EMERGENCY RELIEF MANUAL

(Federal-Aid Highways) Updated May 31, 2013

Office of Infrastructure Office of Program Administration Federal Highway Administration

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Chapter I

Introduction

A. Purpose of Manual [Revised May 31, 2013]

This manual updates the Emergency Relief Manual, November 2009. It covers procedures applicable to the Federal Highway Administration's (FHWA) Emergency Relief (ER) program for Federal-aid highways. It is a guide for FHWA, State, and local transportation agency personnel for requesting, obtaining and administering ER funds. It incorporates program changes made by the Moving Ahead for Progress in the 21st Century Act (MAP-21) (P.L. 112-141), which was signed into law on July 6, 2012 and became effective on October 1, 2012. Questions and Answers addressing ER program changes under MAP-21 are available at http://www.fhwa.dot.gov/map21/qandas/qaer.cfm.

The Emergency Relief for Federally Owned Roads (ERFO) Disaster Assistance Manual, Publication Number FHWA-FLH-11-001 has guidance for repair of roads on Federal lands that are not Federal-aid highways. It is available at http://www.efl.fhwa.dot.gov/programs/erfo.aspx.

The FEMA Public Assistance Policy Digest, January 2008, Publication Number FEMA 321 provides program guidance, authorized by the Stafford Act, P. L. 93-288, for highways that are neither Federal-aid highways nor on Federal lands. It is available at http://www.fema.gov/pdf/government/grant/pa/pdigest08.pdf.

B. Program Overview [Revised May 31, 2013]

Congress authorized the ER Program in Title 23, United States Code (U.S.C.), Section 125, to provide funds from the Highway Trust Fund for the repair or reconstruction of Federal-aid highways and of roads on Federal lands that suffered serious damage from natural disasters or catastrophic failures from external causes. ER funding supplements resources from States, localities and other Federal agencies to help in the repair of facilities damaged by eligible events.

FHWA's roles and responsibilities during the ER process are to:

- 1. Administer the ER program through coordination and implementation of disaster relief policies and procedures.
- 2. Provide assistance to State, Federal or other highway agencies in applying for funds and determining eligibility; and,
- 3. Support the State, Federal or other highway agencies in the technical review, design, repair, and reconstruction of damaged highway facilities.

Chapter II

Eligibility of Damage Repair Work

A. General [Revised May 31, 2013]

Roads and bridges on Federal-aid highways that are damaged as a direct result of a natural disaster or catastrophic failure from an external cause are eligible for ER funds. Federal-aid highways are public roads that are classified as arterial, urban collectors and major rural collectors. Highways that are classified as minor rural collectors or local roads are not eligible for ER funding even if other Federal-aid funds have been used on those roads. For example, "off system" bridges that were replaced with Federal-aid funds or non-highway projects that were constructed with enhancement funds are not eligible for ER funding. State roadway classification maps identify these routes and their designations. The Federal Highway Administration publication "Guidance for the Functional Classification of Highways" has descriptions of the functional classifications. It is available at http://www.fhwa.dot.gov/policy/ohpi/hpms/fchguidance.cfm.

Title 23 Code of Federal Regulations (23 CFR) Part 668, Subpart A provides that an event generally must have caused at least \$ 700,000 (Federal share) in eligible damage for the event to be eligible for ER funding. Disaster damage less than \$700,000 (Federal share) is generally considered to be heavy maintenance or routine emergency repair. For exceptions to this damage threshold, see 23 CFR 668.105(j). By policy, a minimum \$5,000 in repair costs per site is used to determine if sites are eligible for ER funds. Sites that have sustained less than \$5,000 in damage are generally considered to be heavy maintenance. Chapter II, Section C-3, "Damage Estimate under \$5,000 per Site" provides further guidance on the definition of a site.

The ER program generally provides funding to repair and restore highway facilities to predisaster conditions. ER funds are not intended to replace other Federal-aid, State, or local funds for new construction, to correct non-disaster related deficiencies, or to otherwise improve highway facilities.

By statute, ER funding is limited to the cost of repair or reconstruction of a comparable facility. A comparable facility is a facility that meets the current geometric and construction standards required for the types and volume of traffic that the facility will carry over its design life.

While ER funds are primarily provided for repair activities following a disaster; design and construction of repairs should consider the long-term resilience of the facility. USDOT defines **resilience** as the capability to anticipate, prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to social well-being, the economy, and the environment. A risk-based analysis should be used when designing and constructing repairs to

ensure they are cost effective and to reduce the potential for future losses. The analysis should apply the best available scientific and economic information to forecast and assess future risk factors.

There are two categories of emergency relief: 1) emergency repairs and 2) permanent repairs. <u>Emergency repairs</u> are repairs undertaken during or immediately after a disaster to restore essential traffic, to minimize the extent of damage, or to protect the remaining facilities. <u>Permanent repairs</u> are those repairs undertaken after the occurrence of a disaster to restore the highway to its pre-disaster condition.

B. Eligible Items

Generally, all elements within the cross section of a highway that are damaged as a direct result of a disaster are eligible for repair under the ER program. This includes, but is not limited to, pavement, shoulders, slopes and embankments, guardrail, signs and traffic control devices, bridges, culverts, cribbing or other bank control features, bike and pedestrian path, fencing, and retaining walls. The repair of a pedestrian or bicycle trail inside the right-of-way of a Federal-aid highway is eligible for ER funding whether or not the roadway itself is damaged.

The purpose of the ER program is to fund repairs to damaged roadways caused by a natural disaster or catastrophic failure from an external cause. ER funds are not intended to fund repairs of preexisting damage or non-disaster related damage, such as, inherent deficient conditions. The following is a more detailed discussion of eligibility for various highway elements:

1. Engineering and Right-of-Way

Preliminary engineering, right-of-way, and construction engineering costs that are necessary, reasonable and directly attributable to repair of eligible damage may be eligible for ER reimbursement.

2. Indirect Costs

Costs that are not allocable to a specific project such as a general overall assessment of damage, administration, overhead, general supervision, contract administration other than construction engineering, and project planning and scheduling are considered indirect costs that may be eligible for ER funding.

Section 302 of 23 U.S.C. allows State transportation departments to claim reimbursement of indirect costs. State and local government agencies may be reimbursed for indirect costs subject to the provisions of 2 CFR 225formerly OMB Circular A-87), "Cost Principles for State, Local, and Indian Tribal Governments." Since grantees are not required to claim indirect costs, these procedures only apply to agencies that have an approved indirect cost rate.

Federal-aid highway program funds may participate in the indirect costs of State and local governments when the costs are properly allocated to all benefiting cost objectives in accordance with the provisions of the OMB Circular. Appendix E of 2 CFR 225 points out the need to properly account for "extraordinary or distorting expenditures" in order to ensure an equitable distribution of indirect costs to all benefiting cost objectives (Federal and non-Federal awards/activities). Not making allowances for the one-time infusion of significant amounts of Federal dollars into the Federal-aid Highway Program (such as ER funding following a disaster) will likely result in a significant over-recovery of indirect costs that will have to be recovered at a later time.

The State transportation agency (STA) should develop an indirect cost rate that equitably allocates indirect costs to ER projects. A separate indirect cost pool and direct program pool or pools, should be established for calculation of an indirect cost rate associated with administering ER activities. A revised Indirect Cost Allocation Plan should be submitted to the FHWA Division Office for review and approval.

For additional guidance concerning indirect costs, please refer to FHWA Memorandum "Clarification of Policy on Indirect Costs of State and Local Governments," May 5, 2004 (available online at http://www.fhwa.dot.gov/legsregs/directives/policy/indirectcost.htm).

3. Detours and Temporary Substitute Highway Traffic Service [Revised May 31, 2013]

Designated and supplemental detours to restore essential traffic from Federal-aid highways damaged by an eligible disaster are eligible for ER funds if they can be shown to relieve excess traffic directly attributable to the eligible disaster. A designated detour is the route that highway officials have officially signed to reroute traffic around a damaged or impassable portion of a Federal-aid highway. The detour does not need to be a Federal-aid highway.

Detours should be constructed consistent with anticipated volume and type of essential traffic, reasonable speeds, safety, term of use, and costs. However, ER funding does not necessarily extend to restoring pre-disaster levels of service until completion of permanent repairs. The following are examples of eligible costs associated with designated detours:

- Additional traffic control,
- Overlays and widening needed to support detoured traffic,
- Repair of surface damage that occurs while the detour is in operation,
- Repair of surface damage to restore the detour route to its pre-disaster condition after detoured traffic is removed. To determine if such repair is eligible, the applicant should document the pre-disaster condition of the detour route and any preexisting damage.

Additional ferry or transit service may be eligible where a temporary structure or an alternate

existing route is not practical as a temporary connection. Fares charged for comparable service must be deducted from the ER project. Eligible costs for additional ferry or transit service are:

- The cost of the ferryboat or transit vehicle less the remaining salvage value,
- A reasonable rental fee for the ferryboat or transit vehicle,
- Maintenance and operation of the temporary ferry or transit service,
- Docking and loading facilities.

The Federal Transit Administration (FTA) emergency relief program provides eligibility for temporary public transportation services related to damaged public transportation systems. FTA's ER program is administered separately from FHWA's ER program. Guidance on FTA's ER program can be found at http://www.fta.dot.gov/map21_15025.html.

4. Traffic Damage

In general, repair of roadway surfaces due to traffic damage, even if damage is aggravated by saturated subgrade conditions, or by inundation of the roadway, is not eligible for ER funds. There are three exceptions. ER funds may participate in repair of surface damage to:

- 1. Any public roads caused by vehicles making repairs to Federal-aid highways,
- 2. Any public roads caused by traffic using the officially designated detour around a damaged Federal-aid highway, and
- 3. Any Federal-aid highways caused by vehicles responding to a disaster.

ER participation should be limited to surface damage that has occurred during the first 60 days after a disaster event, unless otherwise approved by the FHWA Division Administrator. Examples of response activities include vehicles involved in repairing other transportation facilities, constructing emergency dikes or performing emergency repairs to dikes, providing essential services such as firefighting and providing supplies, or removing debris from both public and private property. In exceptional cases, ER participation may be extended to damage occurring up to 6 months after a disaster.

Identifying surface damage caused by response vehicles can be difficult. In some cases, a pavement management system may provide data that would confirm the roadway condition prior to the disaster. In most cases, an analysis based on best professional engineering practice will be needed. This analysis should use other appropriate information on the pre-disaster condition of the roadway surface and the special circumstances and vehicle use that caused the damage.

5. Overlays

Where entire sections of roadways are damaged and need to be reconstructed, new surfacing is eligible. In addition, where several intermittent but close-by sites have surface damage, resurfacing of the entire section between and including the sites is eligible.

Overlays of roadways that, even though submerged during the flooding, have suffered no significant damage as a direct result of the flooding, are not eligible.

6. Raising Grades

a. Traditional Flooding

Temporary work to raise roadway grades to maintain essential traffic service during the flooding is eligible. This is limited to fill material and minimum riprap to protect the temporary fill plus temporary surfacing material. If such roadways have otherwise suffered no significant damage as a direct result of the flood, work to provide a permanent higher grade, e.g., re-compact fill, provide permanent surfacing, provide drainage, guardrail, signing, etc., is not eligible.

Where roadways have been severely damaged and substantial lengths need to be permanently reconstructed, design modifications as a part of the permanent reconstruction project to avoid future flooding problems could be eligible, on a case-by-case basis, if determined to be a cost-effective betterment. Again, raising the grade of roadways that, even though submerged during the flooding, have suffered no significant damage as a direct result of the flooding, is not eligible.

b. Basin Flooding

A basin is a large depression in the land with no natural drainage outlet such that the water level decreases only due to infiltration or evaporation.

ER funding is available to raise the grades of <u>critical</u> Federal-aid highways faced with <u>long-term</u> loss of use due to an <u>unprecedented</u> rise in basin water level when basin flooding is considered a natural disaster for the purpose of the ER program, and if the corrective work is restorative rather than preventive in nature.

Basin flooding is considered an eligible disaster under the ER program if it can be shown that:

- (i) The work is restorative rather than preventive. A restorative situation exists if damage was not anticipated, and the flooding is long-term, effectively rendering the roadway useless for an extended period of time.
- (ii) There has been an <u>unprecedented</u> rise in the basin water level, both in terms of the

magnitude of the increase and the time frame in which this increase occurred. To document the unprecedented rise, the State should provide information showing that the water elevation in the basin has reached historically high levels. Further, it should provide information that the rise in the water level occurred during a short period of time such that the rate of increase was much greater than previously experienced. Support information could include, for example, historic water level elevation and rainfall intensity records. If these are not available for the basin, more empirical evidence, such as State and/or local maintenance reports or other information that provides some historical perspective on events and water levels within the basin, could be used.

(iii) There is severe damage that results in <u>long-term</u> loss of use of <u>critical</u> Federal-aid routes.

To document the long-term loss, information should be provided concerning the length of time highway facilities have been closed to traffic and are projected to remain closed to traffic based on the basin water level elevations that have and/or are projected to occur. In the case of major arterials still in service which the State determines must remain open, documentation on long-term loss of use will have to be based on the potential for this loss to occur should anticipated basin water levels be reached. Since the ER program is not of a preventative nature but only provides funding after a disaster has occurred, extreme care is needed in evaluating situations involving potential loss of use to ensure the integrity of the ER program is maintained.

Only those routes that are critical to restoring traffic service are eligible for grade raises. Factors to take into account in evaluating whether individual routes are critical could include functional classification, provision of essential community services such as access for school, ambulance, fire, and mail vehicles, availability of alternate routes, length of detours, etc. The FHWA Division Office, in cooperation with the State, will jointly determine those critical Federal-aid routes eligible for grade raises.

Basin flooding is handled as a separate disaster under the ER program. Generally, each basin will be evaluated individually based on the water level rise that has occurred within that basin, and the above criteria must be satisfied for that basin before ER funding will be considered. However, special cases may arise where several basins in close proximity, all of which are affecting the same critical Federal-aid routes, may be treated as one event for the purposes of an ER finding that a disaster has occurred.

The beginning date for incurring ER eligible costs for a basin flooding disaster is not as clear-cut as the typical ER disaster. Basin flooding may represent the culmination of several meteorological events that have caused excessive run-off into the basin and have occurred over an extended period of time. For a typical ER eligible disaster, a State's letter of intent for a basin flooding disaster will serve as the beginning date of ER eligibility for that disaster. If a Division Office believes that use of another beginning date requested by the State can be justified, the damage survey summary report accompanying a State's request for ER funding for a basin

flooding disaster should present their recommendation and rationale as to an alternate beginning date, with appropriate available supporting information. In an effort to provide some consistency on this matter, Headquarters must be consulted for use of an alternate date other than the letter of intent date for a basin flooding disaster.

