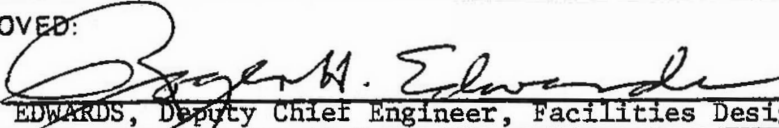


TO: SUPERSEDED BY EB 99-009 EFFECTIVE 7/1/99	<h1>ENGINEERING INSTRUCTION</h1> <p>NEW YORK STATE DEPARTMENT OF TRANSPORTATION</p>
	SUBJECT: INELIGIBLE ITEMS IN FEDERAL-AID CONTRACTS Subject Code: 7.26-2-21
Distribution: <input checked="" type="checkbox"/> Main Office <input checked="" type="checkbox"/> Regions <input checked="" type="checkbox"/> Special	Code: <u>EI 82-55</u> Date: <u>8/20/82</u> Supersedes:
APPROVED:  R. H. EDWARDS, Deputy Chief Engineer, Facilities Design Division	

In a recent Compliance Audit we were cited for including ineligible items in Federal-aid contracts. Specifically these items were business panels on logo signs and asphalt concrete overlays on bridge decks.

We have revised the specifications for logo signs to indicate that the business panels will be installed by State forces. (See EI 82-48) This should bring us into compliance as far as logo signs are concerned.

According to the Auditors and Federal Highway Administration Officials, bridge deck overlays are not eligible for Federal-aid unless they are done in conjunction with more extensive bridge rehabilitation work that extends the service life of the structure. I am attaching a copy of FHWA Notice N 5040.19 and FHWA's memorandum of December 10, 1976. Please use these guidelines and the Federal Highway Program Manual to determine which items of work are eligible for Federal aid.

When you prepare Engineers' estimates for Federal-aid contracts, make sure you do not include ineligible items in the Federal-aid share. If such items are considered essential, they should be included in a separate 100% State share.

Attachments



U. S. DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

SUBJECT

Resurfacing, Restoring, and Rehabilitation
(R-R-R) Work

FHWA NOTICE

N 5040.19
June 28, 1976

1. PURPOSE. To provide guidance for Resurfacing, Restoring, and Rehabilitation (R-R-R) projects under the provisions of the Federal-Aid Highway Act of 1976 until such time as the formal instructions are issued.
2. BACKGROUND
- a. The Federal-Aid Highway Act of 1976 contains several provisions concerning the use of Federal funds for resurfacing, restoring, and rehabilitating (R-R-R) type work. The new provisions require some changes in existing directives.
- b. The terms resurfacing, restoring, and rehabilitating as contained in the new act apply to improvements on main roadways, shoulders, ramps, frontage roads, and bridge decks and incidental work connected therewith.
3. DEFINITIONS
- a. Maintenance. As defined in Section 101 of Title 23--
"The preservation of the entire roadway, including surface, shoulders, roadsides, structures, and such traffic-control devices as are necessary for its safe and efficient utilization."
- b. Resurfacing. The placement of additional pavement layers (including protective systems for bridge decks) over the existing (or restored or rehabilitated) roadway or bridge deck surface to provide additional strength or to improve serviceability for a substantial time period.
- c. Restoration and Rehabilitation. Work required to return the existing structure (roadway pavement or bridge deck) to a suitable condition for placement of an additional stage of construction (bridge deck protective system or resurfacing) or otherwise to perform satisfactorily for a substantial time period.

DISTRIBUTION: Headquarters
Regions
Divisions

OPI: HNG-23

*Rec'd
7-20-76
FHWA
Resurfacing
Restoring
& Rehabilitation
Work
June 28, 1976
Resurfacing
Restoring
& Rehabilitation
Work
June 28, 1976*

- d. Interstate System. Interstate routes as designated under Section 103 of Title 23, U.S.C.

