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Boise River Basin Feasibility Study

Specialist Report:

Transportation and Infrastructure

Boise Project, Idaho

Interior Region 9: Columbia Pacific Northwest

U.S. Department of the Interior May 2020

Mission Statements

The Department of the Interior (DOI) conserves and manages the Nation's natural resources and cultural heritage for the benefit and enjoyment of the American people, provides scientific and other information about natural resources and natural hazards to address societal challenges and create opportunities for the American people, and honors the Nation's trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities to help them prosper.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Acronyms and Abbreviations

Acronym or Abbreviation	Meaning
ADT	average daily traffic
cy	cubic yard
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
GIS	geographic information system
HD	Highway District
ITD	Idaho Transportation Department
LOS	level of service
MSE	mechanically stabilized earth
NFS	National Forest System
Reclamation	Bureau of Reclamation
U.S. 20	U.S. Highway 20
USFS	U.S. Forest Service

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1. Introduction

The Boise River Basin Feasibility Study is a feasibility study to evaluate increasing water storage opportunities within the Boise River basin by expanding Anderson Ranch Reservoir. The project is located at Anderson Ranch dam and reservoir, the farthest upstream of the three reservoirs within the Boise River system and located 28 miles northeast of the city of Mountain Home in Elmore County, Idaho. Anderson Ranch Dam is a zoned earth fill embankment structure that provides irrigation water, flood control, power generation, and recreation benefits. The reservoir also provides a permanent dead storage pool for silt control and the preservation and propagation of fish and wildlife. Anderson Ranch Dam is operated by the Bureau of Reclamation (Reclamation). Reclamation, in partnership with the Idaho Water Resource Board, proposes to raise Anderson Ranch Dam. New water storage would provide the flexibility to capture additional water when available, for later delivery when and where it is needed to meet existing and future demands. The alternatives analyzed in this document include the No-Action Alternative (Alternative A), a 6-foot raise of Anderson Ranch Dam (Alternative B), and a 3-foot raise of Anderson Ranch Dam (Alternative C).

Alternative A provides a basis for comparison with the two action alternatives, Alternative B and Alternative C. Under Alternative A, current baseline conditions would continue, without increasing Anderson Ranch Dam height or constructing associated reservoir rim projects, access roads, or facilities. The expected project duration of Alternative B is approximately 51 months and Alternative C is 44 months. Reclamation would continue existing operations of Anderson Ranch Dam. Alternative B proposes to raise the dam by 6 feet from the present elevation of 4196 feet to 4202 feet to capture and store approximately 29,000 additional acre-feet of water. Alternative B would inundate an estimated 146 acres of additional land around the reservoir above the current full pool elevation of 4196 feet. Alternative C proposes to raise the dam by 3 feet to 4199 feet, allowing for the ability to capture and store approximately 14,400 additional acre-feet of water. Alternative C would inundate an estimated 73 acres of additional land around the reservoir above the current full pool elevation of 4196 feet.

Each of the two action alternatives, Alternative B and Alternative C, includes two separate, but similar, structural construction methods for the dam raise, downstream embankment raise, or mechanically stabilized earth (MSE) wall raise. Otherwise, the only difference is the dam raise elevations of 6 feet for Alternative B and 3 feet for Alternative C. Project areas and construction durations for each method are nearly identical, except for a 200-foot difference in approach road length at the right abutment and an approximate 1-month difference in construction duration. The longer road length is within the dam footprint on previously disturbed ground. Because these differences are negligible, they are generally analyzed as a dam raise within this report. Alternative analysis assumes the longer road length and construction duration, however, a final construction method would be chosen during later phases of engineering evaluation.

Chapter 1 and Chapter 2 of the Boise River Basin Feasibility Study Environmental Impact Statement (EIS) provide a detailed description of the proposed action, project's purpose and need, project area, and alternatives including design features applicable to the action alternatives. This specialist report supports the analysis of expected impacts on transportation as described in the EIS.

1.1 Regulatory Framework

The primary regulations relating to transportation include following *Guidelines for Geometric Design of Low-Volume Roads* (American Association of State Highway and Transportation Officials, 2019); *Roadway Design Manual* (Idaho Transportation Department [ITD], 2013); *2018 Standard Specifications for Highway Construction* (ITD, 2018); Mountain Home Highway District and Glenns Ferry Highway District standards; and applicable U.S. Forest Service (USFS) policy, direction, and management. Idaho Power complies with the National Electric Safety Code and National Fire Protection Association.

2. Affected Environment

The transportation and infrastructure analysis area is the road system around Anderson Ranch Reservoir, including roads near the reservoir used to access residential or recreational sites along the reservoir and South Fork Boise River, and proposed road closures and detours (Figure 1). The analysis area also includes other infrastructure in the project area, including bridges, Pine Airstrip, and utilities as described in Chapter 2 of the EIS. No traffic delays are expected from in-channel work for fish passage at Fall Creek and Deer Creek. The current condition of specific transportation and infrastructure resources to be affected is described below.

2.1 Roads

Roads considered in this analysis were taken from the USFS Motor Vehicle Use Maps as the most comprehensive data source (USFS, 2019). Roads used to access the dam and reservoir area include jurisdictional county roads maintained by highway districts. Several National Forest System (NFS) roads are used to access reservoir recreational sites and provide shoreline access. Roads are referred to as either Highway District (HD) roads under Highway District jurisdiction or NFS roads under USFS jurisdiction. The closest major highway to the Anderson Ranch Reservoir area is U.S. Highway 20 (U.S. 20).

Four primary roads provide vehicle access around the reservoir (Figure 1).

1. HD 61 extends north from its intersection with U.S. 20, follows the northeast shore of the reservoir, and crosses Pine Bridge to the communities of Pine and Featherville.
2. HD 128 provides access from Pine south to Sloans Gulch. The road is inaccessible past the Pine Airstrip during winter months.
3. HD 120 from Fall Creek Campground to Anderson Ranch Dam provides access to the northwest shore.
4. HD 134 extends north from its junction with U.S. 20 to Anderson Ranch Dam, providing the most direct access to the dam and alternate access to the northwest reservoir shore.

