	0	No	No	No	No
003	1		Yes	1	74	66	8	Yes	Yes	Yes	Yes	66	8	Yes	Yes	Yes	Yes	67	7	Yes	Yes	Yes	Yes	67	7	Yes	Yes	Yes	Yes
004	1			0	75	70	5	Yes	No	No	No	70	5	Yes	No	No	No	71	4	No	No	No	No	72	3	No	No	No	No
005	1			0	75	73	2	No	No	No	No	74	1	No	No	No	No	74	1	No	No	No	No	74	1	No	No	No	No
006	1		Yes	1	74	66	8	Yes	Yes	Yes	Yes	67	7	Yes	Yes	Yes	Yes	67	7	Yes	Yes	Yes	Yes	67	7	Yes	Yes	Yes	Yes
007	1			0	75	70	5	Yes	No	No	No	70	5	Yes	No	No	No	71	4	No	No	No	No	72	3	No	No	No	No
008	1			0	75	73	2	No	No	No	No	74	1	No	No	No	No	74	1	No	No	No	No	74	1	No	No	No	No
009	1			0	64	64	0	No	No	No	No	64	0	No	No	No	No	64	0	No	No	No	No	64	0	No	No	No	No
010	1			0	65	65	0	No	No	No	No	65	0	No	No	No	No	65	0	No	No	No	No	65	0	No	No	No	No
011	1			0	67	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No
012	1			0	61	58	3	No	No	No	No	58	3	No	No	No	No	59	2	No	No	No	No	59	2	No	No	No	No
013	1			0	62	60	2	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
014	1			0	67	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No
015	1			0	66	59	7	Yes	Yes	No	No	60	6	Yes	No	No	No	60	6	Yes	No	No	No	61	5	Yes	No	No	No
016	1			0	67	63	4	No	No	No	No	64	3	No	No	No	No	65	2	No	No	No	No	65	2	No	No	No	No
017	1			0	71	69	2	No	No	No	No	70	1	No	No	No	No	70	1	No	No	No	No	70	1	No	No	No	No
018	1		Yes	1	74	66	8	Yes	Yes	Yes	Yes	66	8	Yes	Yes	Yes	Yes	66	8	Yes	Yes	Yes	Yes	67	7	Yes	Yes	Yes	Yes
019	1			0	75	69	6	Yes	No	No	No	69	6	Yes	No	No	No	70	5	Yes	No	No	No	71	4	No	No	No	No
020	1			0	75	73	2	No	No	No	No	73	2	No	No	No	No	73	2	No	No	No	No	74	1	No	No	No	No
021	1			0	59	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No
022	1			0	62	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
023	1			0	70	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No
024	1		Yes	1	72	65	7	Yes	Yes	Yes	Yes	65	7	Yes	Yes	Yes	Yes	66	6	Yes	No	Yes	No	66	6	Yes	No	Yes	No
025	1			0	73	67	6	Yes	No	No	No	68	5	Yes	No	No	No	68	5	Yes	No	No	No	69	4	No	No	No	No
026	1			0	74	70	4	No	No	No	No	71	3	No	No	No	No	71	3	No	No	No	No	72	2	No	No	No	No
027	1		Yes	1	72	65	7	Yes	Yes	Yes	Yes	65	7	Yes	Yes	Yes	Yes	66	6	Yes	No	Yes	No	66	6	Yes	No	Yes	No
028	1			0	73	67	6	Yes	No	No	No	68	5	Yes	No	No	No	68	5	Yes	No	No	No	68	5	Yes	No	No	No
029	1			0	73	70	3	No	No	No	No	70	3	No	No	No	No	71	2	No	No	No	No	71	2	No	No	No	No
030	1			0	59	59	0	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No
031	1			0	62	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	62	0	No	No	No	No
032	1			0	70	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No
033	1			0	60	59	1	No	No	No	No	59	1	No	No	No	No	59	1	No	No	No	No	59	1	No	No	No	No
034	1			0	62	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
035	1			0	69	68	1	No	No	No	No	68	1	No	No	No	No	68	1	No	No	No	No	68	1	No	No	No	No
036	1		Yes	1	71	66	5	Yes	No	Yes	No	66	5	Yes	No	Yes	No	66	5	Yes	No	Yes	No	66	5	Yes	No	Yes	No
037	1			0	73	67	6	Yes	No	No	No	68	5	Yes	No	No	No	68	5	Yes	No	No	No	68	5	Yes	No	No	No
038	1			0	73	69	4	No	No	No	No	70	3	No	No	No	No	71	2	No	No	No	No	71	2	No	No	No	No
039	1			0	72	67	5	Yes	No	No	No	67	5	Yes	No	No	No	67	5	Yes	No	No	No	68	4	No	No	No	No
040	1			0	72	68	4	No	No	No	No	69	3	No	No	No	No	69	3	No	No	No	No	70	2	No	No	No	No
041	1			0	73	71	2	No	No	No	No	71	2	No	No	No	No	71	2	No	No	No	No	71	2	No	No	No	No
042	1			0	59	59	0	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No
043	1			0	61	61	0	No	No	No	No	61	0	No	No	No	No	61	0	No	No	No	No	61	0	No	No	No	No
044	1			0	66	66	0	No	No	No	No	66	0	No	No	No	No	66	0	No	No	No	No	66	0	No	No	No	No
045	1			0	59	59	0	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No
046	1			0	61	61	0	No	No	No	No	61	0	No	No	No	No	61	0	No	No	No	No	61	0	No	No	No	No
047	1			0	67	67	0	No	No	No	No	67	0	No	No	No	No	67	0	No	No	No	No	67	0	No	No	No	No
048	1			0	71	66	5	Yes	No	No	No	66	5	Yes	No	No	No	67	4	No	No	No	No	67	4	No	No	No	No
049	1			0	72	68	4	No	No	No	No	68	4	No	No	No	No	68	4	No	No	No	No	69	3	No	No	No	No
050	1			0	72	69	3	No	No	No	No	70	2	No	No	No	No	70	2	No	No	No	No	70	2	No	No	No	No
051	1			0	70	66	4	No	No	No	No	66	4	No	No	No	No	66	4	No	No	No	No	67	3	No	No	No	No
052	1			0	71	67	4	No	No	No	No	68	3	No	No	No	No	68	3	No	No	No	No	68	3	No	No	No	No
053	1			0	72	69	3	No	No	No	No	69	3	No	No	No	No	70	2	No	No	No	No	70	2	No	No	No	No
054	1			0	59	59	0	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No
055	1			0	61	61	0	No	No	No	No	61	0	No	No	No	No	61	0	No	No	No	No	61	0	No	No	No	No
056	1			0	68	67	1	No	No	No	No	67	1	No	No	No	No	67	1	No	No	No	No	67	1	No	No	No	No

Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	17-ft Noise Level	17-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	16-ft Noise Level	16-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	15-ft Noise Level	15-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	14-ft Noise Level	14-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
057	1			0	59	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No
058	1			0	61	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No
059	1			0	66	65	1	No	No	No	No	66	0	No	No	No	No	66	0	No	No	No	No	66	0	No	No	No	No
060	1			0	70	66	4	No	No	No	No	66	4	No	No	No	No	66	4	No	No	No	No	66	4	No	No	No	No
061	1			0	71	67	4	No	No	No	No	68	3	No	No	No	No	68	3	No	No	No	No	68	3	No	No	No	No
062	1			0	72	69	3	No	No	No	No	69	3	No	No	No	No	69	3	No	No	No	No	70	2	No	No	No	No
063	1			0	67	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No
064	1			0	67	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No
065	1			0	64	61	3	No	No	No	No	62	2	No	No	No	No	62	2	No	No	No	No	62	2	No	No	No	No
066	1			0	67	65	2	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No
067	1			0	69	67	2	No	No	No	No	68	1	No	No	No	No	68	1	No	No	No	No	68	1	No	No	No	No
068	1			0	62	59	3	No	No	No	No	59	3	No	No	No	No	59	3	No	No	No	No	59	3	No	No	No	No
069	1			0	66	64	2	No	No	No	No	65	1	No	No	No	No	65	1	No	No	No	No	65	1	No	No	No	No
070	1			0	68	67	1	No	No	No	No	67	1	No	No	No	No	67	1	No	No	No	No	67	1	No	No	No	No
071	1			0	62	59	3	No	No	No	No	60	2	No	No	No	No	60	2	No	No	No	No	60	2	No	No	No	No
072	1			0	66	65	1	No	No	No	No	65	1	No	No	No	No	65	1	No	No	No	No	65	1	No	No	No	No
073	1			0	68	67	1	No	No	No	No	67	1	No	No	No	No	67	1	No	No	No	No	67	1	No	No	No	No
074	1			0	60	58	2	No	No	No	No	59	1	No	No	No	No	59	1	No	No	No	No	59	1	No	No	No	No
075	1			0	66	64	2	No	No	No	No	65	1	No	No	No	No	65	1	No	No	No	No	65	1	No	No	No	No
076	1			0	68	67	1	No	No	No	No	67	1	No	No	No	No	67	1	No	No	No	No	67	1	No	No	No	No
077	1			0	62	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
078	1			0	67	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No
079	1			0	69	68	1	No	No	No	No	68	1	No	No	No	No	68	1	No	No	No	No	68	1	No	No	No	No