4. PROJECT GUIDELINES

- a. The following types of pavement work are considered to be appropriate for R-R-R projects.
- (1) Restoration may include replacement of malfunctioning joints, repair of spalled joints, substantial pavement undersealing when essential for stabilizing for resurfacing, grinding/grooving faulted rigid pavements to restore smoothness (where adequate structural thickness remains), adding underdrains and removal and replacement of contaminated or deteriorated materials.
 - (2) Rehabilitation may include reworking or strengthening of bases or subbases, recycling or reworking existing materials to improve their structural integrity, adding underdrains, or improving shoulders.
 - (3) Resurfacing consists of adding layer(s) of surface to provide additional structure or improved serviceability.
- b. The provisions of FHPM 6-7-2-7 may be used for R-R-R work on bridges. All work described in paragraphs 6 and 8 of FHPM 6-7-2-7 is considered appropriate for reimbursement with funds eligible for R-R-R work.
- c. R-R-R projects may include related incidental work considered necessary as a normal part of the surface work, including new pavement markings.
- d. R-R-R projects are not intended to include maintenance type work such as work primarily for rejuvenation or protection of existing surfaces; resurfacing of less than 3/4-inch minimum thickness or of short length; patching and repair of minor failures; and undersealing of concrete slabs other than essential as a part of restoration for resurfacing.
- e. Pavement and shoulder improvements should be designed so that a substantial increased service life is provided. Several procedures are available for the

design of additional surface thickness. Some of the procedures are contained in the AASHTO Interim Guide for Design of Pavement Structures.

- f. On freeway facilities States should upgrade roadside safety in conjunction with restoration, rehabilitation, and resurfacing projects. Regular Interstate and other appropriate Federal-aid funds may be used for this upgrading.
 - g. On other than freeway facilities, the overall safety aspects of the existing facilities should be evaluated and, to the extent practical, improvements should be made in conjunction with the R-R-R projects.
 - h. Standards in Section 6-2-1-1 of the FHPM shall apply to R-R-R projects. The applicability of these standards for other than freeway facilities is presently under review. In the meantime, the division offices are expected to use their best judgment as to exceptions considered appropriate for the specific conditions on individual projects. The conditions to be considered would include traffic, terrain, safety, and economic aspects. It is expected that the standards used will be compatible with the improvement proposed. For example, it would be expected that greater adherence to standards would be followed for a 10-inch pavement than for a 3/4-inch overlay.
5. FUNDING GUIDELINES. Some sources of funding have been established in the 1976 Act for R-R-R work, and a specific restriction has been placed on the use of regular Interstate funds.

a. Primary, Urban, and Secondary. Available primary, urban, and secondary funds may be used immediately on the appropriate system.

b. Interstate

- (1) No part of regular Interstate funds (those authorized by Section 108(b) of the Federal-Aid Highway Act of 1956, as amended) shall be used for R-R-R projects on the Interstate System.

This restriction does not preclude the use of regular Interstate funds under existing policies for such items as eligible skid resistance safety work under FHPM 6-2-4-3 (IM 21-2-73); eligible additional pavement stage construction work under FHPM 6-3-2-4 (IM 21-1-62, IM 21-1-67, and CM of May 9, 1967); eligible additional stage of construction on bridge decks in accordance with FHPM 6-7-2-7 dated April 5, 1976; or eligible work on sections incorporated into the Interstate System.