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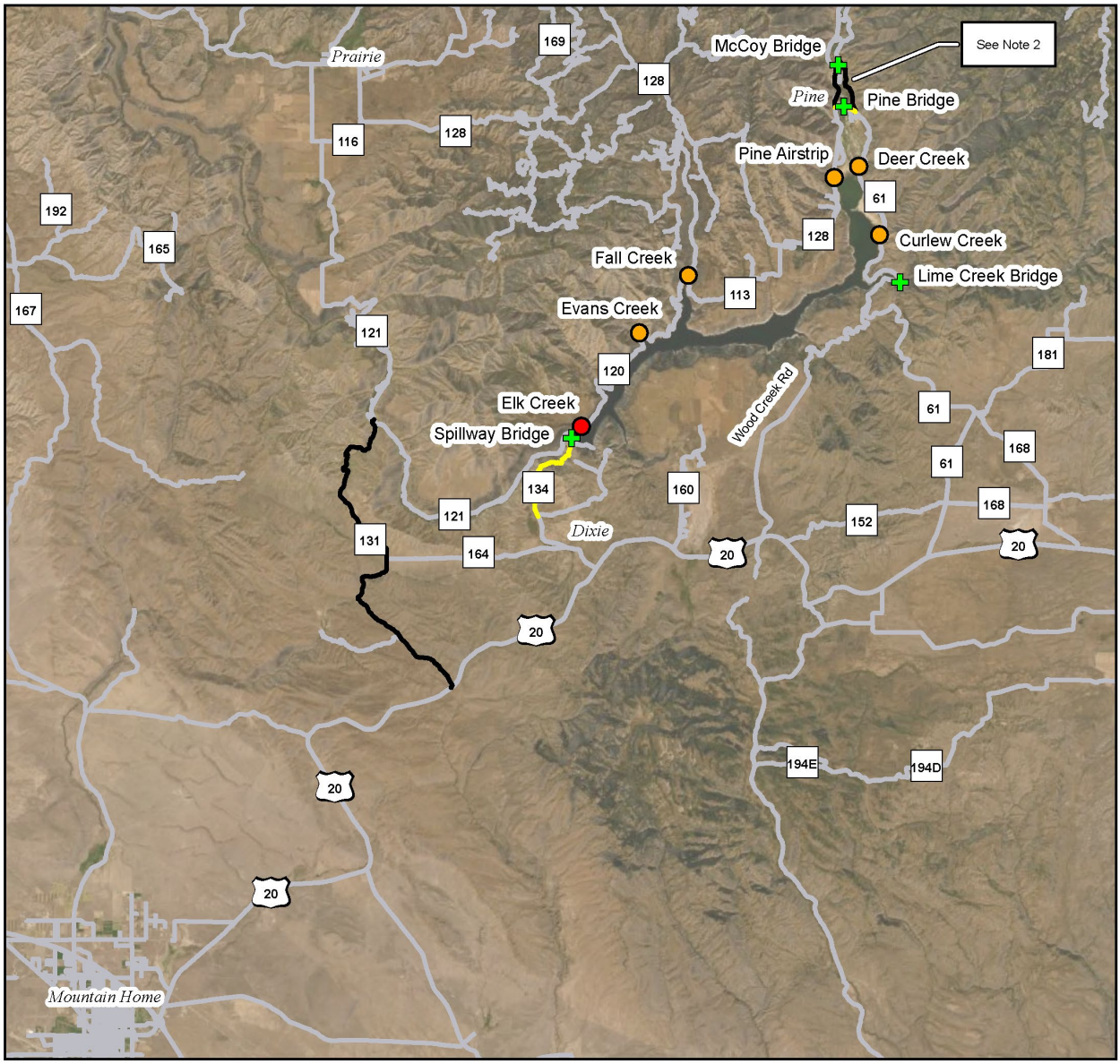
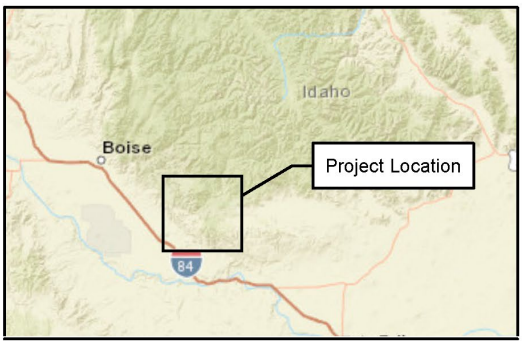


LEGEND

- Roadway
- Roadway Closure
- Proposed Detour
- Boat Ramp
- Boat Ramp Closure
- Bridge

N

0 1 2 4
Miles



Notes:
1. This map is provided as-is and may contain representations of property boundaries. It is intended for general references only. None of the parties involved in preparing this map or data contained herein warrant or represent information to be complete and accurate and cannot be held responsible for errors or omissions.
2. Pine Bridge closure and detour only occurs under Alternative B.

Figure 1: Transportation Map
Boise Project - Arrowrock Division
Boise River Basin Feasibility Study

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In addition, numerous short NFS roads provide reservoir access along the shoreline. Some of the longer roads include NFS Road 128BC at Pine Airstrip and NFS Road 134A near Spillway Campground.

HD 121 provides access from Anderson Ranch Dam south along the northern bank of the South Fork Boise River.

A summary of transportation resources and typical users are provided in Table 1.

Table 1. Key transportation segments in project area

Road Segment	Recreation Destinations	Resident Destinations
US 20	N/A	Mountain Home to Fairfield
HD 134	Anderson Ranch Dam Spillway Spillway Campground Northwest shore of reservoir	Private ranches
HD 120	Northwest shore of reservoir Elk Creek Boat Ramp Evans Creek Campground Castle Creek Campground Fall Creek Campground and Boat Ramp/ Resort and Marina	N/A
HD 121	South Fork Boise River	Smith Prairie Private ranches
HD 61	Curlew Creek Campground Curlew Creek Boat Ramp Deer Creek Boat Ramp	Pine Featherville
HD 131	Cow Creek South Fork Boise River	Private ranches
HD 128	Pine Campground Pine Airstrip Sloans Gulch	Private ranches
Multiple NFS Roads	Various access points to reservoir	N/A

Source: 6-foot Dam Raise Engineering Summary, Appendix C.

The *2014 Elmore County Comprehensive Plan* (Elmore County, Idaho, 2014) describes the highway and related transportation services as providing adequate services throughout the county to meet the current needs for moving people and goods, except for those roads in mountainous communities.

The Federal Highway Administration (FHWA) uses level of service (LOS) indicators to describe changes to baseline traffic information (FHWA, 2017). Using these guidelines, baseline traffic movement based on current roadways in the project area is defined as LOS B. LOS B indicates stable traffic flow with a high degree of freedom to select speed but with some influence from other users during peak times. Section 3.3 provides further description of LOS indicators and the potential for impact from the alternatives.

2.2 Bridges

Three bridges—Lime Creek Bridge, Pine Bridge, and Spillway Bridge—are included in the transportation and infrastructure analysis area (Figure 1). Located on HD 61, the Lime Creek Bridge is a 154-foot long, prestressed concrete bridge (load rating 5 MS 18 [HS 20]) maintained year-round by Glenns Ferry Highway District. Located on HD 61, the Pine Bridge over the South Fork Boise River is a 183-foot long steel girder/concrete bridge (load rating A HL 93) that was replaced in October 2018 over a period of 18 months. Pine Bridge is maintained year-round by Glenns Ferry Highway District and Mountain Home Highway District. The Spillway Bridge, over the Anderson Ranch Dam crest on HD 134, is 65 feet long and has an undisclosed load rating.

2.3 Pine Airstrip

Located on the west shore of Anderson Ranch Reservoir, the Pine airstrip (Federal Aviation Administration identifier 1U9) is operated by ITD Division of Aeronautics under a special use permit by USFS. The turf airstrip is approximately 2,300 feet long and 125 feet wide and suitable for small airplanes.

Aircraft operations average 20 takeoff and landings per week (for a 12-month period ending June 30, 2017) consisting of 98% transient general aviation and 2% military. There are more operations in the summer due to increased recreational activity. The airstrip is not maintained in winter (Air Nav, 2020).

2.4 Utilities

CenturyLink owns a buried fiber optic cable that crosses Anderson Ranch Dam at the dam road as well as nearby manholes and other connection points. According to coverage maps of major telecommunication providers, wireless service is available throughout the project area. Areas north of the project area and remote recreational areas may have inconsistent or no cellular service.

Idaho Power operates overhead and underground power lines, power poles, and some transformers in the project area. The four-cable transmission line spanning the reservoir would remain unaffected by an increase in reservoir water surface elevation. At several locations, individual power poles or short lengths of buried powerline may require relocation, including approximately 24 poles and associated single-phase overhead line along HD 61 and

two transformers and approximately 200 feet of 35-kilovolt single-phase underground primary cable in a 3-inch conduit near Fall Creek. A map of Idaho Power's utilities is presented in the 6-foot Dam Raise Engineering Summary (Appendix C).

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3. Environmental Consequences

3.1 Methods for Evaluating Impacts

Methods to evaluate impacts and the associated significance criteria were developed using a combination of FHWA traffic movement indicators, desktop analysis with a geographic information system (GIS), and telephone calls or in-person meetings with highway districts, utilities, and agencies to develop the impact indicators and associated significance criteria. The direct and indirect effects for transportation and infrastructure are based on the intensity (magnitude), duration, extent, and context of the impacts.

As described in detail below, for potential impacts to traffic volumes, generalized level of service (LOS) indicators from FHWA were used as the baseline (FHWA, 2017). LOS defines traffic movement in context of mobility and roadway design. For comparison to existing average daily traffic (ADT) estimates and measurements, construction traffic (worker and haul truck) daily round trips by construction season, year, and location were estimated for each road (or haul route) based on material types and quantities associated with the two dam raise alternatives and reservoir rim projects associated with each proposed action as described in the Engineering Summary (Appendix C).

