



## **Appendix B**

### **Detailed Project Data Sheets for Recommended Solutions**

### #1: McCarthy Road MP 0 to 21 Drainage Improvements

Project Name		McCarthy Road MP 0 to 21 Drainage Improvements			
Priority	High	Priority is based on resolving key needs related to improving safety, maintaining reliable access, and improving infrastructure conditions along the road. During outreach, the public identified drainage and roadway cross sections as some of the highest priorities to address.			
Timeline	Short (less than five years)	Drainage improvements generally cost less than rehabilitation or reconstruction projects, which may make it easier to fund and implement sooner.			
Scope	Construct or re-establish ditches along the McCarthy Road. Add cross culverts. Raise the road in select areas where necessary to improve drainage. Clear roadside brush and vegetation.				
Description	Construct drainage improvements along the McCarthy Road from the rock cut east of Chitina to approximately 4 miles east of the Kuskulana River crossing (MP 0 to 21). Where necessary, work would include clearing or adding ditches along the road, adding or fixing cross culverts, raising the road as needed to accommodate new culverts, and clearing roadside brush and vegetation.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 382,200	\$254,800			\$ 637,000
Utilities					\$ -
Right of Way					\$ -
Construction			\$6,364,475		\$6,364,475
TOTAL	\$382,200	\$254,800	\$6,364,475	\$	\$7,001,475

#### Funding

Potential Funding Sources	PROTECT formula funds, STBG, NHPP (only for protective features such as adding drainage structures), PROTECT discretionary grant, FLAP
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS, WFL

Environmental	Value	Comments
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	None anticipated	
Permits Required	Yes	USACE Section 404 Permit; ADF&G Fish Habitat Permit
Draft Purpose & Need	The purpose of the project is to ensure safer and more reliable access for roadway users by improving drainage along the McCarthy Road. Identified drainage needs (issues) include lack of ditches or plugged ditches through most of this stretch of the corridor; lacking or damaged culverts; water on road and/or nowhere for water to go; and insufficient room for snow removal. Thawing permafrost exists uphill of the road at Kotsina Bluffs. Drainage issues have resulted in deterioration of the road, safety concerns for drivers, and increased maintenance costs. Improving and constructing new drainage features and adding material to	

Project Name		McCarthy Road MP 0 to 21 Drainage Improvements	
		raise the roadway in select areas would improve reliability of the road and safety for travelers and reduce maintenance costs.	
List Assumptions, Unknowns, Other Environmental Impacts		<ul style="list-style-type: none"><li>• Likely contained within the existing ROW, reducing coordination efforts and chances of delay.</li><li>• A Native allotment extends into the road ROW; up to 0.45 acres may be impacted. Future design will aim to minimize or avoid these impacts when identifying the areas for improvement.</li><li>• There are no known AHRS sites; however future consultation may reveal unrecorded sites.</li><li>• The Copper River Campground is located east of the Copper River near MP 1.6. The Kuskulana Bridge Wayside near MP 17.3 is owned and managed by the NPS.</li><li>• There are two RS 2477s (Chitina River-Strelna Trail and Bellum’s [Billum’s] Crossing) and two 17b easements.</li><li>• Up to six acres of NWI-mapped wetlands (freshwater emergent wetlands, and riverine designations) may be impacted.</li><li>• Road crosses anadromous streams (Copper River and Strelna Creek).</li><li>• Consider migratory birds and preconstruction surveys. Consider revegetation plan; more than 100 invasive plants have been identified.</li></ul>	
Right of Way		Value	Comments
Confidence in ROW Estimate	None		No ROW impacts anticipated.
Utilities		Value	Comments
Confidence in Utility Estimate	None		No utility impacts anticipated.
Bridge		Value	Comments
Bridge Work Included	No		No bridge work anticipated.
Design Notes			
List Assumptions, Unknowns, etc		Drainage improvements focus on areas identified to be in poor condition (by M&O, Public, Stakeholders, Project Team). Based on identified areas and high-level drainage modeling, about 50% of project corridor is assumed to be improved. Clearing and grubbing to be completed for entire project footprint. Drainage projects to install ditching and leave existing roadway undisturbed where appropriate. Where not appropriate, road is raised to provide clearance for culvert. In areas where road is raised, 36-inch structural section (6-inch surface course, 30-inch borrow) provided. All drainage culverts to be 24-inch in size and installed with thaw pipe.	
Maintenance			
List Assumptions, Unknowns, etc		M&O has identified locations with drainage and road condition issues. Improvements to road, drainage, and brushing will reduce maintenance effort.	

## #2: McCarthy Road MP 21 to 43 Drainage Improvements

Project Name		McCarthy Road MP 21 to 43 Drainage Improvements			
Priority	High	Priority is based on resolving key needs related to improving safety, maintaining reliable access, and improving infrastructure conditions along the road. During outreach, the public identified drainage and roadway cross-sections as some of the highest priorities to address. This project could be the highest priority among the three drainage projects due to the numerous locations identified as frequently experiencing glaciation issues.			
Timeline	Short (less than five years)	Drainage improvements generally cost less than rehabilitation or reconstruction projects, which may make it easier to fund and implement sooner.			
Scope	Construct or re-establish ditches along the McCarthy Road. Add cross culverts. Raise the road in select areas where necessary to improve drainage. Clear roadside brush and vegetation.				
Description	Construct drainage improvements along the McCarthy Road from approximately 4 miles east of the Kuskulana River crossing to east of Lakina River (MP 21 to 43). Where necessary, work would include clearing or adding ditches along road, adding or fixing cross culverts, raising the road as needed to accommodate new culverts, and clearing brush and vegetation.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 339,600	\$226,400			\$ 566,000
Utilities					\$ -
Right of Way		\$350,000			\$350,000
Construction			\$5,658,152		\$5,658,152
TOTAL	\$ 339,600	\$576,400	\$5,658,152	\$ -	\$6,574,152

### Funding

Potential Funding Sources	PROTECT formula funds, STBG, NHPP (only for protective features), PROTECT discretionary grant, FLAP
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS, WFL

Environmental	Value	Comments
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	Potential for involvement	AHRS sites present in close vicinity (two sites were previously determined not eligible; two sites have no determination of eligibility). Adjacent National Park Service land (Gilahina Trestle Wayside).
Permits Required	Yes	USACE Section 404 Permit; ADF&G Fish Habitat Permit

Project Name	McCarthy Road MP 21 to 43 Drainage Improvements
Draft Purpose & Need	<p>The purpose of the project is to ensure safer and more reliable access for roadway users by improving drainage along the McCarthy Road. Identified drainage needs (issues) include lack of ditches or plugged ditches; lacking or damaged culverts; and water on road and/or nowhere for water to go. Several locations experience glaciation over the roadway during the winter, such as near MPs 27, 34, 36, and 38. Drainage issues have resulted in deterioration of the road, safety concerns by drivers, and increased maintenance costs. Improving and constructing new drainage features and adding material to raise the roadway in select areas would improve reliability and safety for travelers and reduce maintenance costs.</p>
List Assumptions, Unknowns, Other Environmental Impacts	<ul style="list-style-type: none"> <li>Approximately 2.34 acres near Gilahina River Bridge (MP 29) fall outside of the road ROW on NPS land. DOT&amp;PF and NPS intend to resolve the ROW discrepancy, so the road ROW incorporates the existing road location.</li> <li>Native allotments extend into the road ROW; up to 3.87 acres may be impacted.</li> <li>There are four known AHRS sites in the area; future consultation may reveal unrecorded sites.</li> <li>The NPS-owned and maintained Gilahina Trestle Wayside near MP 29 and the Crystalline Hills Trailhead near MP 34.8 (located north of the road) may be impacted by work in the area.</li> <li>There are no RS 2477s or 17b easements.</li> <li>The public has requested a spring that provides access to drinking water near MP 36.4 be avoided.</li> <li>Up to 6 acres of NWI-mapped wetlands (freshwater emergent wetland and freshwater forested/ shrub wetland) may be impacted.</li> <li>Road crosses anadromous streams (Chokosna lake outlet, Chokosna River and its multiple tributaries, Gilahina River, Ruth Lake Creek [also referred to as Ruth Creek], and Crystal Creek).</li> <li>These are all culverts except for the bridge crossings at Gilahina River and Chokosna River. ADF&amp;G designates five of the culverts as likely deficient for fish passage.</li> <li>Consider migratory birds and preconstruction surveys. Consider revegetation plan; more than 150 invasive plants have been identified.</li> </ul>

Right of Way	Value	Comments
Confidence in ROW Estimate	Moderate	The proposed project footprint extends about 2.34 acres outside of the road ROW. For a full 100-foot ROW (that includes the project footprint), this would consist of 4.7 acres. DOT&PF ROW provided SSE estimate in March 2025.

Utilities	Value	Comments
Confidence in Utility Estimate	None	No utility impacts anticipated.

Bridge	Value	Comments
Bridge Work Included	No	No bridge work anticipated.

Project Name	McCarthy Road MP 21 to 43 Drainage Improvements
<b>Design Notes</b>	
List Assumptions, Unknowns, etc	<p>Drainage improvements focus on areas identified to be in poor condition (by M&amp;O, Public, Stakeholders, Project Team). Based on identified areas and high-level drainage modeling, about 60% of project corridor is assumed to be improved. Clearing and grubbing to be completed for entire project footprint. Drainage projects to install ditching and leave existing roadway undisturbed where appropriate. Where not appropriate, road is raised to provide clearance for culvert. In areas where road is raised, 36-inch structural section (6-inch surface course, 30-inch borrow) provided. All drainage culverts to be 24-inch in size and installed with thaw pipe.</p>
<b>Maintenance</b>	
List Assumptions, Unknowns, etc	<p>M&amp;O has identified locations with drainage and road condition issues. Improvements to road, drainage, and brushing will reduce maintenance effort.</p>

### #3: McCarthy Road MP 43 to 64 Drainage Improvements

Project Name	McCarthy Road MP 43 to 64 Drainage Improvements				
Priority	High	Priority is based on resolving key needs related to improving safety, maintaining reliable access, and improving infrastructure conditions along the road. During outreach, the public identified drainage and roadway cross-sections as some of the highest priorities to address.			
Timeline	Short (less than five years)	Drainage improvements generally cost less than rehabilitation or reconstruction projects, which may make it easier to fund and implement sooner.			
Scope	Construct or re-establish ditches along the McCarthy Road. Add cross culverts. Raise the road in select areas where necessary to improve drainage. Clear roadside brush and vegetation.				
Description	Construct drainage improvements along the McCarthy Road from east of Lakina River to south of the Kennicott Subdivision (MP 43 to 63). Where necessary, work would include clearing or adding ditches along the road, adding or fixing cross culverts, raising the road as needed to accommodate new culverts, and clearing brush and vegetation.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 469,800	\$313,200			\$783,000
Utilities					\$ -
Right of Way					\$ -
Construction			\$ 7,827,427		\$ 7,827,427
TOTAL	\$ 469,800	\$313,200	\$7,827,427	\$ -	\$8,610,427

#### Funding

Potential Funding Sources	PROTECT formula funds, PROTECT discretionary grant, FLAP, STBG, NHPP (only for protective features)
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS, WFL

