

**FHWA NEEDS TO CAPTURE BASIC
AGGREGATE COST AND
SCHEDULE DATA TO IMPROVE ITS
OVERSIGHT OF FEDERAL-AID FUNDS**

*Office of the Secretary
Federal Highway Administration*

*Report Number: MH-2005-046
Date Issued: February 15, 2005*



Memorandum

**U.S. Department of
Transportation**

Office of the Secretary
of Transportation
Office of Inspector General

Subject: **ACTION:** Report on FHWA's Need to Capture
Aggregate Cost and Schedule Data to Improve Its
Oversight of Federal-aid Funds
Report No. MH-2005-046

Date: February 15, 2005

From: Alexis M. Stefani 
Principal Assistant Inspector General
for Auditing and Evaluation

Reply to
Attn. of: JA-40

To: Assistant Secretary for Budget and Programs/Chief Financial Officer
Chief Information Officer
Federal Highway Administrator

In September 2004, the Federal Highway Administration (FHWA) submitted a Fiscal Year (FY) 2006 investment proposal for operating and maintaining the Fiscal Management Information System (FMIS). FMIS is the financial management system used by FHWA to provide oversight of over \$30 billion in disbursements to states for Federal-aid highway projects.

We testified in May 2003,¹ that because FMIS does not capture aggregate project cost information or any project schedule data, FHWA cannot analyze overall project cost overruns and schedule delays, which have impacted its ability to effectively oversee state management of Federal-aid funds. Further, we testified that FMIS does not capture aggregate project cost information, but rather only those costs associated with individual project segments. For example, 62 different project segments comprise the Woodrow Wilson Bridge project in the Washington, D.C., metropolitan area. To determine the total cost of the project, FHWA must contact its division offices, state departments of transportation, or project officials to determine the total costs of all associated contracts.

¹ OIG Testimony, "Management of Cost Drivers on Federal-aid Highway Projects," May 8, 2003. OIG testimony and reports can be accessed on our Web site at: www.oig.dot.gov

Since FMIS was implemented 35 years ago, the importance of project management has increased. In the past, when project cost overruns occurred on highway projects, FHWA approved additional funding to cover the added costs. The ability to provide this funding was made possible by a stable Highway Trust Fund. However, in the past 5 years, collections of gasoline tax receipts—the major source of Highway Trust Fund revenues—have remained static, while the demand for highway funds has substantially increased.

With fewer resources to fund important transportation projects, FHWA has placed greater emphasis on ensuring projects are delivered on time and within budget. On February 27, 2003,² and April 29, 2004,³ the Federal Highway Administrator testified that FHWA is strengthening its oversight of highway funds by: (1) using risk assessments to refocus its oversight of state management practices, and (2) mandating reviews of grant payments to ensure that Federal funds are properly managed. The Department has also established a goal of ensuring that at least 95 percent of major federally funded infrastructure projects (with estimated costs exceeding \$1 billion) meet, or come within 10 percent of, cost and schedule estimates established in project agreements. These initiatives will rely heavily on highway project data.

Due to the importance of the data to FHWA's oversight initiatives and the Department's performance goals, we determined whether FHWA's investment proposal for FMIS adequately addressed project data shortfalls we identified in 2002. Details on our objective, scope, and methodology are in Exhibit A.

OBSERVATIONS AND RECOMMENDATIONS

Our review of FHWA's investment proposal for FMIS disclosed that it did not address improvements needed to remedy project data shortfalls affecting FHWA's oversight of Federal-aid projects. While some of the data shortfalls can be addressed in the long term, others are needed for financial reporting and require immediate attention. For example, auditors conducting the FY 2004 Highway Trust Fund Financial Statement audit cited inadequate grants financial management oversight as a material weakness. FHWA needs to enhance its current system of financial management oversight, anchored by more comprehensive cost and schedule data, to ensure that grant funds are safeguarded against fraud, waste, and abuse.

² Statement of the Federal Highway Administrator before the Senate Committee on Environment and Public Works, Subcommittee on Transportation and Infrastructure, February 27, 2003.

