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**Four Rivers Field Office
Northwest Ada County Rights-of-Way Corridors
Environmental Assessment**

U.S. Department of the Interior
Bureau of Land Management
Boise District
Four Rivers Field Office
3948 Development Avenue
Boise, ID 83705

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ACRONYMS

ACEC	Area of Critical Environmental Concern
ACHD	Ada County Highway District
AUM	Animal Unit Months
BLM	Bureau of Land Management
BMPs	Best Management Practices
CCA	Candidate Conservation Agreement
CDC	Conservation Data Center
CFR	Code of Federal Regulations
cfs	Cubic Feet Per Second
CO	Carbon Monoxide
CY	Cubic Yards
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Element Occurrence
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FLPMA	Federal Land Policy and Management Act of 1976
FMU	Fire Management Unit
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish and Game
IDWR	Idaho Department of Water Resources
ITD	Idaho Transportation Department
kV	Kilovolt
LEPA	<i>Lepidium papilliferum</i> [Slickspot Peppergrass]
M3	M3 Eagle LLC
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NRHP	National Register of Historic Places
O ₃	Ozone
OHV	Off-Highway Vehicle
Pb	Lead
PM	Particulate Matter
R&PPA	Recreation and Public Purposes Act
RMP	Resource Management Plan
ROW	Right-of-Way
SH-16	State Highway 16

SH-55	State Highway 55
SHPO	State Historic Preservation Office
SO ₂	Sulfur Dioxide
SO _x	Sulfur Oxides
SSPs	Special Status Plants
TPL	The Trust for Public Land
U.S.	United States
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
VTD	Vehicle Trips Per Day
VRM	Visual Resource Management
WDNR	Washington Department of Natural Resources

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1.0 INTRODUCTION

This Environmental Assessment (EA) discloses the environmental consequences of three Rights-of-Way (ROW) corridors¹ proposed by M3 Eagle LLC (M3) in the foothills of northwestern Ada County, Idaho on public land administered by the U.S. Department of the Interior, Bureau of Land Management (BLM). The EA is a site-specific analysis of potential impacts that could result from implementing the proposed action or alternatives. The EA assists the BLM in project planning and compliance with the National Environmental Policy Act (NEPA). The EA provides a basis from which a determination on the level of environmental impacts may be judged. If the decision maker determines that the project has significant impacts that cannot be adequately mitigated, then an Environmental Impact Statement (EIS) may be prepared for the project. If the impacts are determined to be less than significant, a Finding of No Significant Impact would be prepared and a Decision Record may be signed for the EA.

Recent interest in northwest Ada County as an area with residential and commercial growth potential has spurred a number of project proposals and planning efforts by a variety of organizations including public agencies, citizen groups, and private interests. Demand for residential and commercial growth in the area has shifted land use patterns and increased strain on existing infrastructure. As surrounding communities experience population growth, it has become apparent that there are additional infrastructure needs in the area.

In order to help alleviate the strain on existing infrastructure and respond to growth demands, M3 proposes to develop approximately 6,015 acres of private land located approximately 4 miles north of downtown Eagle, Idaho, between Willow Creek Road and State Highway 16 (SH-16) (Figure 1-1). The M3 Eagle development is a comprehensive master planned community that would provide a variety of housing, employment, recreational, educational, equestrian, open space, and cultural opportunities integrated into the City of Eagle. The start of construction for the development would be based on market conditions and is currently planned to begin sometime between 2013 and 2014.

1.1 NEED FOR AND PURPOSE OF ACTION

The City of Eagle, in its Comprehensive Plan, (2009; p.74) promoted the idea of Linder Road as one of the main north/south internal connections in the North Eagle Foothills Planning Area. The Ada County Highway District (2008 p. 3-14, 5-35), in its Northwest Foothills Transportation Study also identified the Linder Road access route as a potential arterial road. In addition, the City of Eagle (2007; p. 114) has identified the requirement for future

¹The term corridor is used in the general sense in this EA and does not imply a specific designation as under the Federal Land Policy and Management Act or in Land Use Plans.

development to manage storm water runoff in the North Eagle Foothills Planning Area. If constructed, the proposed project would meet specific terms and conditions set forth by the City of Eagle in the Pre-annexation and Development Agreement for M3, and would provide established access for future transportation and infrastructure improvements within the City of Eagle's area of impact. M3 requires authorization from BLM to construct the proposed roads and drainage improvements on public land and has submitted three applications for ROW that are analyzed in the EA.

BLM is responding to M3's applications for ROW as directed by Code of Federal Regulations (CFR) Title 43, Part 2800. This regulatory directive addresses ROW authorizations by BLM on public lands under the Federal Land Policy and Management Act of 1976 (FLPMA) and directs the use of ROW on public lands through requirements that are designed, in part, to protect the natural resources associated with public lands and coordinates with state and local governments and individuals.

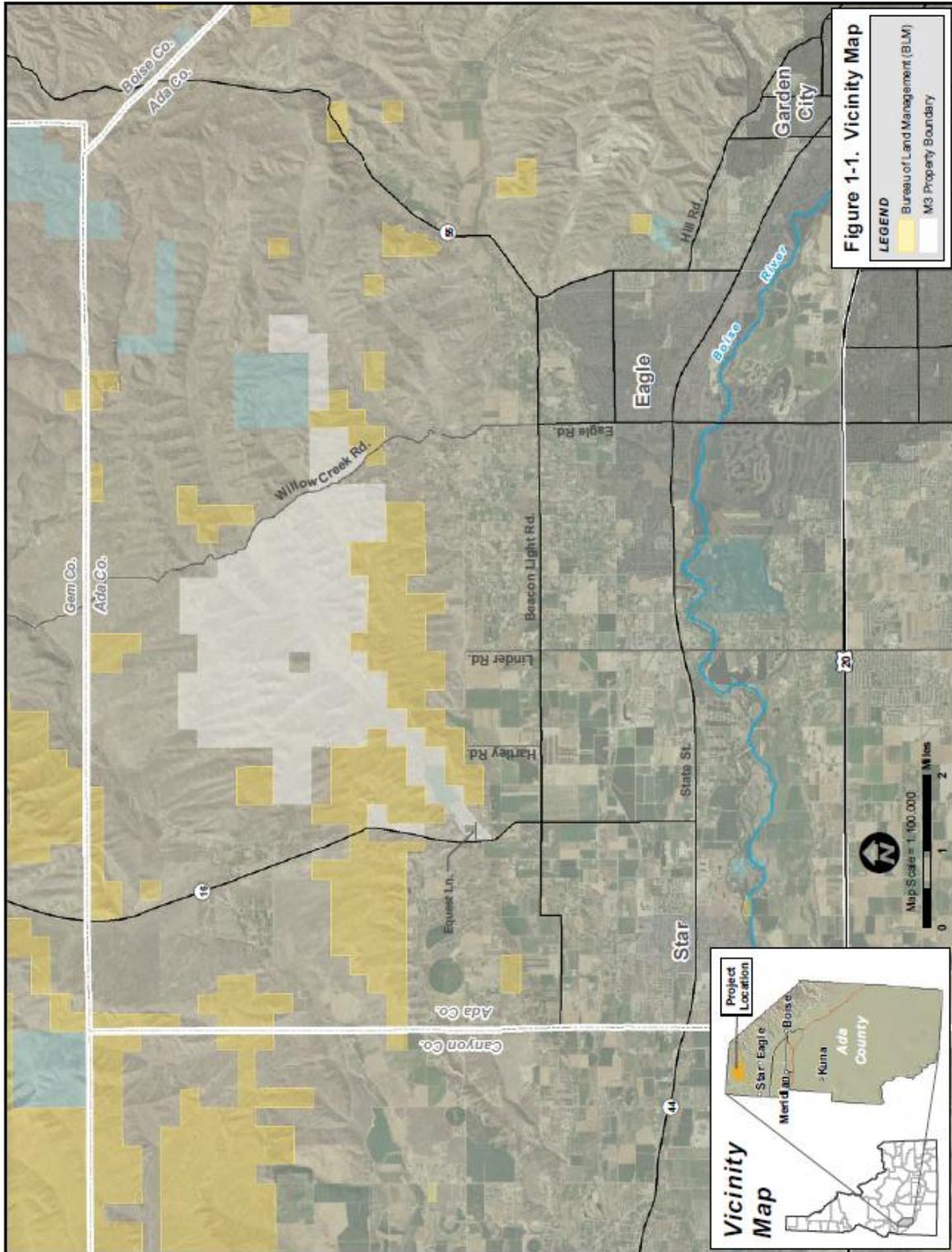
1.2 SUMMARY OF PROPOSED ACTIONS

The proposed action would be for BLM to approve or deny the following ROW applications filed by M3:

- The SH-16 Access ROW serialized under case file #IDI-35854 would accommodate a main east-west arterial transportation corridor designed to connect SH-16 to the M3 Eagle planned development.
- The Linder Road Access ROW serialized under case file #IDI-36222 would accommodate a north-south arterial transportation corridor to the M3 Eagle planned development.
- The Big Gulch Drainage Channel ROW serialized under case file #IDI-36341 would be used to channelize the floodplain of Big Gulch and direct and detain runoff. This ROW would also be used for a linear public park and trail system.

All three ROW corridors are proposed for indefinite year-round use and access. Any future utility rights-of-way applied for including water, power, gas, sewer and communications could be co-located within either of the two access ROW corridors. M3 would provide funding for the construction and maintenance for each of the ROW they have applied for. The roadways would be connected to other arterial streets within the M3 Eagle planned development and could be dedicated as part of that roadway system to Ada County Highway District pending future agreements between all parties involved.

Figure 1-1. Vicinity Map



1.3 LOCATION AND SETTING

The proposed ROW corridors would be located in northwest Ada County approximately 4 miles north of the City of Eagle, Idaho, and east of SH-16 (Figure 1-1). A mixture of farmlands and rural residential properties border the proposed ROW areas to the south, transitioning into suburban residential development associated with the City of Eagle. Areas to the north are foothill rangelands interspersed occasionally with irrigated agriculture and rural residences. The foothills to the north rise in elevation to the Willow Creek drainage before descending steeply towards the Payette River Valley. The ROW corridors are proposed in Township 5N, Range 1W, Sections 21, 22, 23, 26, 27, and 28.

In November 2009, the City of Eagle annexed 5,927 acres of the M3 property for a planned community in the Foothills north of Eagle. This area occurs just north and east of the proposed ROW. At the same time, the City also annexed an area including a 1,915-acre parcel of land administered by the BLM which would be traversed by the Linder Road ROW. BLM continues to have jurisdiction over this parcel.

1.4 CONFORMANCE WITH APPLICABLE LAND USE PLAN

The proposed ROW corridors cross BLM administered public lands (public land) located within the Four Rivers Field Office. The applicable land use plan is the Cascade Resource Management Plan (RMP) (BLM 1988) as amended.

The RMP identifies areas available for various types of ROW, including the proposed ROW areas (BLM 1988; Map 6). New ROW authorizations may be considered if there is a demonstrated need and the resource conflicts are low or can be mitigated. Further RMP guidance on issuing new ROW encourages BLM to authorize new ROW within or adjacent to existing ROW as much as possible except where specifically identified in the RMP for avoidance (BLM 1988).

The Vegetative Resource Objective in the Cascade RMP provides that areas found to contain candidate or sensitive plants should be fenced where harmful disturbance is likely. The RMP further states that surface and subsurface ROW authorizations should be excluded in areas containing candidate or sensitive plants. For the proposed SH-16 and Linder Road ROWs, two years of survey for slickspot peppergrass (a sensitive plant species proposed for listing as Endangered (USFWS 2008) under the Endangered Species Act (ESA), 1973, as amended) demonstrated that the slickspots within the area of disturbance anticipated in construction, operation, and maintenance of the ROW corridors do not contain slickspot peppergrass. Because the proposed ROW would avoid known plant locations where possible, disturbance of the areas known to contain slickspot peppergrass would affect less than 0.1 acres of

occupied habitat. Therefore, this proposal complies with the Cascade RMP Vegetative Resources Objective to protect candidate and sensitive plants.

1.5 RELATIONSHIP TO STATUTES, REGULATIONS, AND OTHER REQUIREMENTS

The proposed action and alternatives comply with relevant federal acts and state statutes that are discussed below:

- **FLPMA, as amended, 43 U.S.C. 1701 et seq.** – This legislation provides the framework for BLM to manage public lands in perpetuity for the benefit of present and future generations. It defines BLM’s mission as one of multiple use and vests the Secretary of the Interior with the authority to grant, issue, or renew ROW over, upon, under, or through public lands.
- **Administrative Procedures Act (APA)** – The APA, Pub. L 79-404, 60 Stat. 237, enacted June 11, 1946, is the United States federal law that governs the way in which administrative agencies of the federal government of the United States may propose and establish regulations. The APA also sets up the process for the United States federal courts to directly review agency decisions.
- **NEPA, 42 U.S.C. 4321 et seq.** – This basic charter for protection of the environment establishes policy, sets goals, and provides means for BLM to insure that environmental information is available to public officials and citizens before decisions are made and actions are taken.
- **CFR Title 43, Part 2800** – This regulatory directive addresses ROW authorizations by BLM on public lands under the FLPMA and includes requirements that are designed, in part, to protect the natural resources associated with public lands.
- **ESA, as amended, 16 USC 1531** – Section 7 of the ESA outlines the procedure for federal interagency cooperation to conserve federally listed species and their designated habitats. Section 7(a) (2) of the ESA states that each federal agency shall, in consultation with Secretary of the Interior, ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of their habitats within the project area. One plant species formerly listed as threatened under the ESA (USFWS 2009), slickspot peppergrass, occurs near the proposed ROW alignments. A biological assessment was prepared and Section 7

consultation with the U.S. Fish and Wildlife Service was performed in accordance with the ESA. The USFWS Biological and Conference Opinion concluded that the project would not likely jeopardize the existence of slickspot peppergrass or adversely effect proposed critical habitat for the species. Details on the consultation are described in Section 4.2.3. In August 2012, the final rule listing slickspot peppergrass as a threatened species under the ESA was vacated by the U.S. District Court (U.S. District Court 2012). This plant species is still managed by the BLM as a Type 1 species and is considered “Proposed Endangered” (USFWS 2008).

- **Candidate Conservation Agreement (CCA) for *Lepidium papilliferum* (slickspot peppergrass) and Slickspot Peppergrass Conservation Agreement** – The CCA for slickspot peppergrass (BLM 2003a) and the Slickspot Peppergrass Conservation Agreement (BLM 2006a), as updated in 2009 (BLM 2009a), amend the 1988 RMP (BLM 1988). The CCA between the BLM, the State of Idaho, Idaho National Guard, and Nongovernmental Cooperators, as amended, applies to management of slickspot peppergrass. The conservation measures identified in the CCA have been developed to address concerns at three interrelated levels: 1) the LEPA Consideration Zone; 2) specified management areas; and 3) specific priority element occurrences (EO, habitat where plants are known to occur). The proposed action alternatives are consistent with the conservation measures identified in the CCA.

The Conservation Agreement of 2006, as updated in 2009 (BLM 2009a) between the BLM and the U.S. Fish and Wildlife Service provides conservation measures for slickspot peppergrass in the Four Rivers Field Office. The conservation measures described in the Conservation Agreement provide programmatic management direction for slickspot peppergrass. The proposed actions comply with the Conservation Agreement by: 1) requiring a project level inventory of slickspot peppergrass occurrences and habitat; 2) modifying the proposed actions to avoid and minimize anticipated impacts to slickspot peppergrass; and 3) conserving remaining stands of sagebrush. The Agreement states that project-level inventories would be completed as appropriate during project planning if inventory information is not available or adequate to determine if impacts to the species or habitat may occur. If direct or indirect negative impacts to the species or its habitat are anticipated as a result of new BLM actions, the activity would be modified to avoid or minimize anticipated negative impacts.

- **Federal Noxious Weed Act of 1974 as amended and Executive Order 13112 on Invasive Species dated February 3, 1999** – The proposed action would be in conformance with the Final Programmatic EIS for Vegetation Treatments Using Herbicides on BLM Lands in the 17 Western States (BLM 2007a) and the Noxious and Invasive Weed Treatment for the Boise District and Jarbidge Field Office EA (BLM 2007b).
- **Cultural Resource Laws and Executive Orders** – BLM is required to consult with Native American tribes to “help assure (1) that federally recognized tribal governments and Native American individuals, whose traditional uses of public land might be affected by a proposed action, would have sufficient opportunity to contribute to the decision, and (2) that the decision maker would give tribal concerns proper consideration” (U.S. Department of the Interior, BLM Manual Handbook H-8120-1). Tribal coordination and consultation responsibilities are implemented under laws and executive orders that are specific to cultural resources which are referred to as “cultural resource authorities,” and under regulations that are not specific which are termed “general authorities.” Cultural resource authorities include the National Historic Preservation Act of 1966, as amended, the Archaeological Resources Protection Act of 1979, and the Native American Graves Protection and Repatriation Act of 1990, as amended. General authorities include the American Indian Religious Freedom Act of 1979, the NEPA of 1969, the FLPMA of 1976, and Executive Order 13007-Indian Sacred Sites. The proposed action is in compliance with the aforementioned authorities.

Southwest Idaho is the homeland of two culturally and linguistically related tribes: the Northern Shoshone and the Northern Paiute. In the latter half of the 19th century, a reservation was established at Duck Valley on the Nevada/Idaho border west of the Bruneau River. The Shoshone-Paiute Tribes residing on the Duck Valley Reservation today actively practice their culture and retain aboriginal rights and/or interests in this area. The Shoshone-Paiute Tribes assert aboriginal rights to their traditional homelands as their treaties with the United States, the Boise Valley Treaty of 1864 and the Bruneau Valley Treaty of 1866, which would have extinguished aboriginal title to the lands now federally administered, were never ratified.

Other tribes that have ties to southwest Idaho include the Bannock Tribe and the Nez Perce Tribe. Southeast Idaho is the homeland of the Northern Shoshone Tribe and the Bannock Tribe. In 1867, a reservation was established at Fort Hall in

southeastern Idaho. The Fort Bridger Treaty of 1868 applies to BLM's relationship with the Shoshone-Bannock Tribes. The northern part of the BLM's Boise District was also inhabited by the Nez Perce Tribe. The Nez Perce signed treaties in 1855, 1863 and 1868. BLM considers off-reservation treaty-reserved fishing, hunting, gathering, and similar rights of access and resource use on the public lands it administers for all tribes that may be affected by a proposed action.

Additional statutes and regulations and other requirements as they relate to specific resources are addressed in Chapter 3 of this EA.

1.6 SCOPING AND DEVELOPMENT OF ISSUES

This section describes the resources and resource uses of concern that were identified through internal and external scoping efforts. Internal scoping included resource specialists that identified resource concerns to be carried forward for analysis in this EA. External scoping efforts included a newsletter to interested publics, and a public meeting held in Eagle, Idaho on November 20, 2008, with solicitation of public comment. Fifty nine individuals submitted comments covering a wide variety of issues. All substantive issues were incorporated into a scoping report document which was distributed on November 16, 2009 to 55 recipients consisting of federal, state and local agencies, special interest groups, and private individuals. In addition, 244 individuals who attended Eagle City council meetings and showed interest in the M3 project were sent post cards notifying them of on-line availability and instructions to download the scoping report from the World Wide Web.

As the grazing permittees were inadvertently left off the scoping report mailing list, they were sent similar postcards on April 16, 2010. All of the public comments and comment summaries are available in the project decision file. Scoping identified the following issues for analysis:

1.6.1 Water Quality

Authorizing the Big Gulch Drainage Channel ROW for improvements to convey drainage could affect ground and surface water. The drainage system could affect subsurface infiltration rates, overland flow, groundwater, and surface water levels. There are at least 25 domestic, single residence wells in the portion of northern Ada County between SH-16 and SH-55 (IDWR 2009).

1.6.2 Soils

The transportation and drainage systems proposed for the ROW corridors would involve construction operations and surface disturbance. Authorization of the ROW corridors could affect soil stability and productivity.

1.6.3 Invasive, Non-native Vegetation

Invasive and non-native vegetation is present in the proposed ROW areas. Construction and operation of the proposed ROW corridors could affect the spread of these species.

1.6.4 Special Status Species

The proposed ROW corridors could affect the following special status plants or animals:

- **Slickspot Peppergrass (Type 1)** – This species is known to occur near the Linder Road Access ROW and the SH-16 Access ROW.
- **Aase's Onion (Type 2)** – This species is known to occur approximately two miles east of the Linder Road Access ROW corridor.
- **Woven-spore Lichen (Type 2) and Compact Earth Lichen (Type 4)** – A literature review for habitat associated with these species match conditions in portions of the proposed ROW corridors (WDNR 1999).
- **Prairie Falcon (Type 3)** – This species is known to occur in the vicinity of the SH-16 Access ROW. Foraging areas could be affected by the proposed ROW corridors.
- **Loggerhead Shrike (Type 3)** – Literature review suggests that habitat is present in the vicinity of the proposed ROW areas but species distribution maps indicate no occurrences in western Ada County (State of Idaho 2009).
- **Brewer's Sparrow (Type 3)** – This species is known to occur in the vicinity of the proposed ROW areas and could be affected by ROW authorization.
- **Woodhouse's Toad (Type 3)** – This species is known to occur approximately 4 miles south of the Linder Road Access ROW corridor.

1.6.5 Wildlife

A variety of wildlife uses the proposed ROW areas. Authorization of linear ROW corridors could affect habitat suitability for some species in the proposed ROW areas where fragmentation and surface disturbance would occur. Road use could affect wildlife movement with a potential for disturbance, injury, or mortality at certain traffic levels. Aboveground utility lines could create a collision or electrical risk to birds and could increase overhead predation of avian and small mammal species.

1.6.6 Fire Management

Fires have been ignited in the project area by natural and human causes. Authorizing access ROW in this area could further affect the potential for fire ignition and spread.

1.6.7 Livestock Grazing

The proposed access ROW corridors cross public lands currently identified as being within two active grazing allotments. Construction of one or both of the proposed access ROW corridors would affect the movement of livestock within these allotments. Effects could require mitigation. The two grazing allotments that could be impacted are:

- Spring Valley (00278) – associated with the Linder Road Access ROW
- Black Canyon (00310) – associated with the SH-16 Access ROW

1.6.8 Recreation

Non-motorized Recreation – Public interest in a variety of non-motorized recreational activities in the proposed ROW corridors include: equestrian trail riding; mountain biking; walking; jogging; and opportunities for solitude. Authorization of the proposed ROW could affect recreational use of the areas. The trails proposed in this EA would be open to all members of the public. The proposed Linder Road Access ROW and Big Gulch Drainage Channel ROW are within a portion of public lands currently under a Recreation and Public Purposes Act (R&PPA) application by the City of Eagle for a regional park. Close coordination has occurred involving M3 and the City of Eagle on these ROW applications.

Access – The proposed Linder Road Access ROW would provide improved access to public land.

Hunting – The proposed ROW corridors could result in less hunting opportunities due to fragmentation of wildlife habitat and greater human presence.

1.6.9 Visual Resources

The proposed ROW areas are designated Class III visual resources in the Cascade RMP. Construction and operation of the two proposed access ROW would affect the viewshed. Construction of portions of the Big Gulch Drainage Channel ROW and the two proposed detention basins would also affect the viewshed.

1.6.10 Social and Economic

Non-market Values – The Linder Road Access and Big Gulch Drainage ROW corridors are proposed on a landscape that is valued by nearby local citizens as open space. Authorization

and operation of these ROW corridors would affect the availability of open space on public lands.

Market Values – The Linder Road extension could affect real estate values for those properties that are adjacent to the proposed ROW.

Safety – Operation of the two proposed road ROW corridors could affect public safety depending on road design. Emergency response times could be affected.

1.6.11 Cultural Resources

Construction activities and ground disturbance could disturb existing cultural resources. A segment of the Basye Freight Road (1870) transects the Big Gulch Drainage Channel and SH-16 Access ROW. Mitigation to reduce impacts would likely be required.

1.6.12 Native American Religious Concerns

Construction and operation of the proposed access ROW and modification to the Big Gulch Drainage Channel could impact tribal interests and resources, including hunting, gathering botanical resources, wildlife and plant populations, and aboriginal rights.

1.6.13 Cumulative Effects

Residential & Commercial Development – Private land holdings in the vicinity of the proposed ROW corridors are being developed for future mixed residential and commercial use. These land use changes could have cumulative effects to the resources and resource uses associated with the proposed ROW corridors.

Traffic – Traffic levels in the existing residential areas adjacent to the proposed Linder Road Access ROW could be affected. Increased traffic could affect existing school locations or designs.

Recreation – The City of Eagle filed an R&PPA Application for 1,915 acres of public land surrounding and in the vicinity of the proposed ROW corridors. This area was annexed by the City of Eagle in 2009 but remains under the jurisdiction of the BLM. The City had previously proposed the creation of a regional park with features that included an extensive pedestrian and equestrian trail system with bridges, trailheads, rodeo grounds, and an amphitheater. A Memorandum of Understanding (MOU) with the city was signed in 2011 to address the potential management of the area. Recreation on undeveloped public lands in the vicinity of the proposed ROW corridors occurs and is expected to increase. Increased

recreational use could result in cumulative effects to the resources and resource uses associated with the proposed ROW corridors.

1.6.14 Issues Considered Beyond the Scope of this Assessment

A number of public comments raised issues concerning laws, regulations, or actions which are either beyond the scope of this EA or inconsistent with laws, regulations, or policy. The following section is a list of comments (in *italics*) raised during scoping meetings or through release of the Public Scoping Document that was distributed by the BLM in November 2009. These comments are considered beyond the scope of this EA. Following the comment is a reply addressing why the comment is not applicable to this EA.

- ***BLM should consider a ROW moratorium on new applications until the plan [RMP] is revised.*** In 1946, Congress passed the APA to establish administrative procedures to regulate and standardize federal agency procedures and to ensure that federal agencies do not abuse their authorities. The APA also established administrative procedures to appeal agency decisions.

With the passage of FLPMA, Congress delegated the management of the public lands to the BLM including the authority to grant or deny the use of those public lands. BLM does not have the authority to institute a moratorium on filing of applications for use of public lands. BLM is required to process ROW applications consistent with management guidance described by the current resource management plan, the 1988 Cascade RMP.

- ***Maintain a “hands off” policy on BLM natural open space.*** FLPMA requires BLM to manage the public land for multiple use and sustained yield in a manner that protects the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, **where appropriate** (emphasis added), preserves and protects certain public lands in their natural condition; that provides food and habitat for fish and wildlife and domestic animals; and that provides for outdoor recreation and human occupancy and use.
- ***The Eagle R&PPA should not include the M3 ROW.*** The R&PPA application is a separate action that is addressed in the cumulative effects analysis of this EA.

- ***The EA should occur following the RMP and R&PPA actions.*** BLM currently manages the proposed action area under the 1988 Cascade RMP. The management decision for this EA would be made under the Cascade RMP. The BLM has determined that the R&PPA application request from the City of Eagle is not a connected action to the proposed ROW and is therefore addressed in this EA as a cumulative impact.
- ***BLM should consider the inter-related and inter-dependent actions (e.g., the R&PPA application) being considered for BLM lands in North Ada County.*** The BLM considers an action to be connected to a proposal and subject to a unified environmental review if the action could not occur without the proposal. That is, but for the proposal, the action would not be able to be completed. M3's development of its private land could happen regardless of the outcome for the city's R&PPA application. It is not a connected action to the proposed ROW; therefore it is not inter-related or inter-dependent.
- ***Land exchange should not be considered outside the RMP, BLM should maintain open space.*** Consolidation and disposal of lands are outside of the scope of this analysis.
- ***An EIS is necessary to appropriately analyze the proposed ROW.*** The BLM NEPA Handbook (H-1709-1, 2009) states that an EA analysis should be used to determine if the action would have significant effects. If the analysis shows significant effects that cannot be mitigated to a level of non-significance, then an EIS needs to be prepared.
- ***Retirement of grazing to preserve slickspot peppergrass habitat must occur as mitigation if any development proceeds here.*** A decision to retire AUMs within the affected allotments is out of the scope of the proposed action. Grazing management guidelines to preserve slickspot peppergrass habitat are presented in the 2009 Conservation Agreement between the USFWS and BLM.
- ***Collaborative efforts in obtaining more federal ownership for recreational needs, BLM land should not be fragmented for development and should be part of a SRMA.*** This issue is out of scope of this analysis. Any SRMA proposals would be considered during the land use planning process.

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2.0 DESCRIPTION OF THE ALTERNATIVES

2.1 ALTERNATIVE DEVELOPMENT PROCESS

The proposed alternatives include a range of options to enhance traffic and drainage infrastructure in the foothills of northwest Ada County. These alternatives recognize existing infrastructure, topography, surface disturbance, and land owner concerns. The alternatives have been developed based on the City of Eagle Comprehensive Plan and Ada County Highway District's (ACHD) preferred road network, including the Northwest Foothills Transportation Plan, and the Community Planning Association of Southwest Idaho's long range plan. Alternatives have been drafted and refined based on citizen meetings, communications with neighboring landowners, agency studies, preliminary planning, and a scoping process that included solicitation of public comment.

2.2 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

The alternatives are limited by factors including existing infrastructure, topography, surface disturbance, and landowner concerns and/or current agreements. Multiple property ownerships in the area were a factor in the alternative development process. The following alternatives were considered but eliminated from further analysis based on one or more of these limitations.

2.2.1 An Underground Drainage System for Big Gulch

This alternative would require a large amount of excavation and installation of underground pipes to convey storm water. From a groundwater perspective, Bureau of Land Management (BLM) and the proponent both recognize that many surrounding residents utilize wells for their water needs and that these residents are concerned about preserving existing groundwater levels. At least 25 domestic, single residence wells are present in the portion of northern Ada County between State Highway 16 (SH-16) to the west and State Highway 55 (SH-55) to the east (IDWR 2009). The underground drainage system would minimize opportunities for surface water to infiltrate the ground and recharge the aquifer beneath Big Gulch. Therefore, the underground drainage alternative was dismissed because it would provide little or no opportunity for aquifer recharge and would have relatively high surface disturbance.

2.2.2 Relocating the Big Gulch Channel to a More Northerly Location

The current channel orientation tends to drain naturally on the south side of the M3 property, crossing public land in two locations. Keeping the channel relatively straight and close to its existing alignment would not be possible with a more northerly location because the existing channel crosses the jagged shared property line between the BLM and M3. A more northerly alignment was dismissed due to the amount of grading, erosion control, concrete, and road

crossings that would result from the relocation. In addition, keeping the drainage alignment near its natural location to the south would result in less fragmentation of open space. Moving the channel to the north would create pockets of development between the channel and public land. Each of these development islands would require a channel crossing which would negatively affect the experience of the public along the public trail system planned along the channel corridor. These pockets could also cut off access to public land for some wildlife within the channel corridor.

2.2.3 Hartley Road Extension

Four alternative alignments for the Hartley Road extension were considered. Two veered east of public lands and traveled through private property. These alignments were dismissed due to landowner objections. One of these two alignments would require eminent domain actions against multiple landowners for the purchase of new rights-of-way (ROW) to replace the existing ROW that currently joins public land. The other alignment to the east was greater in length and the private landowner objected to access passing through his land.

The third and fourth alignments considered would provide a north-south corridor through public land for an extension from the current northern terminus of Hartley Road on private land to provide an additional access point to the M3 Eagle planned development. A detailed environmental analysis of these alignments was conducted prior to dropping them from consideration. One of these alignments (located further to the west on public land) was originally applied for by M3 under case file #IDI-36304. This alignment would directly impact several slickspot peppergrass EOs, a BLM Type 1 plant species. The fourth alignment was proposed further to the east to avoid known locations of slickspot peppergrass. However, due to its proximity to slickspot peppergrass EOs, impacts to this species were still anticipated. Because of the proximity of these two alignments to a BLM Type 1 plant species, these alignments would not comply with the Cascade RMP Vegetative Resources Objective to “Protect Federal candidate and sensitive plants” and would require a land use plan amendment. Therefore, these two additional alignments were dropped from further consideration.

2.2.4 Alternative Alignments for the SH-16 Access ROW

An alternative to the SH-16 Access ROW was identified that would cross through private land further north on Roseway Lane (directly east of Firebird Speedway). This route was dismissed for two reasons. First, it would impact private property. Acquiring the ROW would require an eminent domain proceeding that would involve multiple landowners. Second, it would result in an additional access point on SH-16 that is not currently planned for by Idaho Transportation Department (ITD). An increase in access points on SH-16 would conflict with

the ITD long-term access management plan and its Environmental Determination for SH-16. One of the objectives of this plan is to minimize traffic slowdown that would be caused by the frequency of high-volume access points. Therefore, this alternative was considered but dismissed.

Another alternative to the SH-16 Access ROW was considered at the same access point from SH-16 as the proposed action alternative. This alternative alignment was originally developed for the M3 Eagle planned development on private land and would split into two separate routes by way of a roundabout, providing two access points into the planned development. This alignment was dropped from consideration because it was no longer needed for the M3 Eagle planned development and because of the increased impacts to resources that would result due to greater surface disturbance needed for the road design.

2.3 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Four action alternatives and a no action alternative are described and analyzed in this Environmental Assessment (EA). The following sub-sections (2.3.1 through 2.3.4) include a description of the distinguishing features of each alternative. A detailed explanation of best management practices and design features and construction and operation and maintenance (O&M) procedures common to all proposed ROW corridors are included in Section 2.4 (Activities Common to the Action Alternatives). Best management practices and design features would include noxious weed abatement measures, landscaping and rehabilitation procedures, fire management procedures, and measures designed to minimize potential impacts to special status plants, wildlife, and cultural resources during the various phases of construction and O&M activities associated with the ROW corridors.

Three ROW corridors are proposed under each of the action alternatives, two access corridors and one drainage channel corridor. All three ROW corridors would become part of a regional transportation and drainage infrastructure network that would be interconnected to existing and future roads, trails, and drainages. The ROW corridors are proposed for indefinite year-round use and access. If the access ROW corridors are approved, it would be expected that separate ROW for utilities including water, power, gas, sewer, and communications would be applied for by the utility companies. These utilities could be placed along or within each of the two access ROW corridors, as described in Section 2.4.3.1.

M3 would provide the necessary funding for the construction and initial O&M of its proposed ROW. The roadways would be connected to arterial streets within the M3 Eagle planned development and the Big Gulch Drainage Channel would be connected to a linear regional park by virtue of trails being built along the northern and southern borders of the

channel. The roadways would eventually be dedicated to ACHD and maintained by ACHD. The Big Gulch Drainage Channel would eventually be dedicated to and maintained by the M3 Eagle Homeowner's Association or the City of Eagle, pending future agreements between M3 and the City. Maintenance of landscaping in the road and drainage channel ROW would be completed by either the M3 Homeowner's Association or the City of Eagle, pending future agreements between M3 and the City, and it would meet the same standard for City of Eagle parks. The proposed features within the ROW corridors would be permanent.

All proposed trails would be accessible to the general public. Eventual trail linkages to the future M3 Eagle development are being coordinated between M3 and the City of Eagle to incorporate the trail features of the Linder Road Access ROW and the Big Gulch Drainage ROW corridors.

