

BUDGET DEVELOPMENT AND JUSTIFICATION

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With the great emphasis in recent years on new highway construction and the resulting rapid increases in additions to the highway systems, the spiraling cost of maintenance is a growing problem which complicates future highway finances. We are now reaching the halfway point in the Interstate system and new programs are being accelerated to meet the 1972 completion date. This program along with continued interest in the expansion of other construction programs, is utilizing every available dollar provided for highway financing. Without anticipating an increase in highway revenues, maintenance and construction will be competing for the available revenues. Realizing that maintenance utilizes 100% state funds whereas construction is in part financed with federal funds, every dollar spent by maintenance above the minimum needed could conceivably reduce the amount available for construction programs by as much as ten dollars. The burden will be on maintenance to justify their needs.

Too often in the past, maintenance appropriations have been merely extensions of prior year appropriations with small increases to provide for the inflationary trend of our present economy. Little or no thought has been given to the rising cost of maintenance resulting from increased work loads. We used to have the false idea that a new facility replaced a serious maintenance problem, thereby decreasing our work load. However, the majority of new construction today consists of additions to the system and maintenance expenditures start immediately. Increased traffic volumes and the nature of the new construction require a higher standard of maintenance, which in turn requires an increase in maintenance expenditures. Demands by the traveling public for more and better services are major contributing factors in the rapidly increasing cost of maintenance. To obtain the funds required to meet these rising costs it is imperative that sound management principles and practices be employed for budget development and justification.

The operation and maintenance of the 18,000 mile highway system in Ohio is under the direction of the Division of Operations, which is headed by Mr. E. K. Core, Division Deputy Director. The Division is responsible for the maintenance of pavements, shoulders, roadside and structures, providing snow and ice control, weed and grass control, upkeep of roadside rests and guard rail, placing and servicing traffic control signs and signals, highway lighting, and pavement marking. In addition, there is the upkeep of office buildings, garages, outposts, communications network, weigh stations and several thousand pieces of transportation and road equipment. A few years ago we were operating on a budget of approximately \$33,000,000; our present budget is in excess of \$45,000,000..... an increase of more than 36%.

We are presently using the Physical Inventory of the highway system as the basis of our budget. For this purpose the highway system has been divided into five classifications; Interstate, Major Thoroughfare-Divided, Major

Thoroughfare-Other, Auxiliary and Local. For each classification we have developed a basic unit mile cost which is the combination of the unit mile cost of each major activity of maintaining and operating the highway. In addition, a unit cost has been developed for the upkeep of buildings based on the square foot area, plus a unit cost for the maintenance and operation of each type of the various pieces of equipment. To these costs we add a programmed amount for minor improvements and betterments and an additional amount for emergencies.

To develop the unit cost necessary for the budget preparation it was necessary to revise our cost accounting system to provide the information required. Inasmuch as the new budget system and the new cost accounting methods were put into effect at the same time, we are using estimated costs in our budget until sufficient information is available to develop accurate unit costs.

BUDGETING VIA WORK LOADS

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Maintenance budgeting has traditionally been based upon two or three rather arbitrary factors, Some of them have been touched on here this evening, and I think we are all familiar with them. Historical records certainly are one of the prime sources of many maintenance budgets, even today. A per mile assignment of costs based in part, perhaps, on historical records has been utilized to allocate funds for new mileage added to the highway system. But some new and fresh approaches to maintenance budgeting also have been attempted.

One of these involves the analyses of specific operations and the computation of costs for the various increments of the specific operation, such as Bill Cheatham has just discussed in the program currently underway in Ohio. A similar program is now underway in the State of New Jersey Highway Department and, presumably, will be discussed later by Mr. Stelljes from the Highway Department. Other trends in maintenance budgeting involve the allocation of maintenance funds by formula and we have had presentations dealing with that also. Similar programs are being followed in Louisiana, and presumably will be reported on by Mr. Edwards.

Well, there is at least one other attempt being made to develop a basis for maintenance budgeting through the study of maintenance work loads. This study, which our firm is carrying on, deals specifically with the interstate system and the impact that it may have on the national, as well as the local, budget requirements. While the study deals with a rather specialized and specific segment of the highway system, there may well be procedures and applications that are meaningful to the total highway system as well. The project is based upon the measurement of actual maintenance operations on selected test sections of interstate highways located in five states throughout the major regional subdivisions of the country. These measurements are being made in terms of units of