

USPS-T-13

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

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| Postal Rate and Fee Changes Pursuant to Public Law 108-18 | Docket No. R2005-1 |
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DIRECT TESTIMONY
OF
MARC A. SMITH
ON BEHALF OF THE
UNITED STATES POSTAL SERVICE

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| USPS-LR-K-52 | Development of Piggyback and Related Factors |
| USPS-LR-K-53 | Mail Processing Unit Costs by Shape |
| USPS-LR-K-54 | Equipment and Facility Related Costs |
| USPS-LR-K-62 | Facility Space Usage Study |

AUTOBIOGRAPHICAL SKETCH

My name is Marc A. Smith. I have been employed by the Postal Service since February, 1987, as an Economist in the Cost Attribution group of Finance.

In Docket No. R2001-1, I provided testimony, USPS-T-15, on mail processing costs by shape, the development of base year and test year plant and mail processing equipment costs, piggyback factors and other inputs needed for the worksharing avoided costs calculation. In Docket No. R2000-1, I provided testimony, USPS-T-21, covering the development of the same costs.

In Docket No. R97-1, I provided testimony, USPS-ST-45, on mail processing costs by shape, piggyback factors and other inputs needed for the worksharing avoided costs and testimony, and USPS-ST-46, on Standard A dropship discount cost avoidances.

In Postal Rate Commission Docket No. MC95-1, I testified for the Postal Service, USPS-T-10, on First-Class letter mail processing costs. In Docket No. R94-1, I worked in support of the base year witness Dana W. Barker regarding facility-related and mail processing equipment-related costs. In Docket No. R90-1, I provided testimony on behalf of the Postal Service, USPS-T-8 and USPS-RT-3, to improve the development of plant and equipment costs and the new development of piggyback factors for specific mail processing operations to better determine the indirect costs for cost avoidance calculations. In Docket No. R87-1, I worked in support of Paul R. Kleindorfer's testimony on the peak load cost issue.

Prior to coming to the Postal Service, I was a Senior Economist with the New York Department of Public Service. I testified as an expert witness in numerous electric and telephone rate proceedings, primarily on the marginal costs of electricity. This

1 testimony was in support of both retail and co-generation electric rate proposals. In
2 1981, I served as an economist at the Interstate Commerce Commission. There, I
3 worked on modifying railroad regulations to conform with the Staggers Rail Act of 1980.

4 I received a B.A. with honors in Economics from the George Washington
5 University in 1975. I received a M.A. in Economics from the University of Michigan in
6 1978. While at the University of Michigan, I completed all requirements toward a Ph. D
7 in Economics except the dissertation. As a graduate student, I served as a teaching
8 fellow, in introductory economics and econometrics courses. I also worked as a
9 research assistant at the Institute for Social Research in Ann Arbor, Michigan on a study
10 of electric utility load management and peak load pricing experiments.

11
12 My papers, publications and presentations are as follows:

13
14 Evaluation of the Federal Energy Administration's Load Management and Rate Design
15 Demonstration Projects, with Daniel Hill et al., Electric Power Research Institute, 1979.

16
17 Analysis of Residential Response to Time-of-Day Prices, with Daniel Hill et al., Electric
18 Power Research Institute, 1981.

19
20 "The Effect of Maintenance Requirements in Peak Load Pricing", with Mark Reeder.
21 Presented at the Advanced Workshop in Regulation and Public Utility Economics, May,
22 1983.

23
24 "Pricing Rivalry Between Railroads in the Transportation of Coal in Western United
25 States in the 1970s." Presented at the Advanced Workshop in Regulation and Public
26 Utility Economics, May, 1984.

27
28 "Econometric Evaluation of Electric Utility Operation and Maintenance Expenses" in
29 Proceedings of the Fifth NARUC Biennial Regulatory Information Conferences, National
30 Regulatory Research Institute, September 3-5, 1986 pp. 1871 - 1912.

31
32 "Peak-Load Pricing in Postal Services" with Michael A. Crew and Paul R. Kleindorfer,
33 Economic Journal, September, 1990.

34
35 "The Analytical Basis for Cost Measurement at the United States Postal Service" with
36 Michael D. Bradley and Jeffrey L. Colvin. Presented at the Advanced Workshop in
37 Regulation and Public Utility Workshop in Cooperstown, NY, May 1991.

1

2 “Measuring Product Costs for Ratemaking: The United States Postal Service,” with
3 Michael D. Bradley and Jeffrey L. Colvin, edited by Michael A. Crew and Paul R.
4 Kleindorfer Regulation and the Nature of Postal and Delivery Service. Boston: Kluwer
5 Academic Publishers, 1993, pp. 133-157.

6

7 “Peak Loads and Postal Services: Some Implications of Multi-Stage Production” with
8 Michael A. Crew and Paul R. Kleindorfer, edited by Michael A. Crew and Paul R.
9 Kleindorfer Managing Change in Postal and Delivery Industries. Boston: Kluwer
10 Academic Publishers, 1997, pp. 42-64.

11

12 “Balancing Competition and Public Utility: Postal Service Here and Abroad.”
13 Presented at the Advanced Workshop in Regulation and Competition at Rutgers
14 University in Newark, NJ, January, 2004.

15

16

1 **I. PURPOSE AND SCOPE OF TESTIMONY, AND GUIDE TO SUPPORTING**
2 **DOCUMENTATION**
3

4 There are five main purposes of my testimony. First, I provide a brief
5 analysis to show that the test year escrow funding of \$3.1 billion is non-volume
6 variable. This is used by witness Waterbury, USPS-T-10 in developing test year
7 costs. Second, I provide the study of Facility Space Usage in 1999, which
8 provides a profile of facility space usage by operation and function. This study
9 serves as a key input to my work on base year and test year facility-related costs.
10 Third, I provide methodology and inputs necessary to determine the volume
11 variable equipment and facility-related costs by subclass for both the base year
12 and test year for witnesses Meehan, USPS-T-9, and Waterbury, USPS-T-10.
13 Fourth, I provide piggyback factors which are used to incorporate indirect costs
14 into the cost avoidance estimates and for the purpose of computing final
15 adjustments. These factors are used by witnesses Abdirahman, USPS-T-21,
16 Cutting, USPS-T-26, Hatcher, USPS-T-22, Mayes, USPS-T-25, Miller, USPS-T-19
17 and USPS-T-20, Moser, USPS-T-23, and Wesner, USPS-T-24. In addition, I apply
18 piggyback factors to assist witness Kay, USPS-T-18, in the determination of the
19 Priority Mail incremental costs for Priority Mail Processing Centers (PMPCs). The
20 fifth and final contribution of my testimony is the calculation of labor and indirect
21 mail processing unit costs by shape, by cost pool. These costs are used by
22 witnesses Abdirahman, USPS-T-21, Cutting, USPS-T-26, Miller, USPS-T-19 and
23 USPS-T-20, and Moser, USPS-T-23, in determining the cost avoidance estimates.

1 Much of this testimony updates my work in Docket No. R2001-1 in these same
2 areas, using methods similar to, or the same as, I used in that docket.

3 Part II of my testimony concerns the escrow funding which commences in
4 the test year. Public Law 108-18, as discussed by witness Tayman, USPS-T-6,
5 requires escrow funding of \$3.1 billion for the test year, FY2006. I determine that
6 the escrow funding is not volume variable, and therefore is institutional.

7 Part III reports on the Facility Space Usage Study. This study provides a
8 profile of facility space usage by operation and function as of the end of FY 1999.
9 This study is an important input into my testimony on base year and test year
10 facility-related costs discussed in Part IV. The main source of information for this
11 profile is the August, 1999 survey of about 750 facilities with 50 million square feet
12 of interior space, selected using a stratified random sample. Data were collected
13 on the amount of facility space used for each operation and function for the
14 facilities selected. While the survey included only about two percent of the Postal
15 Service's 35,000 facilities, over one-sixth of the Postal Service's 300 million sq. ft.
16 of facility space was surveyed due to its focus on large facilities. My testimony
17 describes the steps involved in this survey, and the use of survey data along with
18 other data on Postal Service facilities to provide the overall profile of facility space
19 usage by function and operation. An important goal and result of this work was the
20 development of facility space estimates consistent with the mail processing labor

1 cost pools.¹ This part of my testimony is supported by USPS LR-K-62, “Facility
2 Space Usage Study.”

3 Part IV is on equipment and facility-related costs. I provide base year
4 equipment-related costs for mail processing equipment depreciation (component
5 20.1²), interest expense (component 20.5), maintenance labor (component 11.2),
6 and parts & supplies (component 16.3.2), accounting for about 3.3 percent of
7 accrued costs. I apportion these costs by equipment type into 21 cost pools, using
8 data from our accounting and engineering records. For each of these cost pools, I
9 also prescribe the variabilities and distribution keys to relate these costs to
10 subclasses. For the test year I apportion mail processing equipment depreciation
11 into the 21 cost pools, based on data from our accounting system and capital
12 budget.

13 The facility-related costs in the base year and test year are for space
14 provision and space support. The space provision costs are rents (component
15 15.1), depreciation (component 20.3) and interest (component 20.5). The space
16 support costs are fuel and utilities (component 15.2), custodial services labor
17 (component 11.1), contract cleaners (component 11.1.2), building equipment
18 maintenance labor (component 11.3), custodial supplies and services (component
19 16.3.1) and building security (component 18.1.2). I divide these costs into cost
20 pools (or by activity) based on the Facility Space Usage Study for FY1999

¹ This goal was also recommended by the Data Quality Study. See Data Quality Study reported by A.T.Kearney in April, 1999, conducted for the Government Accounting Office (GAO), page 123.

² This component number refers to the numbering system for cost components used in the Summary Description, USPS LR-K-1, and in the segments and component report (e.g., see witness Meehan, USPS-T-9, Exhibit USPS-9A).

1 (discussed in part III), updated using information on equipment deployments. I
2 also prescribe variabilities and distribution keys for these cost pools. This part of
3 my testimony is supported by USPS LR-K-54, "Equipment and Facility-Related
4 Costs."

5 Part V of my testimony presents piggyback and related factors. Piggyback
6 factors are employed in worksharing-related cost studies to add supervisor,
7 administration, facility-related and equipment-related costs to labor cost estimates.
8 A piggyback factor is, in general terms, the ratio of total volume variable costs to
9 volume variable labor costs for a specific function (e.g. city carrier) or operation
10 (e.g. OCR). Total costs, as contained in the numerator, include labor, supervisor,
11 administrative, facility-related and equipment-related costs. Labor costs, in the
12 denominator, are all non-supervisory, non-administrative labor cost associated with
13 the function or operation.

14 There are three sets of factors:

- 15 1. piggyback factors by major function,
- 16 2. piggyback factors used for final adjustments, and
- 17 3. mail processing cost pool and operation specific piggyback factors.

18 The first set of piggyback factors (or ratios) are for major functions (e.g.,
19 mail processing, window service, city delivery, rural delivery, and vehicle service
20 drivers) for each subclass³ for the test year. The second set of piggyback factors
21 is provided for the test year final adjustments performed by witness Moser, USPS-
22 T-23. The third set of piggyback factors is provided for specific mail processing

³ These piggyback factors are computed for each row of the test year (before rates) segments and components report, which is USPS-10F.

1 operations, consistent with the cost pools for mail processing labor costs, for the
2 test year.

3 The final portion of Part V provides an estimate of the piggyback or indirect
4 costs associated with PMPCs which are included in volume variable costs.
5 Identifying these costs allows witness Kay, USPS-T-18, to compute Priority Mail's
6 base year incremental costs associated with PMPCs without an overlap or double
7 counting of these PMPC indirect costs. This part of my testimony is supported by
8 USPS LR-K-52, "Development of Piggyback and Related Factors."

9 Part VI of my testimony concerns Mail Processing Unit Costs by Shape for
10 the test year. These costs are inputs in developing costs avoided due to
11 worksharing. They are test year volume variable mail processing unit costs by
12 shape and presort level. In addition, I provide separate automation and non-
13 automation costs for First-Class and Standard presort letters and I also provide
14 separate costs for metered and non-metered First-Class single-piece letters.
15 These costs include piggyback or indirect costs as well. These costs are provided
16 by cost pool. A new method is used for Standard Regular flats and parcels to
17 address an inconsistency between the cost and volume data. A significant amount
18 of parcel-shaped Standard Regular pieces qualify for flats rates. Such pieces are
19 included in flats volumes, but in parcel costs. As discussed below, the Standard
20 Regular flat-parcel adjustment reduces parcel costs by about 25% while it raises
21 flats costs by about 6%. This part of my testimony is based on USPS LR-K-53,
22 "Mail Processing Unit Costs by Shape."

1 Finally, Part VII is a summary of my testimony and part VIII provides the
2 “Proposed Changes Relative to the PRC Methodology”. The proposed changes
3 discussed relate to distribution of facility space (due to different Non-MODS mail
4 processing labor cost pool definitions), differences in piggyback factors due to the
5 differences between USPS and PRC base year and test year versions, and
6 differences in cost by shape due to differences between USPS and PRC base year
7 and test year versions.

1 II. DETERMINATION OF TEST YEAR ESCROW TREATMENT

2 This part of my testimony concerns the escrow funding which commences
3 in the test year. Public Law 108-18, as discussed by witness Tayman, USPS-T-6,
4 requires escrow funding of \$3.1 billion for the test year, FY2006. The issue I
5 address is the proper treatment of this funding in terms of cost attribution. I
6 conclude that the escrow fund cannot be attributed to the classes and subclasses,
7 and therefore should be treated as institutional.

8 As discussed by witness Tayman, USPS-T-6, the Postal Civil Service
9 Retirement System Funding Reform Act of 2003, P.L. 108-18 changed the formula
10 by which the Postal Service's CSRS payments are calculated. The new formula
11 requires the increase in employer contribution for CSRS employees from 7 percent
12 to 17.4 percent of current wages starting in May 2003, and the payment of a
13 Supplemental Liability. The law further requires the Postal Service to treat as an
14 operating expense and hold in escrow any "savings" resulting from the reform of
15 the Postal Service CSRS funding, starting in FY 2006. The "savings" are the
16 difference between what the Postal Service would be paying under the previous
17 formula, and what it actually pays under the new formula. This difference in the
18 Test Year (i.e., the Escrow amount for the Test Year) is about \$3.1 billion. The
19 legislation also requires that Congress address and define the appropriate use of
20 these "savings" in subsequent legislation.⁴

21 It is well established that the determination of attributable costs requires "a
22 reasoned analysis of cost causation." PRC Op. R80-1, p. 131. Attributable costs

⁴ See witness Tayman, USPS-T-6 for information on PL 108-18.

1 are those causally linked to a subclass or type of service based on analyses of
2 Postal Service costs and operations. In light of these standards, it is necessary to
3 consider two characteristics of the escrow fund as they relate to cost causality.

4 First, as stated by witness Tayman, USPS-T-6, the escrow amount is
5 “arbitrary”. As witness Tayman states: “The amount of the escrow expense is
6 arbitrarily determined in the sense that it represents the difference between the
7 funding requirement relating to a legitimate estimate of Postal Service’s CSRS
8 obligations and an estimate of these obligations that was determined to be
9 substantially in error.”⁵ Second, the purpose of the escrow has not been
10 established, since Congress will take that up in future legislation. Thus the annual
11 escrow fund amount is an arbitrary amount to be used for a yet to be determined
12 purpose. These characteristics of the escrow show that it is not causally related to
13 any postal product or service to be offered in the test year. Its appropriate
14 treatment, therefore, is as an institutional cost.⁶

15

⁵ See USPS-T-6, Section III.B.1.

⁶ This testimony only addresses the Escrow amount and does not address the variability associated with the other payments under the new structure. The main element of this new formula is the increased employer contributions for CSRS employees, which went up from 7 percent to 17.4 percent of current wages starting in May 2003. The larger 17.4 percent payment is included in accrued salary and benefits costs in cost segments 1-13, 16, 18, and 19 just as previously done for the 7 percent payment. As in the past, the employer contribution to CSRS (\$1.6 billion in FY 2004), is volume variable to the same degree as other salary and benefits costs in these cost segments. The only difference is that the employer contribution to CSRS is larger.

1 III. FACILITY SPACE USAGE STUDY

2 This part of my testimony covers the facility space usage study which
3 provides estimates of the amount of square feet and rents by operation and
4 function for the Postal Service as a whole for the end of FY 1999. This is the key
5 input for my estimates of facility space and rents by operation for the base year
6 and test year, in Attachments 5 and 6 respectively. The results of the FY1999
7 Facility Space Usage Study are shown in Table 1. This testimony contains a
8 summary of the main points on the development and the results of this study. The
9 complete description of this study is contained in USPS LR-K-62.

10 The results such as in Table 1 are used in the CRA to apportion facility-
11 related costs such as rent, building depreciation, custodial and utilities, to
12 operation and function, as an intermediate step in obtaining the amount of facility-
13 related costs per class and subclass.⁷ This is fully discussed in part IV. In FY
14 2004, facility-related costs were \$4,052.9 million, accounting for 6.1 percent of total
15 costs.

16 A. Overview of Study

17 Most of the information needed to estimate facility space by operation and
18 function was based on a survey of facility space usage for a sample of facilities.

⁷ For instance the facility survey provides us with the share of facility space used by retail window services. As shown in Table 1, approximately 17.6 million square feet are used for Window Services, out of 295.5 million total square feet in FY1999. This is nearly 6 percent of all facility space. This allows us to assign a share of the facility-related costs to window operations. We also know from IOCS the relative labor time at the window for different classes and subclasses of mail. Based on this window labor time information we distribute the window facility-related costs. This is discussed in more detail in part IV of my testimony.