Initial ROW corridors would be issued to accommodate construction activities. Construction activity could occur anywhere in these corridors; however, actual surface disturbance (cut or fill) would occur in a subset of the corridors. Upon completion of construction activities and approval of revegetation efforts, final ROW corridors would be issued for the roads, drainage channel, including associated trails and maintained landscaping.

2.3.1 Alternative 1 – No Action/Continue Current Management

The applications for each of the three proposed ROW corridors would not be approved and public lands would continue to be managed in accordance with the applicable land use plan. The roads, utilities, trails, and drainage channel proposed on public land for the action alternatives would not be constructed. Current multiple-use land management practices would continue, including seasonal livestock grazing, undeveloped recreational trails, and rare plant management. Future land use authorizations including ROW, mineral leasing, and special use permits would continue to be evaluated on a case-by-case basis.

2.3.2 Alternative 2 – Proposed Action

Three ROW corridors could be authorized (Figure 2-1):

- The Big Gulch Drainage Channel ROW (0.9 miles, 30.7 acres)
- The SH-16 Access ROW (1.5 miles, 27.4 acres)
- The Linder Road Access ROW (1.1 miles, 23.8 acres)

Details of each ROW corridor are described in the following sub-sections.

Figure 2-1. Overview of Proposed ROW Corridors – Alternative 2

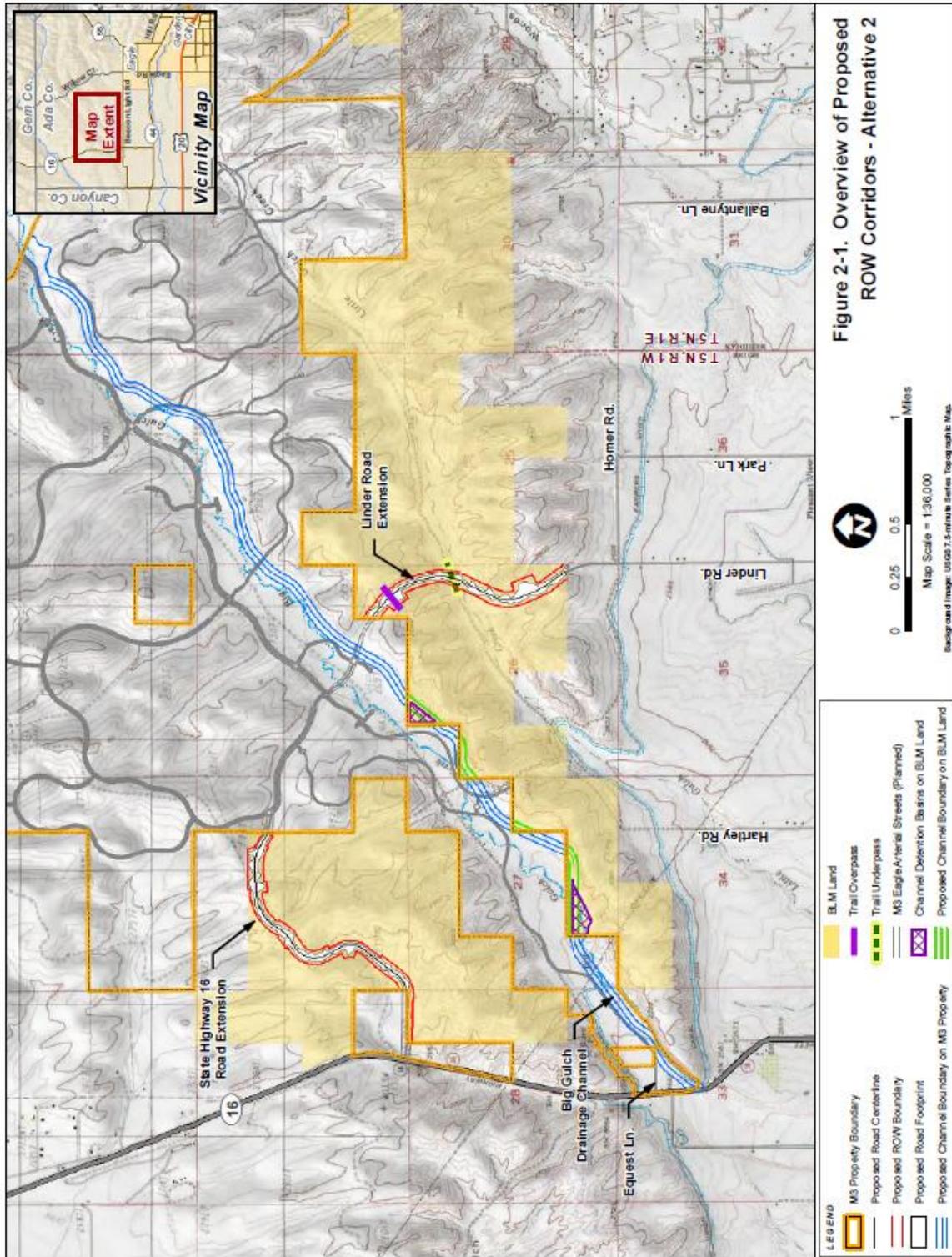


Figure 2-1. Overview of Proposed ROW Corridors - Alternative 2

2.3.2.1 Big Gulch Drainage Channel ROW

The proposed Big Gulch Drainage Channel ROW would modify the alignment of the channel corridor where it currently crosses public land in two locations, relocate the channel alignment onto public land in two new locations, and add two storm water detention basins on public land (Figure 2-2). The property line between the public land and M3 does not relate to the natural topography, and instead forms a series of 90 degree angles along hillsides and within Big Gulch. The ROW would cross four BLM property corners adjacent to the M3 Eagle planned development, of which two are currently crossed by the drainage, and would follow the natural topography at the toe of the slope at the southern edge of Big Gulch. The Big Gulch Drainage Channel ROW would modify the existing channel to a more southerly route that would cross both public and private property. On the adjacent private lands, Big Gulch would become a linear drainage and park feature extending from Willow Creek Road to SH-16, a distance of approximately 5.1 miles (Figure 2-3). The majority of this drainage feature (4.3 miles) would continue to cross private lands. Approximately 0.9 miles (4,488 feet) of the Big Gulch channel would cross public land between Willow Creek Road and SH-16; 0.3 miles (1,320 feet) is presently on public land and approximately 0.6 miles (3,168 feet) of channel would be shifted from private land onto public lands.

The entire Big Gulch drainage channel between Willow Creek Road and SH-16, as proposed, with 0.9 miles (4,488 feet) on public lands, would be altered to better define the channel, add recreation trails, improve aesthetics, and reduce the potential for flooding. Existing flow rates would not increase from natural levels, and it would primarily convey drainage from existing natural watersheds. The amount of runoff directed toward the channel would not exceed the natural flow rates inside of the Big Gulch Drainage.

The Big Gulch Drainage Channel ROW would be widened in two locations on public land to accommodate natural basin features where surface water could collect and replenish the aquifer. Excavated material may be used to construct berms along the north sides of the basins. The larger of these two detention basins would encompass approximately 10 acres. The smaller detention basin would measure approximately 2 acres. Both detention basins would be revegetated following construction and would function as public open space. The basin would have gentle 6:1 slopes and the channel would have steeper 3:1 or 4:1 slopes. River cobble and/or native plantings would line the bottom of both detention basins and the channel.

The ROW width for the channel would vary between 150 and 250 feet. The channel feature itself would vary in width from 40 to 100 feet. The remaining 110 to 150 feet of the ROW would consist of open space and a trail corridor. The channel would have a maximum depth of 3 feet and could convey up to 660 cubic feet per second (cfs) under 100-year storm conditions.

The predicted flow down gradient from the ROW under these conditions would be 369 cfs. The detention basins would be designed to hold additional water in case the Big Gulch Drainage overflowed during a large precipitation event. Figure 2-4 displays a cross-section of the drainage channel and some of the associated features. Refer to Section 2.4 (Activities Common to the Action Alternatives) for a more detailed description of landscaping and features of the Big Gulch Drainage Channel ROW. The total surface disturbance of the Big Gulch Drainage Channel ROW on public land would be 30.7 acres, of which 11.7 would be for the detention basins; the majority would be revegetated.

Multi-use trails would parallel the north (~0.6 miles) and south (~0.7 miles) sides of the channel and basin features, for a total length of 1.3 miles for the two trails (Figures 2-4 and 2-5). As for the channel, the trails would extend through public lands to connect future regional trails on adjacent private lands planned at the M3 Eagle planned development. Trails would be 10 feet wide and restricted to non-motorized vehicle uses. The northern pathway on public land would be paved with asphalt and landscaped, similar to a typical greenbelt park, to blend in with the areas to the north on private land that have been proposed for future development. This pathway would primarily serve pedestrians and bicyclists. This landscaped area would include irrigated landscaping, turf, shrubs, and trees. The southern pathway would be unpaved and planted along the margins with native vegetation to blend with the native rangelands to the south. Pathways would be accessible to walkers, runners, bikers, and equestrians.

Construction of the Big Gulch Drainage Channel and detention basins and the adjacent trails is planned to occur during the first phase of the M3 Eagle planned development. Construction of the drainage channel would take approximately one year to complete.

2.3.2.2 SH-16 Access ROW

The SH-16 Access Road ROW would provide an east-west access corridor to connect road and utilities from SH-16 to the M3 Eagle planned development. The ITD has identified this proposed access point as a possible grade-separated, high capacity intersection. This ROW would have a higher vehicle capacity than the existing SH-16 connection to the project area at Equest Lane. The existing access point off of SH-16 would continue to be used and would connect with the ROW within M3 property. The ROW would contain approximately 1.5 miles (8,055 linear feet) of road on public land, of which 1.3 miles would be located entirely on public land and 0.2 miles of the ROW would be split with approximately half of the ROW width on M3 property and half on public land in order to follow the natural topography.

Figure 2-4. Cross-Section of Big Gulch Drainage ROW – Alternative 2.

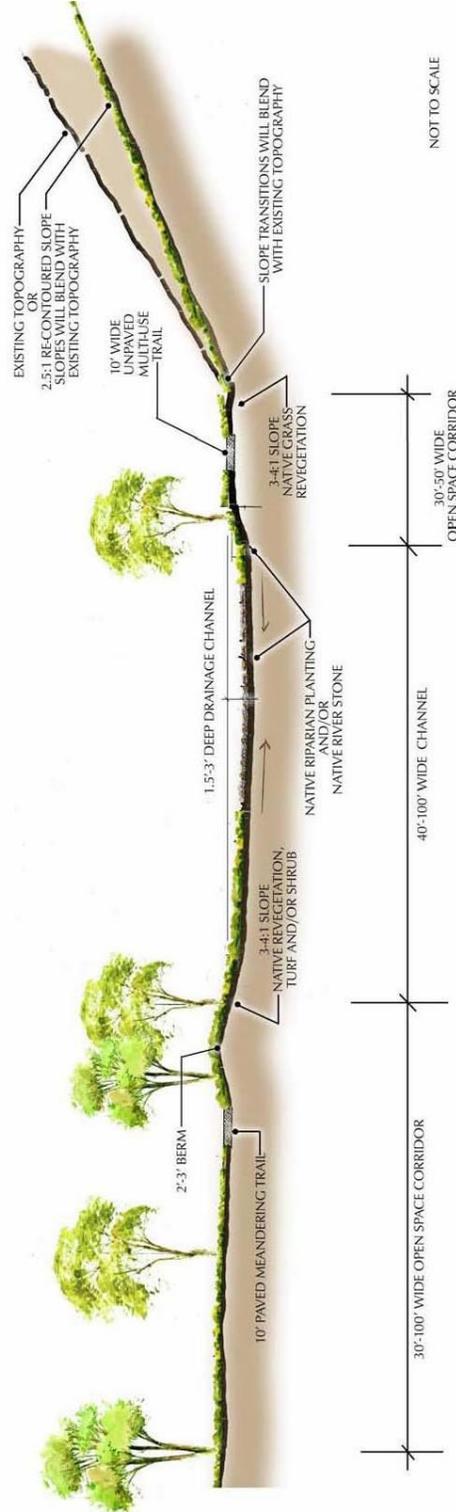
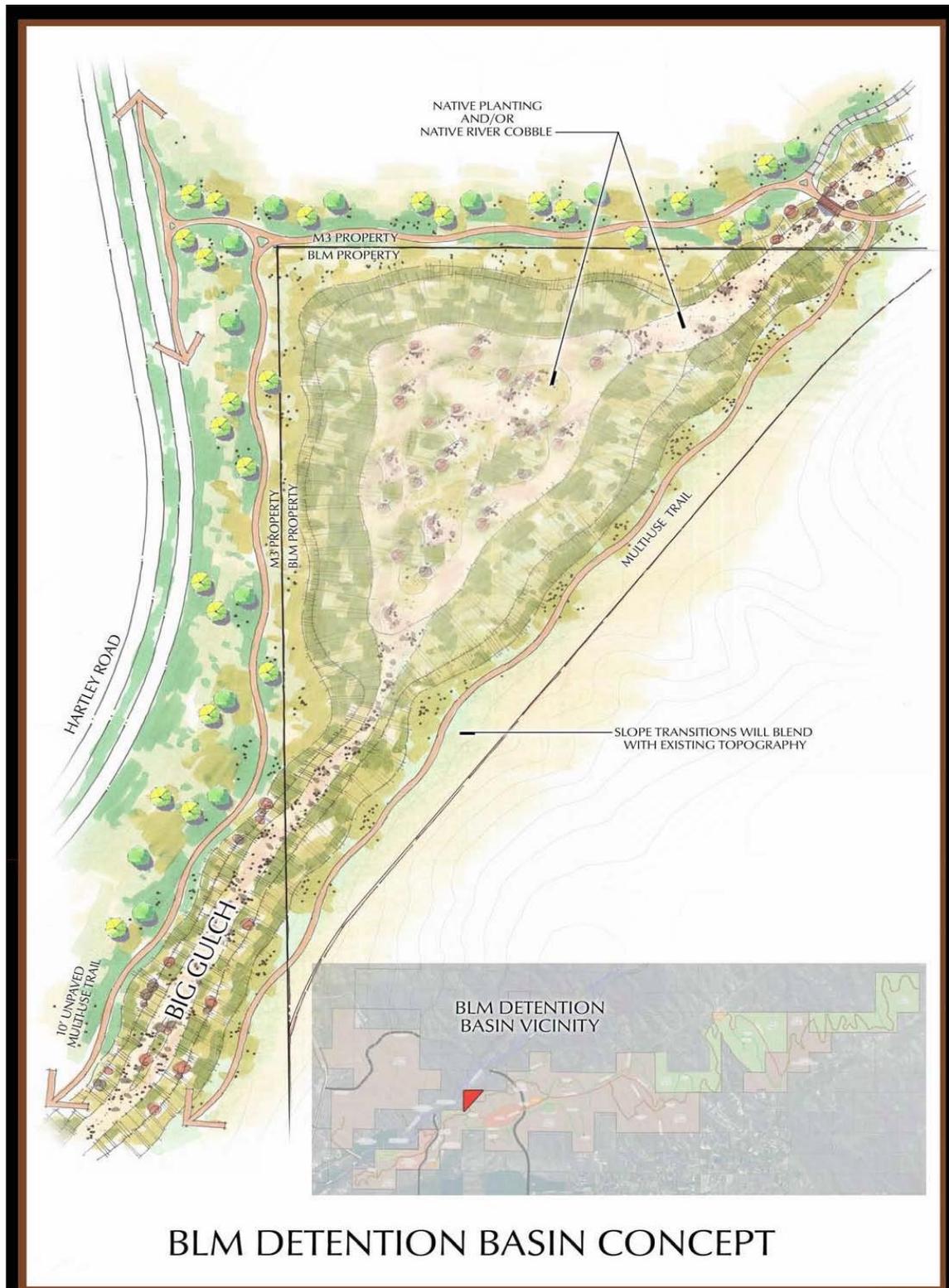


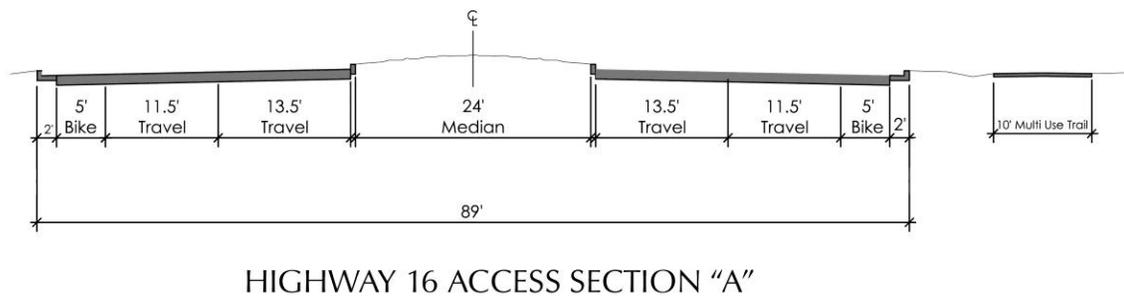
EXHIBIT "C"

Figure 2-5. Detention Basin Concept Plan for Big Gulch Drainage ROW – Alternative 2.



The ROW width would vary, with a minimum of 210 feet and a maximum of 360 feet. Operational roadway width from curb to curb would be approximately 89 feet, which would include two traffic lanes in each direction (for a total of four traffic lanes), a bike lane in each direction, curbs, and a landscaped median (Figure 2-6). The remaining width of the ROW corridor (121 to 271 feet) would accommodate construction, stabilization, landscaping, drainage, a multi-use trail, and utilities. The road design of the SH-16 Access ROW would be capable of servicing up to 20,300 vehicle trips per day.

Figure 2-6. Cross-Section of Proposed State Highway 16 Access Road ROW – Alternative 2.



The area surrounding the roadway would be landscaped with plants designed to minimize wildfire danger, as described in Section 2.4.1.2 and Appendix A. The ROW would be fenced to prevent cross country off-highway vehicle use, as described in Section 2.4.3.1. Utilities could ultimately include a combination of water, power, gas, sewer, and communications. Overhead 138 kilovolt (kV) electrical transmission lines (approximately 1.5 miles in length) are proposed as part of the ROW. A description of the design features for the overhead transmission lines is provided in Section 2.4.3.1. A separate, multi-use trail paralleling one side of the roadway would be constructed within the ROW and surfaced with gravel or other inert material. The trail would be 10-feet wide to accommodate equestrian and pedestrians users.

The route would minimize major cuts and fills by following the natural terrain and blending with existing topography. The estimated volume of earthwork necessary to construct the road would total 125,027 cubic yards (CY) of cut material and 140,641 CY of fill material. The total surface disturbance of the SH-16 Access ROW would be 27.4 acres. Of this, 10.1 acres would be surfaced with asphalt (paved), 3.6 acres would consist of a road median, and 13.7 acres would consist of a road cut (unpaved cut and fill areas). The multi-use trail (1.8 acres) would be constructed within the road cut area. The road median and road cuts would be landscaped with a mixture of plants and cobble/gravel, as described in Section 2.4.1.2 and Appendix A.

Road and utility construction timing would be determined by future roadway phasing studies and ITD plans for SH-16 upgrades. Once construction is initiated, the road and associated utilities would be built within approximately 1 year. Construction staging and material storage areas would be located on adjacent private lands or within the ROW corridors. Excess fill material may be distributed within the ROW or transferred offsite, as needed. Any fill distribution within the ROW would be spread to resemble natural landforms and blend with existing topography. M3 plans to utilize direct access to SH -16 at Equest Lane until construction of the SH-16 access road is completed.

2.3.2.3 Linder Road Access ROW

The Linder Road Access ROW would provide a road and utility access corridor at the northern terminus of Linder Road at Homer Road to the internal road network of the M3 Eagle planned development. The ROW width would vary, with a minimum of 300 feet and a maximum of 580 feet. This ROW would contain approximately 1.1 miles (6,031 linear feet) of road across public lands. Connection of the southern portion of the ROW to Homer Road would be made through private land.

The Linder Road Access ROW would initially feature one traffic lane and one bike lane in each direction; however the ROW would be wide enough to accommodate one additional future traffic lane in each direction if needed to accommodate traffic volume, for a total of four motor vehicle traffic lanes. Traffic projections included in ACHD's Northwest Foothills Transportation Study indicate there would be approximately 24,000 vehicle trips per day on the Linder Road Access ROW attributed to the M3 Eagle planned development at full build-out, which would necessitate the construction of all four lanes. The description of both the two- and four-lane road scenarios is described in this section, but for the purpose of this assessment, a four-lane roadway is analyzed in Chapter 3.

Under the scenario with two traffic lanes and two bike lanes in each direction (Scenario A), the operational width of the roadway from curb to curb would be approximately 81 feet (Figure 2-7, Section A). The remaining width of the ROW corridor (219 to 499 feet) would be necessary to accommodate construction, stabilization, landscaping, drainage, utilities, a multi-use trail, and trail crossings. Under the scenario with one traffic lane in each direction (Scenario B), the operational width of the roadway from curb to curb would be approximately 58 feet, which would include the described single lanes, a bike lane in each direction, curbs, and a landscaped median (Figure 2-7, Section B). The remaining ROW corridor width (242 feet to 522 feet) would be necessary to accommodate construction, stabilization, landscaping, drainage, utilities, a multi-use trail, and trail crossings. A landscaped median would provide 16 feet of separation between directional traffic in both

scenarios. An alternate scenario that includes one traffic lane in each direction (Scenario C) would keep the 81 foot operational width with an expanded median (Figure 2-7, Section C) that would allow for expansion into the median if necessary. The remaining width of the ROW corridor (219 to 499 feet) would be necessary to accommodate construction, stabilization, landscaping, drainage, utilities, and trail crossings. The median would be 43 feet wide under this last scenario and would be landscaped.

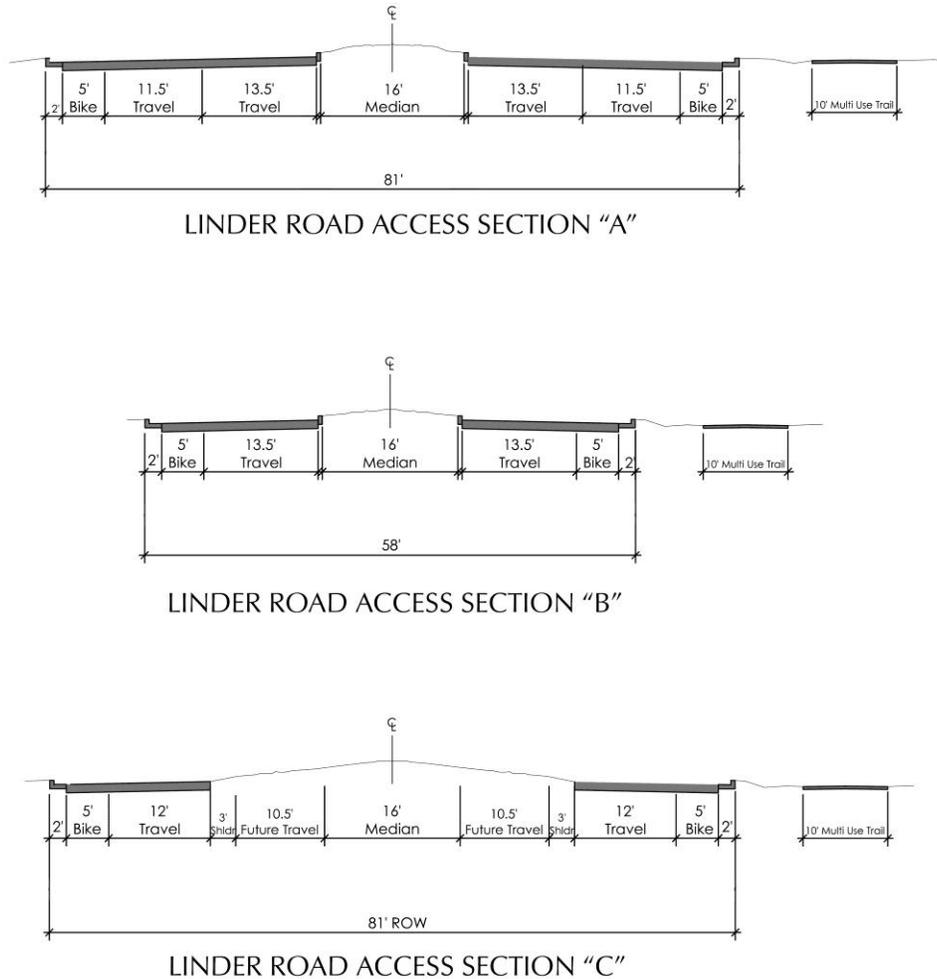


Figure 2-7. Cross-Sections of Linder Road Access ROW for the 4-lane (Sections A & C) and 2-lane (Section B) Scenarios – Alternative 2.

The area surrounding the roadway would be landscaped with plants designed to minimize wildfire danger, as described in Section 2.4.1.2 and Appendix A. The ROW would be fenced to prevent cross country off-highway vehicle use, as described in Section 2.4.3.1. Future utilities could include a combination of water, power, gas, sewer, and communications and could be co-located within the ROW corridor. Overhead 138 kV electrical transmission lines (approximately 1.1 miles or 6,030 feet in length) are proposed in this corridor. A separate, multi-use trail paralleling one side of the roadway would be constructed within the ROW and

surfaced with gravel or other inert material, as described for the SH-16 Access ROW. All construction, operation, and maintenance activities would be contained within the ROW corridor or on adjacent private land under either scenario.

The volume of earthwork necessary to construct the four-lane road would be approximately 109,594 CY of cut material and 139,971 CY of fill material. The road would be surfaced with asphalt. The total surface disturbance of the four-lane Linder Road Access ROW would be 23.8 acres. Of this, 8.3 acres would be paved, 2.1 acres would consist of a median, and 13.4 acres would consist of road cut. The multi-use trail (1.4 acres) would occur within the road cut area. The median and road cuts would be landscaped with a mixture of plants and cobble/gravel, as described in Appendix A.

The Linder Road Access ROW would include a trail overpass and a trail underpass to accommodate non-motorized recreation (Figures 2-1 and 2-8) along existing routes that would be crossed by the road extension. The road at Little Gulch would be elevated to provide a trail underpass. A trail overpass would span the proposed road along the ridge between Little Gulch and Big Gulch. The trail would be maintained by either the M3 Homeowners Association or the City of Eagle, pending future agreements between all parties involved. Trail crossing maintenance would include periodic inspections by qualified engineers for structural integrity. Any structurally deficient trail crossing would be promptly closed and repaired by M3 or the City of Eagle in a timely fashion to avoid a prolonged loss of recreational values. Trail deficiencies would be addressed on an as-needed basis but could include water bars, pruning, weed control, slope maintenance, and signage.

Construction of all features in this ROW (i.e., road, utilities, and two trail crossings) would begin with the first development phase of the M3 Eagle planned development. The ROW elements would take approximately 1 year to build, from start to completion.

2.3.3 Alternative 3

Three ROW corridors could be authorized (Figure 2-9).

- The Big Gulch Drainage Channel ROW (0.9 miles, 19.0 acres)
- The SH-16 Access ROW (1.5 miles, 27.4 acres)
- The Linder Road Access ROW (1.1 miles, 33.5 acres)

The distinguishing features of these ROW corridors compared to those proposed under Alternative 2 are detailed in the following sub-sections. Details common to all of the proposed ROW are described in Section 2.4.

Figure 2-8. Trail Overpass and Underpass Concept Plan – Alternative 2.

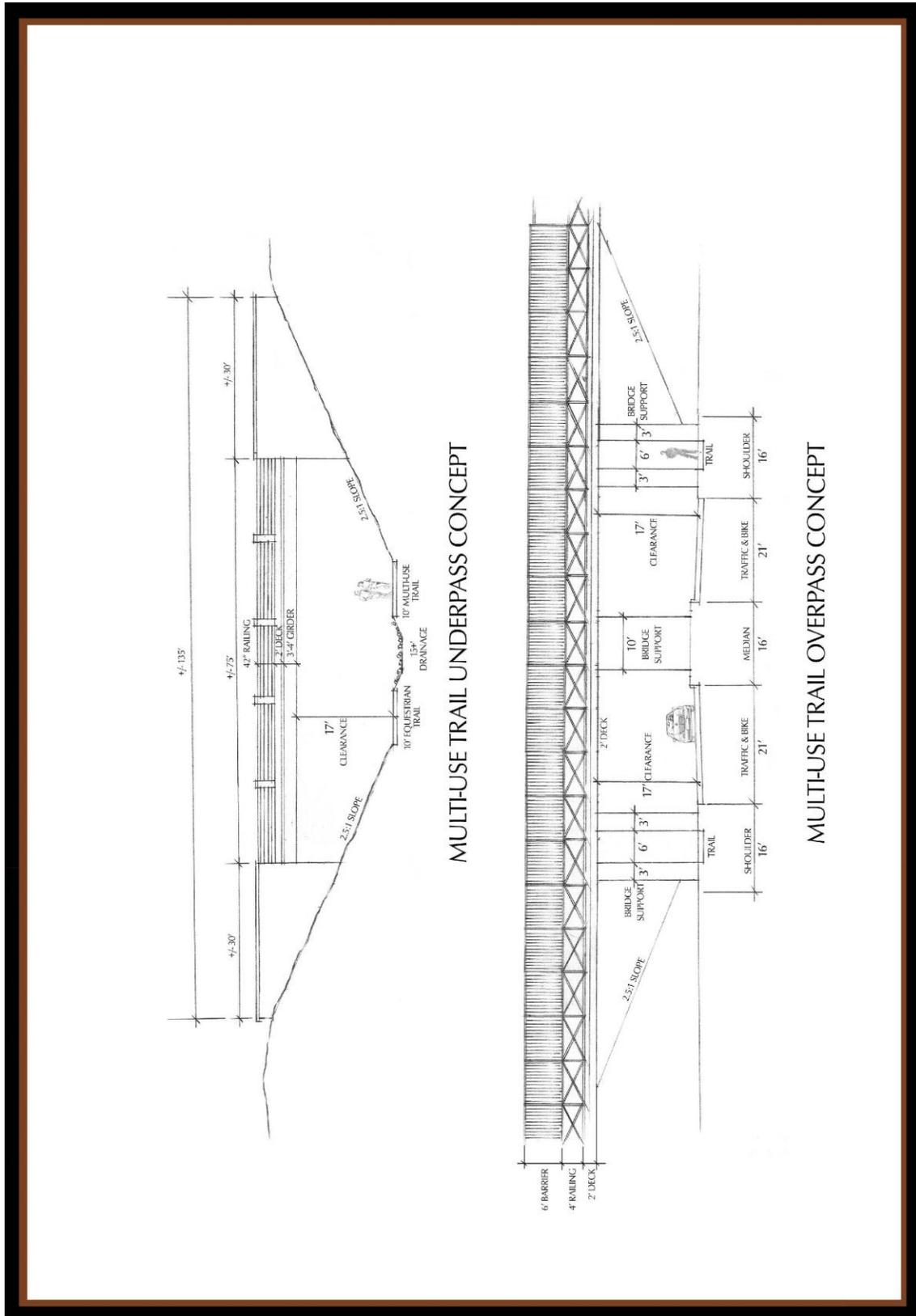
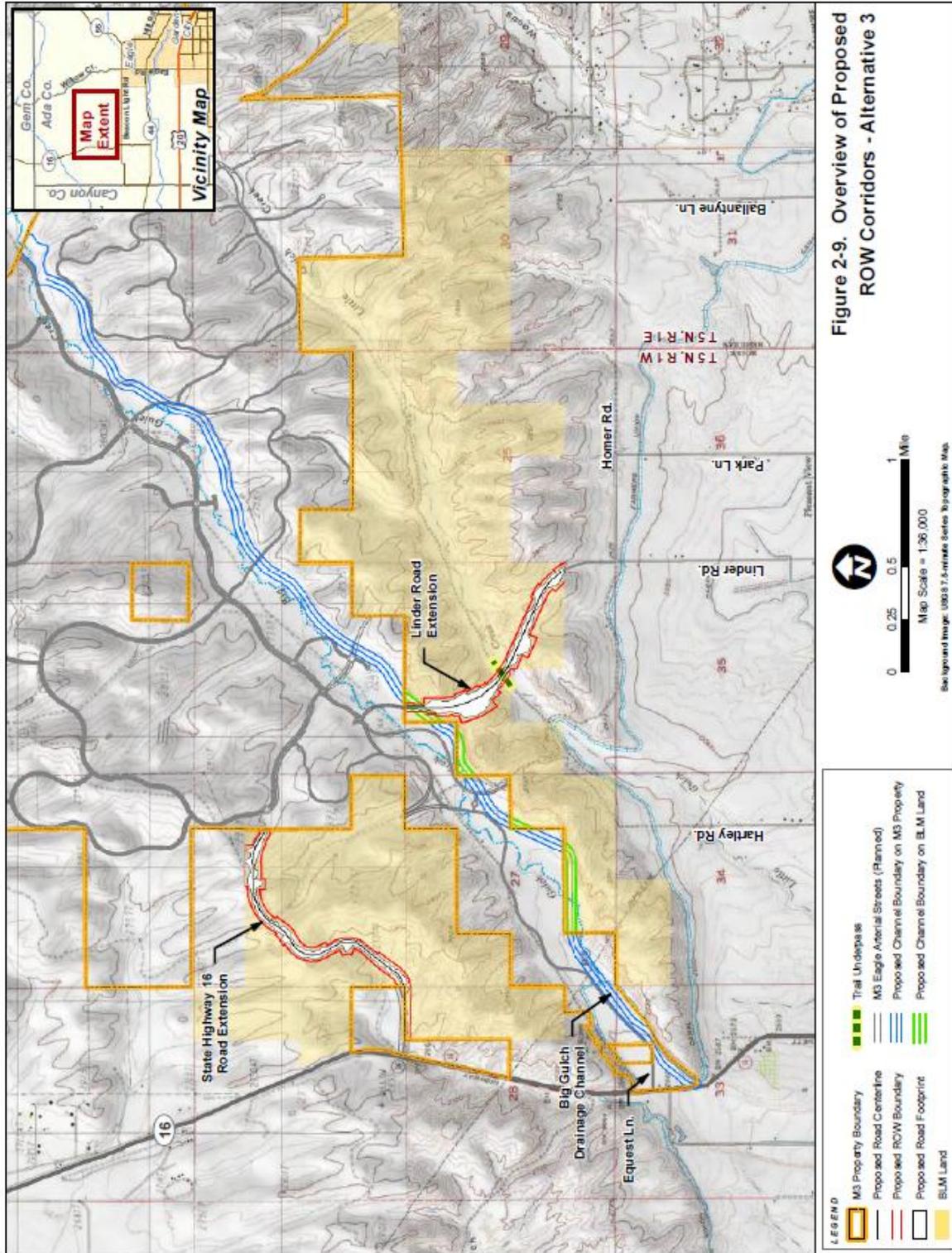


Figure 2-9. Overview of Proposed ROW Corridors – Alternative 3

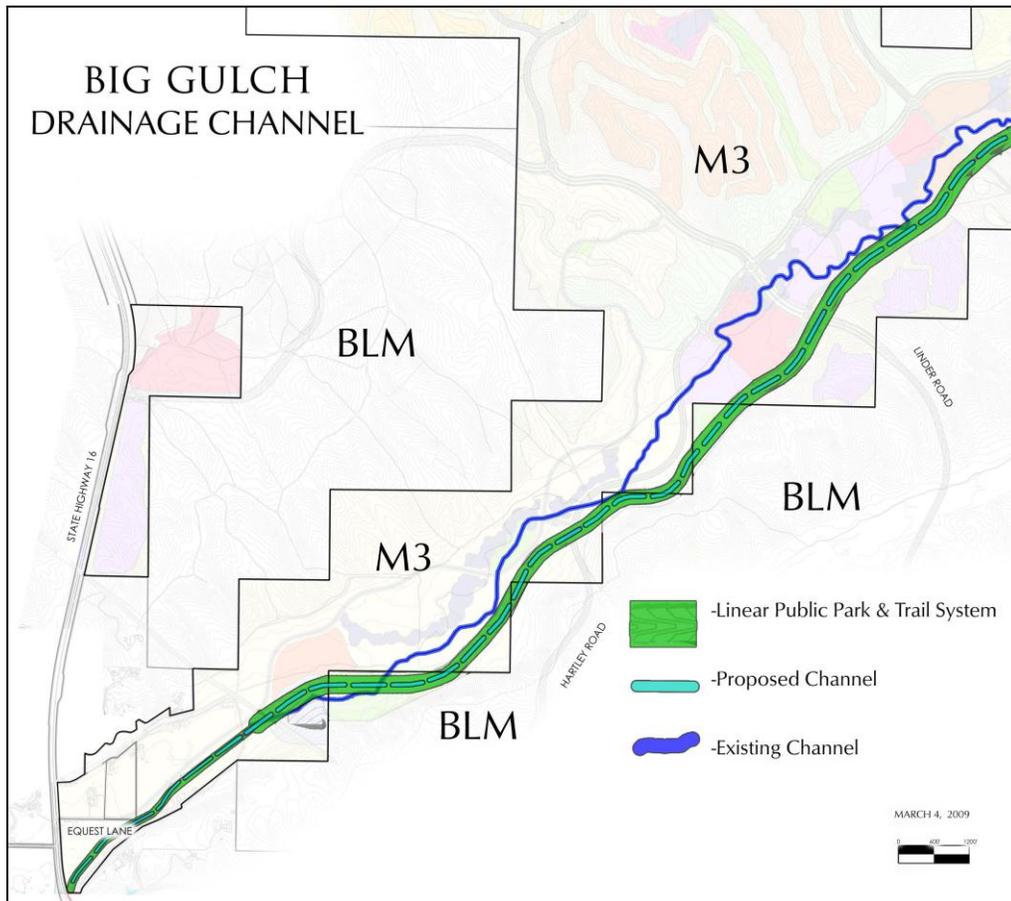


2.3.3.1 Big Gulch Drainage Channel ROW

The proposed Big Gulch Channel ROW would modify the channel corridor where it currently crosses public land and realign the existing channel onto the same portions of public lands as proposed under Alternative 2. However, this alternative would not include construction of the two storm water detention basins on public land (Figure 2-10). Activities on adjacent private lands would be the same as those described under Alternative 2 (Section 2.3.2.1). The ROW width for the channel would vary between 150 and 300 feet.

