

Material Stockpiles: Dalton - Elliott Highway**FY2002 Request: \$500,000****Reference No: 33853****AP/AL:** Appropriation**Project Type:** Deferred Maintenance**Category:** Transportation**Location:** Dalton Highway**Contact:** Tom Brigham**House District:** Rural Interior (HD 36)**Contact Phone:** (907)465-4070**Estimated Project Dates:** 07/01/2001 - 06/30/2006**Brief Summary and Statement of Need:**

Pay for crushing materials used for maintenance that is not reimbursable by federal funding.

Materials stockpiles will be contracted in conjunction with major federal-aid highway projects on the Dalton Highway.

Funding:	<u>FY2002</u>	<u>FY2003</u>	<u>FY2004</u>	<u>FY2005</u>	<u>FY2006</u>	<u>FY2007</u>	<u>Total</u>
Gen Fund	\$500,000						\$500,000
Total:	\$500,000	\$0	\$0	\$0	\$0	\$0	\$500,000

<input type="checkbox"/> State Match Required	<input checked="" type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

Operating & Maintenance Costs:

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	0
Totals:	0	0

Additional Information / Prior Funding History:

None

Project Description/Justification:

The drivability of the Dalton Highway has continued to deteriorate in recent years because of insufficient maintenance funding levels. Although several reconstruction efforts along the Dalton have dramatically improved sections, the highway overall is in poor condition. We receive continual complaints from the trucking industry, tourists and frequent accidents occur. The highway also requires constant grading. Many areas have large boulders protruding through the surface, and these boulders not only affect drivability, but also cause considerable wear and tear on DOT&PF equipment. These areas have no available pit run or stockpiled materials suitable for repairs. The most problematic areas listed below require stockpiled material to allow maintenance forces to address critical areas.

There is a difference between the routine maintenance that requires these stockpiled materials and the preventative maintenance allowed by the federal-aid highway program. Routine maintenance keeps the road surface drivable by keeping a layer of material on the road. This layer carries the traffic load. After a time, the surface material is lost, from traffic knocking it into the ditch and wind blowing it off. If not replaced, rutting occurs, and finally large rocks appear. This type of maintenance is continuous. Stockpiles in support of routine maintenance are not eligible for federal-aid participation.

Preventative maintenance is eligible for federal-aid highway funding. Its purpose is to retain the designed life of the highway. A federal-aid project requires a systematic designed solution to the problem. With preventative maintenance the problem could be major failure of the surface material and subbase. During the federal-aid project construction, underlying problems can be solved, such as major drainage and culverts. A segment of road may reach this condition because of deferred maintenance. Routine maintenance does not end because a federal-aid project has been accomplished.

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The cover coat stockpiles are required to maintain or repair the sections that receive a high float surface treatment. These repairs are not possible without stockpiled materials. Failure to perform repairs on newly reconstructed sections will cause public and Federal Highway Administration outcry for lack of maintenance. In 1997, the Federal Highway Administration asked us to review our maintenance levels because they were concerned about the long-term affects of deferred routine maintenance.

Costs for a single mobilization and setup of processing equipment north of the Brooks Range are as much as \$100,000. High mobilization costs including housing and support for contractors on small crushing jobs can dramatically increase stockpile costs. Single small stockpiles (10,000 cubic yards) will average between \$18.00 and \$20.00 per yard on single site projects. Stockpiles purchased from on site contractors will average between \$10.00 and \$13.00 per yard. Therefore, purchasing from contractors in conjunction with existing projects is a very cost-effective approach to acquire these materials and allow maintenance efforts to be productive. Failure to acquire these stockpiles will severely hamper maintenance's ability to address problematic areas and provide for timely repairs, both on the Dalton Highway and indirectly on the rest of the state through reallocations of resources to address serious maintenance deficiencies.

The following federal-aid highway projects will be under construction contract on the haul road in FY 2002:

- Elliot Highway: MP 28 to 72
- Dalton Highway MP111-144
- Dalton Highway MP 175-209
- Dalton Highway MP274-289
- Dalton Highway MP335-362

Adding additional materials requirements to these construction contracts will save \$8-\$10 per cubic yard over contracting for materials crushing and hauling individually. The table below outlines the savings at two different stockpiles funding levels and the anticipated savings given each scenario:

These areas are the first to receive a high-float treatment and therefore would require stockpiled materials first.

* Materials Location MP 86 Cost \$100.0
10,000 cubic yards high float cover coat for repairs to new high-float surface from MP 90-111

* Materials Location MP 335 - Happy Valley Cost \$175.0
10,000 cubic yards high float cover coat and 6,250 cubic yards of modified subbase C for MP 335 south and MP 335-362. South of Happy Valley, the Dalton Highway is in extremely poor condition scheduled for reconstruction in 2005. The subbase C material will be used to provide minimal surfacing and repair severe undulations caused by thaw degradation. The high float cover coat will be used for minimal repairs to the high float surface treatment including embankment failures between MP 335-362.

* Materials Location: MP 309 Sag River Maintenance Station Cost \$100.0
8,300 Cubic yards of modified subbase C
The Dalton Highway surface is completely depleted through this area. Projects for reconstruction are 5-8 years out. This material will help cover areas where the base course has large boulders protruding through the surface. (For MP 289-335)

* Materials Location: MP 335 - Happy Valley Cost \$25.0
additional 3,750 Cubic yards of modified subbase C
Deficiencies as described under the \$275.0 scenario

* Materials Location: MP 274 Cost \$100.0
10,000 Cubic yards high float cover coat
The high float cover coat will be used for repairs to the high float surface treatment including any embankment failures. (For MP 274-289).

At a funding level of **\$750,000**, the following would also be funded:

* Materials Location: MP 309 Sag River Maintenance Station Cost \$20.0
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