The Federal share for ER funding provided for basin flooding should be determined in a manner similar to other ER disasters. For a basin flooding disaster, costs to restore essential highway traffic, minimize the extent of damage, or protect the remaining facilities, which are incurred in the first 180 days, starting with the date of the letter of intent for the disaster, receive100 percent Federal share reimbursement. All permanent restoration costs and any costs incurred after the first 180 days are to be reimbursed at the normal pro rata share.

For eligible basin flooding disasters, ER funding will generally be limited to grade raises of highways and bridges. However, if within the basin, Federal-aid routes have concurrently suffered traditional ER eligible damage, such as culvert washouts or embankment failures, repair of this traditional damage need not be handled as a separate ER disaster but may be included as incidental to the basin flooding disaster.

Although basin flooding is considered as an ER disaster, it is expected that ER requests be limited to those truly unusual events that meet the criteria outlined above. It is not the intent of the ER program to raise the grades in dips or other low-spots along Federal-aid routes that suffer chronic undulation flooding problems. Rather, these latter situations should more appropriately be corrected using regular Federal-aid funding sources.

7. Slides

The removal of rock and mud slides from a Federal-aid highway is eligible when the slide is either associated with the natural disaster or by itself qualifies as an eligible natural disaster. In both cases, its correction to provide a safe roadway is eligible. If found cost-effective, ER funds can be used to stabilize slide areas to protect a highway facility from future disaster damage (see further discussion of betterments at the end of this chapter). Such stabilization is considered to be an ER-eligible betterment. Also, relocation of the road rather than slide correction is an eligible betterment if found to be cost-effective and accompanied by proper documentation.

8. Work on Active Construction Projects [Revised May 31, 2013]

Most States require contractors to protect facilities that are under construction, but not yet accepted by the State. The contract documents may specify the responsibility for damages that are caused by a disaster during the construction stage of a project. Before considering the ER eligibility of work on an active construction project, it should clearly be established that such work is not the responsibility of the contractor. Generally, project elements that are in place and that have been accepted by the State prior to the disaster would be eligible for ER funding.

Damages to contractor's materials stockpiles, equipment or facilities are not eligible for ER funds.

As an example, an STA has issued a contract to widen a bridge. The contractor has delivered beams to the project site and has received partial payment, but the beams have not been incorporated into the structure. Floodwaters destroy the existing bridge and the stockpiled beams. The cost of replacing the existing bridge is eligible for ER funds. However, since the beams were not a part of the existing bridge at the time of its destruction, the cost of replacing the stockpiled beams is not eligible.

9. Toll Facilities [Revised May 31, 2013]

ER funds may participate in the cost of repairs to highway toll facilities. Although 23 U.S.C 129 no longer requires toll agreements, toll authorities should be aware that by receiving Federal aid funds, the facility becomes subject to the conditions of 23 U.S.C. 129. Loss of toll revenue is not eligible for reimbursement.

10. Traffic Control Devices

ER funds can participate in the cost of the repair or replacement of traffic control devices including traffic signal systems, directional and informational signs, and railroad-highway crossing warning devices, if the damage and associated repair or replacement costs can be shown to exceed heavy maintenance.

11. Landscaping [Revised May 31, 2013]

Replacement of damaged highway landscaping is an eligible ER cost if it is incidental to otherwise eligible damage. For example, following a wildfire, erosion control of damaged areas within the highway right-of-way is an eligible ER activity. The eligibility of erosion control outside the right-of-way should be considered on a case-by-case basis. ER participation in erosion control outside the right-of-way may be economically justified if an analysis demonstrates that the cost of such repairs will result in a net savings to the ER program should a future disaster affect the site. Item 16 has additional discussion of eligible repairs outside the highway right-of-way.

12. Roadside Appurtenances [Revised May 31, 2013]

The repair or necessary replacement of damaged or destroyed guardrail, bridge rail, impact attenuators, right-of-way fences, etc., is eligible for ER funding if such damage is extensive and not limited to a few isolated cases under each category.

13. Timber and Debris Removal [Revised May 31, 2013]

Debris typically includes trees, tree limbs, other woody materials, sand, mud, silt, gravel, and rocks, etc.

Section 1107 of MAP-21 made ineligible disaster-related debris removal that is eligible for FEMA funding. The following scenarios discuss eligibility under both programs.

a. Debris Removal eligible for FEMA funding

Disaster-related debris removal that is eligible for FEMA funding is not eligible for ER funds. Debris removal from Federal-aid highways is eligible for FEMA funding when the President declares an emergency or a major disaster and FEMA determines that debris removal is eligible under sections 403, 407, or 502 of the Stafford Act.

Requirements in 44 CFR 206.224 apply when Stafford Act funds are used for debris removal. They are elaborated in the FEMA Public Assistance Policy Digest found at http://www.fema.gov/pdf/government/grant/pa/pdigest08.pdf.

b. Debris Removal by FHWA

Disaster-related debris removal from Federal-aid highways is eligible for ER funds when:

The Governor makes an emergency or disaster declaration but the President does not make an emergency or a major disaster declaration under the Stafford Act. If the FHWA Division Administrator concurs with the Governor's declaration, ER funds may participate in debris removal on eligible sites on Federal-aid highways in those counties included in the Governor's declaration.

- The President declares an emergency or a major disaster but FEMA determines that debris removal is not eligible under the Stafford Act.
 - ER funds may participate in debris removal costs on eligible sites on Federal-aid highways that FEMA determines to be ineligible under its program. FHWA division offices should request and review documentation of FEMA's determination to ensure the removal is eligible under the ER program.
- The Governor's declaration covers counties that are not included in the President's declaration.

ER may participate in debris removal costs on eligible sites on Federal-aid highways in the same manner as before MAP-21 for those sites included in the Governor's declaration but not the President's declaration.

FHWA requirements in 23 CFR 668.109 apply when ER funds are used for debris removal. Debris deposited as a direct result of the disaster is eligible for ER funding. Other debris, such as debris placed on the roadway by adjacent property-owners, is not eligible for reimbursement.

Material generated from ER funded emergency or permanent repairs, such as structures or culvert replacement or slide stabilization is not considered to be debris and is eligible for ER funds.

When debris removal is eligible for ER funds, the cost of stockpiling and disposing of debris or of removing and transporting marketable timber from the acceptable clearing limits to adjacent sites is eligible for ER funds. Hauling costs to locations outside the general proximity of the damaged highway are not eligible.

The eligible limits for debris removal (when eligible for ER funds), including downed timber, is the traveled way, cut and fill slopes and clearing needed for full functioning of the pavement, drainage ditches, structures, and the safety clear zone. Cut sections should be cleared to a safe distance to prevent debris from causing further slope erosion, filling ditches or endangering traffic.

Clearing the remainder of the right-of-way outside the above limits is not eligible for ER funding. Where directional roadways or "divided highways" are widely separated the cleanup of the entire median would not be eligible. Each directional roadway is treated as a separate roadway, including cut and fill slopes, and handled as described above.

Debris removal, when eligible for ER funds, is considered emergency repair to the extent that it is needed to minimize damage, protect facilities, or restore essential traffic. The outside edges of the shoulders are the limits for debris removal to be considered as emergency repairs. However, debris that is a safety hazard (fixed object) within the clear zone may also be considered emergency repairs.

14. Transportation System Management (TSM) Strategies

TSM strategies to monitor and control traffic and to manage transportation on streets and highways during and immediately following a disaster to restore traffic are eligible for ER funding. The elements of the TSM plan may include highway advisory radio, closed circuit television, video image process surveillance, installation of changeable message signs, a public awareness program, etc.

ER funds are eligible to provide emergency traffic management services by the police during and immediately following a disaster under the following conditions: Such traffic services by the

police must 1) directly relate to the disaster; and 2) represent added costs above and beyond costs related to normal, day-to-day responsibilities, i.e., overtime costs or additional shift costs. The added costs should be itemized and documented to support any use of ER funds for this activity. Lost ticket revenue due to redirection of traffic enforcement police services resulting from an emergency is not an eligible ER expense.

15. Projects and Project Features Resulting from the NEPA Process

An ER repair project developed in accordance with the National Environmental Policy Act (NEPA) process may incorporate added features to mitigate environmental impacts to such resources or sites as wetlands, noise-sensitive land uses, endangered species, etc. These added mitigation features, by themselves, are not considered "betterments" for the purposes of the ER program since they do not protect the highway from future disasters or change the function or character of the highway facility from what existed prior to the disaster or catastrophic failure. This is illustrated by the following example:

Environmental Mitigation Feature Eligible for ER Funding

In repairing a damaged bridge, some of the construction activity will take place in or closely adjacent to the existing stream bed. This particular stream serves as the spawning grounds for an endangered species of fish. The contractor would be required to use special construction techniques that minimize disruption of the streambed, and special pooling areas for the fish will need to be built in the stream adjacent to the bridge. The special construction techniques and the added stream features are necessary mitigation measures to implement the repair project, and they would be eligible for ER funding.

Eligibility determinations for environmental mitigation measures can apply a general rule-of-thumb: if the mitigation measure is related to an ER-eligible betterment, the mitigation measure is also eligible. For example, if a roadway grade raise to protect a facility from future flooding has been economically justified for ER funding, then a mitigation feature associated with the grade raise, such as possible wetland restoration, would qualify for ER funding. Conversely, if a "betterment" is not justified for ER funding, then any added mitigation features related to the betterment would likewise not be eligible for ER funding but instead should be funded from regular apportioned Federal-aid highway funds.

For ER replacement projects, the NEPA decision process can also determine project location, potentially including a completely new location. Further, the mere fact that something old is being replaced with something new, or that the new facility is built to current design standards, does not restrict ER funding. In general, if it has been determined that ER funding may fully participate in the replacement project (see the various scenarios discussed on page 31), and if the replacement project is of comparable function and character to what existed prior to the disaster or catastrophic failure, then ER funding may fully participate in the replacement project.

As noted, the NEPA process may well determine the location of the replacement project. In the case where it is neither practical nor feasible to replace a destroyed facility in-kind at its existing location, the alternative facility developed in conformance with the NEPA process is eligible for ER funding, as illustrated by the following example:

Replacement Facility on New Location Eligible for ER Funding

A roadway was permanently submerged by water backing up behind a naturally created dam, and replacement of the inundated highway facility at its existing location is neither practical nor feasible. Through the NEPA process, various alternative locations for a replacement facility were evaluated. A recommended alternative emerged from the process. This recommended alternative was of comparable function and character to the damaged facility (i.e., same number of lanes, same degree of access control), and, accordingly, was eligible for ER funding.

The NEPA process may also require that a replacement project include additional project features to mitigate impacts of the project. These added mitigation features are eligible for ER funding if the replacement project itself is eligible for ER funding, as illustrated by the following example:

Environmental Mitigation Feature Added to Replacement Facility Eligible for ER Funding

A replacement facility was predicted to result in increased noise impacts on adjacent residential property, and the NEPA noise impact evaluation determined that noise walls must be included in the final project. Although the damaged facility did not have existing noise walls, this added feature, as an environmental commitment, became an integral part of the replacement project in compliance with NEPA and FHWA's Title 23 highway noise impact assessment and mitigation requirements. Further, since a noise wall would not protect the highway from future disaster damage or change the function or character of the highway facility, it did not have to be justified as a "betterment" under the ER program. As a result, this noise wall was eligible for ER funding.

The above discussion on replacement facilities and use of ER funding, in general, reflects those situations where ER funding is not capped. However, if replacement facilities are being advanced where ER funding participation is capped, this same limit on ER funding would apply to the proposed replacement facility including any environmental mitigation features required as a result of developing the replacement facility in accordance with NEPA.

16. Outside of the Highway Right-of-Way [Revised May 31, 2013]

Generally, damage repair activities outside the highway-right-of-way are not eligible for ER

funding. Work associated with stream channels adjacent to a highway is an exception. Normally, projects associated with channel work (riprap, bank protection, etc.) that require right-of-way purchases and/or easements outside the right-of-way are not eligible for ER reimbursement. The fact that the agency responsible for channel maintenance does not have funds to finance the repair and protection work is not an acceptable justification for ER fund assistance. In situations involving requests for participation in erosion control and bank protection outside the highway-right-of way, the following conditions apply when making an eligibility determination:

- The work is directly related to protection of the highway facility;
- The work is not eligible for funds from another agency;
- No other agency has the responsibility for such work;
- The applicant agrees to accept the future maintenance of all work performed.

When work of this type is proposed, the project documents should include a letter from the State agency showing how all of the above four items have been or will be satisfied.

17. Administrative Expenses

a. Regular and Extra Employees

Regular salaries and overtime salaries and wages of all regular and extra employees of the applicant directly engaged in the performance of work on ER projects are eligible for reimbursement. Timekeeping procedures should facilitate allocating employees' time to projects, and/or other activities, each day on an hourly basis. A timekeeping document, such as time slip, time and attendance report, or time book, should be available for examination by audit personnel to support direct labor costs claimed on any ER project. A responsible employee having knowledge that the time distribution is accurately reported should sign the document.

b. Payroll Additives

Usually referred to as labor surcharge, a set percentage over and above the total direct labor costs charged to a project is eligible for ER participation. This surcharge covers costs of various types of leave allowances, industrial accident insurance coverage, and other employee benefits. The allowable percentage rates will normally vary from year to year. Also, employee benefits allowed by one applicant may differ widely from those allowed by another. Therefore, the records used in developing percentage rates should be preserved under suitable control conditions to assure availability for examination when requested. The acceptable percentage rate may be applied only to direct labor costs.

18. Supplies and Materials

Engineering and general office supplies of an expendable nature, charged from stock or purchased for a particular project, and properly identified on the stock-issue slip or vendor's invoice with the project charged, are considered eligible for participation. In the case of issues from stock, verifiable evidence to assure validity of the prices charged should be available for examination if requested. Many classes of materials required for ER projects are purchased for a particular project. In such cases, the costs are eligible for participation, provided the project on which the materials are used is properly identified on the supplier's invoice. The cost of materials issued from stock warehouses or agency-produced or purchased stockpiles for use on an ER project should be properly supported. The records supporting the prices charged should be available for audit when requested. Also, a responsible employee having knowledge that the supplies or materials have actually been incorporated into the project should sign the source document (stock issue slip or supplier's invoice).

19. Equipment

The use of applicant-owned equipment or equipment owned by, and rented from, another public entity, or rented equipment from commercial sources, which is necessary for the prosecution of work properly authorized under an ER project, is eligible for participation. Such use should be charged on a per hour, per shift, per mile, etc., basis. The rental cost of such equipment may include such items as normal operation (gasoline, fuel oil, lubricants, antifreeze, etc.); repair (major and minor), etc.; and depreciation or replacement expenses. Costs in excess of normal depreciation to cover the increased costs of replacement equipment are to be excluded from equipment rental rates applied to ER projects. The rates per unit for applicant-owned equipment should be properly supported by verifiable analyses covering specific sizes and types of equipment charged. Lacking such documented cost analyses by the applicant, ER funds will participate in the equipment rental costs on the basis of rates developed by the STA and approved by the Division Administrator. Each applicant should use either the FHWA approved STA rates or its own established rates, but not a combination of both. The required document action to support equipment rental charges is an acceptable time and equipment use report, signed by a responsible employee signifying actual use of the equipment on the project designated.