Project-specific GIS data and information were used to describe existing transportation and infrastructure conditions in the project area. This included road information from BNF Motor Vehicle Use Maps and associated GIS data; utility information provided by CenturyLink, Idaho Power, and RTI-Rural Telecom; shoreline inundation contour data; and aerial imagery from online sources. Attributes within the road dataset were used to describe jurisdiction and road segment lengths. In addition, shoreline inundation data were used to identify potential road impact areas. The alternatives were reviewed to determine the proposed maximum water surface elevation and potential impacts to existing transportation or infrastructure features due to higher water levels.

Meetings were conducted with the Glenns Ferry Highway District and Mountain Home Highway District to discuss design standards for county roads. These meetings indicated set design standards do not exist, but new transportation facilities should retain existing structural and traffic capacity standards. In addition, communication between Reclamation and USFS provided direction on road realignment design considerations for NFS Roads. Phone discussions with utilities provided the basis for determining potential service interruptions associated with construction of the proposed action.

Cumulative effects analysis is based on identifying impacts that arise through interaction of the proposed action with other past, present, and foreseeable future projects interconnected to the proposed action in space or time.

3.1.1 Assumptions

The following assumptions were considered in assessing impacts to transportation and infrastructure.

- Based on the remote project location, non-motorized travel and mass transit impacts were not analyzed.
- Roads would be reconstructed to the same condition; that is, they would retain existing structural and traffic capacity standards after roadwork is complete.
- Environmental commitments related to standard Reclamation and USFS best management practices (BMPs) would be implemented as part of the proposed road construction activities to avoid, minimize, and mitigate environmental impacts. Specifically, the project would adhere to the Forest Plan Guideline FRGU06, which states that new/realigned roads should be located out of riparian conservation areas wherever possible. When new/realigned roads must be located within riparian conservation areas, they should be developed such that degrading effects to riparian conservation areas are mitigated.
- Relocated utilities associated would be restored to existing regulatory standards.
- This analysis covers changes to recreational access via the transportation system. Impacts to recreational experience and opportunity are discussed in the Recreation Specialist Report.
- Emergency response times associated with transportation changes are discussed in the Safety Specialist Report and the safety section in Chapter 3 of the EIS.

3.1.2 Impact Indicators and Significance Criteria

Direct effects caused by implementing the action alternatives occur at the same time and place as the proposed construction. Indirect effects are associated with implementing the action alternatives but may occur later, at a different location, or later and at a different location. The direct and indirect effects to transportation and infrastructure are based on the intensity (magnitude), duration, and context of the impacts.

For potential impacts to traffic volumes, generalized LOS indicators from FHWA were used to establish a baseline and define the potential for measurable impacts (FHWA, 2017). LOS values define traffic movement in context of user mobility and roadway design and are generally defined by the following:

- LOS A = Free-flow traffic with users unaffected by the presence of other users.
- LOS B = Stable traffic flow with a high degree of freedom to select speed but with some influence from other users.

- LOS C = Restricted flow that remains stable but with significant interactions with others in the traffic stream. General level of comfort and convenience declines noticeably at this level.
- LOS D = High-density flow in which speed and freedom to maneuver are severely restricted and comfort and convenience have declined even through flow remains stable.
- LOS E = Unstable flow at or near capacity levels with poor levels of comfort and convenience.
- LOS F = Stop and go waves, poor travel times, low comfort and convenience, and increased accident exposure.

LOS B was assumed as the baseline condition in the analysis area for the mountainous rural two-lane highways with a 45 mile-per-hour speed limit (HD roads) and with a 55 mile-per-hour speed limit (U.S. 20). For both speed limits, LOS B assumed 10% truck traffic. To remain within LOS B for roadways with a 45 mile-per-hour speed limit, the ADT volume should remain below 2,200 vehicles (FHWA 2017). For this analysis, any change in LOS to a lower service level (from LOS B to LOS C) represents a potentially significant impact to users. Therefore, this volume (ADT=2,200 vehicles) was defined as the significance criteria for the following roads: HD 61, HD 120, HD 121, HD 128, HD 131, and HD 134.

Similarly, to remain within LOS B for the 55 mile-per-hour speed limit roadways, the ADT volume should remain below 8,500 vehicles (FHWA 2017). Therefore, this volume (ADT=8,500 vehicles) was defined as the significance criteria for the following road: U.S. 20. In summary, for construction-related traffic volumes to be considered potentially significant, volumes would have to cause an ADT increase to more than 2,200 vehicles (220 trucks) on the HD routes and more than 8,500 vehicles (850 trucks) on U.S. 20, representing a change from LOS B to LOS C. Table 2 indicates the mechanism by which effects of the action alternatives were measured and the significance criteria used to evaluate impacts.

Table 2. Impact indicators and significance criteria

Impact Indicator	Significance Criteria
Decrease in existing traffic LOS	Shift from current LOS to a lower LOS based on criteria from FHWA (2017). More than a temporary interruption to, or potential conflict with, other means of transportation (pedestrians, bicycles)
Inundation of roads	Permanent road closures as the result of inundation
Reduced use of Pine Airstrip	Interruption in airstrip use lasting more than 3 months or during high-use periods
Reduced recreational access as a result of road closures or delays	Permanent loss of access to recreation sites
Condition of roadways causing increased maintenance requirements	More than a minor deterioration of local roadways
Disruption in utility service	More than temporary outage or loss of utility service

3.2 Direct, Indirect, and Cumulative Impacts

3.2.1 Alternative A – No Action

Under Alternative A, current transportation and infrastructure conditions would continue. Specifically, relative to the proposed action, Alternative A would not increase vehicle traffic levels, disrupt traffic flow, or deteriorate roadway conditions and require additional maintenance. Road closures and construction delays associated with the proposed action would not occur, thereby not impacting recreation and safety access or use of the Pine Airstrip. Utility service would not be temporarily interrupted by Alternative A. However, under Alternative A, road improvements associated with the proposed action would not be implemented, resulting in no widening of the Anderson Dam Road (HD 134) across the dam or improvements to HD 131. Therefore, no new short-term or long-term direct or indirect effects to transportation and infrastructure would occur under Alternative A.

3.2.2 Alternative B – Anderson Ranch Dam Six-Foot Raise

3.2.2.1 Construction

The proposed action would result in the short-term public closure of sections of HD 131, HD 134, HD 61, and all of NFS Road 134A; various temporary roadway lane closures necessary for work on MSE walls, culvert rehabilitation, and bridges; temporary impacts to the use of Pine Airstrip; and short-term loss of utility service due to relocations. As described in the

6-foot Dam Raise Engineering Summary (Appendix C), the Pine Bridge closure may not be required if Reclamation can obtain a variance on the required minimum freeboard.

The direct effects (e.g., driving delay times) would stop when construction is complete. For the purpose of this analysis, approximately 51 months is used as the duration of project impacts.

There are no anticipated indirect effects. The Safety Specialist Report describes a potential reduction in visitor volume associated with roadway delay notices and campground closures. For example, the increase in time required for a transportation user to travel the detour route or wait for the traffic signal at Pine Bridge would be inconveniences that would persist for approximately 51 months and 4 months, respectively.

3.2.2.2 Roads and Bridges

The direct effect of the proposed action is a collection of roadway travel delays that increase the time of travel. This analysis of the affected resource focuses only on those roadways that are potentially impacted by Alternative B. Figure 1 shows proposed road closures and detours, and Table 3 provides a summary of affected roadways.

If the minimum freeboard waiver is not obtained, residents of Pine would face travel delays associated with construction on HD 61 and the Pine Bridge lasting approximately 4 months. The alternate route for Pine Bridge is a detour on HD 61 and HD 114. The detour over McCoy Bridge requires signaling—delaying traffic approximately 15 minutes each way. Construction on Lime Creek Bridge is limited to repairing the abutment slopes, which may only cause a brief traffic slowing across the bridge.

The longest duration road closure (approximately 45 months) is HD 134 from the junction of NFS Road 134C to HD 120 for the duration of construction, causing a detour to HD 131 and longer travel times to the southern end of the reservoir and to residences north and northwest of the reservoir, including those near Prairie. Improvements to HD 131 involve some new alignments, road improvements, and winter snow removal resulting in brief traffic delays during the approximately 43 days of construction along HD 131.

