



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
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Campbell Creek Science Center Road Resurfacing Environmental Assessment, DOI-BLM-AK-A010-2011-0042-EA

Case File, AA-093072

DECISION RECORD

Background

The Bureau of Land Management (BLM) maintains the Campbell Tract Facility (CTF), a 730-acre administrative site located within the Municipality of Anchorage, Alaska. The Campbell Creek Science Center (Science Center), an environmental education facility that hosts area students, special events, and educational programs open to the public is also located at the CTF.

The Science Center is accessible by the Science Center Road, approximately one mile in length. The road begins near the front gate at BLM Road and extends to the Science Center. The road is the only public vehicle route to and from the Science Center. In 2002, it was resurfaced with a “high float” D-1 asphalt mix; it has received minimal maintenance since that time.

The BLM has prepared an Environmental Assessment (EA) evaluating five possible scenarios (alternatives) for re-surfacing the Science Center Road. The EA identifies Alternative 4 – “*Hot mix*” with Road Striping as the Proposed Action Alternative. For more information on the details of this alternative, refer to the EA.

Decision

It is my decision to select Alternative 4 – “*Hot Mix,*” with Road Striping, as described in the EA for implementation, with one exception. The Science Center Road would be resurfaced with “hot mix” from the entrance gate to the edge of the Science Center parking area; when funding allows, the parking area will also be resurfaced. However, at this time, I am not selecting to implement the asphalt striping (yellow center lines and white fog lines) as described in the EA. Instead, the asphalt striping described will be reserved for use as mitigation in the future.

The selected alternative is summarized as follows:

- A two-inch overlay of “hot mix” will be applied to the existing road surface.
- A two-inch gravel shoulder would be placed over the existing four-foot wide gravel shoulder for leveling purposes.

- Up to twenty feet of vegetation may be cleared on inside curves, on an as-needed basis. Vegetation clearing will be coordinated with the Anchorage Field Office Outdoor Recreation Planner.
- All design features, best management practices, and resource protection measures described in EA, Section 2.B will be implemented.
- Pedestrian crosswalks will be striped on the road surface.
- Yellow center lines and white fog lines will not be striped on the road initially, but will be reserved for use in the future.
- When funding allows, the Science Center parking lot will be repaved with “hot mix” until such time that a full re-design of circulation and parking is completed.

This decision is based on site-specific analysis in the *Campbell Creek Science Center Road Resurfacing Environmental Assessment (DOI-BLM-AK-A010-2011-0042-EA)* and the management decisions contained in the *Ring of Fire Resource Management Plan and Record of Decision (2008)*, the *Campbell Creek Environmental Education Center Development Plan (1993)*, and the *Management Plan for Public Use and Resource Management on the BLM Campbell Tract Facility (1988)*.

The Finding of No Significant Impact (FONSI) indicates that the selected alternative has been analyzed in an EA and has been found to have no significant environmental effects (Attachment 1). Therefore, an Environmental Impact Statement is not required and will not be prepared.

Rationale for the Decision

The No Action Alternative was not selected because the existing road surface is beyond its anticipated lifespan and will require maintenance with increasing frequency. As such, the No Action Alternative does not satisfy the purpose of the action: to provide a low-maintenance and highly durable surface.

Alternatives 2, 3, and 5 were not selected for reasons similar to one another, therefore, they will be discussed together. Although the chip-seal top coat (Alternatives 2 and 5) and high-float surface (Alternative 3) offer aesthetic advantages, the estimated lifespans of these surfaces are comparable to the No Action Alternative and, as such, do not offer an optimal solution to the purpose and need of providing a low-maintenance and highly durable surface. Chip seal and high-float surfaces also present certain winter maintenance challenges that reduce the lifespan of the roadbed; refer to the response to public comments for more information (Attachment 2). Furthermore, these surfaces are not conducive to painting pedestrian crosswalks or road striping.

Alternative 4 was selected because it offers the best solution to remedying current road surface needs (i.e., potholes and crumbling edges) as well as the best long-term option for low-maintenance and extended durability (EA, p. 9). Additionally, the “hot mix” surface is most conducive to striping or painting and will allow for successful painting of pedestrian crosswalks.

During the public EA review and comment period, the public voiced concerns about the aesthetic and experiential impacts of using “hot mix” with striping on the approach road to the Campbell Creek Science Center. I acknowledge these concerns and am therefore opting to reserve the center- and fog-line road striping as mitigation, to be used only if needed. Given that the road

does not currently have center- or fog-line striping, reserving the road striping for use only as additional mitigation seems to be a reasonable concession towards maintaining the current aesthetic experience for visitors while also fulfilling the purpose and need for action.

The public also raised concerns about safety along the road corridor should the “hot mix” alternative be selected. I have considered these concerns but have nevertheless selected the “hot mix” alternative on the following bases:

The speed limit of the road is currently 25mph and will remain unchanged with implementation of Alternative 4. Although coarser aggregate surfaces may be more conducive to lower speeds, it is ultimately the responsibility of individual drivers to adhere to posted speed limits, regardless of the surface-type.

The EA indicates that speeding is occurring with the existing high-float surface; so it is therefore reasonable and prudent to assume that these occurrences will continue regardless of the surface type. As such, the EA, as well as the public comments, have identified a suite of mitigation measures that can and will be employed to address existing and future occurrences of speeding as well if speeding frequencies increase in the future. (These measures are also listed in Attachment 3.)

There is no indication that this is an inherently dangerous surface-type for the proposed use. Moreover, the selected “hot mix” surface is comparable to road surface types used in residential areas as well as other park-like settings in the Municipality of Anchorage with similar or heavier recreational use, activities, wildlife occurrences, and/or traffic levels on the road.

Finally, the Science Center Road is gated (closed to vehicular traffic) up to 10-12 hours a day for much of the year. Additionally, in average years, the road is snow packed during the winter months. Although by no means all, much of the recreational use of the road occurs when the gate is closed (i.e., between 6pm and 6am, daily) and/or the road is snow packed. The surface type is therefore irrelevant to recreational user safety during those times.

Laws, Authorities, and Land Use Plan Conformance

The EA and supporting documentation have been prepared consistent with the requirements of various statutes and regulations, including but not limited to:

- Federal Land Policy and Management Act of 1976 (FLPMA)
- National Environmental Policy Act of 1969 (NEPA)
- National Historic Preservation Act of 1966 (NHPA)

BLM-managed lands in the project area are subject to decisions and direction contained in the *Ring of Fire Resource Management Plan and Record of Decision* (2008), the *Campbell Creek Environmental Education Center Development Plan* (1993), and the *Management Plan for Public Use and Resource Management on the BLM Campbell Tract Facility* (1988). The selected alternative is consistent with the direction in the applicable land use plan and step-down plans.

Public Involvement, Consultation, and Coordination

Prior to signing the FONSI and this Decision Record, the Environmental Assessment was made available for public review for a 30-day period. Approximately 2,200 interested parties were notified of the document's availability via a postcard mailing. Additionally, the Far North Bicentennial Park User Group list-serve was notified via e-mail.

Approximately 60 comment letters were received. All comments were reviewed. The majority of comment letters expressed opinion – support for or disapproval of the Proposed Action. Of the comments provided, approximately one dozen comments were substantive and were directly considered in making this decision.

In summary, the substantive comments can be categorized as follows:

- Concerns about the aesthetic and/or experiential impact of changing the road surface;
- Concerns about motorist, wildlife, and recreation user safety along the road corridor;
- Concerns about surface permeability and stormwater runoff on the road;
- Concerns about the effectiveness of winter maintenance; and
- Identification of new project design features, mitigation measures, and/or alternatives not previously considered.

All substantive comments as well as the BLM's response to these comments are presented in Attachment 2.

Appeal Opportunities

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR § 4. To appeal you must file a notice of appeal at the BLM Anchorage Field Office, 4700 BLM Road, Anchorage, Alaska 99507, within 30 days from receipt of this decision. The appeal must be in writing and delivered in person, via the United States Postal Service mail system, or other common carrier, to the Anchorage Field Office as noted above. *The BLM does not accept appeals by facsimile or email.* The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition pursuant to regulation 43 CFR § 4.21 (58 FR 4939, January 19, 1993) for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. Except as otherwise provided by law or other pertinent regulation, a petition for a stay of decision pending appeal shall show sufficient justification based on the following standards: (a) The relative harm to the parties if the stay is granted or denied, (b) The likelihood of the appellant's success on the merits, (c) The likelihood of immediate and irreparable harm if the stay is not granted, and (d) Whether the public interest favors granting the stay.

Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the Office of the Solicitor (see 43 CFR § 4.413); Office of the Regional Solicitor, Alaska Region, U.S. Department of the

Interior, 4230 University Drive, Suite 300, Anchorage, Alaska 99508; at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

/s/ James M. Fincher

September 12, 2012

James M. Fincher
Anchorage Field Manager

Date

Attachments

- 1) Finding of No Significant Impact for the *Campbell Creek Science Center Road Resurfacing Environmental Assessment* (DOI-BLM-AK-A010-2011-0042-EA). September 2012.
- 2) Response to Substantive Public Comments received on *Campbell Creek Science Center Road Resurfacing Environmental Assessment*, DOI-BLM-AK-A010-2011-0042-EA.
- 3) Additional Mitigation Measures

ATTACHMENT 1

Finding of No Significant Impact for the *Campbell Creek Science Center Road Resurfacing Environmental Assessment* (DOI-BLM-AK-A010-2011-0042-EA). September 2012.

ATTACHMENT 2

Response to Substantive Public Comments Received on *Campbell Creek Science Center Road Resurfacing Environmental Assessment* Environmental Assessment, DOI-BLM-AK-A010-2011-0042-EA.

