increasing. Establishment of OSSA in Oregon appears to be a partial answer; however, on a broader national scale, there appears to be a need for a study committee, task force, or national organization to suggest insurance alternatives.

We have only begun to alter the regulatory process to organize different transportation services into a working system. Because of the nature of the laws, rules, and precedents, it will probably take a number of years to revise the regulatory process so that it works for the system's many users.

Abridgment

Joint Funding and Depreciation

Joseph S. Revis, Institute of Public Administration, Washington, D.C.

In developing materials for encouraging more effective use of transportation resources through coordination and cooperative agreements, the Institute of Public Administration (IPA) regularly encounters the problem of depreciation and the use of depreciation accounts involving public investments. Most disagreement is based on the contention that depreciation is not allowed when public monies are used for capital purchases. The counter argument is that depreciation should be permitted under coordinated systems because (a) it permits projects to recover that portion of their vehicle that is used by other than their own clients and probably at a more accelerated rate than would otherwise be true, and (b) it will provide for continuity of funding for vehicle replacement (although, as will be seen, that is only true if there are cash reserves set aside and it does not provide for operating-fund continuity). These questions and the resulting debate have been observed as obstacles to successful coordination of several transportation projects.

It is worth noting that, although much of the discussion about depreciation relates to vehicles, the concept applies to all capital investments. Depreciation is one of several financial costs that cover the expenses of debt costs, including interest on loans, bonds, and notes. In the traditional classification of depreciation accounts, one may include—as far as transportation systems are concerned—the vehicles owned by the system (and depreciated in a legally prescribed manner or as set forth in governing legislation or regulations on an annual basis); the buildings owned and used by the transportation system in the operation of its service; support equipment, such as nonrevenue vehicles and office machinery and equipment; and other items such as shelters, wheelchair lifts, and any special equipment necessary to routine operations (radios and other communication devices).

CONCEPT OF DEPRECIATION

Depreciation is the value of a capital resource, such as a transportation vehicle or other equipment, that declines over time as a result of use and age. Because it is recognized that depreciation is a very real business cost, most accounting systems include a method that systematically allocates this cost to the accounting period during which benefits from the services of the capital equipment are realized. [This section is based on an article written by Lemond and Knautz (1).]

Depreciation is typically used by private enterprise as the basis for taking into account two major factors: (a) the capital replacement cost of plant and equipment as a cost of operation (e.g., vehicles and other related equipment) and (b) conversion of this capital cost (i.e., depreciation) into an annualized expense that reduces income and in turn lowers the amount of taxable income. Thus, for the private profit-oriented firm, depreciation serves as a means of converting the cost of a plant or other asset to an expense item and reflects the fact that these physical (capital) investments have a limited life span and must eventually be replaced. Using depreciation accounts for this purpose, the accounting formats for depreciation allocate the cost of the asset over a period of years during which it is used and reflect the rate at which physical deterioration of an asset, and thereby its loss of market value, is expected to occur. Private businesses often depreciate equipment at accelerated rates in early years of ownership; this action assumes that material value declines faster for new equipment than for older objects. This practice of accelerated depreciation qualifies private business for larger income tax deductions on the high cost of depreciation in early years of ownership.

In the case of publicly owned transit systems of public or nonprofit agency sponsored projects, the requirement for accounting for depreciation takes on a somewhat different format and the previous description loses some of its relevance. This is particularly true when fares are not changed to recover the cost of operation. In this situation, depreciation only serves to identify unrecovered costs, and income tax considerations are not relevant because in most cases these are untaxed operating units. Private nonprofit enterprises (e.g., special transportation projects for the elderly and handicapped) or government transportation projects that do not pay taxes often depreciate capital equipment—if they are permitted—at a constant annual rate with a small residual value for scrap material or trade-in value at the end of the anticipated useful life of equipment. This practice of straight-line depreciation is easy to calculate and simple to estimate based on the acquisition cost of the object and its projected useful life. In general, most projects prepare a list of all their capital equipment by category. This list includes not only the number of pieces of such equipment but generally identifies the life span of each type of equipment in order to determine the basis on which these costs can be spread over a period of time. In this process of spreading cost over a specified life span, the basis is provided for translating a capital cost into a direct operating cost on an annual and even on a day-to-day basis. In developing estimates for

the expected life span of each piece of equipment it is essential to have reasonable knowledge of these life spans.

USING DEPRECIATION

A frequently cited justification for using a depreciation account in transportation operations operating under nonprofit or public agency funded projects is to provide a basis for reserving cash for the purchase or replacement of equipment. A depreciation account is often mistaken for a fund to replace deteriorated capital stock. But this is not necessarily true. A special replacement account may be created to substitute new equipment for old, but this is not the primary purpose of depreciation. From an accounting standpoint, an accumulated depreciation account has a credit balance; it is not an asset and therefore cannot be used to pay for new equipment. The purchase of equipment requires cash that is shown as an asset in the cash account.