Feasibility Factors:				
# of First-Row >=5 dBA Reduction:	6	6	6	6
% of First-Row >=5 dBA Reduction:	75%	75%	75%	75%
Acoustic Feasibility (>=5 dBA reduction for >=50% of front-row):	Yes	Yes	Yes	Yes
Reasonableness Factors:				
# of First-Row Design Goal >=7 dBA Reduction:	5	5	3	3
% of First-Row Design Goal >=7 dBA Reduction:	63%	63%	38%	38%
Noise Abatement Design Goal (>=7dBA reduction for >=35% of front-row):	Yes	Yes	Yes	Yes
# of Benefited:	15	15	12	9
Cost of Noise Wall (Length x Height x $20 per sq ft):	$272,000	$256,000	$240,000	$224,000
Cost of any other items critical to safety:	0	0	0	0
Anticipated Cost of Noise Abatement:	$272,000	$256,000	$240,000	$224,000
Allowable Cost ($30,000 per benefited receptor):	$450,000	$450,000	$360,000	$270,000
Cost Effective (Anticipated Cost < Allowable Cost):	Yes	Yes	Yes	Yes
Feasible and Reasonable:	Yes	Yes	Yes	Yes
Cost per Benefitted Receptor (CPBR):	**$18,133.33**	**$17,066.67**	**$20,000**	**$24,888.89**

Kimball Junction EIS -Alternative A - Noise Wall 2 (NW02a and NW02b)

Wall Height:		18 ft
Wall Length:		2,031 ft
Wall Cost per sq ft:	$20	
Cost of items critical to safety:		
# of First-Row Receivers:	11	

Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	18-ft Noise Level	18-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
251	1		Yes	1	58	57	1	No	No	No	No
252	1			0	56	55	1	No	No	No	No
253	1		Yes	1	57	55	2	No	No	No	No
254	1		Yes	1	63	60	3	No	No	No	No
255	1		Yes	1	63	60	3	No	No	No	No
256	1		Yes	1	66	61	5	Yes	No	Yes	No
257	1		Yes	1	68	62	6	Yes	No	Yes	No
258	1		Yes	1	69	63	6	Yes	No	Yes	No
259	1		Yes	1	68	62	6	Yes	No	Yes	No
260	1		Yes	1	68	60	8	Yes	Yes	Yes	Yes
261	1		Yes	1	66	60	6	Yes	No	Yes	No
262	1			0	63	57	6	Yes	No	No	No
263	1			0	64	58	6	Yes	No	No	No
264	1			0	63	59	4	No	No	No	No
265	1			0	62	58	4	No	No	No	No
266	1			0	59	57	2	No	No	No	No
267	1			0	54	53	1	No	No	No	No
268	1			0	55	54	1	No	No	No	No
269	1			0	55	53	2	No	No	No	No
277	1			0	54	53	1	No	No	No	No
278	1			0	61	59	2	No	No	No	No
279	1			0	62	59	3	No	No	No	No
280	1			0	64	60	4	No	No	No	No
281	1			0	65	61	4	No	No	No	No
282	1		Yes	1	67	64	3	No	No	No	No

Feasibility Factors:	
# of First-Row >=5 dBA Reduction:	6
% of First-Row >=5 dBA Reduction:	55%
Acoustic Feasibility (>=5 dBA reduction for >=50% of front-row):	Yes
Reasonableness Factors:	
# of First-Row Design Goal >=7 dBA Reduction:	1
% of First-Row Design Goal >=7 dBA Reduction:	9%
Noise Abatement Design Goal (>=7dBA reduction for >=35% of front-row):	No
# of Benefited:	8
Cost of Noise Wall (Length x Height x $20 per sq ft):	$731,160
Cost of any other items critical to safety:	0
Anticipated Cost of Noise Abatement:	$731,160
Allowable Cost ($30,000 per benefited receptor):	$240,000
Cost Effective (Anticipated Cost < Allowable Cost):	No
Feasible and Reasonable:	No

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Kimball Junction EIS - Alternative A- Noise Wall 3 (NW03)

Per UDOT policy: [B] Allowable Cost of NAC C/D portion of barrier is determined per Linear Foot and Allowable Cost for non-NAC C/D area is determined per Benefited Receptor)

[C] Benefited Receptors in "Per Linear Foot" Allowable Cost Portion are NOT also included as "Benefited Receptors" in the "Per Benefited Receptors" Allowable Cost Calculation (no double-counting)

Wall Height:	17 ft	16 ft	15 ft	14 ft	13 ft	12 ft	11 ft
Wall Length (per Benefited Receptors Allowable Cost Portion):	1,587 ft	1,587 ft	1,587 ft	1,587 ft	1,587 ft	1,587 ft	1,587 ft
Wall Length (per Linear Foot Allowable Cost Portion):	450 ft	450 ft	450 ft	450 ft	450 ft	450 ft	450 ft
Total Wall Length:	2,037 ft	2,037 ft	2,037 ft	2,037 ft	2,037 ft	2,037 ft	2,037 ft

Wall Cost per sq ft: $20

Cost of items critical to safety:

# of First-Row Receivers: 4

Name	Per Linear Foot Eligible?	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	17-ft Noise Level	17-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
283	Yes	1		Yes	1	74	66	8	Yes	Yes	Yes	Yes
284	Yes	1			0	73	64	9	Yes	Yes	No	No
285	Yes	1			0	72	63	9	Yes	Yes	No	No
286	Yes	1			0	71	63	8	Yes	Yes	No	No
287	Yes	1			0	70	62	8	Yes	Yes	No	No
288	Yes	1			0	69	61	8	Yes	Yes	No	No
289	Yes	1			0	68	61	7	Yes	Yes	No	No
290	Yes	1			0	68	60	8	Yes	Yes	No	No
291	Yes	1			0	67	60	7	Yes	Yes	No	No
292	Yes	1			0	66	60	6	Yes	No	No	No
293	Yes	1			0	65	59	6	Yes	No	No	No
294	Yes	1			0	65	60	5	Yes	No	No	No
295	Yes	1			0	65	59	6	Yes	No	No	No
296	Yes	1			0	65	60	5	Yes	No	No	No
297	Yes	1			0	65	60	5	Yes	No	No	No
298	Yes	1			0	66	60	6	Yes	No	No	No
299	Yes	1			0	66	60	6	Yes	No	No	No
300	Yes	1			0	68	61	7	Yes	Yes	No	No
301	Yes	1			0	69	61	8	Yes	Yes	No	No
302	Yes	1			0	70	62	8	Yes	Yes	No	No
303	Yes	1			0	71	63	8	Yes	Yes	No	No
304	Yes	1			0	72	63	9	Yes	Yes	No	No
305	Yes	1		Yes	1	73	65	8	Yes	Yes	Yes	Yes
306	Yes	1		Yes	1	73	65	8	Yes	Yes	Yes	Yes
307	Yes	1			0	72	64	8	Yes	Yes	No	No
308	Yes	1			0	71	63	8	Yes	Yes	No	No
309	Yes	1			0	70	63	7	Yes	Yes	No	No
310	Yes	1			0	70	62	8	Yes	Yes	No	No
311	Yes	1			0	69	62	7	Yes	Yes	No	No
312	Yes	1			0	69	62	7	Yes	Yes	No	No
313	Yes	1			0	68	61	7	Yes	Yes	No	No
314	Yes	1		Yes	1	73	65	8	Yes	Yes	Yes	Yes
315	Yes	1			0	72	64	8	Yes	Yes	No	No
316	Yes	1			0	72	64	8	Yes	Yes	No	No
317	Yes	1			0	71	63	8	Yes	Yes	No	No
318	Yes	1			0	71	63	8	Yes	Yes	No	No
319	Yes	1			0	70	63	7	Yes	Yes	No	No
320	Yes	1			0	70	62	8	Yes	Yes	No	No
321	Yes	1			0	64	59	5	Yes	No	No	No