Environmental	Value	Comments
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	Yes	AHRS sites present in close vicinity (3 sites have no determination of eligibility).
Permits Required	Yes	USACE Section 404 Permit; ADF&G Fish Habitat Permit
Draft Purpose & Need	<p>The purpose of the project is to ensure safer and more reliable access for roadway users by improving drainage along the McCarthy Road. Identified drainage needs (issues) include lack of ditches/ plugged ditches; lacking or damaged culverts; and water on road and/or nowhere for water to go. There are a couple of locations that experience glaciation over the roadway during the winter. Thawing permafrost near approximate MP 57.5 is a concern. Drainage issues have resulted in deterioration of the road and safety concerns for drivers.</p> <p>Improving and constructing new drainage features and adding material to raise the roadway in select areas would improve reliability and safety for travelers and reduce maintenance costs.</p>	

Project Name		McCarthy Road MP 43 to 64 Drainage Improvements	
List Assumptions, Unknowns, Other Environmental Impacts	<ul style="list-style-type: none"><li>Likely contained within the existing ROW, reducing coordination efforts and chances of delay.</li><li>There are three known AHRS sites in the area; future consultation may reveal unrecorded sites.</li><li>The State Wayside near MP 55.2 is located on state land and managed by the NPS. The vault toilet facilities near the swimming hole vicinity are maintained by the McCarthy Area Council.</li><li>There is one RS 2477 (Nikolai Mine Trail) and no 17b easements in the area.</li><li>Up to 13 acres of NWI-mapped wetlands (freshwater emergent wetlands, freshwater forested/ shrub wetlands, and riverine designation) may be impacted.</li><li>Road crosses anadromous streams (Long Lake Creek/Outlet, Long Lake Creek/Tributary, Kennicott River, near the swimming hole, and Clear Creek).</li><li>Road crosses six additional streams with no assigned AWC stream number (a second Long Lake Creek/ Tributary, three unnamed crossings, Tractor Creek, and Swift Creek). ADF&amp;G identifies these six culverts as likely deficient fish passage culverts.</li><li>Consider migratory birds and preconstruction surveys. Consider revegetation plan; nearly 200 invasive plants have been identified.</li></ul>		
Right of Way		Value	Comments
Confidence in ROW Estimate	None	No ROW impacts anticipated.	
Utilities		Value	Comments
Confidence in Utility Estimate	None	No utility impacts anticipated.	
Bridge		Value	Comments
Bridge Work Included	No	No bridge work anticipated.	
Design Notes			
List Assumptions, Unknowns, etc	Drainage improvements focus on areas identified to be in poor condition (by M&O, Public, Stakeholders, Project Team). Based on identified areas and high-level drainage modeling, about 65% of project corridor is assumed to be improved. Clearing and grubbing to be completed for entire project footprint. Drainage projects to install ditching and leave existing roadway undisturbed where appropriate. Where not appropriate, road is raised to provide clearance for culvert. In areas where road is raised, 36-inch structural section (6-inch surface course, 30-inch borrow) provided. All drainage culverts to be 24-inch in size and installed with thaw pipe.		
Maintenance			
List Assumptions, Unknowns, etc	M&O has identified locations with drainage and road condition issues. Improvements to road, drainage, and brushing will reduce maintenance effort.		



**#4: McCarthy Road MP 0 to 15 Rehabilitation (from rock cut near Chitina to Strelna Creek)**

Project Name		McCarthy Road MP 0 to 15 Rehabilitation			
Priority	High	Priority is based on resolving key needs related to improving safety, maintaining reliable access, and improving infrastructure conditions along the road. During outreach, the public identified drainage and roadway cross-sections as some of the highest priorities to address.			
Timeline	Medium (5+ years)	Rehabilitation projects are not likely to advance sooner than standalone drainage improvement projects largely due to higher cost.			
Scope	Widen the McCarthy Road and add drainage improvements (like ditches and culverts). Add material to raise road in areas with poor conditions. Improve geometry (reduce curves and steep grades) to meet project design criteria. Clear roadside brush and vegetation. Add/replace signs and mile markers.				
Description	Rehabilitate the McCarthy Road from near the rock cut located east of Chitina to Strelna Creek (MP 0 to 15). Where necessary, work would include adding material to widen and/or raise the road (add 2 to 3 feet of gravel material over the existing road), improving drainage (such as constructing or re-establishing ditches, culverts), clearing roadside brush and vegetation, and adding or replacing signage.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 880,200	\$ 586,800			\$ 1,467,000
Utilities					\$ -
Right of Way					\$ -
Construction			\$ 8,796,668	\$ 5,864,445	\$ 14,661,113
TOTAL	\$ 880,200	\$ 586,800	\$ 8,796,668	\$ 5,864,445	\$ 16,128,113

**Funding**

Potential Funding Sources	PROTECT formula funds (for drainage features), STBG, NHPP (only for protective features), PROTECT discretionary grant (for drainage features), FLAP, HSIP, BUILD
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS

Environmental	Value	Comments
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	No	
Permits Required	Yes	USACE Section 404 Permit; ADF&G Fish Habitat Permit

Project Name		McCarthy Road MP 0 to 15 Rehabilitation	
Draft Purpose & Need		<p>The purpose of the project is to ensure safer and more reliable access for roadway users by meeting design standards (such as addressing narrow road width, poor sight lines, road curvature, and steep grades) and improving drainage along the McCarthy Road. Needs arise from the following:</p> <ul style="list-style-type: none"> <li>• The road is narrow in places and needs to be widened to improve safety. The road also has sharp curves and steep grades in locations; reducing these would improve safety.</li> <li>• There are numerous drainage issues, which partly can be attributed to lack of ditches. Thawing permafrost exists uphill of the road at Kotsina Bluffs. Surface water runoff that is unable to drain contributes to poor road condition. Poor drainage has led to deterioration of the road, safety concerns by drivers, and increased maintenance costs. The DOT&amp;PF M&amp;O staff have indicated substantial maintenance issues.</li> <li>• Members of the public have cited speeding as a concern.</li> </ul> <p>Widening the road, improving and/or constructing new drainage features (e.g., ditches, culverts), and adding material to raise the roadway in select areas will improve reliability and safety for travelers and reduce maintenance costs. Adding speed limit signs and mile markers are intended to improve safety for travelers.</p>	
List Assumptions, Unknowns, Other Environmental Impacts		<ul style="list-style-type: none"> <li>• Likely contained within the existing ROW, reducing coordination efforts and chances of delay.</li> <li>• A Native allotment extends into the road ROW; up to 0.6 acres may be impacted. Future design will aim to minimize or avoid these impacts when identifying the areas for improvement.</li> <li>• There are no known AHRS sites; however future consultation may reveal unrecorded sites.</li> <li>• The Copper River Campground is located east of the Copper River near MP 1.6.</li> <li>• There are two RS 2477s (Chitina River-Strelna Trail and Bellum's [Billum's] Crossing) and two 17b easements.</li> <li>• Up to 4 acres of NWI-mapped wetlands (freshwater emergent wetlands, freshwater forested/ shrub wetlands, and riverine designation) may be impacted.</li> <li>• Road crosses anadromous streams (Copper River and Strelna Creek).</li> <li>• Consider migratory birds and preconstruction surveys. Consider revegetation plan; nearly 100 invasive plants have been identified.</li> </ul>	
Right of Way		Value	Comments
Confidence in ROW Estimate		None	No ROW impacts anticipated.
Utilities		Value	Comments
Confidence in Utility Estimate		None	No utility impacts anticipated.
Bridge		Value	Comments
Bridge Work Included		No	No bridge work anticipated.

<b>Project Name</b>		<b>McCarthy Road MP 0 to 15 Rehabilitation</b>
<b>Design Notes</b>		
List Assumptions, Unknowns, etc	Rehab focuses on improving areas identified to be in poor condition (by M&O, Public, Stakeholders, Project Team). Based on identified areas and high-level roadway modeling, about 50% of project corridor is assumed to be improved. Road widened to 24-ft width. In areas where road is raised, 36-inch structural section (6-inch surface course, 30-inch borrow) provided. Clearing and grubbing to be completed for entire project footprint. All drainage culverts to be 24-inch in size and installed with thaw pipe.	
<b>Maintenance</b>		
List Assumptions, Unknowns, etc	M&O has identified locations with drainage and road condition issues. Improvements to road, drainage, and brushing will reduce maintenance effort.	

**#5: McCarthy Road MP 15 to 27 Rehabilitation (between Strelna Creek and Chokosna River)**

Project Name		McCarthy Road MP 15 to 27 Rehabilitation			
Priority	High	Priority is based on resolving key needs related to improving safety, maintaining reliable access, and improving infrastructure conditions along the road. During outreach, the public identified drainage and roadway cross-sections as some of the highest priorities to address.			
Timeline	Medium (5+ years)	Rehabilitation projects are not likely to advance sooner than standalone drainage improvement projects largely due to higher cost.			
Scope	Widen the McCarthy Road and add drainage improvements (like ditches and culverts). Add material to raise road in areas with poor conditions. Improve geometry (reduce curves and steep grades) to meet project design criteria. Clear roadside brush and vegetation. Add/replace signs and mile markers.				
Description	Rehabilitate the McCarthy Road between Strelna Creek and Chokosna River (MP 15 to 27). Where necessary, work would include adding material to widen and/or raise the road (add 2 to 3 feet of gravel material over the existing road), improving drainage (such as constructing or re-establishing ditches and culverts), clearing roadside brush and vegetation, and adding or replacing signage.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 928,800	\$ 619,200			\$ 1,548,000
Utilities					\$ -
Right of Way					\$ -
Construction			\$9,286,920	\$ 6,191,280	\$15,478,200
TOTAL	\$ 928,800	\$619,200	\$9,286,920	\$6,191,280	\$17,026,200

**Funding**

Potential Funding Sources	PROTECT formula funds (for drainage features), STBG, NHPP (only for protective features), PROTECT discretionary grant (for drainage features), HSIP, FLAP, BUILD
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS

Environmental	Value	Comments
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	Potential for involvement	AHRS sites present in close vicinity (one site was previously determined not eligible and one site had no determination of eligibility).
Permits Required	Yes	USACE Section 404 Permit; ADF&G Fish Habitat Permit

Project Name		McCarthy Road MP 15 to 27 Rehabilitation	
Draft Purpose & Need		<p>The purpose of the project is to ensure safer and more reliable access for roadway users by meeting design standards (such as addressing narrow road width, poor sight lines, road curvature, steep grades) and improving drainage along the McCarthy Road. Needs arise from the following:</p> <ul style="list-style-type: none"><li>• The road is narrow in places and needs to be widened to improve safety. The road also has sharp curves and steep grades in locations; reducing these would improve safety.</li><li>• There are numerous drainage issues, which partly can be attributed to lack of ditches. Poor drainage has led to deterioration of the road, safety concerns by drivers, and increased maintenance costs.</li></ul> <p>Widening the road, improving or constructing new drainage features (like ditches or culverts), and adding material to raise the roadway in select areas would improve reliability and safety for travelers and reduce maintenance costs. Adding speed limit signs and mile markers are intended to improve safety for travelers.</p>	
List Assumptions, Unknowns, Other Environmental Impacts		<ul style="list-style-type: none"><li>• Likely contained within the existing ROW, reducing coordination efforts and chances of delay.</li><li>• There are two known AHRS sites in the area; future consultation may reveal unrecorded sites.</li><li>• The Kuskulana Bridge wayside near MP 17.3 is owned and managed by the NPS.</li><li>• There are no RS 2477s or 17b easements in the area.</li><li>• Up to 10 acres of NWI-mapped wetlands (freshwater emergent wetlands and freshwater forested/ shrub wetlands) may be impacted.</li><li>• Road crosses anadromous streams (Strelna Creek, Chokosna Lake outlet, Chokosna River Tributary, and Chokosna River). These are all culverts except for the Chokosna River crossing. ADF&amp;G designated the Chokosna Lake outlet crossing as likely deficient for fish passage.</li><li>• Consider migratory birds and preconstruction surveys. Consider revegetation plan; nearly 100 invasive plants have been identified.</li></ul>	
Right of Way		Value	Comments
Confidence in ROW Estimate	None	No ROW impacts anticipated.	
Utilities		Value	Comments
Confidence in Utility Estimate	None	No utility impacts anticipated.	
Bridge		Value	Comments
Bridge Work Included	No	No bridge work anticipated.	
Design Notes			
List Assumptions, Unknowns, etc		<p>Rehab focuses on improving areas identified to be in poor condition (by M&amp;O, Public, Stakeholders, Project Team). Based on identified areas and high-level roadway modeling, about 65% of project corridor is assumed to be improved. Road widened to 24-ft width. In areas where road is raised, 36-inch structural section (6-inch surface course, 30-inch borrow) provided. Clearing and grubbing to be completed for entire project footprint. All drainage culverts to be 24-inch in size and installed with thaw pipe.</p>	
Maintenance			
List Assumptions, Unknowns, etc		<p>M&amp;O has identified locations with drainage and road condition issues. Improvements to road, drainage, and brushing will reduce maintenance effort.</p>	

