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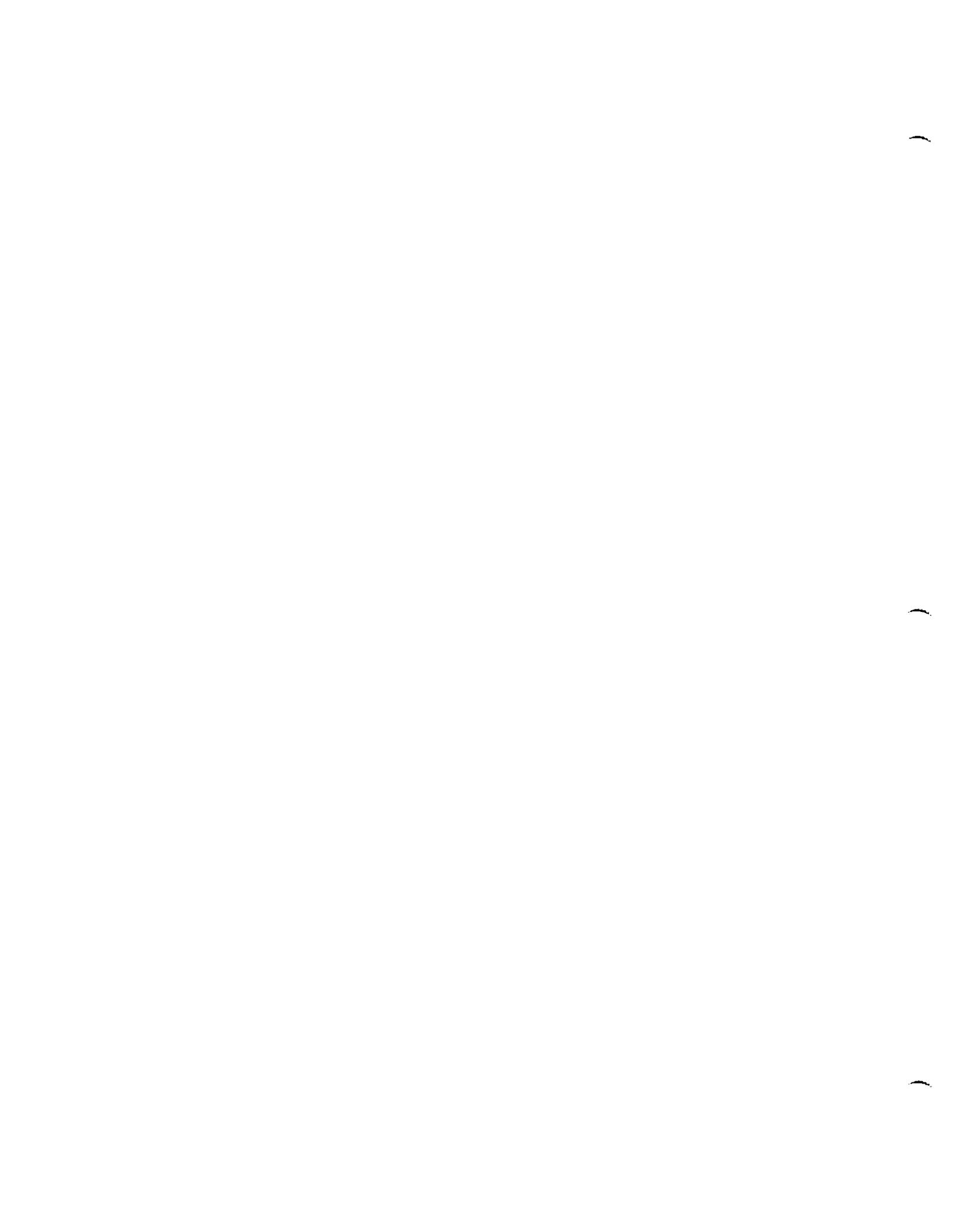
POSTAL RATE COMMISSION
OFFICE OF THE SECRETARY

BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268-0001

Postal Rate and Fee Changes, 2000

Docket No. R2000-1

TESTIMONY OF
DENNIS P. STEVENS
ON BEHALF OF THE
UNITED STATES POSTAL SERVICE



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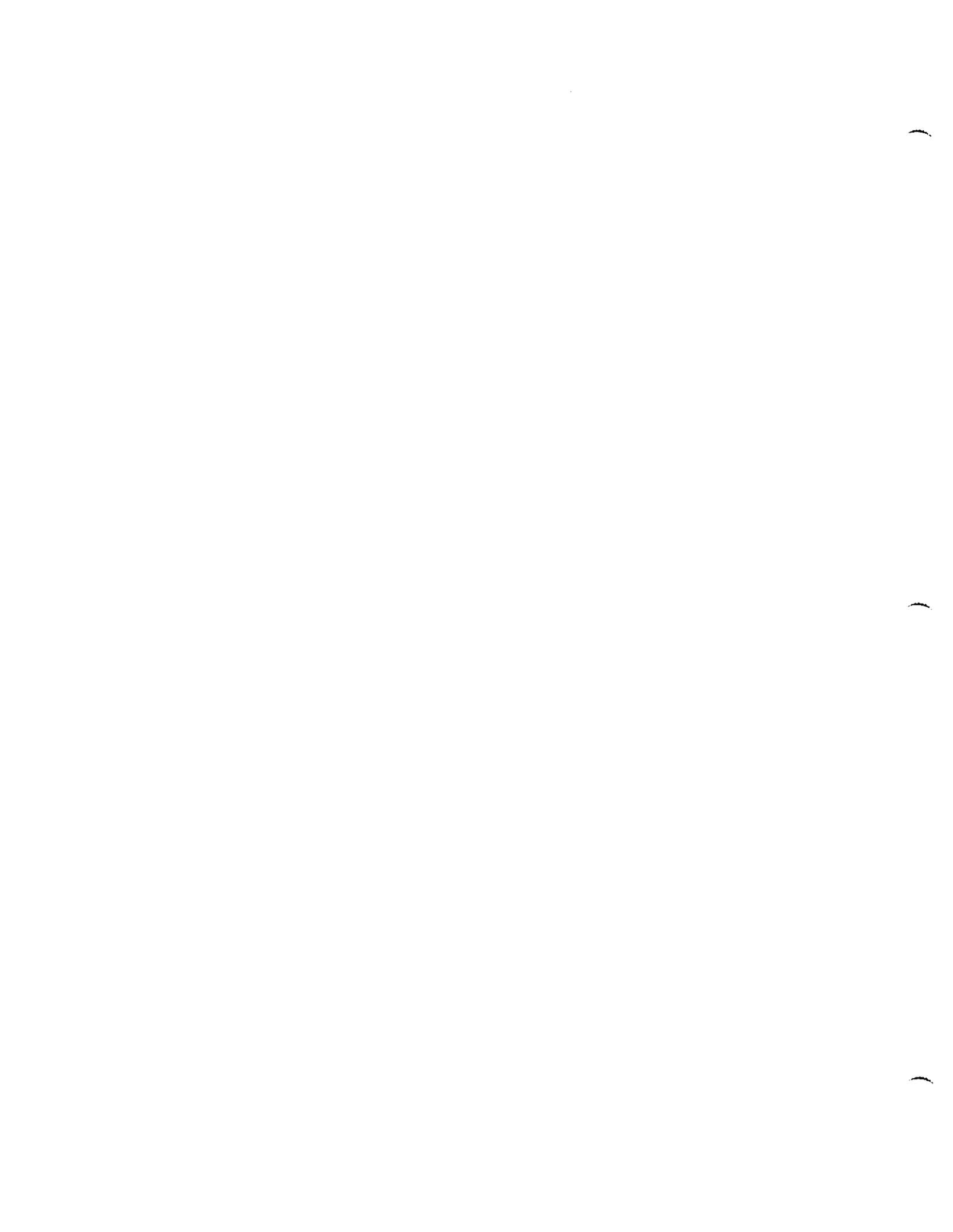
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1 AUTOBIOGRAPHICAL SKETCH