3.2.2.3 Construction Traffic

Trucks hauling material from Mountain Home would share approximately 22 miles of U.S. 20 with the public. The public would not share the roadway with construction traffic around the Dixie Borrow Pit and staging area and closed portions of HD 134, but the public would share roads with construction vehicles for approximately 11 miles on the haul routes using existing roads HD 121, HD 120, and approximately 2 miles of the open portions of HD 134. Most of the haul routes are on unpaved roads, and two of the haul routes are steep. The total length of the haul routes is approximately 14 miles (not including the dam crest). A turnaround is proposed at the Elk Creek boat ramp parking area approximately 0.5 mile upstream of the dam on HD 120 (Figure 1).

As described in the 6-foot Dam Raise Engineering Summary (Appendix C), constructing the dam raise and reservoir rim improvements would require truck shipments of construction materials (via dump trucks, asphalt trucks, and concrete trucks) and transporting workers to project sites.

For Alternative B, approximately 20,000 truck trips (round trip) of local material (from Dixie Pit and HD 121 borrow areas) would be hauled on the closed road (HD 134) and haul route (HD 121) for dam construction. Approximately 1,800 truck trips (round trip) of Zone 2A commercial material from the Mountain Home area would be transported along U.S. 20 to the Anderson Dam Road (HD 134) turnoff and then along HD 134 to the dam construction site. Approximately 900 truck trips (round trip) of road fill from the Mountain Home area would be transported along U.S. 20 to the HD 131 turnoff and then along HD 131 for road improvements along the length of HD 131.

For construction at the reservoir rim project locations, the following materials would be transported up to 55 miles (one way) from the Mountain Home vicinity.

- Riprap = 14,000 cubic yards (cy)
- Imported borrow = 18,000 cy
- Imported gravel = 4,000 tons
- Base course = 450 tons
- Asphalt concrete pavement = 200 tons
- Structural backfill = 500 cy
- Concrete = 550 cy.

The combined volume of these materials expected to require approximately 2,060 truck trips over 305 working days of construction. The reservoir rim projects are expected to be constructed in spring, summer, and fall (March to November). Based on information available in the 6-foot Dam Raise Engineering Summary (Appendix C), the estimated number of construction truck trips is summarized relative to available ADT in Table 3 by route and in Figure 2 by road segment.

As summarized in Table 3 and Figure 2, the additional construction (haul truck) round trips per day on public-accessible roadways would range as follows for B1 and B2.

- B1–Low of 1 (on HD 120 in summer 2026) to a high of 112 (on U.S. 20 in fall 2025, with 36 turning off onto HD 131, 13 turning off onto HD 134, and 63 continuing to the HD 61 turnoff)
- B2–Low of 1 (on HD 120 in summer 2026) to a high of 114 (on U.S. 20 in fall 2025, with 36 turning off onto HD 131, 15 turning off onto HD 134, and 63 continuing to the HD 61 turnoff)

Construction traffic on the closed section of HD 134 is not included in the effects to traffic analysis because this road would be closed to the public for the duration of construction.

Table 3. Alternative B for both construction methods is estimated additional construction haul truck counts by haul route compared to average daily count. B1 refers to the downstream embankment raise, B2 refers to the MSE wall raise.

Alternative	Haul Route	Baseline Traffic Levels (ADT)	FHWA (2017) Level of Service (LOS) B	Added Round Trips Per Work Day	Duration (Work Days)	Total Added Construction Round Trips
B1	U.S. 20 - HD 134 (open and closed segments)	U.S. 20: 1,910 (Spring: Mar-May); 3,200 (Summer: Jul-Aug); 2,565 (Fall: Sep-Nov) HD 134: Not available	U.S. 20: 8,500 HD 134: 2,200	13 (ongoing)	140	1,800
B1	HD 134 (closed segment)	Road closed for construction so no baseline ADT to affect	Not available	114 (ongoing)	140	16,000a
B1	HD 121	Not available	2,200	29 (ongoing)	140	4,000a
B2	U.S. 20 - HD 134 (open and closed segments)	U.S. 20: 1,910 (Spring: Mar-May), 3,200 (Summer: Jul-Aug); 2,565 (Fall: Sep-Nov) HD 134: Not available	U.S. 20: 8,500 HD 134: 2,200	15 (ongoing)	118	1.800
B2	HD 134 (closed segment)	Road closed for construction therefore no baseline ADT to affect.	N/A	136 (ongoing)	118	16,000a
B2	HD 121	Cow Creek Bridge: 20	2,200	34 (ongoing)	118	4,000a
B1 and B2	U.S. 20 - HD 131	U.S. 20: 1,910 (Spring: Mar-May); 3,200 (Summer: Jul-Aug); 2,565 (Fall: Sep-Nov) HD 131: Cow Creek Bridge: 20	U.S. 20: 8,500 HD 131: 2,200	30 (Spring 2025)	30	900

Alternative	Haul Route	Baseline Traffic Levels (ADT)	FHWA (2017) Level of Service (LOS) B	Added Round Trips Per Work Day	Duration (Work Days)	Total Added Construction Round Trips
B1 and B2	U.S. 20 - HD 61	U.S. 20: 1,910 (Spring: Mar-May); 3,200 (Summer: Jul-Aug); 2,565 (Fall: Sep-Nov) Pine Creek Bridge: 1,252 (Seasonal [Peak] 1,879)	U.S. 20: 8,500 HD 61: 2,200	28 (Summer 2025) 63 (Fall 2025)	305	770
B1 and B2	U.S. 20 - HD 61 - HD 128	U.S. 20: 1,910 (Spring: Mar-May); 3,200 (Summer: Jul-Aug); 2,565 (Fall: Sep-Nov) Pine Creek Bridge: 1,252 (Seasonal [Peak] 1,879) HD 128: Not available	U.S. 20: 8,500 HD 61 and HD 128: 2,200	24 (Spring 2026)	305	619
B1 and B2	U.S. 20 - HD 131 - HD 121 - HD 120	U.S. 20: 1,910 (Spring: Mar-May); 3,200 (Summer: Jul-Aug); 2,565 (Fall: Sep-Nov) HD 131, HD 121, HD 120: Cow Creek Bridge: 20	U.S. 20: 8,500 HD 131, HD 121, HD 120: 2,200	36 (Fall 2025) 13 (Spring 2026) 1 (Summer 2026) 5 (Fall 2026)	305	678

a = Assumes of the 20,000 loads of locally excavated material to be used for compacted zoned fill (6-foot Dam Raise Engineering Summary, Appendix C of EIS) that 80% (16,000 loads) would come from Dixie Pit and 20% (4,000 loads) would come from the borrow areas along HD 121 when the Spillway Bridge is closed.

For all construction projects, construction workers are expected to commute daily from Mountain Home and nearby areas to the construction sites. Approximately 30 workers are expected to commute to the dam construction site and approximately 30 workers are expected to commute to the reservoir rim construction sites, arriving in the morning and departing in the evening. Between the hours of 7 a.m. and 9 a.m. and 4 p.m. and 6 p.m., approximately 60 worker trips are expected daily.

Together, construction worker trips and delivery of materials would result in an estimated 174 (60 worker and 114 [B2] haul truck) additional trips per day during peak travel hours and peak construction season, representing the worst case (U.S. 20 in fall 2025). These roundtrips would equate to a maximum increase in ADT of 348 (228 trucks) vehicles. During the

nonpeak hours, such as the middle of the day, and off-season construction days, traffic would be much lower due to less construction and worker commute traffic.

During peak hours and construction season, an increase of 348 vehicles (228 trucks) to the baseline LOS volumes would not represent a significant impact because the increase in vehicle traffic would not exceed the baseline LOS for any road segment. For example, with U.S. 20, during the peak construction (fall 2025), the additional 348 daily round trips (Figure 2) is still below the significance criteria for all vehicles (8,500) and trucks (850). ADT values are less available for HD roads, but, for the two locations available, the increase would be 63 daily round trips at Pine Bridge and 36 daily round trips at Cow Creek Bridge (Figure 2), which is still below the significance criteria for all vehicles (2,200) and trucks (220). Reclamation expects that construction would not be concurrent on all routes and all projects, which would reduce the frequency and duration of the maximum number of truck and worker trips. Construction may require oversized vehicles and weight or height limitations, but Reclamation would upgrade existing roadways as needed so construction equipment access would not be restricted.

