

## GASB 34: the “modified reporting approach” as part of an asset management system

**Tom Maze, Vice President, Howard R. Green Company, contributed to this article.**

*Editor’s note: This is the third article in a series on GASB 34. Here’s a brief summary of the first two articles: The Governmental Accounting Standards Board (GASB) sets Generally Accepted Accounting Practices (GAAP) for governmental agencies. In June 1999, GASB Statement No. 34 (or GASB 34) set new GAAP requirements for reporting major capital assets, including infrastructure like roads, bridges, water and sewer facilities, and dams. Under GASB 34, over the next few years Iowa’s governmental agencies must begin showing the value of these assets in their financial reports. Agencies may report assets using either depreciation methods or a “modified approach.”*



TO USE the modified approach for asset reporting, agencies must demonstrate that they do the following:

- maintain an up-to-date inventory of infrastructure assets,
- regularly assess the condition of all infrastructure and summarize the results using a measurement scale, and

- annually estimate the cost required to maintain the assets at a minimum condition level.

Clearly, the modified approach requires more data collection than does the depreciation approach. In addition, processes for valuing infrastructure assets under the modified approach are undefined in GASB 34; agencies are merely required to use “consistent” and “reasonable” methods for valuing assets.

With more front-end work and so much ambiguity, why would agencies choose to use the modified approach?

### Benefits of the modified approach

Perhaps the most significant advantage of the modified approach is that the reported value of assets will reflect the positive effects of maintenance activities—particularly preventive maintenance—on the condition (and therefore the value) of roads, bridges, and other assets. Such an approach reflects a more accurate portrayal of actual infrastructure value than does the use of a calculated depreciation. Using depreciation does not take into account the value added or maintained due to maintenance efforts.

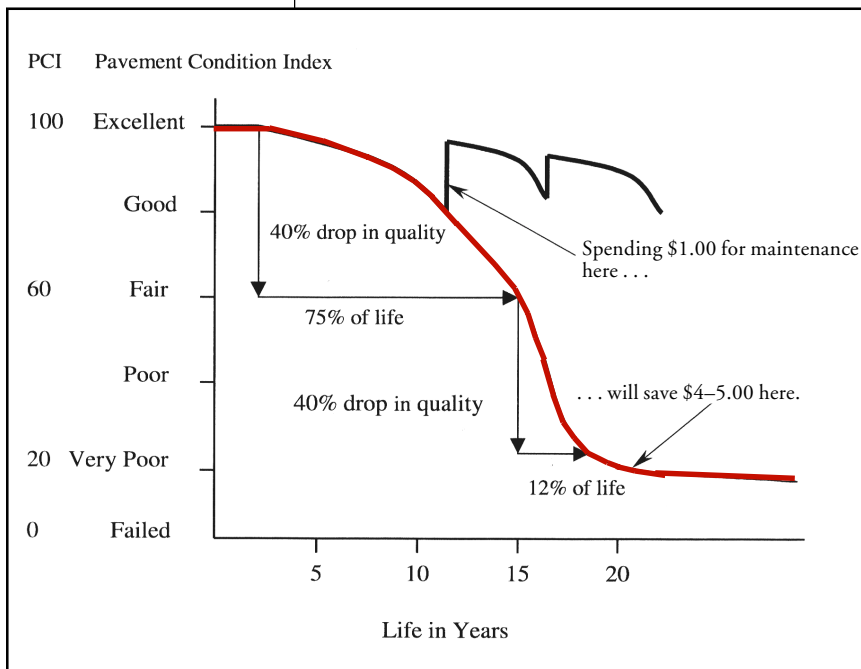
For example, an ongoing study for the Iowa Department of Transportation by Iowa State University’s Charles T. Jahren, associate professor of civil and construction engineering, has cited literature reporting that strategic applications of maintenance treatments improve pavement life cycles, as demonstrated in Figure 1.

The red curve shows a presumed life cycle of a new pavement with no preventive maintenance; note the accelerated deterioration of pavement condition after about 10 years. The black curves show how strategically timed, relatively low-cost applications of preventive maintenance treatments *before* accelerated deterioration begins can restore the pavement to near-excellent condition (and therefore near-new value).

Using calculated depreciation, the depreciated value of this pavement over the years does not reflect the significant value added by preventive maintenance activities. Under the modified approach, the pavement manager assigns a more realistic value to this pavement, based on its actual condition following preventive maintenance activities.