2 My name is Dennis P. Stevens and I am an economist with the Postal Service. I
3 have been in postal costing since 1989 and have been a contributor in the development
4 of postal costs as presented in testimony and supporting documentation in Docket No.
5 R90-1 and subsequent rate cases. I joined the Postal service in 1983. Prior to my
6 present position in the Postal Service, I worked in mail processing operations as a
7 supervisor. My non-postal experience ranges from management in the retail and
8 finance industries to a stint as an Army pilot.

9 I did my undergraduate studies at Harvard University and graduate work at
10 Virginia Commonwealth University. I have a BS in Economics (minor Mathematics) and
11 a MS in Business with concentrations in Economics and Finance. I am a former winner
12 of the National Achievement Scholarship, the Angier B. Duke Scholarship and Harvard
13 Scholarship. I was awarded membership in the Phi Kappa Phi Honors Society
14 University for academic achievement and a member of the Dean's List.

15 I am thoroughly versed in all aspects of postal costing, concentrating in the last
16 several years in the Delivery function. In the R97-1 case I assisted in the new
17 methodologies presented for CS 8, CS 9, and CS 3. In R90-1, I assisted in the
18 development of library references and testimonies relating to CS 15 and CS 16. My
19 broad range of experience has allowed me to view postal economics with special
20 insight.

1 I. **PURPOSE AND SCOPE**

2 My testimony details the proposed Postal Service methodological changes to the
3 development of motor vehicle service costs and vehicle depreciation - CS 12 and CS
4 20.2, respectively. The testimony provides the rationale for these changes and
5 presents the new calculation of these components. Previously, the Postal Service had
6 relied on statistical surveys of vehicle usage to determine the disaggregation of total
7 accrued costs for CS 12 and CS 20.2 into six cost pools (or subcomponents). Volume
8 variabilities and distribution keys of the pools were adopted from the volume variabilities
9 and mail class distributions of the users of the vehicles. For instance, if 20 percent of
10 the vehicle use were determined to be caused by rural carriers, then 20 percent of the
11 accrued costs for vehicle maintenance would be assumed burdened on rural carrier
12 costs. Consequently, 20 percent of vehicle maintenance costs would adopt the volume
13 variability and distribution key for rural carriers.

14 The Postal Service's new approach is to derive the subcomponent share of the
15 total accrued costs using the Vehicle Management Accounting System (VMAS). VMAS
16 compiles vehicle acquisition and maintenance cost data emanated from local records
17 from all vehicle maintenance facilities. Using VMAS, the subcomponent user shares
18 can be derived directly from the universe of billings, eliminating the need for a statistical
19 survey. Moreover, the last data survey used to develop MVS costs was completed in
20 1992. It is the Postal Service's position that the VMAS database, updated every AP,
21 provides a more accurate measure of MVS maintenance costs and depreciation.

22 There are no workpapers or library references directly relating to my testimony.
23 Instead the results of my analysis are incorporated into Witness Meehan's base year
24 workpapers, as indicated in this testimony.

1 II. BACKGROUND

2 A. A Discussion of VMF Operations

3 The USPS operates a fleet of over 200,000 owned vehicles. An additional
4 number of vehicles are leased or hired by the USPS. A number of Vehicle Maintenance
5 Facilities (VMFs) are established around the country. Each has a responsibility to
6 manage the vehicle inventory in its assigned area. The VMFs also have the
7 responsibility to report data concerning the assigned vehicles, the management and
8 procurement of repair parts, the buying, storing, and issuing of petroleum products, and
9 the oversight of auxiliary garages. The Vehicle Management Accounting System
10 (VMAS) supports these responsibilities. The VMFs carry out a wide range of functions
11 in the discharging of their responsibilities, often supporting vehicles located at a number
12 of different locations. The VMFs collect and record data on vehicle usage for both
13 owned and leased (hired) vehicles. They perform and record all types of maintenance
14 on USPS-owned vehicles and record the maintenance on owned vehicles performed by
15 commercial (non-postal) sources. The VMFs manage warranty programs. To support
16 the operation of the maintenance of vehicles, the VMFs procure, store, manage, and
17 issue fuel, tires, and repair parts. VMFs also manage employee work hours, scheduled
18 maintenance, and collect financial data.

19 Each vehicle owned by the Postal Service has a specific function. For instance
20 every city carrier motorized regular route has a designated vehicle. When a new route is
21 authorized, the VMF begins the process to acquire a vehicle for the route. A formal
22 request is made for the new vehicle that lists the type of vehicle and its planned function
23 (use). **ATTACHMENT 1** shows the lists of functions for which new vehicles may be
24 acquired. Postal headquarters performs the authorization and purchase (or transfer).
25 Once the vehicle is delivered to the requesting VMF, the acquisition costs are charged to

1 the receiving site. An account is set up in VMAS. Depreciation dollars, the function code,
2 and the vehicle ID number form the basis for the record. This record remains in VMAS as
3 long as the vehicle is in service. The records are updated every AP. If the function of the
4 vehicle changes, for instance, from a city carrier vehicle to a rural carrier vehicle, then the
5 VMF manager would make that change to the record. The budgets for the VMFs are
6 monitored and controlled from the Area Offices. Critical elements are vehicle use and
7 operating costs. When the vehicle requires servicing, all parts or maintenance work that is
8 needed on the vehicle becomes part of the vehicle record.

9 **ATTACHMENT 2 (Page 1 and Page 2)**, PS Form 4543 front and back, respectively,
10 shows the work order form that is used to record maintenance performed or parts
11 purchased for the vehicle. The form links the employee number (social security number of
12 the employee) which is tied to the employee's wage and the number of hours that the
13 employee has worked on the vehicle to the vehicles' history. The data from these forms
14 are inputted into the VMAS database each AP. Therefore, for any and all vehicles in the
15 system, data can be assembled that provide by AP the number and type of vehicles in
16 inventory; what functions those vehicles are assigned; and the vehicles operating
17 expenses. Maintenance, parts and supplies and depreciation costs are available by
18 vehicle or aggregated to either VMF or national totals. The VMFs are charged with having
19 a ready source of vehicles and are required to operate their facilities in an efficient and
20 effective manner.