Reasonable costs of equipment rented from commercial sources for use on ER projects are eligible for ER participation. The extent of "reasonableness" will be determined by the Division Administrator as consistent with the current edition of the *Associated Equipment Distributors Manual* or rates charged by a recognized rental agency. A commercial invoice, signed by a responsible employee signifying actual use of the equipment on the project designated, is required documentation to support equipment rental charges. The supporting document should indicate the period of use applicable to an identified ER project. The applicant may also claim operating costs provided that the rental costs do not include operating cost. Equipment "move in" and "move out" costs may also be considered eligible.

20. Catastrophic Failure from an External Cause

A catastrophic failure from an external cause is an eligible ER expense. A catastrophic failure from an external cause is defined in 23 CFR 668.103 as the sudden failure of a major element or segment of the highway system due to an external cause. The failure must not be primarily attributable to gradual and progressive deterioration or lack of proper maintenance. The closure of a facility because of imminent danger of collapse is not in itself a sudden failure.

Examples of such disasters include a barge striking a bridge pier causing the sudden collapse of the structure, a truck crash resulting in a fire that damages the roadway, and acts of terrorism that result in structural damage to the highway facility.

Prompt and diligent efforts shall be made by the State to recover repair costs from the legally responsible parties to reduce the project costs particularly where catastrophic damages are caused by ships, barge tows, highway vehicles, or vehicles with illegal loads or where damage is increased by improperly controlled objects or events. [See 23 CFR 668.105(f)]

Any compensation for damages or insurance proceeds including interest recovered by the State or political subdivision or by a toll authority for repair of the highway facility must be used upon receipt to reduce ER fund liability on the project. [See 23 CFR 668.105(e)]

Funding is to be credited to the ER project for which compensation is recovered. FHWA's share of the recovery amount should be proportionate to the ER funding percentage that participated in the project. Any resulting unneeded balance of ER funding on that project will then be withdrawn from the State and made available for other nationwide ER needs.

C. Ineligible Items

ER funds are not intended to cover all damage repair costs. Only the repair work that exceeds heavy maintenance, is extraordinary, and will restore pre-disaster service is eligible. Incidental costs resulting from a disaster, such as project delay costs or lost toll revenues, are not eligible. A more detailed discussion of repair activities that are not eligible for ER funds follows.

1. Projects Not Included in the State's ER Application [Revised May 31, 2013]

The STA must submit an application that includes a comprehensive list of all eligible project sites and repair costs by not later than 2 years after the natural disaster or catastrophic failure. Any project sites that are not identified in this application will not be eligible for ER funding.

2. Heavy Maintenance

When a disaster has caused damage requiring heavy maintenance or work frequently performed by the applicant's maintenance crews, repairs are not eligible. Heavy maintenance is usually performed by highway agencies to repair damage normally expected from seasonal and occasionally unusual natural conditions or occurrences. It includes work at a site required as a direct result of a disaster that can reasonably be accommodated by a State or local road authority's maintenance, emergency, or contingency program. Examples include work necessary to repair minor damage due to eroded shoulders, filled ditches and culverts, pavement settlement, mud and debris deposits, slope sloughing, and slip-outs in cut or fill slopes.

It is not the intent of the ER program to relieve an agency of its maintenance responsibility simply because a storm of unusual character and extent causes serious damage to roads and to public and private property.

3. Damage Estimate under \$5,000 per Site

A minimum \$5,000 in repair cost per site is used as a guideline for a site to be ER eligible. This minimum guideline dollar value is suggested for national consistency but, if circumstances warrant and the State has requested a different figure, the Division Administrator may allow a different minimum amount. This dollar threshold criterion is used to distinguish repairs that are maintenance activities from an ER program responsibility. Generally, a site is an individual location where damage has occurred. However, a site could include several adjoining locations where similar damage, related to the same cause, has occurred. For example, where flooding waters in a drainage course that runs along or continually crosses under a highway has caused damage at several locations within a reasonable distance of each other, it would be acceptable to package these together as a single site. Another exception could involve damage to traffic signs which has occurred at several locations on an area wide basis. In this case it would be acceptable to group these locations by route or jurisdiction, with the accumulated amount considered a site. Overall, aggregating locations together to form a site should be done with care, bearing in mind that the intent of the ER program is not to pay for highway damage repairs that a transportation agency would normally perform as heavy maintenance. For this reason, grouping damages to form a site based solely on a political subdivision (i.e., county or city boundaries) should not be accepted.

4. Traffic Damage

Repair of surface damage caused by traffic, whether or not the damage was aggravated by saturated subgrade or inundation, except as noted under Eligible Item B4 above, is not eligible for ER funds.

5. Frost Heaving

Damage to roadway sub-base and base materials due to inundation or freezing and resultant frost heaves, even if the roadbed has been saturated by the floodwaters, is not eligible for repair with ER funds. Surface roadway damage such as potholes resulting from such conditions are not eligible for ER funding.

6. Applicant-Owned Material

Replenishment or replacement of destroyed or damaged stockpiles of materials for both maintenance and construction that have not been incorporated into the highway is not eligible for reimbursement under the ER program. Repair of damage to or replacement of an applicant's or contractor's facilities, such as maintenance sheds or equipment, is not eligible for ER funds, for example:

The applicant is in the process of widening a bridge as a maintenance betterment project

Precast concrete beams have been delivered to the job site but have not been incorporated into the structure. Rapid runoff of floodwaters destroys the existing bridge and the precast beams. Cost of repair of the existing bridge is eligible. However, since the precast beams were not a part of the existing bridge at the time of its destruction, cost of replacing the stockpiled beams is not eligible for reimbursement.

7. Erosion Damage

Repair of minor erosion damage due primarily or wholly to rainfall and resulting from surface saturation of slopes and embankments, rather than from floodwaters, is not eligible for reimbursement. Even though the work may be a little more extensive than usual, it is considered heavy maintenance.

8. Prior Scheduled Work

Permanent repair or replacement of deficient bridges scheduled for replacement with other funds and damaged during a disaster is not eligible for ER funds, and should be funded as originally intended. The ER funds may participate in emergency repairs to restore essential traffic in such cases. A project is considered scheduled if the "construction phase" of a replacement structure is included in the FHWA approved Statewide Transportation Improvement Program (STIP) at the time of the event. As used in this section, the term "construction phase" refers to the physical construction separate from any other identified phases in the STIP such as planning, design, or right-of-way phases.

Inclusion of bridge replacement work in a city or local agency capital improvement plan is

viewed by FHWA as prior scheduled work and therefore is not eligible for ER funding. In this case, the city or local agency is that agency responsible for capital improvement program funding decisions for that jurisdiction and such a plan is officially recognized for that purpose.

9. Mine/Underground Subsidence

Where a highway passes over an underground mine and a section of highway is closed down due to actual mine subsidence, repair work on the section of highway exhibiting physical damage due to subsidence is eligible for ER funding. However, repair work to prevent additional physical damage to adjacent sections of the highway over the mine is not eligible. Further, in situations where in-bed stream mining is found to be contributing to erosion (where a highway passes over or is adjacent to the stream), associated repair work is considered ineligible.

10. Snow and/or Ice Removal

Snow and/or ice removal is not eligible for ER funding as snow and/or ice is viewed as a relatively short term event not causing physical damage to a highway.

11. Emergency Transportation Services/First Responders

Emergency medical transportation services, such as ambulances or helicopters, are not eligible for ER funding. Activities associated with first responders to a disaster such as emergency police services, firefighting, emergency medical, and any other rescue-related activities including the use of divers for rescue operations, are not an eligible ER activity.

12. Preventive Work/Evacuation Prior to a Disaster

Preventive work to avoid damage to a highway facility in anticipation of a disaster event is not eligible for ER funding. For example, work to prevent scour at bridge sites in anticipation of extremely high rainfall and potential flooding is not eligible for ER funding.

Costs associated with evacuation activities prior to a disaster such as traffic control and police and traffic management activities associated with evacuation of an area prior to the actual occurrence of an event, such as a hurricane, are not eligible for ER funding.

13. Catastrophic Failure from an Internal Cause

Not all catastrophic failures are ER eligible. An ER eligible catastrophic failure must be a sudden failure of a major element, or segment of the highway, due to an external cause. ER funds do not apply to catastrophic failures from an internal cause or source, e.g., gradual and progressive deterioration or lack of proper maintenance. Closure of a facility because of

imminent danger of collapse is not, in itself, a sudden failure and therefore is not eligible for ER funding.

14. Radiological Contamination

Acts of terrorism may result in radiological contamination of a Federal-aid highway facility where no associated structural damage has occurred. Under such a scenario, radiological contamination may render the bridge and/or the surrounding area temporarily or even permanently inaccessible. ER funds cannot be used solely for the purpose of radiological decontamination of a highway infrastructure where there is no incidental structural damage.

If the event resulted in structural damages that met the minimum ER event threshold, then decontamination associated with the repair or replacement of the damaged facility could be considered an eligible ER expense.

D. Emergency Repairs vs. Permanent Repairs [Revised May 31, 2013]

The Emergency Relief Program has two parts, emergency repairs and permanent repairs. Each has its own requirements for project approval, Federal share and methods of construction. Incorrectly classifying the two types of repair can result in unallowable expenses being charged to the ER program and loss of funding to the STA.

1. Emergency Repairs [Revised May 31, 2013]

Emergency repairs are made during or right after a disaster to restore essential traffic, to minimize the extent of damage, or to protect the remaining facilities. Repairs that go beyond these three objectives are permanent repairs.

Examples of emergency repairs are:

- Erection and removal of barricades and detour signs
- Flagging and pilot cars during the emergency period
- Construction of temporary roadway connections (detours)
- Erection of temporary detour bridges
- Temporary substitute highway traffic service, including ferry or transit service
- Removal of debris (see Eligibility Criteria)
- Removal of slides
- Dynamiting and other removal of drift piling up on bridges
- Placing riprap around piers and bridge abutments to relieve severe on-going scour action
- Placing riprap on the downstream slopes of approach fills to prevent scour from overtopping
- Replacement of washed out embankments and approach fills

- Regrading of roadway surfaces, roadway fills, and embankments
- Placement of final roadway surfaces when needed to restore essential traffic.

Emergency repairs should be made in a way that reduces follow-on permanent repairs.

Emergency repairs typically require little preliminary engineering. The need for geotechnical studies, structural analysis or environmental reviews is limited. The repairs can be constructed with little design effort. Emergency repairs are usually within the capabilities of State and local maintenance forces and most will be performed on a force account or an emergency contract basis. Work outside of the travelled way or repairs to non-essential facilities such as rest areas are not generally considered emergency repairs.

Emergency repairs permit work that cannot wait for a finding of eligibility and programming of a project, to begin. State and local transportation agencies may start emergency repairs without prior FHWA authorization. If FHWA determines later that the disaster is eligible for ER funding, it will reimburse properly documented costs. Emergency repairs should be included in the ER program of projects, when it is submitted for approval.

FHWA's acknowledgment of the STA's letter of intent will approve the start of emergency work. It does not authorize the agency to proceed with permanent repairs unless immediate completion of the permanent work is the most economical and feasible operation to quickly restore essential traffic. This incidental work can be performed with the emergency work if it is included in the damage inspection report. If this work was started before the site damage review, retroactive approval may be given when circumstances warrant. However, permanent repairs are always to be reimbursed at the normal pro rata share for the facility.

An example could be the washout of a bridge and its approaches where a detour does not exist, construction of a temporary detour would be costly and time-consuming, and the construction phase of a replacement structure was not identified in the STIP before the disaster. In this case, the STA could, with the approval by FHWA, start construction of the permanent structure and approaches. While the permanent repair would be handled as an emergency repair, it would still be reimbursed at the normal pro rata share.

Emergency repairs are normally limited to the amount needed to bring washed-out fills and slip-outs back to grade with a gravel surface. Nevertheless, the repair to the road should be sufficient to permit traffic to travel over it safely. Surface type and thickness such be based on traffic characteristics, remoteness of the site, traffic control requirements, and socioeconomic factors.

2. Permanent Repairs [Revised May 31, 2013]

Permanent repairs are those repairs undertaken after the occurrence of a disaster to restore the

highway to its pre-disaster condition. They usually occur after emergency repairs have been completed. Permanent repairs will typically require the development of plans, specifications and estimates. They will likely require some design effort and may require geotechnical studies or other engineering studies, structural analysis or environmental reviews. The replacement of bridges, construction of retaining structures, highway relocations or the addition of significant protective measures are usually considered permanent repairs. Work outside of the roadway section and repairs to non-essential facilities such as rest areas are considered permanent repairs.

The total cost of ER funding for a project is limited to the cost of repair or reconstruction of a comparable facility that meets the current geometric and construction standards required for the types and volume of traffic that the facility will carry over its design life. This eligibility is limited to those portions of the facility that have been damaged. Where the State desires to upgrade the general corridor in which the damaged facility is located to meet such current geometric and construction standards, such work in undamaged areas will require the use of other funds. The FHWA expects that STAs will undertake eligible permanent repairs within a reasonable period of time after the occurrence of an event. As such, the FHWA will not continue to recognize ER eligibility where permanent repairs are unreasonably delayed, including situations where the STA puts off improvements to accommodate future traffic needs until a larger corridor upgrade project is potentially advanced in the distant future.

Permanent repairs must receive FHWA authorization prior to the start of the work unless FHWA determines that it is more economical or practical to perform such work with the emergency repairs. This determination should be included in the detailed damage inspection report. Permanent repairs are to be administered using normal Federal-aid contracting procedures although use of streamlined procedures is encouraged. Such repairs may involve one or more of the following categories of work.

Restoration-in-Kind

Restoration in kind is the most common repair done with ER funds. Additional protective features or changes to the function or character from that of the pre-disaster facility will require justification on the basis of economy of construction, improved resiliency to prevent future recurring damage, or technical feasibility.

Replacement-in-Kind

If the STA and FHWA Division agree that it is not technically or economically feasible to restore a damaged facility to its pre-disaster condition, a comparable replacement facility may be warranted. Replacement roadways and bridges should be designed to the current geometric and construction standards required for the types and volume of traffic that the facility will carry over its design life. State transportation agencies should evaluate the resiliency of the proposed replacement and should consider incorporating cost effective features that will make the facility

more resilient and reduce the risk of damage from future events.

ER participation may be prorated. Where the replacement project exceeds ER eligibility limitations, the ER share of project cost will be limited to the estimated cost of the ER eligible replacement roadway or bridge.

