

*ILMPO Board Meeting
August 2, 2011*

Pavement Management IDOT Update

- IDOT BLRS issued PM2009-05 allowing federal and MFT funds to be used for Asset Management including Pavement Management (see attached)
- IDOT BLRS has drafted a pavement preservation policy that requires a pavement management system (expected issue date October 2011)
- Illinois Center for Transportation (ICT) is conducting research project to assist local agencies with implementation of pavement management system (final report expected September/October 2011)
 - Research Principal Investigators from Bradley and Applied Pavement Technologies
 - Implementation Guide will be available
 - PIs will be available to present at local conferences including MPO Annual Conference.
- Illinois Technology Transfer Center offers Asset Management training.
 - New section will be developed based on ICT research
 - Elected official presentation may also available



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

BLRS PROCEDURE MEMORANDUM

NUMBER: PM2009-05
SUBJECT: ASSET MANAGEMENT
ISSUED DATE: December 28, 2009
EFFECTIVE DATE: January 1, 2010

This memorandum revises Section 4-1 dated October 2007 and Section 4-3 dated January 2006 of the Bureau of Local Roads & Streets Manual.

Asset management is a business process and a decision-making framework that covers an extended time horizon, draws from economics as well as engineering, and considers a broad range of assets. The asset management approach incorporates the economic assessment of trade-offs among alternative investment options and uses this information to help make cost-effective investment decisions.

Local agencies may use federal funds to participate in the costs incurred for management systems related to the development, establishment, and implementation of a system for managing certain assets located on and off Federal-aid highways. Local agencies may also use Motor Fuel Tax (MFT) funds for asset management, if the assets are eligible to be constructed or maintained with MFT funds. Asset management may be performed by consulting engineers or local agency staff using paper or electronic methods.

Please contact the BLRS Local Policy & Technology Unit at DOT.LocalPolicy@illinois.gov with any questions.

A handwritten signature in cursive script that reads "Darrell Lewis".

Acting Engineer of Local Roads and Streets

KB/kb

Attachments


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Planning



U.S. Department of Transportation
Federal Highway Administration

Memorandum

Subject: **INFORMATION:** Treatment of Management Systems Cost

Date: **May 6, 2009**

From: Robert Ritter, Acting Director, Office of Planning
Butch Wlaschin, Director, Office of Asset Management

Reply to: HEPP-20/ HIAM-10
Attn. of:

To: Division Administrators
Directors of Field Services

In accordance with Section 303, Title 23, United States Code (U.S.C.) Federal funds may participate in the costs incurred by States for management systems. The purpose of this memorandum is to clarify the eligibility of costs related to the State development, establishment, and implementation of a system for managing each of the following:

- Highway pavement of Federal-aid highways
- Bridges on and off Federal-aid highways
- Highway safety
- Traffic congestion
- Public transportation facilities and equipment
- Intermodal transportation facilities and systems

As each State carries out the continuing, cooperative, and comprehensive transportation planning process that provides for consideration and implementation of projects, strategies, and services that will address efficient system management and emphasize preservation of the existing systems, Surface Transportation Program (STP), National Highway System Program (NHS), Highway Bridge Program (HBP), and Congestion Mitigation and Air Quality Program (CMAQ) funds may be used for development of an integrated management system and linking management systems as a decision-making tool. Furthermore, 23 U.S.C. 505(a)(3) states that State Planning and Research (SPR) funds are also eligible to support the development and implementation of management systems in 23 U.S.C. 303.

The management systems listed above and the data collection and data management that support these systems are funded as a direct project cost¹. To further clarify, costs associated with on- or off-system data, as appropriate, pertaining to the comprehensive transportation network system that benefits or that is part of the transportation planning process may also be considered as a direct project cost.

Costs associated with updating data components may be considered necessary expenses associated with running a functioning management system, but in implementing the management system, it may be necessary to augment the system data with updated annual or biennial data collection. In such case, the State may fund this as a direct project cost at its discretion.