Table 1
FY 1999 FACILITY SPACE AND RENTS BY CATEGORY

| | (1) | (2) |
|------------------------------------|---|---------------------|
| | <u>SQUARE FEET</u> | <u>RENTAL VALUE</u> |
| | | (\$ 000) |
| Facility Categories for CRA | | |
| 1 | Delivery BCS, Carrier Sequence BCS | 8,980,012 |
| 2 | Mail Processing BCS | 2,665,032 |
| 3 | OCRs (including BCS on OCRs) | 2,356,124 |
| 4 | FSM 881, SPFSM, Other | 2,999,393 |
| 5 | FSM 1000 | 1,657,329 |
| 6 | LSM, MPLSM & SPLSM with BCR | 22,403 |
| 7 | Mechanical Sort - Sack Outside | 1,097,087 |
| 8 | Mechanized Parcels | 113,367 |
| 9 | SPBS - Non-Priority & Priority | 5,210,910 |
| 10 | Manual Flats | 1,262,419 |
| 11 | Manual Letters | 2,579,459 |
| 12 | Manual Parcels | 857,041 |
| 13 | Manual Priority | 1,851,369 |
| 14 | LDC 15 - RBCS | 1,444,362 |
| 15 | Air Contract Data Collection Systems | 174,187 |
| 16 | Bulk Presort | 248,797 |
| 17 | Cancellation & Mail Preparation - Metered | 3,447,514 |
| 18 | Manual Sort - Sack Outside | 980,429 |
| 19 | Opening Unit - Preferred Mail | 2,795,823 |
| 20 | Opening Unit - BBM | 1,622,954 |
| 21 | Platform | 12,695,538 |
| 22 | Pouching Operations | 2,101,092 |
| 23 | Business Reply / Postage Due | 187,406 |
| 24 | Damaged Parcel Rewrap | 126,909 |
| 25 | Empty Equipment | 3,130,354 |
| 26 | Express Mail | 515,038 |
| 27 | Mail Processing Support/Miscellaneous Activity | 618,898 |
| 28 | Registry | 535,475 |
| 29 | International / ISCs | 1,318,282 |
| 30 | LDC 41 - Unit Distribution - Automated | 1,199,988 |
| 31 | LDC 42 - Unit Distribution - Mechanized | 62,556 |
| 32 | LDC 43 - Unit Distrib., Manual / LDC 44 - PO Box Distrib. | 11,859,672 |
| 33 | LDC 48 - Customer Service / Express | 84,534 |
| 34 | LDC 48 - Customer Service / Admin. & Other | 502,858 |
| 35 | LDC 48 - Customer Service / Special Services | 168,913 |
| 36 | LDC 49 - Computerized Forwarding System | 1,542,853 |
| 37 | LDC 79 - Mailing Reqs. & Bus. Mail Entry | 850,349 |
| 38 | BMC - Platform | 2,468,911 |
| 39 | BMC - Allied Labor & All Other Mail Processing | 2,062,260 |
| 40 | BMC - Parcel Sorting Machine | 3,349,381 |
| 41 | BMC - Sack Sorting Machine | 868,919 |
| 42 | BMC - SPBS & Irregular Parcels (IPP & 115) | 612,211 |
| 43 | BMC - Non-Machinable Outside (NMO) | 262,932 |
| 44 | Non-MODS - Allied | 21,579,242 |
| 45 | Non-MODS - Automated/Mechanized | 2,454,711 |
| 46 | Non-MODS - Express Mail | 341,345 |
| 47 | Non-MODS - Manual Flat | 2,689,657 |
| 48 | Non-MODS - Manual Letter | 2,812,889 |
| 49 | Non-MODS - Manual Parcel | 4,177,950 |
| 50 | Non-MODS - Registry | 302,032 |
| 51 | Non-MODS - Miscellaneous | 1,954,876 |
| 52 | Window Service | 17,572,173 |
| 53 | Self-Service Postal Center | 2,400,765 |
| 54 | Post Office Boxes / Caller Service | 25,725,428 |
| 55 | Claims & Inquiry | 439,201 |
| 56 | City Carrier | 25,162,936 |
| 57 | Rural Carrier | 8,408,749 |
| 58 | DDU Accountables Cage | 583,207 |
| 59 | Office Space | 25,449,213 |
| 60 | Mail Processing Equipment Maintenance | 4,601,924 |
| 61 | Other Equipment Maintenance | 2,096,912 |
| 62 | Employee Facilities | 22,536,862 |
| 63 | VMF | 6,441,720 |
| 64 | CVS | 8,834,551 |
| 65 | Vacant & Tenant | 7,761,617 |
| 66 | HQ, HQ-Field Related, and Area Offices | 5,710,073 |
| 67 | Mail Transportation Equipment Centers | 1,014,315 |
| 68 | Storage Facilities | 4,993,711 |
| | Total | 295,537,396 |
| | | 2,553,793 |

1 Approximately 750 facilities of the Postal Service's 35,000 facilities were surveyed
2 in August, 1999 after selection through a stratified random sample. The focus of
3 this survey was on larger facilities, so despite the relatively small number of
4 facilities surveyed, approximately 50 million square feet of space (out of 300 million
5 total square feet) was surveyed. For each surveyed facility, information was
6 collected on the amount of facility space used for different operations and
7 functions. These survey results, along with data on facilities maintained by the
8 Postal Service for its operations, are used to develop the profile of space usage
9 contained in Table 1. The results in Table 1 are an update of the FY1992 facility
10 space survey. Apart from providing more current estimates, an important goal of
11 this study was to obtain mail processing facility space consistent with the mail
12 processing labor cost pools as discussed below.

13 This study involves the following three steps, which are very similar to
14 previous facility studies.⁸ First, this study utilized Facilities data and other data
15 available on Postal Service facilities and operations to provide an initial profile of
16 facility space usage. This profile identifies certain facilities, a small portion of
17 space, by operation and function. For the remaining facilities, this profile serves as
18 a basis for selecting a stratified random sample. A random sample is selected to
19 best reflect the population of facilities for which data is sought.

20 Second, survey data are collected from the randomly selected facilities on
21 space usage by operation and function (in August, 1999). Four different survey

⁸ The approach used in this study parallels that of previous facility surveys. See Report on the Costing of Postal Facilities, Foster Associates, Inc., December 1977; Facility Cost Development, Foster Associates, Inc., December 1985 and Facility Cost Development Update, Foster Associates, Inc., December 1993.

1 forms are used to tailor the data collection for different types of facilities. These
2 data are reviewed and edited for consistency with the instructions and
3 completeness. These data are consolidated into the categories more consistent
4 with those in Table 1.

5 Finally, the third step is the calculation of the total square feet and rents for
6 each of the CRA categories shown in Table 1. Total Postal Service space by
7 operation and function is obtained by expansion of the survey results to the
8 population and the use of the initial profile to estimate the non-surveyed space.
9 Then, rental costs by operation and function is obtained by the development of
10 rental rates by strata and category based on the 1992 facility study rental rate
11 estimates and multiplying these by the amount of space by operation/function.

12 **B. Description of Study: Main Aspects and New Methods**

13 This section discusses the goals of this study, data available, sample
14 selection process, survey forms development, training of the data collectors, the
15 data collection, review and editing of the data, consolidation of the data into the
16 form needed for the CRA applications (see Table 1), combining the survey and
17 non-survey results to obtain the square feet by operation, and calculation of the
18 rent by operation.

19 **1. Goals of Study**

20 The information in Table 1 is sought in order to apply the general CRA
21 methodology to facility related costs. This general methodology requires costs
22 split by function and operation, to serve as a basis or enable determination of the
23 volume variability of the cost and developing a distribution method or key to relate

1 the variable costs to class and subclass. Table 1 essentially shows facility space
2 split by function (delivery vs. processing vs. retail) and more detailed breakouts by
3 operation type. We apply Table 1 to split facility related costs (rents, utilities,
4 custodial) by function/operation. Generally we try to split facility space consistent
5 with the way labor and other costs have been divided up in the CRA.

6 Since Docket No. R97-1, mail processing labor has been divided up into
7 cost pools. However, the previous work, the FY1992 study, did not divide mail
8 processing costs into the same operational detail as we now use for mail
9 processing labor costs. As a result, an important new goal for the study is to get
10 facility space categories for mail processing that are in alignment with the mail
11 processing labor cost pools. Such an objective was also independently
12 recommended by the Data Quality Study.⁹ The categories in Table 1 for mail
13 processing space, categories 1 to 51, are indeed based on the mail processing
14 labor cost pools.¹⁰ This goal has important implications for the facility survey data
15 collection methods, as discussed below.

16 **2. Initial Profile of Facility Space Use**

17 As in the previous studies we relied heavily on Postal Service's Facilities
18 data. The primary data on facilities owned or leased by the Postal Service is the
19 Facilities Management System for Windows (FMSWIN). In FY 1999 the Postal
20 Service owned or leased approximately 35,000 facilities containing over 295 million

⁹ See Data Quality Study reported by A. T. Kearney in April, 1999, conducted for the Government Accounting Office (GAO), page 123: "The Postal Service should now link the labor and non-labor costs analyses together by allocating all such costs to MODS costs pools."

¹⁰ See witness Van-Ty-Smith, USPS-T-11 for a description of the mail processing labor cost pools.

1 square feet of space. Facilities maintains data on each of these facilities in its
2 FMSWIN Data. This data includes maintenance, real estate, construction,
3 accounting, and property management records. FMSWIN serves as the official
4 record of all Postal Service controlled real property.

5 FMSWIN data from Quarter 1, FY 1999, for all facilities owned or leased by
6 the Postal Service were obtained for this study. Data obtained on each facility
7 include facility ID, finance no., facility name, address, ownership, facility type, and
8 facility size (including some information on space usage for some purposes).
9 These data are described in USPS LR-K-64, Vol. 1, part II.

10 An important point on FMSWIN data is that they do provide some
11 information for determining the amount of space for a small number of operations
12 and functions listed in Table 1. Its main use, however, is that it provides a starting
13 point or framework for doing a statistical survey of facility space use. Two
14 elements of these data, which are data on interior ancillary space usage and
15 facility type (Type of Quarters), are heavily relied on in this study for both
16 purposes. FMSWIN data on facility space usage are maintained for ancillary uses
17 such as Vehicle Maintenance Facility (VMF) space, and interior parking¹¹ as well
18 as space leased out or vacant. While many or most facilities in the FMSWIN
19 records do not report any ancillary space usage, a significant amount of facilities
20 have some ancillary space. These data on ancillary space can directly be used to
21 determine the amounts of space Postal Service-wide for the some of the
22 categories listed in Table1, such as categories 63 to 65 in Table 1, for VMF, CVS

¹¹ Interior Parking is also called Covered Vehicle Parking (CVP) or Covered Vehicle Storage (CVS).

1 and Vacant & Tenant. Most space, however, is reported as essentially generic
2 interior space, which can contain a wide variety of operations or functions, so
3 additional information must be obtained on the usage of this space.

4 In addition, the FMSWIN record for each facility includes the “Type of
5 Quarters” codes such as main office, station, branch, BMC, carrier annex or
6 Sectional Center Facility (SCF), VMF, CVS, Subleased and USPS District Office.
7 The last four are examples of facilities whose space can be directly related to
8 some of the categories on Table 1, categories 63 to 68. Most facilities, however,
9 have type of quarters codes which can contain a variety of operations and
10 functions. Additional data on facility space usage is needed for such facilities.

11 In addition, the data for each FMSWIN record on finance number and facility
12 name greatly supplement the facility type information. For instance, finance
13 number is used to identify the facilities that are Remote Encoding Centers. Such
14 facility space can be directly related to category 15 “LDC 15 – RBCS.” In addition,
15 finance no. is used to identify PDCs, PDFs, AMCs, AMFs, and other major
16 facilities. Finance number and facility name are also used as consistency checks
17 on the FMSWIN Type of Quarters and other data. In many cases “Type of
18 Quarters” codes were inaccurate, and duplicate records or missing data were
19 found as well. Thus, FMSWIN data were examined and edited for use in this
20 study. In some cases inconsistencies had to be resolved or missing data needed
21 to be obtained by contacting Area or District staff.

22 Table 2 shows the profile of facility space obtained from the work described
23 above. Table 2 shows in column 2 the amount of USPS Interior Square Feet by

1 category for the mail handling facilities that will require surveying to obtain sq. ft. by
2 operation and function. For mail handling facilities, the difference between
3 columns 2 and 3 provides the Interior Support Space by facility type. As discussed
4 above, this includes space for CVS, sublet or unused space available for subletting
5 or VMF. As noted above, data on the amount of this space for each of these
6 support categories are available in FMSWIN data and need not be surveyed.
7 Finally, FMSWIN data also provide us the amount of exterior platform space by
8 facility, so these data need not be collected via the survey. Table 2, column 3 also
9 shows the amount of sq. ft. by facility type for non-mail handling facilities.
10 Surveying is not needed for non-mail handling facilities since the facility type
11 category is specialized enough to give us the information we need on sq. ft. by
12 operation and function. This shows that 259.9 of 293.9 million square feet or 88
13 percent of facility space needs to be surveyed to obtain operation or function
14 detail. Interior facility space that need not be surveyed includes 10.4 million sq. ft.
15 of ancillary space for mail handling facilities and 23.6 million sq. ft. for the non-mail
16 handling facilities. This profile also gives us an indication of the amount of space
17 in total for different types of facilities.

18 **3. Development of Strata and Sample Selection**

19 As discussed above, FMSWIN data can only provide data on a small
20 number of the operations/functions listed in Table 1. As a result it is necessary to
21 conduct a data collection effort to obtain data on facility space usage or square
22 feet by operation and function. The data collection work involved surveying of
23 facility space usage at about 750 facilities, selected from a stratified random

**Table 2
INITIAL PROFILE OF FACILITY SPACE**

| Column: | (1) | (2) | (3) | (4) |
|--------------------------------------|----------------------|-----------------------|----------------------|--------------------|
| Type of Facility | Number of Facilities | USPS Interior Sq. Ft. | Total Interior Space | Exterior Platforms |
| Mail Handling: | | | | |
| AMCs/AMFs | 97 | 5,830,604 | 5,864,677 | 378,658 |
| BIG FACILITIES (>50,000 SqFt) | 183 | 16,514,014 | 17,472,644 | 686,897 |
| BMCs | 34 | 10,406,141 | 10,720,231 | 183,350 |
| CARRIER ANNEXES | 330 | 5,176,707 | 5,352,160 | 300,911 |
| FINANCE STATIONS | 688 | 3,023,041 | 3,096,378 | 232,126 |
| Main Post Offices | | | | |
| 1. 0 - 2,000 SqFt. | 16,464 | 15,683,432 | 15,774,834 | 1,404,117 |
| 2. 2,001 - 5,000 SqFt. | 5,933 | 18,387,449 | 18,545,279 | 1,846,331 |
| 3. 5,001 - 10,000 SqFt. | 2,531 | 17,978,010 | 18,807,141 | 1,647,420 |
| 4. 10,001 - 20,000 SqFt. | 1,459 | 20,435,238 | 21,084,503 | 1,837,057 |
| 5. 20,001 - 50,000 SqFt. | 744 | 21,292,445 | 22,185,105 | 1,594,714 |
| P&DCs / P&DFs | 416 | 83,057,283 | 87,046,401 | 3,414,933 |
| SCFs/ AOs | 259 | 6,903,334 | 7,393,361 | 423,110 |
| Stations/Branches | | | | |
| 1. 0 - 10,000 SqFt. | 2,471 | 10,385,657 | 10,629,900 | 1,113,717 |
| 2. 10,001 - 20,000 SqFt. | 841 | 12,039,318 | 12,585,759 | 1,059,193 |
| 3. 20,001 - 50,000 SqFt. | 398 | 10,686,884 | 11,244,162 | 809,404 |
| Other Facilities | 151 | 2,145,887 | 2,506,320 | 87,501 |
| Total | 32,999 | 259,945,444 | 270,308,855 | 17,019,439 |
| Support or Non-Mail Handling: | | | | |
| Remote Coding Centers | | | 1,121,204 | |
| VMF | | | 4,514,955 | |
| CVS | | | 1,962,090 | |
| DPBU | | | 430,362 | |
| HQ&Area Related | | | 5,710,073 | |
| Storage | | | 4,993,711 | |
| Mail Transport Equip Centers | | | 1,014,315 | |
| Division Offices & Training | | | 2,208,668 | |
| Vacant & Tenant | | | 1,586,865 | |
| SSPC | | | 86,199 | |
| Total | 1944 | | 23,628,442 | |
| All Facilities: | 34,943 | | 293,937,297 | |

1 sample. This section discusses the development of strata and the sample
2 selection.

3 The Postal Service had approximately 33,000 mail handling facilities with
4 approximately 270 million square feet in FY 1999, according to FMSWIN data.
5 About half of these facilities (16,454) are small local post offices or main offices
6 with 0 to 2,000 sq. ft. These offices average about 1,000 sq. ft each, with a
7 combined total space of about 15.8 million sq. ft. At the other end of the spectrum
8 are the largest P&DCs, where 11 of the largest occupy 27 buildings totaling 17.2
9 million square feet. Of course, apart from size, the functions performed in different
10 types of facilities (e.g., a 50,000 sq. ft. AMC vs. a 50,000 sq.ft. carrier annex) are
11 very different. Given this diversity, and as done previously, a stratified random
12 sample was employed to select facilities to be surveyed. Using FMSWIN data and
13 other data sources, facilities were grouped according to Postal Service operational
14 and managerial structure as well as the size differences and specialized nature of
15 some facilities.

16 Stratification was designed primarily to obtain reliable information about the
17 percentage distribution of facility space allotted to the operations/functions listed in
18 the survey questionnaire. To achieve that reliability, information collected in the
19 1992 facility usage survey and new data from the FY1999, Quarter 1, FMSWIN
20 was analyzed to determine which facilities would contribute significant portions for
21 the space for each operation/function. Facilities were then stratified in such a way
22 as to emphasize space usage differences between groups and minimize space
23 usage differences within a group.

1 As it turns out, selecting strata such that space usage differences within
2 strata are minimized, dovetails very well with defining the mail processing
3 operations in a way consistent with the mail processing labor cost pools. The
4 Table 1 categories 1-51, like the mail processing labor cost pools, can be split into
5 four facility types. These are: Function 1 MODS (e.g., plants, AMCs), BMCs,
6 MODS Function 4 (stations, branches related to MODS facilities) and Non-MODS
7 Function 4 (offices, stations or branches). Function 1 MODS categories are 1-29,
8 36 and 37, while MODS Function 4 categories are 30 to 37, which overlaps with
9 MODS Function 1 on for categories 36 and 37. BMC categories are 38 to 43 and
10 Non-MODS facilities categories are 44 to 51. Two important non-mail processing
11 categories, window service and delivery, would tend to be found most in MODS
12 Function 4 (offices, stations, or branches) and Non-MODS. These four
13 categorizations are therefore an important consideration for developing strata.

14 Methods used in dividing mail processing labor costs into these four
15 categories were applied to facilities. As done for labor costs, finance number was
16 used to identify facilities related to Function 1 MODS (e.g., plants, AMCs), BMCs,
17 and "MODS" SCFs. Each separate organizational unit in the Postal Service has its
18 own finance number for budgetary and other purposes. In general, the buildings
19 occupied or used by an organization (i.e., a P&DC, AMC, SCF) will be listed in the
20 FMSWIN data under its finance number. The FMSWIN records for a P&DC which
21 has a main building and an annex will generally be reported to have the P&DC's
22 finance number. The facilities in the "Plant" (or PDCs/PDFs) strata were selected
23 by use of finance numbers associated with all P&DCs and P&DFs. In this way

1 annexes would likely be included with their “parent” facilities. This same approach
2 was also done for AMCs/AMFs, BMCs, “MODS” SCFs and Remote Encoding
3 Centers (RECs). This approach is consistent with the development of mail
4 processing labor cost pools. The remaining facilities (or FMSWIN records of
5 facilities/properties) were grouped on the basis of FMSWIN data on facility type
6 (type quarters code), facility name and facility size. Table 3 shows the strata.