Substantive Public Comment	Topic	BLM Response to Comment
It will increase the water runoff....	Surface Permeability	The permeability and runoff rates are the same between the surface types – both the “High Float” and “Hot Mix” are sealed asphalt surfaces.
The alternatives mentioned in the Environmental Impact Assessment do not consider hot mixes that are permeable, neither are heat island effects considered among the different alternatives. Permeability is critical for the watershed (salmon habitat) in which the road is located.	Surface Permeability	During internal scoping, permeability and runoff were not identified as issues for consideration in the development of alternatives. Nevertheless, it is not feasible to consider any porous surface types for the resurfacing due to the high cost and existing sub-base of the CCSC road. In order to consider a porous surface type, the existing high float surface and subgrades would have to be removed and replaced with material in layers and sizes suitable for a porous surface, which would be an additional cost. The porous surface itself also runs two to three times the cost of conventional asphalt. There is also the requirement that the porous surface be powered vacuumed at regular intervals to remove fines/debris that would otherwise clog the porous material and essentially render it impervious.
...porous or permeable pavement should be considered since the road is going through a green belt and is in close proximity to Campbell Creek.... it would be nice if at a minimum, the proposed project considered permeable pavement, geo grids or other alternatives that reduce runoff and contamination.	Surface Permeability	
If you pave the road, you'll be sanding/salting it more.	Winter Maintenance	BLM Road roughly parallels the Science Center Road at the Campbell Tract Facility. BLM Road is paved with the same “hot mix” surface as is being selected for the Science Center Road. Currently, winter maintenance occurs on these two roads at the same time and in the same manner. There is no indication that the “hot mix” surface type will result in the need for more frequent sanding and/or salting. However, the High Float Surface is more susceptible to having the plow blade catch and remove some of the aggregate in the road surface in winter time than the hot mix which is smoother. Additionally, the high float surface is more susceptible to frost heaves, cracking, and other seasonal damage since it is thinner and less structurally sound than the thicker hot mix layer.
The current treatment will be less costly to maintain and probably less like to experience frost heave and cracking.	Winter maintenance	
In addition there needs to be a review of the CCSC parking lot. A new design needs to be considered, as the current parking area has many safety flaws, and is a high risk for pedestrians walking to the building during high traffic volume.	Parking Lot	Re-design and reconfiguration of the Science Center parking lot is beyond the scope of this planning effort.
I think a larger sign or possibly blinking light in this location is warranted. This would be to warn cars headed from the Science Center toward the entrance gate.	Mitigation	These items have been identified as additional potential mitigation measures. See Attachment 2.
I recommend placing speed bumps in the middle of every straightaway and before each major curve.	Mitigation	

Substantive Public Comment	Topic	BLM Response to Comment
<p>When the Science Center was first proposed, only buses were to drive in and drop students off. No private cars would be allowed.</p>	<p>New Alternative</p>	<p>Closing the road to private passenger vehicles would address the public's concerns about recreational user and wildlife safety. However, it would not address the current road surface issues (i.e., potholes and edge crumbling). Therefore, it does not address the purpose and need for action (EA, p. 2) and will be considered to be an "Alternative Considered but Eliminated from Detailed Analysis." Furthermore, use of the Science Center Road now extends beyond school group uses. Bussing visitors to the Science Center would place an undue financial burden on the BLM and/or users themselves.</p>
<p>The EA uses Kincaid as an example of how the road can be improved, but i know for sure that the Kincaid Road has increased overall speeds into the park and is more of a safety issue for people and other animals. I don't think it's a good example. Besides, the Kincaid park road is longer, had more curves and sees many more visitors throughout the entire year than the science center.</p>	<p>Analysis</p>	<p>References to the Kincaid Park entrance road are limited to the one example photo (EA, p. 8); no analytical conclusions are made based on this one reference.</p>
<p>We do think that the current road surface, speed limit and surrounding vegetation greatly contribute to a visitor's perception of the Tract and its trails. The road provides a vital and necessary transition from busy urban traffic, noise and activity to an expectation of quiet wilderness and wildlife. For this reason we strongly support Alternative 3 as the most appropriate option for resurfacing the road. While it will not ease all safety concerns about folks crossing the road, we note that the EA does not indicate that these represent major safety concerns. We do fear that any change to the road surface will inevitably lead to increased speeds which not only may create more safety incidents, but will strip the road of its very important transitional role as well as sharply increase traffic noise for the trail users. We also recognize that this alternative will not solve the parking lot issues, but believe that issue could be alleviated with better signage. Campbell Tract is a "refuge" for non-motorized recreationists and wildlife; let's maintain those characteristics !</p>	<p>Aesthetics</p>	<p>Regarding the commenter's aesthetic concerns, refer to the Rationale for the Decision which states,</p> <p style="padding-left: 40px;">...the public voiced concerns about the aesthetic and experiential impacts of using "hot mix" with striping on the approach road to the Campbell Creek Science Center. I acknowledge these concerns and am therefore opting to reserve the center- and fog-line road striping as mitigation, to be used only if needed. Given that the road does not currently have center- or fog-line striping, reserving the road striping for use only as additional mitigation seems to be a reasonable concession towards maintaining the current aesthetic experience for visitors while also fulfilling the purpose and need for action.</p> <p>Regarding the commenter's safety concerns, refer to the Decision Rationale, which states, "The public also raised concerns about safety along the road corridor should the 'hot mix' alternative be selected. I have considered these concerns but have nevertheless selected the 'hot mix' alternative on the following [four] bases..." The Rationale for the Decision proceeds to list how safety concerns were considered in the decision.</p>

ATTACHMENT 3

Additional Mitigation Measures

In addition to the design features, best management practices, and resource protection measures identified in EA, Section 2.B, the following measures will also be used to enhance recreation user, wildlife, and motorist safety as well as resource protection along the Science Center Road.

Table DR.1: Additional Mitigation Measures.

Mitigation Measure	Trigger for Implementation
DURING CONSTRUCTION	
Construction signs, re-route/detour signs, and/or barricades to alert recreational traffic of construction activity and heavy machinery.	<ul style="list-style-type: none"> • During construction.
Road closures and/or re-routes for short intervals during construction.	<ul style="list-style-type: none"> • If recreational use/traffic is especially heavy during construction.
LONG-TERM / ONGOING	
Enhanced law enforcement support.	<ul style="list-style-type: none"> • Upon implementation. • During Trailside Discovery Camp each summer. • Based on conflicts reported by the public.
Regular monitoring of Speed Sentry traffic devices.	<ul style="list-style-type: none"> • Quarterly.
Archaeological monitoring.	<ul style="list-style-type: none"> • If future vegetation clearing involves uprooting trees.
Additional signing and/or blinking lights at pedestrian crossings.	<ul style="list-style-type: none"> • Based on law enforcement reports and recommendations. • Based on conflicts reported by the public.
Install vehicle stop signs at pedestrian crossings.	<ul style="list-style-type: none"> • If overall speeds on the road increase (based on Speed Sentry data). • During Trailside Discovery Camp each summer. • Based on conflicts reported by the public.
Traffic calming measures such as installation of speed bumps.	<ul style="list-style-type: none"> • If overall speeds on the road increase (based on Speed Sentry data). • Based on conflicts reported by the public.
Center- and fog-line striping as described in the Proposed Action description.	<ul style="list-style-type: none"> • Based on law enforcement reports and recommendations. • Based on conflicts reported by the public.
Speed humps on straightaways and/or before major curves.	<ul style="list-style-type: none"> • Based on law enforcement reports and recommendations.



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Case File, AA-093072

FINDING OF NO SIGNIFICANT IMPACT

Background

The Bureau of Land Management (BLM) maintains the Campbell Tract Facility (CTF), a 730-acre administrative site located within the Municipality of Anchorage, Alaska. The Campbell Creek Science Center (Science Center), an environmental education facility that hosts area students, special events, and educational programs open to the public is also located at the CTF.

The Science Center is accessible by the Science Center Road, approximately one mile in length. The road begins near the front gate at BLM Road and extends to the Science Center. The road is the only public vehicle route to and from the Science Center. In 2002, it was resurfaced with a “high float” D-1 asphalt mix; it has received minimal maintenance since that time.

The BLM has prepared an Environmental Assessment (EA) evaluating five possible scenarios (alternatives) for re-surfacing the Science Center Road. The EA identifies Alternative 4 – “Hot mix” with Road Striping as the Proposed Action Alternative. For more information on the details of this alternative, refer to the EA (attached).

Finding of No Significant Impact

This action and its effects have been evaluated consistent with the Council on Environmental Quality regulations for determining *significance*. Per 40 CFR § 1508.27, a determination of *significance* requires consideration of both context and intensity. The former refers to the relative context in which the action would occur such as society as a whole, affected region, affected interests, etc. The latter refers to the severity of the impact.

Context

The proposed project is confined to a one-mile road at a BLM Administrative Site within the municipal boundaries of the City of Anchorage. The road dead-ends at the Campbell Creek Science Center. The project does not consist of any new ground disturbance; all anticipated effects are site-specific in nature. The Science Center Road primarily serves local residents and user groups. This project would not affect state, regional, or national resources or interests.

Intensity

1. Impacts that may be both beneficial and adverse.

The EA considered and disclosed both potential beneficial and adverse effects of the alternatives. Given that there is no ground disturbance beyond the existing road footprint, direct adverse effects are limited primarily to temporary displacement of recreational users and/or wildlife during construction activities (EA, p. 4). Although the EA states that, indirectly, the smaller aggregate may initiate changes in driver behavior such as increased speed, the speed limit of the road would remain unchanged (EA, pp. 19-20 and 4, respectively). Additionally, various traffic calming measures have been identified for implementation to deter driving behavior changes (EA, p. 19). On balance, the remaining adverse effects identified in the EA are not anticipated to be significant.

2. The degree to which the proposed action affects public health and safety.

The speed limit of the road is currently 25mph and would remain unchanged (under all alternatives). Although the finer aggregate surface proposed under Alternative 4 is conducive to higher speeds, it is ultimately the responsibility of individual drivers to adhere to posted speed limits, regardless of the surface-type.

The EA indicates that speeding is occurring with the existing high-float surface (EA, pp. 11-12); it is therefore reasonable and prudent to assume that these occurrences will continue regardless of the surface type. As such, the EA identifies a suite of mitigation measures that can and will be employed to address existing and future occurrences of speeding or if speeding frequencies increase in the future (EA, pp. 18-20).