*[B]y offering the modified approach . . . , GASB 34 provides a strong incentive to agencies to take steps toward developing a full-fledged asset management system.*

Figure 1 Typical pavement life cycle



In addition, GASB 34's requirements for using the modified approach (maintaining up-to-date inventories, regularly assessing infrastructure conditions, and estimating maintenance costs) will result in agencies having better information about their infrastructure systems; this information will help guide and plan overall resource allocation decisions.

#### **GASB 34 and asset management systems**

GASB 34 requires that agencies report the current value of infrastructure assets and does not require that they develop a system for managing those assets. However, GASB allows agencies to use a modified approach as a more realistic and useful alternative to depreciation. The modified approach provides a strong incentive to agencies to take steps toward developing a full-fledged asset management system.

How?

The required elements of the modified approach are also the basic elements of an asset management system. In fact, if an agency develops a thorough infrastructure inventory and then regularly assesses the condition of its infrastructure (the first two requirements of the modified approach), it has completed most of the work involved in establishing an asset management system.

#### **What *is* asset management?**

According to the Federal Highway Administration's (FHWA) web page, asset management systems assess the economic trade-offs among alternative investment options, providing information that helps decision makers make cost-effective investment decisions.

"The advent of increasingly powerful computer systems has made the practice of asset management possible. These computer systems not only put sophisticated analytical tools at a highway staff's fingertips but also allow agency officials to perform 'what if' analyses . . ."

Many agencies already systematically manage various physical assets through pavement management systems, bridge management systems, etc., which help decision makers allocate resources among construction, maintenance, and other needs *within* each system. These individual management systems can be the building blocks for the type of broad asset management system described by the FHWA and supported, at least implicitly, by GASB 34. Such an asset management system helps decision makers allocate resources effectively *among a variety of*

*different systems* (e.g., pavements, bridges, and sewers) that compete for an agency's resources.

A basic flow chart of an asset management system is shown in Figure 2 (see page 8). The elements of an asset management system that are also required for GASB 34's modified approach to asset valuation are shown in red; elements of an asset management system that are not part of GASB 34's modified approach are shown in black and labeled "optional."

Start with the upper left corner: conducting an inventory of infrastructure assets. The resulting inventory of road segments, bridges, sewer lines, dams, etc., is the foundation of an overall asset management system. The inventory includes basic information on construction cost, location, design characteristics, and construction history but may include more detailed information on maintenance performed, use (e.g., traffic characteristics), conditions during construction (weather, temperature, etc.), materials specifications and origin, etc.

The next element is the process of conducting field observations to determine the current condition of assets identified and described in the inventory.

The next three elements in Figure 2 are not explicitly required as part of GASB 34's modified approach. However, using these processes, which are central to an asset management system, will greatly enhance agencies' ability to accurately predict needed annual expenditures to preserve assets at or above the level they have prescribed.

A multiyear asset management system involves computer programs that forecast the condition of assets, based on possible maintenance activities, and another module that allocates resources for asset maintenance and rehabilitation, given a multiyear budget.

#### **What's next?**

The final article in our series on GASB 34 will discuss using asset condition information to estimate an asset's value under the modified approach. We will follow this series with a new one about asset management systems, covering topics such as

- assessing baseline conditions of infrastructure assets,
- forecasting asset conditions,
- resource allocation modeling, and
- infrastructure budgeting.

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***GASB 34 . . . continued on page 8***