Name	16-ft Noise Level	16-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	15-ft Noise Level	15-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
283	66	8	Yes	Yes	Yes	Yes	66	8	Yes	Yes	Yes	Yes
284	64	9	Yes	Yes	No	No	65	8	Yes	Yes	No	No
285	63	9	Yes	Yes	No	No	64	8	Yes	Yes	No	No
286	63	8	Yes	Yes	No	No	63	8	Yes	Yes	No	No
287	62	8	Yes	Yes	No	No	62	8	Yes	Yes	No	No
288	61	8	Yes	Yes	No	No	62	7	Yes	Yes	No	No
289	61	7	Yes	Yes	No	No	61	7	Yes	Yes	No	No
290	61	7	Yes	Yes	No	No	61	7	Yes	Yes	No	No
291	60	7	Yes	Yes	No	No	60	7	Yes	Yes	No	No
292	60	6	Yes	No	No	No	60	6	Yes	No	No	No
293	60	5	Yes	No	No	No	60	5	Yes	No	No	No
294	60	5	Yes	No	No	No	60	5	Yes	No	No	No
295	60	5	Yes	No	No	No	60	5	Yes	No	No	No
296	60	5	Yes	No	No	No	60	5	Yes	No	No	No
297	60	5	Yes	No	No	No	60	5	Yes	No	No	No
298	60	6	Yes	No	No	No	60	6	Yes	No	No	No
299	60	6	Yes	No	No	No	61	5	Yes	No	No	No
300	61	7	Yes	Yes	No	No	61	7	Yes	Yes	No	No
301	61	8	Yes	Yes	No	No	62	7	Yes	Yes	No	No
302	62	8	Yes	Yes	No	No	63	7	Yes	Yes	No	No
303	63	8	Yes	Yes	No	No	63	8	Yes	Yes	No	No
304	64	8	Yes	Yes	No	No	64	8	Yes	Yes	No	No
305	65	8	Yes	Yes	Yes	Yes	65	8	Yes	Yes	Yes	Yes
306	65	8	Yes	Yes	Yes	Yes	65	8	Yes	Yes	Yes	Yes
307	64	8	Yes	Yes	No	No	64	8	Yes	Yes	No	No
308	63	8	Yes	Yes	No	No	63	8	Yes	Yes	No	No
309	63	7	Yes	Yes	No	No	63	7	Yes	Yes	No	No
310	63	7	Yes	Yes	No	No	63	7	Yes	Yes	No	No
311	62	7	Yes	Yes	No	No	62	7	Yes	Yes	No	No
312	62	7	Yes	Yes	No	No	62	7	Yes	Yes	No	No
313	61	7	Yes	Yes	No	No	62	6	Yes	No	No	No
314	65	8	Yes	Yes	Yes	Yes	65	8	Yes	Yes	Yes	Yes
315	64	8	Yes	Yes	No	No	65	7	Yes	Yes	No	No
316	64	8	Yes	Yes	No	No	64	8	Yes	Yes	No	No
317	63	8	Yes	Yes	No	No	64	7	Yes	Yes	No	No
318	63	8	Yes	Yes	No	No	63	8	Yes	Yes	No	No
319	63	7	Yes	Yes	No	No	63	7	Yes	Yes	No	No
320	63	7	Yes	Yes	No	No	63	7	Yes	Yes	No	No
321	59	5	Yes	No	No	No	60	4	No	No	No	No

Name	14-ft Noise Level	14-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	13-ft Noise Level	13-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
283	66	8	Yes	Yes	Yes	Yes	67	7	Yes	Yes	Yes	Yes
284	65	8	Yes	Yes	No	No	65	8	Yes	Yes	No	No
285	64	8	Yes	Yes	No	No	64	8	Yes	Yes	No	No
286	63	8	Yes	Yes	No	No	64	7	Yes	Yes	No	No
287	62	8	Yes	Yes	No	No	63	7	Yes	Yes	No	No
288	62	7	Yes	Yes	No	No	62	7	Yes	Yes	No	No
289	62	6	Yes	No	No	No	62	6	Yes	No	No	No
290	61	7	Yes	Yes	No	No	61	7	Yes	Yes	No	No
291	61	6	Yes	No	No	No	61	6	Yes	No	No	No
292	60	6	Yes	No	No	No	61	5	Yes	No	No	No
293	60	5	Yes	No	No	No	60	5	Yes	No	No	No
294	60	5	Yes	No	No	No	60	5	Yes	No	No	No
295	60	5	Yes	No	No	No	60	5	Yes	No	No	No
296	60	5	Yes	No	No	No	60	5	Yes	No	No	No
297	60	5	Yes	No	No	No	61	4	No	No	No	No
298	60	6	Yes	No	No	No	61	5	Yes	No	No	No
299	61	5	Yes	No	No	No	61	5	Yes	No	No	No
300	61	7	Yes	Yes	No	No	62	6	Yes	No	No	No
301	62	7	Yes	Yes	No	No	62	7	Yes	Yes	No	No
302	63	7	Yes	Yes	No	No	63	7	Yes	Yes	No	No
303	63	8	Yes	Yes	No	No	64	7	Yes	Yes	No	No
304	64	8	Yes	Yes	No	No	65	7	Yes	Yes	No	No
305	65	8	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes
306	65	8	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes
307	65	7	Yes	Yes	No	No	65	7	Yes	Yes	No	No
308	64	7	Yes	Yes	No	No	64	7	Yes	Yes	No	No
309	63	7	Yes	Yes	No	No	64	6	Yes	No	No	No
310	63	7	Yes	Yes	No	No	63	7	Yes	Yes	No	No
311	63	6	Yes	No	No	No	63	6	Yes	No	No	No
312	62	7	Yes	Yes	No	No	63	6	Yes	No	No	No
313	62	6	Yes	No	No	No	62	6	Yes	No	No	No
314	66	7	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes
315	65	7	Yes	Yes	No	No	65	7	Yes	Yes	No	No
316	65	7	Yes	Yes	No	No	65	7	Yes	Yes	No	No
317	64	7	Yes	Yes	No	No	64	7	Yes	Yes	No	No
318	64	7	Yes	Yes	No	No	64	7	Yes	Yes	No	No
319	63	7	Yes	Yes	No	No	64	6	Yes	No	No	No
320	63	7	Yes	Yes	No	No	63	7	Yes	Yes	No	No
321	60	4	No	No	No	No	60	4	No	No	No	No

Name	12-ft Noise Level	12-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	11-ft Noise Level	11-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
283	67	7	Yes	Yes	Yes	Yes	68	6	Yes	No	Yes	No
284	66	7	Yes	Yes	No	No	67	6	Yes	No	No	No
285	65	7	Yes	Yes	No	No	66	6	Yes	No	No	No
286	64	7	Yes	Yes	No	No	65	6	Yes	No	No	No
287	63	7	Yes	Yes	No	No	65	5	Yes	No	No	No
288	63	6	Yes	No	No	No	64	5	Yes	No	No	No
289	62	6	Yes	No	No	No	64	4	No	No	No	No
290	62	6	Yes	No	No	No	63	5	Yes	No	No	No
291	62	5	Yes	No	No	No	63	4	No	No	No	No
292	61	5	Yes	No	No	No	62	4	No	No	No	No
293	61	4	No	No	No	No	62	3	No	No	No	No
294	61	4	No	No	No	No	62	3	No	No	No	No
295	61	4	No	No	No	No	62	3	No	No	No	No
296	61	4	No	No	No	No	62	3	No	No	No	No
297	61	4	No	No	No	No	62	3	No	No	No	No
298	61	5	Yes	No	No	No	62	4	No	No	No	No
299	62	4	No	No	No	No	63	3	No	No	No	No
300	62	6	Yes	No	No	No	64	4	No	No	No	No
301	63	6	Yes	No	No	No	64	5	Yes	No	No	No
302	64	6	Yes	No	No	No	65	5	Yes	No	No	No
303	64	7	Yes	Yes	No	No	66	5	Yes	No	No	No
304	65	7	Yes	Yes	No	No	66	6	Yes	No	No	No
305	66	7	Yes	Yes	Yes	Yes	67	6	Yes	No	Yes	No
306	66	7	Yes	Yes	Yes	Yes	67	6	Yes	No	Yes	No
307	65	7	Yes	Yes	No	No	67	5	Yes	No	No	No
308	64	7	Yes	Yes	No	No	66	5	Yes	No	No	No
309	64	6	Yes	No	No	No	65	5	Yes	No	No	No
310	64	6	Yes	No	No	No	65	5	Yes	No	No	No
311	64	5	Yes	No	No	No	65	4	No	No	No	No
312	63	6	Yes	No	No	No	64	5	Yes	No	No	No
313	63	5	Yes	No	No	No	64	4	No	No	No	No
314	66	7	Yes	Yes	Yes	Yes	67	6	Yes	No	Yes	No
315	66	6	Yes	No	No	No	67	5	Yes	No	No	No
316	65	7	Yes	Yes	No	No	67	5	Yes	No	No	No
317	65	6	Yes	No	No	No	66	5	Yes	No	No	No
318	65	6	Yes	No	No	No	66	5	Yes	No	No	No
319	64	6	Yes	No	No	No	65	5	Yes	No	No	No
320	64	6	Yes	No	No	No	65	5	Yes	No	No	No
321	60	4	No	No	No	No	61	3	No	No	No	No