The Science Center Road is gated (closed to vehicular traffic) up to 10-12 hours a day for much of the year. Additionally, in average years, the road is snow packed during the winter months. Although by no means all, much of the recreational use of the road occurs when the gate is closed (i.e., between 6pm and 6am, daily) and/or the road is snow packed. The surface type is therefore irrelevant to recreational user safety during those times.

There is no indication that this is an inherently dangerous surface-type for the proposed use(s). Moreover, the selected “hot mix” surface is comparable to road surface types used in residential areas as well as other park-like settings in the Municipality of Anchorage with similar or heavier recreational use, activities, wildlife occurrences, and/or traffic levels on the road.

3. Unique characteristics of the geographic area such as proximity of historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

There are no parks, prime farmlands, wild and scenic rivers, ecologically critical areas, or otherwise unique characteristics identified through land use planning, legislative, or regulatory processes in proximity to the project site. The project area has been previously surveyed for cultural resources (EA, p. 10). The BLM AFO archaeologist has determined that the potential for previously unknown cultural resources within the project area is extremely low (EA, p. 10).

Additionally, each of the alternatives analyzed in the EA would remain within the existing road footprint (EA, p. 17). No additional ground disturbance is anticipated; therefore, there is no potential for significant effects to cultural resources.

4. *The degree to which the effects on the quality of the human environment are likely to be highly controversial.*

In this context, controversy refers to substantial dispute within the scientific community about the nature of the effects, not merely expressions of opposition to the proposed action alternative or preference among the alternatives (BLM 2008). “Hot mix,” as proposed under Alternative 4, is the same road surface used in residential areas, parking lots, municipal parks, etc. with similar pedestrian, recreational, wildlife, and motorist uses as are present on the Science Center Road. Although there is a public perception that the proposed action will have detrimental effects to motorist, recreationist, and wildlife safety on the road, there is no indication of a “substantial dispute” within the scientific community about the effects of this surface type for similar uses.

No unique or appreciable scientific controversy has been identified regarding the effects of the project.

5. *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.*

In land management, there is always some degree of uncertainty. However, in this case, I have determined that the degree to which the effects are likely to be highly uncertain or involve unique or unknown risks is minimal. The anticipated effects are similar to other road resurfacing and/or improvement projects occurring both on BLM-managed lands elsewhere as well as in our local community; refer to item #4. Additionally, as described in item #2, the selected “hot mix” surface is comparable to road surface types used in residential areas as well as other park-like settings in the Municipality of Anchorage with similar or heavier recreational use, activities, wildlife occurrences, and/or traffic levels on the road. Risk factors along the Science Center Road corridor are no different from similarly used roads and corridors.

6. *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*

The proposed project is in conformance with the applicable land use plan and step-down plan guidance, including the Decision Record for the 1993 *Campbell Creek Environmental Education Center Development Plan*, which approved the development of an, “All weather two-lane access road on [the] existing taxiway,” (EA, p. 2). No other actions are proposed in this corridor or at CTF for which this decision could establish precedence.

7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

There are no other past, present, or reasonably foreseeable future actions proposed in this corridor or at CTF whose effects would overlap with the effects of this action to result in significant effects.

8. *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources.*

The collection of World War Two artifacts and features on the Campbell Tract has been determined eligible for the National Register of Historic Places as a historic district. However, as described for item #3, each of the alternatives analyzed in the EA would remain within the existing road footprint (EA, p. 17). No additional ground disturbance is anticipated; therefore, there is no potential to significantly affect eligibility for listing on the National Register of Historic Places nor would the Proposed Action or alternative result in the loss or destruction of significant scientific, cultural, or historic resources (EA, p. 17).

9. *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.*

There are no Federally threatened or endangered species within the project area or within the Municipality of Anchorage (EA, p. 3).

10. *Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.*

The Proposed Action and/or alternatives do not threaten to violate any law. The Proposed Action and alternatives are consistent with *Ring of Fire Resource Management Plan and Record of Decision* (2008), the *Campbell Creek Environmental Education Center Development Plan* (1993), and the *Management Plan for Public Use and Resource Management on the BLM Campbell Tract Facility* (1988) (EA, p. 2).

Conclusion

Therefore, on the basis of the information contained in the EA, and all other information available to me, it is my determination that:

1. None of the environmental effects identified meet the definition of significance as defined by context and intensity considerations at 40 CFR § 1508.27;
2. The alternatives are in conformance with *Ring of Fire Resource Management Plan and Record of Decision* (2008) and the *Management Plan for Public Use and Resource Management on the BLM Campbell Tract Facility* (1988); and
3. The Proposed Action and alternatives do not constitute a major federal action having a significant effect on the human environment.

Therefore, neither Environmental Impact Statement nor a supplement to the existing EA is necessary and neither will be prepared.

/s/ James M. Fincher

September 12, 2012

James M. Fincher
Anchorage Field Manager

Date

Attachments

BLM 2012. Campbell Creek Science Center Road Resurfacing Environmental Assessment. (DOI-BLM-AK-A010-2011-0042-EA). September 2012.

**U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

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Environmental Assessment
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Campbell Creek Science Center Road Resurfacing
Case File Number: AA-093072

September 12, 2012

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This Environmental Assessment was released for public review and comment on July 3, 2012. This version includes several minor typographical corrections; otherwise, no substantive changes have been made since the public review period.

1.0. INTRODUCTION

The Bureau of Land Management (BLM) maintains the Campbell Tract Facility (CTF), a 730-acre administrative site located within the Municipality of Anchorage, Alaska. The administrative site includes office facilities for the BLM Anchorage Field Office (AFO), a warehouse, maintenance shop, a 5,000-foot gravel airstrip, multiple helicopter landing pads, three communication towers, and the designated Campbell Tract Special Recreation Management Area (SRMA) with approximately 12 miles of multiple-use public trails. The Campbell Creek Science Center (Science Center), an environmental education facility that hosts area students, special events, and educational programs open to the public is also located at the CTF.

The Science Center serves approximately 45,000 visitors annually with a variety of educational programs, special events, and building rentals. During the summer, Trailside Discovery operates from the Science Center and offers outdoor programs through a Special Recreation Permit with the BLM.

Annual visitation at CTF is approximately 165,000; this includes approximately 120,000 trail visits as well as visitors to the Science Center.

A. Land Status

The Campbell Creek Science Center Road (Science Center Road) is located on the Campbell Tract, which is under the jurisdiction of the BLM AFO by withdrawal from the Federal public domain for BLM administrative use as directed by Public Land Order 7471 which expires in 2022. The legal description for the proposed project area is:

T. 12 N., R. 3 W., Sec. 3, Seward Meridian

B. Background

The Science Center Road is approximately one mile in length. It begins near the front gate at BLM Road and extends to the Science Center. The Science Center Road is the only public vehicle route to and from the Science Center. The Science Center receives approximately 45,000 visitors annually and the roadway is used by approximately 30,000 vehicles annually in each direction based on data collected over a one-year period from two radar devices installed on the Science Center Road in 2009 (inbound traffic) 2010 (outbound traffic). Approximately 320 vehicle passes are recorded daily when Trailside Discovery Camp is in session during their 12-week Science Center rental in the summer months. Road use drops off to an average of 50 vehicles per day during the remainder of the year. Additionally, the Science Center Road is used regularly by a variety of recreationists at all times of day throughout the year, including dogwalkers, joggers, bikers, and skiers. In the summer months, the road is used daily by groups of Trailside Discovery campers to access activity areas and trails. The Science Center Road was originally a used as a gravel aircraft taxiway. In 2002, it was resurfaced with a “high float” D-1 asphalt mix in the summer of 2002; it has received minimal maintenance since that time.

C. Purpose and Need

Action is needed at this time because the current road surface has started to develop potholes and the road edges are beginning to degrade and crumble. Additionally, the main parking area at the Science Center presents challenges for controlling parking and circulation during the busy seasons. The natural surface parking area is particularly susceptible to potholes and ruts and makes parking delineation difficult.

The purpose of this action is to provide a low-maintenance, highly durable, year-round surface for the Science Center Road and main parking lot while providing a safe roadway for vehicles, recreationists, wildlife, and students visiting the Science Center.

The BLM will decide whether or not to resurface the road and parking lot and, if re-surfaced, which surface type or other treatments would be necessary to achieve the purpose and need for action.

D. Land Use Plan Conformance

The proposed project would occur at the CTF which is covered by the following land use plan:

Ring of Fire Approved Management Plan and Record of Decision, March 2008.

Per the 2008 Record of Decision, "...Management of [the Campbell Tract SRMA] would continue to be guided by *A Management Plan for Public Use and Resource Management on the Bureau of Land Management Campbell Tract Facility* (BLM 1988), and any future amendments to this plan," (BLM 2008).

Although road surface conditions are not specifically addressed in the CTF management plan, the proposed project is consistent with the Part III. B. Total Area Objectives for the CTF overall as well as the Part III. C. Management Zone Objectives for the Environmental Education Facility Zone described in this plan (BLM 1988).

The proposed project is in conformance with the applicable land use plan and step-down plan guidance, including the Decision Record for the 1993 *Campbell Creek Environmental Education Center Development Plan*, which approved the development of an, "All weather two-lane access road on [the] existing taxiway," (BLM 1993).

E. Issue Identification

The following issues were identified by the Interdisciplinary Team assigned to the project:

- How will re-surfacing the road affect public safety including, but not limited to, recreationists on the road, visitors traveling to the Science Center, potential for vehicle-wildlife collisions, etc.?
- Which road surface will offer the best durability across the seasons?

- Currently, the Science Center Road is used recreationally by dog-walkers, joggers, cyclists, etc. How will re-surfacing the road affect recreational use of the road?
- How will re-surfacing the road affect the visual resources and aesthetic values along the road corridor?