Reclamation expects that the overall increase in vehicle traffic would cause minor deterioration of local roads, and Reclamation would require contractors to repair damage and restore roadways to conditions similar to those before construction. Increased traffic delays are not expected to impact the ability of emergency personnel to respond to an incident because delays would be short term and intermittent. The effects of road closures on safety are described in the Safety Specialist Report.

Road repairs on HD 120, HD 61, and HD 128 would result in one-lane closures. Duration of traffic delays depends on the length of the segment and signaling technique. The community of Pine would be affected because both western and eastern access points would experience road repairs and delay.

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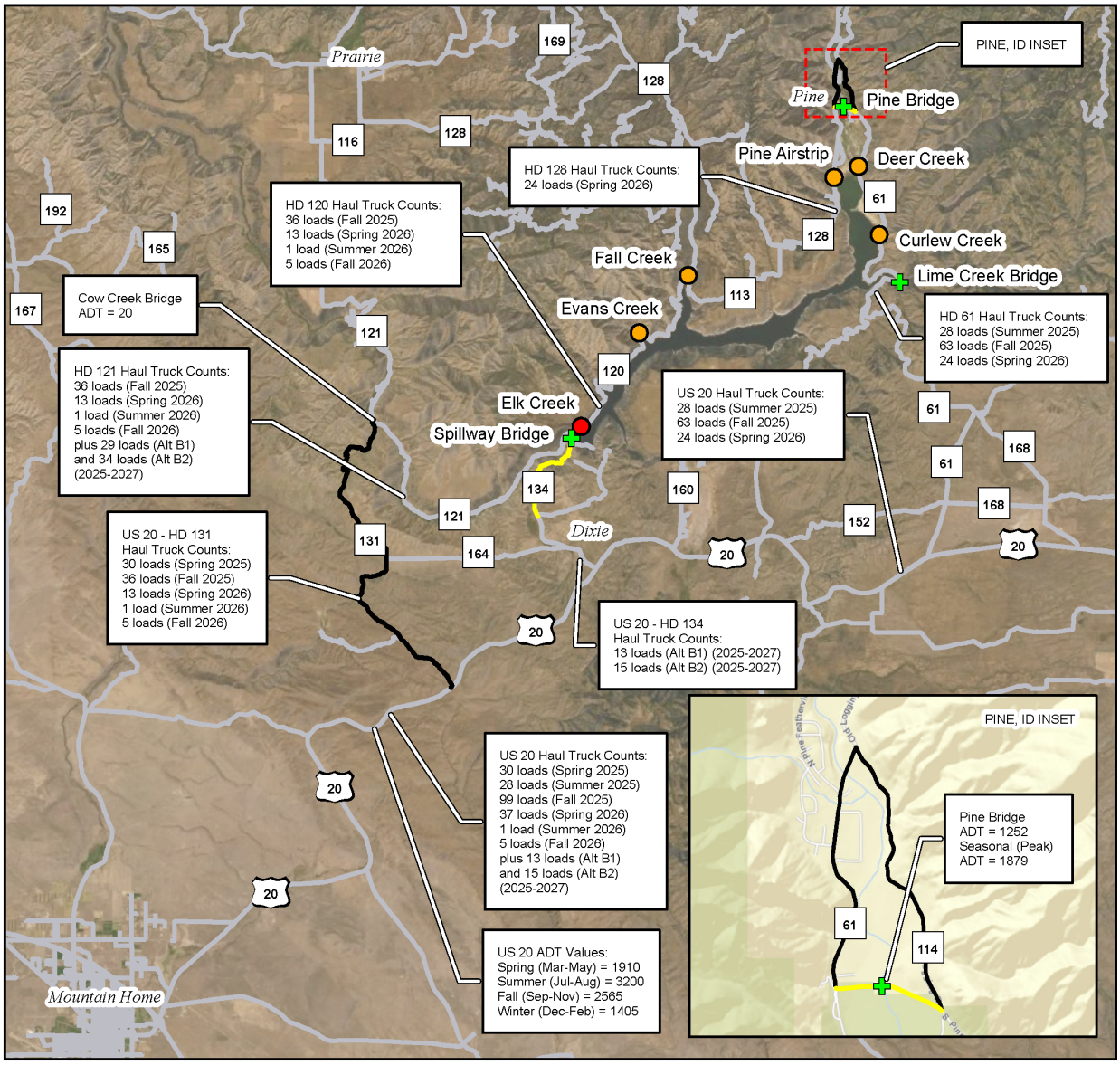

LEGEND

- Roadway
- Roadway Closure
- Proposed Detour
- Boat Ramp
- Boat Ramp Closure
- Bridge

N

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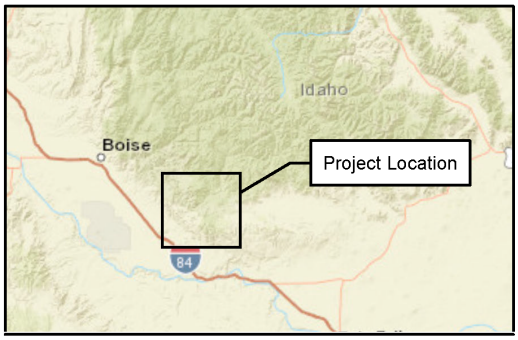
Miles



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2. Average Daily Traffic (ADT) Sources:
   Pine Bridge (2018 estimate): Western Federal Lands (WFL). 2015.
   Cow Creek Bridge (2016 estimate): Idaho Transportation Department (ITD). 2018.
   US 20 (2018 data): https://apps.itd.idaho.gov/apps/roadwaydata/Maps/ATR_WIMmap_map.html

Figure 2: Transportation Alternative C
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Table 4 provides a summary of the direct impacts to traffic associated with bridge and road closures under Alternative B.

Table 4. Summary of proposed road closures and resultant effects

Road Closures	Distance Closed	Alternate Route	Effects
HD 134	3 miles	HD 131	Driving delay of 25-35 minutes (summer conditions) for approximately 47 months during construction
NFS Road 134A	0.7 mile	No alternate route	Due to closure of HD 134; closed for approximately 47 months during construction
HD 61	0.6 mile	HD 114	15-minute delay due to crossing single-lane McCoy Bridge for approximately 3 months
Road Repairs or Realignment	**Distance**	**Alternate Route**	**Effects**
HD 120 repairs east of Castle Creek Campground	175 feet	None; lane closure with signaling	Traffic delays of unknown duration; depends on using flaggers or timed signals
HD 120 repairs near Fall Creek	500 feet		
HD 61 repairs north of Curlew Creek Campground and boat ramp	400 feet		
HD 128 repairs south of Pine Airstrip at Lester Creek	800 feet		
HD 61 MSE wall installation near Curlew Creek	400 feet		
HD 120 MSE wall installation near Castle Creek	125 feet	To be determined	Short closure
NFS Road 128BC realignment above seasonal inundation line at Pine Airstrip	Estimated 0.3 miles	None	Area already closed for Pine Airstrip realignment, no additional impacts from road closure expected
HD 131 realignment/regrading	Estimated 0.25 miles	HD 134	Approximate 43-day closure

Source: 6-foot Dam Raise Engineering Summary, Appendix C.

3.2.2.4 Pine Airstrip

The proposed action would elevate the reservoir, inundating a portion of the Pine Airstrip runway and runway protection zone. The runway would be replaced with another turf runway with similar dimensions and a different orientation. Realignment of NFS Road 128BC would be required (6-foot Dam Raise Engineering Summary, Appendix C). General aviation use of the airstrip would be limited or closed for approximately 1.5 months, in March and April. During this time, recreational use is lower than in summer months and outside the typical fire season. This short duration closure during this time of year minimizes impacts to users of the airstrip.