21

22 **B. VMAS Data Base**

23 The Vehicle Management Accounting System (VMAS) provides improved
24 computer-based support for the management and reporting of vehicle maintenance
25 within the Postal Service. This includes the collection, processing, storing, presentation,

1 and communication of related vehicle maintenance data. VMAS is a client server, multi-
2 user system operating primarily at VMFs and selected auxiliary garages. The work
3 stations consist of personal computers operating under Windows 95 networked into a
4 server with a Windows NT operating system operating under the USPS "Gold Tape"
5 network environment. The following summarizes the major capabilities within VMAS:1

- 6 1. Allow VMAS navigation through the use of standard Windows graphical
7 user interface features.
- 8 2. Provide and control various levels of access to VMAS actions and
9 information.
- 10 3. Manage Vehicle Information.
- 11 4. Manage Parts Information.
- 12 1. Manage Employee Information.
- 13 2. Manage Fuel/Oil Information.
- 14 3. Manage Reference Information.

15 Previous to this case VMAS was the source of the Make Model Report that was used to
16 apportion vehicle usage to drivers /users,

17

18 **C. Motor Vehicle Service**

19 As indicated in the Summary Description of USPS Development of Costs by
20 Segments and Components, CS 12, Motor Vehicle Service covers salaries, benefits, and
21 related costs of vehicle maintenance personnel work; expenses for supplies and services
22 used in maintaining vehicles; expenses for fuel and lubricants; expenses for contracted
23 maintenance services; and expenses for rented vehicles. Vehicles assigned to larger
24 postal operations facilities are maintained at vehicle maintenance facilities (VMFs) that are

1 under the control of local postal management. Vehicles assigned to outlying stations and
2 branches of those operations facilities may obtain routine maintenance services through
3 contracts with local businesses. Contractors at offices known as non-personnel offices
4 (NPOs) service vehicles assigned to smaller offices that do not have VMFs.

5 I assume that MVS costs are related to mail volume in the same way that street
6 costs are to delivered mail volumes. Consequently, MVS costs adopt the volume
7 variability and the distribution key of the drivers or users of the vehicles. The
8 determination of the share of CS 12 costs between the users of the vehicles is predicated
9 on the assumption that vehicle maintenance is dependent on vehicle use – miles driven or
10 hours of operation. Previous postal statistical surveys that showed vehicle use by hours or
11 miles driven by users provided the basis to apportion total national vehicle use to the
12 drivers.

13 **1. Maintenance Labor**

14 The maintenance activities in this segment involve tuning, lubricating,
15 washing, repairing, and fueling fleet vehicles (including experimental vehicles) used
16 by postal employees including city delivery carriers, special delivery messengers,
17 vehicle service drivers, the Postal Inspection Service, postmasters, managers, and
18 administrative employees. Statistical surveys supported the classification of six
19 subcomponent categories based on vehicle usage:

20 **City Delivery Vehicles - Letter Routes.** These vehicles are used on carrier
21 motorized routes such as park and loop routes, curblin routes and business and
22 mixed motorized routes. Vehicle maintenance costs are apportioned in
23 correspondence with city delivery carrier components (office, route, access,
24 elemental load, and coverage-related load) on the basis of the portion of vehicle
25 use associated with these components. These apportioned vehicle maintenance

1 costs are classified as variable to the same degree as the costs of the
2 corresponding individual components in Cost Segments 6 and 7.

3 **City Delivery Vehicles - Special-Purpose Routes.** These vehicles are
4 used on parcel relay, parcel delivery, collection, and other support-type routes.
5 Costs are classified as variable to the same degree as the special purpose route
6 costs of city delivery carriers.

7 **Rural Delivery Vehicles.** These vehicles are used on both "evaluated" and
8 "other" rural routes. Costs are classified as variable to the same degree as rural
9 carrier salary costs. 2

10 **Special Delivery Vehicles.** Costs for these vehicles, which are used on
11 special delivery routes, are classified as variable to the same degree as special
12 delivery messenger street time costs.

13 **Vehicle Service Vehicles.** These vehicles are used on routes within a city
14 and between various postal facilities including post offices, stations, branches,
15 Processing and Distribution Centers/Facilities, Air Mail Centers/Facilities, and Bulk
16 Mail Centers. Costs are classified as variable to the same degree as vehicle
17 service driver costs.³

18 **Other Vehicles.** These vehicles are used for administrative and
19 management work by various categories of employees including the carrier route
20 inspectors, Postal Inspection Service personnel, postmasters, managers, and other
21 administrative employees. Because the number and use of these vehicles are

2 Separate street time costs for rural carriers are not available.

3 Separate street time costs for vehicle service drivers are not available.

1 determined by requirements of management, the costs of this subcomponent are
2 classified as institutional.

3 **2. Parts & Supplies**

4 The costs in this component are for parts, supplies, and services used in
5 vehicle maintenance work performed by motor vehicle service personnel as
6 described for maintenance labor. The classification of costs and the grouping of
7 costs for analysis into six subcomponents are the same as for personnel costs.

8 **3. Vehicle Hire**

9 The costs covered by component 12.3 are for rental of privately-owned and
10 GSA vehicles and exclude equipment maintenance allowances paid to special
11 delivery messengers and rural carriers for use of their vehicles. The costs for these
12 rented vehicles, used to supplement Postal Service owned vehicles for which
13 maintenance costs are covered by components 12.1 and 12.2, were assumed
14 dependent upon the number of employees using them and thus were related to
15 volume consistent with total employee time. Therefore, both office and street time
16 of the employees that use them were used to develop volume variability and mail
17 distribution keys for vehicle hire. Based on the statistical surveys only four of the
18 subcomponent categories used for vehicle maintenance were significant. Vehicle
19 hire for rural carriers and for city carriers on special purpose routes were
20 inconsequential; therefore those hires were included in *other vehicles*.

21 **City Delivery Vehicles - Letter Routes**. Costs are apportioned among
22 delivery functions corresponding to city delivery carrier components in Cost
23 Segments 6 and 7 (office, route, access, elemental load, and coverage-related
24 load) on the basis of the costs of those individual components on motorized letter
25 routes. These apportioned costs are separately classified as variable to the same

1 degree as the costs of the corresponding individual components in Cost Segments
2 6 and 7.

3 **Special Delivery Vehicles.** Costs are classified as variable to the same
4 degree as special delivery messenger salary costs.

5 **Vehicle Service Vehicles.** Costs are classified as variable to the same
6 degree as vehicle service driver costs.

7 **Other Vehicles.** The costs of this subcomponent are classified as
8 institutional.