The following issues and/or resources were considered but eliminated from further analysis; the rationale for eliminating these topics from further consideration is provided:

- *Effects to Subsistence Resources* - CTF lands are Federal Public Lands as defined by Section 810 of Alaska National Interest Lands Conservation Act and fall under the authority of the Federal Subsistence Board and the subsistence regulations for the harvest of fish and wildlife on public lands in Alaska. However, the Campbell Tract is within the Anchorage Management Area and is closed to the taking of wildlife under both State and Federal subsistence regulations.
- *Effects to Threatened and Endangered Species* - No Federally threatened or endangered species are known to occur on CTF or within the Municipality of Anchorage.

2.0. ALTERNATIVES

A. Alternative 1 - No Action Alternative

The No Action Alternative would leave the existing road surface as is; the road would not be re-surfaced. The existing roadway would remain as the “high float” asphalt applied in 2002 and would continue to degrade over time. Maintenance would be provided on an as needed basis and potholes would continue to be filled when necessary.



Figure 1. Science Center road with “high float” asphalt. Color can vary from grey to black and surface material is smoother.

B. Features Common to All Action Alternatives

The following design features, best management practices, and/or resource protection measures apply to all action alternatives:

General Measures

- The total road footprint for all alternatives would be 2.6 acres.
- The road would retain the current 25mph speed limit and would be signed accordingly.
- Radar signs showing actual vehicle speed would remain in their current location at the midpoint of the Science Center Road, in both directions of travel.
- There will be no new surface disturbance outside of the existing roadbed corridor. All resurfacing would occur on the existing roadway and shoulders.
- The existing roadway footprint would remain unchanged (the road has an underground natural gas pipeline on the north side, and an underground electrical line on the south side).
- The estimated time to complete the project would be one week. Fire prevention and

mitigation measures would be adopted to reduce the risk of sparks igniting nearby vegetation during the warm, dry summer construction months.

- Flaggers would be located on opposite ends of the construction zone allowing one lane of traffic to flow around the work area to help minimize traffic disturbance during the construction.
- During construction, heavy equipment would be staged at the Science Center parking area and the area would be signed to inform CTF users of the project and to direct recreationists away from the construction zone. The Smokejumper Trailhead may also be used for vehicle staging.
- CTF users would be encouraged to use Moose Track Trail during the time of construction.
- If the construction occurs while Trailside Discovery Camp is in operation, all parents and students would stage at Kasuun Elementary School for pick-up and drop-off and a bus would provide service from Kasuun to the Science Center twice daily.
- If the road brushing width increases, the contractor will not begin clearing until the BLM AFO Outdoor Recreation Planner has marked leave-trees required for trail vegetative screening.
- Vegetation in the road corridor will be maintained as needed to maximize driver visibility and to minimize potential for moose browsing in proximity to the roadway.

Invasive Species Prevention and Monitoring Measures

- Contractors will be required to implement a non-native invasive plant mitigation, monitoring, and management strategy to prevent the introduction and/or spread of non-native invasive species.
- All vehicles, transport equipment used in access, construction, maintenance, and operations of project must be thoroughly cleaned prior to moving equipment and gear from supplier or point of origin - to transportation units - to the worksite - to the next worksite.
- All gear, tool bags, and accessories must be free of all plant debris, mud, and materials which can be the source of non-native invasive plants and pathogens. This includes: all parts of drilling and earth-moving equipment and associated gear, including but not limited to the insides of bumpers, wheel wells, undercarriages, belly plates, excavating blades, buckets, tracks, rollers, drills, buckets, shovels, any digging tools, etc.,
- Contractors should conduct early detection rapid response monitoring of the project area. This involves a minimum of one site visit annually during the growing season (preferably July) to look for the occurrence of non-native invasive plants. Should any new occurrences be detected as a result of construction, contractors should implement early detection rapid response. Repeated visits to infested sites to remove new invasive plants within a single growing season may be necessary, before plants produce seeds. The objective is to prevent the production of seeds and remove any propagative parts of the plants, thus minimizing the potential for increased spread.
- Site reclamation should be implemented as soon as possible after construction using the original duff layer. This original duff layer is to be removed and set aside upon initial site disturbance, and replaced on disturbed areas in lieu of revegetation with non-local

materials.

- All revegetation and stabilization efforts must use native and/or Alaska certified weed-free products. Sources for weed-free products can be found by calling the Plant Materials Center: 907-745-4469. Additional revegetation Guidance can be found at: http://www.dnr.state.ak/ag/pmcweb/PMC_reveg

C. Alternative 2 - “Hot Mix” with Chip Seal, no Road Striping

The Science Center Road would be resurfaced with “hot mix” from the entrance gate to the edge of the Science Center parking area, and then topped with chip seal.

Specifically, this road resurfacing alternative would entail applying a two-inch overlay of bituminous asphalt cement, commonly known as “hot mix,” over the existing 4,740-foot long/24-foot wide roadway.

A chip seal top coat would be applied over the “hot mix” to provide a more natural appearance than hardened asphalt. Chip seal is a pavement surface treatment that combines a layer(s) of asphalt with a layer(s) of aggregate. Chip seal can vary in color. It can range from light grey to dark black. The largest recommended aggregate for this alternative is the $\frac{3}{8}$ -inch aggregate (Ganley 2012). The $\frac{3}{8}$ -inch aggregate would provide a low-medium level of friction.

A two-inch gravel shoulder would be placed over the existing four-foot wide gravel shoulder for leveling purposes.

If funding allows, the Science Center visitor parking area would also be resurfaced with the same two-inch overlay of hot mix, but no chip seal top-coat, and striping to delineate parking spaces and pedestrian and traffic circulation. The total area of the parking lot is approximately 1.0 acres.

Due to decreased road noise to warn recreationists of approaching vehicles and possible increase in vehicle speed as a result of lower surface friction, up to ten feet of vegetation may be cleared on the inside curves on the Science Center Road to increase visibility.

D. Alternative 3 – New “High Float,” same as Existing Surface

The Science Center Road would be resurfaced with a new layer of “high float” D-1 asphalt mix, the same material that currently exists on the roadway, over the existing 4,740-foot long/24-foot wide roadway (see Figure 1).

A two-inch gravel shoulder would be placed over the existing four-foot wide gravel shoulder for leveling purposes.

“High float” D-1 asphalt mix is comprised of $\frac{3}{4}$ -inch minus gravel providing a high friction road surface. This asphalt mix helps promote lower speeds, due to increased friction and road noise, and a “country lane feel.”

The Science Center visitor parking area would be resurfaced with the same “high float” asphalt mix overlay.

E. Alternative 4 – “Hot Mix,” with Road Striping – Proposed Action

The Science Center Road would be resurfaced with “hot mix” from the entrance gate to the edge of the Science Center parking area. Additionally, the asphalt would be striped with yellow center lines and white fog lines on the road edges (see Figure 2).

Specifically, this road resurfacing alternative would entail applying a two-inch overlay of hot mix over the existing 4,740-foot long/24-foot wide roadway. The hot mix is a smoother, darker surface providing less friction compared to the present “high float” D-1 asphalt mix. This surface is comprised of aggregate approximately 0.19-inch in size. This size aggregate is smooth and provides a low level of friction.

A double yellow down the center of the roadway, single white fog lines along each road edge, and a pedestrian cross-walk at the Coyote Trail intersection would be painted on the new road surface.

A two-inch gravel shoulder would be placed over the existing four-foot wide gravel shoulder for leveling purposes.

If funding allows, the Science Center visitor parking area would also be resurfaced with the same two-inch overlay of hot mix. The total area of the parking lot is approximately 1.0 acres.

Due to decreased road noise to warn recreationists of approaching vehicles and possible increase in vehicle speed as a result of lower surface friction, up to twenty feet of vegetation may be cleared on the inside curves on the Science Center Road to increase visibility.



Figure 2. Entrance road to Kincaid Park, Anchorage, Alaska. Similar appearance to the surface proposed under Alternative 4.

F. Alternative 5 – Double-Coat Chip Seal

The Science Center Road would be resurfaced with a double-coat of chip seal from the entrance gate to the edge of the Science Center parking area. Chip seal is a pavement surface treatment that combines a layer(s) of asphalt with a layer(s) of a single-sized aggregate. Chip seal can vary in color and surface texture (would appear similar to Figure 1). It can range from light grey to dark black, and the size of the aggregate used can vary from sand to $\frac{3}{4}$ -inch rock.

Specifically, this road resurfacing alternative would entail applying two layers of chip seal over the existing high float road surface. First, a layer of $\frac{3}{4}$ -inch aggregate would be applied over the current road surface. A second $\frac{1}{2}$ -inch layer would be applied over the first. The smaller $\frac{1}{2}$ -inch aggregate would be pressed into the lower layer. This $\frac{1}{2}$ inch aggregate would provide a medium level of friction.

A two-inch gravel shoulder would be placed over the existing four-foot wide gravel shoulder for leveling purposes.

If funding allows, the Science Center visitor parking area would be resurfaced with the same two-inch overlay of hot mix as described for Alternatives 2 and 4.

Due to decreased road noise to warn recreationists of approaching vehicles and possible increase in vehicle speed as a result of lower surface friction, up to ten feet of vegetation may be cleared on the inside curves on the Science Center Road to increase visibility.