**#6: McCarthy Road MP 27 to 44 Rehabilitation (between Chokosna River and Lakina River)**

Project Name		McCarthy Road MP 27 to 44 Rehabilitation			
Priority	High	Priority is based on resolving key needs related to improving safety, maintaining reliable access, and improving infrastructure conditions along the road. During outreach, the public identified drainage and roadway cross-sections as some of the highest priorities to address.			
Timeline	Medium (5+ years)	Rehabilitation projects are not likely to advance sooner than standalone drainage improvement projects largely due to higher cost.			
Scope	Widen the McCarthy Road and add drainage improvements (like ditches and culverts). Add material to raise road in areas with poor conditions. Improve geometry (reduce curves and steep grades) to meet project design criteria. Clear roadside brush and vegetation. Add/replace signs and mile markers.				
Description	Rehabilitate the McCarthy Road between Chokosna River and Lakina River (MP 27 to 44). Where necessary, work would include adding material to widen and/or raise the road (add 2 to 3 feet of gravel material over the existing road), improving drainage (such as constructing or re-establishing ditches and culverts), clearing roadside brush and vegetation, and adding or replacing signage.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 1,288,200	\$ 858,800			\$ 2,147,000
Utilities					\$ -
Right of Way		\$ 350,000			\$ 350,000
Construction			\$12,878,815	\$8,585,877	\$21,464,692
TOTAL	\$ 1,288,200	\$1,208,800	\$12,878,815	\$8,585,877	\$23,961,692

**Funding**

Potential Funding Sources	PROTECT formula funds (for drainage features), STBG, NHPP (only for protective features), PROTECT discretionary grant (for drainage features), HSIP, FLAP, BUILD
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS

Environmental	Value	Comments
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	Potential for involvement	AHRS sites present in close vicinity (one site was previously determined not eligible and one site had no determination of eligibility). Adjacent National Park Service land (Gilahina Trestle Wayside).
Permits Required	Yes	USACE Section 404 Permit; ADF&G Fish Habitat Permit

Project Name		McCarthy Road MP 27 to 44 Rehabilitation	
Draft Purpose & Need		<p>The purpose of the project is to ensure safer and more reliable access for roadway users by meeting design standards (such as addressing narrow road width, poor sight lines, road curvature, steep grades) and improving drainage along the McCarthy Road. Needs arise from the following:</p> <ul style="list-style-type: none"><li>• The road is narrow in places and needs to be widened to improve safety. The road also has sharp curves and steep grades in locations; reducing these would improve safety.</li><li>• There are numerous drainage issues, which can be partly attributed to lack of ditches. Several locations experience glaciation over the roadway during the winter, such as near approximate MP 27, 34, 36, and 38. Poor drainage has led to deterioration of the road, safety concerns by drivers, and increased maintenance costs.</li></ul> <p>Widening the road, improving or constructing new drainage features (like ditches or culverts), and adding material to raise the roadway in select areas would improve reliability and safety for travelers and reduce maintenance costs. Adding speed limit signs and mile markers are intended to improve safety for travelers.</p>	
List Assumptions, Unknowns, Other Environmental Impacts		<ul style="list-style-type: none"><li>• Approximately 3.1 acres near Gilahina River Bridge (MP 29) fall outside of the road ROW on NPS land.</li><li>• DOT&amp;PF and NPS intend to resolve the ROW discrepancy, so the road ROW incorporates the existing road location.</li><li>• Native allotments extend into the road ROW; up to 5.1 acres may be impacted.</li><li>• There are no known AHRS sites; however future consultation may reveal unrecorded sites.</li><li>• The NPS-owned and maintained Gilahina Trestle Wayside near the Gilahina River bridge and the Crystalline Hills Trailhead near MP 34.8 (located north of the road) may be impacted by work in the area.</li><li>• There are no RS 2477s or 17b easements in the area.</li><li>• The public has requested a natural spring that provides access to drinking water near MP 36.4 be avoided.</li><li>• Up to 6 acres of NWI-mapped wetlands (freshwater emergent wetlands, freshwater forested/ shrub wetlands, and riverine designation) may be impacted.</li><li>• Road crosses anadromous streams (Gilahina River [bridge] and Crystal Creek [culvert]).</li><li>• Road crosses four additional streams with no assigned AWC stream number. ADF&amp;G identifies three culverts as likely deficient for fish passage (two Chokosna River tributaries and Ruth Creek) and one adequate for fish passage (another Chokosna River Tributary).</li><li>• Consider migratory birds and preconstruction surveys. Consider revegetation plan; nearly 140 invasive plants have been identified.</li></ul>	
Right of Way		Value	Comments
Confidence in ROW Estimate		Moderate	ROW area impacted is 3.1 acres. DOT&PF ROW provided SSE estimate in March 2025.
Utilities		Value	Comments
Confidence in Utility Estimate		None	No utility impacts anticipated.

Project Name		McCarthy Road MP 27 to 44 Rehabilitation	
Bridge		Value	Comments
Bridge Work Included		No	No bridge work anticipated.
Design Notes			
List Assumptions, Unknowns, etc		Rehab focuses on improving areas identified to be in poor condition (by M&O, Public, Stakeholders, Project Team). Based on identified areas and high-level roadway modeling, about 65% of project corridor is assumed to be improved. Road widened to 24-ft width. In areas where road is raised, 36-inch structural section (6-inch surface course, 30-inch borrow) provided. Clearing and grubbing to be completed for entire project footprint. All drainage culverts to be 24-inch in size and installed with thaw pipe.	
Maintenance			
List Assumptions, Unknowns, etc		M&O has identified locations with drainage and road condition issues. Improvements to road, drainage, and brushing will reduce maintenance effort.	



**#7: McCarthy Road MP 44 to 59 Rehabilitation (between Lakina River and Kennicott River)**

Project Name		McCarthy Road MP 44 to 59 Rehabilitation			
Priority	High	Priority is based on resolving key needs related to improving safety, maintaining reliable access, and improving infrastructure conditions along the road. During outreach, the public identified drainage and roadway cross-sections as some of the highest priorities to address.			
Timeline	Medium (5+ years)	Rehabilitation projects are not likely to advance sooner than standalone drainage improvement projects largely due to higher cost.			
Scope	Widen the McCarthy Road and add drainage improvements (like ditches and culverts). Add material to raise road in areas with poor conditions. Improve geometry (reduce curves and steep grades) to meet project design criteria. Clear roadside brush and vegetation. Add/replace signs and mile markers.				
Description	Rehabilitate the McCarthy Road between Lakina River and Kennicott River (MP 44 to 59). Where necessary, work would include adding material to widen and/or raise the road (add 2 to 3 feet of gravel material over the existing road), improving drainage (such as constructing or re-establishing ditches and culverts), clearing roadside brush and vegetation, and adding or replacing signage.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 1,412,400	\$ 941,600			\$ 2,354,000
Utilities					\$ -
Right of Way					\$ -
Construction			\$14,123,520	\$9,415,680	\$23,539,200
TOTAL	\$ 1,412,400	\$ 941,600	\$14,123,520	\$9,415,680	\$25,893,200
Funding					
Potential Funding Sources	PROTECT formula funds (for drainage features), STBG, NHPP (only for protective features), PROTECT discretionary grant (for drainage features), HSIP, FLAP, BUILD				
Potential Lead Agency Sponsor	DOT&PF				
Potential Project Partners	NPS				
Environmental		Value	Comments		
Anticipated Environmental Doc	CE				
Section 4(f) involvement?	Potential for involvement	AHRS sites present in close vicinity (one site was previously determined not eligible and one site had no determination of eligibility).			
Permits Required	Yes	USACE Section 404 Permit; ADF&G Fish Habitat Permit			

Project Name		McCarthy Road MP 44 to 59 Rehabilitation	
Draft Purpose & Need		<p>The purpose of the project is to ensure safer and more reliable access for roadway users by meeting design standards (such as addressing narrow road width, poor sight lines, road curvature, steep grades) and improving drainage along the McCarthy Road. Needs arise from the following:</p> <ul style="list-style-type: none"> <li>• The road is narrow in places and needs to be widened to improve safety. The road also has sharp curves and steep grades in locations; reducing curvature and steep grades would improve safety.</li> <li>• There are numerous drainage issues, which can be partly attributed to lack of ditches. Beaver activity is also contributing to drainage issues (between MP 50 and 52), as is glaciation over the roadway during the winter (approx. MP 54.5 and 57.5). Thawing permafrost near approximate MP 57.5 is a concern. Poor drainage has led to deterioration of the road, safety concerns by drivers, and increased maintenance costs.</li> </ul> <p>Widening the road, improving and/or constructing new drainage features (e.g., ditches, culverts), and adding material to raise the roadway in select areas will improve reliability and safety for travelers and reduce maintenance costs. Adding speed limit signs and mile markers are intended to improve safety for travelers.</p>	
List Assumptions, Unknowns, Other Environmental Impacts		<ul style="list-style-type: none"> <li>• Likely contained within the existing ROW, reducing coordination efforts and chances of delay.</li> <li>• There are two known AHRS sites in the area; future consultation may reveal unrecorded sites.</li> <li>• The State Wayside near MP 55.2 is located on state land and managed by the NPS.</li> <li>• There is one RS 2477 (Nikolai Mine Trail) and no 17b easements in the area.</li> <li>• Up to 15 acres of NWI-mapped wetlands (freshwater emergent wetlands and freshwater forested/ shrub wetlands) may be impacted.</li> <li>• Road crosses anadromous streams (Long Lake Creek/Outlet, Long Lake Creek/Tributary, and Kennicott River).</li> <li>• Road crosses six additional streams with no assigned AWC stream number (another Long Lake Creek/Tributary, three unnamed crossings, Tractor Creek and Swift Creek). ADF&amp;G identifies the six culverts as likely deficient for fish passage.</li> <li>• Consider migratory birds and preconstruction surveys. Consider revegetation plan; nearly 160 invasive plants have been identified.</li> </ul>	
Right of Way		Value	Comments
Confidence in ROW Estimate		None	No ROW impacts anticipated.
Utilities		Value	Comments
Confidence in Utility Estimate		None	No utility impacts anticipated.
Bridge		Value	Comments
Bridge Work Included		No	No bridge work anticipated.
Design Notes			
List Assumptions, Unknowns, etc		<p>Rehab focuses on improving areas identified to be in poor condition (by M&amp;O, Public, Stakeholders, Project Team). Based on identified areas and high-level roadway modeling, 75% of project corridor assumed to be improved. Road widened to 24-ft width. In areas where road is raised, 36-</p>	

Project Name	McCarthy Road MP 44 to 59 Rehabilitation
	inch structural section (6-inch surface course, 30-inch borrow) provided. Clearing and grubbing to be completed for entire project footprint. All drainage culverts to be 24-inch in size and installed with thaw pipe.
<b>Maintenance</b>	
List Assumptions, Unknowns, etc	M&O has identified locations with drainage and road condition issues. Improvements to road, drainage, and brushing will reduce maintenance effort.