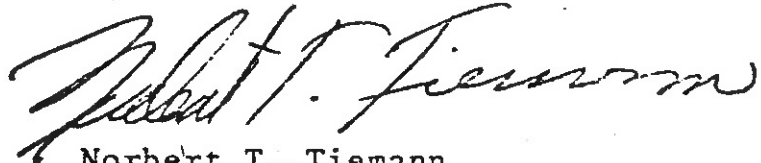
- (2) The funds provided by Section 106(a) of the 1976 Act may be used for R-R-R projects on the Interstate System at the normal Interstate participating ratio. These funds will be available for obligation upon apportionment probably on October 1, 1976.
- (3) The portion of the minimum one-half percent funds provided by Section 105(b)(1) may be used for R-R-R projects on the Interstate System at the normal Interstate participating ratio, but only to the extent that these funds exceed the costs to complete the Interstate System in that State.

c. Transition Quarter Funds

- (1) Transition quarter funds may be used immediately on the primary, urban, and secondary systems and on the Interstate System as a primary project.
- (2) Transition quarter funds in Section 104(b) of the 1976 Act may be used after October 1, 1976, for R-R-R projects on the Interstate System at the normal Interstate participating ratio. This provision is applicable only to those 10 States which did not receive at least one-half percent of the FY 1977 apportionment.

- d. Funds in Sections 104, 105(b)(1), and 106 of the 1976 Act for R-R-R work may only be used on sections of roadway on the Interstate System that have been open to traffic at least 5 years, are not on a toll facility, and are within the Interstate ROW. Priority should be given to the use of these funds on the main traveled way in preference to frontage roads.

6. CONSTRUCTION CLASSES. For all R-R-R type work regardless of class or funds used, the construction class codes to be shown on the PR-37 are as follows:
- a. Roadway
Resurfacing only - Construction Class--3
Resurfacing, Restoration, and Rehabilitation -
Construction Class--R
 - b. Bridges
Resurfacing only - Construction Class--B
Resurfacing, Restoration, and Rehabilitation -
Construction Class--C
 - c. Other than the change in construction class codes, project coding will be done in the normal manner.



Norbert T. Tiemann
Federal Highway Administrator

*Mr. Taylor to
Mr. Taylor & Mr. Morris* *Done* *K*

December 10, 1976

Resurfacing, Restoring, and Rehabilitation
(R-R-R) Work

01-36.2

Victor E. Taylor
Division Administrator
Albany, New York

REK - I GAVE CKB THE ORIGINAL - SHOULD STAY WITH A COPY

Deputy Chief Engineer for Structures
New York State Department of Transportation
Albany, New York

It has become very evident that there is a need to clarify the subject work as it relates to bridges.

This is not to be confused with the information as discussed in the following memorandums from the Washington office (copies were previously furnished your office):

1. Mr. H. A. Lindberg's memorandum of November 5, 1976 subject "1976 Federal-aid Highway Act Section 150(b) Resurfacing, Restoration, and Rehabilitation Study". *oac*
2. Mr. Lester A. Harris's memorandum of November 9, 1976 subject "Survey of Bridge Deck Restoration and Protection Costs Required on Deteriorated Interstate Bridge Decks, 1976 Highway Act, Section 150(b), R-R-R Study".

FIMA Notice, NSOMO.19, dated June 28, 1976, subject, "Resurfacing, Restoring, and Rehabilitation (R-R-R) Work" discusses both roadway and bridge work eligible under this program. Attachment A of this memorandum contains that part of the Notice that pertains to work on bridges. Attachments A-1 and A-2 contains parts of R-PM 6-7-2-7 with comments that will hopefully, clear up categories of eligible R-R-R type work.

H. B. MORRIS
H. B. Morris
Division Bridge Engineer

3 Attachments

Attachment A: V. S. Taylor Memorandum dated December 10, 1976,
Subject: "Resurfacing, Restoring, and Rehabilitation (R-R-R) Work"