Construction, O&M, and landscaping features are described in Section 2.4. The channel could convey up to 660 cfs under 100-year storm conditions. The predicted flow down gradient from the ROW under these conditions would be 471 cfs. The trail concept for the Big Gulch Drainage Channel ROW corridor would be similar to that described under Alternative 2, and would include a trail on both the north and the south sides of the channel, for a total length of 1.3 miles for the two trails. The majority of the trail length on public land would occur on the southern side of the channel due to channel position (limited area exists on the north side of the channel on public land due to the right angle of the property boundary). Access, materials, construction, and O&M of the trails would all be the same as described in Alternative 2. The total surface disturbance of the Big Gulch Drainage Channel ROW on public land would be 19.0 acres, of which the majority would be revegetated.

Figure 2-10. Big Gulch Drainage Channel ROW – Alternative 3.



2.3.3.2 SH-16 Access ROW

The SH-16 ROW would be as described in Alternative 2.

2.3.3.3 Linder Road Access ROW

The Linder Road Access ROW (Figure 2-9) would provide a corridor for an extension of Linder Road from its current terminus at Homer Road northward, to the M3 Eagle planned development but would be routed further to the west than that proposed under Alternative 2. This alternative alignment was developed in response to public concerns about the potential reductions in contiguous recreational areas that occur to the east, and attempts to avoid those areas for recreational purposes. This ROW would contain approximately 1.1 miles (5,850 linear feet) of road across public lands. The ROW width necessary to construct the Linder Road Access ROW along this alignment would require a minimum of 200 feet and a maximum of 660 feet. The maximum road width from curb to curb would be approximately 81 feet. The road design would be similar to that described in Alternative 2 in terms of the number of traffic lanes, bike lanes, and median (Figure 2-7). A separate, 10-foot wide multi-use trail paralleling one side of the roadway would be constructed within the ROW as

described for Alternative 2. This ROW would include a trail underpass for non-motorized recreation, as under Alternative 2, but would not include a trail overpass due to the terrain limitations.

Road traffic capacity, surface material, landscaping activities, fencing, maintenance, construction timing, and duration, would be the same as described for Alternative 2. However, grading and stabilization areas would be substantially larger, including a cutslope over 140 feet tall that would be necessary as a result of the more challenging topography in this alignment. The volume of earthwork necessary to construct the four-lane road would be approximately 1,070,000 CY of cut material and 52,000 CY of fill material. The total surface disturbance on public land for a 4-lane road would be 33.5 acres. Of this, 8.1 acres would be paved with asphalt, 2.1 acres would consist of a median, and 23.3 acres would consist of road cut. The multi-use trail (1.3 acres) would occur within the road cut area. The median and road cuts would be landscaped with a mixture of plants and cobble/gravel, as described in Section 2.4.1.2 and Appendix A.

Utilities would be similar to those described in Alternative 2 and would include a combination of water, power, gas, sewer and communications. The overhead transmission line would be slightly shorter (approximately 1.1 miles or 5,850 feet in length) than that proposed for Alternative 2.

2.3.4 Alternative 4

Three ROW corridors could be authorized (Figure 2-11).

- The Big Gulch Drainage Channel ROW (.3 miles, 9.0 acres)
- The SH-16 Access ROW (1.5 miles, 27.4 acres)
- The Linder Road Access ROW (1.1 miles, 23.8 acres)

The distinguishing features of these ROW corridors compared to those proposed under Alternative 2 are detailed in the following sub-sections. Details common to all proposed ROW are described in Section 2.4.

Figure 2-11. Overview of Proposed ROW Corridors – Alternative 4

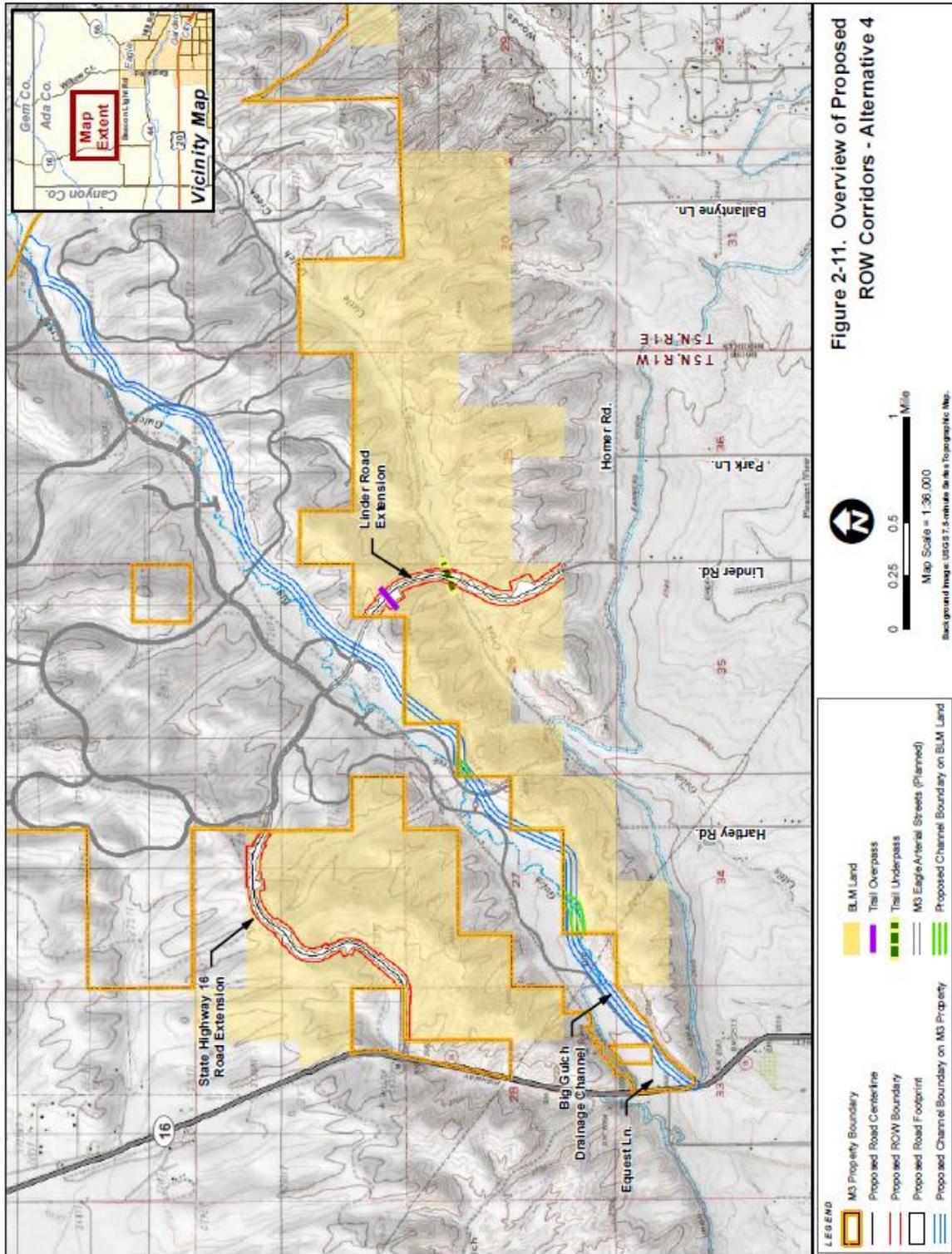
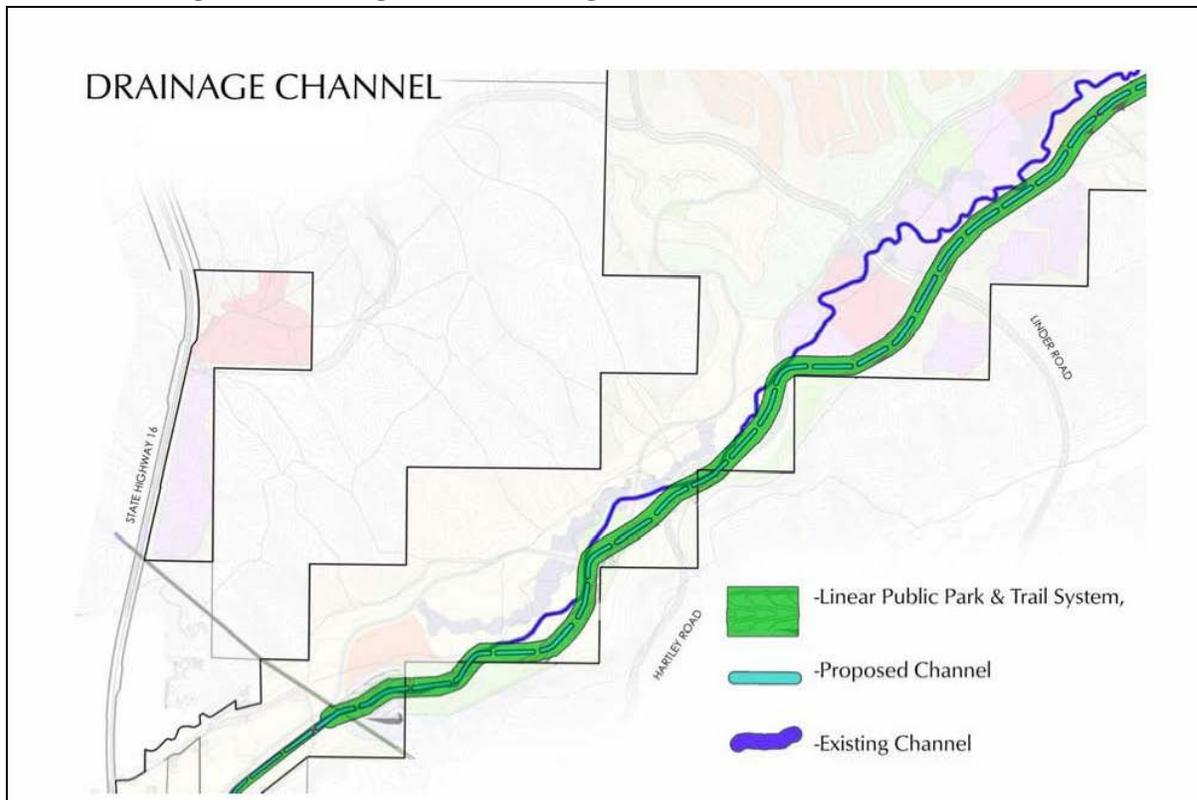


Figure 2-11. Overview of Proposed ROW Corridors - Alternative 4

2.3.4.1 Big Gulch Drainage Channel ROW

The proposed Big Gulch Drainage Channel ROW would improve only the portions of the channel that exist on public land (Figure 2-12). The channel would not be relocated onto public land and storm water detention basins would not be constructed on public land. Where the channel currently crosses public land (~0.3 miles crossing two property corners adjacent to the M3 Eagle planned development), minor improvement including trails and landscaping would occur along with the improvements to the channel itself. Activities on adjacent private lands would be similar to those described under Alternative 2; however, the length of channel improved on private land would be slightly longer (Section 2.5), and the channel on private land would move to a more northerly location in two areas.

Figure 2-12. Big Gulch Drainage Channel ROW – Alternative 4.



The ROW width, channel width, and channel depth would be the same as those proposed under Alternative 2 (Section 2.5). The channel could convey up to 660 cfs under 100-year storm conditions. The predicted flow down gradient from the ROW under these conditions would be 471 cfs. The trail concept and associated details for the Big Gulch Drainage Channel ROW corridor would be similar to that described under Alternative 2, but would cross less public land. Two trails, one to the north and one to the south of the channel, would be constructed following the existing channel alignment. The northern trail (~0.2 miles) would be paved with asphalt and landscaped. The southern pathway (~0.4 miles) would be

unpaved and planted along the margins with native vegetation. The total surface disturbance of the Big Gulch Drainage Channel ROW on public land would be 9.1 acres, of which the majority would be revegetated (Section 2.5). Construction, O&M, and landscaping features are described in Section 2.4 (Activities Common to the Action Alternatives).

2.3.4.2 SH-16 Access ROW

The SH-16 Access ROW would be as described in Alternative 2.

2.3.4.3 Linder Road Access ROW

The Linder Road Access ROW would be as described in Alternative 2.

2.4 ACTIVITIES COMMON TO THE ACTION ALTERNATIVES

This section describes construction best management practices and design features that would occur during construction and O&M activities under all action alternatives. Actions that would occur for all proposed ROW corridors are presented first. These are followed by a separate discussion of construction and O&M activities for the Big Gulch Drainage Channel ROW and the two access ROW corridors combined.

2.4.1 Best Management Practices and Design Features Common to All ROWs

All construction sites, staging areas, vehicle wash down areas, and storage sites would be maintained in an orderly condition during the construction phases of the project. Used oils, fuels, or other hazardous substances would be hauled to an approved off-site disposal location and would not be stored along the ROW corridor. Trash and other construction refuse would be removed regularly from all construction sites to an approved off-site disposal location.

2.4.1.1 Noxious Weed Abatement

All ROW corridors would be monitored annually for the presence of state-listed noxious weeds. Noxious weeds would be spot treated using an appropriate treatment (i.e., herbicide, biological, mechanical, manual) authorized for use on public lands and specified by the BLM Authorized Officer. Herbicide use would comply with the applicable Federal and state laws, and only in accordance with their registered uses. Noxious weed abatement would minimize the potential for noxious weed establishment and spread along all proposed ROW corridors during construction, rehabilitation, and O&M of the ROW.

The Noxious Weed Abatement Plan consists of the following weed control measures:

1. Construction equipment and materials would be stored at the construction site or at a limited number of specified locations on adjacent private lands to minimize

surface disturbance and potential spread of weed seed. All equipment used for off-road construction and grading would be cleaned of soil and debris prior to accessing each site to limit/reduce the potential introduction of noxious weeds. The cleaning process would utilize pressurized water, steam, or air to clean tracks or other parts of equipment that could trap soil and debris. Washing vehicles and equipment prior to entering the ROW areas would minimize the potential for transporting weeds to the ROW corridors. Vehicles traveling only on established roads are not required to be cleaned.

2. Only certified weed-free seed, fill material, and mulch would be used.
3. As directed by the BLM Authorized Officer, M3 or the entity responsible for landscape maintenance shall be responsible for control of noxious weeds and non-native invasive plant species within the limits of the ROW corridors. M3 shall be responsible for consultation with the BLM Authorized Officer and/or local authorities for acceptable weed control methods (within limits imposed in the grant stipulations). If herbicides are used, M3 shall comply with all applicable Federal and state laws and regulations. Standard operating procedures for applying herbicides or other weed prevention measures shall be followed as outlined in the *Final Programmatic EIS for Vegetation Treatments Using Herbicides on Public Lands in 17 Western States* (BLM 2007a) and the *Environmental Assessment for Noxious and Invasive Weed Treatment for the Boise District and Jarbidge Field Offices* (BLM 2007b).
4. Herbicides shall be used only in accordance with their registered uses within the limitations imposed by the Secretary of the Interior. Prior to the use of herbicides, M3 shall obtain from the BLM Authorized Officer written approval of an Herbicide Use Proposal Plan showing the type and quantity of herbicide to be used, weed(s) to be controlled, method of application, and any other information deemed necessary by the BLM Authorized Officer. Only herbicides on the list of approved herbicide formulations (updated annually) will be used on public lands (BLM 2007a).

2.4.1.2 Landscaping

Road medians and margins would be landscaped with ground cover, shrubs, and trees to stabilize soils, minimize weed establishment, attenuate noise, minimize fire risk, and promote aesthetics. Landscaping may also be used along the margins of the ROW corridors in selected locations including trail crossings and any other areas where users of public lands may interact with users of the proposed ROW. Landscaped areas would be covered with topsoil (stockpiled topsoil from construction activities, where available). Irrigation drip lines

would be installed to establish and maintain landscaped vegetation along the roadways. Spray irrigation would be used in select areas associated with the proposed trail overpasses and underpass. Landscaped areas in the access ROW would include a combination of plants native to the Intermountain Region and approved by the BLM, and cobble/gravel surface. Plants would be spaced to minimize fire spread. A roadway landscape plan developed for the access ROW describes plantings in three revegetation zones and provides a list of plant species that could be selected (Appendix A). The list of plants includes species resistant to fire and some that would minimize attractiveness to deer. The landscaping surrounding the roads would be maintained regularly (once per month or as needed) during the growing season by either the M3 Homeowner's Association or the City of Eagle, pending future agreements between M3 and the City. Noxious weeds would be controlled, as described in Section 2.4.1.1, and non-native annual plants (such as cheat grass) would be controlled. Shrubs and trees would be trimmed as needed, and dead vegetation would be cleared.

Landscaped areas in the Big Gulch Channel ROW would include a combination of plants native to the Intermountain Region, non-native plants, and cobble/gravel surface. These areas may be irrigated temporarily after planting, if needed for successful establishment of vegetation. Landscaped areas on the north side of the channel would be spray irrigated, and maintained to the same level of a typical city park. Landscaping would be maintained weekly during the growing season. Turf grass on the northern side of the channel would be mowed and fertilized as needed and plantings of other vegetation would be weeded. Noxious weeds would be controlled, as described in Section 2.4.1.1. Shrubs and trees would be pruned as needed and dead vegetation and trash would be removed.

2.4.1.3 Stabilization and Rehabilitation

Temporary soil stabilization techniques would be employed to prevent soil erosion where soil displacement and sedimentation is likely. Techniques would include covers and barriers such as weed-free straw, straw bales, silt fences, coir rolls, geo-textile grids and fabrics or similar treatments.

Permanent stabilization would involve revegetation to provide stabilization, improve resource conditions, reduce erosion, mitigate fire risk, and minimize noxious weed spread. Cutbanks, fill slopes, and other exposed areas would be planted or seeded as soon as possible following ground disturbance during the optimal seeding period. Seed and plant material applications would be targeted for late fall whenever possible to promote success. Seeding success criteria would be based on a qualitative assessment of reclaimed areas compared with adjacent, similar type, undisturbed habitat. If the first attempt at seedings and plantings is not successful, additional attempts would be made until vegetation becomes successfully established.

Stabilization and rehabilitation of non-constructed disturbed areas would emphasize the use of seeds and plant materials native to the region. Non-native plant materials would be utilized if native stocks are not available. Non-native plant materials would mimic the structure and functionality of regional natives. Stabilization and rehabilitation projects would include techniques that minimize soil disturbance, such as no-till drills, rangeland drills equipped with depth bands, and/or hydroseeding. For broadcast seeding operations, the ground would be lightly raked to cover the seeds with soil after broadcast. Hydroseed techniques could also be utilized that include weed-free mulch with no herbicide additives. Soil stabilization methods would be applied where appropriate with certified weed-free products.

2.4.1.4 Fire Management

All Federal, state, and county laws, ordinances, rules, and regulations that pertain to prevention and suppression of fires would be adhered to. Specific construction related activities would be employed to minimize the ignition and spread of project-related fires.

The following measures would be employed during construction:

- All gasoline or diesel powered equipment would be fitted with spark arrestors.
- Motor vehicles would stay on existing roads and areas free of vegetation associated with ROW construction. Motor vehicles would be parked in areas free of vegetation, and would be equipped with at least one fire extinguisher.
- Construction crews would maintain an easily accessible cache of the following fire suppression equipment: five shovels, two backpack pumps with water, and one fire extinguisher.
- Used oils, fuels, or other flammable substances would be hauled to an approved off-site disposal location and would not be stored along the ROW corridors.
- M3 or its contractor would notify the BLM if a project-related fire occurs in or adjacent to the construction area. The following fire emergency notification contact information would be distributed to all employees and contractors working on site:
 - Boise Fire Dispatch Center – (208) 384-3400
 - Emergency Response – 911.

Long-term fire mitigation during O&M of the proposed projects would include:

- Fire Suppression Resources – Irrigation and community water supplies in the ROW and M3 Eagle planned development would be available to fire fighters for emergency fire suppression operations. Fire hydrants would be located within the

community of the M3 Eagle planned development. Hydrants may also be placed strategically along the ROW corridors. The City of Eagle has preliminary plans for a municipal water tank adjacent to the Hartley Road terminus. This tank would be constructed based on future water needs. If built, M3 would work with the City of Eagle to endeavor to assure a new water tank is available for fire fighters.

- Fire Stations – The Eagle Fire Department maintains a fire station approximately 2 miles south of the proposed ROW corridors, at the intersection of Floating Feather and Linder Roads. M3 would construct two fire stations as part of their planned development located to the north of Linder Road and east of the SH-16 connection.
- Landscaping – Firewise landscaping would be maintained along the roadways in the access ROW corridors to minimize wildfire danger, as described in Appendix A. The northern trail in the Big Gulch Channel ROW would include irrigated landscaping.

2.4.1.5 Special Status Plants

Measures would be employed for the protection of sensitive plant species. Pre-construction surveys for sensitive plant species would be conducted, and sensitive plants would be marked on public land for avoidance. Current BLM survey protocols would be followed. Surveys would be conducted at the appropriate time of year by a qualified botanist before construction activity begins.

The construction footprint of the ROW would not be sited in any portion of EO 76 or other slickspot microsites that are documented to contain slickspot peppergrass plants. Known slickspot peppergrass occurrences on public land near the ROW or near possible O&M activities would be temporarily fenced to protect habitat. Markings would be removed to protect the plants from unwanted attention promptly after the project is complete or no longer poses a threat to the species. Further, known slickspot peppergrass occurrences near the ROW on private land would be temporarily fenced during construction to protect habitat.

Slickspot microsites (habitat for slickspot peppergrass) on public land in portions of the ROW not proposed for excavation (outside of the disturbance footprint) would be temporarily fenced and avoided, as determined by BLM, during construction and landscaping activities. Soil would not be stockpiled on slickspot microsites on public land. For slickspot microsites that cannot be avoided, BLM will be given advance notice prior to ground disturbance to allow for analysis of slickspot microsite soil structure prior to their disturbance and/or elimination during construction.

Vegetation treatments in disturbed areas of the access ROW would use plants native to the Intermountain Region. Native forbs would be selected, many of which are expected to benefit slickspot peppergrass insect pollinators. Vegetation treatment projects would include techniques that minimize soil disturbance such as no-till drills, rangeland drills equipped with depth bands, and/or hydroseeding. Drainage structures would be placed in a manner to prevent disturbed soils from settling on downslope slickspot microsites. Firewise landscaping would be used along the roadway to minimize the potential spread of wildfire, as described in Section 2.4.1.4 and Appendix A.

Weed control conservation measures for slickspot peppergrass would be followed in slickspot peppergrass habitat in the ROW as outlined in the *Confirmation of Concurrence from the USFWS to the BLM on the Noxious and Invasive Weed Treatment* (BLM 2009b). Nonnative annual grasses would be regularly controlled to reduce the risk and spread of wildfire. Tall, naturally regenerating shrubs along the roadway and inside of the ROW would be controlled periodically to reduce flame height and prevent spread in the event of a wildfire.

Annual monitoring would be conducted to ensure that conservation measures for slickspot peppergrass are implemented and to assist in determining if these measures are effective in the conservation of the species.

2.4.1.6 Wildlife

Seasonal and spatial restrictions would be applied to construction activities according to current resource management guidance (Table 2-1). Prior to the application of any restrictions, preconstruction surveys would be conducted to identify the presence and status of raptor nests and presence and condition of deer and elk. Temporary exceptions to the raptor stipulations could be granted by the BLM Authorized Officer in situations where the raptor nest has been destroyed (e.g., by wind, wildfire, lightning), or is not currently active (i.e., young have fledged or if the nest is unused in the current nesting season). Exceptions or temporal deviations from the established February 1 through July 31 timeframe may also be granted based on species, variations in nesting chronology of particular species locally, topographic considerations, or other factors that are biologically reasonable, as described in BLM Information Bulletin No. ID-2010-039. Temporary, short-term exceptions to the stipulations for deer and elk also may be granted by the BLM field office manager according to factors described in BLM Information Bulletin No. ID-2010-039.

Power lines would be constructed in accordance to standards outlined in the Avian Power Line Interaction Committee "Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006" (Avian Power Line Interaction Committee 2006) to ensure the

safety of large perching birds. Perch deterrents would be maintained for the life of the overhead transmission line.

Table 2-1. Construction Activity Restrictions for Protection of Wildlife¹.

Species	Life Stage	Restrictive Period	Spatial Buffer
Ferruginous Hawk	Nesting	February 1 through July 31	Maintain a distance of 1 mile between construction activity and active nest sites
Swainson’s Hawk and Burrowing Owl	Nesting	February 1 through July 31	Maintain a distance of 0.25 miles between construction activity and active nest sites
Red-tailed Hawk	Nesting	February 1 through July 31	Maintain a distance of 0.33 miles between construction activity and active nest sites
Golden Eagle and Prairie Falcon	Nesting	February 1 through July 31	Maintain a distance of 0.50 miles between construction activity and active nest sites
Mule Deer and Elk	Wintering	November 15 through April 30	No construction within winter ranges when animals are present

¹Source: BLM Information Bulletin No. ID-2010-039

2.4.1.7 Cultural Resources

In the event that historic items, prehistoric items, or human remains are discovered during construction, M3 would stop all work in the area and contact the BLM as soon as possible. The discovery would be flagged or fenced to protect its integrity and work would not proceed in the discovery area until BLM provides written authorization. The BLM would determine what mitigation is necessary and when work could resume in the discovery area once mitigation is complete.

2.4.2 Construction, Operation, and Maintenance – Big Gulch Channel ROW

2.4.2.1 Construction

Construction of the drainage channel, detention basins (Alternative 2 only), and trails would largely be an earth-moving and revegetation operation. All work areas would be located within the ROW or would be located on adjacent private land. Construction would involve power equipment such as a backhoe, dozer, or similar to excavate 1 to 2 feet below the surrounding grade. Excavated material would be used on site to construct a 2 to 3 foot high berm along the north side of the channel, creating an approximate 3:1 or 4:1 slope. Excavated topsoil would be temporarily stockpiled for use in the rehabilitation and permanent stabilization process. However, soil would not be stockpiled on slickspot microsites (habitat for slickspot peppergrass plants) present on public land. Temporary soil stabilization techniques would be employed to prevent soil erosion, as described in Section 2.4.1.3.

The channel features would be constructed with the stockpiled native soil and would remain unlined by construction barrier (i.e., geo-textile grids or fabrics) to promote subsurface infiltration. Riprap or river cobble would be placed strategically in portions of the channel (location to be determined) to provide added stability. Culverts would be placed to accommodate drainage from adjacent basins where necessary. Approximately 71 percent of the channel would be permanently revegetated. Topsoil would be applied where revegetation would occur. All plant species used would be approved by the BLM and would likely involve a mixture of planting, seeding, and mulch applications. Native species used would include many of those proposed for the roadway landscape plan; however, turf grass and other non-natives could also be used in some areas. In addition, some riparian species could be planted near drain inlets or within the areas proposed as detention basins under Alternative 2. Chronology of channel construction would proceed as described in Appendix B.

2.4.2.2 Operation and Maintenance

The channel, detention basins (Alternative 2 only), and trails would operate in two capacities: for permeable storm water runoff and drainage and as active public open space. The channel would promote subsurface infiltration of existing natural runoff from precipitation and from the M3 Eagle planned development. The amount of runoff directed toward the channel would not exceed the natural flow rates inside of the Big Gulch Drainage. The detention basins would be dry outside of storm periods but would retain water during flood events, operating to reduce peak flows and limit the risk of area flooding. Detention basins would serve to control the flows in the channel, thus they would proportionately reduce the size of the channel. The public open space aspect of the Big Gulch Drainage ROW would operate as an active linear park feature. Detention basins constructed under Alternative 2 and the revegetated channel would be managed as public open space with trails in a natural park-like setting. Recreational use would be restricted to non-motorized activities. Areas adjacent to the channel would be maintained as open space and public pathways by M3, the future M3 Home Owner Association, City of Eagle, or a combination thereof.

The channel would be routinely inspected for structural integrity, leaks, noxious weed occurrences, and debris. Debris and obstructions would be promptly removed. Channel maintenance would be the responsibility of the City of Eagle, the future M3 Home Owner's Association, or a combination of both. Trail maintenance issues would be promptly addressed, and trails would be repaired as needed. Landscaped areas would be maintained as either natural areas or manicured, depending on the vegetation treatment.

2.4.3 Construction, Operation, and Maintenance – Access ROW (SH-16 and Linder Road Access ROW)

2.4.3.1 Construction

Each roadway would be designed based upon anticipated traffic patterns and existing site conditions. Road widths would range from 58 feet to 89 feet and would consist of gravel base over compacted native sub-base material. A geo-grid or geo-textile material may be used in areas of poor subgrade soils as soil reinforcement and/or to reduce the gravel base thickness requirement. Where possible, crossings at low spots or drainage courses would be at-grade with no culverts or extensive fill. All construction staging and materials storage areas would be provided on adjacent private land or within the ROW corridors. Sand and gravel supplies are yet to be determined but would likely be supplied by a local contractor.

The roads would be graded smooth with low spots and ruts filled in with the extra gravel base materials. A qualified, licensed civil contractor would construct all required roads. During construction, the roads would be sprayed with water daily to control dust. Water would be purchased from private or public water supplies. All disturbed areas of the ROW corridors would be temporarily stabilized after initial grading, as described in Section 2.4.1.3. All disturbed areas not surfaced with gravel, asphalt, or concrete (i.e., areas outside of the shoulder limits) would be permanently stabilized with vegetation, as described in Section 2.4.1.3. Landscaping of the roadways would follow techniques described in Appendix A.

Temporary fences may be installed along the two access ROW corridors during construction activities to limit public exposure to potentially hazardous construction areas and equipment and to prevent damage to road beds from livestock. Permanent fencing would be constructed along the margins of the two access ROW corridors to prevent cross country off-highway vehicle use and reduce the risk of vehicle-caused wildfire starts. The type of fence installed would be three-strand barbed wire or an equivalent. The BLM Fence Standards for Livestock and Wildlife would be followed to ensure all fences are passable for wildlife (BLM 1989). Gaps in the permanent fences would be left to allow pedestrian access to public land. Gates would be included at the end of the fences to allow for sheep trailing through the livestock allotments. Efforts would be made to tie the fences and gates into existing fences and at property corners. All pre-existing gates would be left or returned to the same condition in which they were first identified.

Road drainage would be designed and constructed to ACHD standards. The location of culverts, signs, and road markings are yet to be determined but placement would be coordinated with the BLM Authorized Officer. While traffic signals are not a part of this proposal, it is possible that traffic signals would be warranted at some point in the future off public lands but near the proposed projects. Signs alerting drivers to the presence of livestock

in the area would be installed along each access ROW. Chronology of construction of the access ROW would proceed as described in Appendix C.

Future utilities could be co-located within each of two access ROW corridors and could include a combination of water, power, gas, sewer and communications. Most utilities would either be in a trench within the road footprint or in a trench on the outside of the road footprint. Water lines for irrigation purposes may be constructed within the ROW and could also include fire hydrants. Some overhead utilities, including power and communications, may be installed on poles within the ROW corridors. Utility poles would be free-standing, up to 85-foot tall structures ranging in diameter from 1 to 2 feet and spaced approximately every 300 feet. Up to three lines could be attached to the side of the pole, vertically, rather than horizontally with a “T” bar, on the top of the pole. Perch deterrents would be installed on utility poles and structures to minimize the risk of electrocution to raptors (Section 2.4.1.6).

2.4.3.2 Operation & Maintenance

Road maintenance (curb-to-curb) would be performed on an as-needed basis by M3 until the ROW are assigned to ACHD. Snow removal and other winter road maintenance would be performed, as needed, during the winter months to maintain public access. Any identified needed repairs would be promptly addressed. Any culverts, drains, or other water management devices would be kept clear of blockage to allow effective drainage. Landscaping would be maintained by either the M3 Homeowner’s Association or the City of Eagle, pending future agreements between M3 and the City.