As the management systems mature, the allocable portion of necessary costs associated with running them, including costs of utilities, insurance, security, servicing, normal repairs and alterations, and the like is allowable as indirect costs to the extent that they keep such management systems in an efficient operating condition and do not add to the permanent value of the system nor appreciably prolong its intended life. They are allowable as an indirect cost provided the State has an approved indirect cost rate and may also be eligible for Federal funding (see May 5, 2004 memo – "Clarification of Policy on Indirect Costs of State and Local Governments: <http://www.fhwa.dot.gov/legisregs/directives/policy/indirectcost.htm>). After the implementation of the management systems, we anticipate such general or routine costs will be treated as indirect costs, in accordance with Title 2, Code of Federal Regulations, Part 225, "Cost Principles for State, Local, and Indian Tribal Governments." Once the systems are fully operational and fully utilized, such indirect costs may either be paid with State funds, or through equitable distribution to all benefiting cost objectives via an approved indirect cost allocation plan. It should be noted

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- + economic growth and development in areas underserved by existing highway infrastructure.

The types of projects that are eligible for funding include the following:

- feasibility studies,
- comprehensive corridor planning and design activities,
- location and routing studies,
- multi-state and intrastate coordination for corridors, and
- environmental review or construction after review by the U.S. Secretary of Transportation of a development and management plan for the corridor or useable section of the corridor.

4-1.15 Value Engineering

Value Engineering (VE) is the systematic application of recognized techniques by a multi-disciplinary team to identify the function of a product or service, establish a worth for that function, generate alternatives through the use of creative thinking, and provide the needed functions to accomplish the original purpose of the project, reliably and at the lowest life-cycle cost without sacrificing safety, necessary quality, and environmental attributes of the project. The purpose of VE is to improve project quality, reduce project costs, foster innovations, eliminate unnecessary and costly design elements, and to ensure efficient investments. VE is applicable to all Federal-aid highway projects with an estimated cost of \$25 million or more and all federal-aid bridge projects with an estimated cost of \$20 million or more. See Section 17-2.03 for VE Procedures.

4-1.16 Asset Management

Asset management is a business process and a decision-making framework that covers an extended time horizon, draws from economics as well as engineering, and considers a broad range of assets. The asset management approach incorporates the economic assessment of trade-offs among alternative investment options and uses this information to help make cost-effective investment decisions.

In accordance with Section 303, Title 23, United States Code (U.S.C.) Federal funds may participate in the costs incurred by local highway agencies for management systems related to the development, establishment, and implementation of a system for managing each of the following:

- Highway pavement of Federal-aid highways
- Bridges on and off Federal-aid highways
- Highway safety

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- Traffic congestion
- Public transportation facilities and equipment
- Intermodal transportation facilities and systems

The management systems listed above and the data collection and data management that support these systems are funded as a direct project cost. Costs associated with updating data components may be considered necessary expenses associated with running a functioning management system, but in implementing the management system, it may be necessary to augment the system data with updated annual or biennial data collection.

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2. Township Bridge Funds. MFT funds may be used for the local share in conjunction with a bridge constructed under the Township Bridge Program, see Section 4-2.02 of this Manual.
3. Federal Funds. For counties and municipalities, MFT funds may be used to match federal funds. For municipalities, the participation in the cost of the improvement is limited to 50%. In addition, any local agency may use its MFT funds for any eligible MFT item included in a federally funded project.
4. Other Funds. MFT funds may be used for any phase of a project in conjunction with other funds provided that the entire improvement is designed according to MFT policies and constructed under the supervision of IDOT.

4-3.05 Joint Improvements

Any highway authority may enter into a written contract with any other highway authority for the improvement of any highway or portion thereof subject to the approval of IDOT (605 ILCS 5/4-409). MFT funds may be used for any eligible portion of the joint project provided that the entire project is accomplished under the supervision of IDOT.

4-3.06 Asset Management

4-3.06(a) General

Local highway agencies may use MFT funds for asset management, if the assets are eligible to be constructed or maintained with MFT funds. This includes the following categories:

- Pavements
- Structures
- Culverts/Storm Sewers
- Pavement Markings
- Highway Signs

Asset management may be completed by consulting engineers or local agency staff. See Section 5-5 for preliminary engineering agreements. Employee salaries may be compensated according to Section 4-3.03(c). See Chapter 6 for requirements on structures.