## #8: McCarthy Road MP 59 to 63 Rehabilitation (from Kennicott River to Kennicott Subdivision)

Project Name		McCarthy Road MP 59 to 63 Rehabilitation			
Priority	Medium	Priority is based on resolving key needs related to improving safety, maintaining reliable access, and improving infrastructure conditions along the road. During outreach, the public identified drainage and roadway cross-sections as some of the highest priorities to address.  This project received a medium priority (rather than a high priority) because of the lower vehicle traffic east of the Kennicott River compared to west of it.			
Timeline	Medium (5+ years)	Rehabilitation projects are not likely to advance sooner than standalone drainage improvement projects largely due to higher cost.			
Scope	Widen the McCarthy Road and add drainage improvements (like ditches and culverts). Add material to raise road in areas with poor conditions. Clear roadside brush and vegetation. Add/replace signs and mile markers.				
Description	Rehabilitate the McCarthy Road between Kennicott River and Kennicott subdivision (MP 59 to 63). Where necessary, work would include adding material to widen and/or raise the road (add 2 to 3 feet of gravel material over the existing road), improving drainage (such as constructing or re-establishing ditches and culverts), clearing roadside brush and vegetation, and adding or replacing signage.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 488,400	\$ 325,600			\$ 814,000
Utilities					\$ -
Right of Way					\$ -
Construction			\$8,134,673		\$8,134,673
TOTAL	\$ 488,400	\$ 325,600	\$8,134,673	\$ -	\$8,948,673

### Funding

Potential Funding Sources	PROTECT formula funds (for drainage features), PROTECT discretionary grant (for drainage features), FLAP, STBG, NHPP (only for protective features), HSIP, BUILD
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS

Environmental	Value	Comments
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	Potential for involvement	AHRS sites present in close vicinity (two sites do not have a determination of eligibility).
Permits Required	Yes	USACE Section 404 Permit; ADF&G Fish Habitat Permit

Project Name		McCarthy Road MP 59 to 63 Rehabilitation	
Draft Purpose & Need		<p>The purpose of the project is to ensure safer and more reliable access for roadway users by meeting design standards (such as addressing narrow road width) and improving drainage along the McCarthy Road. Needs arise from the following:</p> <ul style="list-style-type: none"> <li>• The road is narrow in places and needs to be widened to improve safety.</li> <li>• There are numerous drainage issues, which can be partly attributed to lack of ditches. Poor drainage has led to deterioration of the road, safety concerns by drivers, and increased maintenance costs.</li> <li>• Abandoned rails protrude from the embankment in the ditches, preventing some maintenance activities such as brush clearing with hydro-axes.</li> </ul> <p>Widening the road, improving and/or constructing new drainage features (like ditches or culverts), removing abandoned rails, and adding material to raise the roadway in select areas would improve reliability and safety for travelers and reduce maintenance costs. Adding speed limit signs and mile markers are intended to improve safety for travelers.</p>	
List Assumptions, Unknowns, Other Environmental Impacts		<ul style="list-style-type: none"> <li>• Likely contained within the existing ROW, reducing coordination efforts and chances of delay.</li> <li>• There are two known AHRS sites in the area; future consultation may reveal unrecorded sites.</li> <li>• The vault toilet facilities near the swimming hole vicinity are maintained by the McCarthy Area Council (MAC).</li> <li>• There are no RS 2477s or 17b easements in the area.</li> <li>• Few NWI-mapped wetlands are present. Up to 0.2 acres of freshwater forested/ shrub wetland may be impacted.</li> <li>• Road crosses anadromous streams (Kennicott River, near the swimming hole, and Clear Creek). ADF&amp;G designate the culverts at the swimming hole and Clear Creek as likely deficient for fish passage.</li> <li>• Consider migratory birds and preconstruction surveys. Consider revegetation plan; nearly 30 invasive plants have been identified. revegetation plan for this project.</li> </ul>	
Right of Way		Value	Comments
Confidence in ROW Estimate		None	No ROW impacts anticipated.
Utilities		Value	Comments
Confidence in Utility Estimate		None	No utility impacts anticipated.
Bridge		Value	Comments
Bridge Work Included		No	No bridge work anticipated.
Design Notes			
List Assumptions, Unknowns, etc		<p>Rehab focuses on improving areas identified to be in poor condition (by M&amp;O, Public, Stakeholders, Project Team). Based on identified areas and high-level roadway modeling, 80% of project corridor assumed to be improved. Road widened to 24-ft width. In areas where road is raised, 36-inch structural section (6-inch surface course, 30-inch borrow) provided. Clearing and grubbing to be completed for entire project footprint. All drainage culverts to be 24-inch in size and installed with thaw pipe.</p>	

<b>Project Name</b>	<b>McCarthy Road MP 59 to 63 Rehabilitation</b>
<b>Maintenance</b>	
List Assumptions, Unknowns, etc	M&O has identified locations with drainage and road condition issues. Improvements to road, drainage, and brushing will reduce maintenance effort.

**#9: McCarthy Road MP 1.5 to 3 Reconstruction (reroute near Kotsina Bluffs)**

Project Name		McCarthy Road MP 1.5 to 3 Reconstruction			
Priority	High	Priority is based on resolving key needs related to improving safety, maintaining reliable access, improving infrastructure conditions along the road, and reducing the risk of road closure by realigning the road away from the landslide hazard. This is one of the highest identified needs areas in the corridor. For several decades prior to the PEL study, the DOT&PF and the public have indicated this area as a high priority of concern for the road corridor, due to historic landslides and the continuing likelihood of more. In addition to the landslide hazard and risk of slope failure, the road condition is poor due to numerous drainage issues. This stretch requires frequent DOT&PF maintenance. The road is also narrow. During outreach, the public identified the Kotsina Bluffs focus area as one of the highest priorities to address. A member of the public stated, “if the road slides, no other project along the corridor matters.”			
Timeline	Long (10+ years)	Despite being one of the highest priorities in the corridor, the timeline for implementing this project is in the long-term due to factors such as cost, ability to obtain funding, ROW acquisition, and environmental approvals.			
Scope	Reconstruct approximately 1.5 miles of the McCarthy Road from MP 1.5 to 3. Project would realign the existing road onto the dry Kotsina riverbed with substantial riprap.				
Description	Realign approximately 1.5 miles of the McCarthy Road from MP 1.5 to 3 onto the dry Kotsina riverbed, away from and off the Kotsina Bluffs and landslide hazard. Road would be armored appropriately with riprap to protect it from the river. The existing road alignment would be abandoned. Requires acquisition of new ROW.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 3,910,800	\$ 2,607,200			\$ 6,518,000
Utilities					\$ -
Right of Way		\$ 375,000			\$ 375,000
Construction			\$ 19,552,089	\$ 45,621,540	\$ 65,173,629
TOTAL	\$ 3,910,800	\$ 2,982,200	\$ 19,552,089	\$ 45,621,540	\$ 72,066,629

**Funding**

Potential Funding Sources	PROTECT formula funds (for resilience features), STBG, NHPP (only for protective features), PROTECT discretionary grant (for resiliency features), FLAP, HSIP, BUILD (only if ROW is not on federally-owned lands), TTP
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS, Chitna Native Corporation

Environmental	Value	Comments
Anticipated Environmental Doc	EA or EIS	

Project Name	McCarthy Road MP 1.5 to 3 Reconstruction	
Section 4(f) involvement?	No	
Permits Required	Yes	USCG Section 9 Permit; USACE Section 404/10 Permit; ADF&G Fish Habitat Permit
Draft Purpose & Need	<p>The purpose of the project is to ensure a safe and reliable road corridor by improving roadway conditions, meeting current design standards (such as road width), and preventing road closure due to landslides. Project needs arise from the following:</p> <ul style="list-style-type: none"> <li>• Landslide hazard: Historic landslides have resulted in road closures and continues to pose a risk of sliding and road closure. A massive landslide would close McCarthy Road, cutting off the only access into the area for residents and visitors.</li> <li>• Road conditions and drainage issues: Substantial drainage issues result in poor road condition. Thawing permafrost exists uphill from the road. The bluffs shed due to over saturation of unconsolidated material. There are constant slope failures. This section of the road requires frequent attention by DOT&amp;PF M&amp;O.</li> <li>• Design standards: The existing road alignment is narrow, with some sections between 15 and 16 feet wide, rather than 24 feet wide. Addressing these needs by relocating a section of the McCarthy Road away from a landslide area would improve reliability and safety for travelers.</li> </ul>	
List Assumptions, Unknowns, Other Environmental Impacts	<ul style="list-style-type: none"> <li>• Approximately 17 acres along the dry Kotsina Riverbed fall outside of the road ROW for this proposed project on land designated as Alaska Native Lands Patented or Interim Conveyed. Pursuant to a 2017 Settlement Agreement between Ahtna, Inc., and the State of Alaska, Ahtna, Inc. holds fee title to approximately 165 acres of land near the Kotsina delta, subject to multiple material site ROWs held by the State of Alaska. Additional coordination with Ahtna, Inc. will be necessary for the road reroute.</li> <li>• There are no known AHRs sites; however future consultation may reveal unrecorded sites.</li> <li>• The Copper River Campground is located east of the Copper River near MP 1.6.</li> <li>• There are two RS 2477s (Bellum's [Billum's] Crossing -Taral and Chitina-Elliot Trail) and no 17b easements in the area.</li> <li>• NWI-mapped wetlands are present. Up to 15 acres of designated as riverine (i.e., unvegetated gravel bars) may be impacted requiring coordination with USACE.</li> <li>• The area does not have a delineated 100-year floodplain or regulatory floodway. Future coordination is needed with DOT&amp;PF hydrology section to determine need for a LHS and/or H&amp;H study. [e] DOT&amp;PF will need to assess the project's impacts on Kotsina River floodplains, for a potential longitudinal encroachment, per DOT&amp;PF floodplain impacts guidance and compliance with EO 11988.</li> <li>• Reroute would be constructed in the dry Kotsina riverbed. Kotsina River is anadromous, as is the downstream Copper River.</li> <li>• The Kotsina River delta is a popular subsistence fishing area, which will require coordination with subsistence users.</li> </ul>	



Project Name		McCarthy Road MP 1.5 to 3 Reconstruction	
		<ul style="list-style-type: none"><li>The Kotsina River is considered navigable from its confluence with the Copper River upstream 8 river miles, which will require USCG coordination.</li><li>Consider migratory birds and preconstruction surveys.</li></ul>	
Right of Way		Value	Comments
Confidence in ROW Estimate	Moderate	ROW area impacted is 16.6 acres. DOT&PF ROW provided SSE estimate in March 2025.	
Utilities		Value	Comments
Confidence in Utility Estimate	None	No utility impacts anticipated.	
Bridge		Value	Comments
Bridge Work Included	No	No bridge work anticipated.	
Design Notes			
List Assumptions, Unknowns, etc		Realignment of 1.5 miles of roadway onto riverbed. Road profile set 4-ft above observed OHW. Riprap protection of roadway assumed depth 3-ft Type IV and 1-ft Type I. Future design to complete H&H and set minimum profile height above riverbed and size riprap.	
Maintenance			
List Assumptions, Unknowns, etc		Roadway realignment will reduce maintenance effort. Existing maintenance issues to be reduced/eliminated: Drainage issues, road sinking/sluffing, narrow road, high cutbanks, rock/mud slides.	