9 **4. Vehicle Depreciation**

10 For motor vehicle depreciation costs, CS 20.2, I use the same
11 methodology to determine volume variable costs and distribution keys, i.e.,
12 relying on the relationship between mail volume and the users (underlying
13 function) of the vehicles. For vehicle depreciation five subcomponents are
14 considered: city carrier vehicles, rural carrier vehicles, special delivery
15 messenger vehicles (expedited delivery), vehicle service drivers vehicles, and
16 other (administrative) vehicles.

17

1 III. REVIEW OF BASE YEAR 1996 COSTS

2 A. History of MVS Cost Analysis

3 The base year 1996 (BY96) development of MVS costs was the result of a
4 succession of refinements that were incorporated into the analysis since CS-12 was first
5 regarded as partly volume variable because of its link to city carrier activities in the
6 R76-1 rate filing. City carrier costing was developed on a functional basis. Part of the
7 analysis recognized that city delivery carriers were the main users of postal-owned
8 vehicles and that it was (and still is) customary for each motorized route to be
9 individually assigned a vehicle to be used exclusively for that route. Thus the operating
10 cost for a motorized city delivery route inherently includes a direct vehicle cost as well
11 as a direct labor cost and both costs can be treated identically with regard to variability
12 analysis. In other words, the total cost (consisting of both volume variable and
13 institutional components) of a motorized route effectively consists of the carrier cost
14 proportionately burdened by the vehicle cost. If carrier wages amount to \$50,000 and
15 vehicle expenses amount to \$5,000, then the volume variable portion of vehicle costs
16 for a motorized route can be estimated as ten percent of each of the volume variable
17 labor cost components. As such, the volume variable vehicle costs can be distributed to
18 classes of mail for each labor cost component.

19 It should be noted that this treatment results in a vehicle cost burden on carrier
20 office costs as well as on carrier street costs, essentially reflecting the fact that the
21 vehicle belongs to the carrier even when it is not actually in use. Accordingly, at the
22 total system level, the number of carrier vehicles, and hence the aggregate vehicle cost,
23 varies identically with the number of motorized carrier routes - the so-called "system
24 variability". In the original R76-1 filing, this identical variability was approximated by
25 allocating the portion of total CS-12 cost associated with city carrier vehicles among the

1 five types of motorized routes in proportion to the total carrier cost ascribed to each of
2 these route types. The portion of CS-12 costs associated with city delivery vehicles was
3 estimated from available accounting data.

4 The R76-1 treatment as just outlined effectively dealt with the volume variable
5 costs of city carrier vehicles, by far the majority of CS-12 costs. In subsequent rate
6 filings, similar treatments were applied to other postal-owned vehicles: specifically,
7 vehicles used for special delivery messengers, for collection and other special purpose
8 routes, and for vehicle driver routes. In addition, the costs for vehicles leased for these
9 functions were treated similarly to the costs of postal-owned vehicles. In each instance,
10 vehicle costs were considered as volume variable as the volume variable direct labor
11 costs of the corresponding operating functions. This procedure has become known as
12 the burden method. Costs for vehicles dedicated to managerial and administrative
13 functions were regarded as institutional. To determine the appropriate cost pools, CS-
14 12 costs were distributed among the different types of vehicles, and the types of
15 vehicles were distributed among the operating functions (city carriers, rural carriers,
16 etc.). These distributions were based on two reporting systems: the Make-Model
17 Report and the Form 811 Survey (see below).

18 In the R90-1 rates filing, Witness Barker proposed a refinement of the city carrier
19 vehicle cost treatment that took account of the differing amounts of use of vehicles
20 among business and residential and loop and curblines route types. Witness Barker
21 relied on available data (from the 1986 STS survey) to show, for example, that vehicles
22 were being driven 80 percent of the time on curblines routes and 28 percent of the time
23 on loop routes. He then allocated their operating costs (but not their depreciation) in
24 direct proportion to the amount of use. The Commission adopted this methodology,
25 which remains in the existing BY96 workpapers. A set of vehicle-use factors is

1 developed for this purpose in the CS-7 workpapers and the values of these factors are
2 used in CS-12 to determine the proportion of vehicle costs to be treated as volume
3 variable for the carrier components. However, the BY96 workpapers apply the vehicle
4 use allocation to vehicle depreciation as well as to vehicle operating costs. This
5 allocation is an apparently unintentional result of a workpaper error. Witness Barker's
6 R90-1 refinement did not affect the costs of vehicles used for functions other than city
7 delivery.

8 The Make-Model Report provides summary statistics derived from a census of
9 the operations and maintenance of all postal-owned vehicles. It currently relies on the
10 VMAS, an ongoing and largely automated reporting system embracing all VMFs. The
11 Form 811 system, now discontinued, provided statistics on the hours of use of each
12 type of postal owned vehicle with respect to the various operating functions of concern.
13 Given the data from these two sources, allocating costs among operating functions was
14 a two-step process: first determine costs for the different vehicle types, and then
15 determine how the various vehicle types were used.

16

17 **B. CRA Structure**

18 BY 1996 CRA workpapers cover the costs associated with USPS Motor Vehicle
19 Services (MVS) in CS-12 and CS-20. MVS costs arise from the operation of certain
20 Vehicle Maintenance Facilities (VMS's) operated by the Postal Service, the expenses
21 for maintenance services performed under commercial contracts (so-called NPO
22 offices), the depreciation of postal owned vehicles, and the expenses for vehicle hire.
23 VMF operating costs, considered in terms of postal employee labor, supplies and
24 materials, and overheads, are treated in CS-12 together with the other vehicle
25 maintenance and vehicle hire contract expenses. Vehicle depreciation is treated along

1 with other capital expenses in CS-20. Reflecting these several distinct sources of
2 expenses, the present development incorporates four major cost components:
3 Personnel, comprising VMF direct labor and supervision; Supplies and Materials, which
4 includes contract services; Vehicle Hire; and Capital, comprising vehicle depreciation
5 and interest expenses. In common with other cost segments, while CS-12 costs are
6 initially developed with regard to operating expenses and related information of record,
7 they are eventually reconciled on an FY basis with the pertinent USPS expense
8 accounts and labor sub-accounts.

9

10 **C. Development of Costs for BY 1996**

11 **City Carrier Delivery Vehicles:** Delivery by city carriers uses virtually all types of
12 vehicles. Cost pools are formed for these vehicles for (1) letter routes and (2) special
13 purpose routes. For BY96, letter routes account for almost 70 percent of VMF costs
14 and 90 percent of NPO costs, while special purpose routes account for about 6 percent
15 in each case. Vehicle cost distributions are based on the distributions established by
16 volume variability analysis in CS-7 for carrier labor costs, as specially modified to reflect
17 the time usage of vehicles in motorized delivery operations. 4

18 Time usage of vehicles for letter route delivery is found from the functional (STS)
19 proportions in w/s 7.0.4 and, for special purpose routes, from survey results in w/s 7.0.5
20 of the CS-7 workpapers. This provides for each of five motorized letter routes and for
21 special purpose routes the proportion of driving activity (as distinct from all other)
22 associated with the functional components route time and access time. The usage is
23 assumed as 100 percent for travel time. For letter routes the accrued cost associated

4 The time-usage basis for allocating vehicle maintenance costs was originated by Postal Service witness Barker and accepted by the Commission in Docket No. R90-1.

