

Statewide: Seismic Retrofit - Bridges**FY2006 Request: \$1,600,000****Reference No: 36188****AP/AL:** Allocation**Project Type:** Construction**Category:** Transportation**Location:** Statewide**Contact:** John MacKinnon**House District:** Statewide (HD 1-40)**Contact Phone:** (907)465-6973**Estimated Project Dates:** 07/01/2005 - 06/30/2010**Appropriation:** Surface Transportation Program**Brief Summary and Statement of Need:**

Structural enhancements to bridges that are determined to be insufficient in earthquake zones. This project contributes to the Department's Mission by reducing injuries, fatalities and property damage and by improving the mobility of people and goods.

Funding:	<u>FY2006</u>	<u>FY2007</u>	<u>FY2008</u>	<u>FY2009</u>	<u>FY2010</u>	<u>FY2011</u>	<u>Total</u>
Fed Rcpts	\$1,600,000						\$1,600,000
Total:	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$1,600,000

<input checked="" type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input checked="" type="checkbox"/> Phased Project	<input type="checkbox"/> On-Going
20% = 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:

FY2005 - \$1,600,000; FY2004 - \$1,600,000; FY2003 - \$1,700,000; FY2002 - \$1,700,000; FY2001 - \$1,680,000; FY2000 - \$1,745,000; FY1999 - \$1,600,000.

Project Description/Justification:

Alaska is one of the most seismically active regions of the world. Bridges are quite vulnerable to earthquake induced ground motions and forces. Severe bridge damage and collapse seem to accompany every major earthquake around the world. Bridges constructed prior to the early 1990's are particularly vulnerable to significant damage. Seismic retrofitting is eligible for Highway Bridge Rehabilitation & Replacement Program funds for all bridges according to the FHWA.

Phase 2 of this program identifies vulnerable bridges. A "Prioritization List" is used to select the most vulnerable and critical bridges for seismic retrofit (strengthening). Vulnerability is based on structural details and proximity to known earthquake faults. Critical bridges are identified based on traffic demands, available detours, and bridge length. Retrofits typically include devices to keep beams from falling from their supports. In some cases, bridge column and abutment forces are reduced by installing special shock absorbing and isolation devices.