**#10: McCarthy Road MP 29 Gilahina River Bridge (#1194) Replacement**

Project Name		McCarthy Road MP 29 Gilahina River Bridge (#1194) Replacement			
Priority	Medium		Priority is based on resolving needs related to improving safety and maintaining reliable access, addressing roadway elements to meet current design standards, and improving infrastructure conditions.		
Timeline	Short (less than five years)		Timeline assumes a bridge replacement project in nearly the existing alignment is somewhat straightforward to implement. Timeline considers resolving the ROW discrepancy as well as obtaining environmental approvals.		
Scope	Replacement of the single-lane Gilahina Bridge #1194 at MP 29 on the McCarthy Road with a new two-lane bridge with higher clearance. Road would be raised to match new bridge, which would also reduce the steep road grade.				
Description	Replace the Gilahina Bridge #1194 at MP 29 on the McCarthy Road with a two-laned bridge with higher clearance. The road would be raised to match the new bridge, which would reduce (but not fully eliminate) the steep grade. Expand the ROW to incorporate the road.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post-env)	\$ 334,200	\$222,800			\$ 557,000
Utilities					\$ -
Right of Way		\$250,000			\$ 250,000
Construction			\$5,569,286		\$5,569,286
TOTAL	\$ 334,200	\$472,800	\$5,569,286	\$ -	\$6,376,286

**Funding**

Potential Funding Sources	BFP, BIP, STBG, NHPP (only for protective features), FLAP, HSIP, BUILD (only if ROW is not on federally-owned lands)
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS, WFL

Environmental	Value	Comments
Anticipated Environmental Doc	CE or EA	
Section 4(f) involvement?	Likely	National Park Service land (nearby Gilahina Trestle Wayside).
Permits Required	Yes	USCG Section 9 Permit; USACE Section 404/10 Permit; ADF&G Fish Habitat Permit

Project Name		McCarthy Road MP 29 Gilahina River Bridge (#1194) Replacement	
Draft Purpose & Need		<p>The purpose of the project is to improve safety by meeting current design standards and maintaining reliable connectivity along the McCarthy Road by addressing sight distance, clearance, and load restriction issues associated with the existing Gilahina River Bridge (#1194).</p> <p>The existing one-lane bridge is in an area that has one of the steepest grades along the road corridor; it is on sharp roadway curves that are constrained by topography, contributing to poor sight distance. Increasing the bridge clearance and then raising the road to match the raised bridge would decrease the steep road grade. Of all the vehicle bridges in the road corridor, this bridge has the most limiting load restriction (that is, the lowest weight capacity) and the lowest bridge sufficiency rating.</p> <p>Scour occurs at the bridge abutments, debris gets into the girders, and a higher bridge clearance of over the river is needed.</p> <p>The road is not located in the road ROW which is where the abandoned railway trestle stands; the ROW discrepancy needs to be resolved.</p>	
List Assumptions, Unknowns, Other Environmental Impacts		<ul style="list-style-type: none"> <li>• DOT&amp;PF and NPS intend to resolve the ROW discrepancy, so the road ROW incorporates the existing road location.</li> <li>• The NPS' owned and maintained Gilahina Trestle Wayside is near the bridge crossing and would be impacted. Likely Section 4(f) involvement.</li> <li>• There are no known AHRS sites within the area, though they are nearby. Future consultation and cultural resources survey may reveal unrecorded sites.</li> <li>• There are no RS 2477s or 17b easements in the area.</li> <li>• NWI-mapped wetlands are present outside of the project area.</li> <li>• The area does not have a delineated 100-year floodplain or regulatory floodway. Future coordination with DOT&amp;PF hydrology section will determine need for an LHS and/or H&amp;H study.</li> <li>• The new bridge would span the Gilahina River, which is anadromous.</li> <li>• Consider migratory birds and preconstruction surveys. Consider revegetation plan; eight invasive plants have been identified.</li> </ul>	
Right of Way		Value	Comments
Confidence in ROW Estimate		Moderate	The proposed project footprint extends about 0.7 acres outside of the road ROW. However, DOT&PF intend to resolve the ROW discrepancy in this location. DOT&PF ROW provided SSE estimate in March 2025.
Utilities		Value	Comments
Confidence in Utility Estimate		None	No utility impacts anticipated.
Bridge		Value	Comments
Bridge Work Included		Yes	Replace Gilahina Bridge (#1194) on existing alignment. Bridge elevation to be raised and road approach profile to be improved.
Design Notes			
List Assumptions, Unknowns, etc		<p>Unknown geotechnical condition for bridge foundation. Raise road elevation to improve grade and to meet project design criteria. Bridge construction to mitigate impacts to existing Wayside. Bridge to be built immediately adjacent to the existing bridge to reduce impact to travel during construction. ROW discrepancy to be resolved.</p>	

<b>Project Name</b>	<b>McCarthy Road MP 29 Gilahina River Bridge (#1194) Replacement</b>
<b>Maintenance</b>	
List Assumptions, Unknowns, etc	New bridge will reduce maintenance effort. Existing maintenance issues to be reduced/eliminated: Load restrictions. Debris in girders from low clearance over river. Scour at abutments.

**#11: McCarthy Road MP 44 to 48.5 Reconstruction (existing alignment improvements near Long Lake)**

Project Name		McCarthy Road MP 44 to 48.5 Reconstruction			
Priority	High	Priority is based on resolving key needs related to improving safety, maintaining reliable access, and improving infrastructure conditions along the road. During outreach, the public identified the Long Lake focus area as one of the highest priorities to address and drew some of the most attention during the PEL outreach efforts.			
Timeline	Medium (5+ years)	Despite the high priority of this location, the project timeline is influenced by factors such as the high cost of trucking in large porous rock. More cost-effective improvements, like a standalone drainage project, might be able to be implemented sooner.			
Scope	Reconstruct 4.5 miles of the McCarthy Road between MP 44 to 48.5. Project would include road width improvements, resurfacing with new gravel, geometric improvements, roadway signage, and drainage improvements. Drainage improvements would include new ditches, culverts, and porous rock ditch lining. Clear roadside brush and vegetation.				
Description	Reconstruct approximately 4.5 miles of the McCarthy Road along Long Lake in its existing alignment. Work would include widening the road to design standards; addressing roadway geometry by reducing sharp curves and steeper grades; installing ditching, including porous rock to mitigate drainage and glaciation issues; clearing brush and vegetation; and installing signage. Porous rock provides a permeable layer that allows water to flow through the embankment.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 813,600	\$ 542,400			\$ 1,356,000
Utilities					\$ -
Right of Way					\$ -
Construction			\$ 8,134,746	\$ 5,423,164	\$ 13,557,910
TOTAL	\$ 813,600	\$ 542,400	\$ 8,134,746	\$ 5,423,164	\$ 14,913,910

**Funding**

Potential Funding Sources	STBG, FLAP, HSIP, BUILD (only if ROW is not federally-owned lands)
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS

Environmental	Value	Comments
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	No	
Permits Required	Yes	USACE Section 404 Permit; ADF&G Fish Habitat Permit

Project Name		McCarthy Road MP 44 to 48.5 Reconstruction	
Draft Purpose & Need		<p>The purpose of the project is to ensure safer and more reliable access for roadway users by meeting current design standards (e.g., road width, curvature, grade) and improving drainage along the McCarthy Road. Project needs arise from the following:</p> <ul style="list-style-type: none"><li>• Road conditions and drainage issues: Drainage problems, including glaciation and lack of ditching, deteriorate the road and pose safety concerns for drivers.</li><li>• Proactive improvements would reduce maintenance and enhance resilience.</li><li>• Design standards: The road is narrow, with high cutbanks, steep drop-offs, sharp curves, and steep grade.</li><li>• Members of the public have cited speeding as a concern. Adding speed limit signs and mile markers are intended to improve safety for travelers.</li></ul> <p>Addressing these needs would improve reliability and safety for travelers and reduce maintenance costs.</p>	
List Assumptions, Unknowns, Other Environmental Impacts		<ul style="list-style-type: none"><li>• Likely contained within the existing ROW, reducing coordination efforts and chances of delay.</li><li>• There are no known AHRS sites; however future consultation may reveal unrecorded sites.</li><li>• There are no RS 2477s or 17b easements in the area.</li><li>• Up to 3.5 acres of NWI-mapped wetlands (freshwater forested/ shrub wetlands) may be impacted.</li><li>• Road crosses anadromous streams (Long Lake Creek/Outlet and Long Lake Creek/Tributary). ADF&amp;G designates the Long Lake Creek/ Outlet as likely deficient for fish passage and the Long Lake Creek/ Tributary as maybe being inadequate.</li><li>• Consider migratory birds and preconstruction surveys. Consider revegetation plan; 50 invasive plants have been identified.</li></ul>	
Right of Way		Value	Comments
Confidence in ROW Estimate	None	No ROW impacts anticipated.	
Utilities		Value	Comments
Confidence in Utility Estimate	None	No utility impacts anticipated.	
Bridge		Value	Comments
Bridge Work Included	No	No bridge work anticipated.	
Design Notes			
List Assumptions, Unknowns, etc		Road widened to 24-ft width. 36-inch structural section (6-inch surface course, 30-inch borrow) provided. Porous rock to be installed in ditch similar to as-built project that improved drainage and glaciation on this corridor. All drainage culverts to be 24-inch in size and installed with thaw pipe.	
Maintenance			
List Assumptions, Unknowns, etc		Existing maintenance issues to be reduced/eliminated: Drainage issues, narrow road, glaciation.	