Where relocation is necessary, each case must be considered carefully to determine what part of the relocation is eligible for ER funding. When relocation is being considered, the new location should be evaluated to determine its susceptibility to climate change damage. As relocation provides an opportunity to improve system resiliency, State transportation agencies should consider features that will make the facility more resilient. This matter is discussed further in the sections covering environmental considerations in Chapter V and betterments in this chapter.

Deficient Bridges

This category includes structural deficiencies only. It does not consider waterway opening, functional obsolescence or serviceability, etc. Permanent repair of a structurally deficient damaged bridge is eligible for ER funding if the replacement is not already under construction or if the construction phase of the bridge replacement is not scheduled in the approved STIP.

ER eligibility criteria for two common situations are provided below:

(1) Bridge is damaged but is repairable.

- Reasonable emergency repair to restore travel.
- Permanent repair of damage if such repair also removes the structural deficiency.
- Permanent repair of disaster damage if other funds are used to simultaneously correct the structural deficiencies. This involves situations where undamaged portions of a bridge still render the bridge structurally deficient.
- No permanent repair if construction phase of replacement bridge is scheduled in the STIP at the time of the event.
- No permanent repair if the bridge was deficient at the time of the event and the bridge will remain deficient after permanent repairs are made.

(2) Bridge is destroyed or repair is not feasible.

- Reasonable emergency repair to restore traffic.
- New comparable replacement structure to current design standards and to accommodate design-year traffic volume if bridge is not scheduled for replacement.
- No permanent repair if construction phase of a replacement bridge is scheduled in the STIP at the time of the event.

Replacement of Culverts

Repair or replacement of culverts must be specifically related to eligible disaster damage.

- Damaged culverts are eligible for repair in kind. Replacement to current standards is eligible if found to be reasonable based on the amount of damage, age of the culvert, likelihood of recurring damage and relative cost of repair or replacement.
- Destroyed culverts are eligible for replacement to current standards. A hydraulic analysis should be performed to ensure that the replacement is cost effective, resilient and will address future capacity needs.
- Wholesale upgrading of deficient culverts on an area or route basis is not eligible. Eliminating a recurring annual maintenance problem with ER funds, based on the occurrence of a disaster, is not normally within the scope of the ER program.

Betterments [Revised May 31, 2013]

Betterments, for the purposes of the ER program, are added protective features or changes that modify the function or character of a facility from what existed prior to the disaster or catastrophic failure. Betterments can be justified for ER funding by comparing the projected cost to the ER program from potential recurring damage over the design life for the basic repair to the cost of the betterment. The analysis does not include other factors often included in highway benefit/cost evaluations, such as traffic delays costs, added user costs, motorist safety, economic impacts, etc.

(1) Betterments Involving Added Protective Features:

This category of betterments involves adding protective features to highway facilities to make them more resilient to damage from future natural disasters or catastrophic failures. Examples of treatments that have been approved as betterments include:

- 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

The following example illustrates this type of betterment and the economic analysis that would be applied in determining whether the betterment would be eligible for ER funding.

Added Feature Justified for ER Funding

Floodwaters have damaged a 1,400-foot section of roadway with both surfacing and fill material being washed away. The site can be repaired for \$150,000. However, this section of roadway was similarly damaged during an ER event several years ago, and it appears likely to be damaged again in the future. The STA proposes to add additional culverts to increase the drainage capacity under the roadway, thus substantially reducing the chances that this type of flooding in the future will damage this section of roadway. Adding these culverts is estimated to increase the cost of the repair project by an additional \$100,000. Spending an additional \$100,000 for the added features could save one or more future ER repair costs that could easily exceed the cost of the added features. In this case, the added features are economically justified because of the potential to save future costs under the ER program, and, consequently, the added features are eligible for ER funding.

In the previous example, the betterment is considered eligible for ER funding. However, in many instances betterments will fail to meet the economic justification test for use of ER funding. While a betterment may not qualify for ER funding, 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. This point can be illustrated by the following example.

Added Feature Not Justified for ER Funding

Flooding waters covered a 1,000-foot section of a heavily traveled highway. Traffic must be detoured to other routes, causing extra travel and considerable delays. The highway was unusable for 3 weeks until the floodwaters receded. At that time, it was found that the flooding caused only limited damage to the highway, which can be repaired for \$75,000. However, the extra travel distances and delays during the 3-week period the highway was closed imposed an estimated \$1,100,000 in additional costs on the motorists and community. The STA proposed to raise the grade of the highway by 5 feet, thus placing the roadway at an elevation where a similar flood would not inundate it. The estimated cost of raising the grade for this section of highway was \$950,000. Although the cost of the grade raise could easily pay for itself in terms of potential savings in travel and delay costs to the motorists and community from a similar flooding event, the cost is substantially greater than the repair costs that will be charged to the ER program. In this case, the added feature is not economically justified for ER funding. Instead,

the more appropriate Federal highway funding source would be regular apportioned Federal-aid highway funding.

There are limited situations where added features require no further economic justification as betterments. One such situation involves reasonable grade raises associated with basin flooding. Another involves repairs of features, such as bridges, that may require permits or approvals from other entities. If these other entities routinely require 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 betterments.

(2) Betterments Involving Changes to the Function or Character of the Highway:

This category of betterments involves making changes to the function or character of the facility from what existed prior to the disaster or catastrophic failure. Examples include:

- 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 do not qualify for ER funding. One exception established in 23 U.S.C. 125(d)(2) makes eligible the cost of a comparable facility that is designed to current geometric and construction standards required for the types and volume of traffic that the facility will carry over its design life. This type of betterment, and eligibility of ER funding, is illustrated in the following examples:

Change in Function/Character Eligible for ER Funding

A 2,000 foot section of a 2-lane roadway heavily traveled urban route is seriously damaged by floodwaters. The STA proposes to build the replacement at the same site. Design year traffic projections shows that a 4-lane facility will be needed to accommodate future traffic. Accordingly, the STA proposes to build 4 lanes, a significant improvement in capacity. As a result of the statutory provision in 23 U.S.C. 125(d)(2), the added lanes for the damaged section are eligible for ER funding. Widening beyond these limits is not ER eligible, but they may be eligible with other Federal-aid funds. This eligibility ends when the construction is completed and the road is restored to normal traffic. No ER funding entitlement is provided for future corridor upgrading.

Repair Activities That Are Not Betterments:

As noted in the previous discussion, for the purposes of the ER program, the term betterment

applies specifically to added protective features or changes made to the function or character of the facility. The following examples identify types of repair activities that are eligible for and have used ER funds that are <u>not</u> considered betterments.

These are:

- Replacement of older features or facilities with new ones--The fact that a damaged highway feature or facility is replaced with something new that extends the service life of the facility is not, in and of itself, 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, additional roadside safety hardware, improved waterway
 opening that result from following current design standards. These features are not
 betterments.
- Replacement in-kind on existing location not practical or feasible -- On rare occasions, it is neither practical nor feasible to replace a damaged highway facility in-kind on its existing location. A comparable facility selected through the NEPA process is eligible for ER funding. This is <u>not</u> a betterment. (See the following discussion in this chapter on replacement facilities for more information on this special situation.)
- Additional required features resulting from the NEPA 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. These are not
 betterments.

Replacement Facilities and Betterments:

Restoration in-kind is the predominant form of repair activity under the ER program. However, at times restoration is not possible and replacement is necessary, or a STA may choose to replace a facility rather than repairing it. The extent of ER participation varies depending on the circumstances involved. Various scenarios are discussed below.

In a first replacement scenario, a highway facility was seriously damaged; however, inspection verified that repair and restoration of the existing facility was possible. However, the STA preferred to replace the existing facility with a new or alternative facility. In this case, ER funding limited to the ER program share of the estimated cost to repair the existing facility can be applied to a new or alternative replacement facility. Federal-aid highway apportioned (formula) funds may be used to fund project costs above the amount eligible for ER funding.

In a second replacement scenario, a highway facility was seriously damaged, and inspection confirmed that it was not repairable. The STA decided to replace the existing facility with a comparable replacement facility. In this case, ER funding may participate in the total cost of the replacement facility.

In a third replacement scenario, inspections confirmed that a seriously damaged facility was not repairable. Although building a replacement facility at the existing location was found to be feasible, the STA chose to replace the existing facility with a new comparable facility at another location. In this case, ER funding for the new facility is limited to the estimated cost to construct a comparable replacement at its existing location. It may be possible to utilize regular apportioned Federal-aid highway funds to fund project costs above the amount eligible for ER funding.

In a fourth replacement scenario, inspection has confirmed that a seriously damaged facility is not repairable. Because of the unique circumstances involved, replacement at the existing location was determined neither practical nor feasible. Consequently, an alternative replacement facility on a new location was developed through the NEPA process. The cost of a comparable facility is eligible for ER funding. Casual or offhand application of practicability and feasibility criteria to support a determination to replace on a new location is not acceptable; rather they must be applied as very rigorous tests.

For the first and third replacement scenarios discussed above, it is possible that the replacement facility could be justified as betterment that might be eligible under the ER program. Replacement on a new location to reduce the potential for future disaster damage to the facility is an example. To be eligible for ER funding, the additional cost of the relocated facility must satisfy the economic justification criteria applied to betterments. If the relocated replacement facility meets the economic justification criteria, then ER funding is not capped as discussed above but may participate in the cost of the replacement facility. This is illustrated by the following example:

Replacement at New Location Where Repair or Replacement In-Kind is Possible (ER Funding of Betterment to Improve Resiliency)

A three-mile section of a highway in a low-lying coastal area was heavily damaged by high surf and wave action from a storm, the third time in the last 15 years that the highway has been damaged. Additionally, new information shows that raising sea levels will likely increase the frequency of flooding in the area. The latest damage would cost \$2 million to repair. Instead of repairing this section of highway, the STA proposed to replace it on a new location further inland at a cost of \$5.5 million, substantially reducing the risk of future surf and wave damage. Relocation of the facility is viewed as a betterment that needs to be economically justified in terms of the investment of ER funds. For this example, considering the frequency of previous

events and the projected increase in occurrences at this location, the relocation was considered economically justified and is eligible for ER funding.

Chapter III

Emergency Relief Application Process [Revised 5/31/2013]

NOTE: This revised version of Chapter III combines Chapter III and Chapter IV from the November 2009 version of the Emergency Relief Manual.

The STA decides if it will seek ER funding for repair of either State or local agency owned Federal-aid highways. Local highway agencies make their application through the STA.

The STA and local transportation agencies should begin emergency repairs immediately to restore essential traffic service and to prevent further damage to Federal-aid highway facilities. If a STA later requests ER funds and the FHWA Division Administrator finds the disaster to be eligible for ER funds, the STA will be reimbursed for properly documented costs.

There are two ways for a STA to request ER funding. The first, the "Standard" method is the general process to apply for and receive ER funds. The second, the "Quick Release" method, provides limited, initial ER funds for large disasters quickly. Quick Release funds are intended as a "down payment" to immediately provide funds for emergency operations until the Standard application may be submitted and approved.

A. Standard Application Process [Revised May 31, 2013]

Declaration - To be considered for ER funding a disaster declaration/proclamation is required. Any of the following fulfill this requirement:

- The President makes a major disaster declaration under the Stafford Act (42 U.S.C. 5121 et seq.), or
- The Governor of the State issues an emergency or disaster proclamation and FHWA concurs on the declaration.

The Governor's proclamation is usually issued during or shortly after the event. It should specify the affected area and the severity of damage. A sample Governor's proclamation is contained in Appendix D.

The Governor's proclamation required in Title 23 is a separate action from a major disaster declaration issued by the President. The President's declaration proceeds from the disaster relief authority of and is in response to a request from the Governor. The Governor's request for a determination by the President may be submitted as part of the STA's application for ER funds in lieu of a State proclamation.

Only those areas of the State included in the Governor's proclamation or the Presidents' declaration may be considered for ER funding.

The FHWA Division must obtain a copy of the Governor's proclamation for its files.

Notification - The STA sends a "letter of intent" to the FHWA Division to give notice that it plans to request ER funds. This is usually done as soon as it is clear that there is eligible damage, either during or shortly after the disaster. Filing a letter of intent does not commit the State to a future course of action. A sample letter of intent is contained in Appendix B.

Acknowledgment - The FHWA Division Administrator acknowledges in writing the STA's letter of intent. This acknowledgment letter will allow temporary operations, emergency repairs, and preliminary engineering to start before FHWA authorization. Reimbursement depends on the Division Administrator's subsequent eligibility finding for the disaster and on FHWA project authorizations.

A sample acknowledgment letter is contained in Appendix C. The acknowledgment letter should address the following items:

- Acknowledge receipt of letter of intent,
- Effective date of the disaster,
- Emergency operations,
- Preliminary engineering,
- Use of force account,
- Waiver of competitive bidding for emergency repairs,
- Guidance for permanent work,
- Time frame and items needed for Damage Survey Summary Report,
- Time limit for programming,
- Payment contingent on approval by the Division Administrator, and
- Record keeping requirements.

Disaster Assessment – Depending on the disaster, the initial damage assessment may be based on windshield surveys of a sample of sites or detailed damage inspections at many or all sites. If windshield surveys are done initially, detailed damage inspections are done later. Windshield surveys can expedite the funding request process. At least one site is visited in each county involved in the event. Since windshield surveys will not provide the required accuracy to estimate damage costs, requests based on windshield surveys should be conservative. Disaster assessments are described further in Chapter V.

ER Funding Application – State transportation agencies must submit applications for ER funding to the FHWA Division *within two calendar years of the date of disaster*. The

application must include a comprehensive list of all eligible project sites and repair costs as required by 23 U.S.C. 125(d). Applications or new sites submitted after two years will not be considered for ER funding.

While early submission of a complete application is desirable, it may not always be possible. State transportation agencies may request partial ER funding based on available information from windshield surveys, detailed damage inspections, or a combination of both. Additional ER funding may be requested as damage inspections are completed and more accurate estimates are developed. The STA's request is submitted for a finding by the FHWA Division Administrator.

The above steps are usually completed over a 6 to 10-week period. If windshield surveys alone are used, then the above steps could be accomplished over a 2-3 week period.

Division Administrator's Finding - The FHWA Division Administrator notifies the STA that ER funding for the disaster is approved. This notification serves as the finding that a natural disaster or a catastrophic failure has occurred causing substantial damage to Federal-aid highways and that the disaster is eligible for ER funding under 23 U.S.C. 125.

If the President has issued a major disaster declaration, the Division Administrator need not concur that a disaster occurred. However, the Division Administrator still makes a finding that a natural disaster or a catastrophic failure occurred that caused significant damage to Federal-aid highways and that the disaster is eligible for ER funding under 23 U.S.C. 125.

The Division Administrator will notify the STA if ER funding for an event is denied.