4-3.06(b) Pavement Management Studies

Pavement management involves procedures (e.g., pavement condition rating provided by the pavement evaluation study) that are more comprehensive than the procedures used in the pavement evaluation. Using the values assigned for the existing pavement condition and the

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present and projected traffic, the Pavement Management Report should provide the following information:

- a projected average pavement condition index using a specified level of funding for a specified period of time;
- a projected level of funding necessary to provide a specified average pavement index after a specified period of time; and
- a recommended schedule of pavement improvement strategies and timetable for improvements that will meet the selected parameters.

Projects of this nature will be evaluated and approved by Central BLRS on a case-by-case basis. When the local agency requests to use MFT funding, Central BLRS, in cooperation with the district, will establish monitoring procedures to evaluate the effectiveness of the Pavement Management Program.

4-3.06(c) Inventories

Inventories are vital to asset management. Each asset class will have a variety of unique inventory categories; however, at a minimum, all inventories should have the following fields:

- ID Number – It is a unique identifier code that allows the asset to be tracked and may be a sequential or alpha-numeric code, or any other system.
- Description – It is an explanation of the asset that may require numerous fields, including height, width, thickness, material type, etc.
- Condition Rating – It is an evaluation of a current condition of the asset, which should be used to determine future maintenance or rehabilitation.
- Location – It is an identifier that establishes the geographic position of the asset.
- Date(s) – It is the day when an event occurred; it should include installation/construction date, inspection/rating date, maintenance date, and replacement date.

4-3.06(d) Inspections

The asset owner must have a systematic strategy for conducting field inspections and reporting its findings. It must be clear to the inspection team which elements and attributes to investigate. The inspection report should accurately and clearly record all findings and may include photographs representing the condition of the asset and/or any significant defects.

4-3.06(e) Software/Hardware

The asset owner may purchase or develop asset management software to assist with the inventory and inspection management. Annual software license fees and maintenance costs are eligible MFT expense. Hardware may be purchased only if it is a mobile and an integral part of the asset management system and is used for eligible highway assets exclusively.

45-3 PAVEMENT PRESERVATION PROCESS

45-3.01 General

The information and procedures outlined in this chapter allow agencies to conduct pavement preservation with all sources of funding (including MFT, state, or federal funds).

In order to understand the outlined pavement preservation processes, a general description of pavement management and some related details is provided. A pavement management system, as defined earlier, is a set of tools or methods that assist decision-makers in finding optimum strategies for providing, evaluating, and maintaining pavements in serviceable condition over a period of time (AASHTO 1993). A pavement management system can take the form of proprietary software, nonproprietary software, or a simple spreadsheet tool. Whether it is a pavement management system or a spreadsheet tool, it must contain the following information for each pavement section included in the pavement preservation program:

- Route ID
- Location designations (beginning/ending locations)
- Surface type
- Pavement surface age
- Condition rating
- Condition rating type used
- Condition survey date
- Prominent distress type
- Average Daily Traffic (ADT)

The information will be used to track the performance of the pavement sections over time and to support pavement preservation funding requests submitted to the District BLRS office.

Pavement condition surveys should be conducted at least every 3 years on all roadways included in the pavement preservation program. Ideally, all roadways maintained by the agency, not just those included in the pavement preservation program, will be included in the survey so the pavement conditions can be tracked over time and used in making treatment selections as additional sections are added to the pavement preservation program.

The highways eligible for pavement preservation and the pavement management system used by the agency shall be submitted with the agency's approval request. The following steps shall be followed for the department to approve the agency's pavement preservation program.

45-3.02 Pavement Preservation Plan Development

The agency will develop a 10-year pavement preservation plan. Agencies using a pavement management system will be able to use their software to customize a preservation plan, while those using a spreadsheet tool will need to use the available condition rating data to create the pavement preservation plan. The first 2 years of the 10-year plan should provide detail on specific pavement preservation projects proposed for funding. The remaining 8 years of the