3.2.2.5 Utilities

Based on utility information from CenturyLink, buried fiber optic cables would not be inundated by an increase in reservoir levels. At locations where roadway and bridge projects may impact utilities, no extended service interruptions are anticipated to telecommunications, and delays to traffic would be brief. Reclamation would coordinate with Idaho Power to relocate impacted power poles, associated overhead lines, and underground powerlines and transformers. Infrastructure identified for removal or relocation is described in the 6-foot Dam Raise Engineering Summary (Appendix C). In general, the facilities would remain on the same side or cross to the other side of the road during project construction. No extended service interruptions are anticipated to power, and delays to traffic would be brief. Relocation of utility service is not expected to cause more than a temporary outage or loss of service, and impacts are anticipated to be minor.

3.2.2.6 Recreational Access

Recreational access would be impacted during the approximate 47-month construction period in the areas around the reservoir and immediately downstream of the dam along the South Fork Boise River. Because of the construction-related activities in the vicinity of the dam, impacts to recreation would be more notable along the South Fork Boise River below the dam and along the western shoreline of reservoir from the dam north to Fall Creek. The effects to recreation access would be less noticeable to recreation users along the north end of the reservoir, from Curlew Creek north and west to Pine Campground.

In the upper portion of the reservoir, access to developed campgrounds, boat ramps, and dispersed areas would be maintained, but roadway and bridge projects would cause temporary traffic delays. Both the Curlew Creek Campground and boat ramp would likely need to be closed for the construction work to elevate affected campsites, extend the boat ramp, and realign the road to the ramp. Similar work and impacts to users would occur at Pine Campground. Conducting this work later in the season would reduce the impact on users.

Impacts to recreational access near the south end of the reservoir would be greater given the intensity of construction work and traffic rerouting. Two developed sites would be most directly affected. Specifically, Spillway Campground and its three campsites would be closed

to the public for the duration of construction. In addition, the Elk Creek Boat Ramp parking area would be used as a turn-around for truck traffic and therefore closed during construction, eliminating access to the boat ramp.

With closure of Anderson Dam Road (HD 134) during construction, improvements are required to Cow Creek Road (HD 131) to handle additional traffic year-round. These improvements are expected to cause brief traffic delays during the approximately 43 days of construction along HD 131. Following the improvements along HD 131 and closure of Anderson Dam Road (HD 134), traffic would be detoured onto HD 131 along Cow Creek and HD 121 along the South Fork Boise River. The additional traffic on HD 131 and HD 121 would likely adversely affect fisherman, campers, and others recreating in various sites along the river, particularly during busy summer periods, due to slight delays merging into traffic and increased dust and noise.

Construction closure of HD 134 would affect visitors whose destination is Elk Creek and Fall Creek Boat Ramps, Evan's Creek Campground, and Fall Creek Resort and Marina. For comparison purposes using Evan's Creek Campground as a destination, the detour route would add about 14 miles of additional travel on gravel roads compared to Anderson Dam Road (HD 134). For those who might chose a more northerly route through Pine, the additional distance would be 22 miles, though much of this would be on paved roads. The additional travel times and distances would adversely impact those recreating in these areas, especially for those with larger RVs and vehicles pulling boats. In some cases, this may cause some to choose to recreate elsewhere during construction.

Considering the duration of construction and the access challenges for those who might recreate along the southwestern portion of the reservoir and along the South Fork Boise River between Anderson Ranch Reservoir and Cow Creek, reducing recreational access as a result of road closures or delays is considered a short-term moderate direct impact. However, because there is no permanent loss to recreation site access, the impact is not considered significant.

The transportation system and infrastructure in the Anderson Ranch Reservoir area would return to original condition after construction, except for the roadway crossing the dam. Currently, the road across the dam is one-way, controlled by an alternating stop light. This roadway segment would be two lanes following construction. This would create a long-term beneficial improvement to mobility and safety of general recreation use of the area. There would be no permanent loss of access to recreation sites as a result of Alternative B.

3.2.2.7 Post-Construction

The transportation system and infrastructure in the Anderson Ranch Reservoir area would return to original condition after construction, except for the roadway crossing the dam. Currently, the road across the dam is one-way, controlled by an alternating stop light. This roadway segment would be two lanes following construction. This would create a long-term beneficial improvement to mobility and safety. There would be no permanent loss of access to recreation sites as a result of Alternative B.

3.2.2.8 Summary of Direct and Indirect Impacts

Under Alternative B, there would be short-term current transportation and infrastructure changes because of construction-related activities. The potential magnitude of the direct effects of Alternative B is moderate because traffic delays would be experienced by residents north and northwest of the reservoir, including those near Prairie, as well as recreational users for approximately 51 months. The increase in construction vehicle traffic would not represent an increase over the existing level of service volumes, and traffic levels would return to normal following construction.

Direct effects of road construction and detours would be regional geographically (extending throughout the project area) because visitors to the area would be affected. Similar to impacts to drivers, construction and associated road closures and detours would briefly delay and disrupt the use and accessibility of people using other means of transportation (e.g., bicyclists, snowmobilers, pedestrians). Increased traffic and road use could result in changes in the condition of roadways causing increased maintenance requirements. Reconstruction of the Pine Airstrip is short in duration and would affect a small number of recreational visitors living outside the project area.

The magnitude of direct effects to utilities within transportation corridors would be minor because normal construction techniques do not cause service interruptions. If accidental disruption were to occur, it would be restored quickly, affecting only a local geographic area.

3.2.3 Alternative C – Anderson Ranch Dam Three-Foot Raise

The direct and indirect impacts for Alternative C – Anderson Ranch Dam 3-foot raise are identical to the direct and indirect impacts for Alternative B (Figure 1), with several key differences. As described below, Alternative C would require fewer haul trucks, less construction duration, no structural modifications which would require closures of the Pine Bridge, and no realignment or relocation to the Pine Airstrip requiring an airstrip closure. All other impacts would remain the same as Alternative B and are not repeated here.

3.2.3.1 Construction

For the purpose of this analysis, 44 months is used as the duration of project impacts. Compared to Alternative B, the increase in time required for a transportation user to travel the detour route would decrease to approximately 40 months, but no delays would occur waiting for the traffic signal at Pine Bridge.

3.2.3.2 Roads and Bridges

Figure 1 shows roads with proposed roadwork and proposed detours, and Table 3 provides a summary of affected roadways. Similar to Alternative B, the longest road closure is HD 134 from the junction of NFS Road 134C to HD 120 that would last for the duration of dam construction (approximately 40 months).

3.2.3.3 Construction Traffic

Trucks hauling material from Mountain Home would share approximately 22 miles of U.S. 20 with the public. The public would not share the roadway with construction traffic around the Dixie Borrow Pit and staging area and closed portions of HD 134, but the public would share roads with construction vehicles for approximately 11 miles on the haul routes using existing roads HD 121, HD 120, and approximately 2 miles of the open portions of HD 134. Most of the haul routes are on unpaved roads, and two of the haul routes are steep. The total length of the haul routes is approximately 14 miles (not including the dam crest). A turnaround is proposed at the Elk Creek boat ramp parking area approximately 0.5 mile upstream of the dam on HD 120 (Figure 1).

As described in the 6-foot Dam Raise Engineering Summary (Appendix C), constructing the dam raise and reservoir rim improvements would require truck shipments of construction materials (via dump trucks, asphalt trucks, and concrete trucks) and transporting workers to project sites.

For Alternative C, approximately 20,000 truck trips (round trip) of local material (from Dixie Pit and HD 121 borrow areas) would be hauled on the closed road (HD 134) and haul route (HD 121) for dam construction. Approximately 1,800 truck trips (round trip) of Zone 2A commercial material from Mountain Home would be transported along U.S. 20 to the Dixie turnoff and then along HD 134 to the dam construction site. Approximately 900 truck trips (round trip) of road fill from Mountain Home would be transported along U.S. 20 to the HD 131 turnoff and then along HD 131 for road improvements along the length of HD 131.

For construction at the reservoir rim project locations, the following materials would be transported up to 55 miles (one way) from the Mountain Home vicinity.