7 For the P&DCs, P&DFs, AMCs/AMFs, BMCs and SCFs, the sample
8 selection was also done by finance number, so all facilities under a selected
9 finance number would be part of the sample. In this way annexes were essentially
10 combined with their “parent” facility as one unit. Different sampling rates were
11 developed for different strata based on an assessment of the extent to which
12 facilities within a stratum could vary from one another in total interior space and in
13 space usage. Higher sampling rates were desirable for strata that were
14 anticipated to contain higher variations facility to facility. A particular interest was
15 the large facilities and those where processing operations would be located.
16 Another factor in determining strata and sampling rates was the need to limit
17 workload of surveyors. Based on this 771 facilities were selected for sampling as
18 shown in Table 3. Fewer facilities were surveyed in this study, 771, as done in the
19 1992 study (nearly 1,000). The reduction was guided by the use of the variance
20 estimates from the 1992 study.

21 Table 3 shows the strata, the number of facilities and the associated
22 amount space selected to be surveyed for each strata. Three strata, AMCs,

Table 3
Characteristics of Population and Samples by Strata

| Strata | | Interior Sq.Ft.(Non-Ancillary) | | Number of Facilities | | Number of Finance Units* | | |
|---------------|-----------------------------|--------------------------------|-------------|----------------------|------------|--------------------------|------------|--------|
| Strata Number | Facility Type | Interior Sqft.Range | Population | Sample | Population | Sample | Population | Sample |
| 1 | AMC/AMF | All | 3,491,435 | 823,890 | 84 | 22 | 54 | 15 |
| 2 | AMC/AMF Certainty Stratum | All | 2,339,169 | 2,339,169 | 13 | 13 | 7 | 7 |
| 3 | BIG>50K | All | 16,514,014 | 4,373,887 | 183 | 50 | | |
| 4 | BMC | All | 9,175,826 | 3,328,541 | 33 | 13 | 19 | 7 |
| 5 | BMC Certainty Stratum | All | 1,230,315 | 1,230,315 | 1 | 1 | 1 | 1 |
| 6 | Carrier Annex | All | 5,176,707 | 481,930 | 330 | 30 | | |
| 7 | Finance Station | All | 3,023,041 | 97,962 | 688 | 15 | | |
| 8 | MPO/SCF 0-2K | >0-2K | 15,683,432 | 46,824 | 16,464 | 50 | | |
| 9 | MPO/SCF >2K-5K | >2K-5K | 18,387,449 | 171,287 | 5,933 | 55 | | |
| 10 | MPO/SCF >5K-10K | >5K-10K | 17,978,010 | 390,696 | 2,531 | 55 | | |
| 11 | MPO/SCF >10K-20K | >10K-20K | 20,435,238 | 914,227 | 1,459 | 65 | | |
| 12 | MPO/SCF >20K | >20K | 21,292,445 | 2,013,843 | 744 | 70 | | |
| 13 | P&DC/P&DF | All | 66,273,688 | 19,591,435 | 389 | 114 | 240 | 70 |
| 14 | P&DC/P&DF Certainty Stratum | All | 16,783,595 | 16,783,595 | 27 | 27 | 11 | 11 |
| 15 | SCF/AO | All | 6,903,334 | 1,698,437 | 259 | 71 | 78 | 20 |
| 16 | Stations/Branches 0-10K | >0-10K | 10,385,657 | 124,813 | 2,471 | 30 | | |
| 17 | Stations/Branches >10K-20K | >10K-20K | 12,039,318 | 497,449 | 841 | 35 | | |
| 18 | Stations/Branches >20K-50K | >20K-50K | 10,686,884 | 932,291 | 398 | 35 | | |
| 19 | Other | All | 2,145,887 | 285,332 | 151 | 20 | | |
| 20 | BMC Non Mailhandling | All | | | | 0 | | |
| | Total Surveyed Mailhandling | | 259,945,444 | 56,125,923 | 32,999 | 771 | | |

*Each finance unit is an entity like a P&DC, which has a unique finance number and including one or more facilities.

1 BMCs, and PDCs, are certainty strata for large or specialized facilities in which all
2 facilities are selected for the sample. Random sampling was conducted for the
3 rest of the strata. The survey focused on larger facilities so that approximately
4 one-sixth of the Postal Service's 295 million square feet of facility space was
5 selected to be surveyed and over one-fifth of the mail handling space (55
6 million/259 million).

7 **4. Survey Form Development, Data Collector Training and Surveying**

8 Basing the mail processing categories in Table 1 on the mail processing
9 labor costs required a more lengthy and specialized survey form than that used in
10 the 1992 study, particularly for plants. Defining the mail processing operations in
11 Table 1, lines 1-51, in a way consistent with the mail processing labor cost pools,
12 requires us to employ definitions used in developing the processing labor cost
13 pools in the survey forms.

14 For instance, the Table 1 category 21, Platform, which corresponds to the
15 labor cost pool for MODS Function 1 Platform, is the space associated with the
16 MODS operations 210 to 234. The Table 1 category BMC Platform, no. 38, is only
17 defined as "the space used for platform operations at BMCs." The MODS
18 operation numbers did not apply to BMCs in FY 1999.

19 Initial test surveys and this need for specialized results for plants led to the
20 development of four separate versions of the survey forms for different types of
21 facilities.

22 Four separate versions were as follows:

23 Version 1 – BMC Facilities,

24 Version 2 – MODS Facilities (Function 1 MODs, like P&DCs, and AMCs, etc.),

1 Version 3 – Retail Facilities, and
2 Version 4 -- Large Customer Service Facilities (20,000 sq. ft. or more).

3 Separate instructions were provided for each. Separate versions allowed a
4 more tailored set of instructions and data collection at the different type of
5 facilities.¹² This meant surveyors of customer service facilities did not get bogged
6 down in the instructions and survey forms associated with surveying BMCs and
7 plants. Volume 3 of USPS LR-K-62, contains the four versions of the
8 questionnaire and the respective instructions.

9 Training

10 Each Area and District was given a list of facilities to survey and asked to
11 designate coordinators and surveyors to do this work. In addition, these
12 participants were provided a schedule for the facility survey tasks, and a set of
13 survey forms and instructions for all 4 versions. In the last week of July, 1999, 10
14 training sessions of 90 minutes each were conducted by teleconference call (5 for
15 Areas and 5 for Districts). Coordinators and surveyors for each Area and District
16 were provided an orientation and participated in a question/answer session on the
17 survey. Sessions for the Districts focused on customer service facilities, while the
18 sessions for the Areas focused on processing facilities. Discussion in the initial
19 training session lead to a supplemental set of instructions for BMC surveys, which
20 was distributed to all participants. A copy of the materials sent to the Areas and

¹² Version 1 directly relates to the BMC mail processing cost pools and version 2 relates to the Function 1 MODS cost pools. That is, BMCs that are surveyed would use questionnaire version 1, while P&DCs would use version 2. However, questionnaire versions 3 and 4 have a more complicated link to the mail processing cost pools since MODS and non-MODS Function 4 cost pool operations can be located at facilities using either questionnaire version.

1 Districts are included in Volume 3 of USPS LR-K-62, after the questionnaires and
2 questionnaire instructions.

3 Surveying

4 Surveying was organized by coordinators in each Area and District. Plants
5 and other processing facilities were usually surveyed by in-plant support staff for
6 the facilities surveyed, while retail or customer service facilities were usually
7 surveyed by Facilities Specialists from each District. Surveying was scheduled for
8 August, 1999. Most all surveys were completed in August or soon after. Two
9 large processing facilities required data collection during 2000, including one BMC
10 and one P&DC. In these cases, surveyors were asked to provide data reflective of
11 August, 1999. In addition, two surveys were obtained via approximation.¹³ A total
12 of 741 surveys were obtained.¹⁴

13 **5. Review and Editing of Survey Data**

14 Survey data was reviewed and edited in the following ways. First, for each
15 survey we compared FMSWIN and the surveyor's sq. ft. total and further analyzed
16 cases where there was more than a 10 percent difference. This process and other
17 reviews of the survey data prompted significant amounts of editing. Much of this

¹³ The results were approximated for two carrier annexes totaling about 250,000 sq. ft for which surveys were not done. These annexes were in the P&DC and P&DC certainty stratum, and were in fact the only carrier annexes in these stratum. An approximation for these unusual facilities was felt to be the best alternative, as opposed to letting these facilities be treated as missing or non-response. To approximate these results, information was obtained from personnel at these sites on the number of routes for city and rural carriers and also the general utilization of the space. This information along with the survey results for the carrier annex strata were used to approximate the results for these two facilities.

¹⁴ The decline from the 771 facilities selected in the sample was due to some selected facilities were no longer owned or leased by the Postal Service and also non-response.

1 was due to the surveyor's mistakenly categorizing a significant amount of space
2 under the last category on the survey form, which was "Other interior space not
3 counted above (specify use below)" and similar "other" answers (e.g. other
4 equipment). In addition space was shifted to be consistent with a change in the
5 definition of the International mail processing labor cost pool.

6 As a check or validation of the survey results, we compared the FMSWIN
7 facility square feet total data with the surveyor's estimates of this same facility
8 space for each survey. Of the 741 surveys, 199 had a 10 percent or greater
9 difference between the survey and FMSWIN interior space, or 27 percent of the
10 surveys.¹⁵ These surveys were reviewed by analyzing the surveyor's explanation
11 of the difference (which was requested if the difference was 10 percent or more),
12 analyzing the survey data, and in some cases obtaining additional information from
13 the surveyor. For most of these 199 surveys, the difference between FMSWIN
14 square feet and the surveyor's estimates could be explained by a surveyor's error
15 which could be fixed via editing the data as discussed below, or where the
16 surveyor's comments indicate FMSWIN data haven't kept up with facility changes
17 (e.g., building modifications, changes in lease terms) and due to differences on
18 recording leased space, CVS, VMF, basements, and

¹⁵ This is roughly the same percentage as in the 1992 facility survey (it was 25 percent). See Docket No. R94-1, LR-G-120, page III-12.

1 unused/unusable space.¹⁶ There were 15 cases where the survey data couldn't
2 be reconciled with FMSWIN and/or the data appeared unreliable so the data for
3 these facilities was discarded.

4 Edits of survey data on "Other" responses were based on the comments
5 supplied by surveyors when recording facility space in these residual "other"
6 categories. Based on the comments space was shifted to the correct category.
7 The largest example of this editing was the case of a large P&DC, for which the
8 FMSWIN sq. ft. was over 700,000 sq. ft. higher than the surveyed sq.ft. In the
9 comments, the surveyor indicated that aside from the P&DC, the facility itself
10 contained many Postal Service administrative offices for the District, Area and
11 National Headquarters, as well as some processing by some stations. Only the
12 P&DC's own space had been surveyed. Additional information from the surveyor
13 was obtained and the data was edited adding over 700,000 sq. ft. mostly to "office
14 space" and a small amount for processing. In all, adjustments of this type added
15 nearly a million sq. ft. to the survey results for the "office space" category, since
16 numerous other surveyors also excluded non-operational space used by District or
17 other Postal Service personnel "residing" in their facility. In all, the total space
18 shifted as part of these edits of this type of space was 1.6 million sq.ft.

19 Edits or "reclassifications" of space were made to accommodate the revised
20 International mail processing labor cost pool definition for FY 2000. The survey
21 form was designed to be consistent with mail processing labor cost pool definition

¹⁶ Where a difference between FMSWIN and the surveyor's total sq. ft. is due to differences in the amount of space recorded as either VMF, CVS, sublet or vacant then this result is used to adjust the estimates for such space as discussed below.

1 for International for FY1999, which included the labor costs for all MODS
2 international operations for all facilities. Subsequent to this the definition of the
3 International cost pool was redefined as the processing labor at ISC facilities.

4 This edit was done by shifting space recorded as “International” at non-ISC
5 facilities to the appropriate non-International operation, while putting all work room
6 and platform space for ISCs into the “International” category. For 47 non-ISC
7 facilities, 185,092 sq. ft. were shifted to non-international operations. For ISCs, 6
8 facilities were edited to shift all work room and platform space to “International.”
9 The amount of space shifted to International was 370,646 sq. ft. The total amount
10 of space shifted for International space adjustments was 555,738 sq. ft.

11 The overall result of this review and editing was that 17 surveys were
12 dropped as being invalid or incomplete and edits were made on 2,371,034 sq. ft. of
13 the survey data results or approximately 5 percent of the spaced surveyed. The
14 survey results for the remaining 724 facilities is shown in LR-K-62.

15 **6. Consolidation of Survey Data to CRA (“Table 1”) Categories**

16 An important element of the calculation of final results is to aggregate the
17 results for the individual survey questionnaire categories into the categories for use
18 in the CRA (see the list of 68 categories shown in Table 1). This process involves
19 two steps called: Adjustments and Cross-Walk.

20 Adjustments, as in the previous surveys, were done to add support space to
21 the operational space to which it is related. For instance, “Lobby Support Space”
22 (L10) is apportioned to all lobby functions (L1-L4, and L6-L9). Another example of
23 this is the apportionment of workroom corridors, stairs and elevator space to the

1 various operations in the workroom. This apportionment is done in proportion to
2 the share of space associated with each operation.

3 The data presented in LR-K-62, Volume 2, Schedules 2 and 3 indicate that
4 about 20 percent of mail handling facility space is redistributed support space (e.g.,
5 Lobby Service Support, workroom aisles, stairways, utilities or HVAC space).

6 Support space can be considered indirectly related to certain operational activities
7 and should be considered attributable to mall classes and special services to the
8 same-degree that directly related operational space is attributable. Given this,
9 adjustments are made by adding the support space to its related operational space
10 component.¹⁷ Table 4 provides an example of this for the strata MPO/SCF 0-2,000
11 sq. ft. The support category S_L10 is redistributed and is zero. In addition, the
12 redistribution of the rest of the support space (empty equipment storage, staging,
13 corridors, stairwells, utilities) results in a growth in the overall retail space from
14 19,814 to 22,259 sq. ft.

15 “Cross-walk” is the link or linking of the questionnaire categories, those that
16 remain after the adjustments, to the 68 CRA categories shown in Table 1. In some
17 cases that is straight forward such as for category 56 of Table 1 for “City Carriers.”
18 All city carrier space from all types of facilities and survey questionnaire versions
19 (questionnaire categories D1 for questionnaire versions 1, 2

¹⁷ Not all support space is added to operational space. For instance, Employee Use Space (e.g., restrooms, locker rooms, cafeterias) is not added to operational space. Only those support categories which could validly be distributed to the operational categories on the basis of their relative size were adjusted in this way. Non-adjusted support space categories are separate categories in Table 1, (Employee Facilities is category no. 62) with the distribution of these costs directly to classes and subclasses in the CRA.

**Table 4: Unadjusted and Adjusted Strata Totals
for MPO/SCF with 0 to 2,000 Sq. Ft. for Retail Space**

| Space Category | Description | Unadjusted Totals | Adjusted Totals |
|----------------|---|-------------------|-----------------|
| S_L1 | Retail-Window Service Area | 5,537 | 6,837 |
| S_L2 | Retail - Merchandise Area | 142 | 175 |
| S_L3 | Retail – SSPC | 301 | 372 |
| S_L4 | Retail-PO Boxes and Parcel Lockers | 6,071 | 7,496 |
| S_L5 | Total Of 1-4 | 12,051 | 14,880 |
| S_L6 | Work Area Behind Window Service & Merchandise Area | 2,926 | 3,613 |
| S_L7 | Work Area Behind SSPC unit | 68 | 84 |
| S_L8 | Work Area Behind Post Office Boxes and Parcel Lockers | 2,901 | 3,582 |
| S_L9 | Work Area Used for Caller Service | 82 | 101 |
| S_L10 | Lobby service related storage areas and support (include retail vaults, safes, support services and stairwells) | 1,786 | |
| S_L11 | Total of 6-10 | 7,763 | 7,380 |
| S_L12 | Total Retail Space | 19,814 | 22,259 |

Source: USPS LR-K-62, Volume 2, Schedules 2 and 3, Group 4

and 4 and R24 for version 3) along with any supporting space apportioned to this space is combined to be category 56 for “City Carriers.”

In the case of manual letter sorting operations, where clerks sort letters into cases, it is much more complicated. As noted above, the 51 categories in Table 1 for mail processing operations are defined to be consistent with the mail processing labor cost pools. These 51 categories can be divided into four groupings: Function 1 MODS (plants, AMCs), BMCs, MODS Function 4 (or customer service) and Non-MODS Function 4 (or customer service). As is true for the mail processing labor cost pools, space used for manual letter sorting operations would be included into four possible categories, depending on the type of facility. Manual letter sorting at plants or AMCs would be in CRA category 11 “Manual Letters.” Manual letter sorting at BMCs would be in CRA category 39, “BMC—Allied Labor & All Other Mail Processing.” Manual letter sorting at MODs

1 Function 4 stations, branches or post offices would be under CRA category 32,
 2 “LDC43 – Unit Distribution, Manual/ LDC 44 – P.O. Box Distribution.” Finally,
 3 manual letter sorting at non-MODS stations, branches, post offices or associate
 4 offices would be included in CRA category 48, “Non-MODS – Manual Letter.” All
 5 questionnaire space responses were linked with the Table 1 categories as shown
 6 in Table 7 in LR-K-62, Volume 1, section III. The results of applying the crosswalk
 7 to Schedule 3 are shown in Schedule 4 of Volume 2.

8 The crosswalked results for the retail space for the strata MPO/SCF 0-2,000
 9 sq. ft. shown in Table 4, is shown in Table 5. This process is straightforward for
 10 retail space. For instance, category 52 is the sum of the adjusted amounts for L1,
 11 L2 and L6 from Table 4. The rest of the table is discussed in the next section.

12
 13 **Table 5: Crosswalking, Expansion to Population, and Rents for**
 14 **MPO/SCF with 0 to 2,000 Sq. Ft. for Retail Space**

| CRA SPACE CATEGORY | CRA SPACE CATEGORY NAME | Crosswalked to CRA Category | Expanded to Reflect Population | Rents by Category in Dollars |
|--------------------|----------------------------------|-----------------------------|--------------------------------|------------------------------|
| 52 | WINDOW SERVICE | 10,625 | 3,680,209 | 25,163,205 |
| 53 | SELF-SERVICE POSTAL CENTER | 456 | 157,818 | 1,079,069 |
| 54 | POST OFFICE BOXES/Caller Service | 11,179 | 3,872,289 | 26,476,540 |
| | | 22,259 | 7,710,315 | 52,718,814 |

15 Source: USPS LR-K-62, Volume 2, Schedules 4, 5 and 6.

16 17 **7. Calculation of Final Results**

18 There are three steps necessary to complete the study to obtain the total
 19 square feet and rents for each of the 68 categories as shown in Table 1. The three
 20 steps are: expansion of the survey space to the population, the development of

1 rental rates and total rents by strata and for non-surveyed facilities, and the
 2 consolidation across strata to obtain Postal Service totals for the 68 categories for
 3 square feet and rents. These steps are summarized in this section of my
 4 testimony. A more detailed description and the calculations themselves are
 5 provided in USPS LR-K-62, Vol. 1, Section 4.