1 with each of these components is multiplied by the appropriate time usage factor (e.g.,
 2 0.24 for loop routes) to obtain a representative vehicle use cost corresponding to route
 3 time and access time and, independently, for travel time. As travel time cost is
 4 considered a burden on all other accrued carrier costs, including load time and office
 5 time, a vector can be developed representing the accrued time usage costs for each of
 6 the five route types. The five vectors are added across route types and then normalized
 7 to produce a vector of "final vehicle proportions" (see R97-1, USPS-T-20, Workpapers,
 8 W/S 7.0.4.3):

	Final Vehicle Proportions		Total Motor (see below)
12	Access	0.3821	0.2200
13	Route	0.4967	0.2742
14	Load	0.0374	0.1566
15	Office	0.0838	0.3492
16	Total	1.0000	1.0000

17
 18 To distribute costs associated with vehicles used on letter routes, a single
 19 distribution vector (identified herein as the "vlr" vector) is constructed by applying the
 20 Final Vehicle Proportions respectively to the existing (CS-7) cost distributions for access
 21 time, route time, load time, and office time. Similar vectors of vehicle proportions are
 22 developed separately for letter motor routes, letter foot routes, special purpose routes,
 23 and total motor routes (see R97-1, USPS-T-20, W/S 7.0.4.3 and W/S 12.0.3). The
 24 special purpose routes vector is used to develop a distribution vector for vehicles used
 25 on special purpose routes; the total motor routes vector is used to develop a distribution

1 vector (identified herein as the "vhr" vector) for vehicle hire costs. The letter foot routes
2 vector is used to develop the distribution of costs for carfare and driveout agreements.

3 In the BY 1996 USPS treatment, as already indicated, the vlr vector is used to
4 distribute the cost pools associated with VMF personnel, supplies and materials, and
5 vehicle depreciation. In contrast, vehicle hire costs are distributed with the vhr vector, a
6 vector that is similarly developed from CS-7 carrier cost distributions but based on the
7 "total motor" vector shown above. Because the vlr vector reflects much smaller
8 proportions of office and load costs than the vhr vector, the resulting proportion of
9 volume variable costs is much lower for the vehicle use distribution than for the vehicle
10 hire distribution. This effect can be seen in the BY96 Segments and Components
11 report (page 38) and in my TABLE 1: volume variable costs are about 20 percent of
12 total for VMF personnel costs and supplies and materials costs but about 45 percent of
13 the total for vehicle hire costs. Indeed, the 20 percent variability substantially
14 understates the difference in these distributions because it reflects the combined costs
15 of vehicles for carriers, including both letter routes and special purpose routes, together
16 with vehicle costs for messengers and drivers. Examining the relevant CRA
17 components shows that the vehicle cost variability for carriers is less than 20 percent;
18 this same figure applies to VMF personnel (component 87), supplies and materials
19 (component 96), and depreciation (component 226).

20 With regard to the existing treatment of other vehicle-dependent activities, the
21 volume variability of VMF costs associated with messengers (component 88) is 47
22 percent, that for drivers (component 545) is 60 percent. Both these figures derive
23 directly from the corresponding labor cost variabilities for messengers (in CS-9) and
24 drivers (in CS-8). In these cases, there is no consideration of time usage in the
25 development of VMF costs.

1 We have used volume variabilities to indicate differences in distributed costs for
2 the components in the interests of simplicity. The differences are also substantial with
3 respect to the costs allocated to particular mail classes, as may be appreciated by
4 considering the differences in class of mail distributions between office costs and route
5 costs as two of the constituents of the vlr vector (reflecting about 8 percent of the office
6 cost distribution) and the vhr vector (reflecting about 35 percent).

7 Vehicle Depreciation: As noted above, city carrier vehicle depreciation costs (in
8 CS-20) in the BY96 were distributed on the vlr vector and therefore reflect vehicle time
9 usage, for both letter routes and special purpose routes. The R90-1 testimony stated,
10 however, ". . . the city-carriers delivery routes distribution developed for vehicle hire,
11 depreciation, and interest [i.e., the vector vhr noted above] is also used to distribute city
12 carrier carfare expenses in Cost Segment 13." This change in distribution of vehicle
13 depreciation costs from the defining R90-1 testimony (vhr) to the BY96 (vlr) workpapers
14 is not supported by testimony and appears to be the unintended (and erroneous) result
15 of recent workpaper changes made to BY96 for other purposes. The original (and
16 correct) distribution of depreciation costs on the basis of the vhr vector corresponds to
17 the logic that the number of vehicles, and hence their depreciation costs, varies in the
18 same way as the number of vehicle route carriers. In other words, depreciation costs
19 reflect the total system variability.

20 Another way of looking at this is to see that the operating cost of a motorized
21 carrier comprises the cost for equipment in addition to the direct labor cost. Thus if the
22 carrier's annual pay is \$40,000 and the annual vehicle depreciation is \$4,000, the
23 vehicle depreciation can be calculated as a ten percent burden on the carrier labor cost
24 and its cost distribution is the same as the carrier labor cost distribution consistent with
25 the burden treatment.

1 **D. Base Year 1996 Costs**

2 Volume Variable costs for BY 1996 are shown below in TABLE 1.

3 **TABLE 1**

4

CS	Maintenance	Percent	Parts & Supplies	Percent	Vehicle Hire	Percent	Total CS 12	Percent
Volume Variable	\$51,466,000	19%	\$57,712,000	19%	\$12,031,000	45%	\$121,209,000	20%
OTHER	\$220,078,000	81%	\$245,346,000	81%	\$14,800,000	55%	\$480,224,000	80%
TOTAL COSTS	\$271,544,000	100%	\$303,058,000	100%	\$26,831,000	100%	\$601,433,000	100%

CS	Vehicle Depreciation	Percent
Volume Variable	\$24,857,000	14%
OTHER	\$147,346,000	86%
TOTAL COSTS	\$172,203,000	100%

5

1 **IV. DEVELOPMENT OF BASE YEAR 1998 COSTS**

2 **A. Construction of Cost Pools**

3 A causal connection is necessary for determining volume variable costs. Such a
4 connection clearly exists where vehicles are necessary to perform a postal operating
5 function and the vehicles are not bundled with the service itself as with purchased
6 transportation. There is thus a causal basis for attributing CS-12 costs on the basis of
7 the functions that rely on postal-owned or leased vehicles: city delivery, special delivery,
8 vehicle service, rural delivery, and certain management activities. It is thus necessary
9 to disaggregate CS-12 costs in accordance with the relative amounts associated with
10 each of these functions. As stated earlier, the VMAS provides costs and operating data
11 in accordance with functional (user/driver) separations as well as with make-model
12 separations. The VMAS function codes provide a ready basis for this disaggregation
13 and can effectively replace the existing two-step allocation process that uses the
14 Make/Model Report and Form 811 results. Once the CS-12 costs are disaggregated,
15 most of the conceptual issues arise in considering the proper treatment of costs for city
16 carrier vehicles, both because this function accounts for most of the CS-12 total, and
17 because the detail afforded to allocating carrier labor costs provides both a basis and a
18 rationale for a corresponding detail in the CS-12 treatment.