G. Comparison of Alternative Elements

Table 1. Comparison of Alternatives – Science Center Road Resurfacing

	Alternative 1: No Action – current management	Alternative 2: Hot Mix with Chip Seal	Alternative 3: New High Float, same as existing	Alternative 4: Proposed Action - Hot Mix w/ Striping	Alternative 5: Double-Coat Chip Seal on existing road surface
Estimated Initial Cost	\$219,000 (seal coat and patching)	\$650,000	\$472,000	\$376,700 + striping costs	\$570,000
Maintenance Considerations	Spot Maintenance- Road will continue to degrade, costs will increase	Very Little with low volume road on good base	Very Little with low volume road on good base	Very Little with low volume road on good base	Very Little with low volume road on good base; maintenance costs are typically lower, but are typically more frequently needed
Surface Durability/Life of Surface	Road is at/near its intended lifespan. Will need more maintenance over time	Hot mix layer approx. 15-20 years; chip seal layer may need repairs or replacement in 8-10 years	Approx. 10 years	Approx. 15-20 years	Top chip seal layer may need repairs or replacement in 8-10 years
Surface Friction Considerations	¾ inch (0.75 in) minus aggregate. Maximum surface friction. Slower surface in summer. Maximum grip in winter months.	3/8 inch (0.375 in) aggregate. Low-Medium surface friction*, faster than current surface. Low-Medium grip in winter months.	¾ inch (0.75 in) minus aggregate. Maximum surface friction, slower surface. Maximum grip in winter months.	<1/5 inch (0.19 in) aggregate. Smoother, faster surface in summer. Minimal surface friction. Minimal grip in winter.	½ inch (0.5 in) aggregate for top layer. Medium surface friction. Medium grip in winter.
Surface Noise- Audible warning for recreationists and wildlife	High level of road noise	Low-medium level of road noise	High level of road noise	Minimal level of road noise	Medium level of road noise
Surface Visual Appearance	Gray, gravel like appearance. Larger ¾ inch D1 gravel surface	Varies in color. Can be gray or black. 3/8 inch aggregate.	Gray, gravel like appearance. Larger ¾ inch D1 gravel surface	Hot mix composing of small aggregate (approx. 0.19 in.) with double yellow line and white fog line on each road edge	Varies in color and aggregate size. Can be gray or black. ½ inch aggregate.

	Alternative 1: No Action – current management	Alternative 2: Hot Mix with Chip Seal	Alternative 3: New High Float, same as existing	Alternative 4: Proposed Action - Hot Mix w/ Striping	Alternative 5: Double-Coat Chip Seal on existing road surface
Science Center Parking Lot	Natural Surface	Paved with two- inch overlay of hot mix	Resurfaced with the same “high float” asphalt mix overlay as is on the existing road	Paved with two- inch overlay of hot mix	Paved with two- inch overlay of hot mix
Vegetation Clearing for Sight/Visibility Enhancement	None.	Up to 10 feet of vegetation may be cleared on the inside curves	None.	Up to 20 feet of vegetation may be cleared on the inside curves	Up to 10 feet of vegetation may be cleared on the inside curves

Sources: *Ganley 2012; all other considerations developed internally by AFO staff or in coordination with local paving contractors and municipal and state engineers;

H. Alternatives Considered but Eliminated from Detailed Analysis

The following alternatives, or alternative components, were considered but eliminated from further consideration:

Additional paved recreation trails paralleling the Science Center Road were considered to mitigate the safety concerns regarding increased vehicle speed on the road. Specifically, one or two asphalt bike lanes, approximately four-feet wide each, and a pedestrian path, also four-feet wide were considered. The addition of non-motorized trails parallel to the road would require the removal of an additional twelve feet of vegetation for much of the length of the road corridor.

This alternative was determined to be beyond the scope of this analysis. Development of additional recreation facilities is appropriate for consideration in the pending updated Campbell Tract Facility Management Plan, Ring of Fire Resource Management Plan Amendment. Furthermore, this alternative is economically infeasible, and the increased corridor and asphalt paths would cover existing utility corridors along the roadway.

3.0. AFFECTED ENVIRONMENT

A. Cultural Resources

The proposed project area has been previously surveyed for cultural resources. The Alaska Heritage Resources Survey was consulted for cultural resources that could be affected by this undertaking. The nearest resources are ANC-01385, the collection of World War Two artifacts and features on the Campbell Tract, which has been determined eligible for the National Register of Historic Places as a historic district, and ANC-00767, the Campbell Airstrip, which is part of ANC-01385. The BLM AFO archaeologist is familiar with the project area and is often on the road, and has determined that the potential for previously unknown cultural resources within the proposed project area is extremely low.

B. Human Health and Safety

The health and safety of the visiting public is the primary safety-related concern of the proposed project. The Science Center Road parallels the Moose Track Trail. Most visitors utilize the same parking area to access either the Moose Track Trail or use the Science Center Road. However, some visiting public are not comfortable with Moose Track trail because it is narrow, in a thick forest, and has an uneven walking surface. Many people prefer to recreate on Science Center Road for various reasons including, but not limited to, seeking level walking conditions, recreating in large groups, or alleviating fears of wild animals such as moose and bear. The current condition and appearance of the road corridor attracts recreational users and thus changes to the road surface could affect safety risks to these recreationists and change the type of recreational use occurring on the road.

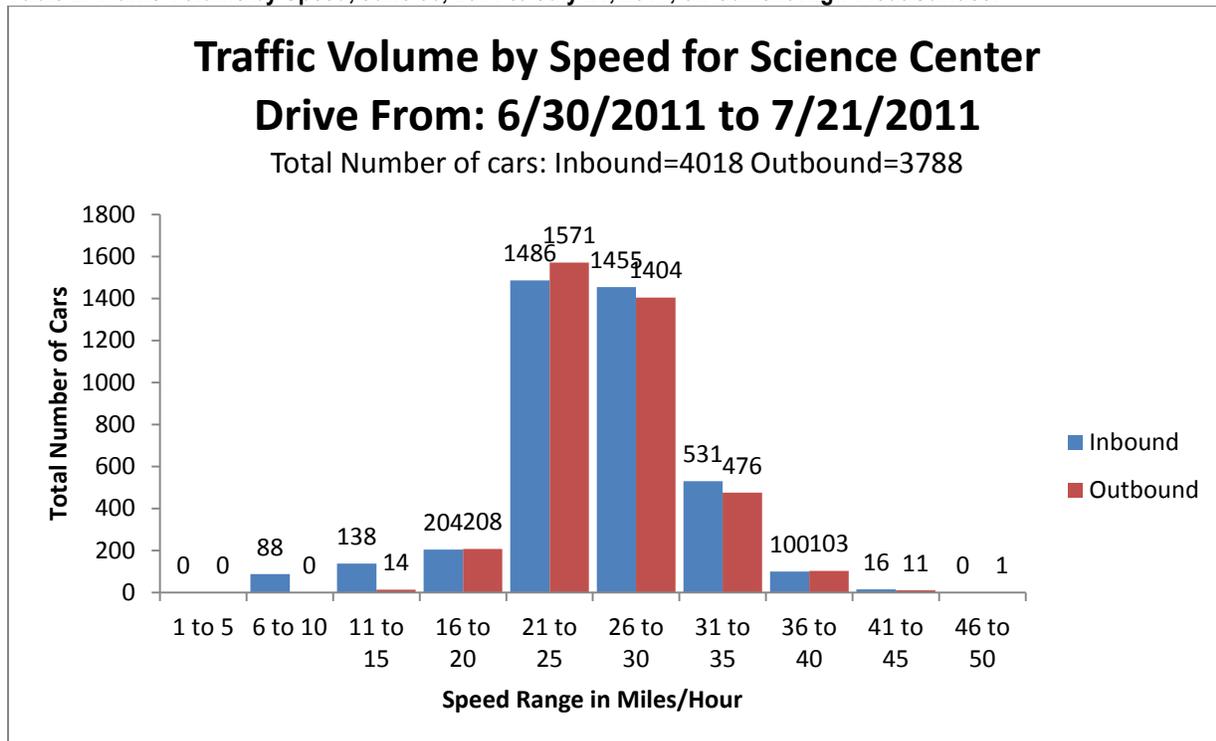
The current high float road surface contains a $\frac{3}{4}$ inch D1 gravel surface. This currently provides high surface friction and road noise that are advantageous to the safety of the recreational user as well as the driver. High surface friction provides better stopping capabilities and road control for vehicles which is important all year long, but especially in the winter when the road is covered with snow and ice. The larger gravel surface provides traction even when snowplowed as the larger aggregate can protrude up through the plowed surface. The larger gravel surface also provides audible warning to recreation users of the road of advancing vehicles.

The factors that influence pavement friction forces can be grouped into four categories: pavement surface characteristics, vehicle operational parameters, tire properties, and environmental factors. Because each factor in this plays a role in defining pavement friction, friction must be viewed as a process instead of an inherent property of the pavement. It is only when all these factors are fully specified that friction takes on a definite value (National Cooperative Highway Research Program 2009).

Maintaining acceptable friction levels on the roadways is very important for traffic safety. Yet it is difficult to correlate the effects of friction values on crash or incident risk. Usually drivers adjust their driving behavior (namely speed) as the appearance of the road environment and the weather conditions present (Noyce et al. 2005). For this reason, it is reasonable to assume that changes in road surface (friction levels, road noise, and appearance) would initiate changes in driving behavior, primarily speed.

The posted speed limit on Science Center Road is 25 mph; the posted speed limit drops to 5 mph at the entrance to the Science Center main parking lot. Currently, radar speed signs are used in both directions to inform motorists of their speed. These signs display vehicle speed to the driver and records speed and frequency data. Table 2 illustrates traffic volume and speed during a peak use period in 2011. It is notable that, on average, approximately 75% of vehicles are within 5 mph of the posted speed limit.

Table 2. Traffic Volume by Speed, June 30, 2011 to July 21, 2011, on Current High-Float Surface.



Science Center Parking Lot Pedestrian Traffic

Located across the road from the Science Center is the main parking lot for visiting public. Currently, the parking lot is gravel and does not support permanent markings to delineate vehicle traffic patterns or pedestrian cross walks creating a notable safety risk to the pedestrians that utilize the Science Center parking lot. This risk is observable, especially during large events such as Trailside Discovery Camp when approximately 150 vehicles arrive and depart twice a day with kids. All of these children must cross the road with vehicle traffic.

Pedestrian Crossing

There is an associated safety risk to pedestrians crossing the Science Center Road between Moose Track and Coyote trail. There are two pedestrian crossing signs at present, with no crosswalk delineated on the road surface to guide pedestrians or as a reference stopping location for vehicles.

C. Invasive Species

Table 3 shows the invasive species that are known to occur in the project area. Figure 3 shows the distribution of known invasive species occurrences at CTF.

Table 3. Invasive Species in the Project Area.