6 Expansion/Extrapolation of Results to Population Totals

7 To obtain results reflective of all facilities for each of the strata, survey
 8 results for the sample need to be expanded or extrapolated to the population. For this
 9 calculation, the survey results by strata, are expanded by multiplying them by
 10 an expansion factor. The expansion factor is the ratio of FMSWIN total facility
 11 space for all facilities in the strata divided by the FMSWIN total facility space for
 12 the surveyed facilities.¹⁸ This approach provides estimates of the total amount of
 13 space as well as the shares of this space for the different operations.

14 The reconciliation of the FMSWIN data and surveyor results indicated that
 15 there were definitely some important trends or directions of the differences by
 16 strata. For instance, in BMCs it appeared that FMSWIN understated actual space,
 17 while for most strata it was the opposite. This may reflect BMC facility expansions
 18 not included in FMSWIN data. Alternatively it appeared that for some customer

¹⁸ The following formula shows the calculation of the expansion factor for strata i.
 Expansion Factor_i =

$$\frac{\text{(Total Block 45 for all facilities in strata i)}}{\text{(Total Block 45 for all facilities used in computing survey results for strata i)}}$$

The numerator is the total (Interior USPS Occupied) space for all facilities in the population data base for strata i. The denominator is the equivalent space for all facilities that were selected randomly, for which acceptable survey data was supplied by surveyors. See USPS LR-K-62, Volume 1, Section IV for more detail.

1 service facilities strata there had been an increase in the amount of space
2 subleased to GSA or other tenants. Thus the extrapolation to population will
3 reflect these trends. This leads to larger overall amounts of space for the 6 BMC
4 categories (see Table 1, categories 38-43) and a larger share of the total space for
5 these categories. As a result, this approach provides more accurate estimates of
6 the share of space by operation and function.¹⁹

7 Expansion factors are computed for each stratum as discussed above and
8 applied to the survey results. Table 5 shows this calculation for the retail space for
9 the MPO/SCF 0-2,000 sq. ft. strata. The expansion factor of this stratum, 346.4, is
10 by far the largest of the study. The profile of the 22,259 sq. ft. of retail space from
11 the 48 facility surveys for this stratum is expanded to be 7.7 million sq. ft. See LR-
12 K-62, Volume 1, Section IV for the calculations for all strata.

13 Rent Calculation

14 Imputed rent²⁰ per square feet was based on the previous study, which is
15 provided in Docket No. R94-1, LR-G-120, Section IV. Rental rates by strata from
16 the earlier study were applied to the strata for the current study, using the most
17 similar strata. The imputed rents for each strata are updated from FY1992 to
18 FY1999 for the overall change in the level of rental rates, using the Global Insight

¹⁹ The previous facility surveys have used the FMSWIN population totals by strata as a given, and used the survey results to determine the share of this space for each operation and function. In a sense, the survey results are used as a distribution key applied to FMSWIN totals to get total space by operation/function.

²⁰ Imputed rent is the estimated current market rental rate. This is discussed further below in part IV.B.1.

1 rent-residential index.²¹ These rental rates are divided between interior and
2 platform as done previously, to get separate rental rates for interior space and
3 exterior platform by strata. Rental rates are applied for each strata and non-survey
4 category to obtain the rents for each of these strata and non-survey categories.
5 Table 5 shows the results of this calculation for the retail space for the MPO/SCF
6 0-2,000 sq. ft. strata. The rental rate per sq. ft. for this stratum is \$6.84. Applying
7 this rental rate to the square feet for each retail category provide the imputed rents
8 for each category, which totals \$52.7 million.

9 Calculation of Final Results

10 The final step is to combine the results for mail handling (both general and
11 ancillary) with exterior platform and support facilities in calculating the square feet
12 and rents by category. This is done in Table 6 below for square feet, but the same
13 process applies for rents.

14 Obtaining total mailhandling space requires summing population square feet
15 estimates across strata, for categories 1-62. The category 52, Window Service,
16 which totals 17.6 million sq. ft., includes the 3.7 million sq. ft. from the MPO/SCF 0-
17 2,000 sq. ft. strata shown in Table 5. The totals for mail handling facility ancillary
18 space (categories 63-65), are obtained by combining the FMSWIN sq. ft. with the
19 extrapolated differences between FMSWIN and surveyors, as determined in the
20 reconciliation of the FMSWIN and survey totals, as discussed further in USPS LR-
21 K-62, Section IV.

²¹ See USPS LR-K-50.

Table 6: Total Space by CRA Category
Combining Mail Handling, Exterior Platform and Support Facilities
(Square Feet)

| CRA SPACE CATEGORY | CRA SPACE CATEGORY NAME | TOTAL MAILHANDLING POPULATION INTERIOR SQUARE FEET | TOTAL MAILHANDLING POPULATION EXTERIOR PLATFORM SQUARE FEET | TOTAL SUPPORT FACILITY POPULATION INTERIOR SQUARE FEET | GRAND TOTAL, MAILHANDLING PLUS SUPPORT FACILITY INTERIOR SQUARE FEET |
|--------------------|---|--|---|--|--|
| 1 | Delivery Barcode Sorters, Carrier Sequence Barcode Sorters | 8,980,012 | - | - | 8,980,012 |
| 2 | Mail Processing Barcode Sorters (MPBCS) | 2,665,032 | - | - | 2,665,032 |
| 3 | OCRs (including BCS on OCRs) | 2,356,124 | - | - | 2,356,124 |
| 4 | FSM 881, SPFSM, Other | 2,999,393 | - | - | 2,999,393 |
| 5 | FSM 1000 | 1,657,329 | - | - | 1,657,329 |
| 6 | LSM,MPLSM & SPLSM W/BCR | 22,403 | - | - | 22,403 |
| 7 | Mechanical Sort - Sack Outside | 1,097,087 | - | - | 1,097,087 |
| 8 | Mechanized Parcels | 113,367 | - | - | 113,367 |
| 9 | SPBS - Non Priority & Priority | 5,210,910 | - | - | 5,210,910 |
| 10 | Manual Flats | 1,262,419 | - | - | 1,262,419 |
| 11 | Manual Letters | 2,579,459 | - | - | 2,579,459 |
| 12 | Manual Parcels | 857,041 | - | - | 857,041 |
| 13 | Manual Priority | 1,851,369 | - | - | 1,851,369 |
| 14 | LDC 15 - RBCS | 323,158 | - | 1,121,204 | 1,444,362 |
| 15 | Air Contract Data Collection Systems | 174,187 | - | - | 174,187 |
| 16 | Bulk Presort | 248,797 | - | - | 248,797 |
| 17 | Cancellation & Mail Preparation - metered | 3,447,514 | - | - | 3,447,514 |
| 18 | Manual Sort - Sack Outside | 980,429 | - | - | 980,429 |
| 19 | Opening Unit - Preferred Mail | 2,795,823 | - | - | 2,795,823 |
| 20 | Opening Unit - BBM | 1,622,954 | - | - | 1,622,954 |
| 21 | Platform | 8,478,837 | 4,216,701 | - | 12,695,538 |
| 22 | Pouching Operations | 2,101,092 | - | - | 2,101,092 |
| 23 | Business Reply / Postage Due | 187,406 | - | - | 187,406 |
| 24 | Damaged Parcel Rewrap | 126,909 | - | - | 126,909 |
| 25 | Empty Equipment | 3,130,354 | - | - | 3,130,354 |
| 26 | Express Mail | 515,038 | - | - | 515,038 |
| 27 | Mail Processing Support/Miscellaneous Activity | 618,898 | - | - | 618,898 |
| 28 | Registry | 535,475 | - | - | 535,475 |
| 29 | International / ISCs | 1,318,282 | - | - | 1,318,282 |
| 30 | LDC 41 - Unit Distribution - Automated | 1,199,988 | - | - | 1,199,988 |
| 31 | LDC 42 - Unit Distribution - Mechanized | 62,556 | - | - | 62,556 |
| 32 | LDC 43 - Unit Distribution - Manual/LDC 44 - Post-Office Box Distrib. | 7,739,641 | 4,120,031 | - | 11,859,672 |
| 33 | LDC 48 - Customer Service / Express | 84,534 | - | - | 84,534 |
| 34 | LDC 48 - Customer Service / Admin & Other | 502,858 | - | - | 502,858 |
| 35 | LDC 48 - Customer Service / Spec.Servc. | 168,913 | - | - | 168,913 |
| 36 | LDC 49 - Computerized Forwarding Systems | 1,542,853 | - | - | 1,542,853 |
| 37 | LDC 79 - Mailing Req' & Bus. Mail Entry | 850,349 | - | - | 850,349 |
| 38 | BMC Platform | 2,285,561 | 183,350 | - | 2,468,911 |
| 39 | BMC: Allied Labor & all other Mail Processing | 2,062,260 | - | - | 2,062,260 |
| 40 | BMC: Parcel Sorting Machine | 3,349,381 | - | - | 3,349,381 |
| 41 | BMC: Sack Sorting Machine | 868,919 | - | - | 868,919 |
| 42 | BMC: SPBS & Irregular Parcels (IPP & 115) | 612,211 | - | - | 612,211 |
| 43 | BMC: Non-Machinable Outside (NMO) | 262,932 | - | - | 262,932 |
| 44 | NONMODS: Allied | 13,021,934 | 8,557,308 | - | 21,579,242 |
| 45 | NONMODS: Automated/Mechanized | 2,454,711 | - | - | 2,454,711 |
| 46 | NONMODS: Express Mail | 341,345 | - | - | 341,345 |
| 47 | NONMODS: Manual Flat | 2,689,657 | - | - | 2,689,657 |
| 48 | NONMODS: Manual Letter | 2,812,889 | - | - | 2,812,889 |
| 49 | NONMODS: Manual Parcel | 4,177,950 | - | - | 4,177,950 |
| 50 | NONMODS: Registry | 302,032 | - | - | 302,032 |
| 51 | NONMODS: Miscellaneous | 1,954,876 | - | - | 1,954,876 |
| 52 | WINDOW SERVICE | 17,572,173 | - | - | 17,572,173 |
| 53 | SELF-SERVICE POSTAL CENTER | 2,314,566 | - | 86,199 | 2,400,765 |
| 54 | POST OFFICE BOXES/Caller Service | 25,295,066 | - | 430,362 | 25,725,428 |
| 55 | CLAIMS & INQUIRY | 439,201 | - | - | 439,201 |
| 56 | CITY CARRIER | 25,162,936 | - | - | 25,162,936 |
| 57 | RURAL CARRIER | 8,408,749 | - | - | 8,408,749 |
| 58 | DDU ACCOUNTABLES CAGE | 583,207 | - | - | 583,207 |
| 59 | OFFICE SPACE | 23,240,545 | - | 2,208,668 | 25,449,213 |
| 60 | MAIL PROCESSING EQUIPMENT MAINTENANCE | 4,601,924 | - | - | 4,601,924 |
| 61 | OTHER EQUIPMENT MAINTENANCE | 2,096,912 | - | - | 2,096,912 |
| 62 | EMPLOYEE FACILITIES | 22,536,862 | - | - | 22,536,862 |
| 63 | VMF | 1,926,765 | - | 4,514,955 | 6,441,720 |
| 64 | CVS | 6,872,461 | - | 1,962,090 | 8,834,551 |
| 65 | VACANT & TENANT | 6,174,752 | - | 1,586,865 | 7,761,617 |
| 66 | HQ, HQ-FIELD RELATED, AND REGIONAL OFFICES | - | - | 5,710,073 | 5,710,073 |
| 67 | MAIL TRANSPORTATION EQUIPMENT CENTERS | - | - | 1,014,315 | 1,014,315 |
| 68 | STORAGE FACILITIES | - | - | 4,993,711 | 4,993,711 |
| | TOTAL SPACE | 254,831,564 | 17,077,390 | 23,628,442 | 295,537,396 |

Source: USPS LR-K-62, Volume 2, Schedule 7

1 Exterior platform space by strata provides the basis for splitting the exterior
2 platform into the 4 categories shown in Table 6. For strata that have exterior
3 platform space in both categories 32 and 44, the relative total sq. ft. of the MODS
4 and non-MODS is used to make this split.

5 Support space comes directly from FMSWIN as provided in Table 2.
6 Adding the mailhandler, exterior platform and support space together gives us the
7 total square feet by CRA category as first reported in Table 1. Rents by category
8 would also be summed in the same way for mailhandler, exterior platform and
9 support space, as discussed in USPS-K-62, Volume 1, Section IV.

10 **C. Summary of Study Results**

11 We have combined facility survey data with FMSWIN to obtain a profile of
12 total square feet and imputed rents by CRA category, as done previously. The FY
13 1999 facility space usage study provides a treatment for processing space
14 consistent with the mail processing labor cost pools. In addition, this study takes a
15 different, more accurate approach, on expanding the results to population. These
16 improvements enhance the attribution and distribution of facility-related costs in the
17 CRA.

18 A comparison of the results of the FY 1992 study and this study show some
19 changes in facility space usage. There is an increase in the share of space used
20 for mail processing operations, mostly at the expense of delivery or carrier space.
21 Retail and administrative space declined slightly as a share of total space. This is
22 discussed in USPS LR-K-61, Volume 1, Section V.

1 **IV. EQUIPMENT AND FACILITY-RELATED COSTS IN THE BASE AND TEST**
2 **YEAR**

3
4 This part of my testimony relates to Attachments 1 to 7. Attachments 1-3, 5
5 and 6 apportion, or can be used to apportion, the accrued equipment and facility-
6 related costs by function in order to form cost pools (or costs by activity). The
7 volume variability for each facility-related cost pool as specified in Attachment 7 is
8 used by witnesses Meehan, USPS-T-9, and Waterbury, USPS-T-10, to relate
9 these costs to the subclasses for the base year and test year. The distribution key
10 for each cost pool as specified in Attachments 4 and 7 are used by witnesses
11 Meehan, USPS-T-9, and Waterbury, USPS-T-10, to relate these costs to the
12 subclasses for the base year and test year. In addition, witness Waterbury, USPS-
13 T-10, also uses these Attachments as guidance to distribute cost reductions and
14 other program costs related to new equipment deployments and programs. The
15 detailed calculations of the results shown in Attachments 1 to 7 are contained in
16 USPS LR-K-54 and are summarized in sections II.A and II.B below.

17 **A. Mail Processing Equipment-Related Costs**

18 The mail processing equipment-related costs that I develop are mail
19 processing equipment depreciation (component 20.1), interest expense
20 (component 20.5)²², maintenance labor (component 11.2), and parts & supplies
21 (component 16.3.2). The accrued costs in the base year for depreciation, interest,

²² This refers to the portion of interest expense which is related to mail processing equipment. Interest expense is composed of three components: Civil Service Retirement Supplemental Liability, interest on debt, and other interest. Interest on debt has the same variability and distribution as total depreciation on equipment, vehicles, land and buildings. As a result interest on debt can be apportioned to equipment, vehicles and facilities in proportion to depreciation expenses for these categories. See USPS LR-K-1, page 20-5.

1 maintenance labor, and parts & supplies are respectively in millions \$770.3, \$3.7,
2 \$1,126.0 and \$266.7, which is about 3.3 percent of accrued cost. This is an
3 update of the work presented in Docket No. R2001-1 in USPS LR-J-54.

4 **1. Development of Cost Pools for Base Year and Test Year**

5 The first step in determining the volume variable costs by subclass
6 associated with any cost segment or component is to identify costs by cost pool or
7 activity. Mail processing equipment, of course, includes many different types of
8 equipment, with different purposes and uses. In my Docket No. R90-1 testimony, I
9 identified twelve cost pools (see Exhibit USPS-8D). The number of cost pools has
10 been updated as new types of equipment have been deployed. We currently have
11 21 categories as listed and described in USPS LR-K-54, part IV at the end.²³ For
12 the base year these are the same cost pools used in Docket No. R2001-1, except
13 that new equipment from deployments since FY 2000 have been included in these
14 categories.²⁴ Each cost pool is intended to reflect a distinct “activity” as much as
15 possible.

16 For the test year three cost pools have been modified. “SPBMs” is renamed
17 “APPS/SPBMs” since the Automated Package Processing System will join the
18 Small Parcel and Bundle Machine in this category. “LSM” which was unused in FY
19 2004 is replaced by “CFS-Letters,” and “CFS” is replaced by “CFS-Flats”. The

²³ The testimony of witness McCrery, USPS-T-29, contains a description of much of this equipment.

²⁴ The primary changes in equipment have been in flats sorting with deployment in AFSM 100s, improvements to FSM 1000 and removal of FSM 881s. The SSIU were added to BMC PSMs. Dispatch systems such as RCS and LCTS, AAA and additional DBCS, and SPBS-Feed Systems were also added. See witness

1 change is prompted by the deployment of Postal Automated Redirection System
2 (PARS) for letters. This allows for the separate distribution of forwarding costs for
3 letters and flats.

4 Attachment 1 shows the apportionment of costs for maintenance labor and
5 parts & supplies into 20 of the 21 equipment categories for the base year.²⁵ This is
6 done using Engineering's Maintenance Activity, Reporting and Scheduling (MARS)
7 data for FY2004. These data track maintenance work hours, parts and supplies by
8 equipment type, for plants and other facilities. Maintenance labor costs by
9 equipment category are calculated to include an apportionment of supervisor and
10 administrative costs. The calculations are shown in USPS LR-K-54, part II (see
11 pages II-4 and II-5 in particular), and summarized in Attachment 1.

12 Attachment 2 shows the base year depreciation costs for 20 of the 21
13 equipment categories.²⁶ The depreciation by equipment category is calculated
14 using FY2004 equipment accounting records.

15 Attachment 3 shows the test year depreciation costs for 20 of the 21
16 categories. The test year depreciation is projected by category by augmenting
17 base year costs with information from the capital budget. Significant investments
18 are anticipated on replacing the MLOCs, enhancing flats sorting equipment (the
19 Automated Flat Sorting Machine 100 and the Upgraded Multi-Position Flats Sorting

McCrery, USPS-T-29, for description of this equipment. See also LR-K-54, part II for a glossary on Acronyms.

²⁵ Costs for the remaining category, the 17th, Tray Transport & Staging Systems are apportioned among certain piece distribution equipment based on the relative number of equipment by type as shown in USPS LR-K-54, page II-7. The types include OCR, MPBCS, DBCS, and FSM. The costs for all 21 categories are shown in USPS LR-K-54, Page II-6.

²⁶ See USPS LR-K-54, page IV-2 to see the costs for all 21 categories.

1 Machine), for replacing CFS with PARS for letters, for APPS deployment and
2 dispatch equipment such as Robotic Containerization Systems (RCS), tray
3 banders, automatic tray sleeves and unsleevers, flat tray ladders, Automated
4 Airline Assignment (AAA) systems and Low Cost Tray Sorter (LCTS). These new
5 developments are described by witness McCrery, USPS-T-29.