**#12: McCarthy Road MP 58 Reconstruction (existing alignment improvements)**

Project Name		McCarthy Road MP 58 Reconstruction			
Priority	Medium	Priority is based on resolving key needs related to improving safety, maintaining reliable access, improving infrastructure conditions along the road, as well as mitigating the landslide hazard risk. During outreach, the public identified the MP 58 focus area as one of the highest priorities to address. Geotechnical drilling by DOT&PF in fall 2024 indicted ongoing shallow slope failures but no clear failure plane for a large-scale failure; initial results suggest ongoing slope failures could be mitigated by flattening slope, installing geotextile fabric, and improving drainage.			
Timeline	Medium (5+ years)	Timeline is based on initial geotechnical drilling results conducted by DOT&PF in the fall 2024 and upcoming monitoring in 2025. Initial results suggest unstable slope failures are likely caused by ground saturation, with no obvious indication of a potential failure plane that a large-scale slope failure could occur upon. Smaller failures are expected as material accumulates and becomes saturated at the slope’s base but could be mitigated by the recommended improvements.			
Scope	Reconstruct 0.3 miles of the McCarthy Road between MP 57.5 to 57.8. Project would include slope stabilization, road width improvements, resurfacing with new gravel, and drainage improvements. Slope stabilization would include slope flattening and geotextile fabric. Clear roadside brush and vegetation.				
Description	Reconstruct 0.3 miles of McCarthy Road near MP 58 in its existing alignment. Work would include widening the road to design standards; improving the road surface by installing fabric and more gravel; installing debris barriers; constructing ditches; clearing brush and vegetation; and installing signage				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 259,200	\$ 172,800			\$ 432,000
Utilities					\$ -
Right of Way		\$ 300,000			\$ 300,000
Construction			\$4,315,542		\$4,315,542
TOTAL	\$ 259,200	\$ 472,800	\$4,315,542	\$ -	\$5,047,542

**Funding**

Potential Funding Sources	PROTECT formula funds (for resilience features), STBG, NHPP (only for protective features), FLAP, HSIP
Potential Lead Agency Sponsor	NPS
Potential Project Partners	DOT&PF, WFL

Environmental	Value	Comments
Anticipated Environmental Doc	CE or EA	
Section 4(f) involvement?	Potential for involvement	AHRS site present in close vicinity (one site was previously determined not eligible)

Project Name		McCarthy Road MP 58 Reconstruction	
Permits Required		No	
Draft Purpose & Need		<p>The purpose of the project is to ensure a safe and reliable road corridor by improving roadway conditions, mitigating landslide hazards, and meeting current design standards. Project needs arise from the following:</p> <ul style="list-style-type: none"><li>Landslide hazard: This section has a history of landslides that can cause road closure and require additional maintenance by DOT&amp;PF. There is concern that a massive landslide could close the McCarthy Road, cutting off access for residents and visitors.</li><li>Road conditions and drainage issues: Drainage problems (including glaciation), deterioration of the road, and safety concerns for drivers. Thawing permafrost near MP 57.5 is a concern. Proactive improvements would reduce maintenance and enhance resilience.</li><li>Design standards: The road is narrow, with high cutbanks, steep drop-offs, sharp curves, and steep grade.</li></ul> <p>Addressing these needs would improve reliability and safety for travelers and reduce maintenance costs. Adding speed limit signs and mile markers are intended to improve safety for travelers.</p>	
List Assumptions, Unknowns, Other Environmental Impacts		<ul style="list-style-type: none"><li>Slope stabilization measures will be constructed uphill on approximately 6.5 acres, of which about 6 acres is on private land and 0.5 acres on NPS land. A temporary construction easement is anticipated for construction access onto private lands.</li><li>There is one known AHRS site in the area; future consultation may reveal unrecorded sites.</li><li>There is one RS 2477 (Nikolai Mine) and no 17b easements in the area.</li><li>NWI-mapped wetlands are not present in the project area.</li><li>There are no anadromous streams in the project area.</li><li>Consider migratory birds and preconstruction surveys. Consider revegetation plan; 13 invasive plants have been identified.</li></ul>	
Right of Way		Value	Comments
Confidence in ROW Estimate		Moderate	ROW area impacted for Temporary Construction Easement is 6.5 acres. DOT&PF ROW provided SSE estimate in March 2025.
Utilities		Value	Comments
Confidence in Utility Estimate		None	No utility impacts anticipated.
Bridge		Value	Comments
Bridge Work Included		No	No bridge work anticipated.
Design Notes			
List Assumptions, Unknowns, etc		Flattened slope and erosion control measures to reduce slope failures impacting roadway. 3-ft ditch added for cross culvert drainage. Additional field exploration of existing geotechnical conditions needed.	
Maintenance			
List Assumptions, Unknowns, etc		Roadway reconstruction will reduce maintenance effort. Existing maintenance issues to be reduced/eliminated: Drainage issues, road sinking/sluffing, narrow road, high cutbanks, rock/mud slides.	



### #13: McCarthy Road Kennicott River Footbridge (#6004) Rehabilitation

Project Name	McCarthy Road Kennicott River Footbridge (#6004) Rehabilitation				
Priority	Medium	Priority is based on resolving key needs related to improving safety, maintaining reliable access, and improving infrastructure conditions along the corridor.			
Timeline	Medium (5+ years)	Timeline considers that the current pedestrian bridge conditions appear stable and other projects such as protecting the nearby river embankment from erosion should have higher priority.			
Scope	Rehabilitation of the pedestrian bridge at Kennicott River. Project would include bridge widening at piers, timber rub rail replacement, deck grating improvements, steel substructure recoating, precast slab jump span installation, and signage additions.				
Description	Rehabilitate the pedestrian bridge at Kennicott River, just east of MP 59 to improve the bridge condition and extend its service life. Modifications to the pedestrian bridge and adding signage are intended to mitigate the conflict of user groups on the bridge between ATV users and pedestrians or cyclists.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 110,400	\$ 73,600			\$ 184,000
Utilities					\$ -
Right of Way					\$ -
Construction			\$ 1,830,034		\$ 1,830,034
TOTAL	\$ 110,400	\$ 73,600	\$ 1,830,034	\$ -	\$ 2,014,034

#### Funding

Potential Funding Sources	FLAP, NSFLTP (depending on cost and significance)
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS, WFL

Environmental	Value	Comments
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	No	
Permits Required	No	
Draft Purpose & Need	<p>The purpose of the project is to extend the service life of the pedestrian bridge, repair known damage, decrease conflict among user groups, and improve safety.</p> <p>Bridge conditions are showing wear and tear, in particular the bridge decking, and need to be improved to maintain access, provide safe travel, and extend the life of the bridge. Bridge improvements would ensure public access is maintained across the Kennicott River.</p> <p>The pedestrian bridge is narrow and experiences conflicts amongst user groups, in particular pedestrians and ATV users. Bridge enhancements and signage is intended to improve access and safety for bridge users.</p>	

Project Name		McCarthy Road Kennicott River Footbridge (#6004) Rehabilitation	
List Assumptions, Unknowns, Other Environmental Impacts	<ul style="list-style-type: none"><li>Improvements are contained to the footbridge, except for a small amount of groundwork at the ends of the bridge to construct jump spans.</li><li>There are no known AHRS sites; however future consultation may reveal unrecorded sites.</li><li>There are no RS 2477s or 17b easements in the area.</li><li>Kennicott River is anadromous. No instream work is anticipated.</li><li>Consider migratory birds and preconstruction surveys. Consider revegetation plan; 5 invasive plants have been identified.</li></ul>		
Right of Way		Value	Comments
Confidence in ROW Estimate	None	No ROW impacts anticipated.	
Utilities		Value	Comments
Confidence in Utility Estimate	None	No utility impacts anticipated.	
Bridge		Value	Comments
Bridge Work Included	Yes	Rehabilitate McCarthy Road Kennicott River Footbridge (#6004).	
Design Notes			
List Assumptions, Unknowns, etc	Seismic retrofit evaluation not performed.		
Maintenance			
List Assumptions, Unknowns, etc	Existing maintenance issues to be reduced/eliminated: Rusting/damaged bridge decking, split/loose timber rub rails, debris on girders/decking supports, chipped paint on steel substructure, sloughing material at bridge approaches.		

**#14: McCarthy Road Kennicott River Erosion Control (MP 59.3)**

Project Name	McCarthy Road Kennicott River Erosion Control (MP 59.3)				
Priority	High	Priority is based on the need to maintain reliable access and protect the pedestrian bridge across Kennicott River from ongoing erosion of the western bank.			
Timeline	Short (less than five years)	Timeline is based on the need to protect the bridge from natural hazards like bank erosion and annual glacial lake outburst flooding.			
Scope	Construct erosion control at Kennicott River. Project would include installation of armor rock and spur dikes.				
Description	Erosion control measures in the form of riprap and spur dikes (approximate 16-foot height) would be installed on the west bank of the Kennicott River, immediately upstream of the pedestrian bridge. Riprap would be installed along approximately 400 feet of riverbank.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 612,000	\$408,000			\$ 1,020,000
Utilities					\$ -
Right of Way		\$300,000			\$ 300,000
Construction			\$10,196,349		\$10,196,349
TOTAL	\$ 612,000	\$708,000	\$10,196,349	\$ -	\$11,516,349

**Funding**

Potential Funding Sources	FLAP, NSFLTP (depending on cost and significance), PROTECT
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS

Environmental	Value	Comments
Anticipated Environmental Doc	CE or possibly EA	Project extends outside of ROW and requires in-stream work for installation of erosion control
Section 4(f) involvement?	No	
Permits Required	Yes	USCG Section 9 Permit; USACE Section 404/10 Permit; ADF&G Fish Habitat Permit
Draft Purpose & Need	The purpose of the project is to maintain reliable access across the Kennicott River and protect the pedestrian bridge. Erosion on the upstream western bank, despite some existing riprap, and annual outburst flooding from Kennicott Glacier Lake and Hidden Creek Lake upstream necessitate additional protection. Constructing erosion control measures on the west bank of the river would safeguard the bridge and ensure continued public access across the river.	

Project Name		McCarthy Road Kennicott River Erosion Control (MP 59.3)	
List Assumptions, Unknowns, Other Environmental Impacts	<ul style="list-style-type: none"><li>• Approximately 0.6 acre of the project footprint falls outside of the road ROW on land designated as private (0.36 acre) and undetermined (i.e., riverine) (0.27 acre), requiring additional coordination.</li><li>• There are no known AHRS sites; however future consultation may reveal unrecorded sites.</li><li>• There is one RS 2477 (Nikolai Mine) and no 17b easements in the area.</li><li>• NWI-mapped waters of the U.S. are present in the area but are inaccurate, indicating only 0.01 acre of riverine will be impacted.</li><li>• The area does not have a delineated 100-year floodplain or regulatory floodway. Future coordination with DOT&amp;PF hydrology section will determine need for a LHS and/or H&amp;H study.</li><li>• The Kennicott River is not designated as navigable by the USACE or USCG, however the river is used by pack rafters especially during occasional Johkulaups. Coordination with the USACE is recommended to determine if a Section 10 permit would be applicable.</li><li>• Kennicott River is anadromous.</li><li>• Consider migratory birds and preconstruction surveys. Consider revegetation plan; three invasive plants have been identified.</li></ul>		
Right of Way		Value	Comments
Confidence in ROW Estimate	Moderate	ROW area impacted is 0.6 acres. DOT&PF ROW provided SSE estimate in March 2025.	
Utilities		Value	Comments
Confidence in Utility Estimate	None	No utility impacts anticipated.	
Bridge		Value	Comments
Bridge Work Included	No	No bridge work anticipated.	
Design Notes			
List Assumptions, Unknowns, etc	Riprap protection assumed depth 3-ft Type IV and 1-ft Type I. Spurs/dikes assumed 16-ft height. Future design to complete H&H to size riprap and spurs/dikes.		
Maintenance			
List Assumptions, Unknowns, etc	Existing maintenance issues to be reduced/eliminated. Erosion along west bank at parking lot and bridge abutment.		