1. PURPOSE. To provide guidance for Resurfacing, Restoring, and Rehabilitation (R-R-R) projects under the provisions of the Federal-Aid Highway Act of 1976 until such time as the formal instructions are issued.
2. BACKGROUND
 - a. The Federal-Aid Highway Act of 1976 contains several provisions concerning the use of Federal funds for resurfacing, restoring, and rehabilitating (R-R-R) type work. The new provisions require some changes in existing directives.
 - b. The terms resurfacing, restoring, and rehabilitating as contained in the new act apply to improvements on main roadways, shoulders, ramps, frontage roads, and bridge decks and incidental work connected therewith. (Naturally, bridges on main roadways, ramps and frontage roads would be considered under the program).
3. DEFINITIONS
 - a. Maintenance. As defined in Section 101 of Title 23--
"The preservation of the entire roadway, including surface, shoulders, roadsides, structures, and such traffic-control devices as are necessary for its safe and efficient utilization."
 - b. Resurfacing. The placement of bridge deck protective systems over the existing (or restored or rehabilitated) bridge deck surfaces to provide additional serviceability for a substantial time period.
 - c. Restoration and Rehabilitation. Work required to return the existing bridge deck to a suitable condition for placement of an additional stage of construction (bridge deck protective system) or otherwise to perform satisfactorily for a substantial time period.
 - d. Interstate System. Interstate routes as designated under Section 103 of Title 23, U.S.C.

4. PROJECT GUIDELINES

- a. Not applicable *Discusses replacement and repair of joints, but apparently is restricted to highway joints.*
- b. The provisions of FPM 6-7-2-7 may be used for R-R-R work on bridges. All work described in paragraphs 6 (See Attachment A-1) and 8 (See Attachment A-2) of FPM 6-7-2-7 is considered appropriate for reimbursement with funds available for R-R-R work. ←
- c. R-R-R projects may include related incidental work considered necessary as a normal part of the surface work, including new pavement markings.

COMMENT: Naturally this is applicable to bridges whether they are a separate contract or a part of a roadway contract.

- d. R-R-R projects are not intended to include maintenance type work such as work primarily for rejuvenation or protection of existing surfaces; resurfacing of less than 3/4 - inch minimum thickness or of short length; patching and repair of minor failures; and undersealing of concrete slabs other than essential as a part of restoration for resurfacing.

COMMENT: Bridges within the limits of resurfacing projects must be given appropriate attention: A deck with or without an overlay must not be overlaid without an evaluation.

Those without overlays should be provided with a protective system in accordance with FPM 6-7-2-7. Those with overlays should be analyzed to determine the possible effect of carrying the overlay across the structure. This should consider the thickness of the existing overlay and the deck condition.

- e. Pavement and shoulder improvements should be designed so that a substantial increased service life is provided. Several procedures are available for the design of additional surface thickness. Some of the procedures are contained in the AASHTO Interim Guide for Design of Pavement Structures.

COMMENT: See comment for "d" above.

- f. On freeway facilities States should upgrade roadside safety in conjunction with restoration, rehabilitation, and resurfacing projects. Regular Interstate and other appropriate Federal-aid funds may be used for this upgrading.
- Interstate - No comment on safety work*
- g. On other than freeway facilities, the overall safety aspects of the existing facilities should be evaluated and, to the extent practical, improvements should be made in conjunction with the R-R-R projects.

- h. Standards in Section 6-2-1-1 of the FHPM shall apply to R-R-R projects. The applicability of these standards for other than freeway facilities is presently under review. In the meantime, the division offices are expected to use their best judgment as to exceptions considered appropriate for the specific conditions on individual projects. The conditions to be considered would include traffic, terrain, safety, and economic aspects. It is expected that the standards used will be compatible with the improvement proposed. "....."

COMMENT: For example, it would be expected that greater adherence to standards would be followed for a complete deck replacement than for an additional stage of construction.

5. FUNDING GUIDELINES. Some sources of funding have been established in the 1976 Act for R-R-R work, and a specific restriction has been placed on the use of regular Interstate funds.

a. Primary, Urban, and Secondary. Available primary, urban, and secondary funds may be used immediately on the appropriate system.

b. Interstate

- (1) No part of regular Interstate funds (those authorized by Section 103 (b) of the Federal-Aid Highway Act of 1956, as amended) shall be used for R-R-R projects on the Interstate System.