19

20 **B. Changes to CRA Structure**

21 **ATTACHMENT 3** shows the output of the VMAS database that replaces the
22 Make/Model Report as the basis for the apportionment of CS 12 and CS 20.2 into
23 subcomponents. These changes were made to the calculation of MVS and vehicle

1 depreciation spreadsheets, as shown in Witness Meehan's (USPS-T-11) base year
2 workpapers.

3 1. The Make/Model Report was not used to apportion the components into
4 functions or subcomponents. Instead **ATTACHMENT 4** shows the
5 disaggregation of maintenance and vehicle dollars into functions: other
6 costs, maintenance costs, city carrier costs, rural carrier costs, expedited
7 delivery and vehicle service driver costs.

8 2. Office costs for city carriers were eliminated as a function or
9 subcomponent. Nothing from my examination of MVS and vehicle
10 depreciation leads to any justification for the inclusion of office time as an
11 underlying cause of volume variable costs for these components. Even
12 though our analyses for rural carriers and vehicle service drivers do not
13 allow us to exclude office time, it is nonetheless preferable and more
14 correct in city carriers to exclude office time where we have identified
15 those costs separately.

16 3. The disaggregation of parts and supplies and vehicle hire rely on the
17 maintenance vector. This approach is consistent with the BY 1996
18 analysis but is not our best treatment for these costs. Because of
19 limitations on our ability to manipulate the VMAS database due to Y2K
20 concerns and the timetable for the development of BY 1998, we were not
21 able to develop parts and supplies and vehicle hire based on the records
22 for these components. Starting in FY 1999, we will use data directly from
23 VMAS.

24 4. The proportions provided from **ATTACHMENT 4** are applied to the
25 accrued cost pools for these components to develop BY 1998 costs.

1 **C. Calculation of Base Year 1998 Costs**

2 **ATTACHMENT 4** shows the disaggregation of maintenance and depreciation
3 dollars into the subcomponents.

- 4 1. **OTHER (MAINT) Personnel** costs, as shown in **ATTACHMENT 4**, Line
5 29, are not used to develop the subcomponent shares of the accrued
6 costs for either MVS or vehicle depreciation. These costs represent
7 vehicles owned by maintenance to perform their duties. See Section V.B.
8 for future treatment.
- 9 2. **ALL CITY CARRIERS** costs, as shown in **ATTACHMENT 4**, Lines 36-37,
10 are redistributed to *CITY CARRIERS LETTER ROUTES* and *CITY*
11 *CARRIERS SPR ROUTES*.
- 12 3. The new total for *CITY CARRIERS LETTER ROUTES* is distributed to its
13 subcomponents using BY98 STS Proportions. This results in the following
14 weighting, as shown in **TABLE 2**. These results are applied to CS 12.1,
15 12.2, and 20.2.

16 **TABLE 2**

Subcomponent	MAINT; Parts & Sup \$	Percent	Depreciation \$	Percent
OTHER PERSONNEL	\$9,722,343	4.72%	\$15,268,069	7.73%
RURAL	\$12,795,649	6.21%	\$10,441,509	5.29%
VEHICLE SERVICE DRIVERS	\$23,869,001	11.59%	\$27,103,724	13.73%
SPEC DEL MES	\$2,333,633	1.13%	\$3,712,012	1.88%
SPR	\$8,548,969	4.15%	\$9,200,662.30	4.66%
LOAD	\$75,531,828	36.68%	\$66,150,297	33.50%
ACCESS	\$52,357,817	25.43%	\$46,334,847	23.47%
ROUTE	\$20,759,796	10.08%	\$19,228,679	9.74%
TOTALS	\$205,919,036	100.00%	\$197,439,799	100.00%

17

- 18 4. Given no new evidence to indicate that rural carriers or city carriers on
19 special purpose routes require rental vehicles at a higher rate than in the past,

1 vehicle hire costs, CS 12.3, rely on the same subcomponent shares as the BY96
2 workpapers. The inputs are shown in USPS T-11 Workpaper B at worksheets
3 12.0.3 and 12.3. VMAS data in this area exists but not available prior to the
4 construction of the base year workpapers. See Section V.B. where future costing
5 enhancements are discussed.

6 Using the percentages developed in **TABLE 2**, the recalculated proportions for
7 depreciation and MVS costs are then inputted in T-11 Workpaper B as shown in
8 **ATTACHMENT 5**.

1 **D. Base Year 1998 Results**

2 Volume Variable costs for BY 19985 are shown below in TABLE 3.

3

4

TABLE 3

CS	Maintenance	Percent	Parts & Supplies	Percent	Vehicle Hire	Percent	Total CS 12	Percent
Volume Variable	\$70,250,000	23%	\$76,467,000	23%	\$16,329,000	50%	\$163,046,000	24%
OTHER	\$236,403,000	77%	\$257,321,000	77%	\$16,335,000	50%	\$510,059,000	76%
TOTAL COSTS	\$306,653,000	100%	\$333,788,000	100%	\$32,664,000	100%	\$673,105,000	100%

CS	Vehicle Depreciation	Percent
Volume Variable	\$45,302,000	22%
OTHER	\$160,475,000	78%
TOTAL COSTS	\$205,777,000	100%

5

6

7 **V. CONCLUSIONS**

8 **A. Comparison of Base Year 1998 and Base Year 1996 Methodologies**

9 The vehicle-use basis and the total system basis represent two distinct concepts
 10 for allocating VMF costs to city carrier activities. The first assumes that VMF labor and
 11 material costs are directly proportional to the time-use of vehicles while the second
 12 assumes that VMF labor and material costs are proportional to the number of vehicles.
 13 This methodological question is eliminated in the BY 1998 treatment as we take costs
 14 directly from accounts as they are charged.

15 Secondly, the BY 1998 methodology is self-updating. Vehicles coming into
 16 service, changing functions, and being taken out of service are reflected in the database

1 each A/P. This removes the issue of the timeliness of the sampling used in the BY
2 1996 costing and sampling error.

3 Lastly, the BY 1996 methodology required many assumptions as to the functions
4 of vehicles. The Make/Model report was apportioned based on the survey and
5 assumed use of vehicles. The new methodology bypasses this complexity by using the
6 actual function assigned to each vehicle. Clearly in all aspects the new methodology is
7 superior, leading to more accurate costing of motor vehicle service and vehicle
8 depreciation.