³ Statement of the Federal Highway Administrator before the House Committee on Appropriations, Subcommittee on Transportation, Treasury, and Independent Agencies, April 29, 2004.

Unless FHWA acts quickly to develop an automated capability to identify the total cost of projects and any cost overruns, it will not have the most basic data needed to satisfy its grants management oversight responsibilities and to correct the material weakness. FHWA plans to develop such a capability for projects that cost \$1 billion or more by the end of April 2005. However, neither the scope of nor the timetable for this effort will ensure that FHWA has the necessary data in time to improve its grants management oversight of all projects. While FHWA has acknowledged the need to aggregate project cost data for projects \$10 million or more, it has not taken action to do so.

Without fundamental project cost and schedule information, FHWA will also have difficulty implementing major oversight initiatives directed at evaluating state financial management practices and accomplishing the Department's performance goal of ensuring major projects are delivered on time and within budget. Because FMIS cannot aggregate project segment costs to determine total project costs and does not capture schedule data, FHWA will have to rely on alternative labor-intensive methods to measure progress in meeting this goal. Additionally, two major initiatives to improve FHWA oversight of Federal-aid funds would benefit greatly from project cost data that are not currently available in FMIS. These initiatives include: (1) the use of risk assessments to identify state management practices warranting oversight attention, and (2) annual reviews of state financial transactions.

FHWA officials have acknowledged that more project data are needed to resolve longstanding oversight deficiencies.⁴ In responding to the FY 2004 financial statement audit, FHWA agreed to upgrade FMIS to aggregate project cost data for projects valued at \$10 million or more by December 2004. However, this upgrade will now only aggregate total costs for those projects that are \$1 billion or more and will not be implemented until the end of April 2005. Further, it will not provide the capability to track project completion dates or other schedule data to evaluate project performance. Obtaining schedule data is important for improving stewardship and oversight, but is less pressing than cost data, and can be addressed as part of a longer-term solution. The Department is also considering including FMIS in its Grants Automation Consolidation Opportunity initiative (GACO); however, it has not yet identified data enhancements that would be made under this initiative or determined when the initiative will be implemented.

Given that existing deficiencies in project cost data reflect weaknesses in the financial management controls affecting future financial statements, FHWA should expand its plans for aggregating project costs in FMIS to ensure that costs are aggregated for all projects regardless of their value. This information will be

⁴ This acknowledgement was made in FHWA's preliminary FY 2006 Exhibit 300 submission.

used in FHWA's oversight initiatives aimed at evaluating state financial management practices. We also recommend that by March 31, 2005, FHWA identify a plan and the associated costs for collecting project schedule data, which along with project cost data, will be needed for measuring its performance in meeting the Department's goal for project delivery. Details on our observations are provided below.

FMIS Does Not Provide Sufficient Project Data Needed by FHWA to Strengthen its Oversight of Federal-Aid Funds

FHWA's FY 2006 investment proposal for FMIS⁵ did not address the costs associated with mitigating known project data deficiencies. Whether data are needed for a single major project or to determine statewide performance, labor-intensive efforts are required to collect the needed project cost and schedule data. For example, FMIS does not aggregate cost data or capture estimated project completion dates or schedule information that could be used to evaluate project performance. Because FMIS identifies project segment status only as "under way," "complete," or "closed," FHWA cannot use FMIS to determine whether a project is meeting established milestones or how delays in project segments will impact the project's final completion date. These deficiencies hinder FHWA's efforts to provide effective oversight. For example:

- The FY 2004 Highway Trust Fund financial statement auditors reported FHWA grants financial management oversight as a material weakness. They determined that FHWA division offices provided inadequate oversight to protect Federal funds from fraud, waste, and abuse. To illustrate, FHWA does not have an effective process to assess grantee financial management risks. Better data about project cost and schedules are needed to conduct effective assessments.
- FHWA could not readily determine the project-level funding status of earmarked projects requested by the former Chairman of the Senate Committee on Commerce, Science, and Transportation.