Scientific Name	Common Name	Rank Code
<i>Phalaris arundinacea</i> L.	reed canarygrass	83
<i>Melilotus alba</i> Medikus	white sweetclover	81
<i>Hieracium aurantiacum</i> L.	orange hawkweed	79
<i>Cirsium arvense</i> (L.) Scop.	Canada thistle	76
<i>Prunus padus</i> L.	European bird cherry	74
<i>Vicia cracca</i> L. ssp. <i>cracca</i>	bird vetch	73
<i>Linaria vulgaris</i> P. Mill.	yellow toadflax	69
<i>Melilotus officinalis</i> (L.) Lam.	yellow sweetclover	69
<i>Hordeum jubatum</i> L.	foxtail barley	63
<i>Bromus inermis</i> Leyss.	smooth brome	62
<i>Leucanthemum vulgare</i> Lam.	oxeye daisy	61
<i>Elymus repens</i> (L.) Gould	quackgrass	59
<i>Trifolium repens</i> L.	white clover	59
<i>Taraxacum officinale</i> F.H. Wigg.	common dandelion	58
<i>Trifolium hybridum</i> L.	alsike clover	57
<i>Crepis tectorum</i> L.	narrowleaf hawksbeard	56
<i>Phleum pratense</i> L.	timothy	54
<i>Elymus sibiricus</i> L.	Siberian wildrye	53
<i>Trifolium pratense</i> L.	red clover	53
<i>Alopecurus pratensis</i> L.	meadow foxtail	52
<i>Lolium perenne</i> L.	perennial ryegrass	52
<i>Poa pratensis</i> L. ssp. <i>irrigata</i> (Lindm.) H. Lindb. or <i>Poa pratensis</i> L. ssp. <i>pratensis</i>	spreading or Kentucky bluegrass	52
<i>Rumex acetosella</i> L.	common sheep sorrel	51
<i>Brassica rapa</i> L.	birdsrape mustard	50
<i>Fallopia convolvulus</i> (L.) A. Love	black bindweed	50
<i>Galeopsis tetrahit</i> L.	brittlestem hempnettle	50
<i>Rumex crispus</i> L.	curly dock	48
<i>Rumex longifolius</i> DC.	dooryard dock	48
<i>Tripleurospermum inodorum</i> (L.) Sch. Bip.	scentless false mayweed	48
<i>Persicaria lapathifolia</i> (L.) Gray	curlytop knotweed	47
<i>Persicaria maculosa</i> Gray	spotted ladythumb	47
<i>Centaurea montana</i> L.	perennial cornflower	46
<i>Poa annua</i> L.	annual bluegrass	46
<i>Polygonum aviculare</i> L.	prostrate knotweed	45
<i>Hypochaeris radicata</i> L.	hairy catsear	44
<i>Plantago major</i> L.	common plantain	44
<i>Silene dioica</i> (L.) Clairville	red catchfly	42
<i>Stellaria media</i> (L.) Vill.	common chickweed	42
<i>Descurainia sophia</i> (L.) Webb ex Prantl	herb sophia	41
<i>Lolium multiflorum</i> Lam.	Italian ryegrass	41
<i>Senecio sylvaticus</i> L.	woodland ragwort	41
<i>Capsella bursa-pastoris</i> (L.) Medik.	shepherd's purse	40
<i>Lamium album</i> L.	white deadnettle	40
<i>Chenopodium album</i> L.	lambsquarters	37

Scientific Name	Common Name	Rank Code
<i>Cerastium fontanum</i> Baumg. ssp. <i>vulgare</i> (Hartm.) Greuter & Burdet	big chickweed	36
<i>Cerastium glomeratum</i> Thuill.	sticky chickweed	36
<i>Matricaria discoidea</i> DC	pineappleweed	32
<i>Spergula arvensis</i> L.	corn spurry	32
<i>Lepidium densiflorum</i> Schrad.	common pepperweed	25
<i>Erucastrum gallicum</i> (Willd.) O.E. Schulz	common dogmustard	not yet ranked
<i>Saponaria officinalis</i> L.	bouncing bet	not yet ranked

Source: Alaska Exotic Plants Information Clearinghouse 2012.

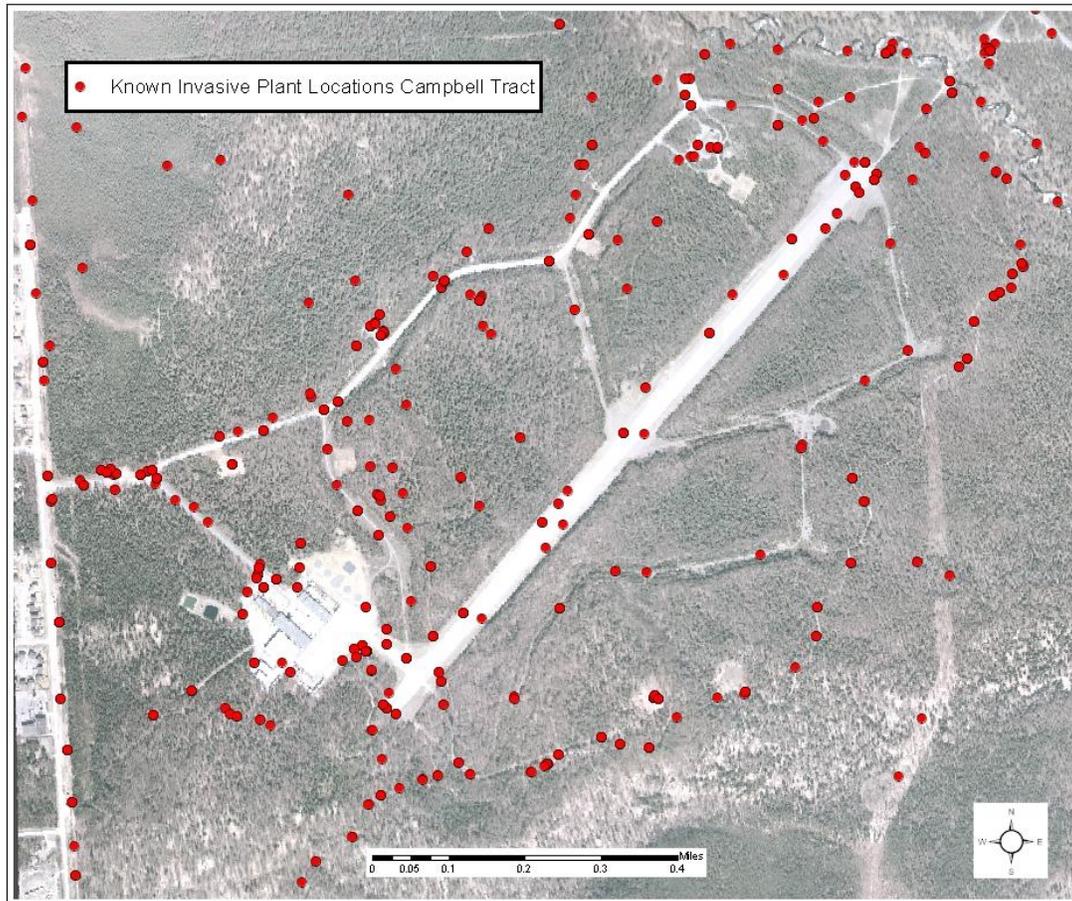


Figure 3. Known Invasive Plant Locations at Campbell Tract Facility. Source: Alaska Exotic Plants Information Clearinghouse 2012.

D. Recreation

Recreational Use of the Road

Despite the availability of the multi-use Moose Track Trail, which parallels the Science Center Road, many recreationists choose to utilize the road instead of the trail. The roadway currently receives incidental recreational use from walkers, runners, bikers, cyclists, parents with strollers, and dog walkers. Groups of runners and bikers prefer the road for early spring training while many other high school running tracks and Municipal paved trails are still covered with ice. Most recreationists choose to utilize the roadway for the following reasons:

- The snow and ice on the road melts and dries faster than on the trail.
- The walking surface is easier for people with injuries or people with strollers or older dogs.
- The visibility is better on the roadway for those who prefer to anticipate and react to wildlife and other trail users more quickly than the on-the-trail experience.
- There is more sun and less shade on the roadway.

Though eliminated from analysis in this EA, it is important that a future effort consider the addition of a separate, paved pedestrian route that would parallel the road. This would help to address the issues related to recreational use of the road and would be most appropriately addressed in a comprehensive travel and transportation plan as part of the Campbell Tract Facility Management Plan, Ring of Fire RMP Amendment.

Science Center Parking Lot Pedestrian Traffic

The destination for most traffic on Science Center Road is the Science Center. Some recreationists, however, will drive to the Science Center parking lot to access the trail system. Additionally, trail users will leave the trail system and cross the Science Center parking lot to visit the Science Center to attend programs, warm up, or use the facilities. Currently, no striping exists on the parking lot to separate vehicular and pedestrian traffic. However, parking bumpers and traffic cones are used to delineate parking spaces, traffic flow, and passenger drop-off zones.

Mushing Trail Proximity to Science Center Roadway

Portions of the winter mushing system trails come close the Science Center Road. Past mushing trail re-routes have eliminated mushing trails crossing the Science Center roadway or coming so close that incidental dog teams entered the road. The current road brushing corridor allows a nice vegetation screen between the road and mushing trail system.

Pedestrian Crossing

One pedestrian crossing exists on the Science Center roadway behind the black gate entry. The Coyote Trail provides access between Moose Track, Airstrip, and Viewpoint trails. There are two pedestrian crossing signs at present; however, no crosswalk is delineated on the road surface.

Roadway Brushing Width and Visibility

Visibility along the Science Center Road is improved with brushing and continual vegetative maintenance of the road corridor. The current brushing corridor allows a vegetation buffer between the road and trails. Moose Track Trail parallels the northwest-side of the road and the mushing trail comes into proximity of the road on southeast-side. This vegetative buffer enhances the natural experience for both the trail users as well as drivers on the road. Additionally, the buffer enhances safety with a vegetative separation of different uses.

E. Visual Resources

All CTF lands fall under the direction within the Ring of Fire Resource Management Plan. Visual Resource Management (VRM) direction for the CTF lands fall under the VRM Class IV objective that “provides for management activities that would make major modifications to the existing character of the landscape; [whereby] change may be very high and while reflecting the basic elements of the landscape, may dominate the view,” (BLM, 2008).