6 **2. Variability of Mail Processing Equipment-Related Costs**

7 My testimony continues the past practice of applying the cost variability of
8 the labor operating the equipment to equipment-related costs.²⁷ This implies that
9 the ratio of labor to equipment-related costs (for a type of equipment) would not
10 change, other things equal, in response to a (small) change in volume on the
11 margin.

12 The mail processing labor variabilities for the equipment categories are
13 developed by using witness Bozzo's (USPS-T-12) variabilities by cost pool which
14 are shown in witness Van-Ty-Smith's testimony, USPS-T-11, Table 1. The
15 variabilities by equipment category are shown in LR-K-55, part VI. They either are
16 identical to the labor variabilities in Table 1 of witness Van-Ty-Smith or represent
17 an averaging of two or more of these variabilities. The latter occurs for equipment
18 categories or equipment which is widely used in more than one of the labor cost
19 pools.

²⁷ See Docket No. R2001-1, USPS LR-J-54, Part III and USPS LR-J-1 at page 20-2.

3. Distribution of Mail Processing Equipment-Related Costs

My testimony continues the past practice of distributing equipment-related costs to subclass based on the distribution of costs for the labor operating the equipment.²⁸ For instance, in the case of automated letter sorting equipment (e.g., OCR, DBCS) I rely on the logic that the machine time by subclass is, for the most part, proportionate to the equipment operators' labor time by subclass. The time the operators spend loading and sweeping the mail from the equipment for each subclass is likely a good indicator for the machine time for each subclass. Therefore, the labor time by subclass should be a reasonable basis for equipment cost distribution. Attachment 4 shows the distribution keys used for each of the 20 equipment categories.²⁹ For the test year, the new categories CFS-Letters and CFS-Flats have new distribution keys. They are the mail processing labor cost pool distribution key for CFS (LDC 49) for letter and flats, respectively.

4. Distribution of Cost Reductions and Other Programs Costs

Cost Reductions and Other Programs for FY2005 and FY2006 are generally associated with new equipment deployments. In some cases, they reflect management initiatives to improve operations in a certain area, as discussed in USPS LR-K-49. Cost reductions in mail processing labor (component 3.1) or mail processing equipment maintenance labor (component 11.2) from equipment deployments and initiatives are distributed to subclasses

²⁸ See my testimony in Docket No. R2001-1, USPS-T-15, Attachment 5, Docket No. R2000-1, USPS-T-21, Attachment 5, and Docket No. R97-1, LR-H-127, Page IV-8 and USPS LR-H-1 at page 20-2.

²⁹ See USPS LR-K-1 at page 11-3 for a description of these distribution keys and also see USPS LR-K-54, page IV-8.

1 using the same variabilities and distribution keys as used for the equipment-related
2 costs and facility related costs, as shown in Attachments 4 and 7. I assisted
3 witness Waterbury in choosing appropriate distribution keys for these programs.³⁰

4 **B. Facility-Related Costs**

5 I develop, for the base year and test year, facility-related space provision
6 and space support costs. The space provision costs are rents (component 15.1),
7 depreciation (component 20.3) and interest (component 20.5).³¹ The space
8 support costs are fuel and utilities (component 15.2), custodial services labor
9 (component 11.1), contract cleaners (component 11.1.2), building equipment
10 maintenance labor (component 11.3), custodial supplies and services (component
11 16.3.1) and building security (component 18.1.2). The accrued costs in the base
12 year for rents, depreciation and interest for space provision are respectively in
13 millions, \$887.2, \$738.1, and \$3.6. The accrued maintenance and custodial labor,
14 contract cleaners, fuel & utilities, custodial building supplies, and USPS protection
15 force costs in the base year are, respectively in millions, \$1,546.0, \$85.3, \$562.4,
16 \$154.1 and \$76.2. These space provision and space support costs account for
17 over six percent of the base year accrued costs. As has been done since Docket
18 No. R90-1 and earlier, the development of variable space provision costs by
19 subclass employs imputed rents, capped at book cost, as described below.

³⁰ Also, see witness Waterbury, USPS-T-10, Appendix F, and LR-K-49 for more on Cost Reductions and Other Programs.

³¹ As noted above in footnote 20, this is for the portion of interest which is treated as variable and distributed the same as facility depreciation.

1. Development of Cost Pools

The first step in the development of cost pools for facility-related costs involves determining the Postal Service facility space by activity or function and determining imputed rents (or market rental value) for this space. The FY 1999 Facility Space Usage Study, discussed in Part III of this testimony, has provided a new set of cost pools. As indicated above, the main change is that the facility categories for mail processing parallel the mail processing labor cost pools.

The base year and test year estimates of facility space and rents by category shown in Attachments 5 and 6 are based on the FY1999 facility study.³² The FY1999 estimates of facility space by category are adjusted to reflect the base year and test year, based on information on equipment deployments, operational changes³³ and overall Postal Service facility space growth. For categories where we have information on equipment deployments, such as space categories 1 to 7, 10 and 15 in Attachment 5, the estimated square footage is adjusted in proportion to the amount of deployment or based on engineering estimates of the space needed by new types of equipment. For instance, the significant growth in the space in the SPBS categories (nos. 10 and 38) for the test year due to the APPS deployment was estimated based on projections of the number of APPS to be deployed for the test year and estimates on the amount of space per APPS. In the remaining categories, square footage is assumed to grow at the same rate as

³² The Facility Space Usage Study is described in part III of this testimony and in USPS LR-K-62.

³³ In addition, space categories for operations affected by equipment deployment (such as manual letter sorting) also are adjusted. For FY 2006 space estimates by

1 overall facility space, net of the space adjustments made for equipment
2 deployments or other operational changes.

3 A new treatment of Remote Encoding Center (REC) space was utilized due
4 to the multi-purpose nature of RECs for the test year. Remote encoding is now
5 presently done for letters and flats at RECs. In addition, for the test year the APPS
6 and PARS will also utilize remote encoding, for parcels and forwarding
7 respectively.³⁴ In order to align the REC facility space used for different purposes
8 with the space categories best suited for distribution, the REC space associated
9 with flats, parcels, and PARS was included in the AFSM 100, SPBS, and CFS
10 categories. Only letter REC space remains in the RBCS category. Similarly, CFS
11 space for the test year included the projected space for the Combined Output Input
12 Subsystem (CIOSS) since it is an element of the PARS program.

13 The imputed rents for each category are updated from FY1999 to reflect the
14 changes in facility space just discussed, and also to reflect changes in the rental
15 rates, using the Global Insight rent-residential index. The methods used to project
16 base year and test year square footage and imputed rents by space category for
17 Attachments 5 and 6 are the same as used in Docket No. R2001-1.³⁵

18 The square footage and imputed rent estimates in Attachments 5 and 6 are
19 used to determine the cost pools for both space provision and space support

category there were significant reductions made in the plant space for manual
letter and flat sorting.

³⁴ Improvements in software and technology have reduced and are projected to
further reduce the amount of REC space needed for letters and flats.

³⁵ This is an update of the work presented in Part 1 of the following library
references, USPS LR-J-54 of Docket No. R2001-1, USPS LR-I-83 of Docket No.
R2000-1, USPS LR-H-127 of Docket No. R97-1, and USPS LR-G-137 of Docket
No. R94-1.

1 costs. The development of the space support costs by cost pool or space category
2 is based on the square footage for each category shown in the Attachments. For
3 instance, for the base year, the accrued costs of maintenance and custodial labor,
4 contract cleaners, fuel & utilities, custodial building supplies, and USPS protection
5 force are divided into cost pools on the basis of relative square footage in
6 Attachment 5. Likewise the test year space support costs are divided into cost
7 pools using the square footage from Attachment 6.

8 The determination of space provision costs by cost pool or space category,
9 however, is more complex, reflecting the PRC's decisions in Docket Nos. R76-1
10 and R90-1. The base year space provision costs by space category are the
11 imputed rents shown in Attachment 5, which are used in place of the accrued or
12 "book" space provision costs (rents, depreciation, and interest), with the caveat
13 that the total volume variable imputed rents³⁶ are capped at "book" costs. In other
14 words, if total volume variable imputed rent for all space categories exceeds "book"
15 costs, then volume variable imputed rent for each space category is reduced by the
16 ratio of "book" costs to the total volume variable imputed rent. This sets it equal to
17 "book" cost – thus capping imputed rent at "book" cost. For the test year, space
18 provision costs are based on the imputed rents in Attachment 6 in the same fashion.
19 In both the base year and test year, the volume variable imputed rents exceed the
20 "book" costs and are therefore capped at "book" cost.

³⁶ Total volume variable imputed rents are computed by multiplying the variability for each space category, as described in the next section, by the category imputed rent, and summing results for all categories.

2. Variability of Facility-Related Costs

My testimony provides the variabilities for each of the space categories. These are shown in Attachment 7 and also are described in the Summary Description, USPS LR-K-1, pages 15-2 and 15-3. These variabilities stem from procedures presented in Docket No. R76-1, USPS-T-9 and USPS-T-16. Variabilities for each new category stemming from the 1999 space survey were the same as the most similar former category.

3. Distribution of Facility-Related Costs

My testimony also provides the distribution key for each of the space categories. These are shown in Attachment 7 and are also described in the Summary Description, USPS LR-K-1, pages 15-3 and 15-4. The distribution keys for the mail processing categories has changed as discussed above. The distribution keys for the mail processing categories are the same as for the mail processing labor cost pools with a few exceptions. The exceptions are in cases where the facility categories corresponds to the combination of two of the labor cost pools in which case the distribution key is the combination of these cost pools. An example of this in Attachment 7 is component 910 which corresponds to the combination of the "SPBS – Priority Mail" and "SPBS—Non-Priority Mail."

This continues the past practice of distributing facility-related costs to subclass based the distribution of costs for the labor using the space.³⁷ For example, in the case of a Delivery Barcode Sorter (DBCS), the facility space

³⁷ See LR-J-1 of Docket No. R2001-1.

1 usage by subclass within the DBCS operation is taken to be proportionate to the
2 equipment operators' labor time by subclass. If 40 percent of the DBCS operator
3 time were spent loading and sweeping Standard Mail letters, then 40 percent of
4 the utilization of DBCS would be for Standard Mail letters, and 40 percent of the
5 DBCS space provision and space support costs would be distributed to Standard
6 Mail letters.

1 V. PIGGYBACK FACTORS

2 Attachments 8 to 12 contain the various piggyback factors, and related
3 costs provided by my testimony. Piggyback factors are used to incorporate
4 indirect costs into the cost avoidance estimates and are used to compute final
5 adjustments. For example, piggyback factors are employed in cost avoidance
6 studies to augment labor cost estimates by adding the costs associated with
7 supervisors and administration, as well as facility-related costs and equipment-
8 related costs, in the same way that such costs are treated in the development of
9 base year and test year costs by witnesses Meehan and Waterbury.

10 The costs used in calculating test year piggyback factors are those
11 developed in the test year before rates costs of witness Waterbury, USPS-T-10.³⁸
12 Generally, piggyback factors are ratios of total volume variable cost to volume
13 variable labor cost for specific functions or operations (e.g. city carriers or OCRs).
14 Total costs, contained in the numerator, include labor, supervisor, administrative,
15 service-wide benefits, facility-related and equipment-related costs. Labor costs, in
16 the denominator, are all non-supervisory, non-administrative labor cost associated
17 with the function or operation. Division of the numerator by the denominator
18 produces a ratio that indicates the relationship between total costs and non-
19 supervisory, non-administrative labor costs. The ratio is greater than 1.00, since
20 the numerator includes all costs, while the denominator includes only the non-
21 supervision, non-administrative labor costs. The amount by which the ratio is

³⁸ The specific costs referred to are the test year before rates costs (with mix adjustment) of witness Waterbury in Exhibit USPS-10F.

1 greater than 1.00 indicates the degree to which all costs exceed non-supervision
2 and non-administrative labor costs.

3 For example, the test year mail processing piggyback factor for First-Class
4 Mail, single-piece letters & parcels is 1.548. This ratio indicates that in the average
5 mail processing operation, for every dollar of labor costs for First-Class single-
6 piece letters & parcels, the Postal Service incurs 54.8 cents of supervision,
7 administrative costs, service-wide benefits, facility-related costs and equipment-
8 related costs.

9 There are three main sets of factors: piggyback factors by major function
10 and subclass in Attachment 8 for the test year; piggyback factors used for final
11 adjustments in Attachment 9; and mail processing cost pool piggyback factors in
12 Attachment 10 for the test year. Attachment 11 contains some additional
13 piggyback factors and related costs, which are also used in developing cost
14 avoidance estimates. In addition, Attachment 12 contains the results of the
15 calculation of non-volume variable indirect costs for Priority Mail Processing
16 Centers (PMPCs) for use in developing Priority Mail incremental costs by witness
17 Kay, USPS-T-18. The detailed calculations of the results shown in Attachments 8
18 to 12 are contained in USPS LR-K-52. The methodology used is essentially the
19 same as that employed in Docket No. R2001-1 in USPS LR-J-52. There are
20 some changes, which I discuss below in going over each of these sets of
21 piggyback factors and the PMPC indirect costs.

1 **A. Piggyback Factors by Major Function and Subclass**

2 Attachment 8 contains the test year piggyback factors by major function and
3 subclass. The major functions are shown at the top of the columns. They are mail
4 processing, window service, city delivery carrier, vehicle service driver, rural carrier
5 and postmasters.³⁹ Subclasses are indicated in the rows of the attachment.

6 An example of the development of these factors is provided for the test year
7 mail processing piggyback factor for First-Class Mail, single-piece letters & parcels
8 of 1.548. Development of this piggyback factor requires identification of the
9 relevant volume variable costs from the Test Year from witness Waterbury. As
10 shown in LR-K-52 in part II, pages 8 to 10, the piggyback factor 1.548 is the ratio
11 of 6,186,629 in column 29 (total estimated volume variable costs for mail
12 processing) to the sum of 3,994,719 and 1,769, columns 1 and 4 (total volume
13 variable labor costs). All of these costs are in thousands of dollars.

14 The volume variable labor costs of 3,994,719 and 1,769 (both in thousands)
15 are taken directly from witness Waterbury's exhibit USPS-10F at pages C-7 and C-
16 8. The 6,186,629 cost, from column 29 in page 10, which is total volume variable
17 costs for mail processing, is calculated by summing the different component costs
18 for labor, supervision, administrative, service-wide benefits, facility-related and
19 equipment-related for mail processing shown in pages 8-10.

³⁹ There are no longer any Clerk/Messengers, so there are no piggyback factors for them. In addition, a new category Postmasters was added, to be used in place of Accounting and Auditing.

1 Some of these costs, such as mail processing supervision costs of 262,871 (at
2 column 2 of page 8), are also taken directly from witness Waterbury's exhibit
3 USPS-10F at page C-4.

4 Often there is a need to disaggregate the component costs of witness
5 Waterbury. An example is the calculation of the mail processing portion of benefits
6 contained in component 18.3, which is found to be 283,465 in column 19 on page
7 9 of LR-K-52. Witness Waterbury provides the total benefits cost for First-Class
8 single-piece, letters & parcels of 495,442 as shown at USPS-10F, page C-24. To
9 calculate the mail processing portion of this cost for piggyback factor calculations,
10 it is necessary to consider the variability and distribution rules used in the
11 development of these costs for witness Waterbury's testimony. As indicated at
12 USPS LR-K-1 at pages 18-6 to 18-8, the non-institutional components of cost
13 segment 18.3 are variable to the same degree as composite postal labor costs and
14 are distributed based on the distribution of composite postal labor costs.

15 Therefore, the portion of the total benefits cost that is associated with mail
16 processing, for a given subclass, is the equal to the ratio of the volume variable
17 mail processing labor to total composite volume variable postal labor, for that
18 subclass. In this way, the disaggregation of test year costs, when necessary for
19 the piggyback factors, is done by employing the same methods used in computing
20 the test year costs.

21 Thus, the basis for the calculations of piggyback factors is provided in the
22 testimonies of witnesses Meehan, USPS-T-9, and Waterbury, USPS-T-10, and
23 those testimonies supporting their work. Piggyback factors are intended to reflect

1 the same procedures as used by those who develop to the base year and test year
2 costs.

3 Three changes are noted here. First, the calculations of all the piggyback
4 factors are now done in Excel instead of using SAS via the mainframe computer.
5 Second, the spreadsheets incorporate corrections indicated in my response to
6 POIR No. 8, Question 4, from Docket No. R2001-1, which eliminated the incorrect
7 test year treatment of some supervisor and administrative costs. Third, an error
8 concerning the facility related cost calculations for employee facilities and office
9 space was fixed. These corrections have very small impacts.

10 **B. Piggyback Factors for Final Adjustments**

11 The piggyback factors for final adjustments, contained in Attachment 9, are
12 applied to the labor cost changes associated with final adjustments done by
13 witness Moser, USPS-T-23, to mirror the development of test year costs that
14 occurs in the roll forward. The roll forward process for reflecting mail volume
15 growth adjusts volume variable "direct" or craft labor cost in proportion to this
16 growth. In addition, certain indirect costs such as supervision, quality control,
17 equipment maintenance personnel, office and clerical, and time and attendance,
18 are also adjusted proportionately.⁴⁰ The final adjustment piggyback factors applied

⁴⁰ This proportional treatment of certain indirect costs reflects mail volume changes, while holding operational procedures the same. While appropriate for changes in mail volume, this treatment is not necessarily correct for all changes in direct labor costs. For instance, the reduction in manual sorting costs through automation would generally involve significant changes to the operational environment, making invalid any assumption of proportionality between changes in direct labor costs and indirect costs.

1 by witness Moser, USPS-T-23, reflect these same changes in indirect costs as
2 would occur for mail volume changes in the roll forward process.⁴¹

3 **C. Mail Processing Operation-Specific Piggyback Factors**

4 Test year mail processing operation-specific piggyback factors, contained in
5 Attachment 10, are developed for each of the 53 mail processing labor cost pools
6 provided by witness Van-Ty-Smith.⁴² In addition, some of the cost pool piggyback
7 factors are disaggregated as shown in Attachment 10, page 2. These calculations
8 are shown in detail in USPS LR-K-52, Part III.

9 Operation-specific piggyback factors are used in two ways. First, they are
10 an input into the calculation of costs by shape as discussed in part VI of this
11 testimony. Second, these piggyback factors are inputs for the mail processing cost
12 models of witnesses Abdirahman, USPS-T-21, Miller, USPS-T-19 and USPS-T-
13 20, and Moser, USPS-T-23. Much the same method is used in these calculations
14 as used in Docket No. R2001-1, USPS LR-J-52, Part III, though some important
15 changes were made.