Project data shortfalls will also make it difficult for FHWA to achieve the Department's performance goal of ensuring that at least 95 percent of major federally funded infrastructure projects meet, or come within 10 percent of, the cost and schedule estimates established in project or contract agreements. For example, because FMIS does not contain adequate project data, FHWA has to

⁵ The FMIS FY 2006 budget is incorporated in the consolidated DOT Form 300.

undertake a labor-intensive data-collection process to determine whether project cost overruns and schedule delays have occurred.

Additionally, two major initiatives to improve FHWA oversight of Federal-aid funds will benefit greatly from project cost data that are not currently available in FMIS. These initiatives include the use of risk assessments to identify state management practices warranting oversight attention and annual reviews of state financial transactions. FHWA division offices will require information on project cost performance to assess risks in state financial management practices and to review state financial transactions related to the expenditure of Federal-aid funds.

FHWA's Plans for Addressing Data Deficiencies are Insufficient

FHWA officials have acknowledged that more project data are needed to resolve longstanding oversight deficiencies. In responding to the FY 2004 financial statement audit findings, FHWA agreed to develop reports to aggregate FMIS project cost data for those projects that are \$10 million or more by December 31, 2004.⁶ FHWA now estimates that this effort will be completed by the end of April 2005. In October 2004, FHWA acknowledged that it also needed to identify the aggregate cost of projects under \$1 billion. We note that since that time FHWA has not implemented action to aggregate total costs for these projects and has not pursued the development of project schedule data within FMIS. The Department is also considering including FMIS in its Grants Automation Consolidation Opportunity initiative (GACO); however, it has not yet identified data enhancements that would be made under this initiative or determined when the initiative will be implemented.

While aggregating project cost data for projects valued at \$1 billion or more in FMIS is a positive step, FHWA's plans are inadequate given the fundamental importance of highway project data. Specifically:

- FHWA's plans to aggregate project costs for projects that are more than \$1 billion or more will not significantly improve financial management controls over the FY 2005 Highway Trust Fund financial statements. Aggregate cost information for all projects regardless of their cost will be needed well in advance of the end of FY 2005 so that FHWA can utilize the data to increase project oversight. Even if FHWA aggregates project costs for projects that are \$1 billion or more by April 30, 2005, it will be difficult for FHWA to demonstrate to the auditors that the data were used effectively to improve controls over grants management.

⁶ Although not separately identified in the Form 300, the cost to develop these reports is being funded from the FMIS operations and maintenance budget.

- Until the data are available, FHWA will be unable to effectively carry out oversight initiatives that the Federal Highway Administrator has testified are essential to strengthening FHWA's oversight of highway funds. Specifically, FHWA must have readily available data on project cost growth to perform financial risk assessments and to assess states' management of Federal-aid funds.
- FHWA has no plans to modify FMIS to flag all funding sources (non-earmarked funds) associated with earmarked projects. In the past, FHWA has had difficulty responding to congressional requests for the funding status of earmarked projects.
- FHWA has not developed a plan for capturing project schedule data—information that FHWA officials believe cannot be easily incorporated into FMIS, which tracks financial data. We agree that FMIS may not be the most appropriate system for capturing project schedule data. However, as part of a long-term solution, it is our opinion that FHWA must have the capability either through FMIS or another automated system to track project completion dates and other schedule information that could be used to evaluate project performance.

RECOMMENDATIONS

We recommend that FHWA:

1. Expand plans for aggregating project costs in FMIS to ensure costs are also aggregated for projects under \$1 billion and implement the change during FY 2005, and take steps to identify all funding sources for earmarked projects.
2. By March 31, 2005, identify a strategy, and the associated costs, for collecting project schedule data needed to improve oversight of Federal-aid highway program activities and measure achievement of the Department's project delivery goal.

MANAGEMENT COMMENTS AND ACTION REQUIRED

We discussed the results of our audit on January 27, 2005, and January 31, 2005, with the FHWA Director of Budget and Finance and the Director of Program Administration, and on January 28, 2005, with the Director of the Department's Office of Financial Management (OFM). Both FHWA and OFM officials generally agreed with the report's recommendations. FHWA agreed to develop aggregate cost and cost overrun reports for projects that are \$1 billion or more by April 30, 2005, expand its plans to aggregate costs for all projects and identify all

funding sources for earmarked projects. Additionally, FHWA will identify a strategy by March 31, 2005, for collecting project schedule data.