F. Wildlife

The road and project area traverses through the developed portion of Campbell Tract, and is surrounded by spruce and birch wildlife habitats, with alder dominant in the disturbed margins of the road. Moose are common and use the area for calving in spring and wintering habitat. Brown and black bear occupy home ranges associated with the nearby Campbell Creek, and are common in summer and move to den sites in the adjacent mountains in winter. A wolf pack uses the area and moves from higher elevations during seasonal changes, or in search of food sources. Snowshoe hares are abundant and support a lynx population that cycles with the hare population. Coyotes are seen or heard regularly and breed in the area. Other animals that live and breed in the area include beaver, red fox, porcupine, red squirrel, wood frog and several species of microtine rodents.

There are at least 20 bird species that are year-round residents, and an additional 21 migrant species that breed here. Three species of owl breed in the CTF's forest habitats, and bald eagles nest in adjacent areas and use the areas prey base to raise young. Thirty-three species of resident and migrant land birds have been documented using CTF forest and shrub habitats during fall migration through studies using mist netting and bird banding. The olive-sided flycatcher, gray-cheeked thrush, Townsend's warbler and blackpoll warbler move through the area during fall migration and are included on the State of Alaska's list for Species of Special Concern. The area provides cover habitat and food for many wildlife species. It serves as a buffer and migration corridor, particularly for moose and bear, between urban areas and Chugach State Park and Far North Bicentennial Park, reducing wildlife conflicts with people in surrounding neighborhoods.

4.0. ENVIRONMENTAL EFFECTS

A. General Considerations

Unless otherwise noted, the geographic scope for the cumulative effects analysis is limited to the immediate Science Center Road corridor because the Science Center Road is not a through-road (does not connect to other roads). The temporal scope for the cumulative effects analysis is spans from the installation of the current surface (2002) to the anticipated lifespan of each alternative's proposed surface (refer to Table 1).

B. Cultural Resources

Alternative 1 – No Action Alternative

Because the No Action Alternative would involve no ground disturbance, this alternative would have no effect on cultural resources.

Given that there would be no direct or indirect effects to cultural resources as a result of the No Action Alternative, by definition, there is no potential for this alternative to incrementally contribute to cumulative effects.

Alternative 2 - “Hot Mix” with Chip Seal, no Road Striping

Because Alternative 2 would remain within the existing road corridor and within the existing parking lot, it is the recommendation of the BLM AFO Archaeologist that this action will have no effect on cultural resources. If future vegetation clearance may involve uprooting trees, then an archaeological monitor is recommended.

Cumulative effects would be the same as described for Alternative 1.

Alternative 3 – New “High Float,” same as Existing Surface

The effects would be the same as described for Alternative 2.

Alternative 4 – “Hot Mix,” with Road Striping – Proposed Action

The effects would be the same as described for Alternative 2.

Alternative 5 – Double-Coat Chip Seal

The effects would be the same as described for Alternative 2.

C. **Human Health and Safety**

Alternative 1 – No Action Alternative

Road Safety

The No Action Alternative would continue to provide the expected safety standard known to the current users of the road.

There would be no direct or indirect effects to the safety of all users of the road with the No Action Alternative. Therefore, no cumulative effects are expected. The potential for recreational user collision with vehicles would remain the same.

Science Center Parking Lot Pedestrian Traffic

There would be a continued associated safety risk to the pedestrians that utilize the Science Center parking lot. This alternative would not accommodate permanent delineation (striping) between vehicle traffic and pedestrians accessing either the nearby trails or the Science Center facility.

Pedestrian Crossing

There would be a continued associated safety risk to the pedestrians crossing the road between Moose Track and Coyote trails. With No Action, this pedestrian crossing would remain unmarked on the road and provide less warning to drivers on the roadway or reference regarding where to stop in case of pedestrian traffic. Currently, there are warning signs of the approaching trail crossing. These would remain in place.

Alternative 2 - “Hot Mix” with Chip Seal, no Road Striping

Road Safety

Road resurfacing would take approximately one week to complete. During this time, employee and visitor safety would be paramount. Construction equipment and activity would displace some users of the road (see Environmental Consequences, Recreation, Section 4.E.). Non-motorized recreation users will be encouraged to use Moose Track Trail. However, some recreational road users may still prefer to use the Science Center Road. Associated safety risks to these users would be mitigated by utilizing a variety of safety engineering, including flaggers. Construction signs, reroute signs, and barricades are all mitigating measures that could be used at any time. Additional mitigation measures could include closing the road to all vehicular traffic (and/or recreational use) for short intervals or for the duration of the resurfacing to provide unquestionable safety measures during the resurfacing. In this case, possible vehicle re-routes could include using the Campbell Tract Airstrip to access the Science Center.

This alternative would use a smaller aggregate ($\frac{3}{8}$ in) than the current road surface ($\frac{3}{4}$ in). This

smaller aggregate would result in less surface friction for vehicles and less audible indicators for recreational users of the road as described in the Affected Environment (see Human Health and Safety, Section 3.B.). This road surface is more conducive to higher average vehicular speeds which would present increased risk to drivers, recreational road users, and wildlife. Given that some vehicle speeds are observed to be in excess of the current speed limit on the current road surface type (see Table 2), it is reasonably foreseeable that higher average speed could be forecasted with a lower-friction surface. This risk can be minimized, however, with the implementation of increased vegetation cutbacks and traffic calming measures such as changes in street alignment, the installation of speed bumps/barriers or other physical measures to reduce traffic speeds in the interest of safety.

Science Center Parking Lot Pedestrian Traffic

There would be a beneficial effect of Alternative 2 on Science Center parking lot. Striping would delineate pedestrian traffic routes to/from the parking lot to the associated trails and Science Center. It would also provide clear warning to drivers and pedestrians for yielding and stopping locations thus increasing overall safety.

Pedestrian Crossing

Same as Alternative 1. However, it should be noted that with increased potential for higher vehicular speed there would be less reaction time for vehicles to yield to crossing pedestrians. Recommended mitigation would include stop signs for vehicles at the pedestrian crossing location.

Alternative 3 – New “High Float,” same as Existing Surface

Road Safety

The effects would be the same as described for Alternative 1.

Science Center Parking Lot Pedestrian Traffic

The effects would be the same as described for Alternative 1.

Pedestrian Crossing

The effects would be the same as described for Alternative 1.

Alternative 4 – “Hot Mix,” with Road Striping – Proposed Action

Road Safety

This alternative would provide an asphalt top coat with the smallest aggregate of all the alternatives (0.19 in). As described in the Affected Environment, it is expected that smaller road

surface aggregates initiates change in driving behavior, namely increased speed. This increase in average speed would pose increased risk to non-vehicular users of the road as well as resulting in less traction loss to drivers.

Science Center Parking Lot Pedestrian Traffic

The effects would be the same as described for Alternative 2.

Pedestrian Crossing

There would be a beneficial effect of the Alternative 4 if permanent surface marking of the Coyote Trail pedestrian crossing on the Science Center roadway occurred. This would increase trail user safety and provide a clear path for pedestrians to follow as well as a clear visual reminder for drivers to slow and stop when occupied.

Alternative 5 – Double-Coat Chip Seal

Road Safety

The effects would be the same as described for Alternative 2, except the aggregate size would be $\frac{1}{2}$ in instead of $\frac{3}{8}$ in. This aggregate size is $\frac{1}{4}$ inch smaller than the current condition and thus it is expected that this still has the potential to initiate changes to driver behavior, primarily increased average speed. With this increase of $\frac{1}{8}$ inch in aggregate size it is expected that average driver speed would not increase as much as under Alternative 2.

Science Center Parking Lot Pedestrian Traffic

The effects would be the same as described for Alternative 1.

Pedestrian Crossing

The effects would be the same as described for Alternative 2. The potential for recreational user collision with vehicles would remain the same.

D. Invasive Species

Alternative 1 – No Action Alternative

Invasive species would continue to be mitigated along the Science Center Road with ongoing integrated pest management activities including hand pulling and mowing.

Alternative 2 - “Hot Mix” with Chip Seal, no Road Striping

The potential risk for invasive species introduction and/or spread is increased with the road resurfacing project. Heavy equipment, tools, gear and weed infested gravel/soil materials have been the source of weed infestations at CTF over the past decade, as is typical throughout much of the Anchorage Bowl and other developments and communities in Alaska, especially transportation corridors.

Heavy equipment operations associated with road resurfacing in the Science Center Road corridor would be disturbing the ground and soil on the road shoulder and adjacent ditches. Many of the invasive species known to occur in the area thrive in disturbed soils and aggressively take over the native flora. This soil disturbance could lead to accelerated loss of native plants in the project area and ecological units of the CTF area. This risk would be minimized, however, with the implementation of the Features Common to All Action Alternatives described in Section 2.B., which are intended as *best management practices*.

The environmental effects relating to invasive species is the same for all action alternatives addressed in this environmental analysis.

Alternative 3 – New “High Float,” same as Existing Surface

The effects would be the same as described for Alternative 2.

Alternative 4 – “Hot Mix,” with Road Striping – Proposed Action

The effects would be the same as described for Alternative 2.

Alternative 5 – Double-Coat Chip Seal

The effects would be the same as described for Alternative 2.

E. Recreation

Alternative 1 – No Action Alternative

Recreational Use of the Road

The No Action Alternative would have no effect to the existing recreation experience. Recreationists would continue to use the Science Center roadway as they currently do and the potential for collision with vehicles would remain the same.

Science Center Parking Lot Pedestrian Traffic

Poor separation of vehicles and pedestrians would continue to be an adverse effect of the No Action Alternative at the Science Center parking lot. With No Action, the parking lot would

remain natural surface and would not accommodate paint striping or other improvements to delineate areas to separate vehicular and pedestrian traffic.

Mushing Trail Proximity to Science Center Roadway

There would be no effect to the road brushing corridor width, so the existing vegetative screen would remain between the mushing trail system and roadway. This vegetative screen helps to keep the dog teams on the trails where they come in proximity to the road.