This restriction does not preclude the use of regular Interstate funds under existing policies for such items as; eligible additional stages of construction on bridge decks in accordance with FHPM 6-7-2-7 dated April 5, 1976; or eligible work on sections incorporated into the Interstate System.

- (2) The funds provided by Section 106(a) of the 1976 Act may be used for R-R-R projects on the Interstate System at the normal Interstate participating ratio. These funds will be available for obligation upon apportionment probably on October 1, 1976.

- (3) The portion of the minimum one-half percent funds provided by Section 105(b)(1) may be used for R-R-R projects on the Interstate System at the normal Interstate participating ratio, but only to the extent that these funds exceed the costs to complete the Interstate System in that State.

c. Transition Quarter Funds

- (1) Transition quarter funds may be used immediately on the primary, urban, and secondary systems and on the Interstate System as a primary project.
- (2) Transition quarter funds in Section 104(b) of the 1976 Act may be used after October 1, 1976, for R-R-R projects on the Interstate System at the normal Interstate participating ratio. This provision is applicable only to those 10 States which did not receive at least one-half percent of the FY 1977 apportionment.

- d. Funds in Sections 104, 105(b) (1), and 106 of the 1976 Act for R-R-R work may only be used on sections of roadway on the Interstate System that have been open to traffic at least 5 years, are not on a toll facility, and are within the Interstate RRM. Priority should be given to the use of these funds on the main traveled way in preference to frontage roads.

COMMENT: Mobilization, maintenance and protection of traffic, preliminary engineering, and any other general project costs must be assigned to the various system and program funds being used on the project.

6. CONSTRUCTION CLASSES. For all R-R-R type work regardless of class of funds used, the construction class codes to be shown on the PR-37 are as follows:

"a.-----"

b. Bridges

Resurfacing only - Construction Class--B
 Resurfacing, Restoration, and Rehabilitation -
 Construction Class--C

- c. Other than the change in construction class codes, project coding will be done in the normal manner.

6. RECONSTRUCTION

In an effort to alleviate bridge deck deterioration and provide bridge decks with a reasonable service life, the following policy is established to assure that all Federal-aid bridge deck reconstruction will be as nearly permanent as judicious economics and current technology will permit.

a. Eligible Work. Reconstruction work and procedures, necessary to assure acceptable performance of existing bridge decks, are set forth below and are eligible for Federal-aid participation from the appropriate funds.

COMMENT: Appropriate funds are those considered to be eligible for use on the particular system on which the project is located.

- (1) Reconstruction Work. Reconstruction shall include all all concrete deck restoration work required to assure satisfactory performance of the concrete deck and of the adopted protective system if required. This may include items such as the removal of existing overlays, removal and replacement of all deteriorated and/or severely contaminated concrete, removal and replacement of all deteriorated reinforcing steel or the complete removal and replacement of an entire bridge deck when necessary. The installation of a protective system, when required, shall be considered an additional stage of construction as covered in paragraph 8 of this directive.

COMMENT: This work is eligible for use of funds (Primary, urban, Secondary and Interstate R-R-R as established in the 1976 Act for R-R-R work) and a specific restriction has been placed on the use of regular Interstate funds.

- (a) Reconstruction may also include removal and replacement of deteriorated concrete curbs, sidewalks, parapets, as well as rails, deck joints, bearings, or similar incidental items which are considered essential for proper functional restoration of the structure.

COMMENT: See comment under 6.a (1) above.

- (b) Consistent with Federal-Aid Highway Program Manual (F.R.H.), Volume 6, Chapter 3, Section 2, Subsection 1, Highway Safety Improvement Program, reconstruction may include safety improvements to be undertaken in conjunction with the above described work, where such improvements eliminate an established hazardous condition. Such safety improvements may include widening, elimination of hazardous walks & substandard railing systems, removal of hazardous fixed objects or installations of energy absorbing barrier systems, and any other features that are considered essential under current safety standards.