	17-ft	16-ft	15-ft	14-ft	13-ft	12-ft	11-ft
Feasibility Factors:							
# of First-Row >=5 dBA Reduction:	4	4	4	4	4	4	4
% of First-Row >=5 dBA Reduction:	100%	100%	100%	100%	100%	100%	100%
Acoustic Feasibility (>=5 dBA reduction for >=50% of front-row):	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reasonableness Factors:							
# of First-Row Design Goal >=7 dBA Reduction:	4	4	4	4	4	4	0
% of First-Row Design Goal >=7 dBA Reduction:	100%	100%	100%	100%	100%	100%	0%
Noise Abatement Design Goal (>=7dBA reduction for >=35% of front-row):	Yes	Yes	Yes	Yes	Yes	Yes	No
# of Benefited (per Benefited Receptors Allowable Cost Portion):	0	0	0	0	0	0	0
# of Benefited (per Linear Foot Allowable Cost Portion):	39	39	38	38	37	32	25
Total # of Benefited:	TRUE 39	TRUE 39	TRUE 38	TRUE 38	TRUE 37	TRUE 32	TRUE 25
Cost of Noise Wall (Length x Height x $20 per sq ft):	$692,719	$651,971	$611,223	$570,474	$529,726	$488,978	$448,230
Cost of any other items critical to safety:	0	0	0	0	0	0	0
Anticipated Cost of Noise Abatement:	$692,719	$651,971	$611,223	$570,474	$529,726	$488,978	$448,230
Allowable Cost ($30,000 per Benefited Receptor):	$0	$0	$0	$0	$0	$0	$0
Allowable Cost ($360 per Linear Foot):	$161,991	$161,991	$161,991	$161,991	$161,991	$161,991	$161,991
Total Allowable Cost:	$161,991	$161,991	$161,991	$161,991	$161,991	$161,991	$161,991
Cost Effective (Anticipated Cost < Allowable Cost):	No	No	No	No	No	No	No
Feasible and Reasonable:	No	No	No	No	No	No	No

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Alternative C

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Kimball Junction EIS - Alternative C - Noise Wall 1 (NW01) 1,936 feet length

Wall Height:	17 ft	16 ft	15 ft	14 ft	13 ft
Wall Length:	1,936 ft	1,936 ft	1,936 ft	1,936 ft	1,936 ft
Wall Cost per sq ft:	$20				
Cost of items critical to safety:					
# of First-Row Receivers:	6				

Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	17-ft Noise Level	17-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	16-ft Noise Level	16-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	15-ft Noise Level	15-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	14-ft Noise Level	14-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	13-ft Noise Level	13-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
003	1		Yes	1	73	65	8	Yes	Yes	Yes	Yes	65	8	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes	67	6	Yes	No	Yes	No
004	1				74	69	5	Yes	No	No	No	69	5	Yes	No	No	No	70	4	No	No	No	No	71	3	No	No	No	No	72	2	No	No	No	No
005	1				75	73	2	No	No	No	No	73	2	No	No	No	No	73	2	No	No	No	No	74	1	No	No	No	No	74	1	No	No	No	No
006	1		Yes	1	73	65	8	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes	67	6	Yes	No	Yes	No	67	6	Yes	No	Yes	No
007	1				74	69	5	Yes	No	No	No	70	4	No	No	No	No	71	3	No	No	No	No	72	2	No	No	No	No	72	2	No	No	No	No
008	1				75	73	2	No	No	No	No	73	2	No	No	No	No	74	1	No	No	No	No	74	1	No	No	No	No	74	1	No	No	No	No
009	1				63	61	2	No	No	No	No	61	2	No	No	No	No	61	2	No	No	No	No	61	2	No	No	No	No	61	2	No	No	No	No
010	1				65	62	3	No	No	No	No	62	3	No	No	No	No	63	2	No	No	No	No	63	2	No	No	No	No	64	1	No	No	No	No
011	1				66	65	1	No	No	No	No	65	1	No	No	No	No	65	1	No	No	No	No	66	0	No	No	No	No	66	0	No	No	No	No
012	1				60	58	2	No	No	No	No	58	2	No	No	No	No	58	2	No	No	No	No	59	1	No	No	No	No	59	1	No	No	No	No
013	1				62	60	2	No	No	No	No	60	2	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
014	1				67	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No
015	1				65	59	6	Yes	No	No	No	60	5	Yes	No	No	No	60	5	Yes	No	No	No	61	4	No	No	No	No	61	4	No	No	No	No
016	1				67	63	4	No	No	No	No	64	3	No	No	No	No	64	3	No	No	No	No	65	2	No	No	No	No	65	2	No	No	No	No
017	1				70	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No	70	0	No	No	No	No	70	0	No	No	No	No
018	1		Yes	1	73	65	8	Yes	Yes	Yes	Yes	65	8	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes	67	6	Yes	No	Yes	No
019	1				74	68	6	Yes	No	No	No	69	5	Yes	No	No	No	69	5	Yes	No	No	No	70	4	No	No	No	No	71	3	No	No	No	No
020	1				75	72	3	No	No	No	No	73	2	No	No	No	No	73	2	No	No	No	No	73	2	No	No	No	No	74	1	No	No	No	No
021	1				58	57	1	No	No	No	No	57	1	No	No	No	No	58	0	No	No	No	No	58	0	No	No	No	No	58	0	No	No	No	No
022	1				62	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
023	1				70	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No
024	1		Yes	1	72	64	8	Yes	Yes	Yes	Yes	65	7	Yes	Yes	Yes	Yes	65	7	Yes	Yes	Yes	Yes	65	7	Yes	Yes	Yes	Yes	66	6	Yes	No	Yes	No
025	1				73	67	6	Yes	No	No	No	67	6	Yes	No	No	No	68	5	Yes	No	No	No	68	5	Yes	No	No	No	69	4	No	No	No	No
026	1				74	70	4	No	No	No	No	71	3	No	No	No	No	71	3	No	No	No	No	72	2	No	No	No	No	72	2	No	No	No	No
027	1		Yes	1	71	64	7	Yes	Yes	Yes	Yes	65	6	Yes	No	Yes	No	65	6	Yes	No	Yes	No	65	6	Yes	No	Yes	No	66	5	Yes	No	Yes	No
028	1				73	66	7	Yes	Yes	No	No	67	6	Yes	No	No	No	67	6	Yes	No	No	No	68	5	Yes	No	No	No	69	4	No	No	No	No
029	1				73	69	4	No	No	No	No	70	3	No	No	No	No	71	2	No	No	No	No	71	2	No	No	No	No	71	2	No	No	No	No
030	1				59	58	1	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No
031	1				62	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
032	1				70	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No
033	1				60	59	1	No	No	No	No	59	1	No	No	No	No	59	1	No	No	No	No	59	1	No	No	No	No	59	1	No	No	No	No
034	1				62	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
035	1				69	68	1	No	No	No	No	68	1	No	No	No	No	68	1	No	No	No	No	68	1	No	No	No	No	68	1	No	No	No	No
036	1		Yes	1	71	65	6	Yes	No	Yes	No	65	6	Yes	No	Yes	No	65	6	Yes	No	Yes	No	66	5	Yes	No	Yes	No	66	5	Yes	No	Yes	No
037	1				72	67	5	Yes	No	No	No	67	5	Yes	No	No	No	67	5	Yes	No	No	No	68	4	No	No	No	No	68	4	No	No	No	No
038	1				73	69	4	No	No	No	No	70	3	No	No	No	No	70	3	No	No	No	No	71	2	No	No	No	No	71	2	No	No	No	No
039	1				71	66	5	Yes	No	No	No	66	5	Yes	No	No	No	67	4	No	No	No	No	67	4	No	No	No	No	67	4	No	No	No	No
040	1				72	67	5	Yes	No	No	No	68	4	No	No	No	No	68	4	No	No	No	No	69	3	No	No	No	No	70	2	No	No	No	No
041	1				73	70	3	No	No	No	No	70	3	No	No	No	No	71	2	No	No	No	No	71	2	No	No	No	No	71	2	No	No	No	No
042	1				59	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No	59	0	No	No	No	No
043	1				61	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No
044	1				66	65	1	No	No	No	No	66	0	No	No	No	No	66	0	No	No	No	No	66	0	No	No	No	No	66	0	No	No	No	No
045	1				59	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No
046	1				61	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No
047	1				67	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No
048	1				71	65	6	Yes	No	No	No	65	6	Yes	No	No	No	66	5	Yes	No	No	No	66	5	Yes	No	No	No	66	5	Yes	No	No	No
049	1				71	66	5	Yes	No	No	No	67	4	No	No	No	No	67	4	No	No	No	No	68	3	No	No	No	No	69	2	No	No	No	No
050	1				72	69	3	No	No	No	No	69	3	No	No	No	No	70	2	No	No	No	No	70	2	No	No	No	No	70	2	No	No	No	No
051	1				70	64	6	Yes	No	No	No	65	5	Yes	No	No	No	65	5	Yes	No	No	No	66	4	No	No	No	No	66	4	No	No	No	No
052	1				71	66	5	Yes	No	No	No	67	4	No	No	No	No	67	4	No	No	No	No	68	3	No	No	No	No	68	3	No	No	No	No
053	1				72	68	4	No	No	No	No	69	3	No	No	No	No	69	3	No	No	No	No	70	2	No	No	No	No	70	2	No	No	No	No
054	1				59	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No
055	1				61	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No
056	1				68	66	2	No	No	No	No	66	2	No	No	No	No	67	1	No	No	No	No	67	1	No	No	No	No	67	1	No	No	No	No
057	1				59	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No
058	1				61	59	2	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No
059	1				66	64	2	No	No	No	No	65	1	No	No	No	No	65	1	No	No	No	No	65	1	No	No	No	No	65	1	No	No	No	No
060	1				70	64	6	Yes	No	No	No	64	6	Yes	No	No	No	65	5	Yes	No	No	No	65	5	Yes	No	No	No	66	4	No	No	No	No
061	1				71	66	5	Yes	No	No	No	66	5	Yes	No	No	No	67	4	No	No	No	No	67	4	No	No	No	No	68	3	No	No	No	No
062	1				71	68	3	No	No	No	No	68	3	No	No	No	No	69	2	No	No	No	No	69	2	No	No	No	No	69	2	No	No	No	No
063	1				68	63	5	Yes	No	No	No	64	4	No	No	No	No	64	4	No	No	No	No	65	3	No	No	No	No	65	3	No	No	No	No
064	1				67	64	3	No	No	No	No	65	2	No	No	No	No	65	2	No	No	No	No	65	2	No	No	No	No	66	1	No	No	No	No