An accumulated depreciation account, sometimes called a depreciation reserve, is generally set up to record the deterioration of capital equipment over time. The use of the word "reserve" often leads to the mistaken conclusion that a fund has necessarily been created to provide for the eventual replacement of the diminishing asset. In fact, the accumulated depreciation account or depreciation reserve is merely a provisional debit to the asset account; in other words, the cost of the asset allocated to use and wearing out is reflected by the accumulated depreciation account. The amount in this account is shown on the business's balance sheet as a deduction from the asset.

If a business or transportation project wishes to create a special fund for the replacement of equipment, financed from revenues collected for the cost of depreciation, it may certainly do so. However, the purchase of equipment requires cash revenue that is shown as an asset in the cash account. Therefore, in the public sector it is necessary to distinguish between accumulated depreciation as a reduction in an asset account and cash reserved for future replacement of equipment.

GOVERNMENT GRANTEES

The federal government makes money available to a wide variety of public and private social service organizations. Those organizations that use federal money to purchase transportation equipment are faced with one of the same problems as organizations that receive no federal funding. At periodic intervals, the business will charge its accumulated depreciation account to reflect the deterioration cost of the vehicle. It will also increase the amount of cash revenue in its special reserve account reflecting a fund that has been set aside to replace the vehicle when it eventually wears out.

For the federally funded organization, the solution is not so simple, especially if the organization is making an attempt to coordinate the transportation services available in the community it serves by providing services to another federally funded organization. Coordinated social service transportation projects typically combine a variety of federal sources of funds with federally sponsored programs in need of transportation. For example, a coordinated transportation project may acquire vehicles from the Urban Mass Transportation Administration's (UMTA) 16b2 funds, Older Americans Act Title III funds, and other capital sources for the transportation of Title III elderly clients and Title XX Social Security clients, among others. The depreciation cost of these vehicles should be distributed over all beneficiaries of the service—just like other operating costs in order to allocate transportation resources equitably. However, Office of Management and Budget (OMB) regulations in Federal Management Circular (FMC) 74-4 prohibit the reimbursement of federal grantees for depreciation from the same source of funds that financed original capital acquisitions, and this has been widely misinterpreted to preclude federal reimbursement of depreciation to any federally funded transportation project as well.

Before coordination was a common practice, the prohibition on reimbursement of depreciation was not a major problem. If a social service program provided transportation with capital and operating funds from a single source, it simply did not charge depreciation against the same source and depended on new capital grants for replacement of deteriorated equipment. On the other hand, if a social service program purchased transportation from a private provider, such as a taxi company, the cost of depreciation was included in the established passenger fare and paid by the agency.

Federal regulations did not prohibit depreciation expenses between second parties, such as independent transportation providers and client organizations. In fact, one set of regulations issued by UMTA on charter and school bus operations (49 CFR 604) requires grantees of UMTA capital funds (section 3) to include depreciation expenses in charter rates on federally assisted buses, facilities, and equipment as an element of cost. This expense is passed on to consumers in order to avoid unfair competition with private charter bus operators. The dilemma of federal restrictions on depreciation expenses results from the unusual degree of cost sharing in coordinated projects.

Current IPA research indicates that OMB limitations on depreciation cost sharing are not as restrictive as commonly believed. Capital depreciation may not be charged against the same grant program that previously funded the purchase of capital equipment; however, where cost-sharing agreements are sought between second party grantees (with potentially different federal sources), OMB regulations do not appear to prevent cost sharing for depreciation. The OMB directive at issue is FMC 74-4 and is discussed in greater detail in the following section.

FMC 74-4

In a study of the federal regulations relating to depreciation, IPA found that of approximately 114 federal programs with some transportation component, nearly all are covered by FMC 74-4, entitled Cost Principles Applicable to Grants and Contracts with State and Local Governments. This circular provides "principles for determining the allowable costs of programs administered by state and local governments under grants from and contracts with the federal government. They are designed to provide the basis for a uniform approach to the problem of determining costs and to promote efficiency and better relationships between grantees and the federal government." FMC 74-4 has two parts, identified as attachment A and attachment B. Attachment B discusses standards for selected items of cost.

Subparagraph 11 of paragraph B of attachment B, concerning depreciation and use allowances states that

1. Grantees may be compensated for the use of buildings, capital improvements, and equipment through use allowances of depreciation. Use allowances are the means of providing compensation in lieu of depreciation or other equivalent costs. However, a combination of the two methods may not be used in connection with a single class of fixed assets.

