Chapter 4

ASSET INVENTORY AND CONDITIONS: SUPPLEMENTAL INFORMATION

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Overview

This chapter describes the steps involved in assembling the asset register, which was then converted into a 'folio' for each asset category. The process of finalizing the folios for the TAMP is also described, along with a general procedure to update and maintain the asset register/folios in the future.

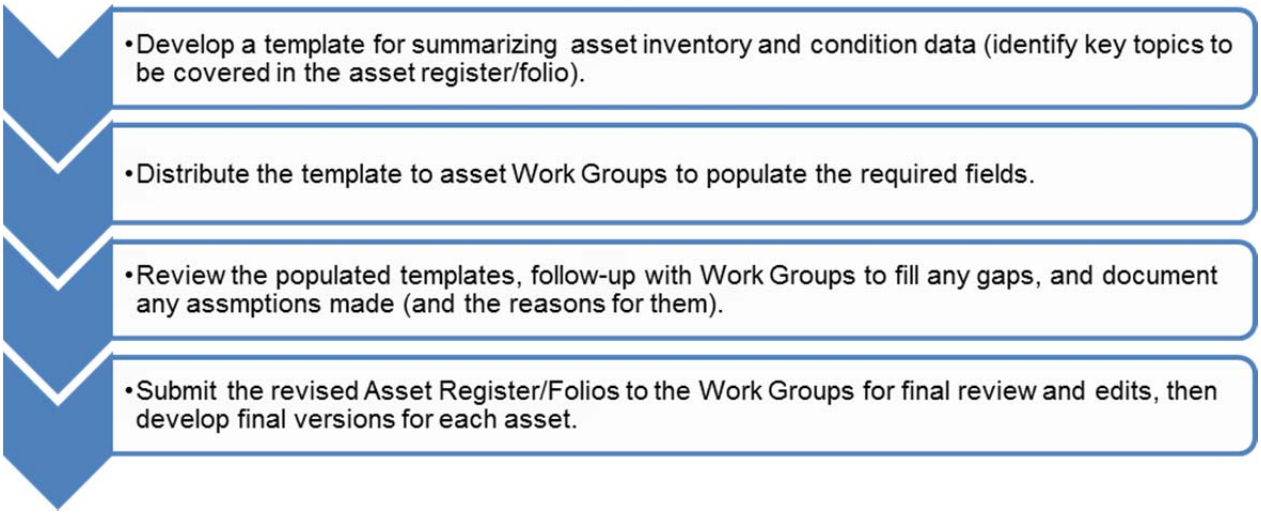
Process

The process of assembling the asset register/folios and the sources of information are presented in this section, and issues related to finalizing the asset register/folios for the TAMP are discussed, along with a simple procedure for maintaining and routinely updating them.

STEPS INVOLVED IN DEVELOPING THE ASSET REGISTER/FOLIOS

The steps involved in developing the asset register/folios are summarized in Figure 4-1.

Figure 4-1: Asset Register/Folios Development Process



KEY INFORMATION SUMMARIZED IN THE ASSET REGISTER/FOLIOS

A typical asset register is divided into six sections. The key information summarized in each section is discussed below. All the information was provided by the asset Work Groups.

ASSET OVERVIEW

This section of the asset register/folio provides a high-level summary of the purpose and importance of the asset and its scope, as covered in the TAMP.

INVENTORY AND REPLACEMENT VALUE

Current asset inventory and replacement value statistics, separated by system or functional classification (if applicable), are summarized in this section.

- Pavements: The inventory of flexible (asphalt-surfaced) and rigid (concrete-surfaced) pavements is provided in roadway miles and the total inventory is summarized in both roadway-miles and lane-miles. Replacement value for pavement assets is based on an average replacement cost of $1 million per lane-mile.
- Bridges: The bridge inventory is summarized both by count (number of bridges) and by bridge deck area (sq. ft.). Replacement value is computed using a unit cost that ranges from $145 per sq. ft. to $225 per sq. ft., depending on the type of bridge.
- Hydraulic Infrastructure: The statewide inventory of highway culverts (count) and deep stormwater tunnels (total length, number of tunnels, and tunnel segments) are summarized. The replacement value for highway culverts was estimated using an average unit cost of $798 per linear ft. (and assuming an average culvert length of 45 ft.), while the replacement value for deep stormwater tunnels was based on the consensus expert opinion of the Work Group.
- Other Traffic Structures: The statewide inventory of overhead sign structures and high-mast light tower structures are summarized (a simple count of the structures is used). Replacement values for overhead sign structures and high-mast light tower structures are based on unit costs of $85,000 and $40,000 per structure, respectively.

ASSET AGE PROFILE

This section of the asset register/folio summarizes the age profile (percent of inventory in a given age category) for each asset category included in the TAMP.

DATA COLLECTION, MANAGEMENT, AND REPORTING PRACTICES

The asset data collection protocols and the data management and reporting practices are summarized in this section.

CONDITION RATING SCALE

A graphical representation of the asset condition rating scale used in the TAMP is provided, in order to help compare and contrast the various condition categories used for the different assets.

CONDITION TARGETS AND 10-YEAR INVESTMENT LEVELS

Asset condition (based on the most recent available data), recommended performance targets (discussed in Chapter 3 of the TAMP), and required investment levels to meet those targets (discussed in Chapter 8 of the TAMP) are summarized in this section.

ISSUES IN FINALIZING THE ASSET REGISTER/FOLIOS FOR THE TAMP

Figure 4-2 summarizes the key issues that the project team faced during the development of the asset register/folios – and the strategies adopted to handle them.

Figure 4-2: Information Needed to Develop the TAMP

SECTION	INFORMATION/WORK ACTIVITIES REQUIRED
Too much information covered in asset register, thereby making the format difficult to present in a user-friendly format in the TAMP	In the first version of the asset register, all the assets were included in a single template. To make it more readable, separate folios were created for each asset, rather than forcing a single 'mega-table' for all the TAMP asset categories.
Inconsistencies in data/information from version to version	As the asset register evolved, several inconsistencies were noted in the various versions, primarily because multiple individuals were responsible for updating the data. It was decided that a single person would be responsible for updating the asset register, which resulted in the production of a consistent product (from both content and formatting standpoints).
Uncertainty in data sources and/or assumptions made in arriving at some of the statistics summarized in the asset register	Key assumptions and data sources were summarized as footnotes in the asset register.

PROCESS TO UPDATE AND MAINTAIN THE ASSET REGISTER/FOLIOS

The asset register should be updated on an annual basis; responsibility for delivery of this update should be given to a specific individual at the agency to ensure consistency. The typical process for updating the asset register/folio is summarized below:

- Step 1: Provide the most recent version of the asset register/folio to each specific division/department that houses or manages the relevant data. Ask them to review sections 2 through 5 of the asset register/folio (inventory and replacement value; asset age profile; data collection management, and reporting practices; condition rating scale) and provide updates.
- Step 2: Update the register/folios based on any new information received and provide a revised copy for final review by the division/department providing the data.
- Step 3: Save a final version to the network and make a backup copy.