Feasibility Factors:				
# of First-Row >=5 dBA Reduction:	6	6	6	6	6
% of First-Row >=5 dBA Reduction:	100%	100%	100%	100%	100%
Acoustic Feasibility (>=5 dBA reduction for >=50% of front-row):	Yes	Yes	Yes	Yes	Yes
Reasonableness Factors:					
# of First-Row Design Goal >=7 dBA Reduction:	5	4	4	3	0
% of First-Row Design Goal >=7 dBA Reduction:	83%	67%	67%	50%	0%
Noise Abatement Design Goal (>=7dBA reduction for >=35% of front-row):	Yes	Yes	Yes	Yes	No
# of Benefited:	22	17	14	10	7
Cost of Noise Wall (Length x Height x $20 per sq ft):	$658,240	$619,520	$580,800	$542,080	$503,360
Cost of any other items critical to safety:	0	0	0	0	0
Anticipated Cost of Noise Abatement:	$658,240	$619,520	$580,800	$542,080	$503,360
Allowable Cost ($30,000 per benefited receptor):	$660,000	$510,000	$420,000	$300,000	$210,000
Cost Effective (Anticipated Cost < Allowable Cost):	Yes	No	No	No	No
Feasible and Reasonable:	Yes	No	No	No	No

Cost Per Benefitted Receptor (CPBR): **$29,920**

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Kimball Junction EIS - Alternative C - Noise Wall 1 (NW01) 1,300 feet length

Wall Height:	17 ft	16 ft	15 ft
Wall Length:	1,300 ft	1,300 ft	1,300 ft
Wall Cost per sq ft:	$20		
Cost of items critical to safety:			
# of First-Row Receivers:	6		

Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	17-ft Noise Level	17-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	16-ft Noise Level	16-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	15-ft Noise Level	15-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
003	1		Yes	1	73	66	7	Yes	Yes	Yes	Yes	67	6	Yes	No	Yes	No	67	6	Yes	No	Yes	No
004	1			0	74	70	4	No	No	No	No	70	4	No	No	No	No	71	3	No	No	No	No
005	1			0	75	73	2	No	No	No	No	73	2	No	No	No	No	74	1	No	No	No	No
006	1		Yes	1	73	66	7	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes	67	6	Yes	No	Yes	No
007	1			0	74	70	4	No	No	No	No	70	4	No	No	No	No	71	3	No	No	No	No
008	1			0	75	73	2	No	No	No	No	73	2	No	No	No	No	74	1	No	No	No	No
009	1			0	63	63	0	No	No	No	No	63	0	No	No	No	No	63	0	No	No	No	No
010	1			0	65	64	1	No	No	No	No	65	0	No	No	No	No	65	0	No	No	No	No
011	1			0	66	66	0	No	No	No	No	66	0	No	No	No	No	66	0	No	No	No	No
012	1			0	60	58	2	No	No	No	No	58	2	No	No	No	No	58	2	No	No	No	No
013	1			0	62	60	2	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
014	1			0	67	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No
015	1			0	65	59	6	Yes	No	No	No	60	5	Yes	No	No	No	60	5	Yes	No	No	No
016	1			0	67	63	4	No	No	No	No	64	3	No	No	No	No	65	2	No	No	No	No
017	1			0	70	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No
018	1		Yes	1	73	65	8	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes
019	1			0	74	69	5	Yes	No	No	No	69	5	Yes	No	No	No	70	4	No	No	No	No
020	1			0	75	73	2	No	No	No	No	73	2	No	No	No	No	73	2	No	No	No	No
021	1			0	58	57	1	No	No	No	No	57	1	No	No	No	No	58	0	No	No	No	No
022	1			0	62	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
023	1			0	70	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No
024	1		Yes	1	72	64	8	Yes	Yes	Yes	Yes	65	7	Yes	Yes	Yes	Yes	65	7	Yes	Yes	Yes	Yes
025	1			0	73	67	6	Yes	No	No	No	67	6	Yes	No	No	No	68	5	Yes	No	No	No
026	1			0	74	70	4	No	No	No	No	71	3	No	No	No	No	71	3	No	No	No	No
027	1		Yes	1	71	64	7	Yes	Yes	Yes	Yes	65	6	Yes	No	Yes	No	65	6	Yes	No	Yes	No
028	1			0	73	66	7	Yes	Yes	No	No	67	6	Yes	No	No	No	67	6	Yes	No	No	No
029	1			0	73	69	4	No	No	No	No	70	3	No	No	No	No	71	2	No	No	No	No
030	1			0	59	58	1	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No
031	1			0	62	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
032	1			0	70	69	1	No	No	No	No	69	1	No	No	No	No	69	1	No	No	No	No
033	1			0	60	59	1	No	No	No	No	59	1	No	No	No	No	59	1	No	No	No	No
034	1			0	62	61	1	No	No	No	No	61	1	No	No	No	No	61	1	No	No	No	No
035	1			0	69	68	1	No	No	No	No	68	1	No	No	No	No	68	1	No	No	No	No
036	1		Yes	1	71	65	6	Yes	No	Yes	No	65	6	Yes	No	Yes	No	65	6	Yes	No	Yes	No
037	1			0	72	67	5	Yes	No	No	No	67	5	Yes	No	No	No	67	5	Yes	No	No	No
038	1			0	73	69	4	No	No	No	No	70	3	No	No	No	No	70	3	No	No	No	No
039	1			0	71	66	5	Yes	No	No	No	66	5	Yes	No	No	No	67	4	No	No	No	No
040	1			0	72	67	5	Yes	No	No	No	68	4	No	No	No	No	68	4	No	No	No	No
041	1			0	73	70	3	No	No	No	No	71	2	No	No	No	No	71	2	No	No	No	No
042	1			0	59	59	0	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No
043	1			0	61	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No

Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	17-ft Noise Level	17-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	16-ft Noise Level	16-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	15-ft Noise Level	15-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
044	1			0	66	66	0	No	No	No	No	66	0	No	No	No	No	66	0	No	No	No	No
045	1			0	59	59	0	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No
046	1			0	61	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No
047	1			0	67	66	1	No	No	No	No	66	1	No	No	No	No	66	1	No	No	No	No
048	1			0	71	65	6	Yes	No	No	No	65	6	Yes	No	No	No	66	5	Yes	No	No	No
049	1			0	71	66	5	Yes	No	No	No	67	4	No	No	No	No	67	4	No	No	No	No
050	1			0	72	69	3	No	No	No	No	69	3	No	No	No	No	70	2	No	No	No	No
051	1			0	70	64	6	Yes	No	No	No	65	5	Yes	No	No	No	65	5	Yes	No	No	No
052	1			0	71	66	5	Yes	No	No	No	67	4	No	No	No	No	67	4	No	No	No	No
053	1			0	72	68	4	No	No	No	No	69	3	No	No	No	No	69	3	No	No	No	No
054	1			0	59	59	0	No	No	No	No	59	0	No	No	No	No	59	0	No	No	No	No
055	1			0	61	60	1	No	No	No	No	60	1	No	No	No	No	61	0	No	No	No	No
056	1			0	68	67	1	No	No	No	No	67	1	No	No	No	No	67	1	No	No	No	No
057	1			0	59	58	1	No	No	No	No	58	1	No	No	No	No	58	1	No	No	No	No
058	1			0	61	60	1	No	No	No	No	60	1	No	No	No	No	60	1	No	No	No	No
059	1			0	66	65	1	No	No	No	No	65	1	No	No	No	No	65	1	No	No	No	No
060	1			0	70	64	6	Yes	No	No	No	64	6	Yes	No	No	No	65	5	Yes	No	No	No
061	1			0	71	66	5	Yes	No	No	No	66	5	Yes	No	No	No	67	4	No	No	No	No
062	1			0	71	68	3	No	No	No	No	68	3	No	No	No	No	69	2	No	No	No	No
063	1			0	68	64	4	No	No	No	No	64	4	No	No	No	No	64	4	No	No	No	No
064	1			0	67	64	3	No	No	No	No	65	2	No	No	No	No	65	2	No	No	No	No

