

## ***Betterments Per FHWA Memorandum***

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The ER Program is intended to assist the states in repairing damaged highway facilities to their predisaster condition. In-kind restoration is the predominate type of repair. On occasion a state may decide to incorporate additional features into the repair work that help protect the highway facility from future disaster damage or to make changes that modify the function or character of a highway facility from what existed prior to the disaster. These added protective features or changes to the function or character of the facility are viewed as betterments for the purposes of the ER Program. Betterments involving added protective features are not eligible for ER funding unless found to be cost effective in terms of reducing probable future recurring repair costs to the ER Program. Betterments that change the function or character of the facility are generally not eligible for ER funding.

### **Categories of Betterments for Protection from Possible Future Damage**

The first category of betterments includes those that help protect highway facilities from possible future damage. Examples are:

- Raising roadway grades.
- Relocating roadways to higher ground or away from slide prone areas.
- Stabilizing slide areas.
- Stabilizing slopes.
- Installing riprap.
- Lengthening or raising bridges to increase waterway openings.
- Deepening channels.
- Increasing the size or number of drainage structures.
- Replacing culverts with bridges.
- Installing seismic retrofits on bridges.
- Adding scour protection at bridges.
- Adding spur dikes.

If a betterment involving an added protective feature is included in an ER repair project, the betterment may be considered eligible for ER funding under [23 CFR 668.109\(b\)\(6\)](#) if it can be economically justified based on an analysis of the cost of the betterment versus projected savings in costs to the ER Program should future disasters occur. This cost/benefit analysis must focus solely on benefits resulting from estimated savings in future recurring repair costs under the ER Program. The analysis cannot include other factors typically included in highway benefit/cost evaluations such as traffic delays costs, added user costs, motorist safety, economic impacts, etc.

It is recognized that in many instances betterments will fail to meet the test of being economically justified for use of ER funding. If ER funding cannot be provided for a betterment, this does not mean that the betterment should necessarily be excluded from the ER repair project. If a betterment provides considerable benefit when other factors are considered, the state is encouraged to use regular apportioned federal aid highway funds, as appropriate, to fund a betterment.

One exception to the above discussion on betterments associated with added protective features involves grade raises associated with basin flooding. FHWA has determined that raising the grades of critical federal aid highways faced with long-term loss of use due to basin flooding is eligible for ER funding (see [23 CFR 668.109\(b\)\(8\)](#)). In these instances, if the FHWA Administrator finds that a basin flooding event is eligible for ER funding, reasonable grade raises require no further economic justification as betterments.

Another exception involves repairs of features that may require permits or approvals from other entities such as bridges. If these other entities are routinely requiring added features as standard industry practice on other projects of similar nature to the ER project, then these added features can be included on the ER project without further justification as a betterment.

## **Categories of Betterments to Change the Function or Character of the Facility**

Examples:

- Adding lanes.
- Upgrading surfaces such as from gravel to paved.
- Improving access control.
- Adding grade separations.
- Changing from rural to urban cross-section.

In general betterments that change the function or character of a facility are not eligible for ER funding. One exception is established under [23 USC 120\(e\)](#) that allows ER funding participation in replacement bridge facilities that can accommodate traffic volumes over the design life of the bridge, thus potentially allowing ER funding for added lanes on bridges.

Examples:

Situations where use of ER funding for repair activities is not considered a betterment are:

- **Replacement of Older Features or Facilities With New Ones** – The mere fact that a damaged highway feature or facility is replaced with something new that may extend the service life of the facility in and of itself is not a betterment.

- **Incorporation of Current Design Standards** – Repaired facilities may be built to current design standards which could result in improved or added features that do not change the function or character of the facility. For example, a repaired length of roadway may have wider lanes or shoulders and additional roadside safety hardware that result from following current design standards. This is not a betterment.
- **Replacement In-Kind on Existing Location Not Practical or Feasible** – On rare occasions when it is neither practical nor feasible to replace a damaged highway facility in-kind on its existing location, an alternative selected through the environmental/public involvement process is eligible for ER funding if of comparable function and character to the destroyed facility. This is not a betterment. (See the following discussion on replacement facilities for more information on this special situation.)
- **Additional Required Features Resulting From the Environmental Process** – ER projects may include additional required features as an outcome of the project being developed in accordance with the NEPA process. These features are eligible for ER funding. This is not a betterment. (See the following discussion on environmental considerations for more information.)