COMMENT: F.R.H. 6-3-2-1 should be reviewed to determine eligibility of anticipated work under the Highway Safety Improvement Program.

- (2) Reconstruction Procedures. The following reconstruction procedures are acceptable for use on Federal-aid projects:

(a) Acceptable Permanent Reconstruction

- 1 Permanent restoration requires a structurally sound bridge deck and the removal of all delaminated concrete, highly chloride contaminated concrete and also deteriorated concrete and rebars in areas of active corrosion. With proper restoration procedures and the installation of an approved protective system, this type of reconstruction is considered permanent and nonexperimental.
- 2 Permanent restoration, however, will require a complete deck survey as to delaminations, corrosion potentials, and chloride contents except where visual and delamination surveys indicate complete deck replacement as the obvious economical alternatives.

(b) Experimental Cost Effective Reconstruction
(See F.R.H., Volume 6, Chapter 4, Section 2, Subsection 4 for experimental construction)

- 1 This procedure is considered experimental, may be undertaken on concrete bridge decks found to be structurally sound, and requires restoration procedures sufficient to assure an estimated extended life for the deck of 10 to 15 years. This alternative allows salt contaminated concrete to be left in place, but the system of restoration must be considered effective based on previous successful experimental installations.

- 2 Experimental considerations require that the first three installations and 10 percent of the remaining installations shall be identified as test structures and be completely surveyed prior to restoration. Ideally, these surveys should represent realistic sampling of the full range of deck conditions being restored.
- 3 Immediately after restoration these test structures shall be resurveyed for corrosion potentials and, if membranes are used, resistivity readings shall be recorded. Periodically thereafter on all test structures, corrosion potential levels, resistivity readings where appropriate, and the presence of delaminations, where practical, shall be determined. Generally, these resurveys should not include chloride sampling unless low membrane resistivity test readings and/or increasing corrosion potentials or delaminations clearly indicate that they are needed. These periodic resurveys should be performed at two- or three-year intervals depending on magnitude and frequency of salting applications unless otherwise agreed upon.

COMMENT: The NYSDOT has currently elected to perform reconstruction only under the "Experimental Cost Effective Reconstruction" category. The attachment to F:PM 6-7-2-7 summarizes procedures for both categories of reconstruction.

It has been agreed that wearing surfaces and/or overlays may prevent a valid evaluation under Steps "2" and "4" for the condition report. Therefore, coring procedures as outlined in the NYSDOT "Bridge Deck Evaluation Procedure Manual," dated September 1975 are to provide preliminary data normally provided by Steps "2" and "4" until after removal of the wearing surface and/or overlay by the contractor. At this time, the survey will be completed.

The "first 3 plus 10% of the remaining decks" requirement is understood to be applicable to each type of protective system and is not to be limited to one particular area of the State.

b. Miscellaneous

- (2) Reconstruction must be consistent with the applicable design and construction controls specified in paragraph 5.

COMMENT: The requirements of paragraph 5 are being met in many respects. The remaining areas should be developed to the same degree of compliance. A major area of concern is the establishment of water-cement ratio controls as required by paragraph 5(a)(2) of F:PM 6-7-2-7.

Paragraph 8 from FHWA 6-7-2-7

8 ADDITIONAL STAGE OF CONSTRUCTION

This paragraph provides the established policy relative to additional stages of construction on existing or reconstructed bridge decks.

"Where not used in the original construction, a moisture barrier, waterproofing membrane, or other protective system, including a water tight deck joint system, is considered an additional stage of construction on an existing bridge where deicing chemicals are likely to be used.-----, a protective system, even though not included on the original construction plans, is eligible as an additional stage of construction for Federal-aid participation from the appropriate funds. -----All additional stage construction procedures must be consistent with applicable design and construction controls specified elsewhere in this subsection."