**#15: McCarthy Road MP 59.5 to 59.7 Reconstruction (existing alignment improvements)**

Project Name	McCarthy Road MP 59.5 to 59.7 Reconstruction				
Priority	Medium	Priority is based on resolving needs related to improving safety, maintaining reliable access, and improving infrastructure conditions along the road.			
Timeline	Medium (5+ years)	Timeline is based on the need to coordinate and resolve the ROW discrepancy between the State of Alaska and NPS.			
Scope	Reconstructs the McCarthy Road between MP 59.5 and MP 59.7. Project would include road width improvements, resurfacing with new gravel, geometric improvements, roadway signage, and drainage improvements.				
Description	Reconstructs the section of the McCarthy Road in its existing alignment near the “swimming hole” located at approximate MP 59.5 to 59.7, slightly east of the Kennicott River pedestrian bridge crossing. Work would include widening the road to design standards; improving roadway geometry by lessening the grade and roadway curvature; constructing drainage improvements to address past flooding and poor road condition; and installing signage. Expand the ROW to incorporate the road.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 88,200	\$ 58,800			\$ 147,000
Utilities					\$ -
Right of Way		\$ 250,000			\$ 250,000
Construction			\$1,469,847		\$1,469,847
TOTAL	\$ 88,200	\$ 308,800	\$1,469,847	\$ -	\$1,866,847

**Funding**

Potential Funding Sources	FLAP, Culverts AOP
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS, WFL, ADF&G/ USFWS

<b>Environmental</b>	<b>Value</b>	<b>Comments</b>
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	Potential for involvement	National Park Service land
Permits Required	Yes	USACE Section 404 Permit; ADF&G Fish Habitat Permit
Draft Purpose & Need	<p>The purpose of the project is to ensure safer and more reliable access for roadway users by meeting current design standards (road width, curvature, grade) and improving drainage along the McCarthy Road. Project needs arise from the following:</p> <ul style="list-style-type: none"> <li>Road conditions and drainage issues: Road conditions are poor and need to be improved. There is a damaged culvert that needs to be replaced, though in consideration with how improvements might impact the “swimming hole,” located just north of the road.</li> <li>Design standards: The road is narrow, curvy and has a steep grade. Addressing these needs would improve reliability and safety for travelers and reduce maintenance costs.</li> </ul>	

List Assumptions, Unknowns, Other Environmental Impacts	<ul style="list-style-type: none"> <li>• DOT&amp;PF and NPS intend to resolve the ROW discrepancy, so the road ROW incorporates the existing road location.</li> <li>• There are no known AHRs sites; however future consultation may reveal unrecorded sites.</li> <li>• The vault toilet facilities near the swimming hole vicinity are maintained by the MAC.</li> <li>• There are no RS 2477s or 17b easements in the area, except for one RS 2477 (Nikolai Mine Trail) that runs outside of the southern extent of the project.</li> <li>• NWI-mapped waters of the U.S. are present but are likely inaccurate. Up to one-third acre of NWI-mapped wetlands (freshwater forested/shrub wetlands and riverine designation) may be impacted.</li> <li>• Road crosses over the swimming hole culvert, which conveys a designated anadromous stream. The culvert is in poor condition; ADF&amp;G designates it as likely deficient for fish passage.</li> <li>• Consider migratory birds and preconstruction surveys. Consider revegetation plan; one invasive plant has been identified.</li> </ul>
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Right of Way	Value	Comments
Confidence in ROW Estimate	Moderate	The proposed footprint extends about 0.5 acres outside of the road ROW. However, DOT&PF intend to resolve the ROW discrepancy in this location. The NPS has previously indicated 3.6 acres for resolving the ROW discrepancy. DOT&PF ROW provided SSE estimate in March 2025.

Utilities	Value	Comments
Confidence in Utility Estimate	None	No utility impacts anticipated.

Bridge	Value	Comments
Bridge Work Included	No	No bridge work anticipated.

Design Notes	
List Assumptions, Unknowns, etc	Road widened to 24-ft width. 36-inch structural section (6-inch surface course, 30-inch borrow) provided. Existing culvert to be replaced with 48-inch sized pipe. Future design to verify structure size. Feasibility of maintaining existing "swimming hole" to be evaluated further.

Maintenance	
List Assumptions, Unknowns, etc	Damaged culvert. Additional road to increase maintenance effort.

### #16: McCarthy Road Pullouts between McCarthy and Kennicott

Project Name	McCarthy Road Pullouts between McCarthy and Kennicott				
Priority	Low	Priority is based on resolving needs related to improving safety and maintaining reliable access.			
Timeline	Long (10+ years)	This section of the road corridor sees less vehicle traffic compared with the road west of the Kennicott River. Timeline reflects the assumption other projects would advance sooner than this one.			
Scope	Construct pullouts along the McCarthy Road between MP 60 to 63. Project would include signage.				
Description	Construct up to five pullouts between McCarthy and the southern boundary of the Kennicott Subdivision. Each pullout would be approximately 100 feet long.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 68,400	\$ 45,600			\$ 114,000
Utilities					\$ -
Right of Way					\$ -
Construction			\$1,131,207		\$1,131,207
TOTAL	\$ 68,400	\$ 45,600	\$1,131,207	\$ -	\$1,245,207

#### Funding

Potential Funding Sources	FLAP
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS, WFL

Environmental	Value	Comments
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	No	
Permits Required	No	
Draft Purpose & Need	The purpose of the project is to improve safety and maintain reliable access along the McCarthy Road by constructing pullouts in a section of road that is narrow and has limited parking in the vicinity. The DOT&PF previously identified the need and proposed location for pullouts.	
List Assumptions, Unknowns, Other Environmental Impacts	<ul style="list-style-type: none"> <li>• Likely contained within the existing ROW, reducing coordination efforts and chances of delay.</li> <li>• There are no known AHRS sites; however future consultation may reveal unrecorded sites.</li> <li>• There are no RS 2477s or 17b easements in the area.</li> <li>• Few NWI-mapped wetlands are present; no impacts are expected.</li> <li>• Consider migratory birds and preconstruction surveys. Consider revegetation plan. No invasive plants have been identified.</li> </ul>	

Right of Way	Value	Comments
Confidence in ROW Estimate	None	No ROW impacts anticipated.

Utilities	Value	Comments
Confidence in Utility Estimate	None	No utility impacts anticipated.

Bridge	Value	Comments
Bridge Work Included	No	No bridge work anticipated.

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**Design Notes**

List Assumptions, Unknowns, etc	Pullouts are 100-ft long and 12-ft wide. 36-inch structural section (6-inch surface course, 30-inch borrow) provided.
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**Maintenance**

List Assumptions, Unknowns, etc	Additional pullout areas to increase maintenance effort.
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### #17: McCarthy Road MP 40.2 Ruth Creek Culvert Replacement

Project Name		McCarthy Road MP 40.2 Ruth Creek Culvert Replacement			
Priority	Low	Priority is assigned based on other higher needs in the study corridor. However, it is recognized that the proposed project would jointly improve infrastructure conditions (road and culvert), safety, and the environment (fish passage).			
Timeline	Medium (5+ years)	Timeline is based on the potential for the varying types of improvements to be able to access varying funding sources, beyond solely transportation-centric programs.			
Scope	Construct a fish passage culvert at Ruth Creek near MP 40.2 and reconstruct and resurface approximately 715 feet of the McCarthy Road. Project would include road width improvements, roadway signage installation, and fish passage improvements.				
Description	Construct a fish passage culvert at Ruth Creek near MP 40.2 and reconstruct a portion of the McCarthy Road nearby. Project location is south of Crystalline Hills and west of the Crystal Creek crossing and Ruth Lake. The road would be raised to accommodate the new fish passage culvert.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 127,200	\$ 84,800			\$ 212,000
Utilities					\$ -
Right of Way					\$ -
Construction			\$2,111,683		\$2,111,683
TOTAL	\$ 127,200	\$ 84,800	\$2,111,683	\$ -	\$2,323,683

#### Funding

Potential Funding Sources	Culverts AOP, STBG, BFP, BIP, FLAP
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS, WFL, ADF&G/ USFWS

Environmental	Value	Comments
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	No	
Permits Required	Yes	USACE Section 404 Permit; ADF&G Fish Habitat Permit
Draft Purpose & Need	<p>The purpose of the project is to ensure safe and reliable access for roadway users by meeting current design standards (notably, road width) and improving fish passage under the McCarthy Road.</p> <p>DOT&amp;PF M&amp;O has recommended the culvert be replaced and upsized, and both ADF&amp;G and CRWP identified the current culvert as a fish barrier needing replacement. The pipe condition is noted as poor. DOT&amp;PF M&amp;O has identified the area as having a sink hole/soft spot and drainage issues extending to the east about 0.5 mile.</p> <p>To accommodate the new culvert, the road would be raised. The project would resurface the road with new gravel material, improving the road condition.</p> <p>Widening the road, replacing the culvert, and adding new gravel material would improve reliability and safety for travelers, reduce maintenance costs, and enhance the environment by improving fish passage.</p>	

List Assumptions, Unknowns, Other Environmental Impacts	<ul style="list-style-type: none"> <li>• Likely contained within the existing ROW, reducing coordination efforts and chances of delay.</li> <li>• There are no known AHRs sites; however future consultation may reveal unrecorded sites.</li> <li>• There are no RS 2477s or 17b easements in the area.</li> <li>• NWI-mapped wetlands are not present in the project area.</li> <li>• The area does not have a delineated 100-year floodplain or regulatory floodway. Future coordination with DOT&amp;PF hydrology section will determine need for a LHS and/or H&amp;H study.</li> <li>• Ruth Creek does not have an assigned AWC stream number; however, ADF&amp;G identifies the culvert conveying Ruth Creek as likely deficient in fish passage.</li> <li>• Consider migratory birds and preconstruction surveys. Consider revegetation plan; five invasive plants have been identified.</li> </ul>
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Right of Way	Value	Comments
Confidence in ROW Estimate	None	No ROW impacts anticipated.

Utilities	Value	Comments
Confidence in Utility Estimate	None	No utility impacts anticipated.

Bridge	Value	Comments
Bridge Work Included	No	No bridge work anticipated.

Design Notes	
List Assumptions, Unknowns, etc	Fish passage structure assumed to be structural plate pipe arch 13-ft span x 9-ft rise. Future design to verify structure size. Roadway geometry to be modified to meet project design criteria.

Maintenance	
List Assumptions, Unknowns, etc	Channel migration, upsize pipe recommended. Maintenance effort to be reduced.

### #18: McCarthy Road MP 56.1 Swift Creek Culvert Replacement

Project Name		McCarthy Road MP 56.1 Swift Creek Culvert Replacement			
Priority	Low	Priority is assigned based on other needs in the study corridor. However, it is recognized that the proposed project would jointly improve infrastructure conditions (road and culvert), safety, and the environment (fish passage).			
Timeline	Medium (5+ years)	Timeline is based on the potential for the varying types of improvements to be able to access varying funding sources, beyond solely transportation-centric programs.			
Scope	Construct a fish passage culvert at Swift Creek near MP 56.1 and reconstruct and resurface approximately 1,065 feet of the McCarthy Road. Project would include improvements to profile by raising road, improvements to horizontal curvature by realigning the road, width improvements, roadway signage, and fish passage improvements.				
Description	Construct a fish passage culvert at Swift Creek near MP 56.1 and reconstruct a portion of the McCarthy Road nearby. Road improvements would include minimizing the road curve and widening the narrow road. The road would be raised to accommodate the new fish passage culvert.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 162,600	\$ 108,400			\$ 271,000
Utilities					\$ -
Right of Way					\$ -
Construction			\$2,705,885		\$2,705,885
TOTAL	\$ 162,600	\$ 108,400	\$2,705,885	\$ -	\$2,976,885

#### Funding

Potential Funding Sources	Culverts AOP, STBG, BFP, BIP, FLAP
Potential Lead Agency Sponsor	DOT&PF, WFL
Potential Project Partners	NPS, ADF&G/ USFWS

Environmental	Value	Comments
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	No	
Permits Required	Yes	USACE Section 404 Permit; ADF&G Fish Habitat Permit