9 **B. Methodology Refinements**

10 As stated earlier, Y2k limitations on manipulations of the database and the
11 timeliness of the base year limited our total use of the VMAS data to develop these
12 costs. Starting with FY 1999 Cost Revenue Analysis (CRA), the computation on vehicle
13 hire, CS 12.3, and parts and supplies, CS 12.2, will be calculated directly using their
14 own vectors of costs by function code. This will enhance the treatment immeasurably.
15 This improvement will deflate any arguments that stem from using CS 12.1,
16 maintenance dollars to allocate other components, e.g., issues relating to usage vs.
17 number of vehicles as addressed in **Section V.A.**

VMAS FUNCTION CODES

FUNCTION CODE	DESCRIPTION
AI	ACCIDENT INVESTIGATION
AM	ADMINISTRATIVE
AO	FIELD MAINT OPERATION
AT	AUTO TRANSPORT
AV	AMF VEHICLE
BT	BMC VEHICLE (TRAILERS)
CA	CUSTOMER ACCT REP
CD	CURBLINE DELIVERY
CP	COMBINATION
CS	COLLECTION SERVICE
DD	DELIVERY DIST MAINT
DM	DISMOUNT ROUTE
DS	DEAD STORAGE
DT	DRIVER TRAINING
ED	EXPEDITED DELIVERY
EX	EXPERIMENTAL
FT	FUEL TANKER SERVICE
IA	INSPECTION SVC (ADMIN)
IE	INSPECTION SVC LAW ENF
IN	INTRA CITY NON-VMS
IS	INSPECTION SVC (OTHER)
MF	MOBILE VEH REPAIR FAC
MP	MOBILE PO TRAILER
MR	MAINTENANCE RESERVE
MS	MOBILE SELF-POWERED PO
MT	MOTOR VEH SVC (MVS) TRL
MV	MOTOR VEH SVC (MVS) VEH
PL	PARK AND LOOP
PM	PLANT MAINT SERVICE
PP	PARCEL POST
PS	PREPARED FOR SALE
RR	RURAL ROUTE
RV	MOBILE REPAIR VEHICLE
SP	SPOTTER
SS	STREET SUPERVISION
ST	NON-ROAD USE TRAILERS
VM	VEHICLE MAINT SERVICE
VS	VENDING SERVICE
VV	VOMA VEHICLE
WR	WRECKERS
ZZ	NON-POSTAL VEHICLE
TT	TOTALS:

VMAS WORK ORDER FORM BACK

Description of Work <i>(Initial when completed)</i>		Info.	Comp. Code	Acct. Code	Hours & Tenths	ERT Time	Employee Number	Clock Range
1								E B
2								E B
3								E B
4								E B
5								E B
6								E B
7								E B
8								E B
9								E B
10								E B
11								E B
12								E B
13								E B
14								E B
15								E B
16								E B
17								E B
18								E B
19								E B
20								E B
21								E B
22								E B
23								E B
24								E B
25								E B

Remarks

Yes No **VEHICLE DEFECT REPORT REQUIRED**
 Yes No **VEHICLE APPROVED FOR RETURN TO SERVICE**
 Supervisor's Signature  Date _____

ATTACHMENT 3 USPS-T-20

DATE: 06/15/1999

PAGE: 1

VEHICLE MAINTENANCE AND DEPRECIATION COST REPORT FOR FISCAL YEAR 1998

FUNCTION CODE	MAINTENANCE LABOR COST	DEPRECIATION COST	VEHICLE COUNT
** - NO FUNCTION CODE	554,314.16	1,032,128.00	1,776
AI - ACCIDENT INVESTIGATION	34,819.36	28,199.00	36
AM - ADMINISTRATIVE	3,805,359.11	5,517,402.00	5,561
AO - FIELD MAINT OPERATION	314,177.29	377,179.00	330
AT - AUTO TRANSPORT	156,020.91	75,685.00	92
AV - AMF VEHICLE	296,236.02	349,949.00	289
BT - BMC VEHICLE (TRAILERS)	145,418.72	280,397.00	321
CA - CUSTOMER ACCT REP	109,375.67	157,478.00	181
CD - CURBLINE DELIVERY	45,898,779.04	34,228,957.00	41,659
CP - COMBINATION	14,223,793.53	11,948,059.00	12,591
CS - COLLECTION SERVICE	5,160,235.85	5,477,019.00	3,628
DD - DELIVERY DIST MAINT	21,812.00	52,923.00	33
DM - DISMOUNT ROUTE	10,400,228.97	8,707,967.00	10,591
DS - DEAD STORAGE	2,595,187.99	741,038.00	9,076
DT - DRIVER TRAINING	347,571.88	349,771.00	472
ED - EXPEDITED DELIVERY	2,333,633.04	3,712,012.00	2,449
EX - EXPERIMENTAL	13,158.65	114,908.00	65
FT - FUEL TANKER SERVICE	665.94	1,422.00	1
IA - INSPECTION SVC (ADMIN)	56,198.99	151,573.00	102
IE - INSPECTION SVC LAW ENF	717,949.44	2,256,659.00	1,408
IN - INTRA CITY NON-VMS	427,970.27	1,029,055.00	270
IS - INSPECTION SVC (OTHER)	540,970.56	1,349,515.00	856
MF - MOBILE VEH REPAIR FAC	18,961.83	1,352.00	5
MP - MOBILE PO TRAILER	18,851.99	59,553.00	32
MR - MAINTENANCE RESERVE	10,549,184.10	4,469,758.00	5,907
MS - MOBILE SELF-POWERED PO	255,487.57	458,756.00	169
MT - MOTOR VEH SVC (MVS) TRLR	4,684,641.43	2,801,777.00	3,974
MV - MOTOR VEH SVC (MVS) VEH	17,772,315.95	21,966,674.00	4,171
PL - PARK AND LOOP	78,586,298.49	77,295,123.00	91,283
PM - PLANT MAINT SERVICE	2,473,381.30	3,102,498.00	2,962
PP - PARCEL POST	2,168,398.84	1,891,707.00	1,194
PS - PREPARED FOR SALE	54,332.73	4,804.00	90
RR - RURAL ROUTE	12,795,648.84	10,441,509.00	11,241
RV - MOBILE REPAIR VEHICLE	110,110.14	54,055.00	61
SP - SPOTTER	1,245,885.24	2,037,223.00	420
SS - STREET SUPERVISION	351,439.16	167,778.00	406
ST - NON-ROAD USE TRAILERS	20,739.31	17,653.00	233
VM - VEHICLE MAINT SERVICE	1,645,832.28	1,004,125.00	971
VS - VENDING SERVICE	171,970.68	206,479.00	239
VV - VOMA VEHICLE	274,001.89	174,541.00	340
WR - WRECKERS	1,051,285.35	993,995.00	409
ZZ - NON-POSTAL VEHICLE	1,904.04	849.00	4
TOTALS:	\$ 222,404,548.55	\$ 205,089,504.00	215,898

NOTE: ALL DATA FROM THIS REPORT WERE EXTRACTED FROM VMAS MASTER FILE OF AP13 FY98. ALL VEHICLES WERE READ & PROCESSED ACCORDING TO ASSIGNED FUNCTION CODE. THIS REPORT INCLUDES ALL ACTIVE, INACTIVE, SOLD VEHICLES AND FOUR NON-POSTAL VEHICLES(F/C='ZZ').