ACHD would treat the road surfaces (snow removal, street sanding, and de-icing) to promote safe winter driving conditions in accordance with their Winter Street Service Policy. These treatments would occur as needed, based on weather conditions and the amount of traffic on the road. Resurfacing of the roads would occur on an as-needed basis and would include chip seal or similar asphalt treatment. Street signs would be repaired or replaced as needed. ROW corridors would be monitored annually for the presence of state-listed noxious weeds and treated as needed (Section 2.4.1.1).

2.5 COMPARISON OF ALTERNATIVES

Tables 2-2 through 2-4 summarize features of each ROW corridor on public lands and compare how the ROW corridors would differ between the four alternatives.

Table 2-2. Big Gulch Drainage Channel ROW Alternative Comparison.

Feature	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Channel Length (miles)	NA	0.9 (4,488 ft.)	0.9 (4,488 ft.)	0.3 (1,320 ft.)
ROW Width (ft.)	NA	Minimum 150 Maximum 250	Minimum 150 Maximum 300	Minimum 150 Maximum 250
Channel Width (ft.)	NA	Minimum 40 Maximum 100	Minimum 150 Maximum 250	Minimum 150 Maximum 250
Detention Basin Area (ac.)	NA	11.7	0	0
Maximum Channel Depth (ft.)	NA	3	3	3
Initial Construction ROW (ac.)	NA	30.7	24.7	9.1
Total Surface Disturbance (ac.; includes basins for Alt 2)	NA	30.7	24.7	9.1
Final ROW (ac.)	NA	30.7	24.7	9.1
Recreational Trail (miles)	NA	1.3	1.3	0.5
Capacity (cfs)	NA	660	660	660
Predicted Flow (cfs) Down Gradient from ROW under 100 Year Storm Conditions	NA	369	471	471

Note: Values in table apply to public lands only.

Table 2-3. State Highway 16 Access ROW Alternative Comparison.

Feature	Alternative 1	Alternative 2	Alternative 3	Alternative 4
ROW Length (miles)	NA	1.5 (8,055 ft.)	Same as Alternative 2	Same as Alternative 2
ROW Width (ft.)	NA	Minimum 210 Maximum 360		
Initial Construction ROW (ac.)	NA	54.7		
Surface Disturbance (ac.)	NA	27.5 (total)		
Paved/Trail	NA	10.1/1.8		
Revegetated ¹	NA	15.6		
Grading Quantity (Cubic Yards)	NA	Cut: 125,027 Fill: 140,641		
Final ROW (ac. ²)	NA	14.7		
Traffic Capacity (VTD ³)	NA	20,300		
Overhead Transmission Line Length (miles)	NA	1.5		
Traffic Lanes	NA	4		
Bike Lane	NA	2		
Overpass/Underpass	NA	No		

Note: Values in table apply to public lands only.

¹ Revegetated acres include the road median and cutslope.

² Estimated by buffering road centerline by 40.5 feet, actual value may be slightly different.

³ Vehicle trips per day (VTD) are projections based on the Northwest Foothills Transportation Study (ACHD 2008) projections for the year 2030.

Table 2-4. Linder Road Access ROW Alternative Comparison.

Feature	Alternative 1	Alternative 2	Alternative 3	Alternative 4
ROW Length (miles)	NA	1.1 (6,031 ft.)	1.1 (5,850 ft.)	Same as Alternative 2
ROW Width (ft.)	NA	Minimum 300 Maximum 580	Minimum 200 Maximum 660	
Initial Construction ROW (ac.)	NA	47.6	54.4	
Surface Disturbance ¹ (ac.)	NA	23.8 (total)	33.5 (total)	
Paved/Trail	NA	8.3/1.4	8.1/1.3	
Revegetated ²	NA	14.1	24.1	
Grading Quantity ¹ (Cubic Yards)	NA	Cut: 109,594 Fill: 139,971	Cut: 1,070,000 Fill: 52,000	
Final ROW (ac. ³)	NA	10.3	10.8	
Traffic Capacity (VTD ⁴)	NA	20,100 (2-lane) 24,000 (4-lane)	20,100 (2-lane) 24,000 (4-lane)	
Overhead Transmission Line Length (miles)	NA	1.1 (6,031 ft.)	1.1 (5,850 ft.)	
Traffic Lanes	NA	2 Minimum 4 Maximum	2 Minimum 4 Maximum	
Bike Lanes	NA	2	2	
Overpass/Underpass	NA	1/1	0/1	

Note: Values in table apply to public lands only.

¹ Data presented are for the 4-lane road option

² Revegetated acres include the road median and cutslope.

³ Estimated by buffering road centerline by 40.5 feet, actual value may be slightly different.

⁴ Vehicle trips per day (VTD) are projections based on the Northwest Foothills Transportation Study (ACHD 2008) projections for the year 2030.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 AIR QUALITY

3.1.1 Affected Environment – Air Quality

The concentration of pollutants in the atmosphere determines air quality. Factors that affect air quality include the type and amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and meteorological conditions relating to the prevailing climate.

The U.S. Environmental Protection Agency (EPA) sets national ambient air quality standards (NAAQS) for six criteria pollutants:

- Particulate Matter (PM₁₀) particulate matter less than or equal to 10 microns in diameter; (PM_{2.5}) particulate matter less than or equal to 2.5 microns in diameter
- Carbon Monoxide (CO)
- Sulfur Dioxide (SO₂)
- Nitrogen Dioxide (NO₂)
- Ozone (O₃)
- Lead (Pb)

Federal and/or state air quality standards set the maximum allowable concentrations of pollutants to protect public health and welfare with a reasonable margin of safety. The Idaho Department of Environmental Quality (IDEQ) has the primary responsibility to carry out the requirements of the Federal Clean Air Act in Idaho.

The EPA classifies geographic areas as attainment or nonattainment based on air pollutant levels. A geographic area that meets or has pollutant levels below the NAAQS is called an attainment area. An area with persistent air quality problems is designated a nonattainment area. This means that the area has violated Federal health-based standards for outdoor air pollution. Each nonattainment area is declared for a specific pollutant. Nonattainment areas for different pollutants may overlap each other or share common boundaries.

In addition to the attainment/nonattainment classification, some areas are described as "maintenance areas." Maintenance areas are those geographic areas that were once classified as nonattainment, but are now consistently meeting the NAAQS. Maintenance areas have been re-designated by the EPA from "nonattainment" to "attainment with a maintenance plan." These areas have demonstrated through monitoring and modeling that they have

sufficient controls in place to meet and maintain the NAAQS. They also have contingency measures in place that would be implemented should an exceedance occur.

3.1.1.1 Coarse Particulate Matter (PM₁₀)

Violations of the health-based PM₁₀ standard were first documented in the Treasure Valley in the winter of 1985-86. Northern Ada County was designated a PM₁₀ nonattainment area by the EPA in 1987. The main sources of PM₁₀ in Ada County are fugitive road dust and agriculture (IDEQ 2010). Industries contribute only 3 percent of the area's total particulate matter (IDEQ 1999).

In 1991, IDEQ developed and submitted an air quality improvement plan to EPA, outlining strategies to reduce PM₁₀ levels and minimize the likelihood of future violations. Wood burning restrictions, road sanding improvements, and new industrial permits were implemented to reduce PM₁₀ levels. As a result of these control measures, only one exceedance for PM₁₀ (in 2002) has been recorded since 1991. In September 2002, IDEQ submitted the Northern Ada County PM₁₀ Maintenance Plan to EPA (IDEQ 2002). EPA approved the plan in September 2003, restoring Northern Ada County to attainment status for PM₁₀.

3.1.1.2 Fine Particulate Matter (PM_{2.5})

Ada County is designated as an attainment area for PM_{2.5}. It is both a primary and a secondary pollutant, meaning it can be directly emitted into the air or formed as other pollutants and chemicals combine in the air. In the Treasure Valley, nitrogen oxides (NO_x), sulfur dioxide, and ammonia particles are the common chemicals that form to make PM_{2.5}. The main sources of NO_x in the valley are vehicles, including cars, SUVs, trucks, commercial vehicles, and construction and farm equipment. Almost two-thirds of ammonia emissions in the valley are from livestock waste, including dairies. Ada County exceeded the EPA air quality standard for PM_{2.5} in December 2002 (IDEQ 2010).

3.1.1.3 Carbon Monoxide (CO)

At present, Northern Ada County is a Limited Maintenance Area for CO. Mobile and area source emissions are the two major sources of CO. The primary source of CO emissions in Ada County is incomplete combustion of gasoline by motor vehicles, accounting for an estimated 69 percent of annual emissions in 1994-95 and 75 percent of 1995 to 1996 winter emissions. Wood burning, outdoor burning, lawn and garden equipment, industry, and other types of fossil fuel burning equipment make up the majority of the rest of the CO emissions in this area. Industries contribute 2 percent of the area's CO (IDEQ 1999).

Monitoring for CO in the Treasure Valley began in 1977. Violations of the health-based standard for CO occurred every winter from 1977 through 1986 and Northern Ada County was designated a CO nonattainment area by the EPA as a result of high levels of CO.

The IDEQ developed a CO air quality improvement plan for Northern Ada County in response to EPA's nonattainment classification (IDEQ 2001). The plan was prepared to meet EPA requirements to support re-designation of the area to attainment status and was approved by EPA in December 2002. Motor vehicle tailpipe emissions have been reduced through measures such as the Ada County Vehicle Inspection and Maintenance Program, Federal new vehicle emissions standards, efforts to increase alternative transportation options, and improvements in traffic flow in downtown Boise. Wood burning and outdoor burning controls, designed to address particulate matter problems, have also had some impact on CO emissions. No exceedances of CO have occurred since 1991 (IDEQ 2010).

3.1.1.4 Sulfur Oxides (SO_x)

Sulfur dioxide forms when substances containing sulfur are burned; usually coal, diesel, or oil. Industry is the largest source of sulfur oxides in the area (IDEQ 1999). A small component of the total emissions for the Treasure Valley airshed is emitted during some industrial processes. The EPA regulates SO₂, but most oxides of sulfur (SO_x) are also of concern. Combined with ammonia, it forms secondary particles that fit into the PM_{2.5} category. In the past ten years, IDEQ has not measured significant concentrations of SO₂ (IDEQ 2008).

3.1.1.5 Nitrogen Oxides (NO_x)

When fuel burns at high temperatures, a group of highly reactive gasses that contain nitrogen and various amounts of oxygen are formed. Monitoring data collected in the Treasure Valley since 1996 show levels of NO_x are below health-based standards (IDEQ 2010). However, NO_x can form secondary pollutants because it contributes to the formation of ozone and PM_{2.5}. The largest source of NO_x in the area is motor vehicle emissions. Other sources include open burning and non-road vehicle emissions such as those from aircraft and from lawn, construction, and agricultural equipment (IDEQ 2010). Industry is the second largest source of NO_x in the area (IDEQ 1999). In the past ten years, IDEQ has not measured significant concentrations of NO₂ (IDEQ 2008).

3.1.1.6 Ozone (O₃)

Ada County is designated as an attainment area for O₃. O₃ is not emitted from a source but is created by chemical reactions of NO_x and volatile organic compounds in the presence of sunlight. Some of the major sources of NO_x and volatile organic compounds in Ada County

are motor vehicle exhaust, industrial emissions, gasoline vapors, and chemical solvents. O₃ levels in the Treasure Valley are measured during the summer (May - September). IDEQ began monitoring ozone at two sites in Ada County in 2001 and documented two exceedances of the 8-hour ozone standard that year. In 2002, IDEQ added a third monitoring site in Canyon County. The three monitoring sites documented five exceedances of the 8-hour standard between Ada and Canyon Counties in 2002. One exceedance was measured in the 2003 summer season. No other exceedances for O₃ have been reported by IDEQ since 2003 (IDEQ 2010).

3.1.1.7 Lead

Historically, the major sources of lead emissions were motor vehicles and industrial sources. Since the phase-out of leaded gasoline, airborne lead is no longer a problem in most of the United States and therefore it is not addressed further in this assessment.

3.1.2 Environmental Consequences – Air Quality

Sources of air pollutants for all of the action alternatives would be limited to fugitive dust emissions caused by surface disturbance and vehicle emissions generated during road construction and future passenger trips associated with use of the new roads. Impacts would include temporary and localized increases in criteria pollutant concentrations that would occur during the construction phase of the proposed project. Expected emissions would consist of tailpipe exhaust from construction equipment (PM_{2.5}, CO, and NO_x), fugitive dust emissions from vehicular traffic and from soil and rock disturbances (PM₁₀), and passenger vehicles utilizing the new roadways (PM_{2.5}, CO, and NO_x).

Construction operations for roadways and utilities would be located in an attempt to minimize disturbance. The cut and fill required would be balanced to the extent possible, in order to minimize disturbance to the natural topography and to minimize the amount of materials that would need to be brought onto or removed from the site. Each of these measures would serve to reduce the potential to generate fugitive dust. Exposed soils would be sprayed with water daily during construction to control dust.

Dust suppression best management practices (BMPs) would be carried out during the construction phases. Further details of the BMPs that would be used to reduce fugitive dust emissions during construction activities are presented in Chapter 2. Because construction-related air pollution effects would be temporary and localized in occurrence, no measurable impact on air quality or ambient values in the proposed rights-of-way (ROW) areas would occur due to construction.

Following construction, the roadway would be surfaced with asphalt and the roadside and median would be landscaped. This would serve to reduce exposed soils and the potential for ongoing dust emissions.

Increased traffic levels resulting from the two access ROW could impact long-term air quality resources in the area. However, the proposed roadway alignments would be designed to maximize transportation efficiency, which could reduce potential tailpipe emissions by minimizing vehicle idle time. The proposed ROW do not include installation of traffic lights, which could also serve to minimize potential vehicle idle time. Construction activities and subsequent use of the proposed ROW would be subject to NAAQs and the IDEQ air quality improvement plans that are currently in effect for Northern Ada County. Through use of the dust suppressant BMPs and adherence to the current IDEQ management plans for CO and PM₁₀, construction and use of the three proposed ROW are not expected to exceed the NAAQs.

3.1.2.1 Alternative 1

Current sources of emissions and fugitive dust would continue to exist. Ongoing recreational use would generate emissions from the exhaust of off-highway vehicles (OHVs). Fugitive dust would continue to be generated from OHV use, equestrian trail use, and cattle grazing. Fugitive dust from wind erosion of the existing native surface roads would continue to occur.

3.1.2.2 Alternative 2

For the two access ROW the total surface disturbance would be 51.3 acres, with 29.7 acres that would be landscaped with a mixture of plants and cobble/gravel. Fugitive dust would be generated from the surface disturbing activities and would continue until paving of the road and landscaping is completed and vegetation becomes established along the roadsides.

Potential impacts to air quality caused by the Big Gulch Drainage Channel ROW would be slightly different than those described for the two access ROW. Both basin detention areas would be lined with river cobble and/or native plantings following construction, which would serve to reduce the potential for future fugitive dust emissions. Paving the northern trail and replanting both pathways would further reduce wind erosion and the potential for fugitive dust emissions. Motor vehicles would be prohibited in the channel pathways and no increased tailpipe emissions would occur in the area.

3.1.2.3 Alternative 3

Impacts to air quality would be similar to those described for Alternative 2 with the following exceptions. The temporary effects due to construction activities would be greater

for road construction activities required for the Linder Road Access ROW. This would be due to greater roadside cuts and more turns that would be included with this ROW. The total surface disturbance for the two access ROW would be 61.0 acres, with 39.7 acres that would be landscaped with a mixture of plants and cobble/gravel. Impacts from the State Highway 16 (SH-16) Access ROW would be the same as for Alternative 2.

The total surface disturbance required for the Big Gulch Channel ROW would be 24.7 acres; approximately 6.0 acres less surface disturbance than Alternative 2 because detention basins would not be constructed. Therefore, temporary impacts to air quality from construction would be slightly less.

3.1.2.4 Alternative 4

Impacts to air quality from the two access ROW would be the same as for Alternative 2. Surface disturbance from improvements to the Big Gulch Drainage Channel would impact approximately 9 acres of public land, of which the majority would be revegetated. Surface disturbance and associated short-term impacts to air quality would be less than alternatives 2 and 3 because less of the channel would be realigned onto public land.

3.2 WATER QUALITY

3.2.1 Affected Environment – Water Quality

No perennial surface water exists in the proposed ROW areas. The U.S. Army Corps of Engineers performed an on-site inspection of the Big Gulch and Little Gulch drainages on February 29, 2008 and determined both drainages are isolated and are not waters of the United States regulated under Section 404 of the Clean Water Act. The nearest water body to the proposed ROW is the Farmer's Union Canal, which conveys seasonal irrigation water from the Boise River system to the Eagle and Star areas. There are at least 25 domestic, single residence wells in the portion of northern Ada County between SH-16 and SH-55 (IDWR 2009).

Big Gulch intercepts Farmer's Union Canal on private property, approximately 0.3 miles southwest of the proposed Big Gulch Drainage Channel ROW (Figure 2-1). An existing 18-inch pipe would allow flows from Big Gulch to pass under the Farmer's Union Canal, thus preventing the possibility of co-mingling waters. The future channel plan calls for an underground pipe crossing of the Farmer's Union Canal capable of handling a 100-year storm event. Farmer's Union Canal is approximately 0.3 miles south of the Linder Road Access ROW and approximately 1 mile south of the SH-16 Access ROW.

Under Section 303(d) of the Clean Water Act as amended (1977), states, territories, and Tribes are required to develop lists of impaired waters that do not meet water quality standards. Based on review of the IDEQ geographic information system website data published in 2006, the nearest 303 (d) water is a tributary of Willow Creek located approximately 2,600 feet north of the SH-16 Access ROW, which is upstream of the proposed ROW.

3.2.2 Environmental Consequences – Water Quality

3.2.2.1 Alternative 1

The current multiple land use management practices would continue and no impacts to water quality would occur, as there are no perennial surface waters in the proposed ROW.

3.2.2.2 Alternative 2

Road construction as a result of authorizing the SH-16 and Linder Road Access ROW would cause soil disturbance. Impacts to water quality are not likely to occur because BMPs (temporary and permanent soil stabilization techniques) will be employed during and after construction to prevent soil erosion and potential indirect impacts to surface and groundwater.

After the new paved roads are constructed, indirect impacts to water quality would occur from increased storm water runoff to storm drains or drainage basins associated with the traffic on the new roadways associated with the two access ROW. It is assumed that the increased storm water runoff would carry pollutants, including sediment and residue from cars that would accumulate on the paved surfaces, into the storm drain system designed for the M3planned development. These pollutants could impact groundwater and eventually be delivered to the Boise River.

Authorizing the Big Gulch ROW for improvements to convey drainage would not affect ground and surface water levels. Minimal amounts of runoff from developed portions of the M3 Eagle planned development would be directed into this channel. Flow rates would not increase from natural levels, and it would primarily convey drainage from existing natural watersheds. No direct or indirect impacts to water quality would be expected.

3.2.2.3 Alternative 3

Impacts to water quality would be the same as Alternative 2.

3.2.2.4 Alternative 4

Impacts to water quality would be the same as Alternative 2.

3.3 SOILS

3.3.1 Affected Environment – Soils

The soils in the proposed ROW are Cashmere-Tindahay and are nearly level to steep, well drained and somewhat excessively drained, very deep soils. Soils in this unit occur on dissected sedimentary terraces and foothills in drainageways and on alluvial fans on foothills (SCS 1980). These soils formed in alluvium derived from sedimentary materials and mixed volcanics that accumulated in the basin once occupied by Lake Idaho. Surface textures range from sandy loam to clay loam. These soils have an aridic bordering xeric soil moisture regime and a mesic soil temperature regime. The soils associated with the Big Gulch Drainage Channel ROW, the Linder Road Access ROW, and a portion of the SH-16 Access ROW, have a high or very high erosion hazard (BLM 1987). Soil disturbance from road construction, farming, domestic livestock grazing, urban development, recreation, and wildfire has directly impacted the native vegetation and provided an opportunity for soil erosion to occur.

3.3.2 Environmental Consequences – Soils

3.3.2.1 Alternative 1

The current multiple land use management practices would continue and no impacts to soils would occur from not constructing the ROW corridors. Soil erosion would continue to occur due to surface disturbing activities described in Section 3.3.1.

3.3.2.2 Alternative 2

Authorization of the ROW corridors could affect soil stability and productivity. The transportation and drainage channel proposed for the ROW corridors would involve construction operations and surface disturbance. Although the type of surface disturbance would be similar for each proposed roadway, the impacts depend on the number of acres of associated soil disturbance. Impacts to soils would be minimized during construction using BMPs. Soils would be disturbed, mixed structurally, compacted, and exposed to erosion during construction resulting in a temporary increase in wind or water erosion on up to 82.0 acres until construction is complete. Some disturbance (e.g., compaction, crushed vegetation, short-term loss of cover), primarily to the soil surface and A and B horizons, could occur on up to 51 acres of the initial ROW area where construction activities occur outside the surface disturbance area. During construction, the roads would be sprayed with water daily to control dust. Following construction, up to 51.5 acres would be revegetated (Table 3-1), resulting in post-construction permanent impacts to soils on about 30.5 acres in the proposed ROW. Over time, soils in areas adjacent to the paved roads would become more stabilized, which would decrease erosion when the new vegetation becomes established.

Table 3-1. Acres of Initial Surface Disturbance and Revegetated Acres for each ROW – Alternative 2.

ROW Name	Total Initial ROW	Acres of Initial Surface Disturbance	Revegetated Acres *
Big Gulch Drainage Channel	30.7	30.7	21.8
SH-16 Access	54.7	27.5	15.6
Linder Road Access	47.6	23.8	14.1
Total	133.0	82.0	51.5

* Revegetated acres for roadways include both the median and roadcuts minus the acreage for the detached pedestrian and equestrian trail.

3.3.2.3 Alternative 3

The type of impacts to soils would be the same as Alternative 2, but would occur over a larger area (85.7acres), primarily due to the increase in grading required for the Linder Road alignment (Table 3-2). Short-term disturbance from construction activities outside the surface disturbance area could occur on up to 48.1 acres. Following construction, up to 57.2 acres would be revegetated, resulting in post-construction permanent impacts to soils on about 25.2 acres in the proposed ROW. This is 5.3 acres less than under Alternative 2.

Table 3-2. Acres of Initial Surface Disturbance and Revegetated Acres for each ROW – Alternative 3.

ROW Name	Total Initial ROW	Acres of Initial Surface Disturbance	Revegetated Acres*
Big Gulch Drainage Channel	24.7	24.7	17.5
SH-16 Access	54.7	27.5	15.6
Linder Road Access	54.4	33.5	24.1
Total	133.8	85.7	57.2

* Revegetated acres for roadways include both the median and roadcuts minus the acreage for the detached pedestrian and equestrian trail.

3.3.2.4 Alternative 4

The type of impacts to soils would be the same as described under Alternative 2, but would occur over a smaller area (60.4 acres) until construction in complete, primarily due to less disturbance to public lands from the realignment of the Big Gulch Channel ROW (Table 3-3). Short-term disturbance from construction activities outside the surface disturbance area could occur on up to 51 acres. Following construction, a total of 36.2 acres would be revegetated, resulting in post-construction permanent impacts to soils on about 24.2 acres in the proposed ROW, which is 6.3 acres less than Alternative 2 and 5.3 acres less than Alternative 3.

Table 3-3. Acres of Initial Surface Disturbance and Revegetated Acres for each ROW – Alternative 4.

ROW Name	Total Initial ROW	Acres of Initial Surface Disturbance	Revegetated Acres*
Big Gulch Drainage Channel	9.1	9.1	6.5
SH-16 Access	54.7	27.5	15.6
Linder Road Access	47.6	23.8	14.1
Total	111.4	60.4	36.2

* Revegetated acres for roadways include both the median and roadcuts minus the acreage for the detached pedestrian and equestrian trail.

3.4 VEGETATION / SPECIAL STATUS PLANTS / NOXIOUS WEEDS AND INVASIVE PLANTS

3.4.1 Affected Environment – Vegetation / Special Status Plants / Noxious Weeds and Invasive Plants

3.4.1.1 Vegetation

The shrub-steppe habitat of the proposed ROW has been subjected to disturbance, resulting in conditions ranging from poor to satisfactory (URS 2006). Soil disturbance from road construction, farming, domestic livestock grazing, urban development, recreation, and wildfire impacted the native vegetation and provided an opportunity for invasive species to establish and spread (Sheley et al. 1999). Trampling and utilization from livestock grazing and recreational use occurs throughout the area at varying levels. The spread of invasive species has shifted the vegetation from native vegetation communities to a grassland-dominated landscape with scattered shrub-dominated communities. In addition to the disturbance described above, approximately 77 to 82 percent of the proposed ROW burned during the 2010 Big Fire (BLM 2010a). This fire greatly reduced shrub coverage in the proposed ROW areas. Consequently the majority of the area was converted to grasslands (Appendix D). Prior to the 2010 Big Fire, approximately half of the proposed ROW areas burned during 1 or 2 fires from 1958 and 1997 (BLM 2007c). Historically, fires were relatively infrequent in the sagebrush-steppe ecosystem, likely occurring on the order of every 100 years (Whisenant 1990). The increase in fire frequency is positively associated with the abundance of cheatgrass (*Bromus tectorum*) (Whisenant 1990), which is the dominant understory species throughout the area.

Recovery from fire is more successful where more perennial and native plant species occurred prior to the fire. Natives like Sandberg bluegrass (*Poa secunda*) and bluebunch wheatgrass (*Pseudoroegneria spicata*) recover quickly from fire (Brown et al. 2000), whereas sagebrush only reproduces by seeds (Monsen and Kitchen 1994), and does not

recover well in repeated burn cycles. Cheatgrass, however, produces abundant seeds and responds well to fire. It grows well in areas of low precipitation and frequent fire. Cheatgrass is highly flammable earlier in the year than perennials, making areas dominated by the species even more susceptible to continued wildfire (Brown et al. 2000).

Grasslands dominate in the greater project area surrounding the proposed ROW, with shrub communities occurring in patches (Figure 3-1). The proposed ROW areas do not support riparian vegetation. Shrubs were the dominant cover type in the Linder Road Access ROW and Big Gulch Drainage Channel ROW prior to the 2010 Big Fire, and grasslands dominated the SH-16 Access ROW (Figure 3-1, Table 3-4).

Table 3-4. Acres of Grasslands and Shrublands within the Proposed ROW for each Action Alternative prior to the 2010 Big Fire and Acres and Percent Burned in 2010.

ROW by Alternative	Acres Pre-fire - Grassland	Acres Burned 2010 (%) - Grassland	Acres Pre-fire - Shrubland	Acres Burned 2010 (%) - Shrubland	Total Acres Pre-fire	Total Acres Burned 2010 (%)
<i>Alternative 2</i>						
BG Channel ¹	1.1	1.1 (100%)	29.5	11.8 (40%)	30.6	12.9 (42%)
SH-16 Access	54.4	41.9 (77%)	0.3	0.0 (0%)	54.7	41.6 (76%)
Linder Road Access	15.0	15.0 (100%)	32.4	32.4 (100%)	47.4	47.4 (100%)
Total	70.5	57.8 (82%)	62.2	44.2 (71%)	132.7	102.2 (77%)
<i>Alternative 3</i>						
BG Channel ¹	1.2	1.2 (100%)	23.5	11.0 (47%)	24.7	12.4 (50%)
SH-16 Access	54.4	41.9 (77%)	0.3	0.0 (0%)	54.7	41.6 (76%)
Linder Road Access	9.3	9.3 (100%)	44.6	44.6 (100%)	53.9	53.9 (100%)
Total	64.9	52.6 (81%)	68.4	55.4 (81%)	133.3	108.0 (81%)
<i>Alternative 4</i>						
BG Channel ¹	0	0.0 (0%)	9.1	2.1 (23%)	9.1	2.1 (23%)
SH-16 Access	54.4	41.9 (77%)	0.3	0.0 (0%)	54.7	41.6 (76%)
Linder Road Access	15.0	15.0 (100%)	32.4	32.4 (100%)	47.4	47.4 (100%)
Total	69.4	56.9 (82%)	41.8	34.7 (83%)	111.2	91.2 (82%)

¹BG Channel = Big Gulch Channel

In the 2010 Big Fire (boundary depicted in Figure 3-1), the majority of the shrubs within and adjacent to the two proposed Linder Road Access ROW burned (Table 3-4). A few remnant live patches of shrubs remain (Appendix D). Some areas appeared to have burned very hot as evidenced by the charred soil and remnant stumps (Appendix D). Between 23 to 50 percent

(depending on alternative) of public lands proposed for the Big Gulch Channel ROW were burned in the 2010 Big Fire (Table 3-4). The western portion did not burn and is still dominated by basin big sagebrush (Appendix D). The eastern portion was consumed in the wildfire and no longer contains shrubs (Appendix D). Approximately 76 percent of the SH-16 Access ROW burned in the 2010 Big Fire (Table 3-4). Cover by annual weedy species has likely increased from pre-fire conditions.

The vegetation classification system presented in this document follows national vegetation classification standards (Grossman et al. 1998 and NatureServe 2009) and is grouped by class, sub-class, alliance, and association, where possible. Vegetation types and boundaries were identified by review of aerial photography and an on-site ground survey prior to the 2010 Big Fire (URS 2006). A description of the dominant species in the grassland and shrub communities is presented in the following sub-sections.

Grasslands

Grasslands in the proposed ROW vicinity are comprised of a variety of perennial and annual grasses and forbs that exist together in various compositions. Grasslands are in the herbaceous class with perennial graminoid vegetation and annual graminoid vegetation subclasses. The dominant alliance in the perennial graminoid vegetation is the *Poa secunda* Herbaceous Alliance. The association is the *Aristida purpurea* var. *longiseta* – *Poa secunda* Herbaceous Vegetation (NatureServe 2009) with a heavy component of cheatgrass and medusahead (*Taeniatherum caput-medusae*). The annual graminoid vegetation subclass was not characterized by an alliance or association.

The most common perennial grasses within this association include red threeawn (*Aristida purpurea* var. *longiseta*), Sandberg bluegrass, squirreltail (*Elymus elymoides*), and bluebunch wheatgrass. The most common annual grasses include cheatgrass, medusahead, and sixweeks fescue (*Vulpia octoflora*). Both native and non-native forb species are common in the grasslands and include clasping pepperweed (*Lepidium perfoliatum*), tumbled mustard (*Sisymbrium altissimum*), fiddleneck (*Amsinckia* spp.), annual sunflower (*Helianthus annuus*), yarrow (*Achillea millefolium*), Munro's globemallow (*Sphaeralcea munroana*), and lupine (*Lupinus* spp.). Since the 2010 Big Fire, the amount of annual grasses and weedy forbs has increased in the general area of the ROW.

Figure 3-1. Vegetation Cover in the Proposed ROW Areas.

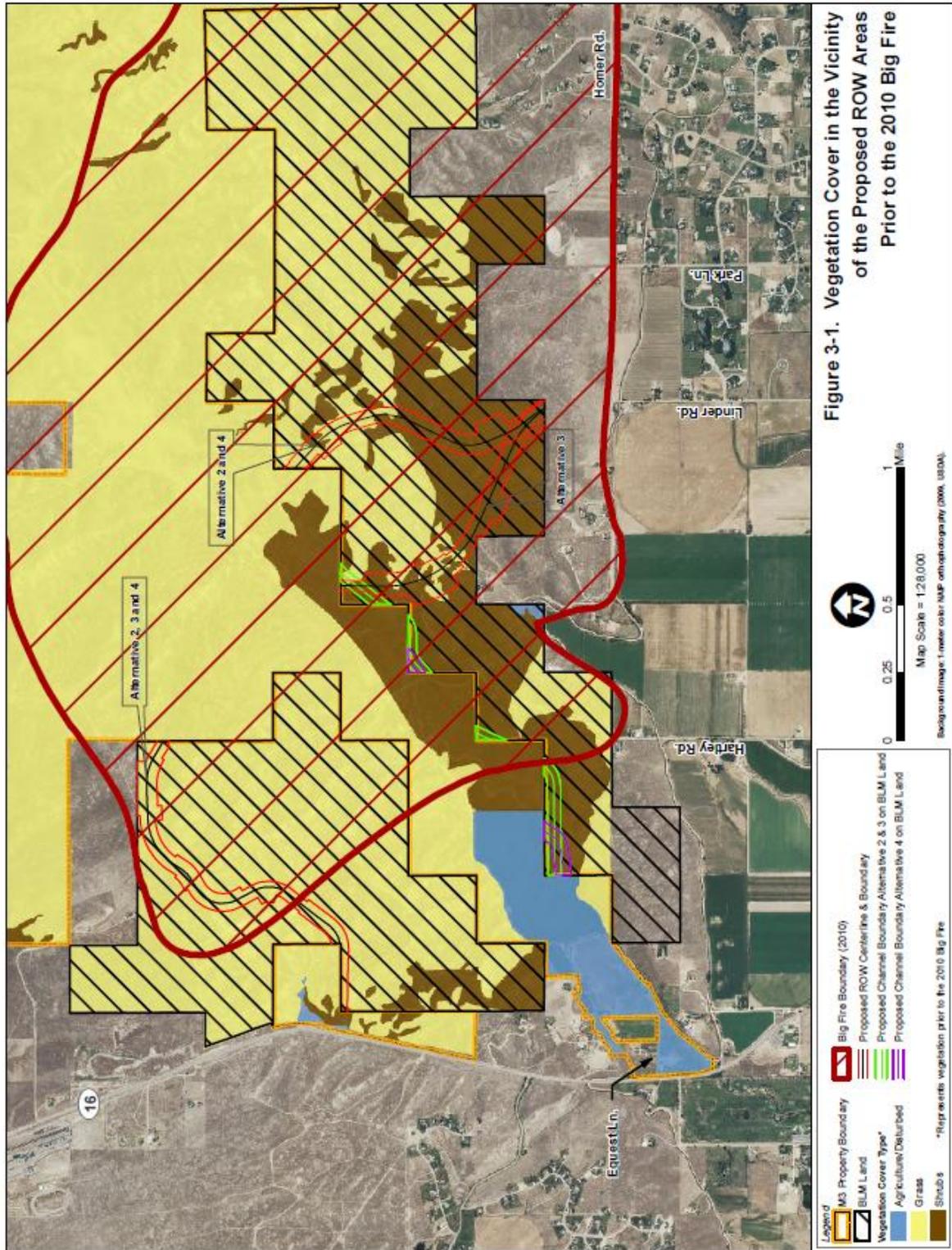


Figure 3-1. Vegetation Cover in the Vicinity of the Proposed ROW Areas Prior to the 2010 Big Fire

Shrub Communities

The shrub communities in the proposed ROW vicinity are in the shrubland class, evergreen shrubland subclass, the *Artemisia tridentata* Shrubland Alliance, and are generally of two different sagebrush associations. The *Artemisia tridentata* Shrubland Alliance (NatureServe 2009) is present along portions of the Big Gulch Drainage ROW. The dominant variety of sagebrush in this association is basin big sagebrush (*A. tridentata* ssp. *tridentata*) and the shrub understory is only sparsely covered with herbaceous species.