16 The main change is that the two step process of deriving an initial set of 29
17 piggyback factors and then using the “cross-walk matrix” to get piggyback factors
18 by cost pool is no longer used. Instead there is essentially a “one-step” process

⁴¹ See USPS LR-K-52, last section in Part II, which shows the calculation of the mail processing final adjustment piggyback factors. For instance for First-Class, single-piece, letters & parcels the numerator is 4,841,935 (from column 30). It is the sum of the columns 1 to 28. The denominator is the same as discussed above in part A, it is the sum of 3,994,719 and 1,769 (which sum to 3,996,488). The final adjustments piggyback factor for mail processing for this subclass is the ratio of 4,841,935 to 3,996,488, which is 1.212 as shown in column 31. Also note that final adjustment piggyback factors are also calculated in Excel and the POIR No. 8 corrections also apply to final adjustments.

⁴² See USPS-T-11, Table 1.

1 where by the piggyback factors by cost pool are directly calculated, with only
2 limited use of the “cross-walk matrix.” The FY 1999 Facility Space Usage Study
3 provides the information to determine facility-related costs by cost pool. As a
4 consequence, the “cross-walk matrix” was only utilized for relating a small portion
5 of equipment costs to cost pool, rather than linking all facility and equipment-
6 related costs to cost pool as done previously.

7 In addition, another change is that modifications were needed to the test
8 year equipment depreciation and facility space estimates to better relate costs to
9 cost pools. In other words, the results shown in Attachments 1, 3 and 6 were
10 modified to be more consistent for use in computing cost pool piggyback factors.

11 The new process is more direct, in that it involves determining all the costs
12 by cost pool. This is done separately for: the clerk and mail handler labor costs;
13 supervisor, service-wide benefits and administrative costs; and facility-related and
14 equipment related costs. Then these costs are combined to compute the
15 piggyback factors for the cost pools as shown on page page III-2 of USPS LR-K-
16 52.

17 I obtain the base year volume variable mail processing labor costs by cost
18 pool from witness Van-Ty-Smith, USPS-T-11, Table 1. To obtain the test year
19 costs, these base year volume variable processing labor costs by cost pool are
20 “rolled forward” using an approximation of the methods used by witness Waterbury
21 in her testimony. This calculation is done in USPS LR-K-52, Part III, page III-3.
22 This projection of test year costs (or alternatively disaggregation of witness
23 Waterbury’s costs) approximates the wage escalation, mail volume growth and

1 cost reductions and other programs calculations done by witness Waterbury in her
2 development of test year before rates costs which she presents in her Exhibit
3 USPS-10F. The resulting test year volume variable mail processing labor costs by
4 cost pool is shown in column 1 of page III-2 of USPS LR-K-52.

5 Test year supervisor, service-wide benefits and administrative costs for
6 each of these cost pools is shown in column 2 of page III-2 (of USPS LR-K-52).
7 These are based on the calculations supporting the test year mail processing labor
8 piggyback factors by subclass (these piggyback factors are in Attachment 8).
9 Pages III-18 and III-19 show the calculation of the cost ratios needed to compute
10 these costs for the cost pools.

11 The calculation of facility related costs shown in the columns 3 and 4 of
12 page III-2, of USPS LR-K-52, for the cost pools is accomplished in pages III-8 to
13 III-16. The calculation is essentially the same as done previously, in that square
14 feet and rents by category is used to split facility-related costs by category, except
15 that the facility categories for processing operations are now nearly the same as
16 mail processing labor cost pools.⁴³

17 Another change from the previous work is that the square feet and rents
18 by category shown in Attachment 6 were modified for the purposes of the cost pool
19 piggyback factors. As mentioned above, Attachment 6 includes REC space sq. ft.
20 and rents used for "parcels" and PARS in the SPBS (APPS) and CFS categories.
21 While CIOSS (modified DBCS) space was included in the CFS category since it is
22 an element of PARS. However, in order to be most consistent with the mail

⁴³ In the cases where a facility category is the combination of two labor cost pools, the facility-related costs are split based on relative labor costs.

1 processing labor cost pools as presently defined, I shifted the REC space and
2 CIOSS space back to the RBCS and DBCS categories respectively. Thus DBCS
3 and RBCS have more space and APPS/SPBS and CFS have less space in the
4 piggyback factor calculations, to be most consistent with the labor costs. In
5 addition, to relate REC costs to PARS and APPS, and to also relate CIOSS to CFS
6 for the purposes of piggyback factors, I supplemented the cost pool piggyback
7 factors with piggyback factors for additional operations (See LR-K-52, page III-
8 2A). After relating the facility-related costs to the labor cost pools based on the
9 actual space used in the operations, support costs such as for employee facilities,
10 office space, processing equipment maintenance and mail transport equipment
11 centers are related to the labor cost pools consistent with treatment of these costs
12 in the base year and the test year, see Attachment 7.

13 The process for obtaining equipment-related costs by processing labor
14 cost pool was less straight-forward. These costs are shown in columns 5 to 7 of
15 page III-2 of LR-K-52. As a starting point we modified the costs in Attachments 1
16 and 3, by splitting off from the Tray Transport and Staging category a new
17 category for Robotic Container Systems/Low Cost Tray Sorters (RCS/LCTS) to
18 better relate equipment costs to processing labor cost pools. This allows this
19 portion of Tray Transport and Staging Systems to be included in the Dispatch and
20 Mechanized Tray Sorting cost pools, rather than being apportioned to the OCR,
21 MPBCS, DBCS and FSM categories as done for the rest of the category. Base
22 year maintenance labor and parts & supplies costs must be “rolled forward” to the
23 test year, again paralleling the calculations of witness Waterbury, as shown on

1 pages III-15 and III-16 of USPS LR-J-52. The test year mail processing
2 depreciation does not need to be “rolled forward.”

3 The next step is that the 21 categories associated with equipment
4 depreciation, maintenance labor, and supplies costs must be related to the 53
5 processing labor cost pools. Apart from the equipment categories where there
6 was a direct match with the labor cost pools, two other methods were used to link
7 to the cost pools. First, the Facility Space Usage Study provides information on
8 the split of processing equipment like DBCS between Plants vs. Non-MODS or
9 BMCs. This information was used to split equipment related costs. Second, a
10 portion of the “old” cross walk matrix” was used to relate Air Dispatch, Strapping,
11 and Powered Transport Equipment to the labor cost pools. The new category
12 RCS/LCTS was split between Dispatch and Mechanized Tray Sorting, based on
13 the relative amount of labor costs. Finally, equipment cost in the categories
14 “General and Logistics, BMC”, “General and Logistics, Non-BMC”, and “Mail
15 Transport Equipment” must be computed for each of the 53 labor cost pools,
16 based on their treatment (variability and distribution) in the base year and test year
17 cost development. For example, as shown in Attachment 4, line 18, “General and
18 Logistics, BMC” costs are distributed to subclasses in proportion to their respective
19 mail processing labor costs at BMCs. These costs are apportioned to the 6 cost
20 pools at BMCs as shown on page III-2 of USPS LR-J-52, in proportion to the labor
21 cost for each in column 1.

22 Once we have computed all the costs on page III-2 we calculate the
23 piggyback ratio in column 9, which is of course the total costs divided by the labor

1 costs for each of the mail processing labor cost pools. This gives us the desired
2 result of having piggyback factors for each of the 53 mail processing labor cost
3 pools listed in my Attachment 10, page 1. Additional mail processing piggyback
4 factors by operation are provided on page 2.

5 **D. Calculation of PMPC Indirect Costs for Priority Mail Incremental Costs**

6 As discussed by witness Kay, USPS-T-18, the non-volume variable PMPC
7 costs are incremental to Priority Mail for the base year. I assist witness Kay in
8 splitting some of the accrued costs for PMPCs into variable and non-volume
9 variable in two main ways.⁴⁴ First, I use the mail processing piggyback factors for
10 the base year to determine the amount of PMPC mail processing supervision,
11 miscellaneous expense and administrative clerk costs that are volume variable, to
12 determine the amount of non-volume variable costs for each. Second, I determine
13 that all of the facility related PMPC costs are volume variable. I do this by
14 calculating the amount of volume variable facility related costs that are associated
15 with the Attachment 5 square feet and rents for PMPCs (and related Office,
16 Employee Facilities, and Mail Transport Equipment) and compare this to the
17 accrued facility-related costs. I found that the volume variable costs exceeded the
18 accrued costs, so I took the facility related costs as entirely volume variable.
19 These calculations are summarized in Attachment 12 and shown in detail in USPS
20 LR-K-52, part IV.

⁴⁴ Certain costs, like mail processing labor for PMPCs, are already split between variable and non-variable, see witness Van-Ty-Smith, USPS-T-11, Table 1. However, for “piggybacked” costs, costs which are assigned in proportion to all processing labor costs, must be estimated as I do here.

1 **VI. MAIL PROCESSING UNIT COSTS BY SHAPE FOR TEST YEAR**

2 Attachment 14 contains test year mail processing unit costs by shape,
3 presort and other separations for a number of subclasses or CRA categories.
4 These costs include piggyback or indirect costs and are provided separately by
5 cost pool in USPS LR-K-53, part VI. They are used by witnesses Abdirahman,
6 USPS-T-21, Miller, USPS-T-19 and USPS-T-20, and Moser, USPS-T-23, in
7 determining the cost avoidance estimates. The detailed calculations of the results
8 in Attachment 14 are contained in USPS LR-K-53.⁴⁵

9 Mail processing unit costs by cost pool, shape, presort and other
10 separations for the test year are a disaggregation of witness Waterbury's test year
11 costs. Her test year costs are not prepared in all the detailed separations required.
12 I calculate the detailed separations as follows. I start with the mail processing
13 labor cost data by subclass, cost pool, disaggregated by shape and other
14 characteristics mentioned above, and apply to these costs the same adjustments
15 that witnesses Meehan, USPS-T-9, and Waterbury, USPS-T-10, apply to
16 component 3.1 costs in their workpapers and models. The base year adjustment
17 is applying the premium pay adjustment on costs by subclass. Then I reflect the
18 effects on costs of wage escalations, mail volume changes by subclass, for cost
19 reduction programs, and other programs, to adjust base year costs to test year
20 levels. The application of piggyback factors by cost pool adds in the indirect costs
21 and completes the process. All of these calculations, including the calculation of
22 the piggyback factors, involve approximations of the calculations

⁴⁵ This is an update of USPS LR-J-53 of Docket No. R2001-1.

1 done by witnesses Meehan and Waterbury. As a result, the costs I develop must
2 be reconciled back to the test year costs and adjusted to be consistent at the
3 subclass level. In addition, as I discuss below, there is a an adjustment of
4 Standard Regular flats and parcels costs to eliminate an inconsistency in the
5 volume and cost data which was causing an overstatement of parcels unit costs.

6 I use several inputs in performing the calculations. I obtain mail processing
7 labor costs by shape, presort level, and other characteristics from witness Van-Ty-
8 Smith, USPS-T-11, in USPS LR-K-55, part III, table III. This includes the division
9 of non-carrier route presort letters and cards costs into automation and non-
10 automation categories. This division is based on IOCS information on piece
11 markings (such as whether or not the letter/card has “Automation” or “Auto” in the
12 indicia or address label), or if the piece has a mailer applied 11-digit barcode. This
13 division was done consistent with the “1999 IOCS method for dividing tallies
14 between non-automation and automation letters” utilized by the PRC in Docket No.
15 R2000-1.⁴⁶ I also obtain volumes by shape, presort, automation vs. non-
16 automation, and indicia from witness Loetscher, USPS-T-32, based on RPW and
17 Permit-Bravis as shown in USPS LR-K-87.

18 The calculations are relatively straightforward. I start out with the mail
19 processing labor costs by cost pool by shape, presort, and other breakdowns as
20 developed by witness Van-Ty-Smith. I apply to these costs the same adjustments
21 that witness Meehan applies in her workpapers and model, which is the premium
22 pay adjustment. It is made for all non-BMC mail processing labor costs.

⁴⁶ See PRC Op., Docket No. R2000-1, Vol. I, at 242, [5095]. Also see USPS LR-J-10.

1 Next, the labor costs for each cost pool are adjusted up or down consistent
2 with the percentage change projected between the base year and the test year.
3 This is to reflect or approximate wage escalation, mail volume changes by
4 subclass, and cost reductions and other programs adjustments that witness
5 Waterbury has employed in developing test year before rates costs. These
6 projections by cost pool are made using the same information and process used in
7 developing the operation-specific piggyback factors (see USPS LR-K-52, part III).
8 At this stage, costs are summed by subclass and reconciled for any differences
9 with test year costs (component 3.1) of witness Waterbury, in Exhibit USPS-10F.
10 This reconciliation will impart the class specific distribution of cost reductions and
11 other programs as well as the effects of volume growth.

12 Piggyback factors are applied to the reconciled labor costs to reflect total
13 mail processing costs, rather than just labor costs alone, and the results are
14 divided by subclass volumes to obtain unit costs by subclass. The final step is a
15 reconciliation of these unit costs with the test year mail processing (labor and
16 indirect) cost of witness Waterbury. These calculations are shown in USPS LR-K-
17 53 and the results are shown in Attachment 14 of this testimony.

18 This last reconciliation incorporates the Standard Regular flat-parcel
19 adjustment to compensate for the cost and volume data inconsistency. The
20 inconsistency arises for “parcel-size” pieces between $\frac{3}{4}$ th and $1 \frac{1}{4}$ th inches thick.
21 Since the inception of the parcel rate surcharge and DMM 301.3.4.2, such pieces
22 can have either flats or parcel rates depending on their make up. Such pieces if
23 prepared as automation flats will get flats rates thereby avoiding the parcel

1 surcharge. RPW volumes by shape provided by witness Loetscher are consistent
2 with the rates paid based on the mailing statements. IOCS however is most likely
3 treating these pieces as parcels. This volume appears to be a significant share of
4 the parcel-shaped pieces as discussed below. As a result there has been a
5 significant and growing inconsistency between volume and cost data for Standard
6 Regular parcels, leading to anomalously high processing and other costs for
7 parcels.

8 An estimate of the inconsistency can be obtained by comparing RPW and
9 ODIS Standard Regular volumes by shape. ODIS volumes by shape are
10 consistent with the cost systems treatment, since the same methods are used to
11 determine piece shape. Since the inception of the parcel rate surcharge and DMM
12 301.3.4.2 which allows certain "parcel-shaped" pieces to qualify for flats rates,
13 there has been a growing divergence between ODIS and RPW, with RPW
14 volumes now about 75 percent of the volumes for ODIS (ODIS is reconciled with
15 RPW total volumes). The divergence of ODIS and RPW since 1999 has been
16 consistent with the rise in the Standard Regular parcel unit costs, thus showing a
17 clear link.

18 To adjust or eliminate this inconsistency we shift about 25% of the Standard
19 Regular parcels costs to Standard Regular flats. This adjustment is based on the
20 RPW to ODIS Standard Regular Parcel volumes ratio, which shows that the RPW
21 volume is 75% of the ODIS volume. As a result of this adjustment Standard
22 Regular parcels unit costs decline from 80.7 cents per piece to 61 cents, while

- 1 Standard Regular flat unit costs go up from 13.9 to 14.7 cents per piece, as shown
- 2 in Attachment 13.

1 VII. SUMMARY

2 This testimony has described the methodology, rationale and calculations

3 for:

- 4 1. treating the test year Escrow expense as an institutional cost,
- 5 2. volume variable equipment and facility-related costs for the base year
6 and test year,
- 7
- 8 3. piggyback factors, and
- 9
- 10 4. mail processing (labor and indirect) unit costs by shape, presort, indicia,
11 as well as for automation and non-automation categories.
- 12

13 Much of my testimony focuses on equipment and facility-related costs. In general
14 my work in these areas follows past practice and has been accepted by the Postal
15 Rate Commission (PRC) as noted above. The current treatment of equipment and
16 facility-related costs is essentially as emerged from the Docket No. R90-1
17 consideration of my testimony.⁴⁷ Since that Docket, the treatment of these costs
18 has been enhanced through further refinement of the equipment and facility
19 categories.⁴⁸ The 21 equipment categories and 68 facility space categories,
20 enabled by the FY 1999 Facility Space Usage Study, provide a strong basis for
21 relating equipment and facility-related costs to subclass. These refinements of
22 equipment and facility-related costs, along with the development of mail

⁴⁷ The Commission did not explicitly address the cost pools that I proposed in Docket No. R90-1. However, their development of equipment and facility-related costs appeared to have utilized my proposed cost pools. In addition, the Commission's endorsement of the new operation-specific piggyback factors at III-1 and their modifications to these in Appendix M of the Decision make explicit use of the equipment and facility-related costs with my proposed cost pools.

⁴⁸ As noted above, the number of equipment categories in R90-1 was 12, as shown in Appendix M, page 6. The number in this Docket is 21; see Attachment 1. The number of facility related categories, in mail processing alone, was 9 as shown at Appendix M, page 18. The current treatment divides mail processing space up into 51 categories, paralleling the mail processing labor cost pools.

- 1 processing labor cost pools, have allowed significant improvement in the
- 2 development of piggyback factors and costs by shape as well.

1 VIII. PROPOSED CHANGES RELATIVE TO PRC METHODOLOGY

2 To the extent that, in response to Commission Rule 53, I discuss and
3 compare PRC versions of costing materials in this testimony, I do not sponsor
4 those materials, or in any way endorse the methodologies used to prepare them.
5 In its Order No. 1380 adopting the roadmap rule, the Commission included the
6 following statements regarding the role played by Postal Service witnesses under
7 these circumstances:

8 The comparison required by this exercise cannot be equated
9 with sponsoring the preexisting methodology. It merely
10 identifies and gives context to the proposed change, serving
11 as a benchmark so that the impact can be assessed....

12 [W]itnesses submitting testimony under Rule 53(c) sponsor
13 the proposed methodological changes, not the preexisting
14 methodology. That they may be compelled to reference the
15 preexisting methodology does not mean that they are
16 sponsoring it.

17 Order No. 1380 (August 7, 2003) at 7. Therefore, although I may be compelled to
18 refer to the PRC methodologies and versions corresponding to the Postal Service
19 proposals which are the subject of my testimony, my testimony does not sponsor
20 those PRC materials.

21 The proposed changes relative to the PRC methodology are as follows:

- 22 1. Different Facility Space Categories – the PRC version has 74 categories vs.
23 my testimony which has 68 (see Attachments 5 and 6). This affects the

1 distribution of base year and test year facility-related costs (this is due to
2 different mail processing labor cost pool definitions --it parallels witness
3 Van-Ty-Smith, USPS-T-11 "proposed change" on mail processing labor cost
4 pools—it is a direct result of having facility categories parallel the mail
5 processing labor cost pools), see LR-K-54, part I.

6 2. Differences in piggyback factors due to the differences between USPS and
7 PRC base year and test year versions. See USPS LR-K-52 vs. USPS LR-
8 K-98.

9 3. Differences in cost by shape due to differences between USPS and PRC
10 base year and test year versions. See USPS LR-K-53 vs. USPS LR-K-99.