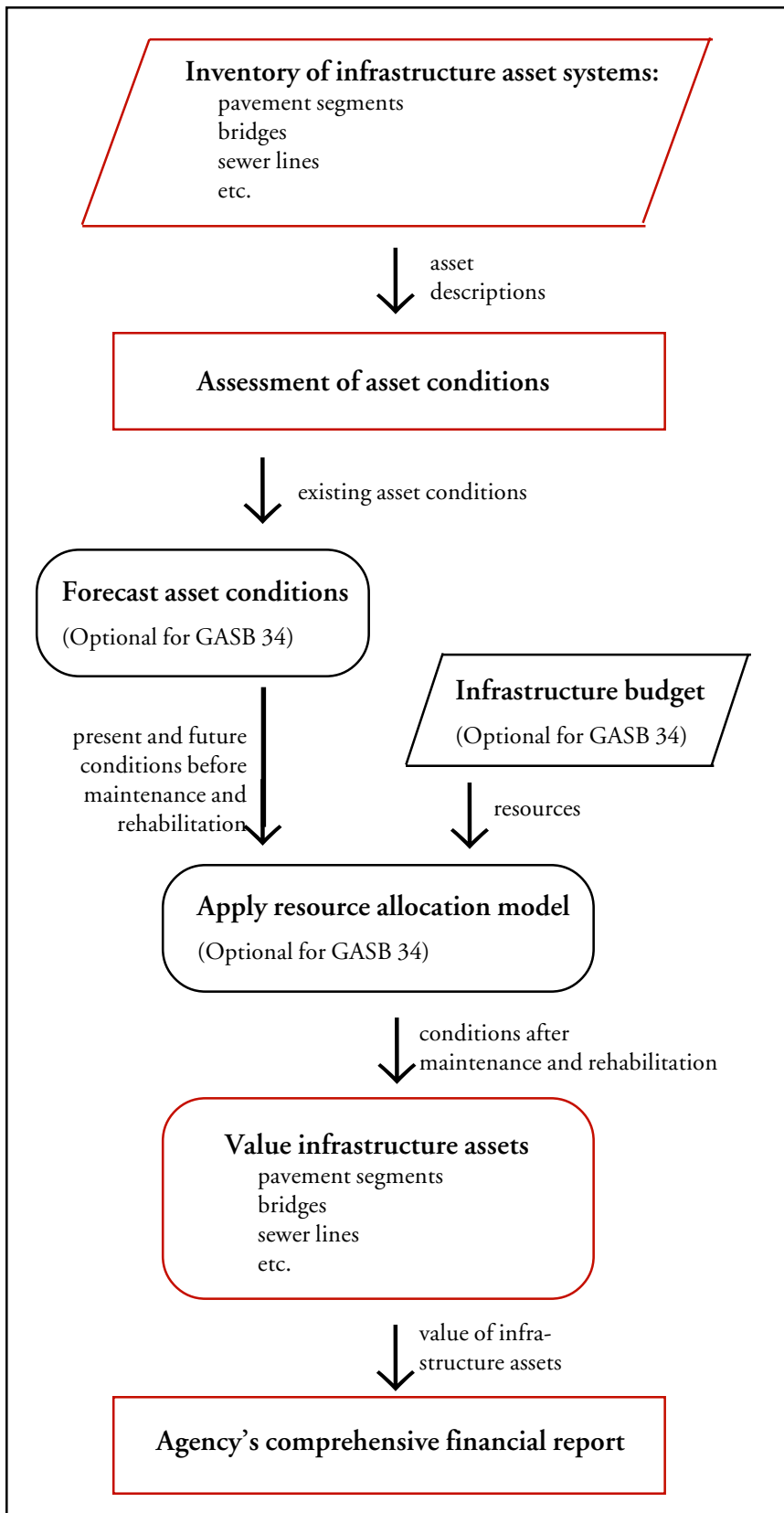


Figure 2 Components of asset management system. (Red components signify elements that must be implemented by agencies using GASB 34's modified approach to valuing capital assets.)

### GASB 34 . . . continued from page 7

As deadlines for complying with GASB 34 near, *Technology News* will periodically provide updated information.

### Upcoming GASB 34 training

The Center for Transportation Research and Education (CTRE) is participating in two upcoming training workshops that will help city and county transportation agencies understand issues involved in complying with GASB 34.

On August 31, 2000, the "GASB 34 Educational Conference," Holiday Inn Airport, Des Moines, will provide information to agency decision makers and financial officers who are responsible for GASB 34 reporting. This event is cosponsored by the Iowa League of Cities, Iowa State Association of Counties, and CTRE. Watch your mail for registration brochures.

Perhaps more important for Iowa's city and county engineers, "An Introduction to Asset Management and GASB 34 for Transportation Agencies" is being planned for late fall 2000. This workshop will be helpful for agency staff who will ultimately be responsible for providing inventory and value information regarding physical transportation infrastructure to financial officers for the GASB 34 reporting process. Workshop partners include the FHWA, Iowa State Association of Counties, Iowa League of Cities, the Iowa Department of Transportation, the state auditor's office, Howard R. Green Company, and CTRE.

### Help us help you!

To help us plan upcoming workshops, we are distributing a brief survey to Iowa's transportation agencies soliciting input about training needs regarding GASB 34. Watch for the survey in the Iowa Department of Transportation's weekly mailing.

### For more information

For a summary of GASB 34, visit the web site of the Governmental Accounting Standards Board, [www.rutgers.edu/Accounting/raw/gasb/](http://www.rutgers.edu/Accounting/raw/gasb/).

For information about asset management systems, contact Omar Smadi, CTRE's pavement management specialist, 515-294-8103, [smadi@iastate.edu](mailto:smadi@iastate.edu), or David Plazak, CTRE's transportation policy analyst, 515-294-8103, [dplazak@iastate.edu](mailto:dplazak@iastate.edu). •