Request for ER Funding Allocation – At the same time, the FHWA Division requests an allocation of ER funds, either by memorandum or e-mail, from the FHWA Office of Program Administration. A sample request memorandum is contained in Appendix A. E-mail requests must be sent to the Office of Program Administration official mailbox (FHWA, HIPA Official Mailbox) with a copy to the ER Program Manager.

The request must include the following items:

- Date of the Division Administrator's approval,
- Description of the event,
- Estimated total cost of damage repair and the Federal share,
- ER funds needed for obligation in the current FY,
- List of counties in the disaster area, and
- U.S. Congressional district numbers for the disaster area.

Additionally copies of the following documents must be provided;

- The Governor's Proclamation, if one was issued,
- The STA letter of intent,
- The Division Administrator's acknowledgment,
- Damage Survey Summary Report

Detailed Damage Inspections – These inspections are completed at a later date, usually after the Division Administrator has made a finding of ER eligibility. The Detailed Damage Inspections Reports (DDIRs) are used to prepare the comprehensive list of projects. Requests for additional ER funds are to be based on estimates from DDIRs and the comprehensive list of projects.

B. Quick Release Application Process [Revised May 31, 2013]

Quick Release allocations generally provide limited funds to help the STA with initial emergency repair costs. Supplemental allocations would follow at later dates.

Preliminary Step - Same as Standard Process, although the STA's letter of intent and request for ER funds may be combined into a single document.

Disaster Assessment - Few, if any, on-site damage surveys are made. Instead, the disaster assessment is based on readily available information, such as credible media reports or aerial surveys done by the STA.

ER Funding Application - The STA requests ER funds based on a preliminary assessment of damage. The request is done in a brief letter to the Division and can be combined with the letter of intent. No Damage Survey Summary Report is prepared to accompany the ER application. A sample STA letter is provided in Appendix F.

Division Administrator's Finding - The FHWA Division Administrator makes a finding of eligibility of the event based on readily available reliable information on the extent and severity of the damage.

Request for ER Funding Allocation - The FHWA Division submits a request, by e-mail, for an initial allocation of ER funds from the FHWA Office of Program Administration. A sample request memorandum is contained in Appendix A. E-mail requests must be sent to the Office of Program Administration official mailbox (FHWA, HIPA Official Mailbox) with a copy to the ER Program Manager.

The amount of a Quick Release is typically discussed by phone between FHWA Division staff and the ER Program Manager. However, the Federal Highway Administrator decides if a Quick Release will be made and the amount. FHWA Division Offices cannot commit to the STA either

that a Quick Release will be approved or the amount of any Quick Release.

Typically, the above steps would be accomplished over a 1 to 2-day period.

The STA should prepare and submit an abbreviated Damage Survey Summary Report to the Division Office after most of the detailed damage inspections have been completed. The report can be as simple as a summary of eligible estimated ER costs by county. This report should provide support for supplemental allocations of ER funds for permanent repairs as well as providing a summary of the counties involved in the disaster and an overall estimate of ER eligible repair costs.

Detailed Damage Inspections – These inspections are completed at a later date, usually after the Division Administrator has made a finding of ER eligibility. The Detailed Damage Inspections Reports are used to prepare the comprehensive list of projects. Requests for additional ER funds are to be based on estimates from DDIR's and the comprehensive list of projects.

C. Two Disasters Treated as One

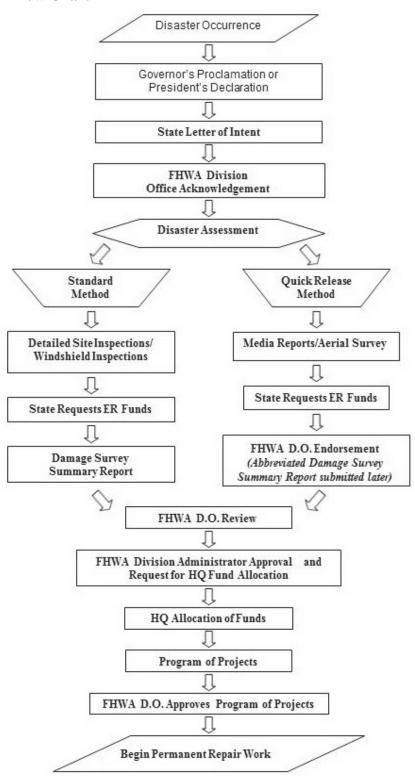
Sometimes, disasters can occur so closely in time that the damage to roads and bridges is difficult to evaluate and tabulate as separate events. Facilities in the same area may suffer damage from a new event before survey teams can inspect the damage from the earlier event. In these cases, the STA may ask that these events be treated as a single event. The magnitude and extent of damage from subsequent events should be supported in the regular manner.

Treating two disasters as one will simplify the ER application and allocation processes as a single ER finding is made for the disasters. The Governor's second proclamation should cover both disasters. However, the supporting data must prove that facilities have suffered severe damage in each event and that the damage is sufficient to justify ER funding.

Treating two disasters as one may not be desirable if one or both disasters are subject to an event cap. The STA and the FHWA Division should make a "best estimate" of damage to be attributed to each event. Also, when two disasters are treated as one, there is only one 180-day period covering the 100 percent Federal share for the combined event; this period beginning with the occurrence date of the first disaster.

The above discussion would also apply where more than two disasters are to be treated as one.

D. ER Program Flow Chart



Chapter IV

[Revised Chapter number from V to IV – May 31, 2013]

Disaster Assessment and Damage Survey Summary Report

A. Purpose [Revised May 31, 2013]

For a natural disaster, the disaster assessment is an evaluation of a natural occurrence that affects transportation facilities to determine if the basic conditions exist to support a reasonable request for ER funding. In any natural disaster situation two conditions must be met in order to qualify for ER funding: (1) the natural occurrence is sudden, unusual, and causes serious damage to Federal-aid highways; and (2) the extent of serious damage to Federal-aid highways covers a wide area (23 CFR 668.105). The natural occurrence over a wide area must have inflicted unusual heavy economic loss to the State and its subdivisions or other organizations or agencies.

A catastrophic failure is the sudden failure of a major element or segment of a Federal-aid highway due to an external cause. The disaster assessment should gather, organize and discuss the necessary data to either support or rule out a catastrophic failure event. The failure must not be primarily attributable to gradual and progressive deterioration, or lack of proper maintenance. The closure of a facility because of imminent danger of collapse is not considered a sudden failure.

B. Logistics/Mobilization

Experience dictates the need for developing a system for documenting damage estimates related to a disaster event and for the preparation of the Division Office Field Report. A good procedural method consists of the following elements:

1. Disaster Coordination Engineer

One engineer from the Division Administrator's staff should be selected and delegated the responsibility for coordinating the Division Office activities relating to disaster assistance programs. This approach should provide uniformity in administration of all ER program activities.

2. Division Office Orientation

The Division Disaster Coordination Engineer should arrange a training meeting to brief field engineers on resource and procedural requirements necessary to fulfill Division Office responsibilities. Eligibility criteria and field reporting procedures should be discussed and review/evaluation teams organized.

The following items should be provided to each FHWA engineer charged with assessment responsibility:

- Transportation agency contact's name
- Emergency Relief Manual
- Camera
- Maps of affected areas showing Federal-aid routes
- Calculator and Measuring Tape
- List of unit prices
- Laptop Computer
- Communication equipment including Cellular Phone
- Detailed damage inspection report forms (Appendix E)

3. Resource Evaluation

An initial evaluation of staffing/personnel requirements, equipment, and financial needs should be made. These resources must be adequate for the timely completion of the required disaster assessments and damage surveys. For example, concerning personnel needs, each FHWA Division Office should confirm that driver's licenses are current and assess possible immunization requirements.

The disaster assessment should be completed quickly to permit submission of the required information for the ER request within the prescribed time-period. Combining the detailed inspections with the disaster assessment may take longer and cause a late assessment.

C. Coordination with Other Agencies

Most natural disasters involve several Federal, State, and local agencies. It is necessary and often critical to establish immediate contact with these agencies to expedite the ER program. Coordination with the Office of Federal Lands Highway Programs is of particular importance since they maintain close liaison with the U.S. Forest Service, Park Service, Bureau of Indian Affairs, and the Bureau of Land Management regarding damage to Federal roads that may have sustained damage from the same event. Also, coordination with appropriate environmental resource agencies is encouraged. Among other reasons, coordination can avoid embarrassing inconsistencies and inaccurate total damage estimates.

Meetings set up by the STA are often advantageous, particularly if they are similar to, or in conjunction with, those held by the FEMA. Since the State makes the request for ER funds, it has the responsibility to arrange these meetings. The FHWA should provide technical assistance at these meetings, as requested.

These meetings should provide briefings of all eligible applicants and personnel who will be involved in ER projects. Participants should include State maintenance forces, key State transportation headquarters and division and/or district office personnel, FHWA field engineers, administrative staff from local governments, and representatives from Federal agencies. Eligibility, field procedures, and Damage Survey Summary reporting procedures should be discussed.

Applicants should be advised of the necessary records and documents that must be available to support expenditures on ER projects. Permanent restoration work must follow normal Federal-aid procedures.

1. Policy

The Federal Government will participate in costs incurred by a STA, or a political subdivision of that State, when such costs are properly supported and are directly attributable and properly allocable to ER projects. Needed documentation, as applied to the several categories of cost, is discussed later in this chapter.

2. State Transportation Agency

All requests for reimbursement shall be submitted consistent with procedures followed in billing other types of Federal-aid project costs. Billings for reimbursement will be subject to audit by State and Federal representatives. (Reference *Federal-Aid Policy Guide*, 23 CFR Part 140). A billing for eligible costs incurred by the State should be submitted to the FHWA for reimbursement. A billing for participating costs incurred by a political subdivision of a State should be submitted to the State which, in turn, may submit a billing for such costs to the FHWA for reimbursement. Final billing should be submitted promptly after the final inspection of the completed work. Progress billings are reimbursed on permanent repair projects. All billings should result from the project cost records and the accounting system. In order to obtain maximum reimbursement from the Federal Government, any political subdivision expecting to incur ER project costs should obtain guidance in the preparation and maintenance of supporting documentation as well as in billing procedures from officials of the State. Source documents are to be preserved for a period of at least 3 years after payment of the final voucher by the FHWA.

D. Damage Assessments

The State, in cooperation with FHWA field staff and in coordination with local authorities, undertakes damage assessments. Typically, this involves on-the-ground visits to the damage sites to verify the extent of damage and to estimate the cost of repairs eligible for ER funding. If there is a need to expedite the delivery of ER funding for high-cost disasters, an initial damage assessment may be based on aerial fly-overs, news telecasts, and other means of quickly estimating the extent of damage. This initial damage assessment is followed-up later with more

detailed site inspections.

As discussed in Chapter III, the damage assessments are conducted using one of two different methods, with the choice of method depending upon the urgency for developing and processing a State's request for ER funding for a disaster or catastrophic failure eligible under the FHWA ER program. Under the Traditional Method, detailed damage inspections are conducted to document site-by-site estimates. Alternatively, expedited windshield inspections may be conducted to document estimates for a limited number of sites. Under this method, a combination of detailed inspections and windshield inspections may also be employed. Under the Quick Release method estimates are based on readily available information such as valid media reports or aerial surveys done by the State.

1. Detailed Damage Inspections

These are inspections conducted on site to determine the extent of damage, scope of repair work, the preliminary estimate of cost of repair, and ER funding eligibility. Detailed damage inspections are conducted at many, if not all, sites. After it becomes apparent that the Division Administrator will recommend a positive determination of natural disaster, disaster inspection teams should be organized. These teams normally document site-by-site repair estimates to develop supporting material for programming purposes. This detailed inspection may be accomplished in conjunction with the disaster assessment if it does not delay submission of the Damage Survey Summary Report.

The on-site inspection provides an important opportunity to define clearly the extent of repairs eligible for ER funding. Eligibility determinations under the ER program reside with FHWA.

a. Documentation

The damage inspection report should document:

- The specific location, type of Federal-aid highway, ADT, cause, nature and extent of damage, including mileposts where available
- The most feasible and practical method of repair, particularly if the applicant's proposal does not meet eligibility criteria (See Chapter II)
- Work considered to be emergency or permanent should be identified and documented
- The estimated repair cost
- Recommendation by the FHWA field engineer
- Acknowledgment by the applicant (and State representative, as appropriate)
- Potential environmental/historical impacts
- Photographs supporting the above
- A location map and field site sketch

A blank detailed damage inspection report is provided in Appendix E.

b. Disaster Inspection Teams

The inspection teams consist of representatives from the FHWA and the applicant. If the applicant is not the STA, a State representative should be a member of the inspection team. Specialists (for example, bridge engineers if there is significant bridge damage) from each agency should also accompany the team if the situation warrants. Other specialists in such areas as right-of-way, environmental evaluation, or geo-technical analysis may also be needed, depending on site conditions.

The applicant's representative identifies the cause of damage and the normal design and construction practice to repair the facility. The FHWA field engineer shall consider site eligibility and proposed repair effort to aid in developing an estimate. All sites reviewed by the applicant should be documented with the FHWA eligibility recommendations noted. If all or any of the parties cannot agree on eligibility, the FHWA representative must note all items of disagreement on the inspection report. The applicant may appeal an ineligibility finding that should be submitted in writing to the Division Administrator within 30 days after the initial finding. The FHWA representative should also explain that any ER eligibility or participation disagreements are decided by the FHWA Division Administrator, or, when necessary and appropriate, the FHWA Administrator.

Copies of the inspection report should be provided to the applicant and members of the inspection team.

As a general practice, FHWA should participate in the damage inspections. However, events with a large number of damage sites and multiple inspection teams in the field at one time may overextend FHWA staff resources.

If an FHWA representative cannot be present on each inspection, the FHWA inspection workload should be ordered by such priority considerations as project cost, scope of work, good agency record keeping and documentation, the jurisdiction whose sites are involved, and the general experience and capabilities of the inspection teams. In addition, other steps that occur during administration of an ER disaster, such as the preparation of a program of projects or final inspections that may be undertaken by the Division Office, afford the FHWA some opportunity to further assess eligibility issues.

In view of the ER eligibility issues, decisions concerning any site inspections that will not be attended by FHWA must be based on appropriate risk management principles.

2. Windshield Inspections

Where appropriate, windshield surveys are used to expedite the ER application process. These reviews verify the extent and impact of damage during or immediately following a disaster and collect damage information to determine disaster eligibility for ER funding. Damage assessments are based on a windshield inspection at a sampling of sites as described below, but at least one eligible site must be visited in each county involved in the event.

The STA and Federal or State agencies with responsibility for highways under their jurisdiction will have advance information on the initial damage, road closures, and in some cases a very rough estimate of costs to restore facilities. As part of the more general disaster assessment, FHWA field engineers will be assigned to verify extent and severity of damage to highways and bridges.