2. The computation of depreciation or use allowance will be based on acquisition cost. Where actual cost records have not been maintained, a reasonable estimate of the original acquisition cost may be used in the computation. The computation will exclude the cost or any portion of the cost of buildings and equipment donated or borne directly or indirectly by the federal government through charges to federal grant programs or otherwise, regardless of where title was originally vested or where it presently resides. In addition, the computation will also exclude the cost of land. Depreciation or a use allowance idle on excess facilities is not allowable, except when specially authorized by the grantor federal agency.

3. Where the depreciation method is followed, adequate property records must be maintained, and any generally accepted method of computing depreciation may be used. However, the method of computing depreciation must be consistently applied for any specific asset or class of assets for all affected federally sponsored programs and must result in equitable charges considering the extent of the use of the assets for the benefit of such programs.

4. In lieu of depreciation, a use allowance for buildings and improvements may be computed at an annual rate not exceeding 2 percent of acquisition cost. The use allowance for equipment (excluding items properly capitalized as building cost) will be computed at an annual rate not exceeding 6.67 percent of acquisition cost of usable equipment.

5. No depreciation or use charge may be allowed on any assets that would be considered as fully depreciated, provided that reasonable use charges may be negotiated for any such assets—if warranted after taking into consideration the cost of the facility or time involved, the estimated useful life remaining at time of negotiation, the effect of any increased maintenance charges or decreased efficiency due to age, and any other factors pertinent to the utilization of the facility or item for the purpose contemplated.

Item 2 above specifically permits capital depreciation as a cost attributable to a program only for buildings and equipment that were purchased with nonfederal money. Though this may suggest that one way to avoid problems with FMC 74-4 would be to pay for vehicles with nonfederal funds, in most instances this would be tantamount to either no capital availability or seriously limited availability. There are shortages of both capital and operating funds—as well as the fiscal capacity to raise them—at the local levels, and there is considerable dependence on federal programs as a source of capital and operating funds. It is this shortage of funds that has provided much of the impetus in developing coordinated transportation services, thus obtaining more effective use of the limited resources available.

FMC 74-4 regulations on depreciation at first glance appear to restrict a project's ability to include depreciation as part of a user charge made to another project. According to an OMB official, this is not the case. FMC 74-4 applies only between a federal grantee and the government; it does not apply between two federal grantees. Although paragraph 11 of attachment B of FMC 74-4 sometimes prohibits a grantee from charging the cost of depreciation to the federal government, it does not prohibit one grantee from charging depreciation to another grantee. For example, if one federally funded program wants to loan a vehicle to another federally funded program, it can do so and charge the borrower a fair and reasonable price for the use of the vehicle. The various components of the price would not be probed, so long as the price itself was fair and reasonable. One of these components could be depreciation. This would not violate FMC 74-4 because the charge is being made against another federally funded program and not against the federal government.

Although a federal grantor might have its own regulations prohibiting its grantees from charging other grantees depreciation, OMB has indicated that there is no basis for a federal grantor using FMC 74-4 as a basis for disallowing depreciation in the situation described above. (OMB has indicated that FMC 74-4 does not prohibit an agency from forbidding grantee-grantee depreciation charges.) It was noted that if any federal agency holds FMC 74-4 as a barrier to charging depreciation, this would not be in accordance with the intent of the regulation; FMC 74-4 is not meant to be applied by individual agencies.

Therefore, it would appear that those departments that have essentially adopted FMC 74-4 as their own interdepartmental regulation could only interpret their regulations in a similar fashion. In other words, the restrictions on charging depreciation should not apply if the grantee seeks to make the charge against another grantee. OMB has no difficulty with a project recovering these funds to the extent that they permit their capital and equipment to be used for activities other than those specifically designated within their project's objectives and requirements. It is fairly clear that coordination between grantees does not appear to be restricted by any OMB circular; however, one should check rather carefully with regard to other possible restrictions relating to specific legislation.

OMB Circulars A-102 and A-110

OMB Circulars A-102 (formerly FMC 74-7) and A-110 are two additional governmentwide regulations issued by OMB that address the issue of cost sharing implied by the practice of transportation coordination. Though these are not directly concerned with depreciation, they do have significant bearing on coordination.

OMB Circular A-102 promulgates standards for establishing consistency and uniformity among federal agencies in the administration of grants to state, local, and federally recognized Indian tribal governments. The circular contains 15 attachments, A through O. Attachment N, dealing with property management standards, prescribes uniform standards governing the utilization and disposition of property furnished by the federal government or acquired in whole or in part with federal funds or whose cost was charged to a project supported by a federal grant. Paragraph 2c of attachment N defines nonexpendable personal property as "tangible personal property having a useful life of more than 1 year and an acquisition cost of $300 or more per unit." Nearly all transportation equipment would fall into this category.