Feasibility Factors:			
# of First-Row >=5 dBA Reduction:	6	6	6
% of First-Row >=5 dBA Reduction:	100%	100%	100%
Acoustic Feasibility (>=5 dBA reduction for >=50% of front-row):	Yes	Yes	Yes
Reasonableness Factors:			
# of First-Row Design Goal >=7 dBA Reduction:	5	3	2
% of First-Row Design Goal >=7 dBA Reduction:	83%	50%	33%
Noise Abatement Design Goal (>=7dBA reduction for >=35% of front-row):	Yes	Yes	No
# of Benefited:	19	16	13
Cost of Noise Wall (Length x Height x $20 per sq ft):	$442,000	$416,000	$390,000
Cost of any other items critical to safety:	0	0	0
Anticipated Cost of Noise Abatement:	$442,000	$416,000	$390,000
Allowable Cost ($30,000 per benefited receptor):	$570,000	$480,000	$390,000
Cost Effective (Anticipated Cost < Allowable Cost):	Yes	Yes	No
Feasible and Reasonable:	Yes	Yes	No
Cost Per Benefitted Receptor (CPBR):	**$23,263.16**	**$26,000**	

Kimball Junction EIS - Alternative C - Noise Wall 2 (NW02)

Wall Height:		12 ft
Wall Length:		600 ft
Wall Cost per sq ft:	$20	
Cost of items critical to safety:		
# of First-Row Receivers:	2	

	Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	12-ft Noise Level	12-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
123		1			0	67	64	3	No	No	No	No
124		1			0	63	58	5	Yes	No	No	No
125		1			0	66	61	5	Yes	No	No	No
126		1			0	68	64	4	No	No	No	No
127		1			0	61	57	4	No	No	No	No
128		1			0	63	59	4	No	No	No	No
129		1			0	64	62	2	No	No	No	No
130		1			0	56	54	2	No	No	No	No
131		1			0	57	55	2	No	No	No	No
132		1			0	59	58	1	No	No	No	No
133		1			0	54	53	1	No	No	No	No
134		1			0	54	53	1	No	No	No	No
135		1			0	57	57	0	No	No	No	No
136		1			0	52	51	1	No	No	No	No
137		1			0	53	52	1	No	No	No	No
138		1			0	56	56	0	No	No	No	No
139		1			0	52	51	1	No	No	No	No
140		1			0	52	52	0	No	No	No	No
141		1			0	56	56	0	No	No	No	No
142		1			0	52	51	1	No	No	No	No
143		1			0	53	52	1	No	No	No	No
144		1			0	57	56	1	No	No	No	No
145		1			0	61	57	4	No	No	No	No
146		1			0	64	60	4	No	No	No	No
147		1			0	66	62	4	No	No	No	No
148		1		Yes	1	73	64	9	Yes	Yes	Yes	Yes
149		1			0	75	70	5	Yes	No	No	No
150		1			0	75	75	0	No	No	No	No
151		1			0	71	63	8	Yes	Yes	No	No
152		1			0	70	63	7	Yes	Yes	No	No
153		1			0	73	67	6	Yes	No	No	No
154		1			0	74	72	2	No	No	No	No
155		1			0	69	67	2	No	No	No	No
156		1			0	68	68	0	No	No	No	No
157		1			0	69	67	2	No	No	No	No
158		1			0	70	68	2	No	No	No	No
159		1			0	68	68	0	No	No	No	No
160		1			0	70	70	0	No	No	No	No
161		1			0	71	71	0	No	No	No	No
162		1			0	72	71	1	No	No	No	No
163		1			0	69	69	0	No	No	No	No
164		1			0	69	69	0	No	No	No	No
165		1			0	71	70	1	No	No	No	No
166		1			0	71	71	0	No	No	No	No
167		1			0	70	69	1	No	No	No	No
168		1			0	71	69	2	No	No	No	No
169		1			0	72	71	1	No	No	No	No

Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	12-ft Noise Level	12-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
170	1			0	73	72	1	No	No	No	No
171	1		Yes	1	72	70	2	No	No	No	No
172	1			0	63	63	0	No	No	No	No

Feasibility Factors:	
# of First-Row >=5 dBA Reduction:	1
% of First-Row >=5 dBA Reduction:	50%
Acoustic Feasibility (>=5 dBA reduction for >=50% of front-row):	Yes
Reasonableness Factors:	
# of First-Row Design Goal >=7 dBA Reduction:	1
% of First-Row Design Goal >=7 dBA Reduction:	50%
Noise Abatement Design Goal (>=7dBA reduction for >=35% of front-row):	Yes
# of Benefited:	7
Cost of Noise Wall (Length x Height x $20 per sq ft):	$144,000
Cost of any other items critical to safety:	0
Anticipated Cost of Noise Abatement:	$144,000
Allowable Cost ($30,000 per benefited receptor):	$210,000
Cost Effective (Anticipated Cost < Allowable Cost):	Yes
Feasible and Reasonable:	Yes

Kimball Junction EIS - Alternative C - Noise Wall 2 (NW02)

Wall Height:		16 ft	14 ft
Wall Length:		600 ft	600 ft
Wall Cost per sq ft:	$20		
Cost of items critical to safety:			
# of First-Row Receivers:	2		

Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	16-ft Noise Level	16-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	14-ft Noise Level	14-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
123	1			0	67	63	4	No	No	No	No	64	3	No	No	No	No
124	1			0	63	57	6	Yes	No	No	No	57	6	Yes	No	No	No
125	1			0	66	60	6	Yes	No	No	No	61	5	Yes	No	No	No
126	1			0	68	62	6	Yes	No	No	No	63	5	Yes	No	No	No
127	1			0	61	55	6	Yes	No	No	No	56	5	Yes	No	No	No
128	1			0	63	57	6	Yes	No	No	No	58	5	Yes	No	No	No
129	1			0	64	60	4	No	No	No	No	61	3	No	No	No	No
130	1			0	56	53	3	No	No	No	No	54	2	No	No	No	No
131	1			0	57	54	3	No	No	No	No	55	2	No	No	No	No
132	1			0	59	57	2	No	No	No	No	58	1	No	No	No	No
133	1			0	54	52	2	No	No	No	No	53	1	No	No	No	No
134	1			0	54	53	1	No	No	No	No	53	1	No	No	No	No
135	1			0	57	57	0	No	No	No	No	57	0	No	No	No	No
136	1			0	52	51	1	No	No	No	No	51	1	No	No	No	No
137	1			0	53	52	1	No	No	No	No	52	1	No	No	No	No
138	1			0	56	56	0	No	No	No	No	56	0	No	No	No	No
139	1			0	52	50	2	No	No	No	No	51	1	No	No	No	No
140	1			0	52	52	0	No	No	No	No	52	0	No	No	No	No
141	1			0	56	56	0	No	No	No	No	56	0	No	No	No	No
142	1			0	52	50	2	No	No	No	No	51	1	No	No	No	No
143	1			0	53	52	1	No	No	No	No	52	1	No	No	No	No
144	1			0	57	56	1	No	No	No	No	56	1	No	No	No	No
145	1			0	61	56	5	Yes	No	No	No	56	5	Yes	No	No	No
146	1			0	64	58	6	Yes	No	No	No	59	5	Yes	No	No	No
147	1			0	66	60	6	Yes	No	No	No	61	5	Yes	No	No	No
148	1		Yes	1	73	62	11	Yes	Yes	Yes	Yes	63	10	Yes	Yes	Yes	Yes
149	1			0	75	66	9	Yes	Yes	No	No	68	7	Yes	Yes	No	No
150	1			0	75	73	2	No	No	No	No	74	1	No	No	No	No
151	1			0	71	61	10	Yes	Yes	No	No	62	9	Yes	Yes	No	No
152	1			0	70	61	9	Yes	Yes	No	No	62	8	Yes	Yes	No	No
153	1			0	73	64	9	Yes	Yes	No	No	66	7	Yes	Yes	No	No
154	1			0	74	68	6	Yes	No	No	No	70	4	No	No	No	No
155	1			0	69	67	2	No	No	No	No	67	2	No	No	No	No
156	1			0	68	67	1	No	No	No	No	68	0	No	No	No	No
157	1			0	69	67	2	No	No	No	No	67	2	No	No	No	No
158	1			0	70	68	2	No	No	No	No	68	2	No	No	No	No

Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	16-ft Noise Level	16-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	14-ft Noise Level	14-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
159	1			0	68	68	0	No	No	No	No	68	0	No	No	No	No
160	1			0	70	70	0	No	No	No	No	70	0	No	No	No	No
161	1			0	71	71	0	No	No	No	No	71	0	No	No	No	No
162	1			0	72	71	1	No	No	No	No	71	1	No	No	No	No
163	1			0	69	69	0	No	No	No	No	69	0	No	No	No	No
164	1			0	69	69	0	No	No	No	No	69	0	No	No	No	No
165	1			0	71	70	1	No	No	No	No	70	1	No	No	No	No
166	1			0	71	70	1	No	No	No	No	71	0	No	No	No	No
167	1			0	70	69	1	No	No	No	No	69	1	No	No	No	No
168	1			0	71	69	2	No	No	No	No	69	2	No	No	No	No
169	1			0	72	70	2	No	No	No	No	71	1	No	No	No	No
170	1			0	73	72	1	No	No	No	No	72	1	No	No	No	No
171	1		Yes	1	72	70	2	No	No	No	No	70	2	No	No	No	No
172	1			0	63	63	0	No	No	No	No	63	0	No	No	No	No