In certain circumstances where time permits and the number of sites can be adequately sampled, ER assessments may coincide with assessments required by FEMA. Concurrence by FEMA should be obtained in advance.

a. Scope of Review

An independent verification by FHWA is required. Depending on the time available, amount of damage, how widespread the damage is, and accessibility, FHWA field engineers must review as much of the identified or reported damage as possible. As noted above, at least one eligible site in each county recommended for ER funding should be verified. This verification will assure the Division Administrator that no jurisdiction will be promised funds when not eligible and that the most critical needs are approved at the earliest practical time. For an obvious situation, such as a massive bridge collapse, these conditions may be immediately met. For a marginal condition, many weeks of verification may be necessary. The Division Disaster Coordination Engineer should be responsible for prescribing to the FHWA field engineers the format and extent of information necessary to prepare the Damage Survey Summary Report and to support the Division's recommendations.

b. Record-keeping

As a minimum, the Division's file should contain information on the extent of and methods used to evaluate the disaster and copies of the FHWA field engineer's assessments on damage and estimates of cost.

c. Supplemental Information

Types and sources of other information and data that should be considered if available:

- Damage reports from other agencies supported by photographs or field verification by FHWA personnel
- Newspaper articles
- Photos, including aerial photos or digital images
- U.S. Weather Bureau data
- U.S. Geological Survey information
- Reports from others, e.g., flood control agencies, cities, public utilities, Corps of Engineers, etc.
- Interviews with local citizens
- Contact with FEMA where a Presidential declaration is involved.

Detailed damage inspections of sites are completed at a later date, likely after the Division Administrator has made a finding of eligibility for the event. These detailed damage inspections of sites at a later date aid in eligibility determinations and approval of a program of projects.

3. Damage Assessments for Quick Release

Quick Release damage assessments are based on readily available information such as valid media reports or aerial surveys done by the State. Detailed damage site inspections are conducted at a later date, most likely after the Division Administrator has made a finding of eligibility for the event.

E. Damage Survey Summary Report

The FHWA Division Office assists the STA in preparing a Damage Survey Summary Report based on the State's assessments. The Damage Survey Summary Report provides the Division Administrator with a basis to make a finding that the disaster is eligible for funding under the FHWA ER program.

1. Purpose

The purpose of the Damage Survey Summary Report is to summarize the damage assessment and provide information and documentation for the FHWA Division Administrator to make a finding that a natural disaster or catastrophic failure has occurred within the intent of 23 U.S.C. 125. The report describes the general nature and extent of the resulting emergency situation and delineates the limits of serious damage to Federal-aid highway facilities. The sudden and unusual nature of the disaster should be documented and evidence of external cause should be included for a catastrophic failure.

A long-term problem, e.g., a very slow moving slide or subsidence or a slow lake rise, is considered outside the scope of a "disaster", since necessary work is more accurately categorized as preventive rather than repair. Serious damage for purposes of supporting a finding of ER

eligibility is heavy, major, or unusual damage to the highway that severely impairs the safety or usefulness of the highway or results in road closure. Serious damage requires more than normal heavy maintenance to repair. Examples of serious damage include destroyed bridges, damaged bridges incapable of supporting traffic, loss of traffic control devices causing severe disruption, or major slides and slip-outs extending into the traveled way. Applications for ER funds in amounts less than \$700,000 must include a statement explaining why the damage repair involved is beyond the scope of heavy maintenance or routine emergency repair. 23 CFR 668.105(j). Generally, widespread nominal road damages in this range are not considered significant and therefore do not justify approval by the FHWA Division Administrator for ER funding.

2. Damage Survey Summary Report Preparation/Content

The Damage Survey Summary Report should include:

- a. A description of the type and extent of damages and the estimated cost of restoration or reconstruction by Federal-aid routes for each county. In addition, the Division should provide the Federal share of the estimated cost of repair work and determine the amount of ER funds needed for repairs during the current FY.
- b. A description of the limits of the areas involved and the nature and characteristics of the disaster or catastrophe including the dates of occurrence. This information will differentiate between ordinary and extraordinary natural disturbances, except when the President has declared that a major disaster exists over the area involved.
- c. Photos showing the extent of serious damages sustained in the areas being recommended. At least one photo showing eligible damage should be included for each affected county.

3. Damage Survey Summary Report Submission

The Damage Survey Summary Report and supporting documents shall be submitted to FHWA Division Office.

4. Summary of Other Required Documents

If not previously submitted, the following documents must accompany the Damage Survey Summary Report [23 CFR 668.111(c)]:

- Governor's Proclamation, or a copy of the Governor's official request for a Presidential disaster declaration
- A copy of the State's written request for ER funds

5. Exception

Formal preparation of a Damage Survey Summary Report is not required when requesting ER funds using Method 2 - Quick Release, as described in Chapter III. For the purposes of the ER application, the State requests ER funding based on their preliminary assessment of the extent of damage via a brief letter to the FHWA Division Office. No Damage Survey Summary Report is prepared to accompany the ER application. The Division Administrator will then make a determination of eligibility of the disaster for ER funding. However, the Division Office should coordinate with the FHWA Headquarters ER Program Manager prior to the eligibility determination. Refer to the topic Quick Release under Chapter III. An abbreviated Damage Survey Summary Report should be prepared and submitted to the FHWA Division Office upon completion of a sufficient number of detailed damage inspections to demonstrate that an eligible disaster event has occurred. A Damage Survey Summary Report is still needed to meet the requirements of preparing a program of projects for final approval by the Division Administrator.

Chapter V

[Revised Chapter number from VI to V – May 31, 2013]

Project Procedures and Requirements

A. General

Once the FHWA Division Administrator has made a finding that emergency or catastrophic conditions justify ER funding, the State should submit promptly a program of projects for repair of damage to the Federal-aid highways. Projects should be individually justified. If sufficient information is available when the Damage Survey Summary Report is submitted, the first program of ER projects may be incorporated into the Damage Survey Summary Report itself, or it may accompany that report, even though a finding has not yet been made. In any case, the program of projects should be submitted within three months after the disaster finding by the FHWA Division Administrator.

A program of projects is to be submitted to the FHWA Division Office regardless of the Division Office's role in project oversight on Federal-aid projects.

B. Fund Management

FHWA's Office of Program Administration will maintain a current table of nationwide ER requests. This table will be updated as requests for ER funds are received. This table will consist of "formal requests" and "pending requests" (described below) based on the stage of the application process. A "pending request" should be developed shortly after an ER-eligible event has occurred. The FHWA Division Office should work with the State to develop an initial "best estimate" of ER needs for the event. Such an initial request should be provided to the Office of Program Administration as soon as practicable for inclusion on the current ER request table. Pending requests should be updated as better estimates are developed. Such pending requests are subject to change and will not result in an actual allocation of ER funds. However, it is important that the Division Offices keep the Office of Program Administration apprised of the most current needs for any known ER eligible events. At times, Congress may choose to provide a supplemental ER appropriation if current available funding falls short of total outstanding ER needs. Maintaining the most current ER request data allows Congress to accurately address all outstanding ER needs if a supplemental appropriation is considered.

After the FHWA Division Administrator makes an affirmative finding on a State's request for ER, the Division requests an allocation of ER funds from the FHWA Office of Program Administration (see Chapter III, *Emergency Relief Application Process*). This request represents the "formal request" for an actual allocation and will be included on the current ER request table. This allocation request is based on the State's anticipated ER obligations for the current FY and

may be less than the total ER needs for that event. The actual allocation amount may be less than the amount requested, depending on the availability of ER funds. FHWA's Office of Program Administration will allocate additional ER funds based on outstanding nationwide ER needs, provided additional funds are available.

The FHWA Division Office should work closely with their State to accurately determine ER obligation needs for the current fiscal year. It is recognized that funding requests may occur at any time during the FY. A funding request near the beginning of the FY will allow for better estimating of current FY obligation needs. However, for funding requests occurring late in the FY, it may be more difficult to estimate obligation needs for the remainder of the FY. Divisions are encouraged to work with the State to prepare an annual finance plan, as appropriate, that will facilitate an accurate estimate of ER obligation needs during the FY.

In addition to pending and formal requests submitted as described above, the Office of Program Administration will request from all Division Offices a list of ER needs (both pending and formal). This request will usually be made near the end of each FY, but may be made at other times as well. The identified needs will be added to the nationwide ER request table in preparation for an allocation of funds.

Near the end of each FY, the Office of Program Administration will also coordinate with Division Offices to identify any balances of previously allocated ER funds that will not be obligated through the remainder of the FY. Those funds will be withdrawn to be used for other nationwide ER funding needs during the next allocation. This process is intended to avoid accumulating large balances of unobligated ER funds and helps manage available funds nationwide as effectively as possible.

C. Federal Share [Revised May 31, 2013]

The Federal share for the repair of Federal-aid highways is established by law. It varies depending on the nature of repairs, when the work is accomplished, and the Federal-aid route being repaired.

For the costs associated with restoring essential traffic, minimizing the extent of damage, or protecting the remaining facility which are incurred in the first 180 days after the occurrence of the disaster, the Federal share is normally 100 percent. The 180 day time period for 100 percent eligibility of emergency repairs may be extended if a State cannot access a site to evaluate damages and the cost of repair. Since the ability to access facilities to evaluate damages and the cost of repair is location specific, it will be necessary for a State to request, and the FHWA Division Office to approve and document, extensions on a case-by-case basis for specific locations that cannot be accessed. Such extensions should not be extended for all sites in the disaster area unless all sites are not accessible. This extension is for situations where the site cannot be physically accessed and should not be granted for sites that can be physically accessed

but where the assessment is not made in a timely manner for other reasons.

For the costs of permanent restoration work, and the costs of all repairs incurred after the first 180 days, or the allowable extension to assess damages, the Federal share is based on the type of Federal-aid highway that is being repaired. For Interstate highways, the Federal share is 90 percent. For all other Federal-aid highways, the Federal share is 80 percent. The Federal share may be increased based on the "Sliding Scale" rates in States with high percentage of Federally owned public lands. The Federal share payable for any repair or reconstruction of Federal land transportation facilities, Federal land access transportation facilities, and tribal transportation facilities may amount to 100 percent of the cost of the repair or reconstruction.

The Federal share for permanent repairs may be increased to 90 percent on any Federal-aid highway if a State's eligible ER expenses exceed the State's combined annual Federal-aid apportionments for the fiscal year in which the disaster(s) occurred.

D. Preparation and Submission of Programs [Revised May 31, 2013]

States are required to submit an application for ER funding to FHWA within two calendar years of the date of disaster. The application must include a comprehensive list of all eligible project sites and repair costs.

A program of ER projects should be prepared by the State. The program of projects should:

- Indicate the natural disaster or catastrophic failure and the time of its occurrence.
- Relate the damage to that described in the damage assessment reports prepared and/or detailed damage inspections.
- Describe proposed permanent repairs or replacements on a site-by-site basis (although sites may be lumped by route and county for program purposes).
- Include supporting material indicating the suitability and economy of upgrades or betterments including relocation proposed for participation with ER funds. For some projects it will be necessary to complete additional design work in order to develop justification for added protective features. When betterments are contemplated, the State or local agency should contact the Division Administrator so that further project development is accomplished with FHWA involvement.
- Identify emergency repairs.

E. Approval of Programs and Project Authorizations

The Division Administrators have authority to approve programs of projects that are located on Federal-aid highways.

Temporary operations including emergency repairs, and preliminary engineering, including

consultant work, may proceed without prior authorization. This work need not be authorized retroactively; however, the need for such work must subsequently be approved by the FHWA as part of a program of projects. Permanent restoration work shall not be performed prior to FHWA authorization unless performed as part of emergency repairs.

F. Advancing Projects During ER Program Funding Shortages

When ER funds are not available for allocation to the States to cover either additional funding needs on previously approved ER events or funding needs for new disaster requests awaiting action by the Division Administrator, ER funding requests received in Headquarters are recorded and held by the Office of Program Administration pending action by Congress to replenish the ER accounts through a supplemental appropriation.

Recognizing that quick congressional action is not always possible, the following options could be used to fund or advance ER projects on an interim basis.

1. Previously Approved ER Events

For an event that the Division Administrator has previously found eligible for ER funding, requests to fund additional work for that event could be handled under one, or some combination, of the following two options:

a. Option 1 - Use of Regular Federal-aid Highway Funds

Federal-aid highway formula funds, appropriate for the type of Federal-aid highway (National Highway System/ National Highway Performance Program or Surface Transportation Program), can be used. Federal-aid funds must use the obligation limitation associated with the class of funds used. The Federal share is the Federal share appropriate for the ER work being authorized. Under this option, the letter of authorization should indicate that the project will be converted to ER funding when ER funding becomes available, at which time the regular Federal-aid funding, and the accompanying obligation limitation, will be released from the project.

This option may be used for both emergency repairs to restore essential traffic as well as permanent repairs. This option has the advantage of allowing immediate Federal reimbursement for costs that are being incurred. Further, it provides a means of securing FHWA authorization of the permanent repair activities so that they may proceed. A disadvantage is that use of Federal-aid funding sources will likely require the use of obligation limitation until the project can be converted to ER funding.

b. Option 2 - Use of Advance Construction (AC)

Although 23 U.S.C. 115 does not contain authority to advance construct ER funds, it does

designate several other Federal-aid funding sources that can be used for advance construction. Thus, a project advance constructed under any of the funding sources designated in Section 115 could later be converted using ER funds. For example, an ER type project can be authorized as an advance construction STP project and later converted to an ER project as ER funds become available. An authorization under this option should be made following the general guidance for advance construction of Federal-aid. The letter of authorization should confirm the State's intention to convert the project to ER funds.

This option may be used in those instances requiring prior FHWA authorization of permanent repair work. This option has the advantage of providing a means of securing FHWA authorization of the permanent repair activities so that they may proceed. Further, it does not use obligation limitation. However, a State must have adequate State funding resources to proceed with the project until it can be converted to ER funding.

2. ER Events Awaiting a Division Administrator Finding

When a potential ER event has occurred, the State is empowered to undertake immediate emergency repairs to restore essential traffic service and to prevent further damage to Federal-aid highway facilities. Properly documented costs will later be reimbursed once the Division Administrator makes a formal finding that the event qualifies for funding under the ER program.

However, if a delay in the Division Administrator's formal finding will likely delay the orderly progression of both emergency and permanent repairs, it may be preferable to proceed with ER activities using Options 1 or 2 above, subject to the following requirements:

- The State's formal request for ER funding, along with an acceptable Damage Survey Summary Report has been submitted to the FHWA Division Office. Various methods for developing State requests are discussed in Chapter III.
- Division staff managing the ER program has reviewed the ER request and recommends that it be approved, excepting any questionable or ineligible ER activities.
- FHWA letter of authorization under Options 1 or 2 will stipulate that any use of ER funding on the project is subject to the Division Administrator's formal finding that the event qualifies for funding under the ER program.

Options 1 or 2 should be limited to specific events where the delay in securing a formal finding is lengthy and is delaying repair efforts. Any Division Office authorization of work prior to the Division Administrator's formal finding should be coordinated with the Office of Program Administration.