Draft Purpose & Need	<p>The purpose of the project is to ensure safe and reliable access for roadway users by meeting current design standards (such as road width, road curvature) and improving fish passage under the McCarthy Road. The culvert is located on a narrow, curved stretch of road. Widening the road and reducing the curve would improve safety and sight lines. Public concerns about a dangerous dip in the roadbed near this location would also be addressed.</p> <p>Several issues near the culvert need improvement. The riprap armoring is absent on the roadway side slopes around the culvert inlet and outlet, leading to erosion risks. Both ADF&amp;G and the CRWP identified the current culvert as a barrier to fish due to its perched height. The large elevation change between the inlet and outlet provides construction challenges without a perch. Scouring on the outlet side due to perch height will continue to increase the elevation change and decrease slope stability leading to further road maintenance issues.</p> <p>To accommodate the new culvert, the road would be raised and resurfaced with new gravel material, improving its condition. Widening the road, reducing the road curvature, replacing the culvert, and adding new gravel material would improve reliability and safety for travelers, reduce maintenance costs, and enhance the environment by facilitating fish passage.</p>	
List Assumptions, Unknowns, Other Environmental Impacts	<ul style="list-style-type: none"><li>• Likely contained within the existing ROW, reducing coordination efforts and chances of delay.</li><li>• There are no known AHRs sites; however future consultation may reveal unrecorded sites.</li><li>• There is one RS 2477 (Nikolai Mine) and no 17b easements in the area.</li><li>• NWI-mapped wetlands are not present in the project area.</li><li>• The area does not have a delineated 100-year floodplain or regulatory floodway. Future coordination with DOT&amp;PF hydrology section will determine need for an LHS and/or H&amp;H study.</li><li>• Swift Creek does not have an assigned AWC stream number; however, ADF&amp;G identifies the culvert conveying Ruth Creek as likely deficient in fish passage.</li><li>• Consider migratory birds and preconstruction surveys. Consider revegetation plan; 13 invasive plants have been identified.</li></ul>	
<b>Right of Way</b>		
	<b>Value</b>	<b>Comments</b>
Confidence in ROW Estimate	None	No ROW impacts anticipated.
<b>Utilities</b>		
	<b>Value</b>	<b>Comments</b>
Confidence in Utility Estimate	None	No utility impacts anticipated.
<b>Bridge</b>		
	<b>Value</b>	<b>Comments</b>
Bridge Work Included	No	No bridge work anticipated.
<b>Design Notes</b>		
List Assumptions, Unknowns, etc	Fish passage structure assumed to be structural plate pipe arch 13-ft span x 9-ft rise. Future design to verify structure size. Roadway geometry to be modified to meet project design criteria.	
<b>Maintenance</b>		
List Assumptions, Unknowns, etc	Erosion concerns at culvert inlet and outlet. Maintenance effort to be reduced.	

**#19: McCarthy Road MP 47.9 Long Lake Creek/Tributary Culvert Replacement**

Project Name	McCarthy Road MP 47.9 Long Lake Creek/Tributary Culvert Replacement				
Priority	Low	Priority is assigned based on other higher needs in the study corridor. However, it is recognized that the proposed project would jointly improve infrastructure conditions (road and culvert), safety, and the environment (fish passage).			
Timeline	Medium (5+ years)	Timeline is based on the potential for the varying types of improvements to be able to access varying funding sources, beyond solely transportation-centric programs.			
Scope	Construct a fish passage culvert at Long Lake Creek near MP 47.9 and reconstruct and resurface approximately 1,155 feet of the McCarthy Road. Project would include improvements to the road profile by raising road, improvements to horizontal curvature by realigning the road, width improvements, roadway signage, and fish passage improvements.				
Description	Construct a fish passage culvert at Long Lake Creek/Tributary near MP 47.9 and reconstruct a portion of the McCarthy Road nearby. Project location is east of Long Lake. Improvements would include minimizing the road curve, widening, resurfacing, raising the road for the new culvert, and adding speed limit signs.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 175,800	\$ 117,200			\$ 293,000
Utilities					\$ -
Right of Way		\$ 250,000			\$ 250,000
Construction			\$2,927,679		\$2,927,679
TOTAL	\$ 175,800	\$ 367,200	\$2,927,679	\$ -	\$3,470,679

**Funding**

Potential Funding Sources	Culverts AOP, STBG, BFP, BIP, FLAP
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS, WFL, ADF&G/ USFWS

<b>Environmental</b>	<b>Value</b>	<b>Comments</b>
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	No	
Permits Required	Yes	USACE Section 404 Permit; ADF&G Fish Habitat Permit

Draft Purpose & Need	The purpose of the project is to ensure safe and reliable access for roadway users by meeting current design standards (such as road width, road curvature) and improving fish passage under the McCarthy Road. The culvert is located on a narrow, curved stretch of road. Widening the road and reducing the curve would improve safety and sight lines, addressing public concerns about the curves, dips, and blind corner with brush blocking line of sight. The DOT&PF M&O staff have identified water drainage issues just east of the culvert near MP 48. Both ADF&G and the CRWP identified the current culvert as a barrier to fish. The 5-foot diameter culvert was damaged during high flows in summer 2023 and can no longer pass fish. Replacing the culvert would restore connectivity and improve access to habitat for anadromous and resident fish species. To accommodate the new culvert, the road would be raised and resurfaced with new gravel material, improving its condition. Widening the road, reducing the road curvature, replacing the culvert, and adding new gravel material will improve reliability and safety for travelers, reduce maintenance costs, and enhance the environment by facilitating fish passage.	
List Assumptions, Unknowns, Other Environmental Impacts	<ul style="list-style-type: none"><li>• Approximately 0.4 acre of the project footprint falls outside of the road ROW on state-owned land, requiring additional coordination.</li><li>• There are no known AHRS sites; future consultation may reveal unrecorded sites.</li><li>• There are no RS 2477s or 17b easements in the area.</li><li>• Up to 0.4 acre of NWI-mapped wetlands (freshwater forested/ shrub wetlands) may be impacted.</li><li>• The area does not have a delineated 100-year floodplain or regulatory floodway. Future coordination with DOT&amp;PF hydrology section will determine need for a LHS and/or H&amp;H study.</li><li>• The Long Lake Creek/ tributary is anadromous.</li><li>• Consider migratory birds and preconstruction surveys. Consider revegetation plan; five invasive plants have been identified.</li></ul>	
<b>Right of Way</b>		
	<b>Value</b>	<b>Comments</b>
Confidence in ROW Estimate	Moderate	ROW area impacted is 0.4 acres. DOT&PF ROW provided SSE estimate in March 2025.
<b>Utilities</b>		
	<b>Value</b>	<b>Comments</b>
Confidence in Utility Estimate	None	No utility impacts anticipated.
<b>Bridge</b>		
	<b>Value</b>	<b>Comments</b>
Bridge Work Included	No	No bridge work anticipated.
<b>Design Notes</b>		
List Assumptions, Unknowns, etc	Fish passage structure assumed to be structural plate pipe arch 13-ft span x 9-ft rise. Future design to verify structure size. Roadway geometry to be modified to meet project design criteria.	
<b>Maintenance</b>		
List Assumptions, Unknowns, etc	Damaged culvert. Maintenance effort to be reduced.	

## #20: McCarthy Road MP 59.8 Clear Creek Culvert Replacement

Project Name		McCarthy Road MP 59.8 Clear Creek Culvert Replacement			
Priority	Low	Priority is assigned based on other needs in the study corridor. However, it is recognized that the proposed project would jointly improve infrastructure conditions (road and culvert), safety, and the environment (fish passage).			
Timeline	Medium (5+ years)	Timeline is based on the potential for the varying types of improvements to be able to access varying funding sources, beyond solely transportation-centric programs.			
Scope	Construct a fish passage culvert at Clear Creek near MP 59.8 and reconstruct and resurface approximately 945 feet of the McCarthy Road. Project would include improvements to the road profile by raising road, width improvements, roadway signage, and fish passage improvements.				
Description	Construct a fish passage culvert at Clear Creek near MP 59.8 and reconstruct and resurface a portion of the adjacent roadway. The road would be widened to improve safety and raised to accommodate the fish passage culvert. This area is also the location where people collect water for drinking, so impacts to that would need to be considered and addressed.				
Budget	Year 1	Year 2	Year 3	Year 4+	TOTAL
Design (pre- and post- env)	\$ 134,400	\$ 89,600			\$ 224,000
Utilities					\$ -
Right of Way					\$ -
Construction			\$2,232,796		\$2,232,796
TOTAL	\$ 134,400	\$ 89,600	\$2,232,796	\$ -	\$2,456,796

### Funding

Potential Funding Sources	Culverts AOP, FLAP, FLTP (possibly in combination with Project #15)
Potential Lead Agency Sponsor	DOT&PF
Potential Project Partners	NPS, WFL, ADF&G/ USFWS

Environmental	Value	Comments
Anticipated Environmental Doc	CE	
Section 4(f) involvement?	Potential for involvement	AHRS sites present in close vicinity (two sites do not have a determination of eligibility). National Park Service land.
Permits Required	Yes	USACE Section 404 Permit; ADF&G Fish Habitat Permit
Draft Purpose & Need	<p>The purpose of the project is to ensure safe and reliable access for roadway users by meeting current design standards (e.g., road width) and improving fish passage under the McCarthy Road.</p> <p>The culvert is located on a narrow stretch of road and in a dip. A member of the public indicated this is sometimes the worst spot on the entire road during the winter months.</p> <p>Both ADF&amp;G and the CRWP identified the culvert as a barrier to fish and as lacking substrate in the culvert. The CRWP also indicated there are beaver conflicts in the area with dams being built inside the pipe that result in road flooding. Vehicles driving through these waters results in water quality degradation, which impacts both the community drinking water and fish habitat.</p>	

	To accommodate the new culvert, the road would be raised and resurfaced with new gravel material, improving its condition and reducing the dip in the road. Widening the road, replacing the culvert, and adding new gravel material would improve reliability and safety for travelers, reduce maintenance costs, and enhance the environment by facilitating fish passage.
List Assumptions, Unknowns, Other Environmental Impacts	<ul style="list-style-type: none"> <li>• Approximately 0.09 acre of the project footprint falls outside of the road ROW on NPS-owned land. However, DOT&amp;PF and NPS intend to resolve the ROW discrepancy, so the road ROW incorporates the existing road location.</li> <li>• There are two known AHRS sites in the area; future consultation may reveal unrecorded sites.</li> <li>• The vault toilet facilities near the swimming hole vicinity are maintained by the MAC.</li> <li>• There are no RS 2477s or 17b easements in the area.</li> <li>• Up to 0.18 acre of NWI-mapped freshwater forested/shrub wetlands may be impacted.</li> <li>• The public has indicated this area provides an important drinking water source for the community and visitors.</li> <li>• The area does not have a delineated 100-year floodplain or regulatory floodway. Future coordination with DOT&amp;PF hydrology section will determine need for a LHS and/or H&amp;H study.</li> <li>• Clear Creek is anadromous.</li> <li>• Consider migratory birds and pre-construction surveys. Consider revegetation plan; five invasive plants have been identified.</li> </ul>

Right of Way	Value	Comments
Confidence in ROW Estimate	Moderate	ROW area impacted is 0.1 acres. DOT&PF ROW provided SSE estimate in March 2025.

Utilities	Value	Comments
Confidence in Utility Estimate	None	No utility impacts anticipated.

Bridge	Value	Comments
Bridge Work Included	No	No bridge work anticipated.

Design Notes	
List Assumptions, Unknowns, etc	Fish passage structure assumed to be structural plate pipe arch 13-ft span x 9-ft rise. Future design to verify structure size. Roadway geometry to be modified to meet project design criteria.

Maintenance	
List Assumptions, Unknowns, etc	Beaver conflicts, plugged pipe, flooded road. Maintenance effort to be reduced.