

**CTIP STUDY PROBLEM STATEMENT**  
**Request for Funding**  
**FY 2001**

**FHWA Strategic Goal Area:** Safety

**Project Title:** Evaluation of Avalanche Resistant Guard-wall

**Background:** In many of the alpine regions of the National Parks, avalanches cross the roadway during the winter road closure, often causing damage to walls and safety appurtenances. An avalanche resistant guard-wall has been designed and constructed in Glacier National Park on the Going to the Sun Highway. A detailed study is needed to document the validity of the design and the effects over several winters.

**Objectives:** This study will evaluate the durability, effectiveness, and maintenance cost savings for repairs of avalanche damage to guard-walls using the avalanche resistant design. The intent is to document for the winter conditions, the effectiveness of the design using narrative and photos to describe the demographics, the extent of avalanche activity and the resulting impacts on the design. Conclusions will be expected about the cost effectiveness of the design and potential maintenance savings.

**Status:** This is the initial design for an avalanche resistant guard-wall. Upon its completion and opening to traffic, an evaluation should begin to assess the conditions and results over multiple years to assure severe winter conditions are encountered and to develop a projection of the time affects. Currently nothing is underway to evaluate this type of design.

**Expected Products and Milestones by Fiscal Year:** Annual reports will document the severity of the weather conditions, the extent of avalanche activity and the results on the design. A final report after three years will draw conclusion about the effectiveness of the design and the cost savings.

**Duration:** Three years to collect data and document results and six months to complete a final report.

**Estimated Cost by Fiscal Year:**

FY 2001 - \$5,000
FY 2002 - \$5,000
FT 2003 - \$10,000

**Suggested Organization Method:** The National Park service and the WFLHD Geotechnical Engineer will collect appropriate data, and photos to document the conditions and results of avalanche impacts on the design. The National Park Service will document the annual conditions in a report each summer about the previous winter conditions. The National Park Service will prepare the final report, summarizing the study results and conclusions after the third winter.

**Submitted:**

**Agency/Division:** Western Federal Lands Highway Division

**Name:** Cal Frobig

**Phone:** 360-696-7648

**Date:** 1 April 2001

**Champion:**

**Name:** Richard Gatten / Tori Kinne

**Phone:** 360-696-7729

**Funding Source:** (Check one.)

▪ Agency Fund

9 General Fund

**DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
WESTERN FEDERAL LANDS HIGHWAY DIVISION - VANCOUVER, WA**

**DETERMINATION AND FINDINGS**

**Findings**

The proposed Interagency, Reimbursable Agreement with the Glacier National Park in West Glacier, MT, is to provide observations, photographs, and measurements for the evaluation of the Avalanche Resistant Guard Wall along the Going-to-the-Sun Highway.

1. Reimbursable Agreement Number 01-A-17-0089
2. It is  more economical  more convenient to obtain the required supplies or services through the proposed Interagency Reimbursable Agreement, rather than by direct contract with a commercial concern because:  The Agency has demonstrated that has greater knowledge with respect to the subject work:  The Agency has indicated that it has resources available to begin this work in a timely manner:  The Agency personnel performing the work are locally located resulting in much reduced travel and subsistence costs, and therefore, total costs are expected to be less than if performed by outside firms.
3.  Other: \_\_\_\_\_
4. Legal authority for the acquisition otherwise exists.
5. The action does not conflict with any other agency's authority or responsibility.

*Note: [If the servicing agency must do a contract action, see FAR 17.503(b) for required statement]  
Note: [If the servicing agency operates a commercial or industrial activity using Govt. personnel, see TAM 1217.503(c) and Appendix A for required statement]*

Prepared by:

\_\_\_\_\_  
Date:

Technology Deployment Engineer

**Determination**

Based upon these findings, I hereby determine that it is in the Government's interest to obtain the required supplies/services as authorized by the Economy Act (31 U.S.C. 1535) if from another Federal agency, or as authorized by Title 23 U.S.C. if by a State or local agency.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Contracting Officer

File:  
#

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
REIMBURSABLE AGREEMENT

AGREEMENT  
No. 01-A-17-0089

PARTIES TO THE AGREEMENT

a. REIMBURSING ORGANIZATION Federal Highway Administration Western Federal Lands Highway Division 610 East Fifth Street Vancouver, WA 98661-3801	b. ORGANIZATION TO BE REIMBURSED Glacier National Park PO Box 128 West Glacier, MT 59936
APPROPRIATION CHARGEABLE X417-17-30-53-0000-001-0	APPROPRIATION REIMBURSED
EFFECTIVE DATE	COST (Estimated)
October 1, 2001	a. FY: 2001 b. Amount:\$5,000

SUMMARY:

- A This agreement is entered into under authority of Title 23, USC Section 204; Title 31 USC Section 1535; and the Economy Act, Section 601, by and between the National Park Service, Glacier National Park, hereinafter called "GNP" and the Federal Highway Administration, Western Federal Lands Highway Division, hereinafter called "WFLHD".
2. The GNP will assist in the evaluation of the Avalanche Resistant Guard Wall, designed and constructed along the Going-To-The-Sun Highway, by making observations, taking photographs, and making measurements as necessary under the direction of the WFLHD COTR. The GNP staff time, equipment, and materials necessary to collect and document information for the evaluation during the fall of 2001 and spring of 2002 are eligible under this agreement. Evaluation is anticipated to continue for the next three to five years, but separate agreements will be made for each year based on funds available and allocated under the Coordinated Technology Implementation Program.
3. The WFLHD shall reimburse the GNP for all eligible costs incurred under the terms of this agreement. The total estimated cost is \$5,000. In no case shall it exceed this amount without modification of this agreement as mutually approved by both the GNP and WFLHD.
4. The WFLHD's Contracting Officer's Technical representative (COTR) is Mr. Jeff Berg.

AUTHORIZED APPROVALS

a. FOR REIMBURSING ORGANIZATION	b. FOR ORGANIZATION TO BE REIMBURSED
SIGNATURE                      DATE	SIGNATURE                      DATE

TITLE	TITLE
Contracting Officer Western Federal Lands Highway Division	

FINANCIAL ADDENDUM

Billing Office: Western Federal Lands Highway Division  
Federal Highway Administration

Bill to Address: 610 East Fifth Street  
Vancouver, WA 98661

COTR: Name: Jeff Berg Routing Symbol: HTS 17.21  
Title: Bridge/Geotech Wall Management System Coordinator  
Telephone: 360-696-7719

Accounting Classification: X417-17-30-53-0000-001-0

Project Beginning Date: October 1, 2001 Ending Date: October 31, 2002

Each specific item of goods or services to be furnished under the terms of this agreement are as follows:

- Photos of the Avalanche Resistant Guard Wall before and after winter.
- Observations of the condition, alignment, and failures in a written report
- Measurements as directed by the COTR.

IDENTIFY THE FOLLOWING:

Billable Charges: Equipment, Material and Labor costs

Method of Computation of Charges: Actual costs

Estimated Cost: \$5,000

Billing Period(s) \_\_\_\_\_ (Monthly) \_\_\_\_\_ (Quarterly)  
  X   (Other) Specify: one billing at the end agreement.

Financial Contact: Jan Palmer (360) 696-7624

Documentation required by the Reimbursing Agency as a condition of payment is as follows:

Tax ID No. for Agency to be reimbursed: 84-1024566

The NPS shall submit billings to Jeff Berg, Bridge/Geotech Wall Management Systems Coordinator, Western Federal Lands Highway Division, 610 East Fifth Street, Vancouver, WA 98661-3801, including a certified statement of costs incurred, indicated as "Partial" or "Final" Billing, itemized as: (1) Salaries and Wages, (2) Transportation Cost, (3) Equipment Charges, (4) Materials, and (5) Other Items including overhead.



U.S. Department  
of Transportation

Federal Highway  
Administration

WESTERN FEDERAL LANDS HIGHWAY DIVISION  
610 EAST FIFTH STREET  
VANCOUVER, WA 98661-3893  
(360) 696-7700 FAX: (360) 696-7846

May 22, 2005

Refer to: HTS-17.1  
File: 741 & 715#1  
#

Mr. Fred Babb  
Glacier National Park  
PO Box 128  
West Glacier, MT 59936

Dear Mr. Babb

Enclosed are two signed originals of Reimbursable Agreement No. 01-A-17-0089, for collecting and documenting evaluation information about the Avalanche Resistant Guard Walls along the Going-to-the-Sun Highway.

If you concur with the terms and conditions of the agreement, **please sign, date, and return one original to our office to the attention of Kathy McCormmach.** The other original is for your records.

In accordance with the Debt Collection Improvement Act of 1996, all payments between federal agencies must be billed via On-line Payment and Collections (OPAC). The Agency Location Code (ALC) for Federal Highway Administration, Western Federal Lands Highway Division (WFLHD) is 69-05-001. If you have any questions regarding billing information please call Jan Palmer, at (360) 696-7624.

If you have other questions regarding this agreement please call Cal Frobig, at (360) 696-7648, or Jeff Berg, at 360-696-7719.

Sincerely yours,

Robert B. Lale III  
Program Planning and Administration Engineer

Enclosures:  
Reimbursable Agreement 01-A-17-0089 (2 originals)  
OPAC Billing Information Form

cc: Kathy McCormmach, Program Coordination, WFLHD  
Jan Palmer, Finance, WFLHD  
Jeff Berg, Bridge/Geotech, WFLHD  
Richard Gatten, Design Operations Engineer, WFLHD  
Jack Gordon, Glacier National Park