3. General Comments

Prior to FHWA authorization of permanent ER repairs using formula Federal-aid funds or the advance construction process, the Division Office should review the activities and project features to be funded to assure their eligibility before starting construction.

G. Project Oversight

ER projects for permanent repairs should be processed following regular Federal-aid procedures. ER projects the same as or sufficiently similar to regular Federal-aid projects subject to the 23 U.S.C. 106 oversight exceptions may also be administered under these exceptions, subject to the following two conditions:

- 1. Any betterments to be incorporated into the project and for which ER funding is requested must receive prior FHWA approval.
- 2. The FHWA reserves the right to conduct final inspections on all ER projects. The Division Administrator has the discretion to undertake final inspections on ER projects as deemed appropriate.

H. Combined Federal-Aid and Emergency Relief

When the State or applicant decides not to replace a damaged facility in-kind and proposes work in excess of the work eligible for ER funds, a combined project may be programmed using ER funds to the extent eligible. Other Federal-aid funds may be used for the additional work. Separate programming is required for each class of funds with appropriate cross-referencing.

I. Construction Start Deadline (Time Extensions)

ER funds are allocated to assist the States and other agencies or organizations in conditions of emergency. Consequently, after approval of programs and allocation of funds, all projects should be completed promptly. Failure to advance an approved ER project to completion within a reasonable period of time could result in withholding of funding for that project. Emergency opening work should be accomplished within one month of accessibility to the site under normal circumstances.

Unless there is satisfactory justification for project delay to warrant its retention, projects for permanent repairs that have not advanced to construction obligation by the end of the second fiscal year following the year in which the disaster occurred will not be advanced [23 CFR 668.104(h)]. Justification for such delay and request for time extension must be submitted to the FHWA Division Administrator for approval. Time extensions are granted in one-year increments. Such delays may be caused by the need for extensive environmental evaluation,

litigation, or complex right-of-way acquisition.

In certain situations the delay of permanent work may be as much as two to three years. Permanent restoration work, for example, could be deferred to permit study of a serious slide condition, thereby allowing sufficient time to adequately design a permanent correction.

J. FHWA as the Construction Agency

State or local agencies may request the FHWA to accomplish repairs, reconstruction, or relocation of sections that are on the Federal-aid highways. The emergency operations to restore essential traffic should be handled by the State or local agency. In any event, where such situations are anticipated, a letter of request should be prepared by the State or local agency through the State to the Division Administrator expressing the desire to have the FHWA perform the work. The Division Administrator should promptly forward any such request to the Federal Lands Highway Division Engineer along with his/her recommendations, and arrange for a joint field inspection by the two offices, the local agency, and/or the State.

K. Project Designations and Numbering

All ER-funded projects on a Federal-aid highway (not on a Federal road) shall be designated with the prefix "ER". ER projects located on Federal Roads use the prefix "ERFO" (Emergency Relief Federally Owned). Combination projects designated "ER-ERFO" may be used where portions of a project on a Federal-aid highway are also located on a Federal road.

The State may designate the project numbering system to be used for each project resulting from a natural disaster or catastrophic failure. Where an existing "ER" series has been established, the State may continue the sequence of the established series of project numbers for several individual improvements, with separate agreement numbers for individual improvements.

Projects may be numbered to conform to the system established for other Federal-aid projects. For the project number, enter seven digits (four digits for Route number and three digits for agreement number) preceded by the prefix ER.

L. Disaster Code [Revised May 31, 2013]

Division Offices should be prepared to readily identify obligations by appropriation and by disaster. The Fiscal Management Information System (FMIS) provides a disaster number entry, which should be carefully entered to ensure that legislated limits on obligations for a particular disaster are not exceeded.

The disaster number is assigned by the Division Office at the time of the finding. This number should be shown as part of the disaster identification on the program. It consists of the two-letter

State or Territory code, the full four-digit FY of the initial damage, and the sequence number (based on the number of disasters submitted by a State) of the disaster. Thus, the first disaster submitted by Alabama for FY 2013 (i.e., the event began on or after October 1, 2012), would be shown as "AL2013-1," with any subsequent eligible disasters submitted during FY 2013 following in sequence as "AL2013-2," etc.

The disaster fiscal year and disaster sequence number must be entered in the FMIS to enable ER obligations for disasters to be determined at any time. As of the date of publication of this interim update of the ER Manual, the Office of the Chief Financial Officer is working on adding a new field in FMIS to allow tracking of ER allocations by event. When implemented, this field will tie the FMIS program code to the event for which those funds were allocated. This is expected to be available in FMIS by the end of calendar year 2013. Additional guidance will be provided when this is implemented.

M. Construction Contracts /Force Account [Revised May 31, 2013]

1. Emergency Repairs [Revised May 31, 2013]

Under 23 CFR 668.105(i), emergency repair work may be accomplished by the contract, negotiated contract, or transportation agency force account method as determined by the transportation agency as best suited to protect the public health and safety. Where time and conditions warrant, States are strongly encouraged to first consider using the competitive bidding method of contracting for emergency repairs. The FHWA may approve a waiver of the advertising requirement if State or local law authorizes such procedures and the contract method chosen is suitable for the proposed corrective work.

Often, emergency repair work, such as debris removal, can be performed more efficiently through the deployment of pre-established emergency repair contracts. Such contracts should be competitively bid and must comply with all applicable Federal-aid contracting requirements at the time of the disaster. States are encouraged to work with their FHWA Division Office to develop and periodically update pre-established emergency repair contracts prior to the occurrence of a disaster. For States that have pre-established emergency repair contracts, FHWA Division Offices should work with their respective States to ensure that these contracts are up-to-date.

a. Force Account [Revised May 31, 2013]

The term force account means the direct performance of highway construction work by a STA, a county, a railroad, or a public utility company by use of labor, equipment, materials, and supplies furnished by the entity accomplishing the work and used under their direct control. An agency may use the workforce of another entity to supplement its own workforce so long as the supplemental workforce is under the agency's direct control. Public agencies may perform

emergency repairs under the force account method, but are not permitted to compete for solicited or negotiated contracts. Emergency repair work may be performed by the National Guard under the ER program when such work is not otherwise funded by another federal government agency. To be eligible for ER funding, all ER eligible costs must be properly segregated from other National Guard efforts that are not eligible for ER participation.

Due to the emergency character of the work, State and local forces and/or negotiated equipment rental contracts may be used to perform a considerable portion of the emergency repairs. In accordance with 23 CFR 635.204(b), a formal finding for force account work for emergency repairs is not required.

b. Solicited Contract

A solicited contract may be warranted due to the emergency character of the work. The State may contact a reasonable minimum number of contractors by telephone to solicit quotes for a specific scope of work. A summary showing how the solicitation was conducted, who was contacted, and the responses by the contractors must be prepared.

c. Negotiated Contract

Under certain emergency circumstances where it is critical to restore essential travel in an expedited manner, it may be appropriate to enter into a negotiated contract with one firm. The contracting agency must document the process it used for selecting and negotiating a reasonable price with a single firm. States are encouraged to use negotiated contracts only when the State determines that the circumstances are such that competitive bidding is not effective or feasible. Lump sum contracting should be used only when unusual or rare circumstances are present making it virtually impossible to estimate quantities of work for a competitively bid unit-price contract or a cost reimbursable negotiated contract.

The Division Administrator shall determine whether the price of a negotiated contract is reasonable under the circumstances of the situation. Where feasible, the State should conduct a cost analysis prior to the award of any negotiated contract to assure that prices are fair and reasonable to aid in this determination. Pursuant to 23 U.S.C. 106, which requires the Secretary's approval of all plans, specifications, and estimates, the FHWA reserves the right to withhold funding or to reduce its participation when prices are not deemed to be reasonable.

A State should adopt appropriate industry rate guides, such as the Rental Rate Blue Book for computing equipment usage rates for negotiated contracts, or develop its own guide. The State must make the determination that the equipment rental rates developed or adopted fairly estimate a contractor's actual cost to own and operate the equipment, and the Division Administrator must concur in that determination. In situations where the rate of a particular item of equipment is not provided in the adopted guide, the State must determine that the rate is a reasonable

representation of the contractor's actual cost to own and operate the equipment in light of the particular circumstances. If feasible, the State may compare the rates charged for using the piece of equipment in other projects for other entities, but taking into account the particular circumstances of the situation in which the State needs to use the piece of equipment.

2. Permanent Repairs

Permanent repair and reconstruction work, not accomplished as emergency repairs, must be done by contract awarded by competitive bidding unless the State demonstrates some other method is cost effective as described in 23 CFR 635.204. The contracting agency must assure an opportunity for free, open, and competitive bidding, including adequate publicity of the advertisements or call for bids. However, in certain cases, ER construction projects can be accelerated using other contracting techniques described below.

3. Techniques to Accelerate Projects

Innovative contracting procedures available to accelerate ER construction projects include costplus-time bidding, lane rental, construction manager at risk and design-build contracting. Other methods such as abbreviated plans, shortened advertisement period for bids, and incentive/disincentive clauses are commonly used to accelerate ER construction projects.

a. Cost-Plus-Time Bidding

Cost-plus-time bidding, more commonly referred to as the A+B bidding method, involves time, with an associated cost, in the low bid determination. Under the A+B bidding method, each bid submitted consists of two components:

The "A" component is the traditional bid for the contract items and is the dollar amount for all work to be performed under the contract.

The "B" component is a "bid" of the total number of calendar days required to complete the project, as estimated by the bidder (calendar days are used to avoid potential misinterpretations which may arise if work days were used).

The "B" component is multiplied by a factor "x" which is generally equal to or less than the estimated road user cost per day.

The bid for award consideration is based on a combination of the bid for the contract items and the associated cost of the time, according to the formula:

$$(A) + (B) \times (x)$$

This formula is only used to determine the lowest bid for award and is not used to determine payment to the contractor.

The contract incorporates an incentive / disincentive provision based on the "x" factor that assesses a disincentive to discourage the contractor from overrunning the time "bid" for the project and provides an incentive for early completion.

For critical projects that have high road user delay impacts, the A+B bidding method can be an effective technique to significantly reduce these impacts.

b. Design-Build

The design-build concept allows the contractor maximum flexibility for innovation in the selection of design, materials and construction methods. With design-build procurement, the contracting agency identifies the end result parameters and establishes the design criteria. The prospective bidders then develop design proposals that optimize their construction abilities. The submitted proposals may be rated by the contracting agency on such criteria as design quality, timeliness, management capability and cost, and these criteria may be used to adjust the bids for the purpose of awarding the contract.

By allowing the contractor to optimize its work force, equipment, and scheduling, the design-build concept offers greater opportunities for innovation. However, along with the increased flexibility, the contractor must also assume greater responsibility. Extended liability insurance or warranty clauses may be used to ensure that the finished product will perform as required.

From the contracting agency's perspective, the potential time savings are a significant benefit. Since the design and construction are performed through one procurement, construction can begin before all design details are finalized. For example, pile driving could begin while bridge lighting is still being designed. Because both design and construction are performed under the same contract, claims for design errors or construction delays due to design errors are not allowed, and the potential for other types of claims is greatly reduced. Additionally, design-build contracts may be awarded prior to the completion of the NEPA process, which will enable the State to have the contract in place once authorized to proceed with construction.

The design-build method of contracting provides an alternative to the traditional design-build contracting method, but it should only be used for projects that fit the design-build process. The contracting agency must adequately define the scope of work prior to the request for proposals. A design-build project should have sufficient scope and complexity to allow for a strong creative design component. Relatively small or simple projects such as roadway resurfacing or minor roadway widening projects do not provide significant design components, and are not ideal projects for design-build. The design-build method assists in expediting project delivery. It is not intended to provide a means for quick obligation of funds or to compensate for insufficient

State personnel resources.

Federal-aid funds may participate in design-build contracts when approved and awarded using the procedures in 23 CFR Part 636.

c. Abbreviated Plans and Shortened Advertisement Period for Bids

Pursuant to 23 CFR 635.113(b), the FHWA Division Administrator may approve abbreviated plans, provided all essential information necessary to describe the work to be accomplished and to determine the reasonableness of unit prices for contract or force account work have been provided. Also, the time period for advertisement of bids may be shortened; however, a State may also need to suspend its own rules and regulations covering advertisement periods.

d. Short List of Qualified Contractors

Another technique that has been used successfully to accelerate contract bidding and award involves using a short list of qualified contractors to bid on a project. For example, a minimum of three bidders may be selected based on the following: early willingness to respond, type of work, prior demonstrated ability to move swiftly, availability, staff and equipment, and having previously worked in the area. Generally, a contractor awarded a contract as low bidder on one project is not included in the short list of qualified contractors for the next project; however, the unsuccessful bidders are.

4. Contract Requirements

Contracts for both permanent repair work and emergency repairs must incorporate all applicable federal requirements. As such, FHWA Form 1273 must be included in all contracts pursuant to 23 CFR 633.102. FHWA Form 1273 includes, but is not limited to, the following requirements:

a. Davis-Bacon Act

Generally, 23 U.S.C. 113 requires that all laborers and mechanics employed for construction work on Federal-aid highways shall be paid wages at rates not less than those prevailing wages as determined by the Secretary of Labor under the Davis-Bacon Act. This provision cannot be waived by the FHWA.

Contract work for emergency repairs: All contract work for emergency repairs performed by contractors or subcontractors within the right-of-way of a Federal-aid highway is covered by 23 U.S.C. 113 requirements. While contracting agencies are empowered to begin emergency repairs immediately, they must comply with 23 U.S.C. 113 requirements so that properly documented costs will be eligible for reimbursement once the FHWA Division Administrator makes a finding that the disaster is eligible for

emergency relief funding.

Contract work for debris removal only: 23 U.S.C. 113 requirements do not apply where emergency contract work is <u>only</u> for the removal of debris and related clean up (when eligible for ER funds), which is not considered to be a "construction" activity for the purposes of 23 U.S.C. 113. However, debris removal performed in conjunction with construction, alteration, and repair work (such as highway resurfacing, re-grading, significant earthmoving, bridge repairs, etc.) is covered by 23 U.S.C. 113.