The other more common sagebrush association in the vicinity of the proposed ROW is the *Artemisia tridentata* ssp. *wyomingensis* / *Poa secunda* Shrubland (NatureServe 2009). In this association, Wyoming big sagebrush (*A. tridentata* ssp. *wyomingensis*) dominates the shrub canopy with a highly variable percent cover and native bunchgrass Sandberg bluegrass and annual grasses and forbs are typically dominant in the sparse to moderately dense herbaceous understory. Grey rabbitbrush (*Ericameria nauseosa*) and green rabbitbrush (*Chrysothamnus viscidiflorus*) are often present in the shrub layer while fourwing saltbush (*Atriplex canescens*) and antelope bitterbrush (*Purshia tridentata*) are both rare. Other grasses present have less canopy cover and include squirreltail, red threeawn, cheatgrass, and medusahead. Forbs are a minor and variable component of this association. This association is currently limited to remnant patches in the proposed ROW due to the 2010 Big Fire.

3.4.1.2 Special Status Plants

Special status plants (SSPs) include all vascular plants, non-vascular plants, and lichens that are federally listed as threatened and endangered, proposed for listing, or candidates for listing under the Endangered Species Act (ESA); or sensitive, as designated by the Bureau of Land Management (BLM) state director. The BLM manages SSPs under national policy requiring the BLM State Director to designate BLM sensitive species in cooperation with the Idaho State Fish and Wildlife agencies (BLM Manual 6840, BLM 2008a). These designations are used primarily for occurrences on BLM lands where the outcome of land management can affect the conservation status of the species. Based upon numerous criteria, such as risk of extinction, population size, distribution, and trend, SSPs are assigned a 'Type' number. Species at highest risk are classified Type 1 and those at lowest risk are Type 4 (BLM 2011a). Four SSPs have the potential to occur in the ROW: *Lepidium papilliferum* (slickspot peppergrass), *Allium aaseae* (Aase's onion), *Texasporium sancti-jacobi* (woven-spore lichen), and *Catapyrenium congestum* (compact earth lichen).

The BLM Four Rivers Field Office has designated several special management areas within 5 miles or less of the ROW areas specifically for management of SSP resources. Three of

these are managed for slickspot peppergrass (LEPA; BLM Type 1) and two for Aase’s onion (BLM Type 2) (Table 3-5).

Table 3-5. Special Management Areas in the Vicinity of the ROW Areas Managed for SSPs.

Special Management Area	Focus Species	Distance from the ROW Area¹ (miles)
LEPA Management Area 2A	Slickspot peppergrass (Type 1)	3.0
LEPA Management Area 2B	Slickspot peppergrass (Type 1)	2.5
LEPA Management Area 2C	Slickspot peppergrass (Type 1)	0 (Overlaps part of the Big Gulch Drainage Channel ROW for Alt 2 & 3)
Sand Capped Knob ACEC	Aase’s onion (Type 2)	4.8
Willow Creek ACEC	Aase’s onion (Type 2)	2.9

¹ Distance reported is that to the closest ROW.

Slickspot Peppergrass

Slickspot peppergrass is proposed for listing as an endangered species under the ESA (USFWS 2008). This species was formerly listed as threatened under the ESA (USFWS 2009), but the final listing rule was vacated by the U.S. District Court in 2012 (U.S. District Court 2012). The BLM continues to manage this plant as a Type 1 species given the listing proposal and conservation agreements with the United States Fish and Wildlife Service (USFWS), Idaho, and non-governmental cooperators (BLM 2003a and BLM 2009a). Although “take” (removal or destruction of plants) of listed plant species is not prohibited under the ESA, the USFWS guidance is for avoidance and minimization of impacts. Further, one of the Cascade RMP (BLM 1988) Vegetative Resources Objectives is to “Protect Federal candidate and sensitive plants.” Section 7 consultation has been conducted for this project and a Biological Assessment and Biological Opinion have been prepared to document the potential effects of the proposed project (Alternative 4) on slickspot peppergrass and proposed critical habitat (see Section 4.2.3).

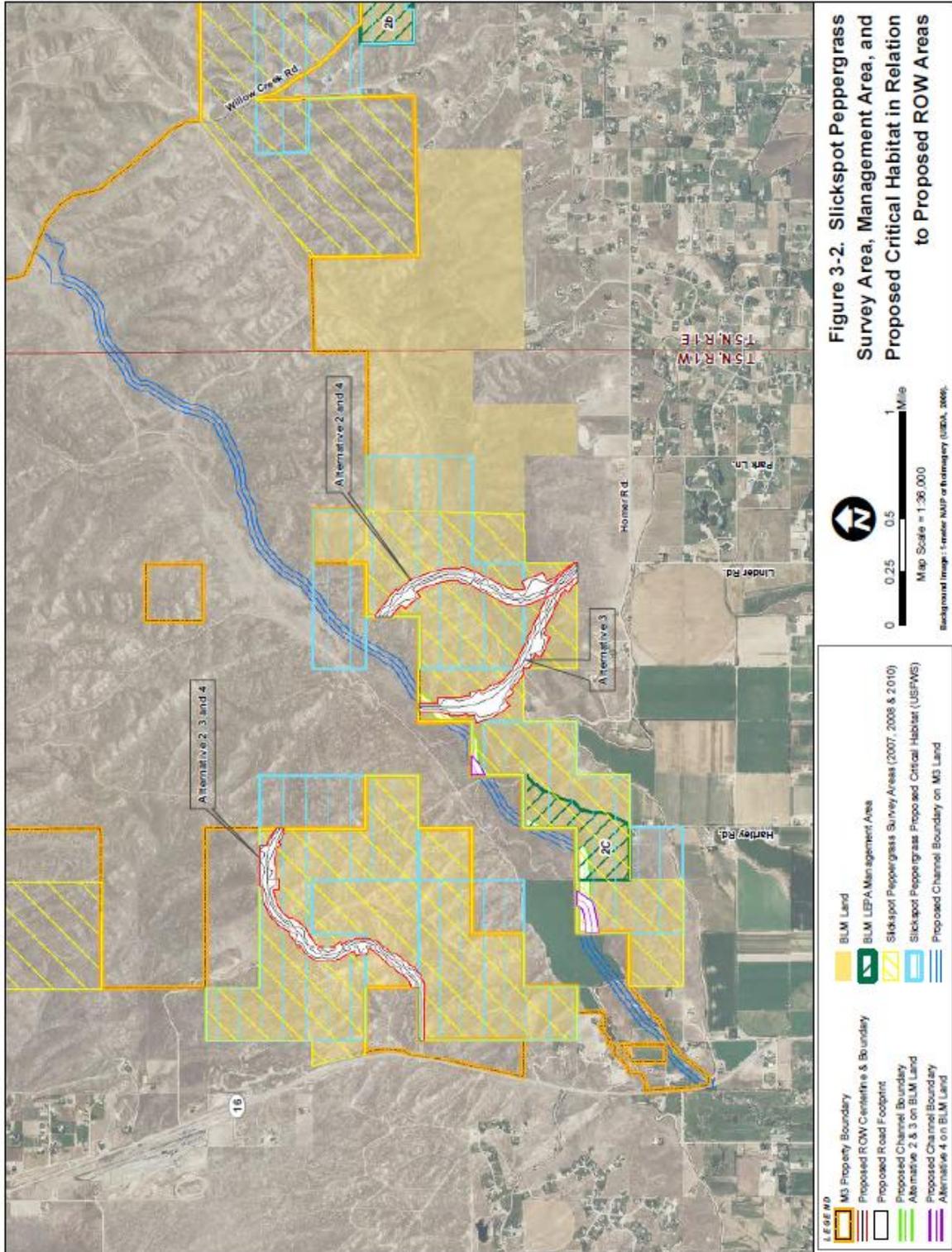
Slickspot peppergrass is currently managed under two separate conservation agreements: 1) Candidate Conservation Agreement (BLM 2003a) which is a conservation agreement between BLM, the state of Idaho, Idaho Army National Guard, and several BLM permittees; and 2) Conservation Agreement (established in 2006 and updated in 2009, BLM 2006a and BLM 2009a) between the BLM and the USFWS which provides management guidelines and an effective and efficient means of ESA Section 7 consultation for BLM management actions. The Conservation Agreement states: “Project-level inventories will be completed as appropriate during project planning if inventory information is not available or adequate to determine if impacts to the species or habitat may occur. If direct or indirect negative impacts

to the species or its habitat are anticipated as a result of new BLM actions, the activity will be modified to avoid or minimize anticipated negative impacts. BLM will complete all necessary Section 7 compliance for new activities that may affect this species and its habitat.” Project-level inventories for slickspot peppergrass and Section 7 Consultation have been completed for the proposed ROW.

Slickspot peppergrass is a herbaceous, annual or biennial mustard endemic to southwest Idaho and occurs exclusively in sagebrush-steppe habitats at elevations ranging from 2,200 to 5,400 feet above sea level. It grows 4 to 12 inches in height with clusters of small white flowers containing four petals each. Plants are densely papillose-puberulent (having clusters of fine hairs). Flowering and setting of fruit occurs between late April and June. This species is restricted to slickspots, also called mini-playas or natric sites. Slickspots are distinct, small, typically whitish patches with a hard-packed clay subsurface soil horizon and exhibit higher alkalinity than surrounding soils. Due to soil conditions, other vegetation is often sparse in undisturbed slickspots. Slickspot peppergrass seed may remain viable in the soil for up to 12 years (Meyer et al. 2005), but it has a low seed set in the absence of insect pollinators (Robertson and Hannon 2003). Studies have shown a strong positive correlation between insect diversity and the number of slickspot peppergrass flowering at a site (Robertson and Hannon 2003). Intact sagebrush-steppe habitat typically has a diversity of forbs, which help maintain pollinators necessary for slickspot peppergrass.

Slickspot peppergrass is endemic to the semiarid sagebrush-steppe of southwestern Idaho and known only from the Snake River Plain and its adjacent northern foothills with a smaller disjunct population on the Owyhee Plateau (USFWS 2009). Eighteen slickspot peppergrass management areas have been established to protect slickspot peppergrass EOs on BLM lands (BLM 2006c). An EO is a specific geographic location where “a species or natural community is, or was, present” (NatureServe 2002). Each management area has specific conservation measures “designed to eliminate, reduce, or mitigate the impacts of site specific activities and threats and to maintain or restore the sagebrush-steppe habitat” (BLM 2003a). LEPA Management Area 2C overlaps the Big Gulch Channel ROW under alternatives 2 and 3 but not Alternative 4 (Figure 3-2). Slickspot peppergrass habitat and known EOs in the foothills are less common than the nearby plains (BLM 2003a).

Figure 3-2. Slickspot Peppergrass Survey Area, Management Area, and Proposed Critical Habitat in Relation to all Proposed ROW.



The BLM requires protocol surveys for slickspot peppergrass, which are conducted in three stages (BLM 2010b). Stage 1 inventories are performed to determine if slickspots and slickspot peppergrass plants are present. Stage 2 and 3 inventories are performed to determine the presence or absence of slickspot peppergrass in known slickspots, as identified through Stage 1 inventory. Stage 1 and 2 inventories are often performed simultaneously. An area containing slickspots may be determined not to contain slickspot peppergrass after 3 years of inventory where spring rainfall is at least 60 percent of "average" spring precipitation (March through May; about 2.5 inches) within the current range of the species. These areas, according to the protocol (BLM 2010b), will continue to be classified as slickspot peppergrass habitat, but will be reclassified as unoccupied.

Recent protocol surveys conducted by URS Corporation (2007a, 2008, and 2010) for slickspots (Stage 1) and slickspot peppergrass presence (Stage 2) located several slickspots in the proposed ROW areas including 0.05 acres of occupied slickspots with 20-30 plants in the SH-16 Access ROW. Stage 3 surveys were not done, so it cannot be determined that slickspot peppergrass habitat is unoccupied. Additional occurrences of slickspots and slickspot peppergrass plants were located outside of but in the vicinity of the proposed ROW. Review of Idaho Department of Fish and Game (IDFG) (IDFG 2010a) data revealed that EO 76 and EO 108 are located outside of but in the vicinity of the proposed ROW; however, occupied slickspots identified in the SH-16 Access ROW are considered part of EO 76.

Slickspot peppergrass habitat is presented in four categories: (1) slickspot peppergrass EOs, (2) occupied habitat, (3) slickspot peppergrass habitat, and (4) proposed critical habitat (Table 3-6, Figure 3-2). Slickspots and slickspot complexes were mapped during field surveys, as mentioned above, and point locations were buffered by 82 feet (25 meters), for consistency with EO mapping.

Slickspot peppergrass EOs include areas where slickspot peppergrass plants have been documented at least once; they may include several individuals from different slickspots if the slickspots are adjacent to each other. These EOs include point locations documented during the 2007, 2008, and 2010 surveys which have been incorporated into updated EOs as recorded by the IDFG (IDFG 2010a). Up to 0.05 acres of occupied slickspots (20-30 plants out of 500 in the EO) occur in the proposed SH-16 ROW and none occur in the other proposed ROW (Table 3-6).

Table 3-6. Acres of Slickspot Peppergrass Occurrences (EOs), Slickspots, Occupied Habitat, Slickspot Peppergrass Habitat, and Proposed Critical Habitat Recorded within the Proposed ROW.

Alternative	Proposed ROW	Slickspot Peppergrass EOs	Slickspots & Slickspot Complexes	Occupied Habitat	Slickspot Peppergrass Habitat	Proposed Critical Habitat
2	BG Drainage ¹	0	1.2	30.7	0	23.5
	SH-16 Access	0.05	2.7	54.7	0	43.7
	Linder Road Access	0	3.0	43.7	3.9	32.8
3	BG Drainage ¹	0	1.0	24.7	0	19.1
	SH-16 Access	Same as in the Alternative 2 alignment				
	Linder Road Access	0	14.7	49.8	4.5	1.6
4	BG Drainage ¹	0	0	9.1	0	9.1
	SH-16 Access	Same as in the Alternative 2 alignment				
	Linder Road Access					

¹BG Drainage = Big Gulch Drainage

Occupied habitat as defined in the May 2010 BLM *Slickspot Peppergrass Inventory and Clearance Standards* (BLM 2010b) and mapped by the BLM (BLM 2011b) overlaps the ROW. Occupied habitat includes a 0.5-mile buffer around all EOs. Between 107.5 acres (96 percent of Alternative 4 proposed ROW) and 129.2 acres (97 percent of Alternative 3 proposed ROW) is occupied habitat (Table 3-6).

Slickspot peppergrass habitat contains slickspot microsites, is within the known range of slickspot peppergrass, and has general soil and elevation characteristics of the species, but has not had slickspot peppergrass plants documented. Occupied habitat and slickspot peppergrass habitat categories are mutually exclusive, meaning that if an area is mapped as one of these categories, it won't be included in the other category. A small proportion (3-4 percent) of the proposed ROW is classified as slickspot peppergrass habitat (Table 3-6).

Proposed critical habitat was designated by the USFWS (USFWS 2011a) for a total of 57,756 acres across its known range within Ada, Elmore, Payette, and Owyhee counties in Idaho. A portion of this acreage overlaps the ROW (Figure 3-2). Critical habitat is defined in Section 3 of the ESA as “(i) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the [Endangered Species] Act, on which are found those physical or biological features. (I) Essential to the conservation of the species, and (II) Which may require special management considerations or protection; and (ii) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.”

Proposed critical habitat overlaps 77 percent of the Big Gulch Drainage for alternatives 2 and 3 and 100 percent for Alternative 4 (Table 3-6). Proposed critical habitat overlaps approximately 69 percent of the Linder Road Access ROW for alternatives 2 and 4, and 3 percent for Alternative 3. Proposed critical habitat overlaps approximately 80 percent of the SH-16 Access ROW under all alternatives. In this area, proposed critical habitat is a subset of occupied habitat; therefore, subsequent discussions of occupied habitat will apply to proposed critical habitat.

As part of the proposed listing of critical habitat, primary constituent elements (PCEs) were developed for slickspot peppergrass. PCEs include physical and biological features of designated or proposed critical habitat essential to the conservation of the species, including, but not limited to: (1) space for individual and population growth, and for normal behavior; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and (5) habitats that are protected from disturbance or are representative of the historic geographic and ecological distributions of a species [ESA §3(5)(A)(i), 50 CFR §424.12(b)]. The USFWS considers the physical or biological features essential to the conservation of slickspot peppergrass to be those PCEs laid out in the appropriate quantity and spatial arrangement to provide for the conservation of the species. Four PCEs developed for slickspot peppergrass proposed critical habitat include: PCE 1 – ecologically functional microsites or slickspots, PCE 2 – relatively intact Wyoming big sagebrush vegetation, PCE 3 – a diversity of flowering plants necessary for pollinators, PCE 4 – sufficient pollinators for successful reproduction. More details concerning PCEs are described in the Biological Assessment prepared for this project (BLM 2011c). PCEs will be discussed for all occupied habitat.

Based on population size, habitat conditions within the EOs, and landscape conditions of occupied habitat, EOs 76 and 108 had an overall high conservation value (B-rank) prior to the Big Fire (USFWS 2011b). Although only 0.05 acres of a slickspot peppergrass EO is present within the proposed SH-16 Access ROW, approximately 5.7 acres (Alternative 4) to 18.4 acres (Alternative 3) of slickspots (PCE 1) are present in the SH-16 Access and Linder Access ROW (Table 3-6). The quality of the slickspot microsites was generally rated as moderate (USFWS 2011b). After the Big Fire, there were between 7.1 acres (Alternative 4) and 18 acres (Alternative 2) of relatively intact Wyoming big sagebrush vegetation (PCE-2) are present in the proposed ROW (Table 3-4). The quality of the sagebrush habitat was generally rated as moderate (USFWS 2011b). Diversity of native forbs (PCE-3) and reproductive nesting sites for pollinators (PCE-4) were rated low because of limited native forb diversity and cover and predominance of exotic invasive species (USFWS 2011b).

The “primary threat to slickspot peppergrass is the present or threatened destruction, modification, or curtailment of its habitat and range due to the increased frequency and extent of wildfires under a wildfire regime modified and exacerbated by the spread of invasive non-native plants, particularly non-native annual grasses” such as cheatgrass (USFWS 2009). The effects of wildfire on slickspot peppergrass seed dormancy and viability are currently unknown, though abundance is reduced in burned areas (USFWS 2009). Slickspot peppergrass typically declines or is extirpated following the replacement of sagebrush-steppe habitat by non-native annuals (Moseley 1994). Invasion by invasive plants leads to increasing habitat fragmentation and isolation of occurrences (Moseley 1994).

Aase’s Onion

Aase’s onion, a BLM Type 2 SSP, is endemic to Idaho in the lower foothills from Boise to the Weiser area in Ada, Boise, Gem, Payette, and Washington counties (BLM 2000). This plant is restricted to coarse sandy soil on steep, south-facing slopes, or near ridgetops in sagebrush-grass communities. It is often found associated with red threeawn and antelope bitterbrush between 2,625 and 4,920 feet elevation.

A survey for Aase’s onion was conducted on private land owned by M3 in the vicinity of the ROW during April and May 2006 and 2007. Prior to conducting field surveys, IDFG data were reviewed to determine if there were any known, previously recorded EOs of Aase’s onion on private and BLM land in the area. The IDFG data indicated that most of the proposed ROW fall within the large buffer of historic Aase’s onion EO 31 which was first and last observed in 1978. The location precision of this EO is considered to be vague due to the potentially poor original data source (IDFG 2010a) which means Aase’s onion may or may not have been observed within the proposed ROW. Other Aase’s onion EOs are known greater than 2.5 miles east of the proposed ROW. Surveys located two occurrences of this species on private land, approximately 2.5 miles east of the ROW. Surveys have not been conducted specifically for Aase’s onion within public land in the ROW. However, this species was not observed during surveys for slickspot peppergrass.

Woven-spore Lichen

Woven-spore lichen, a BLM Type 2 SSP, is dependent on organic material for a growing substrate, mainly growing on clumps of dead Sandberg bluegrass or small mammal dung. This rare crustose (crust-like) lichen species is mainly found at sagebrush sites between 2,890 and 3,280 feet that have not been disturbed for several years or burned. In Idaho, this species grows in the same areas and habitat as slickspot peppergrass, but only in areas with little evidence of recent disturbance (McCune and Rosentreter 1992). Fire, grazing, and

recreational activities that reduce organic matter and disrupt soil surfaces along with invasive exotic annuals, such as cheatgrass and medusahead that cover biotic soil crusts are considered threats to this species (WDNR 1999). This species occurs at lower elevations in much of the Four Rivers Field Office Area, and the closest known EO (EO 3) is 17 miles away and has not been observed since 1998. No documented occurrences of this species have been recorded in the ROW; however, species-specific surveys have not been conducted. The likelihood of the woven-spore lichen in the ROW is low based on disturbance history and presence of invasive species.

Compact Earth Lichen

Compact earth lichen, a BLM Type 4 SSP, has scale-like lobes called squamules that are usually small and overlapping. It occurs in sagebrush or shadscale steppe habitats and is restricted to barren, slightly natric soil sites. Livestock trampling has been identified as a threat to this species (BLM 2006b). The documented occurrences of this species in Ada County are east of Boise, with the majority of known occurrences in Owyhee County. EO 1 is 12 miles away from the proposed ROW, but is the closest known occurrence. It was last observed in 1997 adjacent to a 1996 fire perimeter (IDFG 2010a). No documented occurrences of this species have been recorded in the ROW; however, species-specific surveys have not been conducted. Potentially suitable habitat for this lichen is present in the slickspots in the ROW. However, the likelihood of occurrence is reduced due to the disturbed nature of the area.

3.4.1.3 Noxious Weeds and Invasive Plants

The term ‘noxious’ is a legal designation given by the Director of the Idaho State Department of Agriculture to any plant having the potential to cause injury to public health, crops, livestock, land or other property (Idaho Statute 22-2402). Similarly, invasive plants are alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health (Executive Order 13112). Noxious weeds and invasive plants are highly competitive and persistent, germinate under a wide variety of conditions, and often show fast seedling growth. These species are introduced and often lack natural control agents such as herbivory, parasites, or other factors that often regulate native species (Keane and Crawley 2002). The productivity of public lands in the BLM Four Rivers Field Office is being adversely affected by the spread of noxious weeds and other invasive species (BLM 2007b).

Recent biological investigations documented two noxious weed species in the project area. Field observations made during the 2007 and 2008 surveys identified well-established relatively common patches of rush skeletonweed (*Chondrilla juncea*) and uncommon patches

of whitetop (*Cardaria draba*) which occur in small, localized populations in the proposed ROW areas (URS 2008). Scattered potential Canada thistle (*Cirsium arvense*) rosettes were also observed (URS 2008). Russian knapweed (*Acroptilon repens*) and rush skeletonweed were also documented near the proposed ROW by the BLM and were chemically treated (BLM 2004).

The ROW are within the Boise Basin Cooperative Weed Management Areas. The BLM Four Rivers Field Office is cooperating and coordinating with Federal and state agencies, Ada County, and private landowners through the Cooperative Weed Management Areas to control noxious and invasive weeds in the Four Rivers Field Office Planning Area. Nine noxious weed species have been documented on BLM lands within Ada County from 1996 to 2004 (BLM 2007b). Many of these weed occurrences have been treated chemically or biologically since then.

Other invasive weeds or weedy species, besides those designated by the state as noxious, have been identified in the ROW and vicinity. The dominant invasive species in the ROW areas are cheatgrass and medusahead. These grasses occur in large areas within the project site. Many weedy forb species are also present, such as thistle (*Cirsium* sp.) and common St. John's wort (*Hypericum perforatum*). These forbs primarily invade areas that have been disturbed. Because invasive weeds are already present in the general project area, the area has burned one to several times in the past 52 years. Much of the area (77-82%) recently burned again during the 2010 Big Fire (BLM 2010a, Table 3-4). The area has the potential to reestablish, post-fire, as grassland with increased exotic grass and forb components, instead of its native sagebrush-steppe habitat.

3.4.2 Environmental Consequences – Vegetation / Special Status Plants / Noxious Weeds and Invasive Plants

Impacts to vegetation are assessed by determining the number of acres of disturbance to vegetation communities (as described prior to the 2010 Big Fire) for ground disturbing activities for all ROW associated with each alternative. Both temporary and permanent disturbance to vegetation would occur. Temporary disturbance includes areas disturbed during construction that would be revegetated. Permanent disturbance is the permanent removal of vegetation from the ROW and is computed by taking the difference between the total disturbance (initial construction disturbance) and the number of acres revegetated.

Impacts to SSPs are assessed by determining the acres of slickspot peppergrass occurrences and slickspots/slickspot complexes that would be disturbed from ground disturbing activities for all ROW associated with each Alternative. The number of acres of occupied habitat,

slickspot peppergrass habitat, and proposed critical habitat within disturbance areas is also reported.

Impacts associated with the introduction and spread of noxious and invasive weeds are based on the number of acres of ground disturbance and the presence of noxious and invasive weeds prior to disturbance.

3.4.2.1 Alternative 1—No Action

Vegetation / Special Status Plants / Noxious Weeds and Invasive Plants

Impacts to vegetation and SSPs from current management such as on-going livestock grazing and recreational use would continue. Recreation is expected to increase in the future due to anticipated continued population increases in the region. Fire risk, the greatest threat to slickspot peppergrass and its habitat, would continue to be high due to the invasive plant understory common throughout the area. The scattered remnant shrub-dominated communities could be converted to annual dominated grasslands due to increased fire frequency over the long term. An increase in invasive weeds would compete for limited resources with native perennial forbs, which are necessary for pollinator habitat for slickspot peppergrass. A reduction in pollinator habitat could adversely impact slickspot peppergrass and result in limited survival in the area over the short-term (5-20 years) and possible local elimination of the species in the long-term.

3.4.2.2 Alternative 2

Vegetation

Vegetation would be impacted from the construction of the three ROW in the short-term through temporary construction activities, and the long-term from increased fragmentation from the ROW. Human impacts to vegetation through increased recreation would also be long-term. The increase in human impacts and increased fire frequency could speed up the conversion of scattered remnant shrub-dominated communities to annual grasslands with little native plant diversity. Poor quality annual grasslands offer little to no habitat for special status plant species (slickspot peppergrass), and their pollinators.

Initial impacts to vegetation from construction activities associated with Alternative 2 would affect up to 132.7 acres of vegetation. Approximately 82 acres would be temporarily removed. Approximately 44 percent of the acres that would be removed are grasslands and 56 percent are shrublands (using vegetation composition prior to the 2010 Big Fire). Following construction activities, a total of 51.5 acres would be revegetated, resulting in the permanent removal of 30.5 acres of vegetation (Table 3-7).

Table 3-7. Acres of Vegetation Removed and Revegetated by ROW – Alternative 2.

ROW	Grassland Removed¹	Shrubland Removed¹	Total Removed²	Total Revegetated	Permanently Removed
Big Gulch Channel	1.1	29.5	30.6	21.8	8.9
SH-16 Access	27.4	0.1	27.5	15.6	11.9
Linder Road Access	7.2	16.6	23.8	14.1	9.7
Total	35.7	46.2	81.9	51.5	30.5

¹ Based on vegetation acres prior to the 2010 Big Fire.

² Totals may be off by 0.1 acres due to rounding.

Vegetation in the 50.7 acres outside direct disturbance areas could be impacted by trampling and soil disturbance caused by construction activities; however, fencing and other BMPs would help minimize impacts. The increased surface disturbance within the ROW could further introduce and increase the spread of invasive and noxious weeds into the area. The increase in invasive weeds, particularly annual grasses such as cheatgrass, would increase the amount of fine fuels and could shorten the fire-return interval, which could increase the potential for both small and large-scale fires.

The addition of roadways into an area with a large amount of fine fuels could increase the potential for fire starts from increased traffic, but it could also serve as an access point to fight future fires. The paved roads and landscaped areas could also minimize the spread of fire. Areas revegetated could improve the condition of vegetation in localized areas where invasive plant species currently occur. Best management practices and design features specific to noxious and invasive weeds and fire management would help reduce the potential for the introduction and spread of noxious and invasive weeds and thus help reduce the spread of fire, which would in turn help protect vegetation and special status plants from fire.

Existing and continued impacts to vegetation from pedestrian recreation could continue in the non-developed portions of the proposed ROW, despite the permanent fencing.

Special Status Plants

Construction activities would have a minor long term affect on slickspots and slickspot complexes (PCE 1). The portion of an EO that occurs within the SH-16 ROW (0.05 acres) would be eliminated by construction activities. However, the amount affected represents 0.0003 percent of the total acreage of EOs known in 2009 (USFWS 2011b). No other EOs would be directly affected. Approximately 3.4 acres of slickspots and slickspot complexes would be eliminated in cut and fill areas (Table 3-8). Slickspots (3.5 acres) occurring outside direct disturbance areas could be subjected to compaction or damage from vehicle traffic.

Depending on the degree of impact, affects would be short (minor compaction during dry season, slickspot integrity maintained) or long (compaction or puncture of clay layer during wet season, slickspot integrity not maintained) term. Direct damage and mechanical disturbance may alter slickspot soil layers, which impacts the slickspot function, making it susceptible to invasion by invasive plants (USFWS 2009). Temporarily fencing slickspot microsites in portions of the ROW not proposed for excavation, as determined by BLM, would reduce the potential for impacts to slickspot microsites from construction activities (Section 2.4.1.5).

Table 3-8. Acres Slickspot Peppergrass Occurrences (EOs), Slickspots, Occupied Habitat, Slickspot Peppergrass Habitat, and Proposed Critical Habitat Removed by ROW- Alternative 2.

Proposed ROW	Slickspot Peppergrass EOs	Slickspots & Slickspot Complexes	Occupied Habitat	Slickspot Peppergrass Habitat	Proposed Critical Habitat
Big Gulch Drainage	0	1.2	30.7	0	23.5
SH-16 Access	0.05	1.3	27.5	0	22.0
Linder Road Access	0	0.9	22.0	1.8	15.9

Disturbance to slickspots or deposition of soil on slickspots could result in slickspot peppergrass seeds being buried too deep to allow for successful germination. Stockpiling of soil would not occur on public lands where slickspots are present (Section 2.4.1), which would reduce this risk. Further, storage of construction equipment and materials would occur in limited areas to minimize surface disturbance (Section 2.4.1). Pre-construction surveys and subsequent temporary fencing of known slickspot peppergrass occurrences adjacent to the ROW would ensure that slickspot peppergrass plants present on public land would be avoided (Section 2.4.1.5).

Construction activities would directly eliminate 80.2 acres of occupied habitat and 1.8 acres of slickspot peppergrass habitat over the short term (until revegetation efforts are completed). Up to 46.2 acres of shrubland (PCE 2) could be affected; however, only 18.1 acres of sagebrush (in the Big Gulch Channel and SH-16 ROW) remained after the Big Fire. Revegetation efforts (51.5 acres) could restore sagebrush on a majority of the area not permanently converted to roadways and trails (30.5 acres). Where they become established, the mix of forbs identified for revegetation efforts would help provide a diversity of flowering plants for pollinators (PCE 3) over the long term. Road cuts and fills would provide marginal habitat for ground dwelling pollinators over the long term. Because the completed ROW would be relatively narrow linear features, they would only have none to minor adverse affect on pollinator’s ability to move between shrub habitats (PCE 4).

Construction activities outside direct impact areas could have minor short term impacts on up to 50.7 acres where forbs and shrubs are damaged or killed or pollinator habitat is otherwise trampled or destroyed. Recovery of vegetation in these areas would meet pollinator habitat needs except where invasive annual species replace desirable perennial species.

Development of the proposed ROW would increase the risk of fire, slickspot peppergrass's greatest threat, in both the short- and long-term. The threat of fire would be increased during construction of the ROW (potential spark ignition from construction equipment) and during public use of the roadways and trails (potential fire ignition from vehicle sparks or discarded cigarettes). Roads could also decrease response time to fires (Section 3.5), and roads and landscaping could potentially reduce the spread of a wildfire. Other long-term impacts would include reduction in habitat, increased fragmentation of the habitat, and potential lowered densities and diversity of insects required for pollination and successful reproduction of special status plants. Loss of and damage to all categories of slickspot peppergrass habitat could lead to indirect declines in the local population. Habitat fragmentation could lead to decreased reproductive success (lower seed set). Permanently fencing the ROW would confine vehicles to the improved roads, reducing the potential destruction or degradation that could be caused from OHV access, as well as reducing fire risk.

Indirect impacts to slickspot peppergrass and all categories of its habitat could occur from the introduction and spread of invasive plants, including noxious weeds. Invasive plants could adversely affect the quality of suitable habitat for slickspot peppergrass. With the spread of annual invasive plant species, there would be more fine fuels and a greater risk of fire, which could threaten the population of slickspot peppergrass. Similar to Alternative A, conversion of sagebrush-steppe into annual grasslands, which could result from a shortened fire regime interval, would further degrade the quality of habitat for slickspot peppergrass and its pollinators, which are known to have lowered abundance in burned areas (USFWS 2009).

Road maintenance in the winter, which could include sanding the roadway, could indirectly lead to an accumulation of sand on the roadside, including within slickspot microsites. Accumulation of sand could alter the function of the slickspot microsites. Placement of drainage structures to avoid the settling of disturbed soils on downslope slickspot microsites (Section 2.4.1.5) would help minimize potential effects from soil accumulation on slickspot microsites.

The noxious weed abatement plan (Section 2.4.1.1), along with firewise landscaping (Section 2.4.1.2), and fire management design features (Section 2.4.1.4) would help minimize the effects of noxious weeds and reduce risk of and spread of fire. Existing and continued impacts to slickspot peppergrass and all categories of its habitat from pedestrian recreation

activities, such as trampling and continued introduction and spread of noxious and invasive weeds, would likely continue in the proposed ROW areas. Projected increase in recreational use of public lands adjacent to the ROW could increase potential threats to this species.

Aase's onion, compact earth lichen, and/or woven-spore lichen could occur in the proposed ROW; however, the probability of occurrence is quite low due to lack of suitable habitat. It is possible that a minimal number of individuals would be lost due to construction activities.

Noxious Weeds and Invasive Plants

Soil disturbance and increased access associated with the proposed ROW would make up to 133 acres and adjacent undisturbed areas susceptible to colonization by noxious weeds and invasive plants over the short term. This potential would be exacerbated due to the current presence of noxious and invasive weeds in the ROW. Potential vectors for transmitting noxious weeds and invasive plants into the proposed ROW include seeds attached to vehicles, machinery, and personnel necessary for excavation and construction activities. The exposed bare ground after construction is very susceptible to noxious weeds and invasive plants species. Planting species approved by the BLM after the construction process would minimize the initial introduction. After the plantings are established, the risk of introduction would be reduced on 51.5 acres.

Noxious weed abatement, as described in Section 2.4.1.1, would minimize the potential for noxious weed establishment and spread. Cleaning equipment used for off-road construction and grading prior to entering the ROW areas would minimize the potential for transporting noxious weeds along roads and the ROW. Annual monitoring by M3 for the presence of state-listed noxious weeds would help in detecting any new noxious weed infestations in the final ROW areas. Control of noxious weeds and non-native invasive plant species by M3 that could result from construction and O&M would help limit the potential for noxious weed establishment and spread. Noxious weed control could impact native vegetation and slickspot peppergrass and its habitat through overspray and accidental spillage. However, standard operating procedures would be followed to reduce this risk (Section 2.4.1.1)

3.4.2.3 Alternative 3

Vegetation

The type of impacts to vegetation would be the same as described in Section 3.4.2 and under Alternative 2, but would occur over a larger area (85.7 acres) due to the increase in grading required for the Linder Road alignment. Approximately 40 percent of the acres removed would be grasslands and 60 percent would be shrublands (using vegetation composition prior

to the 2010 Big Fire). Following construction, a total of 57.2 acres would be revegetated (Table 3-9), resulting in the permanent removal of 28.5 acres of vegetation.