Attachment N also defines shared use:

> During the time that nonexpendable personal property is held for use on the project or program for which it was acquired, the grantee shall make it available for use on other projects or programs if such other use will not interfere with the work on the project or program for which the property was originally acquired. First preference for such other use shall be given to other projects or programs sponsored by the federal agency that financed the property; second preference shall be given to projects or programs sponsored by other federal agencies. If the property is owned by the federal government, use on other activities not sponsored by the federal government shall be permissible if authorized by the federal agency. User charges should be considered if appropriate.

A similar definition appears in OMB Circular A-110, which applies to institutions of higher education, hospitals, and other nonprofit organizations. However, this

definition in Circular A-110 would not be interpreted to require sharing between different grantees; instead, OMB's intent was to require a grantee to share such property among programs of activities that it sponsors. This interpretation is clearly at variance with the plain language of the circular, which sanctions sharing between a federal grantee and activities not sponsored by the federal government and sharing between projects or programs of two different federal agencies—although with secondary priority.

Both OMB Circular A-102 and Circular A-110 conclude that user charges should be considered where appropriate. But nowhere is there any indication of what a grantee should consider when making such a charge.

REFERENCE

1. W. H. Lemond and D. Knautz. Exploring the Usefulness of Depreciation. Passenger Transport, Vol. 36, No. 8, Feb. 24, 1978, p. 7.

Coordination, Costs, and Contracting for Transportation Services

Joseph S. Revis, Institute of Public Administration, Washington, D.C.

Studies of contractual and cooperative agreements among U.S. social-service agencies that provide transportation services have shown that one of the most serious barriers to coordination among agencies is lack of knowledge about transportation costs. In this paper, categories of transportation costs and services developed by the Institute of Public Administration as cost-accounting guidelines for transportation projects are identified and defined. The issue of allocation of data collection responsibilities among the personnel of transportation projects is discussed. Cost accounting and reporting systems developed under Section 15 of the Urban Mass Transportation Act of 1964 (as amended) are related to the Institute of Public Administration guidelines to provide a basis for cost-sharing agreements among transportation agencies.

The provision of transportation services to their clients has long been an important part of the programs of social-service agencies. Their growing concern and involvement with the issue of coordinating these transportation services arise out of (a) the substantial and relatively sudden increase in the number of projects that provide such services (in the face of the inadequacy of public transportation and the lack of private transportation among certain social groups), (b) the scarcity of funds for social-service programs in the 1960s and 1970s, and (c) recognition of the importance of coordination in the face of the need and the scarcity of funds.

The Institute of Public Administration (IPA), in its 1974 survey of the transportation problems of the elderly (1), estimated that between 1000 and 1500 projects were providing transportation services to the elderly and other disadvantaged groups. By 1976, when IPA undertook the updating of that work, the estimate had increased to the range of 3000 projects. Recent experience and inventories that have been undertaken throughout the country suggest that the number is substantially higher. For example, in a recent inventory in Los Angeles County alone, over 850 paratransit services were identified as providing transportation services. Although these included taxi services and may have included some double counting, it is clear that a broad range of transportation services are being provided by social-service agencies throughout the country.

An important element in the provision of these transportation services and especially in developing coordination among them has been the use of contractual arrangements and agreements. The purchase of transportation services draws on a substantial existing tradition of purchase of services by social-service agencies and has helped to overcome a number of difficulties associated with coordination and cost sharing, especially in relation to accountability requirements.

Throughout the United States, a number of barriers have been identified in studies on the issue of developing coordination through contractual or cooperative agreements (among social-service agencies and others). IPA itself undertook a survey of each of the state agencies on aging, and from this survey a number of stumbling blocks to coordination were identified. Included in the category of statutory and legal barriers were user eligibility restrictions as well as franchise and labor problems. On the administrative side were regulations, accountability requirements, lack of knowledge about transport costs, turf protection, preferential treatment of clients, concern about mixing one's own clients with others, and discontinuity of funding. This paper focuses on the one element that was identified over and over again as one of the more serious constraints on agreements and on developing contractual arrangements: lack of knowledge about transportation costs.

UNIFORM COST ACCOUNTS AND COST SHARING

One of the more important elements in the development of contractual or shared transportation services by social-service agencies (and others) is the reliable identification of the cost of the service and the measurement of the units of output obtained from these cost inputs. These cost accounts and unit-of-service measures are essential for most agency operators—in terms not only of ensuring effective use of budgets and resources but also of meeting the many accountability requirements set forth by federal, state, and local statutes and regulations.

As difficult as keeping good records and appropriate data on costs and service may be for an individual