In accordance with Department of Transportation Order 8000.1C, we would appreciate receiving your written comments within 30 calendar days. If you concur with the finding and recommendations, please indicate the specific action taken or planned for each recommendation and the target dates for completion. If you do not concur, please provide your rationale. You may provide alternative courses of action that you believe would resolve the issue presented in this report.

We appreciate the cooperation and assistance provided by you and your staff during our review. If you have any questions concerning this report, please call me at (202) 366-1992 or Debra Ritt, Assistant Inspector General for Surface and Maritime Programs, at (202) 366-5630.

#

cc: Investment Review Board Members
FHWA Associate Administrator for Administration

EXHIBIT A. OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to determine whether FHWA's investment proposal for FMIS adequately addressed project data shortfalls. To accomplish our objective, we reviewed supporting information contained in an FHWA report on the FMIS investment, known as Exhibit 300. FHWA prepares and updates the Exhibit 300 on a continuing basis and includes it in the capital asset plan and business case submission to the OMB for the annual budget request. Exhibit 300 is also a management tool used to measure the performance of information technology investments against expected costs, benefits, and schedule milestones. In addition, we reviewed information contained in the Program Assessment Rating Tool (PART)¹ review. This review was performed by OMB to assess the effectiveness of the FHWA Federal-aid infrastructure. We also met with Office of the Secretary and FHWA officials located in Washington, D.C., to discuss the FMIS data shortfalls, current FHWA initiatives, and the Department's consolidation efforts.

We conducted this review from February 2004 through January 2005, in accordance with the Government Auditing Standards prescribed by the Comptroller General of the United States, and included such tests as were considered necessary to provide a reasonable assurance of detecting abuse or illegal acts.

¹ The PART is a series of questions designed to provide a consistent approach to rating programs across the Federal Government. It is a diagnostic tool that relies on objective data to assess and evaluate programs across a wide range of issues related to performance.

EXHIBIT B. PRIOR AUDIT COVERAGE

OIG Report Number QC-2005-007, Quality Control Review of Audited Financial Statements for FY 2004 and FY 2003, Highway Trust Fund, November 12, 2004. We reported that the audit work performed by the outside auditors, Clifton Gunderson LLP, complied with applicable government standards. The auditors identified two material weaknesses directly related to FMIS: (1) Grant Financial Management Oversight, and (2) Information Technology Applications.

Grant Financial Management Oversight – The audit work noted deficiencies in FHWA’s financial management oversight on highway projects. FHWA disbursed approximately \$30 billion to grantees and others in FY 2004. The report recommended that FHWA implement new procedures to improve controls currently in place to ensure that such funds are safeguarded against fraud, waste and abuse.

Information Technology Applications – The auditors reported weaknesses in several aspects of the information technology (IT) systems in both the general and specific applications used by Highway Trust Fund agencies to prepare the financial statements. The IT weaknesses directly impact the ability of the users to rely on data being generated by the systems and require the users to employ extended financial analysis of such information to ensure its accuracy. Accordingly, reliance on data being generated from these systems by the system users is critical to their ability to prepare reliable financial statements in a timely manner.

The DOT Assistant Secretary for Budget and Programs/Chief Financial Officer concurred with the weaknesses and prepared a detailed action plan.

EXHIBIT C. MAJOR CONTRIBUTORS TO THIS REPORT

THE FOLLOWING INDIVIDUALS CONTRIBUTED TO THIS REPORT.

<u>Name</u>	<u>Title</u>
Debra S. Ritt	Assistant Inspector General for Surface and Maritime Programs
Jim H. Crumpacker	Program Director
Michael Ralph	Program Director
Michael Marshlick	Computer Scientist
Reginald Robinson	Project Manager
Tyler Apffel	Senior Auditor
Jean Yoo	Information Technology Specialist
Harriet Lambert	Editor