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Table 3-9. Acres of Vegetation Removed and Revegetated by ROW – Alternative 3.

ROW	Grassland Removed¹	Shrubland Removed¹	Total Removed	Total Revegetated	Permanently Removed
Big Gulch Channel	1.2	23.5	24.7	17.5	7.2
SH-16	27.4	0.1	27.5	15.6	11.9
Linder Road	6.1	27.4	33.5	24.1	9.4
Total	34.7	51.0	85.7	57.2	28.5

¹ Based on vegetation acres prior to the 2010 Big Fire.

Special Status Plants

Impacts to slickspot peppergrass EOs and slickspots would be similar to those described in Alternative 2; however, 12.3 acres of slickspots and slickspot complexes would be eliminated by construction activities and 6.1 acres could be subjected to short-term impacts by construction equipment (Table 3-10). Impacts to PCE 2-4 would be similar to those described in Alternative 2, but the acreages would vary slightly. Construction activities would directly eliminate 83.2 acres of occupied habitat and 2.5 acres of slickspot habitat over the short term. Up to 51 acres of shrubland could be affected; however, only 13 acres of sagebrush (in the Big Gulch Channel and SH-16 ROW) remained after the Big Fire. Revegetation efforts could restore up to 57.2 acres of forbs and shrubs.

Table 3-10. Acres Slickspot Peppergrass Occurrences (EOs), Slickspots, Occupied Habitat, Slickspot Peppergrass Habitat, and Proposed Critical Habitat Removed by ROW – Alternative 3.

Proposed ROW	Slickspot Peppergrass EOs	Slickspots & Slickspot Complexes	Occupied Habitat	Slickspot Peppergrass Habitat	Proposed Critical Habitat
Big Gulch Drainage	0	1.0	24.7	0	19.1
SH-16 Access	0.05	Same as in the Alternative 2 alignment			
Linder Road Access	0	10.0	31.0	2.5	0.7

Aase's onion, compact earth lichen, and/or woven-spore lichen could occur in the proposed ROW; however, the probability of occurrence is quite low due to lack of suitable habitat. It is possible that a minimal number of individuals would be lost due to construction activities.

Noxious Weeds and Invasive Plants

Impacts from noxious weeds and invasive plants would be similar to Alternative 2 but with 85.7 acres of soil disturbance. Therefore, more area (approximately 3.7 acres) would be susceptible to the introduction and spread of invasive and noxious weeds.

3.4.2.4 Alternative 4

Vegetation

The type of impacts to vegetation would be the same as described in Section 3.4.2 and under Alternative 2, but would occur on less acreage (60.4 acres), primarily due to less surface disturbance associated with the Big Gulch Channel ROW. Approximately 57 percent of the acres removed would be grasslands and 43 percent would be shrublands (using vegetation composition prior to the 2010 Big Fire). Following construction activities, a total of 36.2 acres would be revegetated, resulting in the permanent removal of 24.2 acres of vegetation (Table 3-11), which would be less vegetation loss than alternatives 2 and 3.

Table 3-11. Acres of Vegetation Removed and Revegetated by ROW – Alternative 4.

ROW	Grassland Removed¹	Shrubland Removed¹	Total² Removed	Total Revegetated	Permanently Removed
Big Gulch Channel	0	9.1	9.1	6.5	2.6
SH-16 Access	27.4	0.1	27.5	15.6	11.9
Linder Road Access	7.2	16.6	23.8	14.1	9.7
Total	34.6	25.8	60.4	36.2	24.2

¹ Based on vegetation acres prior to the 2010 Big Fire.

² Totals may be off by 0.1 acres due to rounding.

Special Status Plants

Impacts to slickspot peppergrass EOs and slickspots would be similar to those described in Alternative 2; however, 2.5 acres of slickspots and slickspot complexes would be eliminated by construction activities and 3.2 acres could be subjected to short-term impacts by construction equipment (Table 3-12). Impacts to PCE 2-4 would be similar to those described in Alternative 2, but the acreages would vary slightly. Construction activities would directly eliminate 58.6 acres of occupied habitat and 1.8 acres of slickspot habitat over the short term. Up to 41.8 acres of shrubland could be affected; however, only 7.4 acres of sagebrush (in the Big Gulch Channel and SH-16 ROW) remained after the Big Fire. Revegetation efforts could restore up to 36.2 acres of forbs and shrubs.

Table 3-12. Acres Slickspot Peppergrass Occurrences (EOs), Slickspots, Occupied Habitat, Slickspot Peppergrass Habitat, and Proposed Critical Habitat Removed by ROW – Alternative 4.

Proposed ROW	Slickspot Peppergrass EOs	Slickspots & Slickspot Complexes	Occupied Habitat	Slickspot Peppergrass Habitat	Proposed Critical Habitat
Big Gulch Drainage	0	0	9.1	0	9.1
SH-16 Access	0.05	Same as in the Alternative 2 alignment			
Linder Road Access	0	Same as in the Alternative 2 alignment			

A Biological Assessment (BLM 2011c) of impacts to slickspot peppergrass was completed for this alternative. The USFWS issued a Biological and Conference Opinion concluding “the proposed project will not jeopardize the survival and recovery of the slickspot peppergrass, and will not adversely modify proposed critical habitat for this species” (USFWS 2011b).

Aase’s onion, compact earth lichen, and/or woven-spore lichen could occur in the proposed ROW; however, the probability of occurrence is quite low due to lack of suitable habitat. It is possible that a minimal number of individuals would be lost due to construction activities.

Noxious Weeds and Invasive Plants

Impacts from noxious weeds and invasive plants would be similar to alternatives 2 and 3 but with 60.4 acres of soil disturbance, which is less than for alternatives 2 and 3. Therefore, less area would be susceptible to the introduction and spread of invasive and noxious weeds than alternatives 2 and 3.

3.5 FIRE MANAGEMENT

3.5.1 Affected Environment – Fire Management

The proposed ROW are in the Boise Front Fire Management Unit (FMU; BLM 2005). The area is a high priority for fire suppression due to the safety concerns associated with the wildland urban interface and the presence of slickspot peppergrass and its habitat. The cities of Eagle and Star are both designated as Communities at Risk from wildfire. Community assistance and agreements with local fire departments are a major component of fire management in this area. All fires in this area are actively suppressed. The BLM places a high priority on hazardous fuels treatments in this area to mitigate the risk of wildland fire to sensitive resources and the wildland urban interface areas. Emergency stabilization and rehabilitation projects are also a high priority in post-fire environments of this area (BLM 1988).

The local fire regime (i.e., pattern of occurrence) is strongly influenced by climate, weather, vegetation, and local land use activities. The proposed ROW experience fire ignitions that can quickly escalate to large fires due to flash fuel types including annual grasses and brush. The proposed ROW areas are a mosaic of grasslands and shrublands but are highly susceptible to invasion by annual grasses and other non-native species (Section 3.4). Where annual grasses and exotic annual forbs dominate, they create continuous fine fuels. Summer temperatures in the 90 to 105 degree Fahrenheit range and humidity in the 10 to 25 percent range drive fuel moistures down early in the season. These fuel conditions often shorten fire

return intervals (more frequent fires) due to the continuous fine fuels that dry out earlier in the season relative to native plant communities, which retain more moisture into the season and form less continuous surface fuels. The fire season typically starts in May and ends in mid-October. The peak of the fire season in this area is usually July through August.

The Boise Front FMU has an extensive fire history influenced by the proximity to dense population centers and high levels of annual grasses. Nearly 35 percent of the FMU and 67 percent of public land within this FMU have burned at least once in the last 48 years. Most fire starts are human-caused and they generally occur at lower elevations. Although the majority of fires fall into the smaller size classes, there have been many larger acreage fires. More than 16 percent of fire starts in the FMU, and 25 percent on public lands, have been more than 100 acres in size (BLM 2005). In the past 20 years, approximately 3,900 acres have burned in fires in the project area vicinity: 32 acres in the 1995 Big Gulch Fire, 196 acres in the 1997 Little Gulch Fire, and 3,674 acres in the 2010 Big Fire. The Big Fire burned between 77 to 82 percent of the proposed ROW (depending on alternative) (Figure 3-1) and was variable in severity. The fire was caused by lightning strikes and is a recent example of the ever present fire danger in this FMU.

3.5.2 Environmental Consequences – Fire Management

Impacts to fire and fuels could occur during the construction and O&M phases of the proposed project. For purposes of this assessment, fire management includes suppression, fuels management, and fire rehabilitation projects. All access ROW are addressed together under the action alternatives because the impacts would be the same. BMPs for fire management would apply to all ROW to decrease the potential of fire ignition (Section 2.4.1.4).

3.5.2.1 Alternative 1

The application for the proposed ROW would not be authorized by the BLM, and fire management of the area would continue under the current guidelines. All fires would continue to be actively suppressed and emergency stabilization and rehabilitation activities would occur after a fire to prevent erosion and other impacts to the resources. Impacts from these ongoing activities could include a temporary reduction in areas available for grazing during rehabilitation activities, temporary air quality impacts during wildfires or controlled fires, areas closed to public use during and after fires for a period of time until the areas have been rehabilitated and temporary safety concerns from fire and fire activities.

3.5.2.2 Alternative 2

The risk of human-caused ignitions in the proposed Big Gulch Drainage Channel ROW could increase slightly over the short-term during construction activities. Operation of heavy machinery and work crews near flammable vegetation during periods of high fire danger (May through October) would increase the potential for ignition. The ROW trails would be maintained for non-motorized vehicle use and M3 would provide Firewise landscaping and irrigated vegetation along the trails. Depending on what plants are used along the trails, the vegetation could provide more fuel on the south side trail. The irrigated plantings on the north side would likely provide a better green strip (less chance for fire to spread). The addition of trails could reduce the area for potential fires as the trail surfaces could provide a minimal break in available fuels. Windy conditions in this area could result in a small increase in the opportunity for fire to spread through the landscaped areas. The construction of two detention basins along the Big Gulch Drainage Channel on public lands could also provide another area with reduced fire potential. Because the detention basins could have water present during storm runoff, they could function as a fuel break when saturated. At a minimum, the basins would not function as a potential area for fire ignition during periods when water is present in the basins (during spring runoff/large storm events).

The proposed plan for this ROW does not include the addition of fire hydrants or other fire suppression resources along the channel. However, access to the drainage ROW would be increased if the Linder Road Access ROW were approved and constructed. This could cause a decrease in response times of the suppression crews to fires in the Big Gulch Drainage area. The presence of constructed trails along the Big Gulch Drainage would also decrease response time to fires along this drainage ROW as hand crews would be able to access the area quickly and safely on the ROW trails.

The risk of human-caused ignitions from the proposed SH-16 and Linder Road Access ROW could increase slightly over the short-term during construction activities. Operation of heavy machinery and work crews near flammable vegetation during periods of high fire danger (May through October) would increase the potential for ignition.

Presence of the proposed access roadways could have long-term impacts to fire management. New roadways would provide better access to the proposed ROW areas for both the public and firefighters. In the event of an ignition, fire suppression crew response time would likely decrease, resulting in the potential for earlier containment of wildfire and a reduction in acres burned. Because there would be people and homes in the area, the number of Fire Response units diverted to protecting human life and structures would increase and the number of units diverted to protecting open space would decrease. This could have an opposing effect of the additional ease of access because it may take longer to contain the fire if individuals are

protecting structures and people instead of containing the fire. Landscaped roadways could benefit fire managers indirectly by reducing the rate and spread of fire and potentially acting as a fuel break during low wind conditions, increasing the ability of firefighters to safely suppress wildfire. The combination of improved access and irrigated vegetation associated with the roadsides and medians could reduce average fire size in the proposed ROW. Conversely, the risk of human-caused ignitions would increase because operation of the proposed roadways would result in increased travel through the area.

The development of the proposed ROW would increase the number of safety hazards that firefighters may have to negotiate in the event of wildfire suppression within the ROW areas. These additional safety hazards would include increased traffic, overhead transmission lines, homes, and the general presence of more people in the area. Firefighters would likely be diverted to protect structures, if the structures were threatened by fire. This would reduce the number of firefighters available to contain a wildfire, and could result in a longer timeframe for wildfire containment.

3.5.2.3 Alternative 3

The impacts associated with the Big Gulch Drainage Channel ROW would be similar as those discussed for Alternative 2, except the two detention basins would not be constructed. The potential for the basins to reduce the risk of fire ignition or create a fuel break during fire would not be realized. The trails and the native vegetation planted along the realigned channel could still reduce the potential spread of wildfire but the potential fire break features would be shorter in length. The potential impacts associated with constructing and operating the proposed access ROW would be the same as those discussed under Alternative 2, despite the difference in alignments for the Linder Road Access ROW.

3.5.2.4 Alternative 4

The impacts associated with the Big Gulch Drainage Channel ROW would be essentially the same as those discussed for Alternative 3, except the channel would not be realigned on BLM land, and the total trail length would be slightly shorter. The potential impacts to fire management associated with constructing and operating the proposed access ROW would be the same as those discussed under Alternative 2.

3.6 WILDLIFE

3.6.1 Affected Environment – Wildlife

3.6.1.1 General Wildlife

The proposed ROW areas provide habitat for wildlife species other than those listed on the BLM Special Status Animal Species list, including big game, upland game birds, and non-

game animals such as raptors, small mammals, and passerines. Portions of the ROW areas are a winter destination for migrating mule deer coming from the north, northeast, and east. In addition, a resident mule deer herd inhabits the general area year-round. The grasslands near SH-16 are utilized on occasion by antelope. Habitat for upland game bird species including Hungarian partridge, ring-necked pheasant, California quail, and chukar is present, and these birds have been observed in the ROW and vicinity (URS 2006). During 2007 field surveys, raptor use was observed in the majority of the proposed ROW areas and is expected where ground dwelling small mammals are abundant. Observed raptors include the red-tailed hawk, northern harrier, American kestrel, golden eagle, and short-eared owl. Small mammals observed include ground squirrels (most abundant), badgers, black-tailed jackrabbits, and desert cottontails. Passerines commonly observed include western meadowlarks, western kingbirds, and black-billed magpies. Wildlife habitat in and adjacent to the proposed SH-16 ROW is limited due to the lack of diversity and structure in the vegetation community and is suited primarily to species that utilize grassland habitats. Habitat adjacent to the other ROW is more diverse due to the presence of shrub and grass communities.

3.6.1.2 Special Status Species

One wildlife species listed under the ESA as threatened, endangered, or candidate (BLM Type 1) with the potential to occur within the ROW is the greater sage-grouse. Greater sage-grouse are a candidate species and are known to occur within the BLM Four Rivers Field Office in sagebrush-steppe habitats. Although sagebrush-steppe is present, it is highly limited due to recent wildfires and greater sage-grouse are not known or expected to occur within the ROW areas. The ROW are greater than 25 miles from known sage-grouse leks (BLM 2007d) and greater than 25 miles from key habitat (BLM 2010c). Therefore, sage-grouse are not further addressed in this EA.

Gray wolves were formerly listed in the Rocky Mountains and were classified in southern Idaho as an experimental, nonessential population under the ESA. This species was delisted in 2011 with gray wolves in Montana and Idaho, as well as portions of eastern Oregon, eastern Washington, and north-central Utah, removed from the list of endangered and threatened wildlife (USFWS 2011c). Because of its previous status in Idaho, gray wolves are briefly addressed.

The ROW provide potential habitat for 20 BLM Type 1 through Type 5 animal species (Table 3-13). These species are associated with grassland and sagebrush-steppe habitats. Of these, nine bird, one amphibian, and one mammal species are known to occur or have a moderate to high potential to occur in the proposed ROW areas, and are addressed in the following text. The other nine species have low to no potential for occurrence because of

fragmented habitat, human disturbances, or distance from a known population. These species are not considered further.

Table 3-13. BLM Sensitive and Watch Species Associated with Grasslands and Sagebrush-steppe Habitats in Idaho.

Species	BLM Sensitive ¹	Potential Occurrence within the ROW areas
Greater sage-grouse (<i>Centrocercus urophasianus</i>)	Type 1	No
Gray wolf (<i>Canis lupis</i>)	Type 2 ²	Yes
Pygmy rabbit (<i>Brachylagus idahoensis</i>)	Type 2	No
Columbian sharp-tailed grouse (<i>Tympanuchus phasianellus columbianus</i>)	Type 3	No
Ferruginous hawk (<i>Buteo regalis</i>)	Type 3	Yes
Prairie falcon (<i>Falco mexicanus</i>)	Type 3	Yes
Peregrine falcon (<i>Falco peregrinus anatum</i>)	Type 3	No
Loggerhead shrike (<i>Lanius ludovicianus</i>)	Type 3	Yes
Brewer's sparrow (<i>Spizella breweri</i>)	Type 3	Yes
Sage sparrow (<i>Amphispiza belli</i>)	Type 3	No
Woodhouse toad (<i>Bufo woodhousii</i>)	Type 3	Yes
Longnose snake (<i>Rhinocheilus lecontei</i>)	Type 3	No
Black-throated sparrow (<i>Amphispiza bilineata</i>)	Type 4	No
Swainson's hawk (<i>Buteo swainsoni</i>)	Type 5	Yes
Short-eared owl (<i>Asio flammeus</i>)	Type 5	Yes
Western burrowing owl (<i>Speotyto cunicularia</i>)	Type 5	Yes
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	Type 5	Yes
Long-billed curlew (<i>Numenius americanus</i>)	Type 5	Yes
Green-tailed towhee (<i>Pipilo chlorurus</i>)	Type 5	No
Sage thrasher (<i>Oreoscoptes montanus</i>)	Type 5	No

¹ BLM 2003b. Type 1-Type 4 species are defined by the Idaho State BLM office as special status. Type 5 species are on a watch list because current information suggests they may warrant special species status in the future. The lower the type rank, the higher the conservation priority for that species.

² Gray wolves were delisted in 2011 by the USFWS and their status as a non-essential, experimental population under the ESA was removed. Gray wolves will be classified as BLM Sensitive for a minimum of 5 years following delisting while they are monitored by the USFWS.

Gray Wolf

Gray wolves use habitats with varied topography, substrate, and vegetation. Forests, open meadows, rocky ridges, and lakes and rivers may all comprise portions of a pack's territory. Wolves prey mainly on ungulates year-round and packs generally require large home ranges. No wolf observations have been made in the proposed ROW areas. The closest observation in 2008 through 2009 was of a wolf pack approximately 10 miles to the northeast; this group was terminated. The next closest observation in 2008 through 2009 was of a documented pack approximately 15 miles to the east, just to the north and east of Horseshoe Bend (Mack et al. 2010). Incidental use of the ROW and vicinity by wolves could occur given the presence of deer in the general area.

Raptors

Ferruginous Hawk

Ferruginous hawks are found in shrub-steppe habitat in Idaho. They nest in the southern half of the state and winter in small numbers in the south and southwestern counties (Stephens and Sturts 1998). They nest in trees and shrubs, on cliffs, pinnacles, rock outcrops, buttes, banks, slopes, and utility structures, and sometimes on towers and artificial nest platforms. They feed mainly on small mammals, but also eat birds, reptiles, and insects. Ferruginous hawks are known to forage in the ROW and vicinity, and nesting is likely. The only known, recorded nest is west of the ROW (Haak 2007).

Prairie Falcon

Prairie falcons typically nest on cliffs, outcroppings, or pinnacles in cavities, ledges, or nests of other raptors and ravens. This falcon is a migratory raptor that times its annual breeding cycle to coincide with the seasonal activity patterns of ground squirrels. There is no nesting habitat in the ROW areas, but nests are known within the foraging radius (up to 23 miles; Marzluff et al. 1997) of the falcons (Haak 2007). Therefore, given the abundance of ground squirrels in the ROW and vicinity, foraging by prairie falcons is likely.

Swainson's Hawk

Swainson's hawks inhabit open pine/oak woodlands and cultivated land with scattered trees (e.g., alfalfa and other hay crops, and certain grain and row crops). In Idaho, this hawk prefers to nest in trees or shrubs near riparian zones or adjacent to agricultural lands. Swainson's hawks feed primarily on ground squirrels and pocket gophers during the breeding season and insects at other times. The ROW are adjacent to cultivated lands with scattered trees, and Swainson's hawks have been observed frequently near agricultural land northeast of the northern terminus of Hartley Road (URS 2007a).

Short-eared Owl

Short-eared owls inhabit open country in prairies, meadows, marshes, savannas, dunes, fields, and open woodlands. They nest in depressions on the ground and roost by day on the ground, on low open perches, under low shrubs, or in conifers. Diet consists mainly of rodents, commonly voles. Agricultural fields occur to the north and south of the proposed ROW. A short-eared owl was observed perching on a sagebrush northwest of the northern terminus of Hartley Road, above a cultivated field (URS 2007a). Use of the area in the proposed ROW is expected.

Western Burrowing Owl

Burrowing owls are known to breed and nest in southwestern Idaho during the spring and summer months (Rich 1986). The birds nest in sagebrush-steppe habitats that have short-grass, open grassland habitat, mowed or overgrazed pastures, golf courses, airfields, and irrigated agricultural fields. They commonly nest in burrows dug by badgers. They feed on insects, small mammals, birds, and reptiles. Burrowing owls were observed to the east of the proposed ROW during field surveys conducted in 2008. Suitable habitat exists where badger burrows are present.

Passerine Birds

Loggerhead Shrike

Loggerhead shrikes breed across southern Idaho and winter in small numbers in southwestern Idaho (Stephens and Sturts 1998). They use open habitat during both breeding and nonbreeding seasons. Grasslands or pastures with short or patchy grasses are usually used for foraging. Scattered trees, shrubs or hedgerows are most often used for nesting and perching (Peterjohn and Sauer 1995), but in southwest Idaho, a majority of nesting occurs in sagebrush. Their diet consists of insects, small mammals, birds, reptiles, and amphibians. Loggerhead shrikes have not been observed in the ROW and vicinity; however, potentially suitable habitat is present.

Brewer's Sparrow

Brewer's sparrows are found in sagebrush. These sparrows prefer an abundance of shrub cover, and within a given habitat patch, the probability of their occurrence increases with increases in total shrub cover. In Idaho, they typically build cup-shaped nests in large, living sagebrush. This sparrow forages on the ground on insects in the spring and summer and on seeds in the fall and winter. Brewer's sparrows have been observed in the ROW and vicinity (URS 2007a). Suitable habitat for this species has been greatly reduced in the proposed ROW due to the 2010 Big Fire. Where sagebrush occurs (the western portion of the Big Gulch Channel ROW and remnant patches in the southern portion of the Linder Road Access ROW), the presence of Brewer's sparrow can still be expected. This sparrow is not expected to occur in the SH-16 Access ROW due to lack of habitat.

Grasshopper Sparrow

The grasshopper sparrow is found across southern Idaho. It inhabits prairies, old fields, open grasslands, cultivated fields, and savannas. Nests are built on the ground. It eats insects, other small invertebrates, grain, and seeds. Grasshopper sparrows have not been observed in the ROW and vicinity, but suitable habitat occurs in the grasslands in the proposed ROW.

Long-billed Curlew

The long-billed curlew is a shorebird that nests in arid habitat, at times well away from open water. Long-billed curlews migrate into southwestern Idaho in late March to nest and fledge their young and typically depart by mid-August. They prefer open shrub-steppe and grasslands with short vegetation for nesting, and may feed in agricultural areas (Karl 2000). Long-billed curlews were observed flying over Little Gulch near the ROW (URS 2007a). Data from the IDFG indicate breeding habitat for curlews occurs and an Area of Critical Environmental Concern (ACEC) for curlew management (Long-Billed Curlew Habitat ACEC) is present on public land approximately 2.5 miles northwest of the proposed SH-16 Access ROW. Suitable nesting and foraging habitat for curlews is present in the annual and short perennial grasslands, in areas where the topography is gentle, within and adjacent to the proposed SH-16 Access ROW and near the proposed Linder Road Access ROW surrounding the Little Gulch drainage.

Woodhouse Toad

Woodhouse toads are typically found in prairies, agricultural areas, and brushy flats and are often associated with a water source. The water source may vary from irrigation ditches, ponds, and small lakes to backwaters of the Snake River. Foraging may occur at large distances from the water source where they mate and lay eggs. Woodhouse toads prefer lowland sandy areas, such as river bottoms, mountain canyons, and desert streams, and are even known to use suburban backyards. These toads are active in wet or dry weather and inactive during the cold months of fall, winter, and early spring. When inactive, they burrow underground, or hide under rocks, plants, or other cover. This species has not been observed in the ROW; however, species-specific surveys have not been conducted. There is no breeding habitat for Woodhouse toads in the ROW due to lack of standing water during the spring. This species could use the ROW outside of the breeding season during overland travel.

3.6.1.3 Migratory Birds

Instruction Memorandum 2008-050 identifies the Birds of Conservation Concern (BLM 2007e) and Game Birds Below Desired Condition (Appendix E) as the guidance documents for migratory bird species being addressed in project level planning. The Birds of Conservation Concern lists species according to Bird Conservation Region. The proposed ROW are within Bird Conservation Region 9, the Great Basin. Review of these lists indicates that ten birds on the Birds of Conservation Concern and one bird on the Game Birds Below Desired Condition list potentially occupy grassland and sagebrush-steppe habitats in Idaho. Of these, six species are likely to occur in the ROW areas and include the ferruginous hawk, golden eagle, loggerhead shrike, Brewer's sparrow, long-billed curlew, and mourning dove.

Except for the golden eagle and mourning dove, all are considered BLM sensitive species and are addressed in Section 3.6.1.2. The golden eagle and mourning dove are addressed within the Migratory Bird sub-headings.

Golden Eagle

Golden eagles are typically found in open country, including shrublands, grasslands, canyons, and desert plains, as well as open coniferous forests in mountainous regions. Elevated nest sites, typically on cliff faces near their hunting grounds, are the preferred breeding habitat. In the absence of suitable cliffs and rock outcrops, they have been known to nest in trees. Golden eagles feed mainly on small mammals, especially rabbits, marmots, and ground squirrels, but also eat insects, snakes, birds, juvenile ungulates, and carrion. No nesting habitat for golden eagles occurs within the proposed ROW. However, golden eagles in flight have been observed in the ROW areas.

Mourning Dove

Mourning doves are typically found in open woodlands, forest edges, cultivated lands with scattered trees and bushes, parks and suburban areas, arid and desert country when water is available nearby (State of Idaho 2009). They are found throughout Idaho, but prefer lower elevations and open areas. This species is a habitat generalist and has been observed in the proposed ROW areas.

3.6.2 Environmental Consequences – Wildlife

The analysis of impacts to wildlife involves the description of loss of habitat through ground disturbing activities and alterations to the environment that may impact foraging and reproductive behavior as well as movement. Loss of habitat is described as either long-term (e.g., paved road) or temporary (e.g., disturbance areas that would be revegetated) and quantified as acres of disturbance by vegetation type as described in Tables 3-8, 3-10, and 3-12. Impacts to behavior of wildlife are associated with both long-term and temporary ground disturbance as well as long-term and temporary human activities associated with the proposed alternatives.

3.6.2.1 Alternative 1

Impacts to general wildlife, special status species, and migratory birds are expected to follow current trends in the BLM Four Rivers Field Office. Sources of impacts include recreation, grazing, other land management practices (e.g., weed control), and wildfire. Recreation would likely increase in the future as the regional population increases. Grazing impacts and other land management actions are expected to remain at current levels. Impacts associated with these activities involve degradation of wildlife foraging habitat and nesting habitat as a

result of vegetation trampling, noxious weed encroachment, and modifications to vegetation communities through wildfire. Recreation and other human activity also result in avoidance of these areas by wildlife because of visual or auditory disturbances.

3.6.2.2 Alternative 2

Impacts common to all wildlife would result from ground disturbing activities that would lead to a long-term loss of 30.5 acres of wildlife habitat (see Section 3.4.2.2, Vegetation). Construction of the ROW would also introduce long-term human impacts to wildlife through increased recreation and vehicle traffic. Table 3-8 displays the approximate acres of shrubland and grassland removed from each ROW (Section 3.4.2.2). Temporary impacts would also be associated with construction activities and include temporary disturbance of 51.5 acres of habitat, increased noise and human activity, presence of construction equipment and temporary fencing, and trampling of vegetation within the ROW outside of the disturbance areas. How these actions and sources of disturbance would affect wildlife is described below.

General Wildlife

Construction would result in a direct loss of foraging and/or cover habitat for upland game birds and non-game animals, as well as the loss of mule deer habitat. Both resident and wintering deer are likely to forage within the ROW areas, but these habitats are not considered crucial to the species. More dense populations of wintering mule deer occur approximately 3 miles away, east of Willow Creek Road (IDFG 2010b), where crucial winter range has been identified (BLM 2008b).

Road construction would introduce long-term impacts including wildlife avoidance of the area due to vehicle noise and visual disruptions as well as vehicle collision risks. Roads could also act as barriers to some wildlife movements resulting in altered home ranges, loss of foraging habitat, and a potential for decreased reproductive success. Permanent fencing associated with roads could reduce wildlife-vehicle collisions, but also add to the effect of habitat fragmentation associated with roads. Permanent fencing could provide perching opportunities for raptors. Fencing also poses a collision risk for big game, upland game birds, and raptors that forage close to the ground. However, wildlife-friendly fencing would be installed and should help to decrease potential collisions and injuries associated with wildlife crossings (Section 2.4.3.1).

Construction of overhead electrical transmission lines along the road would introduce a collision risk for upland game birds, passerines, and raptors. These structures could also impact the ability of small mammals, upland game birds, and passerines to avoid predators

by providing perching opportunities for raptors and corvids. Overhead transmission lines also pose an electrocution hazard for large birds, especially raptors. However, design features of the proposed transmission lines would minimize perching opportunities and electrocution hazards (Section 2.4.1.6).

Trail crossings (underpass and overpass) proposed within the Linder Road Access ROW could help to reduce vehicle collisions associated with the roads by providing traffic crossing opportunities for wildlife. However, trail crossings are not designed specifically as wildlife corridors.

Temporary impacts to wildlife could include avoidance of the construction area and adjacent habitats outside of the ROW due to visual and auditory disturbances. Equipment and construction fencing pose a potential collision risk for big game and birds. These structures could also impact small mammals, upland game, and passerines by providing perching opportunities for raptors.

The system of proposed trails could greatly increase non-motorized vehicle recreation activities including walking, running, biking, and equestrian use. This would result in potential avoidance of the trail areas and surrounding habitats by intolerant wildlife. Landscaping associated with the trail system would provide new foraging opportunities for all wildlife; however, landscaping could encourage establishment of wildlife species not typically found in grassland/sagebrush-steppe ecosystems. These species could compete with native wildlife for resources and result in an increase of habitat generalist species and a decrease in habitat specialist species.

Detention basins associated with the Big Gulch Drainage ROW could create temporary standing water sources. This could benefit wildlife by providing additional sources of drinking water during the winter and spring as well as summer rain events. These water sources could also attract wildlife species not currently known to occur in the ROW areas such as waterfowl and amphibians.

Use of new roads, operation of overhead transmission lines, and increased recreation would increase the likelihood of wildfire in the area. Wildfire in this area would have a detrimental effect on wildlife as shrubs and perennial grasses would likely be replaced by annual grasses and other species that provide little benefit to most native wildlife species.

Special Status Species

Gray Wolf

Individual wolves could potentially roam in the vicinity of the proposed ROW given the presence of deer in the general area. However, because the roads would be fenced and crucial habitat for big game would not be impacted, no adverse impacts to individuals or to the wolf population are expected to result from the construction and use of the proposed roads and modifications to the drainage channel.

Raptors

Construction activities would result in a loss of foraging habitat for raptors by reducing the habitat of potential prey. There would be both a short-term and long-term loss of foraging habitat based on temporary and long-term disturbance acres. Fragmentation of these habitats could result in a gradual reduction in number of prey available for ferruginous hawks, short-eared owls, and western burrowing owls. Construction would likely disturb nesting activities and could result in nest abandonment and nest failure. Ground disturbance, where not revegetated, would result in a long-term loss of nesting habitat.

Long-term impacts could include avoidance of the ROW areas due to increased visual and auditory disturbances as well as collision risks associated with vehicle traffic. Short-eared owls in proximity to roads are particularly susceptible to vehicle collisions because of their low-flying hunting techniques (IDFG 2005). Impacts associated with overhead electrical transmission lines would be the same as described for general wildlife.

Temporary avoidance of the construction area by raptors would be likely due to increased noise and human activity. However, equipment and construction fencing would provide perching opportunities for raptors and proposed ground disturbances could reduce safety cover for prey species.

Passerine Birds

Construction would result in a loss of nesting and foraging habitat. Both a short-term and long-term loss of habitat could occur based on temporary and long-term disturbance acres. Active nests could be disturbed during construction activities and could result in nest abandonment and failure.

Long-term impacts associated with roads would be the same as those described for raptors. Impacts to special status passerine birds from overhead electrical transmission lines would be the same as described for general wildlife.

Temporary impacts would be the same as those described for general wildlife in terms of increased temporary raptor perching opportunities and avoidance of construction activity.

Long-billed Curlew

Construction activities would remove grasslands considered to be potential nesting habitat of the long-billed curlew and shrubs considered to be suitable habitat for the species. Additional types of impacts described for passerines (temporary, nesting, and long-term impacts), could also occur.

Woodhouse Toad

Impacts would include the relocation of portions of Big Gulch Drainage onto public lands which would increase the total amount of habitat available to woodhouse toads on public lands. Detention basins would also provide a potential source of standing water during portions of the year and potential breeding habitat. Roads would fragment any woodhouse toad habitat and individual toads could be killed by vehicles if crossing the roads.

Migratory Birds

Types of impacts to golden eagles associated with construction in the proposed ROW would be the same as those discussed for special status raptors. Likewise, types of impacts to mourning doves associated with the construction in the three proposed ROW would be the same as those discussed for special status passerines.

3.6.2.3 Alternative 3

The types of impacts common to all wildlife would be similar as those described under Alternative 2. However, the area of impact would change. A total of 28.5 acres of wildlife habitat would be considered a long-term loss and 57.2 acres of wildlife habitat would be considered a temporary loss. Long-term impacts would occur on 2 fewer acres than under Alternative 2, whereas temporary impacts would occur on about 5.7 more acres of wildlife habitat. Table 3-10 displays the approximate acres of shrubland and grassland removed for each ROW (Section 3.4.2.3).

General Wildlife

Temporary and long-term impacts to general wildlife would be similar to those discussed for Alternative 2. However, the detention basins described in Alternative 2 are not proposed for Alternative 3 and any impacts associated with them would not apply to Alternative 3. Further, there would be no trail overpass on Linder Road. Therefore, the risk of wildlife collision could be somewhat greater. However, a trail underpass could still serve to reduce this risk.