- Riprap = 8,000 cy
- Imported borrow = 16,000 cy
- Imported gravel = 4,000 tons
- Base course = 270 tons
- Structural backfill = 800 cy
- Concrete = 550 cy

The combined volume of these materials expected to require approximately 1,620 truck trips over 305 working days of construction. The reservoir rim projects are expected to be constructed in spring, summer, and fall (March to November). Based on information available in the 6-foot Dam Raise Engineering Summary (Appendix C), the estimated number of construction truck trips is summarized relative to available ADT in Table 5 by route and by road segment.

As summarized in Table 5 and Figure 3, the additional construction (haul truck) round trips per day on public-accessible roadways would range as follows for C1 and C2.

- C1–Low of 1 (on HD 120 in summer 2026) to a high of 96 (on U.S. 20 in fall 2025, with 31 turning off onto HD 131, 13 turning off onto HD 134, and 52 continuing to the HD 61 turnoff)
- C2–Low of 1 (on HD 120 in summer 2026) to a high of 98 (on U.S. 20 in fall 2025, with 31 turning off onto HD 131, 15 turning off onto HD 134, and 52 continuing to the HD 61 turnoff).

This is approximately an 18% reduction compared to Alternative B. Construction traffic on the closed section of HD 134 is not included in the effects to traffic analysis because this road would be closed to the public for the duration of construction, identical to Alternative B.

Table 5. Alternative C for both construction methods is estimated additional construction haul truck counts by haul route compared to average daily count. C1 refers to the downstream embankment raise, C2 refers to the MSE wall raise.

Alternative	Haul Route	Baseline Traffic Levels (ADT)	FHWA (2017) Level of Service (LOS) B	Added Round Trips Per Work Day	Duration (Work Days)	Total Added Construction Round Trips
C1	U.S. 20 - HD 134 (open and closed segments)	U.S. 20: 1,910 (Spring: Mar-May); 3,200 (Summer: Jul-Aug); 2,565 (Fall: Sep-Nov) HD 134: Not available	U.S. 20: 8,500 HD 134: 2,200	13 (ongoing)	140	1,800
C1	HD 134 (closed segment)	Road closed for construction so no baseline ADT to affect	Not applicable	114 (ongoing)	140	9,600a
C1	HD 121	Cow Creek Bridge: 20	2,200	29 (ongoing)	140	2,400a
C2	U.S. 20 - HD 134 (open and closed segments)	U.S. 20: 1,910 (Spring: Mar-May), 3,200 (Summer: Jul-Aug); 2,565 (Fall: Sep-Nov) HD 134: Not available	U.S. 20: 8,500 HD 134: 2,200	15 (ongoing)	118	1,800

Alternative	Haul Route	Baseline Traffic Levels (ADT)	FHWA (2017) Level of Service (LOS) B	Added Round Trips Per Work Day	Duration (Work Days)	Total Added Construction Round Trips
C2	HD 134 (closed segment)	Road closed for construction therefore no baseline ADT to affect.	N/A	136 (ongoing)	118	9,600a
C2	HD 121	Cow Creek Bridge: 20	2,200	34 (ongoing)	118	2,400a
C1 and C2	U.S. 20 - HD 131	U.S. 20: 1,910 (Spring: Mar-May); 3,200 (Summer: Jul-Aug); 2,565 (Fall: Sep-Nov) HD 131: Cow Creek Bridge: 20	U.S. 20: 8,500 HD 131: 2,200	30 (Spring 2025)	30	900
C1 and C2	U.S. 20 - HD 61	U.S. 20: 1,910 (Spring: Mar-May); 3,200 (Summer: Jul-Aug); 2,565 (Fall: Sep-Nov) Pine Creek Bridge: 1,252 (Seasonal [Peak] 1,879)	U.S. 20: 8,500 HD 61: 2,200	24 (Summer 2025) 52 (Fall 2025)	305	770
C1 and C2	U.S. 20 - HD 61 - HD 128	U.S. 20: 1,910 (Spring: Mar-May); 3,200 (Summer: Jul-Aug); 2,565 (Fall: Sep-Nov) Pine Creek Bridge: 1,252 (Seasonal [Peak] 1,879) HD 128: Not available	U.S. 20: 8,500 HD 61 and HD 128: 2,200	8 (Spring 2026)	305	619

Alternative	Haul Route	Baseline Traffic Levels (ADT)	FHWA (2017) Level of Service (LOS) B	Added Round Trips Per Work Day	Duration (Work Days)	Total Added Construction Round Trips
C1 and C2	U.S. 20 - HD 131 - HD 121 - HD 120	U.S. 20: 1,910 (Spring: Mar-May); 3,200 (Summer: Jul-Aug); 2,565 (Fall: Sep-Nov) HD 131, HD 121, HD 120: Cow Creek Bridge: 20	U.S. 20: 8,500 HD 131, HD 121, HD 120: 2,200	31 (Fall 2025) 10 (Spring 2026) 1 (Summer 2026) 3 (Fall 2026)	305	678

a = Assumes of the 12,000 loads of locally excavated material to be used for compacted zoned fill (estimated based on 3-foot Dam Raise Engineering Summary (Attachment 2), Appendix D) that 80% (9,600 loads) would come from Dixie Pit and 20% (2,400 loads) would come from the borrow areas along HD 121 when the Spillway Bridge is closed.

For all construction projects, construction workers are expected to commute daily from Mountain Home and nearby areas to the construction sites. Approximately 30 workers are expected to commute to the dam construction site and approximately 30 workers are expected to commute to the reservoir rim construction sites, arriving in the morning and departing in the evening. Between the hours of 7 a.m. and 9 a.m. and 4 p.m. and 6 p.m., approximately 60 worker trips are expected daily.

Together, construction worker trips and delivery of materials would result in an estimated 158 (60 worker and 98 [C2] haul truck) additional trips per day during peak travel hours and peak construction season, representing the worst case (U.S. 20 in fall 2025). These roundtrips would equate to a maximum increase in ADT of 316 vehicles (196 trucks), approximately 9% less than with Alternative B2. During the nonpeak hours, such as the middle of the day, and off-season construction days, traffic would be much lower due to less construction and worker commute traffic.

During peak hours and construction season, an increase of 316 vehicles to the baseline LOS volumes would not represent a significant impact because the increase in vehicle traffic would not exceed the baseline LOS for any road segment. For example, with U.S. 20, during the peak construction (fall 2025), the additional 316 daily round trips (Figure 3) is still below the significance criteria for all vehicles (8,500) and trucks (850). ADT values are less available for HD roads, but, for the two locations available, the increase would be 52 daily round trips at Pine Bridge and 31 daily round trips at Cow Creek Bridge (Figure 3), which is still below the significance criteria for all vehicles (2,200) and trucks (220). Reclamation expects that construction would not be concurrent on all routes and all projects, which would reduce the frequency and duration of the maximum number of truck and worker trips.

Construction may require oversized vehicles and weight or height limitations, but Reclamation would upgrade existing roadways as needed so construction equipment access would not be restricted.

Similar to Alternative B, Reclamation expects that the overall increase in vehicle traffic would cause minor deterioration of local roads, and Reclamation would require contractors to repair damage and restore roadways to conditions similar to those before construction. Increased traffic delays are not expected to impact the ability of emergency personnel to respond to an incident because delays would be short term and intermittent. The effects of road closures on safety are described in the Safety Specialist Report in Appendix B of the EIS.

Similar to Alternative B, road repairs on HD 61, HD 120, and HD 128 would result in one-lane closures. Duration of traffic delays depends on the length of the segment and signaling technique. The community of Pine would be affected because both western and eastern access points would experience road repairs and delay.

Table 4 provided for Alternative B provides a summary of the direct impacts to traffic associated with bridge and road closures under Alternative C.