11 Most all of these differences stem from the differences on mail processing labor
12 cost variabilities and distribution, as discussed by witnesses Bozzo, USPS-T-12,
13 and witness Van-Ty-Smith, USPS-T-11, in their discussions of "Proposed Changes
14 Relative to PRC Methodology."

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List of Attachments

1. Maintenance Labor, And Parts And Supplies For Mail Processing Equipment By Category For FY 2004
2. Mail Processing Equipment Depreciation By Category For FY 2004
3. Mail Processing Equipment Depreciation By Category For FY 2006
4. Distribution Keys for Mail Processing Equipment Capital, Maintenance, and Supplies
5. FY 2004 Facility Space and Rents By Category
6. FY 2006 Facility Space and Rents By Category
7. Variability and Distribution Keys for Facility Categories
8. Test Year Piggyback Factors by Major Function
9. Test Year Piggyback Factors for Final Adjustments
10. Test Year Mail Processing Cost Pool Piggyback Factors
11. Additional Piggyback Factors and Other Costs
12. Priority Mail Incremental Costs for Priority Mail Processing Centers (PMPC)
13. Standard Regular Flat-Parcel Cost Adjustment for Costs by Shape
14. Test Year Mail Processing Unit Costs by Shape

**MAINTENANCE LABOR, AND PARTS AND SUPPLIES FOR
MAIL PROCESSING EQUIPMENT BY CATEGORY _1/**

ATTACHMENT 1

Fiscal Year 2004

| Equip. Group | --- Equipment Description --- | Maintenance Labor Costs (CS 11) | Parts & Supplies Costs (CS 16) |
|-----------------|--------------------------------|---------------------------------------|--------------------------------------|
| 1 | OCRs | 89,035,342 | 7,779,394 |
| 2 | MPBCSs | 45,949,023 | 3,250,792 |
| 3 | DBCSS | 368,069,235 | 59,273,809 |
| 4 | CSBCSs | 10,878,045 | 8,181,743 |
| 5 | LSMs | - | - |
| 6 | FSMs | 115,014,394 | 15,707,066 |
| | RBCS: WORKROOM | 24,703,591 | 4,320,020 |
| | RBCS: REMOTE ENCODING CENTERS | 10,142,123 | 191,393 |
| 7 | RBCS TOTAL | 34,845,714 | 4,511,413 |
| 8 | CFS | 22,890,549 | 4,903,669 |
| 9 | EDGE, FACE, & CANCEL - LETTERS | 128,422,327 | 16,662,812 |
| 10 | EDGE, FACE, & CANCEL - FLATS | 3,145,593 | 157,978 |
| 11 | CULLING | 6,582,503 | 176,696 |
| 12 | SSMs | 17,528,120 | 1,038,296 |
| 13 | SPBMs | 56,750,123 | 8,760,244 |
| 14 | PSMs | 38,541,518 | 5,408,326 |
| 15 | Air Dispatch | 15,894,794 | 2,285,617 |
| 16 | STRAPPING | 16,125,558 | 955,028 |
| 18 | GENERAL AND LOGISTICS: BMC _2/ | 37,945,240 | 1,702,455 |
| 19 | GENERAL AND LOGISTICS: NON-BMC | 67,465,272 | 6,698,720 |

MAIL PROCESSING EQUIPMENT DEPRECIATION BY CATEGORY _1/

ATTACHMENT 2

Fiscal Year 2004

| Equip. Group | --- Equipment Description --- | Depreciation Costs (CS 20.1) |
|-----------------|--------------------------------|------------------------------------|
| 1 | OCRs | 14,350,229 |
| 2 | MPBCSs | 7,822,868 |
| 3 | DBCSs | 198,655,187 |
| 4 | CSBCSs | 36,397,452 |
| 5 | LSMs | - |
| 6 | FSMs | 140,614,012 |
| | RBCS: WORKROOM | 113,517,321 |
| | RBCS: REMOTE ENCODING CENTERS | - |
| 7 | RBCS TOTAL | 113,517,321 |
| 8 | CFS | 2,900,820 |
| 9 | EDGE, FACE, & CANCEL - LETTERS | 27,512,345 |
| 10 | EDGE, FACE, & CANCEL - FLATS | 389,414 |
| 11 | CULLING | 3,127,827 |
| 12 | SSMs | 1,900,367 |
| 13 | SPBMs | 35,614,105 |
| 14 | PSMs | 20,379,863 |
| 15 | Air Dispatch | 15,774,166 |
| 16 | STRAPPING | 2,118,074 |
| 18 | GENERAL AND LOGISTICS: BMC _2/ | 74,232,596 |
| 19 | GENERAL AND LOGISTICS: NON-BMC | 66,420,806 |
| 20 | MAIL TRANSPORTATION EQUIPMENT | - |
| 21 | POWERED TRANSPORT EQUIPMENT | 8,603,548 |

MAIL PROCESSING EQUIPMENT DEPRECIATION BY CATEGORY _1/

ATTACHMENT 3

FY2006

| Equip. Group | --- Equipment Description --- | Depreciation Costs (CS 20.1) |
|-----------------|--------------------------------|------------------------------------|
| 1 | OCRs | 30,495,773 |
| 2 | MPBCSs | 8,303,571 |
| 3 | DBCSS | - |
| | | 158,262,908 |
| 4 | CSBCSs | - |
| | | 8,795,922 |
| 5 | CFS- LETTERS | - |
| | | 29,043,870 |
| 6 | FSMs | - |
| | | 172,646,677 |
| | RBCS: WORKROOM | - |
| | RBCS: REMOTE ENCODING CENTERS | 42,533,869 |
| 7 | RBCS TOTAL | - |
| | | 42,533,869 |
| 8 | CFS- FLATS | - |
| | | 1,450,410 |
| 9 | EDGE, FACE, & CANCEL - LETTERS | - |
| | | 19,188,549 |
| 10 | EDGE, FACE, & CANCEL - FLATS | - |
| | | 323,735 |
| 11 | CULLING | - |
| | | 3,331,707 |
| 12 | SSMs | - |
| | | 1,761,676 |
| 13 | APPS/SPBMs | - |
| | | 62,869,276 |
| 14 | PSMs | - |
| | | 20,210,179 |
| 15 | Air Dispatch | - |
| | | 20,779,025 |
| 16 | STRAPPING | - |
| | | 2,258,278 |
| 18 | GENERAL AND LOGISTICS: BMC _2/ | - |
| | | 64,688,284 |
| 19 | GENERAL AND LOGISTICS: NON-BMC | - |
| | | 56,205,307 |
| 20 | MAIL TRANSPORTATION EQUIPMENT | - |
| | | - |
| 21 | POWERED TRANSPORT EQUIPMENT | - |
| | | 6,045,085 |

DISTRIBUTION KEYS FOR MAIL PROCESSING EQUIPMENT CAPITAL, MAINTENANCE, AND SUPPLIES

BASE YEAR

| <u>LINE NO.</u> | <u>EQUIPMENT CATEGORY</u> | <u>DISTRIBUTION KEY _1/</u> |
|-----------------|--|--|
| 1 | OPTICAL CHARACTER READERS (OCRs) | IOCS TALLIES FOR OCR OPERATION |
| 2 | MAIL PROCESSING BARCODE SORTERS (MPBCSs) | IOCS TALLIES FOR MPBCS OPERATION |
| 3 | DELIVERY BARCODE SORTERS (DBCSSs) | IOCS TALLIES FOR DBCS OPERATION |
| 4 | CARRIER SEQUENCE BARCODE SORTERS (CSBCSs) | IOCS TALLIES FOR CSBCS OPERATION |
| 5 | LETTER SORTING MACHINE (LSMs) | IOCS TALLIES FOR LSM OPERATION |
| 6 | FLAT SORTING MACHINE (FSMs) | IOCS TALLIES FOR FSM OPERATION |
| 7 | REMOTE BARCODING SYSTEM | IOCS TALLIES FOR MPBCS OPERATION, IN OSS MODE |
| 8 | COMPUTER FORWARDING SYSTEM | IOCS TALLIES FOR CFS OR MARKUP OPERATION |
| 9 | EDGER/FACER/CANCELER - LETTERS | IOCS TALLIES FOR LETTER FACER/CANCELER OPERATION |
| 10 | EDGER/FACER/CANCELER - FLATS | IOCS TALLIES FOR FLAT FACER/CANCELER OPERATION |
| 11 | CULLING | IOCS TALLIES FOR CULLING OPERATION |
| 12 | SACK SORTING MACHINE (SSMs) | IOCS TALLIES FOR SSM OPERATION |
| 13 | SMALL PARCEL AND BUNDLE SORTER (SPBS) | IOCS TALLIES FOR SPBS OPERATION |
| 14 | PARCEL SORTING MACHINE (PSM) /NON-MACHINABLE OUTSIDE MACHINE (NMO) | IOCS TALLIES FOR PSM OR NMO OPERATION |
| 15 | AIR DISPATCH | IOCS TALLIES FOR ACDCS OPERATION |
| 16 | STRAPPING | IOCS TALLIES FOR STRAPPING OPERATION |
| 17 | TRAY TRANSPORT AND STAGING SYSTEMS | N/A |
| 18 | GENERAL AND LOGISTICS, BMC | ALL BMC MAIL PROCESSING LABOR |
| 19 | GENERAL AND LOGISTICS, NON-BMC | ALL NON-BMC MAIL PROCESSING LABOR |
| 20 | MAIL TRANSPORTATION EQUIPMENT | ALL MAIL PROCESSING LABOR |
| 21 | POWERED TRANSPORT EQUIPMENT | IOCS TALLIES FOR FORKLIFTS, TOW MOTORS, ETC. |

_1/ SEE USPS LR-K-54, PAGE IV-8 FOR MORE DETAILS.

DISTRIBUTION KEYS FOR MAIL PROCESSING EQUIPMENT CAPITAL, MAINTENANCE, AND SUPPLIES

TEST YEAR DISTRIBUTION KEYS FOR MAIL PROCESSING EQUIPMENT CAPITAL
(ROWS 5, 8 AND 13 CHANGED FROM BASE YEAR)

| <u>LINE NO.</u> | <u>EQUIPMENT CATEGORY</u> | <u>DISTRIBUTION KEY _1/</u> |
|-----------------|---|--|
| 1 | OPTICAL CHARACTER READERS (OCRs) | IOCS TALLIES FOR OCR OPERATION |
| 2 | MAIL PROCESSING BARCODE SORTERS (MPBCSs) | IOCS TALLIES FOR MPBCS OPERATION |
| 3 | DELIVERY BARCODE SORTERS (DBCSs) | IOCS TALLIES FOR DBCS OPERATION |
| 4 | CARRIER SEQUENCE BARCODE SORTERS (CSBCSs) | IOCS TALLIES FOR CSBCS OPERATION |
| 5 | COMPUTER FORWARDING SYSTEM -- LETTERS | LDC 49 - CFS, COMPONENT 938 -- LETTERS ONLY |
| 6 | FLAT SORTING MACHINE (FSMs) | IOCS TALLIES FOR FSM OPERATION |
| 7 | REMOTE BARCODING SYSTEM | IOCS TALLIES FOR MPBCS OPERATION, IN OSS MODE |
| 8 | COMPUTER FORWARDING SYSTEM -- FLATS | LDC 49 - CFS, COMPONENT 938 -- FLATS ONLY |
| 9 | EDGER/FACER/CANCELER - LETTERS | IOCS TALLIES FOR LETTER FACER/CANCELER OPERATION |
| 10 | EDGER/FACER/CANCELER - FLATS | IOCS TALLIES FOR FLAT FACER/CANCELER OPERATION |
| 11 | CULLING | IOCS TALLIES FOR CULLING OPERATION |
| 12 | SACK SORTING MACHINE (SSMs) | IOCS TALLIES FOR SSM OPERATION |
| 13 | SMALL PARCEL AND BUNDLE SORTER (SPBS)/ AUTOMATED PACKAGE PROCESSING SYSTEM | IOCS TALLIES FOR SPBS OPERATION |
| 14 | PARCEL SORTING MACHINE (PSM) /NON- MACHINABLE OUTSIDE MACHINE (NMO) | IOCS TALLIES FOR PSM OR NMO OPERATION |
| 15 | Air Dispatch | IOCS TALLIES FOR ACDCS OPERATION |
| 16 | STRAPPING | IOCS TALLIES FOR STRAPPING OPERATION |
| 17 | TRAY TRANSPORT AND STAGING SYSTEMS | N/A |
| 18 | GENERAL AND LOGISTICS, BMC | ALL BMC MAIL PROCESSING LABOR |
| 19 | GENERAL AND LOGISTICS, NON-BMC | ALL NON-BMC MAIL PROCESSING LABOR |
| 20 | MAIL TRANSPORTATION EQUIPMENT | ALL MAIL PROCESSING LABOR |
| 21 | POWERED TRANSPORT EQUIPMENT | IOCS TALLIES FOR FORKLIFTS, TOW MOTORS, ETC. |

_1/ SEE USPS LR-K-54, PAGE IV-8 FOR MORE DETAILS.

FY 2004 FACILITY SPACE AND RENTS BY CATEGORY

| | (1) | (2) | (3) |
|--------------------------------|--|---------------------|-------------------------|
| | <u>SQUARE FEET</u> | <u>RENTAL VALUE</u> | <u>RENTS PER SQ.FT.</u> |
| | | (\$ 000) | (\$) |
| Space Distribution Keys | | | |
| 1 | Delivery BCS, Carrier Sequence BCS | 9,568,312 | 9.64 |
| 2 | Mail Processing BCS | 1,276,102 | 9.64 |
| 3 | OCRs (including BCS on OC Rs) | 2,214,585 | 9.62 |
| 4 | FSM 881, SPFSM, Other | 34,949 | 9.62 |
| 5 | FSM 1000 | 1,741,971 | 9.53 |
| 6 | AFMS 100 | 3,388,558 | 9.62 |
| 7 | LSM, MPLSM & SPLSM with BCR | - | - |
| 8 | Mechanical Sort - Sack Outside | 1,141,154 | 9.65 |
| 9 | Mechanized Parcels | 117,921 | 9.59 |
| 10 | SPBS - Non-Priority & Priority | 5,210,910 | 9.61 |
| 11 | Manual Flats | 1,313,127 | 9.56 |
| 12 | Manual Letters | 2,683,069 | 9.61 |
| 13 | Manual Parcels | 891,466 | 9.63 |
| 14 | Manual Priority | 1,925,733 | 9.64 |
| 15 | LDC 15 - RBCS | 822,401 | 13.34 |
| 16 | Air Contract Data Collection Systems | 771,163 | 9.62 |
| 17 | Bulk Presort | 258,791 | 9.64 |
| 18 | Cancellation & Mail Preparation - Metered | 3,585,991 | 9.61 |
| 19 | Manual Sort - Sack Outside | 596,075 | 9.61 |
| 20 | Opening Unit - Preferred Mail | 1,895,355 | 9.61 |
| 21 | Opening Unit - BBM | 1,003,077 | 9.61 |
| 22 | Platform | 13,205,484 | 8.02 |
| 23 | Pouching Operations | 441,421 | 9.61 |
| 24 | Business Reply / Postage Due | 194,934 | 9.61 |
| 25 | Damaged Parcel Rewrap | 132,007 | 9.62 |
| 26 | Empty Equipment | 3,256,091 | 9.61 |
| 27 | Priority Mail Processing Centers | 2,139,005 | 10.28 |
| 28 | Express Mail | 535,725 | 9.67 |
| 29 | Mail Processing Support/Miscellaneous Activity | 643,758 | 9.63 |
| 30 | Registry | 556,984 | 9.65 |
| 31 | International / ISCs | 1,581,571 | 9.71 |
| 32 | LDC 49 - Computerized Forwarding System | 1,604,825 | 9.99 |
| 33 | LDC 79 - Mailing Reqs. & Bus. Mail Entry | 884,506 | 10.05 |
| 34 | BMC - Platform | 2,568,081 | 9.36 |
| 35 | BMC - Allied Labor & All Other Mail Processing | 2,141,830 | 9.73 |
| 36 | BMC - Parcel Sorting Machine | 3,483,916 | 9.73 |
| 37 | BMC - Sack Sorting Machine | 903,821 | 9.73 |
| 38 | BMC - SPBS & Irregular Parcels (IPP & 115) | 636,802 | 9.73 |
| 39 | BMC - Non-Machinable Outside (NMO) | 273,493 | 9.73 |
| 40 | Non-MODS - Allied | 31,501,408 | 9.01 |
| 41 | Non-MODS - Automated/Mechanized | 3,817,185 | 10.87 |
| 42 | Non-MODS - Express Mail | 442,985 | 10.82 |
| 43 | Non-MODS - Manual Flat | 3,432,802 | 10.56 |
| 44 | Non-MODS - Manual Letter | 3,528,909 | 10.63 |
| 45 | Non-MODS - Manual Parcel | 6,388,281 | 10.53 |
| 46 | Non-MODS - Registry | 489,861 | 11.59 |
| 47 | Non-MODS - Miscellaneous | 2,556,455 | 10.90 |
| 48 | Window Service | 18,278,000 | 11.08 |
| 49 | Self-Service Postal Center | 2,497,198 | 11.12 |
| 50 | Post Office Boxes / Caller Service | 26,758,749 | 11.32 |
| 51 | Claims & Inquiry | 456,843 | 10.83 |
| 52 | City Carrier | 26,173,663 | 11.91 |
| 53 | Rural Carrier | 8,746,506 | 10.62 |
| 54 | DDU Accountables Cage | 606,632 | 11.55 |
| 55 | Office Space | 26,471,439 | 10.49 |
| 56 | Mail Processing Equipment Maintenance | 4,786,771 | 10.19 |
| 57 | Other Equipment Maintenance | 2,181,139 | 10.67 |
| 58 | Employee Facilities | 23,442,107 | 10.75 |
| 59 | VMF | 6,700,466 | 11.87 |
| 60 | CVS | 9,189,411 | 3.97 |
| 61 | Vacant & Tenant | 8,073,380 | 9.30 |
| 62 | HQ, HQ-Field Related, and Area Offices | 5,939,431 | 18.27 |
| 63 | Mail Transportation Equipment Centers | 1,055,057 | 9.79 |
| 64 | Storage Facilities | 5,194,295 | 9.79 |
| 65 | Mechanized Tray Sorter | 1,245,745 | 9.61 |
| 66 | Scan Where You Band (SWYB) | - | 9.61 |
| 67 | Dispatch Unit | 1,013,741 | 9.61 |
| 68 | Flats Preparation | 1,016,171 | 9.61 |
| | 307,609,591 | 3,160,373 | 10.27 |