Feasibility Factors:		
# of First-Row >=5 dBA Reduction:	1	1
% of First-Row >=5 dBA Reduction:	50%	50%
Acoustic Feasibility (>=5 dBA reduction for >=50% of front-row):	Yes	Yes
Reasonableness Factors:		
# of First-Row Design Goal >=7 dBA Reduction:	1	1
% of First-Row Design Goal >=7 dBA Reduction:	50%	50%
Noise Abatement Design Goal (>=7dBA reduction for >=35% of front-row):	Yes	Yes
# of Benefited:	14	13
Cost of Noise Wall (Length x Height x $20 per sq ft):	$192,000	$168,000
Cost of any other items critical to safety:	0	0
Anticipated Cost of Noise Abatement:	$192,000	$168,000
Allowable Cost ($30,000 per benefited receptor):	$420,000	$390,000
Cost Effective (Anticipated Cost < Allowable Cost):	Yes	Yes
Feasible and Reasonable:	Yes	Yes
Cost per Benefitted Receptor (CPBR):	**$13,714.29**	**$12,923.08**

Kimball Junction EIS - Alternative C - Noise Wall 3 (NW03)

Wall Height:	17	ft
Wall Length:	2,523	ft
Wall Cost per sq ft:	$20	
Cost of items critical to safety:		
# of First-Row Receivers:	24	

	Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	17-ft Noise Level	17-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
173		1		Yes	1	64	57	7	Yes	Yes	Yes	Yes
174		1			0	68	60	8	Yes	Yes	No	No
175		1			0	70	62	8	Yes	Yes	No	No
176		1		Yes	1	63	56	7	Yes	Yes	Yes	Yes
177		1			0	66	59	7	Yes	Yes	No	No
178		1			0	70	61	9	Yes	Yes	No	No
179		1		Yes	1	60	55	5	Yes	No	Yes	No
180		1			0	68	59	9	Yes	Yes	No	No
181		1			0	62	57	5	Yes	No	No	No
182		1			0	67	59	8	Yes	Yes	No	No
183		1			0	68	61	7	Yes	Yes	No	No
184		1		Yes	1	63	57	6	Yes	No	Yes	No
185		1			0	69	61	8	Yes	Yes	No	No
186		1		Yes	1	71	63	8	Yes	Yes	Yes	Yes
187		1			0	63	57	6	Yes	No	No	No
188		1			0	69	60	9	Yes	Yes	No	No
189		1			0	70	63	7	Yes	Yes	No	No
190		1			0	61	57	4	No	No	No	No
191		1			0	59	57	2	No	No	No	No
192		1			0	58	55	3	No	No	No	No
193		1			0	58	55	3	No	No	No	No
194		1			0	58	54	4	No	No	No	No
195		1			0	57	54	3	No	No	No	No
196		1			0	56	53	3	No	No	No	No
197		1			0	56	53	3	No	No	No	No
198		1			0	55	52	3	No	No	No	No
199		1			0	56	53	3	No	No	No	No
200		1			0	56	53	3	No	No	No	No
201		1			0	56	53	3	No	No	No	No
202		1			0	55	53	2	No	No	No	No
203		1			0	55	53	2	No	No	No	No
204		1			0	56	54	2	No	No	No	No
205		1			0	57	55	2	No	No	No	No
207		1		Yes	1	61	57	4	No	No	No	No
208		1		Yes	1	61	56	5	Yes	No	Yes	No
209		1		Yes	1	61	56	5	Yes	No	Yes	No
210		1		Yes	1	60	55	5	Yes	No	Yes	No
211		1		Yes	1	60	55	5	Yes	No	Yes	No
212		1		Yes	1	59	54	5	Yes	No	Yes	No
213		1		Yes	1	58	54	4	No	No	No	No
214		1		Yes	1	58	54	4	No	No	No	No
215		1		Yes	1	58	54	4	No	No	No	No
216		1		Yes	1	58	54	4	No	No	No	No
217		1		Yes	1	58	54	4	No	No	No	No
218		1		Yes	1	59	55	4	No	No	No	No
219		1		Yes	1	59	55	4	No	No	No	No
220		1		Yes	1	59	56	3	No	No	No	No

Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	17-ft Noise Level	17-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
221	1		Yes	1	59	56	3	No	No	No	No
222	1		Yes	1	59	56	3	No	No	No	No
223	1		Yes	1	60	58	2	No	No	No	No
224	1		Yes	1	60	58	2	No	No	No	No
225	1		Yes	1	61	59	2	No	No	No	No

Feasibility Factors:

# of First-Row >=5 dBA Reduction:	10
% of First-Row >=5 dBA Reduction:	42%
Acoustic Feasibility (>=5 dBA reduction for >=50% of front-row):	No

Reasonableness Factors:

# of First-Row Design Goal >=7 dBA Reduction:	3
% of First-Row Design Goal >=7 dBA Reduction:	13%
Noise Abatement Design Goal (>=7dBA reduction for >=35% of front-row):	No

# of Benefited:	22
Cost of Noise Wall (Length x Height x $20 per sq ft):	$857,820
Cost of any other items critical to safety:	0
Anticipated Cost of Noise Abatement:	$857,820
Allowable Cost ($30,000 per benefited receptor):	$660,000
Cost Effective (Anticipated Cost < Allowable Cost):	No
Feasible and Reasonable:	No

Kimball Junction EIS - Alternative C - Noise Wall 4 (NW04)

Wall Height:		**17** ft	**18** ft
Wall Length:		**1,825** ft	**1,825** ft
Wall Cost per sq ft:	$20		
Cost of items critical to safety:			
# of First-Row Receivers:	15		

Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	17-ft Noise Level	17-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	18-ft Noise Level	18-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
228	1			0	65	58	7	Yes	Yes	No	No	58	7	Yes	Yes	No	No
229	1		Yes	1	67	59	8	Yes	Yes	Yes	Yes	59	8	Yes	Yes	Yes	Yes
230	1		Yes	1	49	41	8	Yes	Yes	Yes	Yes	41	8	Yes	Yes	Yes	Yes
231	1		Yes	1	72	64	8	Yes	Yes	Yes	Yes	64	8	Yes	Yes	Yes	Yes
232	1		Yes	1	72	64	8	Yes	Yes	Yes	Yes	64	8	Yes	Yes	Yes	Yes
233	1		Yes	1	70	63	7	Yes	Yes	Yes	Yes	62	8	Yes	Yes	Yes	Yes
234	1		Yes	1	64	60	4	No	No	No	No	59	5	Yes	No	Yes	No
235	1		Yes	1	65	61	4	No	No	No	No	61	4	No	No	No	No
236	1		Yes	1	64	61	3	No	No	No	No	61	3	No	No	No	No
237	1		Yes	1	65	61	4	No	No	No	No	61	4	No	No	No	No
238	1		Yes	1	64	60	4	No	No	No	No	60	4	No	No	No	No
239	1		Yes	1	64	61	3	No	No	No	No	60	4	No	No	No	No
240	1		Yes	1	64	61	3	No	No	No	No	61	3	No	No	No	No
241	1		Yes	1	63	60	3	No	No	No	No	60	3	No	No	No	No
242	1		Yes	1	62	60	2	No	No	No	No	60	2	No	No	No	No
243	1		Yes	1	62	60	2	No	No	No	No	60	2	No	No	No	No

Feasibility Factors:		
# of First-Row >=5 dBA Reduction:	5	6
% of First-Row >=5 dBA Reduction:	33%	40%
Acoustic Feasibility (>=5 dBA reduction for >=50% of front-row):	No	No
Reasonableness Factors:		
# of First-Row Design Goal >=7 dBA Reduction:	5	5
% of First-Row Design Goal >=7 dBA Reduction:	33%	33%
Noise Abatement Design Goal (>=7dBA reduction for >=35% of front-row):	No	No
# of Benefited:	6	7
Cost of Noise Wall (Length x Height x $20 per sq ft):	$620,500	$657,000
Cost of any other items critical to safety:	0	0
Anticipated Cost of Noise Abatement:	$620,500	$657,000
Allowable Cost ($30,000 per benefited receptor):	$180,000	$210,000
Cost Effective (Anticipated Cost < Allowable Cost):	No	No
Feasible and Reasonable:	No	No

Kimball Junction EIS - Alternative C - Noise Wall 5 (NW05a and NW05b)

Wall Height:	17 ft		18 ft
Wall Length:	2,296 ft		2,296 ft
Wall Cost per sq ft:	$20		
Cost of items critical to safety:			
# of First-Row Receivers:	11		