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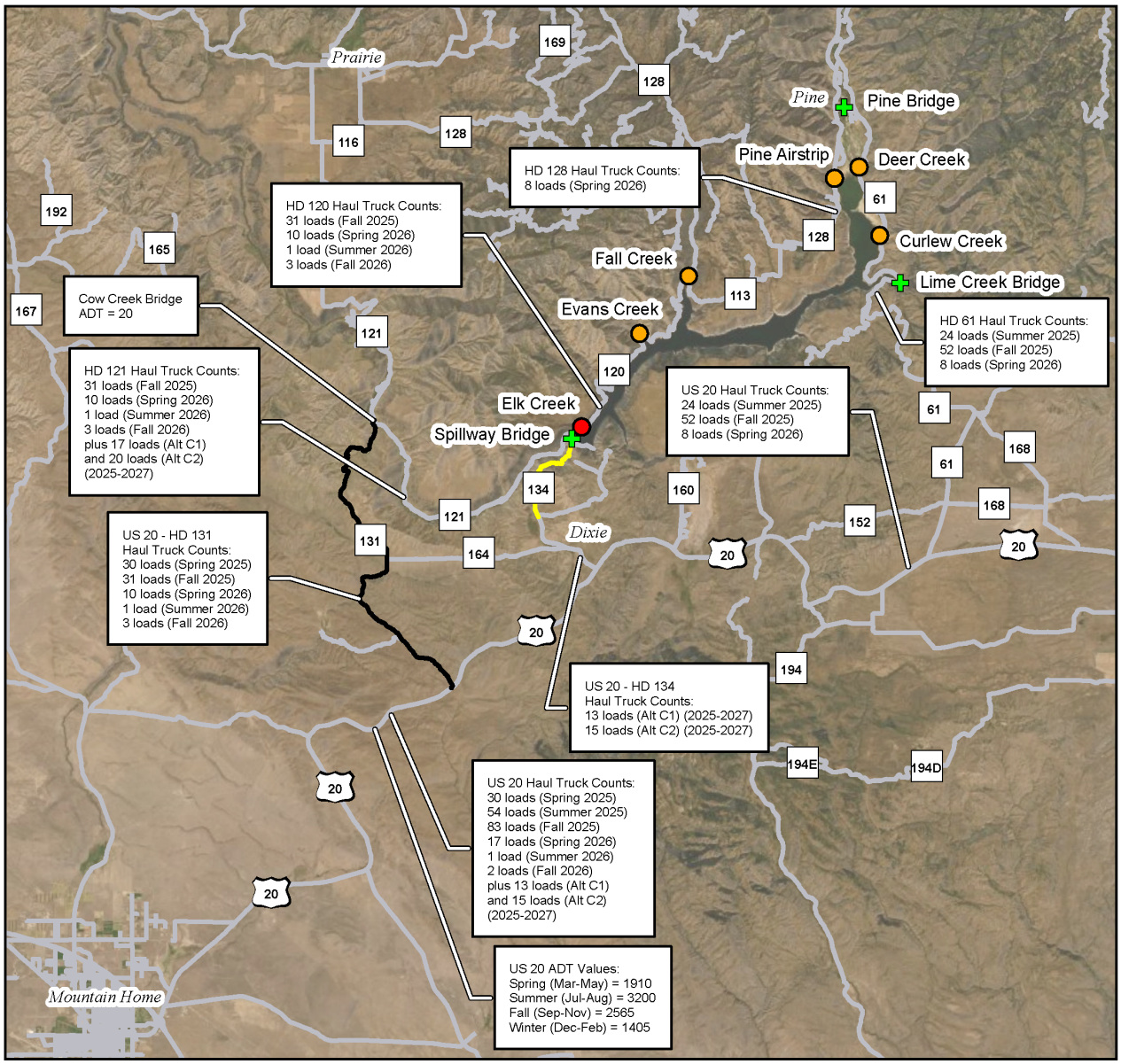

LEGEND

- **Roadway**
- **Roadway Closure**
- **Proposed Detour**
- **Boat Ramp**
- **Boat Ramp Closure**
- **Bridge**

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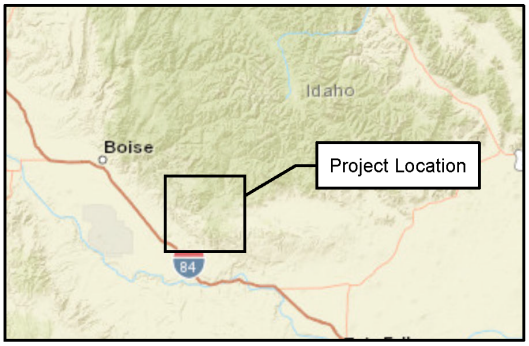

Notes:

1. This map is provided as-is and may contain representations of property boundaries. It is intended for general references only. None of the parties involved in preparing this map or data contained herein warrant or represent information to be complete and accurate and cannot be held responsible for errors or omissions.
2. Average Daily Traffic (ADT) Sources:
   Pine Bridge (2018 estimate): Western Federal Lands (WFL). 2015.
   Cow Creek Bridge (2016 estimate): Idaho Transportation Department (ITD). 2018.
   US 20 (2018 data): https://apps.itd.idaho.gov/apps/roadwaydata/Maps/ATR_WIMmap_map.html

Figure 3: Transportation Alternative C Boise Project - Arrowrock Division Boise River Basin Feasibility Study

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3.2.3.4 Pine Airstrip

Alternative C would elevate the reservoir water surface elevation, but not enough to inundate the Pine Airstrip runway and runway protection zone. Construction of an MSE wall to protect the airstrip is not expected to impact transportation.

3.2.3.5 Utilities

Utility impacts would be the same as Alternative B.

3.2.3.6 Recreational Access

Recreational access would be impacted during the approximately 40-month construction period in the areas around the reservoir and immediately downstream of the dam along the South Fork Boise River. Aside from the shorter duration, the effects to recreation access would be the same as Alternative B.

3.2.3.7 Post-Construction

Post-construction impacts would be the same as Alternative B.

3.2.3.8 Summary of Direct and Indirect Impacts

In contrast to Alternative B, Alternative C would require fewer haul trucks, less construction duration, no direct impacts to Pine Bridge, and no direct impacts to Pine Airstrip. However, similar to Alternative B, the potential magnitude of the direct effects of Alternative C is moderate because traffic delays would be experienced by all residents north of the reservoir and recreational users for approximately 51 months. All other direct and indirect impacts would remain the same as Alternative B.

3.2.4 Cumulative Impacts

Cumulative effects are analyzed for the Alternative B and Alternative C. Cumulative effects are those that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. The cumulative effects analysis considers projects, programs, and policies that are not speculative and are based on known or reasonably foreseeable long-range plans, regulations, operating agreements, or other information that establishes them as reasonably foreseeable. While no present actions are identified, Reclamation has identified two past actions: Pine Bridge replacement and the 4-foot Anderson Ranch Dam crest raise for security enhancement. Reclamation has also identified two potential future projects to be considered for the cumulative impact analysis: Cat Creek Energy Project and South Fork Boise River Diversion Project. Additional project proposal information for these, as known by Reclamation to date, is provided in Chapter 2 of the EIS.

The proposed 2025 dam construction date is well removed in time from the 2018 installation of the newly replaced Pine Bridge and the 2010 construction of the security berm along the dam crest. Any potential direct or indirect impacts to transportation from the proposed Pine

Bridge construction or dam raise would not be additive; therefore, no cumulative impacts to transportation are identified for these past actions.

The CCE Project and South Fork Boise River Diversion Project would both impact local roads. In the unlikely scenario two or more of the projects would be constructed simultaneously, depending on the specific locations of the CCE and South Fork Boise River Diversion projects, roads within the project area may see increased traffic during construction. For example, U.S. 20, HD 134, and HD 61 would experience increased baseline levels of construction traffic that may or may not represent a temporary change in LOS. Any cumulative impacts to transportation, although not expected to be significant, would be dependent on activities developed for construction and operations of the Cat Creek Energy Project and the South Fork Boise River Diversion Project.

3.2.5 Mitigation

The following plans could help reduce affects to transportation and infrastructure for Alternative B and Alternative C include the following.

- Provide a Transportation Management Plan to communicate closures and delays with the public.
- Use high-tech road signaling or increased use of flaggers to reduce vehicle wait time at single-lane road and bridge sections.
- Coordinate winter maintenance so that detours and single-lane roads are cleared adequately during both weekdays and weekends.
- Ensure utility relocation plans are in place to minimize or eliminate service disruption.
- For NFS roads, meet USFS standards and guidelines (including BMPs) regarding location and design in future road construction.
- For HD roads, meet Highway District standards and guidelines (including BMPs) regarding location and design in future road construction.

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