Work by public agency forces: 23 U.S.C. 113 requirements do not apply to State or local government agency employees who perform emergency repairs or construction work on a force account basis because government agencies (such as States or their subdivisions) are not considered contractors or subcontractors. See 29 CFR 5.2 (h). However, 23 U.S.C. 113 requirements do apply to contracts let by State or local government agencies using an alternative procurement procedure that has been approved through the force account approval process.

b. Buy America [Revised May 31, 2013]

The "Buy America" provisions in 23 U.S.C. 313 and FHWA implementing regulations (23 CFR Part 635.410) apply to all ER funded projects. These requirements prohibit the obligation of funds for a project unless all permanently incorporated steel and iron used in such projects are produced in the United States. This restriction applies to all contracts eligible for assistance under title 23, including the ER program, for a project within the scope of the NEPA review. Under certain circumstances a State may request, and FHWA may grant, a waiver from these requirements if the Secretary funds that the application of Buy America would be inconsistent with the public interest or that the required steel or iron products are not produced in the United States in sufficient quantities of a satisfactory quality. [23 U.S.C. 313(b) and 23 CFR 635.410(c)].

c. Disadvantaged Business Enterprises (DBE)

The normal DBE requirements are applicable to all ER funded projects.

d. Americans with Disabilities Act (ADA)

The FHWA operates under the ADA regulations issued by the Department of Justice (DOJ). According to DOJ, no waivers from these regulations are possible. The governing statute and DOJ regulations make no provision or exception for emergency relief situations. The ADA accessibility guidelines issued by DOJ, however, do provide guidance concerning temporary structures.

e. Equal Employment Opportunity (EEO)

EEO requirements prohibit discrimination and requires contractors to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract.

f. Convict Labor

The convict labor prohibition in 23 U.S.C. 114 applies to ER projects. Convict labor cannot be used in ER construction projects.

g. Use of Suspended or Debarred Contractors

Recipients of Federal funds are prohibited from doing business with contractors who have been suspended or debarred. This prohibition includes contractors with principals who have been suspended or debarred. Recipients are responsible for determining whether any contractor or its principals are suspended or debarred. In addition to certifications provided in FHWA Form 1273, recipients should check the Excluded Parties List System that is maintained by General Services Administration at: https://www.epls.gov/.

N. Environmental Considerations

Repair projects under the ER program must comply with the requirements of the National Environmental Policy Act (NEPA) of 1969. Emergency repairs to restore essential travel, minimize the extent of damage, or protect remaining facilities are normally classified as categorical exclusions under 23 CFR 771.117(c)(9). As a result of MAP-21, 23 CFR 771(c)(9) was amended on February 19, 2013 to categorically exclude repair, reconstruction, restoration, retrofitting, or replacement of damaged eligible facilities if the work:

- 1. occurs within the existing right of-way and in a manner that substantially conforms to the preexisting design, function, and location as the original (which may include upgrades to meet existing codes and standards as well as upgrades warranted to address conditions that have changed since the original construction); and
- 2. is commenced within a 2-year period beginning on the date of the declaration.

However, if impacts to protected or otherwise sensitive or high-value resources are possible, advance coordination with the appropriate local, State, and Federal resource agencies should be closely considered to avoid or minimize project delays or shutdowns.

On occasion, an ER project that includes a betterment, whether or not eligible for ER funding, may require further NEPA review. Although on the surface a project may appear to qualify for a categorical exclusion, certain betterments may need either an environmental assessment (EA) to determine whether or not the project will cause significant environmental impacts, or an environmental impact statement (EIS) if significant impacts are predicted. This is illustrated by the following example:

Project Betterment Requiring Environmental Evaluation

When repairing a section of roadway inundated and seriously damaged by floodwaters, it was determined that a grade raise could be economically justified for ER funding. Raising the grade of the roadway will require small amounts of additional right-of-way from adjacent wetland areas. In addition, in future flood events, the higher roadway grade could impound additional water and flood other upstream areas. As a result of the project's potential impact on wetlands and future flooding patterns, further evaluation was necessary to determine the appropriate level of NEPA documentation.

The NEPA project development process provides the final Federal-aid highway project decision, occasionally including a facility on new location. ER projects to construct replacement facilities in new locations may require environmental assessments or environmental impact statements, depending on the potential level of impacts to resources, the value of the resources, and what, if any, legal protections apply to the resources. However, even replacement facilities constructed at the existing location of the damaged facility may require extra environmental evaluation beyond that needed for a routine categorical exclusion. These situations are illustrated by the following examples:

Replacement at New Location

A roadway was permanently submerged by water backing up behind a naturally created dam, and it has been determined replacement of the inundated highway facility at its existing location is neither practical nor feasible, and various alternate locations may be available to relocate this section of highway. The NEPA process documents consideration of appropriate project alternatives and their potential impacts and determines that the preferred alternative is replacement of the old facility on a specific new location or site. Although a categorical exclusion can be used if circumstances merit, early environmental coordination may determine that an EA or an EIS is necessary to do this.

Replacement at Existing Location

An existing bridge over a river has been damaged beyond repair but can be replaced with a bridge of comparable width and length at the same location. However, this section of

river contains critical habitat for a federally listed endangered species, which would be seriously impacted during the scheduled construction period. As a result of this potential impact, the project decision could not be categorically excluded, and additional NEPA evaluation and documentation was necessary.

O. Design Standards [Revised May 31, 2013]

Reconstruction of extensively damaged facilities, including betterment projects when adequately justified, should meet current applicable design standards. 23 CFR 625, Design Standards for Highways provides direction on the applicability of various standards to Federal-aid projects.

Section 1107 of MAP-21 provides that the total cost of a project funded under 23 U.S.C. 125 may not exceed the cost of repair or reconstruction of a comparable facility. A "comparable facility" is a facility that meets the current geometric and construction standards required for the types and volume of traffic that the facility will carry over its design life. This expands the previous allowance to design for future needs that existed only for bridges to roadways. Judgment must be exercised to ensure that the extra cost of additional capacity is consistent with the amount and length of the damaged section of roadway. So, if damage has occurred to a short section of roadway that would require widening over its design life, ER eligibility is limited to the portion of the road that is damaged. These ER funds would supplement other funds being used to make the capacity improvement for the corridor.

Additionally, once the permanent repairs on such a road have been completed, no further ER eligibility for widening exists. So, if the STA does not undertake the widening as the roadway is being repaired, there is no continued entitlement to ER funding.

As indicated in section II.D.2.f (Betterments), resiliency and adaptation to climate change are emerging areas in infrastructure planning and development. The FHWA supports planning, designing and constructing highways to adapt to current and future climate change and extreme weather events under the Federal-aid program. Features that will improve the resilience of repaired federal aid highways should be considered and evaluated consistent with risk, cost effectiveness and regulatory conditions. The evaluation should apply the best available scientific and economic information to forecast and assess future risk factors.

P. State Emergency Manual

An important element of emergency procedures is the State's emergency operation plan. Since Federal-aid funds are not available for maintenance and State maintenance personnel will handle much of the emergency operations, the State's instructions should be carefully reviewed. It may be appropriate to supplement the State's instructions with portions of this manual, for example, Chapter V, Disaster Assessment and Damage Survey Summary Report and Chapter II, Eligibility of Damage Repair Work.

Appendices

Appendix A. Sample ER Request Memorandum

Subject:	-	Name] - Emergency Relief (ER) Event, Title, Disaster Code]			
From:	_	on Administrator Name] on Administrator State]	In Reply Refer To:		
То:		of Program Administration Director Name] or, Office of Program Administration			
	approv	arpose of this memorandum is to advise you that the [S] red the subject event as eligible for ER funding. In according Approval memorandum, dated June 28, 1999, ation:	ordance with the Delegation of		
	1.	[Example event description] Beginning on March 10, flooding and wind damage resulting in debris and roa highways in the southwestern region of the State. So inches of rainfall over a 48 hour period. Several major Highway 10 and Interstate Highway 90 were severely traffic due to flood damages. Typical damages include roadways, shoulder washouts, pavement damage, sign around bridge piers.	dway damages to Federal-aid me areas received up to 15 or roadways, including State damaged and were closed to le debris deposits on many		
	2.	The disaster number for this event is			
	3.	The total cost of eligible damage is \$ wit \$	h a Federal share of		
	4.	Counties with eligible damage sites are			
	5.	The following U.S. Congressional Districts were affected	cted:		
	We request that ER funding in the amount of \$ be made available for the subject disaster. If you have any questions concerning this request, please contact				

Appendix B. Sample State Letter Of Intent

TO:	, Division Administrator
	Federal Highway Administration
FROM:	
	Administrator and State Transportation Engineer
SUBJECT:	[Severe Flooding in] [State] [Date]
Dear	
Department of damages on the	visions of Title 23, U.S.C., Section 125, this is notice of intent by the [State] f Transportation to request emergency relief funds to assist in the cost of repairing the Federal-aid highways in [State] caused by the extreme runoff and flooding [storm] beginning [Date].
Attached is a constant [State] on [Date]	copy of the Declaration by Governor of a State of Disaster in te].
•	stimates of the damages sustained to the Federal-aid highways will be forwarded lays when assembled.
	eding expeditiously to maintain two-way traffic at all locations and to repair those ciently to protect facilities from further damage.
	Yours Sincerely,
Attachment	

Appendix C. Sample FHWA Acknowledgement Letter

State Department of Transportation	
Dear:	
This is to acknowledge receipt of your letter of intent, dated, to request Emergency Relief Funds, authorized under 125 of Title 23, U.S.C., for the repair of damage to Federal-aid highways resulting from the (event) of(date).	
You should proceed with performance of emergency operations, including emergency repairs, on the Federal-aid highways necessary to restore essential traffic, to protect the remaining facilities, and to reduce the extent of damage. Also, you may proceed with preliminary engineering, meaning surveys, design, and preparation of construction plans, to perform the permanent restoration work required as an associated part of the emergency operations, and to use State forces and/or negotiated equipment rental contracts as necessary to perform the work.	
The eligibility of such work for ER funds will be contingent upon a favorable finding by the FHWA Division Administrator, on the eligibility of the disaster, and subsequent approval of the work by FHWA.	
The basis for the Division Administrator's decision will be the Damage Survey Summary Report, which must be submitted to this office. The DSSR, among other requirements, must include estimates of cost to repair and reconstruct the damaged Federal-aid highways.	
My office will be meeting [has met] with members of your staff to make arrangements for reviewing the disaster damage and assisting in preparing the Damage Survey Summary Report and site damage reports. The Damage Survey Summary Report is to be submitted within weeks, if possible. If additional time is required, please advise, including the reasons why the extra time is necessary.	
If FHWA concurs in the disaster, all emergency work must be included in a program of emergency repair projects. The program, when submitted for approval, shall include a detailed outline of the necessary emergency operations performed and a description of the permanent restoration work proposed. Permanent restoration work other than that performed as an associated part of the emergency operations, shall not be performed prior to program approval and authorization by this office.	
Sufficient record keeping must be done to permit audit of costs on a site-by-site basis.	
Sincerely yours, [Division Administrator]	

Appendix D. Sample Governor's Proclamation

Floods and rapid runoff, commencing on [date] , were experienced throughout the following counties in [State] as a result of extremely heavy rains: [list of counties] . The flooding and associated runoff have produced serious and extensive damage to both private and public property. As a consequence, this State has sustained severe damage to its road systems, which include bridges, roadbeds, and other facilities. Damage occurred on Federal-aid highways.
Damage throughout the <u>[region]</u> part of the State has been of such an extent that immediate repairs have been necessary. Such conditions constitute an emergency as is contemplated by the terms of Sections 125 and 120(e) of Title 23, U.S.C.
Therefore, I, Governor of the State of do hereby proclaim an emergency to exist throughout the[region] of the State as a result of flooding and runoff conditions and consequent danger to life and damage to property including Federal-aid highways.
The immediate repair and reconstruction of the damaged highways is vital to the security, well-being, and health of the citizens of the State of (State); and the Federal Highway Division Administrator is hereby requested to concur in the declaration of this emergency.
In testimony whereof, I have hereunto subscribed my name and caused the seal of the State of to be affixed at _[City]_, the day of _[month]_, A.D[year]
Governor of
ATTEST:
Secretary of State

Appendix E. Detailed Damage Inspection Report

DETAILED DAMAGE INSPECTION REPORT					Report Number	Report Number	
U.S. Department of Transportation Federal Highway (Title 23, Federal-aid Highways)					Sheet	Sheet	
Adı	ninistration				_	of	
Location (Name of Road and Milepost) FHWA Disaste					FHWA Disaster N	lumber	
					Inspection Date		
De	scription of Damage				Federal-aid Route	Number	
Tederard Notice							
					State	County	
	Cos	st Estim	nate				
	Description of Work to Date	Unit	Unit Price	Quantity	C	ost	
	(Equipment, Labor, and Materials)	Offic	Offit Price	Quantity	Completed	Remaining	
		ea					
		ea					
		ea					
		ea					
Emergency Repair		ea					
& B		ea					
5		ea					
ge		ea					
me		ea					
ш		ea					
		ea					
		ea					
	Method			Subtotal			
	Local Forces State Forces	Contract		PE/CE			
	State Forces	Contract		L	rgency Repair Total		
		ea					
		ea					
		ea					
		ea					
ţi		ea					
ora		ea ea					
Ses		ea					
ŧ		ea					
Permanent Restoration		ea					
ᇤ		ea					
ď		ea					
	Method				Subtotal PE/CE		
	☐ Local Forces ☐ Contract						
					Right-of-Way		
Fn	Perm. Repair Totals Environmental Assessment Recommendation						
-"	Categorical Exclusion EA/EIS				Estimated Total		
Re	commendation	FHWA E	ngineer			Date	
Со		State Eng	gineer			Date	
Yes No							
Concurrence Local Agency Representative Date							

Form FHWA-1547 (Rev. 4-98)

Appendix F. Sample State Letter for Quick Release of ER Funds

Name
FHWA Division Administrator
Dear:
We appreciate your timely acknowledgement letter of[date] sent in response to our letter of intent dated[date] We are continuing to conduct necessary emergency operations and repairs to maintain traffic throughout the disaster area.
We are performing damage assessments throughout the area. At this time it is not possible to provide exact cost estimates; however, damage to Federal-aid highways is anticipated to exceed [amount] . We expect to be able to provide a more accurate estimate [within "x" weeks] .
Our budget for emergencies is limited and local governments have even greater financial constraints with limited cash flows available to fund emergencies. Consequently, we are requesting approval of ER funding for this disaster with a quick release of emergency relief funds to allow us to proceed expeditiously with emergency repairs to Federal-aid highways.
We are requesting a quick release of <u>[amount]</u> for these emergency repairs. Additional allocations will be requested as damage survey teams inventory damage.
Sincerely yours,
(State Department of Transportation Official)
Date:

Appendix G. Sample State Letter Requesting ER Funds

	Date
To: FHWA Division Administrator	
Subject: Heavy Rains and Flooding N	March 23-26, 2013
Dear	
requesting Emergency Relief (ER)Fu highways in (State) damaged as a res beginning March 23, 2013. Based on \$3 million in ER funds. Following a Federal Highway Division Administr	S.C. Section 125, the (State) Department of Transportation is ands to assist in the cost of repairing damages on Federal-aid ault of extreme runoff and flooding following the heavy rains a the preliminary estimate of damage, we are requesting favorable determination of eligibility for ER funds by the rator, we will submit detailed damage inspection report with for each site as a program of projects.
	Sincerely
	Title [State] DOT
	[State] DOT