	Name	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	17-ft Noise Level	17-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	18-ft Noise Level	18-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
251		1		Yes	1	57	56	1	No	No	No	No	56	1	No	No	No	No
252		1			0	55	54	1	No	No	No	No	54	1	No	No	No	No
253		1		Yes	1	57	56	1	No	No	No	No	56	1	No	No	No	No
254		1		Yes	1	62	60	2	No	No	No	No	60	2	No	No	No	No
255		1		Yes	1	63	60	3	No	No	No	No	60	3	No	No	No	No
256		1		Yes	1	65	61	4	No	No	No	No	61	4	No	No	No	No
257		1		Yes	1	68	63	5	Yes	No	Yes	No	62	6	Yes	No	Yes	No
258		1		Yes	1	70	64	6	Yes	No	Yes	No	63	7	Yes	Yes	Yes	Yes
259		1		Yes	1	69	64	5	Yes	No	Yes	No	63	6	Yes	No	Yes	No
260		1		Yes	1	70	62	8	Yes	Yes	Yes	Yes	62	8	Yes	Yes	Yes	Yes
261		1		Yes	1	71	63	8	Yes	Yes	Yes	Yes	62	9	Yes	Yes	Yes	Yes
262		1			0	67	60	7	Yes	Yes	No	No	59	8	Yes	Yes	No	No
263		1			0	67	61	6	Yes	No	No	No	60	7	Yes	Yes	No	No
264		1			0	66	61	5	Yes	No	No	No	60	6	Yes	No	No	No
265		1			0	63	58	5	Yes	No	No	No	58	5	Yes	No	No	No
266		1			0	60	57	3	No	No	No	No	57	3	No	No	No	No
267		1			0	54	53	1	No	No	No	No	53	1	No	No	No	No
268		1			0	55	54	1	No	No	No	No	54	1	No	No	No	No
269		1			0	55	54	1	No	No	No	No	54	1	No	No	No	No
277		1			0	54	53	1	No	No	No	No	53	1	No	No	No	No
278		1			0	67	61	6	Yes	No	No	No	61	6	Yes	No	No	No
279		1			0	68	62	6	Yes	No	No	No	61	7	Yes	Yes	No	No
280		1			0	70	62	8	Yes	Yes	No	No	62	8	Yes	Yes	No	No
281		1			0	71	63	8	Yes	Yes	No	No	63	8	Yes	Yes	No	No
282		1		Yes	1	73	65	8	Yes	Yes	Yes	Yes	65	8	Yes	Yes	Yes	Yes

Feasibility Factors:		
# of First-Row >=5 dBA Reduction:	6	6
% of First-Row >=5 dBA Reduction:	55%	55%
Acoustic Feasibility (>=5 dBA reduction for >=50% of front-row):	Yes	Yes
Reasonableness Factors:		
# of First-Row Design Goal >=7 dBA Reduction:	3	4
% of First-Row Design Goal >=7 dBA Reduction:	27%	36%
Noise Abatement Design Goal (>=7dBA reduction for >=35% of front-row):	No	Yes
# of Benefited:	14	14
Cost of Noise Wall (Length x Height x $20 per sq ft):	$780,640	$826,560
Cost of any other items critical to safety:	0	0
Anticipated Cost of Noise Abatement:	$780,640	$826,560
Allowable Cost ($30,000 per benefited receptor):	$420,000	$420,000
Cost Effective (Anticipated Cost < Allowable Cost):	No	No
Feasible and Reasonable:	No	No

Kimball Junction EIS - Alternative C - Noise Wall 6 (NW06)

Per UDOT policy: [B] Allowable Cost of NAC C/D portion of barrier is determined per Linear Foot and Allowable Cost for non-NAC C/D area is determined per Benefited Receptor)

[C] Benefited Receptors in "Per Linear Foot" Allowable Cost Portion are NOT also included as "Benefited Receptors" in the "Per Benefited Receptors" Allowable Cost Calculation (no double-counting)

Wall Height:	17 ft	16 ft	15 ft	14 ft	13 ft	12 ft
Wall Length (per Benefited Receptors Allowable Cost Portion):	2,036 ft	2,036 ft	2,036 ft	2,036 ft	2,036 ft	2,036 ft
Wall Length (per Linear Foot Allowable Cost Portion):	448 ft	448 ft	448 ft	448 ft	448 ft	448 ft
Total Wall Length:	2,484 ft	2,484 ft	2,484 ft	2,484 ft	2,484 ft	2,484 ft

Wall Cost per sq ft: $20

Cost of items critical to safety:

# of First-Row Receivers: 1

Name	Per Linear Foot Eligible?	# of DU	Relocation	1st Row	# of 1st Row	Baseline Noise Level	17-ft Noise Level	17-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	16-ft Noise Level	16-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	15-ft Noise Level	15-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	14-ft Noise Level	14-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	13-ft Noise Level	13-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal	12-ft Noise Level	12-ft Noise Reduction	Benefited	Design Goal	1st Row >= 5 dBA Reduction	1st Row Design Goal
283	yes	1		Yes	1	73	66	7	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes	66	7	Yes	Yes	Yes	Yes	67	6	Yes	No	Yes	No
284	yes	1				72	64	8	Yes	Yes	No	No	64	8	Yes	Yes	No	No	64	8	Yes	Yes	No	No	65	7	Yes	Yes	No	No	65	7	Yes	Yes	No	No	65	7	Yes	Yes	No	No
285	yes	1				71	63	8	Yes	Yes	No	No	63	8	Yes	Yes	No	No	63	8	Yes	Yes	No	No	64	7	Yes	Yes	No	No	64	7	Yes	Yes	No	No	64	7	Yes	Yes	No	No
286	yes	1				70	62	8	Yes	Yes	No	No	63	7	Yes	Yes	No	No	63	7	Yes	Yes	No	No	63	7	Yes	Yes	No	No	63	7	Yes	Yes	No	No	64	6	Yes	No	No	No
287	yes	1				69	62	7	Yes	Yes	No	No	62	7	Yes	Yes	No	No	63	6	Yes	No	No	No	63	6	Yes	No	No	No	63	6	Yes	No	No	No	63	6	Yes	No	No	No
288	yes	1				68	61	7	Yes	Yes	No	No	62	6	Yes	No	No	No	62	6	Yes	No	No	No	62	6	Yes	No	No	No	62	6	Yes	No	No	No	63	5	Yes	No	No	No
289	yes	1				67	61	6	Yes	No	No	No	61	6	Yes	No	No	No	62	5	Yes	No	No	No	62	5	Yes	No	No	No	62	5	Yes	No	No	No	62	5	Yes	No	No	No
290	yes	1				67	60	7	Yes	Yes	No	No	60	7	Yes	Yes	No	No	60	7	Yes	Yes	No	No	61	6	Yes	No	No	No	61	6	Yes	No	No	No	61	6	Yes	No	No	No
291	yes	1				66	60	6	Yes	No	No	No	60	6	Yes	No	No	No	60	6	Yes	No	No	No	61	5	Yes	No	No	No	61	5	Yes	No	No	No	61	5	Yes	No	No	No
292	yes	1				65	59	6	Yes	No	No	No	59	6	Yes	No	No	No	60	5	Yes	No	No	No	60	5	Yes	No	No	No	60	5	Yes	No	No	No	61	4	No	No	No	No
293	yes	1				65	59	6	Yes	No	No	No	59	6	Yes	No	No	No	59	6	Yes	No	No	No	60	5	Yes	No	No	No	60	5	Yes	No	No	No	60	5	Yes	No	No	No

Feasibility Factors:

# of First-Row >=5 dBA Reduction:									1						1						1						1						1						1			
% of First-Row >=5 dBA Reduction:									100%						100%						100%						100%						100%						100%			
Acoustic Feasibility (>=5 dBA reduction for >=50% of front-row):									Yes						Yes						Yes						Yes						Yes						Yes			

Reasonableness Factors:

# of First-Row Design Goal >=7 dBA Reduction:									1						1						1						1						1						0			
% of First-Row Design Goal >=7 dBA Reduction:									100%						100%						100%						100%						100%						0%			
Noise Abatement Design Goal (>=7dBA reduction for >=35% of front-row):									Yes						Yes						Yes						Yes						Yes						No			
# of Benefited (per Benefited Receptors Allowable Cost Portion):									0						0						0						0						0						0			
# of Benefited (per Linear Foot Allowable Cost Portion):									11						11						11						11						11						10			
Total # of Benefited:								TRUE	11					TRUE	11					TRUE	11					TRUE	11					TRUE	11					TRUE	10			
Cost of Noise Wall (Length x Height x $20 per sq ft):									$844,575						$794,894						$745,213						$695,532						$645,851						$596,170			
Cost of any other items critical to safety:									0						0						0						0						0						0			
Anticipated Cost of Noise Abatement:									$844,575						$794,894						$745,213						$695,532						$645,851						$596,170			
Allowable Cost ($30,000 per Benefited Receptor):									$0						$0						$0						$0						$0						$0			
Allowable Cost ($360 per Linear Foot):									$161,295						$161,295						$161,295						$161,295						$161,295						$161,295			
Total Allowable Cost:									$161,295						$161,295						$161,295						$161,295						$161,295						$161,295			
Cost Effective (Anticipated Cost < Allowable Cost):									No						No						No						No						No						No			
Feasible and Reasonable:									No						No						No						No						No						No			

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