ATTACHMENT 4 -

MAINT & DEPREC DOLLARS BY SUBCOMPONENTS USPS-T-20

<u>LINE NUMBER</u>	<u>FUNCTION CODE</u>	<u>Maintenance Dollars</u>	<u>Depreciation Dollars</u>	<u>Vehicle Count</u>
OTHER				
1	NO NO FUNCTION CODE	554,314.16	1,032,128.00	1,776
2	AI ACCIDENT INVESTIGATION	34,819.36	28,199.00	36
3	AM ADMINISTRATIVE	3,805,359.11	5,517,402.00	5,561
4	AO FIELD MAINT OPERATION	314,177.29	377,179.00	330
5	AV AMF VEHICLE	296,236.02	349,949.00	289
6	CA CUSTOMER ACCT REP	109,375.67	157,478.00	181
7	IA INSPECTION SVC (ADMIN)	56,198.99	151,573.00	102
8	IE INSPECTION SVC LAW ENF	717,949.44	2,256,659.00	1,408
9	IS INSPECTION SVC (OTHER)	540,970.56	1,349,515.00	856
10	MP MOBILE PO TRAILER	18,851.99	59,553.00	32
11	MS MOBILE SELF-POWERED PO	255,487.57	458,756.00	169
12	DD DELIVERY DIST MAINT	21,812.00	52,923.00	33
13	PM PLANT MAINT SERVICE	2,473,381.30	3,102,498.00	2,962
14	SS STREET SUPERVISION	351,439.16	167,778.00	406
15	VS VENDING SERVICE	171,970.68	206,479.00	239
16		9,722,343.30	15,268,069.00	14,380.00
OTHER (MAINT) Personnel				
17	AT AUTO TRANSPORT	156,020.91	75,685.00	92
18	MF MOBILE VEH REPAIR FAC	18,961.83	1,352.00	5
19	FT FUEL TANKER SERVICE	665.94	1,422.00	1
20	MR MAINTENANCE RESERVE	10,549,184.10	4,469,758.00	5,907
21	RV MOBILE REPAIR VEHICLE	110,110.14	54,055.00	61
22	VM VEHICLE MAINT SERVICE	1,645,832.28	1,004,125.00	971
23	VV VOMA VEHICLE	274,001.89	174,541.00	340
24	WR WRECKERS	1,051,285.35	993,995.00	409
24	DS DEAD STORAGE	2,595,187.99	741,038.00	9,076
26	EX EXPERIMENTAL	13,158.65	114,908.00	65
27	ZZ NON-POSTAL VEHICLE	1,904.04	849	4
28	PS PREPARED FOR SALE	54,332.73	4,804.00	90
29		16,470,645.85	7,636,532.00	17,021.00
CITY CARRIERS LETTER ROUTES				
30	DM DISMOUNT ROUTE	10,400,228.97	8,707,967.00	10,591
31	PL PARK AND LOOP	78,586,298.49	77,295,123.00	91,283
32	CD CURBLINE DELIVERY	45,898,779.04	34,228,957.00	41,659
CITY CARRIERS SPR ROUTES				
33	IN INTRA CITY NON-VMS	427,970.27	1,029,055.00	270
34	CS COLLECTION SERVICE	5,160,235.85	5,477,019.00	3,628
35	PP PARCEL POST	2,168,398.84	1,891,707.00	1,194
ALL CITY CARRIERS				
36	CP COMBINATION	14,223,793.53	11,948,059.00	12,591
37	DT DRIVER TRAINING	347,571.88	349,771.00	472
38	TOTAL CARRIERS	157,213,276.87	140,927,658.00	161,688.00
RURAL ROUTE				
39	RR RURAL ROUTE	12,795,648.84	10,441,509.00	11,241
40		12,795,648.84	10,441,509.00	11,241
EXPEDITED DELIVERY				
41	ED EXPEDITED DELIVERY	2,333,633.04	3,712,012.00	2,449
42		2,333,633.04	3,712,012.00	2,449
VEHICLE SERVICE DRIVER				
43	SP SPOTTER	1,245,885.24	2,037,223.00	420
44	MV MOTOR VEH SVC (MVS) VEH	17,772,315.95	21,966,674.00	4,171
45	BT BMC VEHICLE (TRAILERS)	145,418.72	280,397.00	321
46	MT MOTOR VEH SVC (MVS) TRL	4,684,641.43	2,801,777.00	3,974
47	ST NON-ROAD USE TRAILERS	20,739.31	17,653.00	233
48		23,869,000.65	27,103,724.00	9,119.00
49	TT TOTALS:	\$222,404,548.55	\$205,089,504.00	215,898

ATTACHMENT 5

USPS-T-20

MVS BASE YEAR INPUTS

Base Year 1998 - USPS Version

C/S 12 MOTOR VEHICLE SERVICE INPUTS

C/S 20.2.2 VEHICLE DEPRECIATION INPUTS

USPS T-11 W/S NO.	TYPE OF VEHICLE	TOTAL COST	CITY DEL \$	CITY SPT \$	SPEC DEL \$	VEH SVC DRVRS \$	RURAL \$	OTHER \$
	COLUMN NUMBER	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	CALCULATIONS							
	UNITS	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
	COLUMN SOURCE/NOTES	From Stmt of Rev & Exp subacct. 141						
12.1.1	TOTAL PERSONNEL	306,653	221,374	12,730	3,475	35,543	19,054	14,477
12.2.1	TOTAL SUPPLIES AND MATERIALS	333,789	240,963	13,857	3,782	38,688	20,740	15,759
USPS T-11 W/S NO.	FACILITY TYPE	VMS/NPO APPORTIONED MVS	CITY DELIVERY COSTS	CITY SUPPORT COSTS	SPECIAL DELIVERY COSTS	VEH SVC DRVS COSTS	OTHER COSTS	
	COLUMN NUMBER	(1)	(2)	(3)	(4)	(5)	(6)	
	CALCULATIONS							
	UNITS	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
	COLUMN SOURCE/NOTES	From Stmt of Rev & Exp Acct. 52459						
12.3.1	TOTAL VEHICLE HIRE	32,664	25,142	1,446	395	4,037	1,644	

USPS T-11 W/S NO.	TYPE OF VEHICLE	VEHICLE DEPREC	CITY DELIVERY COSTS	CITY SUPPORT COSTS	SPECIAL DELIVERY COSTS	VEHICLE SVC DRVS COSTS	RURAL	OTHER
	COLUMN NUMBER	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	CALCULATIONS							
	UNITS	-	-	-	-	-	-	-
	COLUMN SOURCE/NOTES	From Stmt of Rev & Exp Acct. 54340	USPS-T-20	USPS-T-20	USPS-T-20	USPS-T-20	USPS-T-20	USPS-T-20
20.2.2	TOTAL DEPRECIATION	205,777	140,329	9,163	3,696	26,989	10,397	15,203