Special Status Species

Temporary and long-term impacts to special status species would be similar to those discussed in Alternative 2. However, Alternative 3 would not include construction of detention basins in the Big Gulch ROW and any impacts associated with them would not apply to Alternative 3. Specifically, potential standing water and breeding habitat for Woodhouse toad would not be created under Alternative 3.

Migratory Birds

Temporary and long-term impacts to migratory birds would be same as those discussed under Alternative 2.

3.6.2.4 Alternative 4

The types of impacts common to all wildlife would be the same as those described under Alternative 2. However, the area of impact would change. A total of 24.2 acres of wildlife habitat would be considered a long-term loss and 36.2 acres of wildlife habitat would be considered a temporary loss. Long-term impacts would occur to 6.3 fewer acres than Alternative 2 and 4.3 less acres than Alternative 3. Temporary impacts would occur on 15.3 fewer acres of wildlife habitat than Alternative 2 and 21 acres less than Alternative 3. The primary difference between Alternative 4 and Alternative 2 would be the lack of detention basins and smaller area of improvements to the Big Gulch Channel ROW. Table 3-12 displays the approximate acres of shrubland and grassland removed for each ROW (Section 3.4.2.4).

General Wildlife

Temporary and long-term impacts of the Big Gulch Channel ROW to general wildlife would be similar to those discussed for Alternative 3 but there would be less disturbance and removal of habitat and a slightly smaller amount of landscaped trails. Temporary and long-term impacts of the access ROW would be the same as discussed for Alternative 2.

Special Status Species

Temporary and long-term impacts of the Big Gulch Channel ROW to special status species would be similar to those discussed in Alternative 3, but there would be less habitat disturbed and removed. Temporary and long-term impacts of the access ROW would be the same as described for Alternative 2.

Migratory Birds

Temporary and long-term impacts to migratory birds would be same as those discussed under Alternative 2.

3.7 LIVESTOCK GRAZING

3.7.1 Affected Environment – Livestock Grazing

Livestock in the proposed ROW areas are managed through a permitting process that authorizes livestock grazing in specific areas known as grazing allotments. Grazing allotments are further divided into pastures for more intensive livestock grazing management. An allotment may have one or more grazing permits. Each grazing permit authorizes a season of use and allocates forage in terms of animal unit months (AUMs). An AUM is the amount of forage needed to sustain one cow and calf, five sheep, or one horse for 1 month. Grazing permits are tied to adjacent or nearby privately-owned property which is either owned or leased by the permittee and which sustains some portion of the livestock grazing operation during the year.

Three grazing allotments overlap the proposed ROW: McPherson (#196), Spring Valley (#278), and Black Canyon (#310; Figure 3-3). The allotments and pastures are fenced. Livestock grazing management on these allotments is summarized in Table 3-14. Acres of allotments that would be impacted by the proposed action or alternatives are summarized in the Section 3.7.2.

The McPherson allotment is 240 acres and is located entirely on public land. This allotment is stocked at 7.1 acres per AUM (BLM 1987). There is one permit granted from April 11 to May 31 for 20 cattle (Table 3-14).

The Spring Valley Allotment is split between two different permittees. Each grazing permit allocates different forage levels and authorizes different seasons of use (Table 3-14). From April 1 to October 31, up to 582 cattle occupy the allotment. From April 1 to May 28, up to 950 sheep are also on the allotment. Sixteen percent of this allotment is located on public land (7,379 acres). This allotment is stocked at 10.4 acres per AUM (BLM 1987). Sheep herders trail sheep through this allotment in the spring and fall.

Figure 3-3. Grazing Allotments in Relation to Proposed ROW

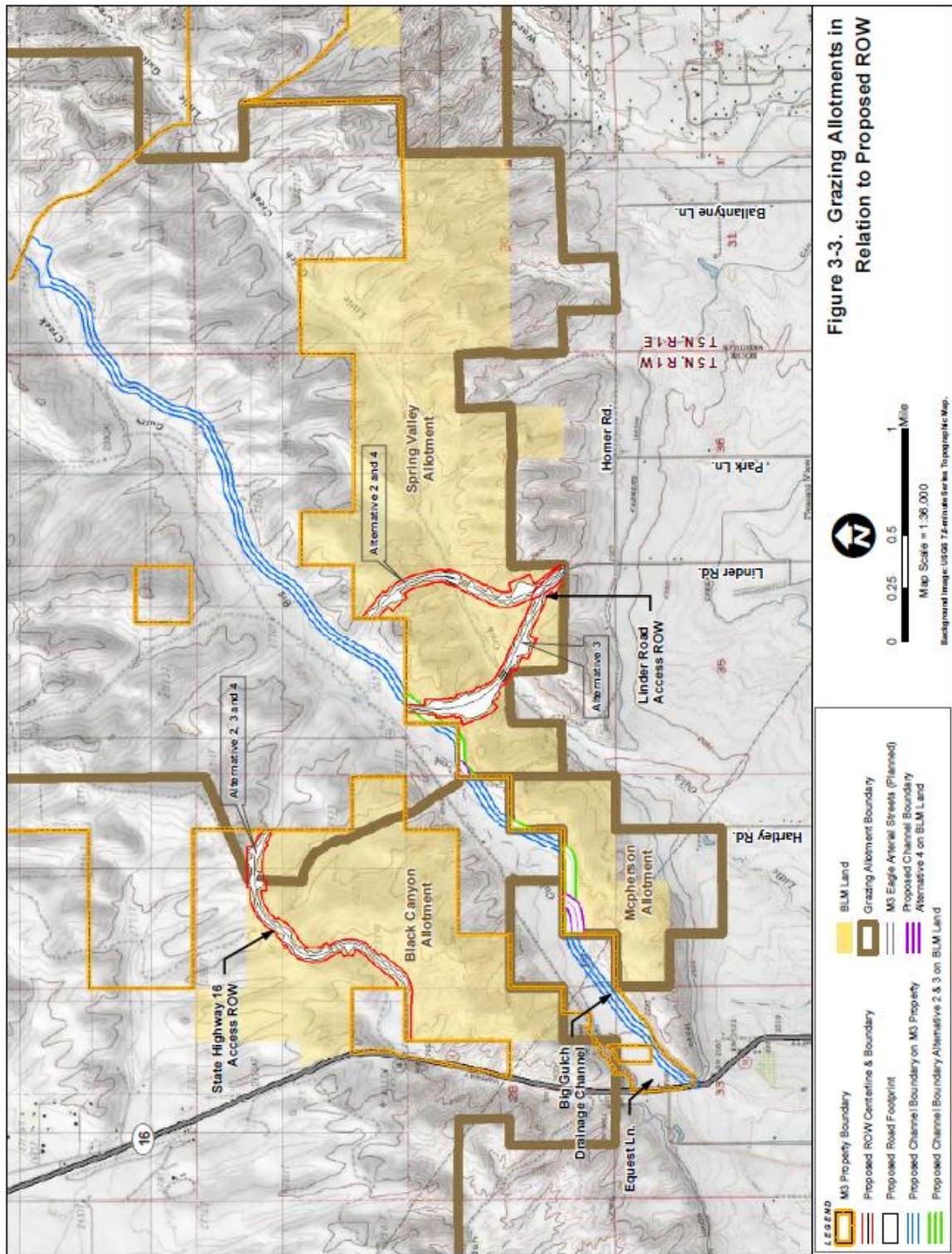


Table 3-14. Livestock Management on Grazing Allotments within the Proposed ROW.

Grazing Allotment	Total Acres †	Percent Public Land †	Permitted Use (AUM)	Condition*	Season of Use †	Class of Livestock †
McPherson (#196)	235	100%	34	Poor	April 1 to October 31	34 Cattle (34 AUMs)
Spring Valley (#278)	45,153	16% (7,379 acres)	848 (split between 2 permits)	Fair	April 1 to October 31	582 Cattle (696 AUMs)
				Fair	April 1 to May 28	950 Sheep (152 AUMs)
Black Canyon (#310)	12,333	89% (11,041 acres)	2,642 (split between 2 permits)	Poor	April 1 to May 23	1,600 Sheep (558 AUMs)
					December 1 to December 31	1,800 Sheep (367 AUMs)
					March 11 to May 23	3,070 Sheep (1495 AUMs)
					December 5 to December 15	3,070 Sheep (222 AUMs)

* Source: (BLM 1987)

† Source: (BLM 2009c)

The Black Canyon Allotment is also split between two permittees. Each permit allocates different forage levels and authorizes different seasons of use (Table 3-14). The majority of this allotment is located on public land (11,041 acres). This allotment is stocked at 5.9 acres per AUM (BLM 1987). Livestock operators trail sheep through this allotment in the spring and fall. Both of the permits are for sheep and they are on the allotment from March 11 until May 23 in varying numbers, and then again in December, also in varying numbers (Table 3-14).

3.7.2 Environmental Consequences – Livestock Grazing

General impacts and possible minimization measures to livestock associated with the action alternatives are discussed below, followed by specific impacts from each alternative.

Temporary direct impacts to livestock could include impacts during construction activities from the noise of the construction equipment or from being struck, injured, or killed by construction vehicles. It is possible that the noise of the construction vehicles would be enough to keep livestock out of the construction area, while some animals may be accustomed to this type of noise and could enter the construction area. Temporary construction fences would help minimize livestock access to construction areas and potential direct impacts.

3.7.2.1 Alternative 1

Current management of public lands would continue and the access roadways would not be constructed. M3 would still have access to their property (via Equest Lane and Willow Creek

Road) and would proceed to complete some drainage modifications on private property. The three grazing allotments (#196, #278, and #310) would continue to be managed under their current permit terms and would not be impacted by the no-action alternative. A mixture of cattle and sheep grazing would occur periodically in the spring, with the sheep returning for the month of December. Because Willow Creek Road and Equest Lane would be used as primary access to the M3 property, off-site movement of livestock (trailing) across these existing roads could become a challenge with the safety of animals and travelers on the road at risk.

3.7.2.2 Alternative 2

The Big Gulch Drainage Channel ROW would directly impact public land in the McPherson and Spring Valley allotments. The amount of land in the McPherson Allotment required for drainage channel modifications and one detention basin would be 18.8 acres or 7.8 percent of the total allotment; up to three AUMs could be lost. The amount of land in the Spring Valley Allotment required for drainage channel modifications and the second detention basin would be 11.9 acres or less than 0.03 percent of the total allotment, which could remove less than one AUM. These impacts to the grazing allotments are not expected to affect the quality or availability of grazing areas for permittees.

The SH-16 Access ROW would directly impact the Spring Valley and Black Canyon grazing allotments. The amount of public land in the Spring Valley Allotment required for road construction would be 5.6 acres (0.01% of the allotment); less than one AUM could be lost. The amount of public land in the Black Canyon Allotment required for road construction would be 21.9 acres (0.2% of the allotment); up to four AUMs could be lost. These impacts to the grazing allotments are considered minor and would not be expected to affect the quality or availability of grazing areas for permittees. The Black Canyon Allotment pasture would essentially be split into two areas because of the fenced ROW (Figure 3-3). This would require more work by the livestock operators because they would have to trail livestock through designated gates and across the roadway.

The Linder Road Access ROW would directly impact approximately 23.8 acres (0.05%) of public lands within the Spring Valley Allotment. This impact (a loss of less than three AUMs) is considered minor and is not expected to impact livestock grazing use of the rest of the allotment.

Once the roadways are operational for both access ROW, there would be a long-term potential for livestock collisions with vehicles. Because fences would be installed on each side of the ROW, livestock collisions with vehicles on the road would be minimized, although livestock could potentially enter the ROW through gaps in the fences provided for

pedestrians. Signs posted to alert drivers to the presence of livestock and overpasses and underpasses proposed for the Linder Road Access ROW could provide safer passage. Fencing could also modify movement patterns of livestock. Sheep trailing through the SH-16 and Linder Road Access ROW could still occur, but access points would be limited to existing gates or where gates in the proposed fencing would be installed. For the Linder Road Access ROW, sheep trailing could also occur through the proposed overpass and underpass.

Summary of Impacts by Allotment

Impacts to each grazing for the three proposed ROW are depicted in Table 3-15. Overall, total impacts to the Spring Valley and Black Canyon allotments would equate to less than 1 percent of the total land in each allotment. Impacts to the McPherson Allotment from the Big Gulch Channel ROW would affect up to 7.8 percent of the total allotment, but should not notably affect the use of the allotment by cattle.

Table 3-15. Acres of Impact by Grazing Allotment Across all ROW – Alternative 2.

Grazing Allotment	ROW	Total Acres Impacted / Percent	Potential AUMs Lost
McPherson	Big Gulch Channel	18.8 / 7.8	3
Spring Valley	Big Gulch Channel, SH-16 Access, Linder Road Access	41.2 / 0.1	5
Black Canyon	SH-16 Access	21.9 / 0.2	4
All Allotments Total		81.9 acres	12 AUMs

3.7.2.3 Alternative 3

The amount of public land in the Big Gulch Drainage Channel ROW required from the McPherson Allotment would be approximately 14.1 acres (6%). This could result in a loss of two AUMs. For the Spring Valley allotment, 10.3 acres (0.02%) of public land would be required. This could result in a loss of less than one AUM.

The potential impacts to livestock grazing allotments from the SH-16 Access ROW would be the same as described for Alternative 2. The Linder Road Access ROW would directly impact 33.5 acres (0.1%) of public lands within the Spring Valley Allotment. This could result in a loss of slightly more than three AUMs. This ROW would not impact the livestock use of the rest of the allotment. Risk of collisions would be the same as described for Alternative 2. Potential impacts to sheep trailing would be similar, but there would be less areas for passage because the overpass would not be constructed on the Linder Road Access ROW.

Summary of Impacts by Allotment

Impacts to each allotment for the three proposed ROW are depicted in Table 3-16. Impacts to the Spring Valley Allotment would be slightly greater than for Alternative 2. Impacts to Black Canyon would be the same. Overall, total impacts to the Spring Valley and Black Canyon allotments would equate to less than 1 percent of the total land in each allotment. Amount of acres disturbed in the McPherson Allotment would be similar to Alternative 2, but slightly lower, at 6 percent of the total allotment.

Table 3-16. Acres of Impact by Grazing Allotment Across all ROW – Alternative 3.

Grazing Allotment	ROW	Total Acres Impacted / Percent	Potential AUMs Lost
McPherson	Big Gulch Channel	14.1 / 6	2
Spring Valley	Big Gulch Channel, SH-16 Access, Linder Road Access	49.4 / 0.1	4
Black Canyon	SH-16 Access	21.9 / 0.2	4
All Allotments Total		85.4 acres	10 AUMs

3.7.2.4 Alternative 4

The amount of public land in the Big Gulch Drainage Channel ROW required from the McPherson Allotment would be approximately 6.9 acres (2.8%). This could result in a loss of one AUM. For the Spring Valley Allotment, 2.1 acres (<0.01%) of public land would be required for the Big Gulch Drainage Channel ROW. This could result in a loss of less than one AUM. The potential impacts to livestock grazing allotments from the access ROW would be the same as described for Alternative 2.

Summary of Impacts by Allotment

Impacts to each grazing allotment for the three proposed ROW combined are depicted in Table 3-17. Impacts to the Spring Valley Allotment would be less than for alternatives 2 and 3. Overall, total impacts to the Spring Valley and Black Canyon allotments equate to less than 1 percent of the total land in each allotment. Amount of acres disturbed in the McPherson Allotment would be less than those for alternatives 2 and 3, at only 2.8 percent of the total allotment.

Table 3-17. Acres of Impact by Grazing Allotment Across all ROW – Alternative 4.

Grazing Allotment	ROW	Total Acres Impacted / Percent	Potential AUMs Lost
McPherson	Big Gulch Channel	6.9 / 2.8	1
Spring Valley	Big Gulch Channel, SH-16 Access, Linder Road Access	31.5 / <0.1	3
Black Canyon	SH-16 Access	21.9 / 0.2	4
All Allotments Total		60.3 acres	8 AUMs

3.8 RECREATION

3.8.1 Affected Environment – Recreation

The proposed ROW are located in close proximity to the communities of Eagle, Star, and Emmett, Idaho. These “urban interface” lands have limited accessibility where there are privately controlled access points. Public vehicular access to the parcel of public land where the SH-16 Access ROW is proposed is limited due to a privately controlled gate where private land abuts the highway. Public access elsewhere to this parcel is limited due to lack of roads originating at the highway and steep topography. Further, little to no recreational use of this parcel occurs from the east from Willow Creek Road, because of privately controlled access points. The parcel of public land associated with the Linder Road Access and Big Gulch Drainage Channel ROW can only be accessed at the northern terminus of the existing Hartley Road. An exception is where private landowners are situated adjacent to the parcels of public land; these landowners have personal access but do not make that access available to the general public. As of January 27, 2011, nearly 1,920 acres of public land, including the majority of the proposed ROW and the access at the northern terminus of Hartley Road, was temporarily closed for 24 months to allow for recovery and establishment of native vegetation following the the Big Fire. These areas remain open to non-motorized recreation access (BLM 2011d).

Despite the limited access points, the northern terminus of Hartley Road provides the public access to a large expanse of public lands south of the Big Gulch Channel. As a result, the parcel of public land proposed for the Linder Road Access and Big Gulch Drainage ROW is used frequently by local residents, which can be attributed to its accessibility and proximity to nearby communities. This area offers undeveloped and dispersed recreational opportunities in a roaded-natural type setting. The opportunities and experiences that these lands supply in the urban interface are of local recreational importance. The area does not offer the exceptional types of recreational opportunities that draw out-of-state or international visitors, such as the nearby Payette River Corridor.

Accessible portions of the proposed ROW are increasingly used for local or community activities such as horseback riding, OHV use, walking, picnicking, bicycling, dog walking, and nature viewing. While demand for riding areas and trails has increased, surrounding areas are becoming more urbanized and some popular trails crossing private lands have been closed to public use as new developments occur.

Accessible portions of the proposed ROW are also used for hunting and recreational shooting. The IDFG manages hunting in the area. The lower elevations of the foothills north

of the City of Eagle serve primarily as winter range for mule deer and elk. The area falls within the Weiser River Elk Management Zone and Game Management Unit 32. The proposed ROW are within sub-unit 32-2. Hunting seasons for big game within the unit are restricted to deer and elk. The hunting season for deer ranges from the end of August to the end of October, depending on the permit. There is no muzzle loader season for deer in this unit. The hunting season for elk ranges from the beginning of August to the end of November, depending on the permit. Upland game bird hunting also occurs in the accessible portions of the proposed ROW.

The proposed ROW areas are managed as an extensive recreation management area (BLM 1987). Management emphasis in the area focuses primarily on visitor health and safety, avoiding user conflict, resource protection, and land health. This custodial management approach is not intensive and there are no recreational facilities such as full-service campgrounds, potable water, interpretive signs, or vault toilets provided in the ROW area.

3.8.2 Environmental Consequences – Recreation

General impacts to recreation from the action alternatives are discussed in this section, followed by specific impacts from each alternative. All recreation activities currently taking place in and near the ROW would still continue, except for the use of OHVs in the ROW corridor. Hunting would still be allowed on public lands; however, no hunting would be allowed along the access ROW, and discharging of firearms from or across the roadways would be prohibited (City of Eagle Code 36-1508). Therefore, hunting in the area could potentially decrease. The trails planned would open more recreation access to the general public in this area. These trails would be closed to motorized vehicles and would not provide an opportunity for OHV or motorcycle users. Most of the remaining public land in the area that would not be used for the Big Gulch Drainage Channel would continue to be used as open space and would be managed as an extensive recreation management area.

All recreation activities currently taking place on public lands would continue to be allowed; however, there could be safety concerns related to crossing new roads. Fences along the access ROW would provide protection to pedestrians near the roadway and would encourage crossing of the ROW at designated areas along the fenceline, such as trailheads, fence gaps, or trail overpasses and underpasses, where applicable. The paved bike lanes in the ROW would provide additional cycling routes and the multi-use trails along one side of each access ROW would provide a safe route for pedestrian, equestrian, and bicycle use.

3.8.2.1 Alternative 1

Recreation use and opportunities in the proposed ROW would continue and would not be impacted. Accessible portions of the ROW area would continue to be used for local or community activities such as horseback riding, OHV use, walking, picnicking, bicycling, dog walking, and nature viewing. Access to these public lands from the private lands surrounding the area would not change and the public would continue to have restricted access to public lands from private access points. Limited access to public land from SH-16 would continue. The access from the Hartley Road terminus to public lands would remain the same. Access to property owned by M3 Eagle would continue to occur from the west at the intersection of SH-16 and Equest Lane and from the east at three locations along Willow Creek Road (Figure 1-1). No high volume access to public land from the south would be provided because the access ROW would not be authorized.

3.8.2.2 Alternative 2

Construction and O&M of the Big Gulch Drainage Channel ROW would create 1.3 miles of trails for use by the general public. Two trails would be constructed; the northern trail would be a hard surface trail for biking, walking, jogging, etc. (0.6 miles), and the southern trail would be constructed with soft materials so that equestrians could also use the trail system (0.7 miles).

The construction and operation of the SH-16 Access ROW road would fragment public open space and modify the recreation opportunity within an approximately 1.5-mile corridor on public lands due to the conversion of native vegetated areas to a paved road and multi-purpose trail with fencing along the ROW. Access to public lands from the ROW would be limited to gaps and gates in the fences, but would facilitate increased public access over existing conditions. Further, the bike-lane and multi-purpose trail within the ROW would provide new recreational opportunities.

The Linder Road Access ROW would fragment public open space and modify the recreation opportunity within an approximately 1.1-mile corridor on public lands. Conversion of native vegetated areas to a paved road and multi-purpose trail, installation of a trail overpass and underpass, and fencing of the ROW would affect the recreation opportunity. The trail overpass and underpass would facilitate safe pedestrian, equestrian, and bicyclist access to public lands along the proposed roadway and would provide access to public lands in addition to those provided by gaps or gates in the fences. Further, the bike-lane and multi-purpose trail within the ROW would provide new recreational opportunities.

3.8.2.3 Alternative 3

Potential impacts from the SH-16 Access ROW would be the same as those of Alternative 2. The impacts of the other proposed ROW would be the same with the following exceptions. No overpass would be included to cross the Linder Road Access ROW, thus access opportunities to public lands would be less than Alternative 2 and there could be an increased safety risk to pedestrians and bicyclists crossing the road. The underpass, however, would still provide safe access to public lands. The length of the Linder Road Access ROW where recreational opportunities would be modified would be essentially the same as Alternative 2, but slightly shorter (approximately 180 feet). The length of the Big Gulch Drainage Channel ROW on public lands would be the same as under Alternative 2, but would only have 0.6 miles of associated recreation trails due to the absence of the two detention basins. The majority of the trail length on public lands would be unpaved and occur on the southern side of the ROW.

3.8.2.4 Alternative 4

Impacts from the SH-16 and Linder Access ROW would be the same as those discussed for Alternative 2. The impacts associated with the Big Gulch Drainage Channel ROW would be similar to those discussed in Alternative 3, but less drainage would be realigned. The length of the Big Gulch Drainage Channel ROW on public lands would be 0.3 miles (0.6 miles shorter than Alternative 2). Trails would still be constructed and the public could access the area, but the length of trails proposed on public land associated with the channel would be shorter (approximately 0.5 miles; <0.2 miles for the paved northern trail and <0.4 miles for the southern unpaved trail).

3.9 VISUAL RESOURCES

3.9.1 Affected Environment – Visual Resources

Scenic quality is the relative worth of a landscape from a visual perception point of view. The seven key factors of scenic quality are landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications. The low and arid foothills of the proposed project areas are steep, with meandering dry drainages that dissect the hills lending irregular shadows throughout the day. The combination of grasslands and low-growing shrubs create an irregular mosaic of muted browns, greens, and yellows that exhibit fine to medium textures. The scenery adjacent to the proposed project areas exhibits a rural to suburban landscape where constructed features like highways, residences, commercial facilities, and infrastructure are scattered. The proposed ROW areas are moderately sensitive to visual contrasts due to proximity to local residents of the City of Eagle and the viewing angles of travelers along SH-16 and local county roads.

Local residents and workers directly south of the proposed ROW on Linder Road experience foreground to middle ground views of the area for potentially long durations. Residents and workers who live further south, towards the City of Eagle, experience middle ground to background views of the proposed ROW for long durations. Motorists traveling along SH-16 and other local county roads experience foreground to middle ground views of the proposed ROW for short durations but commuters may experience these views frequently.

The proposed ROW areas are managed under the current land use plan as a Visual Resource Management (VRM) Class III area. The management objective for visual resources in the area is to partially retain the existing character of the landscape. The level of change to the landscape can be moderate. Management activities may attract attention, but should not dominate the view of the casual observer. Change should repeat the basic form, line, color, and texture elements found in the natural landscape.

3.9.2 Environmental Consequences – Visual Resources

The VRM class assigned to the area is evaluated against the impacts of the proposed ROW to determine what, if any, mitigation is required to meet the VRM class objectives.

3.9.2.1 Alternative 1

No changes to visual resources would occur because the proposed ROW would not be constructed.

3.9.2.2 Alternative 2

Short-term disturbance caused by the presence of large earth-moving equipment and ground disturbance would occur during construction activities. At some times, localized clouds of dust created by road building and other grading activities may be visible at the construction sites. Active dust suppression prescribed in the BMPs would minimize the frequency and extent of construction-related dust. Because of grading activities that would occur during construction, areas of exposed soil and fresh gravel that contrast with the colors of the surrounding undisturbed landscape may be visible over the short-term.

Construction activities for roads and utilities would be located to minimize disturbance to the natural topography. The two access ROW would be fenced and portions of the roadside would have granite/rock ground cover interspersed with plantings. These features would introduce change in line, color and form to the foreground and middleground views. The majority of exposed soils would be revegetated.

In views from Homer Road, SH-16, and other nearby roads, the visual changes associated with construction activities would be moderately to highly visible during the construction phase and would continue to have a moderate level of permanent visual impact to the area. Implementation of environmental protection measures during construction, including minimizing areas of surface disturbance, controlling erosion, using dust suppression techniques, and restoring temporarily exposed soils, would minimize short-term construction impacts to visual resources. Over time, portions of each of the ROW would achieve more natural conditions after revegetation is established in the disturbed areas (i.e., medians and roadcuts).

Visible changes related to the Big Gulch Channel ROW would represent channel modifications and the insertion of new features (two vegetated drainage basins and trails), into an undeveloped landscape. Changes in form, line, color, and texture of the existing landform and vegetation would occur with moderate impact to the visual setting. Development of the proposed ROW would result in contrasts to the existing landscape in a manner that is consistent with Class III management objectives.

The proposed SH-16 Access ROW would minimize major cuts and fills by following the natural terrain and blending with existing topography for minimized visual impact. The new road and utility lines would introduce linear contrasts to the landscape. Change of form and color would be introduced to the largely undeveloped and natural setting through the presence of a paved four-lane road. Visual changes would attract the attention of viewers traveling north on SH-16. The proposed ROW would not be highly visible for those traveling south on SH-16 or motorists traveling in either direction along Homer Road. Development of the proposed ROW would result in moderate contrasts to the existing landscape and would briefly attract the attention of viewers traveling north on SH-16 in a manner consistent with Class III management objectives.

The proposed Linder Road Access ROW would include one trail overpass and one trail underpass. The new road and utility lines would introduce moderate linear contrasts to the natural, undisturbed landscape through the presence of paved road with under and overpasses. Change of form and color would be introduced to the largely undeveloped setting. Portions of the proposed ROW, primarily in lower topographic areas, may be visible by local residents near the intersection of Linder and Homer Roads. Development of the proposed ROW would require removal of over 109,000 cubic yards of fill and would result in moderate contrasts to the existing landscape. The contrast would be in a manner consistent with Class III management objectives.

3.9.2.3 Alternative 3

Impacts to visual quality would be similar to Alternative 2; however, greater land area for cutslopes would be involved for the Linder Road ROW. Visual impacts of the SH-16 Access ROW would be the same as described for Alternative 2.

The proposed Big Gulch Drainage Channel ROW would not involve the two vegetated drainage detention basins and would have a shorter trail length compared to Alternative 2. Therefore, overall changes in form, line, color, and texture of the existing landform and vegetation would be less than Alternative 2. Development of the proposed ROW would result in contrasts to the existing landscape in a manner that is consistent with Class III management objectives.

The road alignment of the Linder Road Access ROW would have similar design features as Alternative 2, but would not include the trail overpass and would be located further west of the alignment proposed for Alternative 2. Road construction would require larger grading and stabilization areas as compared to Alternative 2, with over 140 feet of cutslope and over 1 million cubic yards of associated soil removal (Section 2.3.3.3). This would result in greater visual impacts by change in line, form, texture, and color, compared to Alternative 2. Construction activities and the finished road alignment would be visible by residences to the south along Homer Road. Implementation of the proposed ROW would be consistent with Class III management objectives.

3.9.2.4 Alternative 4

Impacts to visual resources from development of the Big Gulch Drainage Channel ROW caused by change in line, form, color, and texture would occur, but would be less than that of alternatives 2 and 3. Impacts would be less because only those portions of the channel that currently exist on public land would be improved and no storm water detention basins would be constructed. Improvements to the channel would be similar to that proposed under Alternative 2. Visual impacts of the two access ROW would be the same as described for Alternative 2.

3.10 SOCIAL AND ECONOMIC

3.10.1 Affected Environment – Social and Economic

In the last 10 years, the Treasure Valley has seen an increase in the development of new subdivisions with many proposed on lands adjacent to public land. The opportunities and experiences that public lands supply in the urban interface are of local economic and social importance. Meetings with and letters from the residents of nearby communities have

emphasized that continued public ownership, access, and use of public lands adjacent to local communities are of great importance. These residents expressed the importance of public lands to their “quality of life” and some emphasized that they chose to live in the area largely due to the nearby parcels of public lands.

The proposed ROW are located in Ada County and were annexed into the City of Eagle in December 2009. The City of Eagle is the nearest center of trade, civic, and cultural activity. Idaho’s Capitol, Boise, serves as the civic, trade, service, and cultural center of the region. The economy of Ada County is the most prosperous within the region. The following data provide a snapshot of the demographics, economy, and social structure of Ada County and the City of Eagle.

According to the 2010 Census, there were 148,445 households in Ada County with an average household size of 2.6 people. Household size is a reflection of age composition because young professionals and resident college students often live alone. Families made up 70 percent of the households in Ada County. This figure includes both married-couple families (52%) and other families (14%). Non-family households made up 33 percent of all households in Ada County. Most of the non-family households were people living alone, but some were composed of people living in households in which no one was related to the householder (U.S. Census Bureau 2010a). The 2006 to 2010 median value of housing in Ada County was \$214,500, which is higher than either the Idaho or U.S. median values. The age of housing in Ada County is relatively young compared to most other surrounding counties, with 25.6 percent of housing units having been built since 2000 (U.S. Census Bureau 2010b).

The population in the City of Eagle in 2010 was comprised predominantly of people greater than 17 years but less than 65 years of age (57%). Approximately 12 percent of the population was 65 years and older and 30.8 percent was less than 18 years of age. Of this population, the majority was comprised of people that were Caucasian (94.4%). Less than 5 percent were Hispanic, and the remainder included people of other races. Only 6 percent of the population in the City of Eagle was living below poverty level in 2010, which was less than the Idaho State average of 13.6 percent. Further, the median household income in the City of Eagle between 2006 and 2010 (\$83,444) was larger than that of Ada County (\$55,835) and almost double that of Idaho (\$46,423). Income per capita in the City of Eagle from 2006 to 2010 was \$43,784, which was much higher than the Ada County per capita income (\$27,915) and almost twice as high as the Idaho per capita income (\$22,518; U.S. Census Bureau 2012). These data indicate a large proportion of working-age individuals and a low occurrence of financial strain in the community surrounding the proposed ROW.

Emergency services in the City of Eagle include both a fire and police department. The police services for the City of Eagle are provided by the Ada County Sheriff's Office, which provides nine full-time deputies to the City (City of Eagle 2010). The nearest hospital is located in Meridian, Idaho (approximately 6 miles from the City of Eagle) and the nearest health care center providing emergency services is located in Eagle, Idaho.

3.10.2 Environmental Consequences – Social and Economic

3.10.2.1 Alternative 1

There would be no impacts or changes to regional or local, social or economic conditions because the access and drainage ROW would not be constructed. The ROW areas would continue to function as a dispersed recreation area and would continue to provide seasonal livestock grazing opportunities.

3.10.2.2 Alternative 2

Direct impacts to the social environment within the ROW areas could be an increased perception of "quality of life" because of the trail system and open space that the Big Gulch Drainage Channel realignment would create. The creation of trails along the realigned channel would provide community members and other nearby residents with open space and the opportunity for walking, biking, and equestrian use of the trails. These trails would also provide a safe place for recreation away from motorized vehicles.

Temporary economic benefits would be introduced from construction activities for the labor force that would be needed to construct drainage channel modifications and the trails associated with the channel. An additional indirect economic impact associated with the Big Gulch Drainage Channel and associated trails could be an increase in property values for nearby residents. Studies in a wide range of urban areas have documented increases in real estate value for residences located near parks, with increments in real estate value attributed to individual park systems ranging into the millions of dollars. Homes near greenways have also been shown to sell for higher prices than those farther away (TPL 2010).

The construction and O&M of the SH-16 Access ROW would directly impact 27.5 acres of open space on public land. The authorization and operation of this ROW corridor would affect the availability of open space on public lands and could affect public perceptions of the administration of public land. However, the ROW corridor could provide additional access points to public land located adjacent to the ROW area.

The roadway in the proposed ROW corridor could affect public safety if pedestrians were to walk across the road in order to gain access to public lands. The detached multi-use trails in

the access ROW would provide a safe location for pedestrians or other users to travel en route to public lands or private lands to the north.

Temporary economic benefits would occur from construction activities because of the labor force that would be needed to construct the roadway and associated utilities. This labor force would likely spend a portion of their wages in the City of Eagle or other surrounding communities during the construction period. The labor force may also be made up of individuals from surrounding communities. Long-term economic benefits could be realized from the labor force required to maintain the road, landscaping, and utilities of the proposed ROW.

The construction and operation of the Linder Road Access ROW would directly impact 23.8 acres of open space on public land. The impacts associated with this ROW corridor would be similar to those discussed for the SH-16 Access ROW. In addition, the development in this ROW could affect real estate values for those properties located adjacent to the proposed ROW; however, impacts at the county level would be substantially unnoticeable. Construction and use of the road could also become an annoyance to adjacent homeowners accustomed to low traffic volumes and noise levels.

3.10.2.3 Alternative 3

The impacts from construction and O&M of the roadways in the access ROW corridors and realignment of the Big Gulch Drainage channel on social and economic conditions would be similar to those discussed under Alternative 2. However, there would be some small differences in the number of acres of open space impacted. The Big Gulch Drainage Channel ROW would directly impact 24.7 acres of public land, a reduction from Alternative 2. The SH-16 Access ROW would directly impact the same acreage of open space on public land as in Alternative 2 (27.5 acres). The Linder Road Access ROW would directly impact 33.5 acres of open space on public land, an increase from Alternative 2. An additional private landowner could be impacted from vehicle noise due to the more westerly alignment of the proposed Linder Road ROW.