Pedestrian Crossing

There would be a continued adverse effect of the No Action Alternative as the existing road surfacing would not accommodate a painted marking of the Coyote Trail pedestrian crossing on the Science Center roadway. With No Action, this pedestrian crossing would remain unmarked and provide less warning to drivers on the roadway regarding where to stop.

Roadway Brushing Width and Visibility

There would be no effect to the visibility along the Science Center Road as it would remain unchanged with current vegetative maintenance levels. This Action would continue to allow a vegetative buffer between the road and trails which enhances safety and the natural trail experience provided.

Alternative 2 - “Hot Mix” with Chip Seal, no Road Striping

Recreational Use of the Road

During construction, some recreational road users may be displaced to other areas, including areas both on and off of CTF.

It is reasonably foreseeable, given the data provided by the Speed Sentry Units (cite source once Science Center data inserted into document), that vehicles will continue to drive over the 25 mph speed limit into the future. Since the road surface proposed in Alternative 2 is more conducive to higher vehicle speeds, the cumulative effect would include a possible increase in the potential for collisions with recreationists.

Science Center Parking Lot Pedestrian Traffic

There would be a beneficial effect of Alternative 2 on Science Center parking lot, as it would allow for paving the lot with asphalt. Asphalt surface would accommodate the paint striping necessary to delineate separate areas for vehicular and pedestrian traffic thus, increasing safety.

Mushing Trail Proximity to Science Center Roadway

Alternative 2 would have an adverse direct effect with up to 10 feet of vegetation cleared on inside curves for road visibility. If these inside curves occur in locations where the mushing trail comes into proximity of the road, it would decrease the amount of vegetative screening currently provided. This vegetative screen helps to keep the dog teams on the trails where the trails come in proximity to the road.

This effect can be mitigated with the involvement of the Outdoor Recreation Planner selecting important leave trees, not to be cut. Additionally, over time, the effect would be mitigated naturally with regrowth of new vegetation which would shield the visibility of the roadway from the trail.

Pedestrian Crossing

The effects would be the same as described for Alternative 1.

Roadway Brushing Width and Visibility

Alternative 2 would have an adverse effect as up to 10 feet of vegetation may be cleared on inside curves. This has the potential to decrease the vegetative buffer between the road and trails which could impact the natural trail experience provided.

Alternative 3 – New “High Float,” same as Existing SurfaceRecreational Use of the Road

During construction, some recreational road users may be displaced to other areas, including both on and off of CTF. Otherwise, same as Alternative 1.

Science Center Parking Lot Pedestrian Traffic

The effects would be the same as described for Alternative 1.

Mushing Trail Proximity to Science Center Roadway

The effects would be the same as described for Alternative 1.

Pedestrian Crossing

The effects would be the same as described for Alternative 1.

Roadway Brushing Width and Visibility

The effects would be the same as described for Alternative 1.

Alternative 4 – “Hot Mix,” with Road Striping – Proposed Action

Recreational Use of the Road

The effects would be the same as described for Alternative 2.

Science Center Parking Lot Pedestrian Traffic

The effects would be the same as described for Alternative 2.

Mushing Trail Proximity to Science Center Roadway

Alternative 4 would have an adverse direct effect with up to 20 feet of vegetation cleared on inside curves for road visibility. If these inside curves occur in locations where the mushing trail comes into proximity of the road, it would decrease the amount of vegetative screening currently provided. This vegetative screen helps to keep the dog teams on the trails where the trails come in proximity to the road.

This effect can be mitigated with the involvement of the Outdoor Recreation Planner selecting important leave trees, not to be cut. Additionally, over time, the effect would be mitigated naturally with regrowth of new vegetation which would shield the visibility of the roadway from the trail.

Pedestrian Crossing

There would be a beneficial effect of the new surface as it would allow painted marking of the Coyote Trail pedestrian crossing on the Science Center roadway. This would increase trail user safety and provide a clear path for pedestrians to follow as well as a clear visual reminder for drivers to slow and stop.

Roadway Brushing Width and Visibility

Alternative 4 would have an adverse effect with up to 20 feet of vegetation cleared on inside curves for road visibility. This has the potential to decrease the vegetative buffer between the road and trails which could impact the natural trail experience provided.

Alternative 5 – Double-Coat Chip Seal

Recreational Use of the Road

The effects would be the same as described for Alternative 2.

Science Center Parking Lot Pedestrian Traffic

The effects would be the same as described for Alternative 1.

Mushing Trail Proximity to Science Center Roadway

The effects would be the same as described for Alternative 1.

Pedestrian Crossing

The effects would be the same as described for Alternative 2.

Roadway Brushing Width and Visibility

The effects would be the same as described for Alternative 1.

F. Visual Resources

Alternative 1 – No Action Alternative

Because the No Action Alternative would involve no ground disturbance, this alternative would have no direct or indirect effect on visual resources.

Given that there would be no direct or indirect effects to visual resources as a result of the No Action Alternative, by definition, there is no potential for this alternative to incrementally contribute to cumulative effects.

Alternative 2 - “Hot Mix” with Chip Seal, no Road Striping

Roadway Brushing Width and Visibility

Because Alternative 2 would clear up to 10 feet of vegetation on inside curves, this alternative would have an initial direct effect on the vegetative buffer between the road and trails. The potential direct and indirect effects would include an initial decrease in the natural scenic visual experience provided from the trail as the roadway would become more visible immediately following construction.

This effect can be mitigated with the involvement of the BLM AFO Outdoor Recreation Planner selecting important leave trees, not to be cut. Additionally, over time, the effect would be mitigated naturally with regrowth of new vegetation which would shield the visibility of the roadway from the trail.

The potential for cumulative effects is low due to the low likelihood of future proposed roadways or other development that may affect visual resources at CTF.

Alternative 3 – New “High Float,” same as Existing Surface

Because this Action Alternative would occur in the existing footprint, would involve no vegetation removal or new ground disturbance, and would use the same surface as is present currently, this alternative would have no direct or indirect effect on visual resources.

Cumulative effects would be the same as described for Alternative 1.

Alternative 4 – “Hot Mix,” with Road Striping – Proposed Action

Roadway Brushing Width and Visibility

Because Alternative 4 would clear up to 20 feet of vegetation on inside curves, this alternative would have an initial direct effect on the vegetative buffer between the road and trails. The potential direct and indirect effects would include an initial decrease in the natural scenic visual experience provided from the trail as the roadway would become more visible right after construction.

This effect can be mitigated with the involvement of the BLM AFO Outdoor Recreation Planner selecting important leave trees, not to be cut. Additionally, over time, the effect would be mitigated naturally with regrowth of new vegetation which would shield the visibility of the roadway from the trail.

The potential for cumulative effects is low due to the low likelihood of future proposed roadways or other development that may affect visual resources at CTF.

Alternative 5 – Double-Coat Chip Seal

The effects would be the same as described for Alternative 3.

G. Wildlife

Alternative 1 – No Action Alternative

Wildlife in the road corridor may be temporarily displaced or disturbed by road maintenance activities and maintenance personnel presence. The No Action Alternative would have no effect on potential collisions with wildlife.

Given that there would be no direct or indirect effects to wildlife resources as a result of the No Action Alternative, by definition, there is no potential for this alternative to incrementally contribute to cumulative effects.

Alternative 2 - “Hot Mix” with Chip Seal, no Road Striping

During the road resurfacing effort, which is estimated to take approximately one week, wildlife may be temporarily disturbed and/or displaced from the road corridor by machinery noise and personnel. Displacement of wildlife as well as lower speeds through the active construction areas would reduce or altogether remove the potential for collisions during this timeframe.

The chip seal coating would offer road noise similar to the existing high-float surface. Road noise as audible warning to wildlife on the road would remain largely unchanged under this alternative.

From a cumulative standpoint, within the road corridor, the presence of recreationists and vehicles are the primary factors affecting wildlife. Although the posted speed limit would remain unchanged, under this alternative it is reasonably foreseeable that motorists would travel at higher speeds due to lower surface friction. This could increase the potential for collisions with wildlife.

Alternative 3 – New “High Float,” same as Existing Surface

This alternative would have the same direct and indirect effects as described for Alternative 2. Although this alternative does have potential short-term direct effects to wildlife, this alternative’s incremental contribution to cumulative effects is limited, similar to Alternative 1.

Alternative 4 – “Hot Mix,” with Road Striping – Proposed Action

The direct effects would be the same as described for Alternative 2. The hot mix surface proposed under this alternative offers the least amount of road noise of the alternatives considered. Relative to the other alternatives, this alternative would offer the least audible warning to wildlife on the road.

From a cumulative standpoint, within the road corridor, the presence of recreationists and vehicles are the primary factors affecting wildlife. Although the posted speed limit would remain unchanged, under this alternative it is reasonably foreseeable that motorists would travel at higher speeds due to lower surface friction. The combination of a road surface that is more conducive to higher speeds as well as reduced road noise as audible warning would increase the potential for collisions with wildlife.

Alternative 5 – Double-Coat Chip Seal

The effects would be the same as described for Alternative 2.

5.0. CONSULTATION AND COORDINATION

A. Agency and Public Consultation

The following specialists were consulted during the preparation of this EA:

Frank Ganley	Alaska Department of Transportation, Construction Manager
Jason Foster	North Star Paving & Construction, Estimator
Russell Oswald, P.E.	Municipality of Anchorage, Planning and Engineering Division

The Science Center Road resurfacing project was announced at the Campbell Tract/Far North Bicentennial User Group meeting on December 5, 2011. Two verbal comments were received about the future road surface. Both comments voiced concerns about faster speeds should a smoother surface be used; both users voiced preference for a rougher surface (i.e., higher friction).

This EA will be made available for public review and comment for approximately 30 days prior to a decision on the action.

B. List of Preparers and Contributors

The following preparers and contributors participated in the identification of issues for analysis, development of alternatives, and environmental impact analysis. Unless otherwise noted, all preparers are affiliated with the BLM AFO:

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