3.10.2.4 Alternative 4

The impacts from construction and O&M of the roadways on social and economic conditions in the access ROW corridors would be the same as Alternative 2. Impacts of improving the Big Gulch Drainage channel would be similar to those discussed in Alternative 3. However, there would be some differences in the number of acres of open space impacted. The Big Gulch Drainage Channel ROW would directly impact 9.1 acres of public land, a reduction over alternatives 2 and 3.

3.11 CULTURAL RESOURCES

3.11.1 Affected Environment – Cultural Resources

Cultural resources consist of definite locations of human activity, occupation, or use identified through field inventory, historic documentation, or oral evidence. URS conducted a 312-acre intensive cultural resources inventory for the proposed project in May 2009 under the requirements of Section 106 of the National Historic Preservation Act. Results of the cultural inventory were documented in an Archaeological and Historical Survey report (URS 2009).

Additional surveys were conducted in June and July 2012 by the BLM Four Rivers Field Office (FRFO) archaeologist to determine the true locations of the Basye Freight Road and Goodale's Cutoff Trail that pass through the area. The FRFO archaeologist then evaluated the Basye Freight Road and the Goodale's Cutoff Trail to determine if the historic roads were eligible to be listed on the National Register of Historic Places (NRHP). Cultural resource sites that are eligible to be listed on the NRHP are called historic properties. The archaeologist also evaluated the eligibility of the six cultural resource sites documented in 2009 survey report that had been previously recorded on parcels managed by the BLM. The FRFO archaeologist then assessed the impacts that the proposed project would have on any historic properties on BLM parcels (BLM 2012).

The FRFO archaeologist evaluated the two historic roads and concluded that sections of both the Basye Freight Road and Goodale's Cutoff Trail are eligible for listing on the NRHP (BLM 2012). The Basye Freight Road crosses a portion of the SH-16 Access ROW. The Goodale's Cutoff Trail does not cross any of the proposed ROW areas, but occurs in the general vicinity of the project area. These historic properties do not intersect the Linder Road Access ROW or the Big Gulch Drainage Channel ROW on public lands.

The other six cultural resource sites were evaluated and it was determined that the six sites are not eligible to be listed on the NRHP (BLM 2012). Because these six sites are not historic properties, they will not be evaluated further in this document.

Various segments of each historic road had lost their integrity due to modern intrusions such as roads, plowed fields, structures or other impacts that obliterated the original historic roads. The FRFO archaeologist further noted that the Basye Freight Road had been previously impacted by a modern two-track road in the area where the SH-16 Access ROW is proposed (BLM 2012). The presence and use of the two-track road has compromised the integrity of the Basye Freight Road; therefore, the segment of the Basye Freight Road crossing the SH-

16 Access ROW is no longer considered a historic property and is not eligible to be listed on the NRHP.

3.11.2 Environmental Consequences –Cultural Resources

3.11.2.1 Alternative 1

Access and drainage ROW would not be constructed on public lands; therefore, no associated impacts to historic properties would occur.

3.11.2.2 Alternative 2

No impacts to the Goodale’s Cutoff Trail would occur because this historic property does not cross the three proposed ROW. The SH-16 Access ROW would impact approximately 300 feet of the Basye Freight Road. However, at the location of the proposed ROW, Basye Freight Road has previously been impacted by the presence of an existing two-track road and no longer retains its integrity, as discussed in Section 3.11.1. Therefore, the impact to this section of the road is not considered adverse by the State Historical Preservation Office, and no adverse impacts to historic properties eligible for the NRHP would occur by issuing grants for the three ROW (BLM 2012).

3.11.2.3 Alternative 3

No adverse impacts to historic properties eligible for the NRHP would occur, as under Alternative 2.

3.11.2.4 Alternative 4

No adverse impacts to historic properties eligible for the NRHP would occur, as under Alternative 2.

3.12 HAZARDOUS MATERIALS

3.12.1 Affected Environment – Hazardous Materials

The affected environment for hazardous materials and petroleum products is defined by public access opportunities, transportation routes, and staging areas that would be used during the construction of the proposed ROW.

A Hazardous Materials Environmental Site Assessment was conducted in 2007 for approximately 5,800 acres of land that included the proposed ROW areas (URS 2007b). The assessed property was made up of 14 parcels with divided ownership between M3 and public lands. The assessment was performed in order to evaluate the presence or potential presence of hazardous substances or petroleum products that could have caused contamination to the ground, groundwater, or surface water of the surveyed property. Results of the site

assessment revealed no evidence of any hazardous substance releases, past environmental contamination, or existing solid waste dumping on the 5,800-acre assessed property, which includes the proposed ROW.

While no evidence of illegal dumping was identified during the 2007 field survey, opportunities for motorized public access are present at the current terminus of Hartley Road and near the proposed SH-16 Access ROW. Therefore, the potential for illegal dumping exists in these areas.

3.12.2 Environmental Consequences – Hazardous Materials

3.12.2.1 Alternative 1

Access and drainage ROW would not be constructed on public lands. Therefore, opportunity for the presence of hazardous materials would remain similar to the current conditions.

3.12.2.2 Alternative 2

The presence of hazardous materials would occur through the use of oils, fuels, and other hazardous substances that would be brought onsite during construction activities. The potential for hazardous material impacts would be associated with accidental spills or leaks caused by construction activities and incidents attributed to indiscriminant public dumping.

All construction and O&M activities would be confined to the proposed ROW corridors or on adjacent private property. As per the project best management practices, all construction sites, staging areas, and storage sites would be maintained in an orderly condition during the construction phases of each of the proposed ROW. Temporary fences would be installed along the access ROW corridors during construction activities which would serve to limit public access to the construction areas and equipment and associated petroleum products and potentially hazardous substances

Granting of the proposed access ROW would create indirect impacts by allowing increased motorized vehicle access and greater opportunity for incidence of illegal or indiscriminant dumping to occur. Construction activities and operations associated with the ROW would be required to use project BMPs to avoid impacts to the environment from hazardous materials. In addition, regular inspection of the construction areas and access routes would serve to minimize the potential for uncontrolled spills and/or dumping of hazardous materials.

3.12.2.3 Alternative 3

The opportunity for the presence of hazardous materials during construction of the ROW and the potential for illegal dumping from increased access to the area via the access ROW would result in the same types of impacts as those described for Alternative 2.

3.12.2.4 Alternative 4

The opportunity for the presence of hazardous materials during construction of the ROW and the potential for illegal dumping from increased access to the area via the access ROW would result in the same types of impacts as those described for Alternative 2.

3.13 CUMULATIVE EFFECTS

A cumulative effect is defined as “the impact which results from the incremental impact of the action, decision, or project when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.7). The cumulative effects area is defined for each affected resource in Sections 3.13.2.1 through 3.13.2.10. Cumulative effects are addressed below by alternative. The following past, present, and reasonably foreseeable actions occur within Ada and Gem Counties and overlap the proposed ROW areas.

3.13.1 Cumulative Actions

3.13.1.1 Housing and Community Developments

The following housing and community developments are proposed or approved in the vicinity of the proposed ROW corridors (Figure 3-4).

M3 Eagle Planned Development (proposed) – 7,153 residential lots, 245 acres for commercial shops and office buildings and a 500-guest hotel. In addition, parks, golf courses, and vineyards would be created and natural open space would be maintained. This proposed development would occur on approximately 6,015 acres directly adjacent to the proposed ROW. The majority of this area was annexed into the City of Eagle in December 2009.

High Plains Estates (approved) – off SH-16 to the east at North Grand Ridge Lane consisting of 13 homesites on approximately 5-acre lots. The road has been constructed, but no homes have yet been built. This property is approximately 0.4 miles north of the proposed SH-16 Access ROW.

Colton Ranch Subdivision (approved) – off SH-16 to the west of Firebird Raceway (10 ten-acre lots). This property is approximately 2.2 miles northwest of the proposed SH-16 Access ROW.

Broken Trumpet Acres (approved) – off SH-16 on Trumpet Lane and approximately 0.6 miles northwest of the proposed SH-16 Access ROW with five, 10 to 11-acre, lots.

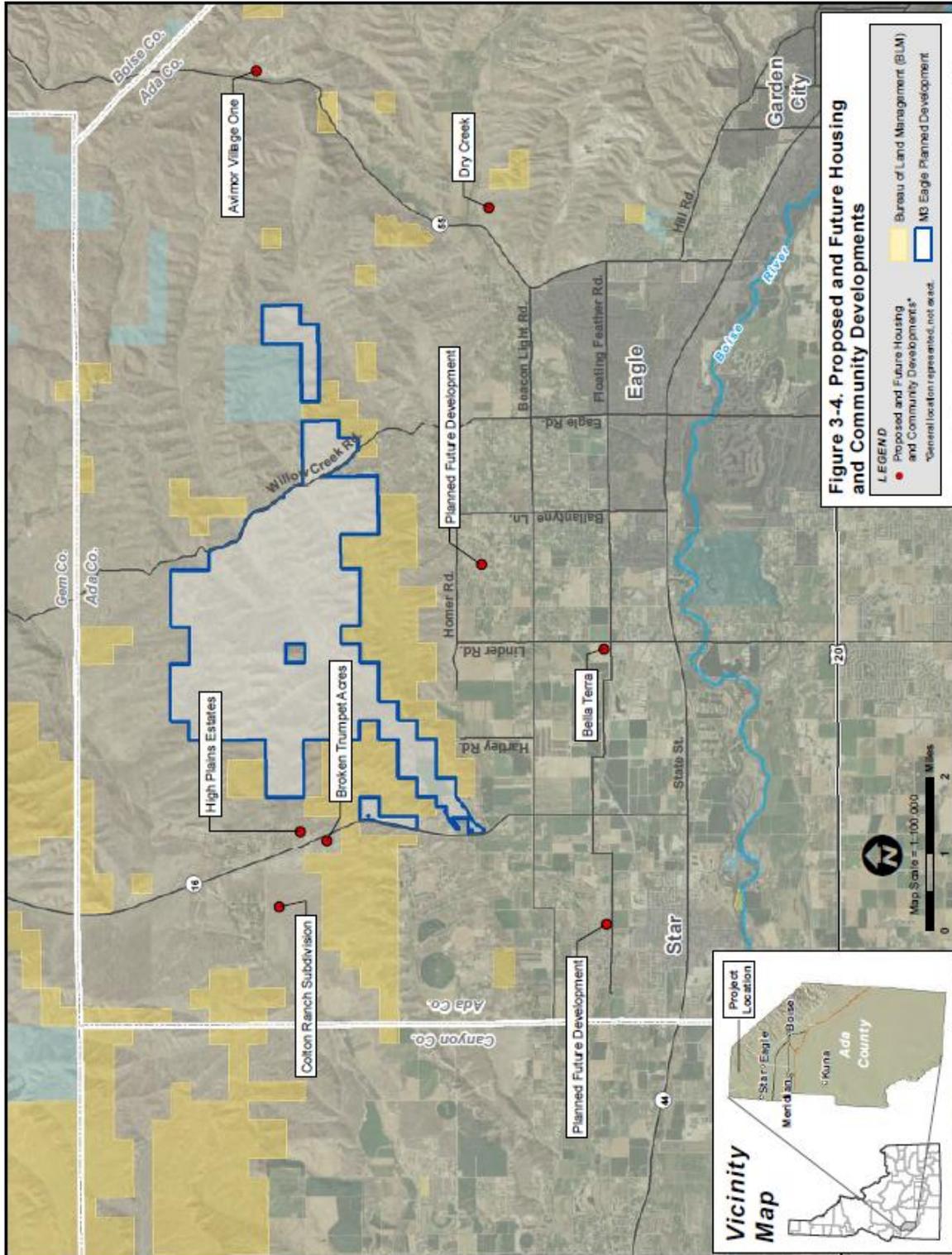
The area bounded by Beacon Light, Homer Road, Ballantyne Lane, and Linder Road has generally all been approved for subdivisions with mostly 5-acre lots. This area is to the south and approximately 2.2 miles from the SH-16 Access ROW and only 0.2 miles from the Linder Road Access ROW.

Avimor Village One (approved) – off SH-55 approximately 8.6 miles northeast of the SH-16 Access ROW; 840 acres will include 650 homes and 175,000 square feet of mixed commercial space (offices, retail, and restaurants). Avimor is the first phase of development planned for up to 23,000 acres. At full buildout, this development could ultimately result in construction of 12,000 homes over the course of several decades.

Dry Creek (approved) – off SH-55, located approximately 7.0 miles northeast of the proposed SH-16 Access ROW; 1,400 acres that will include 3,500 homes built over the next 15 years.

Bella Terra (approved) – at the corner of Linder and Floating Feather with 34 housing lots. These lots are located approximately 3.2 miles south of the SH-16 Access ROW and 1.7 miles south from the Linder Road Access ROW.

Figure 3-4. Proposed and Future Housing and Community Developments



3.13.1.2 Recreation

Recreational use on public lands is expected to increase with the growth of the population in Ada and Gem counties.

The City of Eagle filed a Recreation and Public Purposes Act application for 1,915 acres of public land that is in an area that was annexed by the city in December 2009. The application was put on hold when slickspot peppergrass was listed under the ESA. The City of Eagle and BLM are working on a management plan for public lands between SH-16, Beacon Light Road, SH-55, and the Ada County line. The plan vision is to create and preserve an interconnected system of natural open spaces that supports wildlife, native plants, and a variety of sustainable recreational opportunities within the Eagle Foothills.

M3 is proposing to maintain 800 acres of their property as open space. As part of the M3 Eagle planned development, the Big Gulch Drainage would be converted to a linear public park and trail system extending approximately 5 miles from Willow Creek Road and west to SH-16.

3.13.1.3 Livestock Grazing on Lands Administered by the BLM

The BLM manages rangelands within the proposed ROW areas and throughout the BLM Four Rivers Field Office for the use of livestock. The rangelands are divided into allotments and pastures for management purposes. These allotments support cow-calf and sheep operations.

Demand for livestock grazing leases is expected to remain relatively steady in the future, with relatively constant livestock class ratios utilizing the BLM Four Rivers Field Office (BLM 2009d). Existing and on-going conflicts between livestock operators and recreationists are expected to increase in the future as major population centers continue to grow and public demand for recreational experiences increase.

3.13.1.4 Traffic and Road Improvements

The Idaho Transportation Department completed work in the spring of 2011 to incorporate a left turn lane on SH-16 at the intersection with Floating Feather Road (1 mile south of Beacon Light);

The Idaho Transportation Department replaced the Willow Creek Bridge on SH-16 about 1 mile north of Firebird Raceway. This two-lane bridge was replaced with a three-lane bridge in the summer of 2011.

The Idaho Transportation Department plans completed a pavement preservation program on SH-16, from SH-44 to Emmett in the summer of 2012.

The Idaho Transportation Department plans to implement some improvements under its safety program at the intersection of SH-44 and Linder Road. This project is scheduled to begin in 2013.

The Idaho Transportation Department plans to construct the intersection of SH-16 and SH-44 and associated local roads needed to provide new access. Construction completion expected in summer 2014.

The Ada County Highway District plans to replace the Eagle Road Bridge near Floating Feather Road. Construction is planned for 2016.

The Ada County Highway District plans to construct pedestrian and bike facility improvements on the north side of Floating Feather Road between Chaucer Way and Ballantyne Lane. Construction is planned for 2016.

3.13.2 Cumulative Effects Analysis

The following sections include an analysis of cumulative effects for all resources that would be directly or indirectly impacted from the proposed ROW developments.

3.13.2.1 Air Quality

The region of influence for cumulative effects to air quality is defined as Northern Ada County, as this reflects boundaries defined in the IDEQ Air Quality Management Plan for attainment. Construction activities associated with area housing developments, Big Gulch Channel realignment on M3 property, and road improvements could adversely affect regional air quality due to emissions from construction equipment and vehicular exhaust. These emissions would generally be localized and short in duration. Dust emissions and soil loss from travel on unpaved roads, from earth-moving activities, and from areas where vegetation has been removed could increase. Impacts from construction activities would be negligible because fugitive dust control would be implemented as BMPs that are typically required by county or IDEQ permit conditions. Construction projects are also subject to the Idaho Administrative Procedures Act 58, Rules for the Control of Air Pollution in Idaho.

Air quality in the proposed ROW areas is generally good and the area is not in violation of NAAQS. Indirect impacts to air quality attributed to planned housing developments along

with direct impacts from vehicle emissions and construction activities under the proposed ROW would add cumulatively to air quality. Some reduction in air quality attributed to fugitive dust and vehicle emissions may be experienced in the City of Eagle area.

3.13.2.2 Soils

The region of influence for cumulative effects to soils is defined by the proposed ROW boundaries because the indirect impacts from surface disturbance to soils would not extend beyond these areas. Current surface disturbing activities such as grazing, recreation, farming, and wildfire would likely continue. These activities result in changes in vegetation composition and the spread of invasive weed species, which affect soil stability and can impact the rate of soil erosion. Increased use of the area would occur due to access from the proposed road construction and future housing and recreational developments, which would add to the current impacts. Under Alternative 1, the ROW would not be constructed. Modifications to the Big Gulch Channel on private land would still occur as part of the M3 Eagle planned development. Soil disturbance associated with these modifications would not add a measurable amount of soil erosion to that already created by the ongoing activities described in Section 3.1.

3.13.2.3 Vegetation / Special Status Plants / Noxious Weeds and Invasive Plants

The cumulative effects analysis area for vegetation, special status plants, and noxious and invasive weeds is bordered on the west by SH-16, the south by the BLM boundary north of Homer Road, the east by slickspot peppergrass Management Area 2B, and the north by the northern boundary of the proposed M3 Eagle planned development. This area was selected because it considers the population of slickspot peppergrass in the Eagle Foothills and the greatest extent of anticipated indirect impacts of the proposed ROW. The area includes slickspot peppergrass Management Area 2B and 2C, the proposed M3 Eagle planned development, and portions of the public lands open space planning area. The vegetation in this area is dominated by poor and marginal condition grasslands, with lesser amounts of poor to satisfactory condition shrub vegetation communities (URS 2006). In July 2010, 42 percent of the analysis area was burned during the Big Fire (BLM 2010a), thus reducing cover of shrubs and increasing cover by grasses.

Proposed housing developments in the cumulative effects analysis area would remove grass and shrub vegetation communities and disturb soil which could act as a vector and/or increase the spread of invasive and noxious weeds. Housing developments, including those proposed for the M3 Eagle planned development on up to 5,530 acres, would likely remove slickspot peppergrass plants, slickspot microsites, occupied and slickspot peppergrass habitat, proposed critical habitat, and potential slickspot peppergrass seedbank. Recreation and

grazing could cause trampling of vegetation, disturb soil, and act as a vector and spread of invasive and noxious weeds. Recreation and grazing activities could also cause trampling of slickspot peppergrass and suitable habitat. These direct impacts would add cumulatively to the approximately 60 to 82 acres of vegetation impacts from the proposed ROW.

Cumulative indirect effects would include increased population, recreation, roads, and traffic, which all could be vectors for introduction and colonization of non-native plants, including invasive and noxious weed species. The spread of invasive annual plants, especially cheatgrass and medusahead, degrades vegetation communities, slickspot peppergrass suitable habitat, and could reduce the abundance and diversity of insect pollinators needed for slickspot peppergrass. The increase in invasive species also would increase fine fuels in the vegetation understory, which would increase wildfire risk. With greater traffic along more roads, there is an increased risk of fire ignition from vehicle sparks. The risk of fire and noxious and invasive weed invasion are the greatest threats to slickspot peppergrass and its habitat. These indirect impacts would be relatively minor within the ROW proposed for alternatives 2, 3, and 4 and could be further reduced through BMPs. However, these indirect impacts are additive when considering the proposed developments, recreation, and grazing in the Eagle Foothills and would have a cumulative effect on the general vegetation condition, slickspot peppergrass population and suitable habitat, and infestation and spread of invasive and noxious weeds. Ultimately, the complete conversion of shrub and grasslands to annual grasslands with low native diversity could result. If a complete conversion to annual grasslands were to occur, there would likely be a reduction in the population of slickspot peppergrass because of the reduction in habitat, its seedbank, and insect pollinators.

3.13.2.4 Wildlife

The cumulative effects analysis area for general wildlife and special status species is all areas within a 6-mile radius of the ROW. This area was selected because it would incorporate typical movements of the species considered through the ROW corridors. Although big game migrate greater distances, the movement patterns of big game that reside or move through the ROW areas are not well documented.

Proposed housing developments and associated roads would remove vegetation and disturb soils and would result in a loss of native wildlife habitat. Conversely, the proposed housing developments could bring parks and open space such as riparian habitat that could attract wildlife to the area. The developments could also result in the increase in non-native wildlife species such as starlings, house sparrows, and domesticated house pets, which could displace native species. Recreation and grazing would cause trampling of vegetation and could introduce invasive species of vegetation as well as noxious weeds, resulting in a loss of wildlife habitat. Recreation, including use of the proposed parks, and grazing would also

modify behaviors of wildlife species that could result in avoidance of the areas around these activities. Increased human population and associated vehicle traffic, and increases in recreation, would cause wildlife to avoid areas where human activities occur. Increased human population and associated vehicle traffic would also cause increased mortalities resulting from vehicle and structural collisions, legal and illegal take of wildlife, and depredation by domestic animals. The proposed ROW may be small in comparison to future developments within the analysis area, but they would add cumulatively to the impacts on wildlife.

3.13.2.5 Fire

The region of influence for the analysis of fire management cumulative effects is the Boise Front FMU. This region was selected because the proposed ROW are located within this FMU, and several other past, present, and future projects could have incremental impacts to fire management in this FMU.

As this area becomes more developed, there are likely to be more human-caused fires in or near public lands, especially in areas that are considered part of the wildland urban interface. However, the construction of additional transportation corridors and increased access to water sources could reduce the response time to reach a fire and to control it. The development and construction of new residential and commercial business areas near public lands could give the BLM and other local governments an opportunity to discuss fire management with the public at open house events or other planned events. Educating the public about Firewise principles (BLM 2010d) and how to prevent human-caused fires could reduce the potential for human caused fires on public lands.

Fire suppression resources including irrigation and community water supplies in the proposed ROW and M3 Eagle planned development would be available to firefighters for emergency suppression operations. Fire hydrants would be located within the M3 Eagle planned development. A municipal water tank is being considered by the City of Eagle near the northern terminus of Hartley Road; it will be constructed on an as-needed basis depending on water demand. Two fire stations are also proposed for the M3 Eagle planned development. Having these resources available within the M3 Eagle development would make response times for fire personnel quicker and more efficient. Conversely, the increase in the number of homes and people in the area would increase Wildland Urban Interface issues, meaning that firefighting resources would likely be diverted to structure protection, not wildland suppression, and it could take longer to contain fires.

3.13.2.6 Livestock Grazing

The region of influence for livestock grazing impacts would include the three livestock allotments overlapping the ROW. The demand for land associated with recreation along with residential and commercial property development is expected to increase over time. Impacts to vegetation and other livestock grazing resources from land development and recreation needs, including expanded transportation corridors, are likely to increase. As these types of resource uses increase, private and public needs are likely to shift. Impacts from planned development and transportation improvements affect livestock grazing allotments by reducing the area available for grazing activities. Each new development could decrease the availability of livestock grazing areas located on public lands that are part of an allotment. These regional influences to livestock grazing could result in long-term reductions in livestock use of public lands in the area. Large contiguous allotments may not feel the impacts of development because of restrictions on the type of use on these lands. Other areas, such as the Eagle Foothills, are already seeing impacts from development that have reduced the size or fragmented allotments.

The overall impacts to livestock grazing on public lands from regional influences would be consistent under all alternatives. However, there would be no cumulative effects to livestock grazing on public lands under Alternative 1 because livestock grazing would not be impacted. The type of impacts to livestock grazing under alternatives 2, 3, and 4 would be the same; however, the number of acres affected by activities within the ROW would be slightly different (Section 3.7). As the M3 Eagle planned development is built and more homes become occupied, the risk of disturbance to or potential collision with livestock by motorized vehicles traveling in the ROW would increase. However, this would be minimized by the construction of fences along the ROW.

3.13.2.7 Recreation

The cumulative effects analysis area for the recreation resource is defined as Ada County. This area was chosen because recreation in the county is increasing and many residents within this county access public land for recreation opportunities including biking, hiking, fishing, equestrian, hunting, and OHV use.

The demand for land associated with residential and commercial property development is expected to increase over time. Impacts to open space and dispersed recreation areas from land development, including expanded transportation corridors, are likely to increase. As these types of resource uses increase, private and public needs are likely to shift. Additional ROW on public land could decrease the availability of public open space and dispersed recreation areas. Additional housing developments on private property and the associated

increase in regional population could add to the demand put on public open space. The development of a trails system on public and private lands would address this demand by increasing the opportunity for designated non-motorized recreation uses. Although the use of this area would shift from unmanaged dispersed recreation to managed recreation, the enforcement of rules and management of the park could benefit the recreational capacity of the land.

The overall impacts to recreation on public lands from regional influences would be consistent under all four alternatives. However, because there would be no direct or indirect impacts to recreation under Alternative 1, there would be no cumulative effects to recreation for this alternative. The type of impacts to recreation under alternatives 2, 3 and 4 would be similar in that all alternatives would include added trails and bike lanes to the area.

3.13.2.8 Visual Resources

The region of influence for cumulative effects to visual resources is defined as the area north of the City of Eagle, bounded by Homer Road to the south, SH-16 to the west, and Linder Road because the visual impacts resulting from development of the three proposed ROW would not likely extend beyond this boundary. The BLM lands in the cumulative effects area are designated VRM Class III. Past and current projects have created the existing visual conditions in the Eagle area. Each of the action alternatives would have varying degrees of impacts to visual resources beyond the proposed ROW by failing to maintain the existing character of the landscape.

The M3 Eagle planned development would impact the visual quality of the existing native landscape within the proposed ROW. The Linear Public Park and Trail System associated with realignment of the Big Gulch Channel on private property would also result in visual impacts, depending on location and magnitude of what is built. In addition, several planned community developments and transportation improvements are expected to occur in the immediate vicinity of the proposed ROW.

The incremental impacts of the proposed ROW, when added to the future planned housing development, parks, and road projects would introduce contrast to form, line, color, and texture of the natural landscape. These impacts would be visible by viewers in the foreground, middleground, and background of the ROW. Development of the three proposed ROW would contribute moderate contrasts to the cumulative visual contrasts in the analysis area.

3.13.2.9 Social and Economic

The region of influence for the analysis of socioeconomic cumulative effects is Ada County. This region was selected because the proposed ROW are located within Ada County and the City of Eagle. This is the area primarily affected by the direct and indirect impacts of the proposed action and alternatives. Past, present, and future projects (described in Section 3.13.1) will incrementally impact social and economic conditions within the region. These impacts, though, are difficult to ascertain as the economic conditions of the county are currently in flux as the housing and commodity markets have not stabilized following the recent recession.

The cumulative effects of the proposed ROWs would be immeasurable as Ada County and the City of Eagle are economically diverse and have a robust economy. The cumulative effects associated with recreation in the area could result in greater community involvement and an increased desirability as a place to live or retire.

3.13.2.10 Cultural Resources

No adverse impacts to historic properties would result from issuing the three ROW grants (BLM 2012); therefore, no further analysis of cultural resources is required.

4.0 CONSULTATION AND COORDINATION

4.1 LIST OF PREPARERS

Preparers of this Environmental Assessment (EA) consist of the Bureau of Land Management (BLM) Interdisciplinary Team (Table 4-1) and the contractor, URS Corporation (Table 4-2).

Table 4-1. BLM Interdisciplinary Team.

Name	Title	Specialty
Terry A Humphrey	Four Rivers Field Manager	Management
Cecil Werven	Project Lead, Realty Specialist	Realty
Dean Shaw	Archaeologist	Archaeology
James Tarter	Riparian Specialist	Riparian Ecology/Fisheries
Jill Holderman	Wildlife Biologist	Wildlife
Lara Hannon	Ecologist	Ecology/Botany
Larry Ridenhour	Outdoor Recreation Planner	Recreation
Lonnie Huter	Natural Resource Specialist	Weeds
Mark Steiger	Botanist	Botany
Martin Espil	Rangeland Management Specialist	Range/Livestock
Matthew McCoy	Four Rivers Asst FM	Management
Kathi Kershaw	Fuels Botanist-Ecologist	Ecology/Botanist
Candi Aguirre	Realty Specialist	Realty

Table 4-2. URS Corporation.

Name	Title	Responsible for the Following Section(s) of this Document
Kavi Koleini (former URS employee)	Biologist	Chapters 1 and 2 and portions of Chapter 3, existing conditions
Rebecca Thompson	Wildlife Biologist	Technical Lead and Editorial Review
Ryan Baum	GIS Specialist	Document Figures, GIS Analysis
Sandra Steele	Administrative Manager	Document Production
Lisa Gates	Environmental Scientist	Air Quality, Visual Resources and Hazardous Materials
Suzy Cavanagh	Geologist/Office Manager	Soils and Hydrology
Lisa Harloe	Botanist/Plant Ecologist	Vegetation

Name	Title	Responsible for the Following Section(s) of this Document
Matt Cambier	Staff Wildlife Biologist	Wildlife
Valerie Porter	Environmental Planner	Recreation, Grazing, Fire, Socioeconomics
Brian Wallace	Archaeologist	Cultural Resources

4.2 LIST OF AGENCIES, ORGANIZATIONS, AND INDIVIDUALS CONSULTED

Table 4-3 includes the list of agencies, organizations, and individuals consulted for this EA.

Table 4-3. Agencies, Organizations, and Individuals Consulted for this EA.

Shoshone-Paiute Tribes
US Fish and Wildlife Service (USFWS) – Barb Chaney
Idaho State Historical Preservation Office (SHPO)
Idaho Chapter of the Oregon California Trails Association
Environmental Protection Agency – Maria Lopez
Idaho Transportation Department District 3 – Robert Amoureux
Ada County Planning Office – Meg Rush

4.2.1 Tribal Consultation

Requests for comment were provided to the Shoshone-Paiute, Shoshone-Bannock and Nez Perce Tribes during the initial project scoping period. No scoping comments were received from the tribes.

Government-to-Government consultation (Executive Order 13084) with the Shoshone-Piute Tribe regarding tribal treaty rights and interests (Executive Order 13007) has been conducted. The rights-of-way (ROW) applications were discussed at the Boise District Wings and Roots meetings in December 2008, October 2009, and February, March, and April 2012. The Tribe expressed concerns regarding the protocol for handling of inadvertent discoveries of human remains, but they had no concerns specific to the proposed ROW. The Tribe expressed a general opposition to surface-disturbing activities and development in the area.

Government-to-Government consultation (Executive Order 13084) with the Shoshone-Bannock Tribe was conducted on January 10, 2012 at the Fort Hall Tribal Office. Although the tribe had concerns relating to a proposed M3 exchange, they did not provide comment on the proposed M3 ROWs.

4.2.2 SHPO Consultation

An Archaeological Survey Report was completed in 2009 (URS 2009), then submitted to the BLM, and forwarded to the Idaho SHPO. Upon further review of existing archaeological site data, the Idaho SHPO requested amendments be made to eliminate confusing information concerning Goodale's Cutoff Trail and the Basye Freight Road.

An Archaeological Survey Report amendment was submitted to the SHPO in July 2012 (BLM 2012). The report clarified that only three ROW would be studied and included records, photographs, and maps for the Basye Freight Road and Goodale's Cutoff Trail. The report also evaluated the eligibility of sites on public lands and assessed the proposed impacts to those sites. The SHPO accepted the reports and agreed with the evaluations and assessments in July 2012.

4.2.3 USFWS Consultation

This project was first introduced to the BLM/USFWS Level 1 Team on July 9, 2008. Discussions with the USFWS on this project have been ongoing. A Biological Assessment was prepared to address the impacts of the proposed ROW on *Lepidium papilliferum* (slickspot peppergrass). Formal Section 7 consultation with the USFWS was initiated for this project on April 20, 2010. On May 9, 2011, the USFWS proposed the designation of critical habitat for the slickspot peppergrass species (USFWS 2011). BLM requested that formal consultation be suspended until such time that BLM consultation documents were amended to address proposed critical habitat for the slickspot peppergrass. On August 16, 2011, the BLM provided the Service with an updated Biological Assessment that addressed proposed critical habitat for slickspot peppergrass; BLM requested completion of formal consultation on slickspot peppergrass and formal conference on proposed critical habitat for the slickspot peppergrass.

On October 17, 2011, the USFWS issued their Biological and Conference Opinion (Opinion; 14420-2011-F-0148). The conclusion in the Opinion was that "the proposed action is not likely to jeopardize the continued existence of the slickspot peppergrass" and that "the proposed action is not likely to destroy or adversely modify proposed critical habitat for the slickspot peppergrass." The Opinion included discretionary conservation recommendations to be incorporated by BLM into the ROW grant, as appropriate. Recommendations directly related to slickspot peppergrass in the project area were incorporated into the EA, as best management practices and design features (Section 2.4.1). On February 9, 2012, BLM sent a letter to the USFWS describing new information on the slickspot peppergrass occurrence near the SH-16 ROW and requesting confirmation that reinitiation of formal consultation was not necessary. On March 6, 2012, the USFWS responded to BLM in a letter stating that the

new information will not trigger reinitiation of formal consultation for the project and that the potential impacts to slickspot peppergrass on BLM-administered lands will be less than originally presented in their Opinion. Formal Section 7 consultation with the USFWS on slickspot peppergrass and formal conference on proposed critical habitat for slickspot peppergrass was completed prior to the U.S. District Court decision which vacated the final rule listing slickspot peppergrass as a threatened species under the ESA (U.S. District Court 2012).

4.3 PUBLIC PARTICIPATION

On November 7, 2008, BLM issued a public notice announcing the preparation of an EA to analyze potential impacts from authorizing the proposed ROW on public lands. The notice also announced the date of an open house for the public to comment on the proposed ROW. On November 12, 2008, a News Release was published by BLM regarding the open house. On November 20, 2008, BLM convened a public meeting to solicit public input and identify issues on the proposed ROW. Twenty-one people attended the open house. Following this meeting, 58 public comment letters were received on the proposed ROW. These comments were reviewed and used in concert with feedback from the BLM interdisciplinary team to develop a set of preliminary issues to address in the EA.

On November 20, 2009, a scoping information package was mailed to 56 members of the public. The purpose of this package was to inform interested and affected parties of the proposal and to solicit comments. The scoping information package summarized the ROW applications filed with the BLM by M3 Eagle LLC. It described the purpose and need for action, the existing conditions in the vicinity of the proposed ROW, preliminary issues identified during prior internal and external scoping, preliminary alternative development, and decisions to be made. The scoping information package was also posted on the BLM Idaho website and 228 postcards announcing the availability of the scoping package on the BLM website were mailed to the public. This comment period closed on December 18, 2009 and 11 comment letters were received. These comment letters and how these comments were addressed in the EA are contained in the project decision file. Issues within the scope of the EA that were raised during public scoping are summarized in Chapter 1 and carried through the assessment.

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