SOURCE: USPS LR-K-54, PART I

FY 2006 FACILITY SPACE AND RENTS BY CATEGORY

| | (1) | (2) | (3) | |
|--------------------------------|---|---------------------|-------------------------|-------|
| | <u>SQUARE FEET</u> | <u>RENTAL VALUE</u> | <u>RENTS PER SQ.FT.</u> | |
| | | (\$ 000) | (\$) | |
| Space Distribution Keys | | | | |
| 1 | Delivery BCS, Carrier Sequence BCS | 9,497,244 | 96,776 | 10.19 |
| 2 | Mail Processing BCS | 1,214,263 | 12,370 | 10.19 |
| 3 | OCRs (including BCS on OCRs) | 2,202,314 | 22,388 | 10.17 |
| 4 | FSM 881, SPFSM, Other | - | - | - |
| 5 | FSM 1000 | 1,741,971 | 17,554 | 10.08 |
| 6 | AFMS 100 | 3,388,558 | 34,462 | 10.17 |
| 7 | LSM, MPLSM & SPLSM with BCR | - | - | - |
| 8 | Mechanical Sort - Sack Outside | 1,143,785 | 11,662 | 10.20 |
| 9 | Mechanized Parcels | 118,193 | 1,199 | 10.14 |
| 10 | SPBS - Non-Priority & Priority | 7,696,718 | 78,175 | 10.16 |
| 11 | Manual Flats | 609,012 | 6,155 | 10.11 |
| 12 | Manual Letters | 1,500,354 | 15,246 | 10.16 |
| 13 | Manual Parcels | 893,521 | 9,090 | 10.17 |
| 14 | Manual Priority | 1,930,173 | 19,658 | 10.18 |
| 15 | LDC 15 - RBCS | 573,714 | 8,092 | 14.10 |
| 16 | Air Contract Data Collection Systems | 772,941 | 7,861 | 10.17 |
| 17 | Bulk Presort | 259,387 | 2,642 | 10.18 |
| 18 | Cancellation & Mail Preparation - Metered | 3,594,259 | 36,523 | 10.16 |
| 19 | Manual Sort - Sack Outside | 597,449 | 6,068 | 10.16 |
| 20 | Opening Unit - Preferred Mail | 1,899,725 | 19,294 | 10.16 |
| 21 | Opening Unit - BBM | 1,005,390 | 10,211 | 10.16 |
| 22 | Platform | 13,235,928 | 112,143 | 8.47 |
| 23 | Pouching Operations | 442,438 | 4,493 | 10.16 |
| 24 | Business Reply / Postage Due | 195,383 | 1,985 | 10.16 |
| 25 | Damaged Parcel Rewrap | 132,311 | 1,346 | 10.17 |
| 26 | Empty Equipment | 3,263,598 | 33,163 | 10.16 |
| 27 | Priority Mail Processing Centers | 2,139,005 | 23,238 | 10.86 |
| 28 | Express Mail | 536,960 | 5,491 | 10.23 |
| 29 | Mail Processing Support/Miscellaneous Activ | 645,242 | 6,568 | 10.18 |
| 30 | Registry | 558,268 | 5,691 | 10.19 |
| 31 | International / ISCs | 1,581,571 | 16,232 | 10.26 |
| 32 | LDC 49 - Computerized Forwarding System | 1,434,970 | 15,149 | 10.56 |
| 33 | LDC 79 - Mailing Reqs. & Bus. Mail Entry | 886,545 | 9,421 | 10.63 |
| 34 | BMC - Platform | 2,574,001 | 25,476 | 9.90 |
| 35 | BMC - Allied Labor & All Other Mail Processin | 2,139,300 | 21,997 | 10.28 |
| 36 | BMC - Parcel Sorting Machine | 3,491,948 | 35,921 | 10.29 |
| 37 | BMC - Sack Sorting Machine | 905,905 | 9,320 | 10.29 |
| 38 | BMC - SPBS & Irregular Parcels (IPP & 115) | 940,581 | 9,671 | 10.28 |
| 39 | BMC - Non-Machinable Outside (NMO) | 274,123 | 2,820 | 10.29 |
| 40 | Non-MODS - Allied | 31,574,033 | 300,725 | 9.52 |
| 41 | Non-MODS - Automated/Mechanized | 3,782,822 | 43,601 | 11.53 |
| 42 | Non-MODS - Express Mail | 444,007 | 5,077 | 11.43 |
| 43 | Non-MODS - Manual Flat | 3,440,716 | 38,389 | 11.16 |
| 44 | Non-MODS - Manual Letter | 3,537,045 | 39,727 | 11.23 |
| 45 | Non-MODS - Manual Parcel | 6,403,009 | 71,296 | 11.13 |
| 46 | Non-MODS - Registry | 490,990 | 6,013 | 12.25 |
| 47 | Non-MODS - Miscellaneous | 2,562,349 | 29,522 | 11.52 |
| 48 | Window Service | 18,320,139 | 214,523 | 11.71 |
| 49 | Self-Service Postal Center | 2,502,955 | 29,413 | 11.75 |
| 50 | Post Office Boxes / Caller Service | 26,820,441 | 320,780 | 11.96 |
| 51 | Claims & Inquiry | 457,896 | 5,243 | 11.45 |
| 52 | City Carrier | 26,234,005 | 330,250 | 12.59 |
| 53 | Rural Carrier | 8,766,670 | 98,404 | 11.22 |
| 54 | DDU Accountables Cage | 608,031 | 7,421 | 12.20 |
| 55 | Office Space | 26,532,468 | 294,219 | 11.09 |
| 56 | Mail Processing Equipment Maintenance | 4,797,806 | 51,678 | 10.77 |
| 57 | Other Equipment Maintenance | 2,186,168 | 24,664 | 11.28 |
| 58 | Employee Facilities | 23,496,152 | 267,016 | 11.36 |
| 59 | VMF | 6,715,914 | 84,237 | 12.54 |
| 60 | CVS | 9,210,597 | 38,695 | 4.20 |
| 61 | Vacant & Tenant | 8,091,993 | 79,529 | 9.83 |
| 62 | HQ, HQ-Field Related, and Area Offices | 5,953,124 | 114,939 | 19.31 |
| 63 | Mail Transportation Equipment Centers | 1,057,490 | 10,938 | 10.34 |
| 64 | Storage Facilities | 5,206,270 | 53,852 | 10.34 |
| 65 | Mechanized Tray Sorter | 1,970,669 | 20,014 | 10.16 |
| 66 | Scan Where You Band (SWYB) | - | - | - |
| 67 | Dispatch Unit | 1,016,078 | 10,319 | 10.16 |
| 68 | Flats Preparation | 1,018,514 | 10,344 | 10.16 |
| | | 309,215,402 | 3,356,376 | 10.85 |

SOURCE: USPS LR-K-54, PART I

VARIABILITY AND DISTRIBUTION KEYS FOR FACILITY CATEGORIES

| Component Description | Comp. | Distribution Key | Variability |
|--|-------|---|---------------------------------------|
| Space Distribution Keys | | | |
| Delivery BCS, Carrier Sequence BCS | 901 | Labor Cost Pool | 80% |
| Mail Processing BCS | 902 | Labor Cost Pool | 80% |
| OCRs (including BCS on OCRs) | 903 | Labor Cost Pool | 80% |
| FSM 881, SPFSM, Other | 904 | Labor Cost Pool | 80% |
| FSM 1000 | 905 | Labor Cost Pool | 80% |
| AFMS 100 | 906 | Labor Cost Pool | 80% |
| LSM, MPLSM & SPLSM with BCF | 907 | Labor Cost Pool | 80% |
| Mechanical Sort - Sack Outside | 908 | Labor Cost Pool | 70% |
| Mechanized Parcels | 909 | Labor Cost Pool | 70% |
| SPBS - Non-Priority & Priority | 910 | Labor Cost Pool | 70% |
| Manual Flats | 911 | Labor Cost Pool | 80% |
| Manual Letters | 912 | Labor Cost Pool | 80% |
| Manual Parcels | 913 | Labor Cost Pool | 70% |
| Manual Priority | 914 | Labor Cost Pool | 100% |
| LDC 15 - RBCS | 915 | Labor Cost Pool | 80% |
| Air Contract Data Collection Systems | 916 | Labor Cost Pool | 80% |
| Bulk Presort | 917 | Labor Cost Pool | 80% |
| Cancellation & Mail Preparation - Metered | 918 | Labor Cost Pool | 80% |
| Manual Sort - Sack Outside | 919 | Labor Cost Pool | 70% |
| Opening Unit - Preferred Mail | 920 | Labor Cost Pool | 70% |
| Opening Unit - BBM | 921 | Labor Cost Pool | 70% |
| Platform | 922 | Labor Cost Pool | 100% |
| Pouching Operations | 923 | Labor Cost Pool | 80% |
| Business Reply / Postage Due | 924 | Labor Cost Pool | 80% |
| Damaged Parcel Rewrap | 925 | Labor Cost Pool | 80% |
| Empty Equipment | 926 | Labor Cost Pool | 80% |
| Priority Mail Processing Centers | 927 | Labor Cost Pool | 100% |
| Express Mail | 928 | Labor Cost Pool | 100% |
| Mail Processing Support/Miscellaneous Activity | 929 | Labor Cost Pool | 80% |
| Registry | 930 | Labor Cost Pool | 100% |
| International / ISCs | 931 | Labor Cost Pool | 100% |
| LDC 49 - Computerized Forwarding System | 938 | Labor Cost Pool | 80% |
| LDC 79 - Mailing Reqs. & Bus. Mail Entry | 939 | Labor Cost Pool | 80% |
| BMC - Platform | 940 | Labor Cost Pool | 100% |
| BMC - Allied Labor & All Other Mail Processing | 941 | Labor Cost Pool | 80% |
| BMC - Parcel Sorting Machine | 942 | Labor Cost Pool | 70% |
| BMC - Sack Sorting Machine | 943 | Labor Cost Pool | 70% |
| BMC - SPBS & Irregular Parcels (IPP & 115) | 944 | Labor Cost Pool | 70% |
| BMC - Non-Machinable Outside (NMO) | 945 | Labor Cost Pool | 70% |
| Non-MODS - Allied | 946 | Labor Cost Pool | 80% |
| Non-MODS - Automated/Mechanized | 947 | Labor Cost Pool | 80% |
| Non-MODS - Express Mail | 948 | Labor Cost Pool | 100% |
| Non-MODS - Manual Flat | 949 | Labor Cost Pool | 80% |
| Non-MODS - Manual Letter | 950 | Labor Cost Pool | 80% |
| Non-MODS - Manual Parcel | 951 | Labor Cost Pool | 70% |
| Non-MODS - Registry | 952 | Labor Cost Pool | 100% |
| Non-MODS - Miscellaneous | 953 | Labor Cost Pool | 80% |
| Window Service | 954 | Window Service Labor--Comp. 40 | same as D.K. |
| Self-Service Postal Center | 955 | Institutional | 0% |
| Post Office Boxes / Caller Service | 956 | All to Post Office Boxes/Caller Ser. | 100% |
| Claims & Inquiry | 957 | Claims & Inquiry Labor -- Comp. 66 | same as D.K. |
| City Carrier | 958 | City Carrier Labor--CS 6 & 7 | same as D.K. |
| Rural Carrier | 959 | Rural Carrier Labor --Comp. 72 | same as D.K. |
| DDU Accountables Cage | 960 | IOCS Tallies for Miscellaneous Op., Checking In/Out Acct. | same as combined city & rural carrier |
| Office Space | 961 | NON-HQ OFFICE LABOR* | same as D.K. |
| Mail Processing Equipment Maintenance | 962 | Processing Equip. Maintenance Labor -- Comp. 1258 | same as D.K. |
| Other Equipment Maintenance | 963 | Institutional | 0% |
| Employee Facilities | 964 | All Labor Costs | same as D.K. |
| VMF | 965 | VMF Labor -- Comp. 90 | same as D.K. |
| CVS | 966 | Institutional | 0% |
| Vacant & Tenant | 967 | Institutional | 0% |
| HQ, HQ-Field Related, and Area Offices | 968 | Institutional | 0% |
| Mail Transportation Equipment Centers | 969 | All Mail Proc. Labor --Comp. 35 | same as D.K. |
| Storage Facilities | 970 | Institutional | 0% |
| Mechanized Tray Sorter | 971 | Labor Cost Pool | 80% |
| Scan Where You Band (SWYB) | 972 | Labor Cost Pool | 80% |
| Dispatch Unit | 973 | Labor Cost Pool | 80% |
| Flat Mail Preparation | 974 | Labor Cost Pool | 80% |

*CRA Components: Postmasters, H.L. Supv. & Clks (Other Admin, T&A, Data Coll, Gen. Off., QC)

**TEST YEAR PIGGYBACK FACTORS BY MAJOR FUNCTION
TY2006BR - USPS VERSION**

| Line No. | Class, Subclass, or Special Service Cost Segment Column Number | Mail Processing 3.1 (1) | Window Service 3.3 (2) | City Delivery 6 & 7 (3) | Vehicle Service Drivers 8 (4) | Rural Delivery 10 (5) | Postmasters 1 (6) |
|----------|--|-------------------------------|------------------------------|-------------------------------|-------------------------------------|-----------------------------|-------------------------|
| 1 | FIRST-CLASS MAIL | | | | | | |
| 2 | SINGLE PIECE LETTERS | 1.548 | 1.348 | 1.266 | 1.475 | 1.182 | 1.218 |
| 3 | PRESORT LETTERS | 1.572 | 1.348 | 1.266 | 1.475 | 1.182 | 1.218 |
| 4 | TOTAL LETTERS | 1.554 | 1.348 | 1.266 | 1.475 | 1.182 | 1.218 |
| 5 | SINGLE PIECE CARDS | 1.473 | 1.348 | 1.266 | 1.475 | 1.182 | 1.218 |
| 6 | PRESORT CARDS | 1.522 | 1.348 | 1.268 | 1.473 | 1.182 | 1.218 |
| 7 | TOTAL CARDS | 1.484 | 1.348 | 1.267 | 1.474 | 1.182 | 1.218 |
| 8 | TOTAL FIRST | 1.551 | 1.348 | 1.266 | 1.475 | 1.182 | 1.218 |
| 9 | PRIORITY MAIL | 1.515 | 1.348 | 1.297 | 1.475 | 1.182 | 1.219 |
| 10 | EXPRESS MAIL | 1.382 | 1.348 | 1.313 | 1.474 | 1.182 | 1.219 |
| 11 | MAILGRAMS | 1.352 | 1.000 | 1.329 | 1.000 | 1.279 | 1.000 |
| 12 | PERIODICALS: | | | | | | |
| 13 | WITHIN COUNTY | 1.464 | 1.349 | 1.268 | 1.475 | 1.182 | 1.219 |
| 14 | OUTSIDE COUNTY | 1.586 | 1.349 | 1.257 | 1.475 | 1.182 | 1.218 |
| 15 | TOTAL PERIODICALS | 1.584 | 1.349 | 1.257 | 1.475 | 1.182 | 1.218 |
| 16 | STANDARD MAIL: | | | | | | |
| 17 | ENHANCED CARR RTE | 1.559 | 1.348 | 1.268 | 1.475 | 1.182 | 1.218 |
| 18 | REGULAR | 1.562 | 1.348 | 1.262 | 1.475 | 1.182 | 1.218 |
| 19 | TOTAL STANDARD MAIL | 1.562 | 1.348 | 1.264 | 1.475 | 1.182 | 1.218 |
| 20 | PACKAGE SERVICES: | | | | | | |
| 21 | PARCEL POST | 1.582 | 1.348 | 1.299 | 1.475 | 1.182 | 1.219 |
| 22 | BOUND PRINTED MATTER | 1.613 | 1.348 | 1.305 | 1.475 | 1.182 | 1.218 |
| 23 | MEDIA MAIL | 1.618 | 1.348 | 1.296 | 1.475 | 1.182 | 1.219 |
| 24 | TOTAL PACKAGE SERVICES | 1.600 | 1.348 | 1.301 | 1.475 | 1.182 | 1.218 |
| 25 | U.S. POSTAL SERVICE | 1.510 | 1.348 | 1.252 | 1.475 | 1.186 | 1.000 |
| 26 | FREE MAIL | 1.555 | 1.348 | 1.274 | 1.474 | 1.181 | 1.000 |
| 27 | INTERNATIONAL MAIL | 1.512 | 1.348 | 1.279 | 1.475 | 1.182 | 1.218 |
| 28 | TOTAL ALL MAIL | 1.552 | 1.348 | 1.267 | 1.475 | 1.182 | 1.218 |
| 29 | SPECIAL SERVICES: | | | | | | |
| 30 | REGISTRY | 1.432 | 1.348 | 1.283 | 1.000 | 1.181 | 1.217 |
| 31 | CERTIFIED | 1.392 | 1.348 | 1.271 | 1.000 | 1.182 | 1.218 |
| 32 | INSURANCE | 1.377 | 1.348 | 1.277 | 1.000 | 1.182 | 1.217 |
| 33 | COD | 1.403 | 1.349 | 1.273 | 1.000 | 1.182 | 1.226 |
| 34 | MONEY ORDERS | 1.000 | 1.348 | 1.000 | 1.000 | 1.182 | 1.219 |
| 35 | STAMPED CARDS | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.151 |
| 36 | STAMPED ENVELOPES | 1.000 | 1.348 | 1.000 | 1.000 | 1.000 | 1.210 |
| 37 | SPECIAL HANDLING | 1.476 | 1.348 | 1.000 | 1.000 | 1.000 | 1.201 |
| 38 | POST OFFICE BOX | 1.457 | 1.348 | 1.244 | 1.000 | 1.000 | 1.218 |
| 39 | OTHER | 1.430 | 1.348 | 1.277 | 1.000 | 1.182 | 1.218 |
| 40 | TOTAL SPECIAL SERVICES | 1.421 | 1.348 | 1.273 | 1.000 | 1.182 | 1.218 |
| 41 | TOTAL VOLUME VARIABLE | 1.550 | 1.348 | 1.267 | 1.475 | 1.182 | 1.218 |

Source: USPS LR-K-52, Part II.

**TEST YEAR PIGGYBACK FACTORS FOR FINAL ADJUSTMENTS
TY 2006 Before Rates - USPS VERSION**

| Line No. | Class, Subclass, or Special Service Cost Segment Column Number | Mail Processing 3.1 (1) | Window Service 3.3 (2) | City Delivery 6 & 7 (3) | Vehicle Service Drivers 8 (4) | Rural Delivery 10 (5) |
|----------|--|-------------------------------|------------------------------|-------------------------------|-------------------------------------|-----------------------------|
| 1 | FIRST-CLASS MAIL | | | | | |
| 2 | SINGLE PIECE LETTERS | 1.212 | 1.117 | 1.116 | 1.169 | 1.042 |
| 3 | PRESORT LETTERS | 1.225 | 1.117 | 1.115 | 1.169 | 1.042 |
| 4 | TOTAL LETTERS | 1.215 | 1.117 | 1.116 | 1.169 | 1.042 |
| 5 | SINGLE PIECE CARDS | 1.188 | 1.117 | 1.116 | 1.169 | 1.042 |
| 6 | PRESORT CARDS | 1.209 | 1.117 | 1.116 | 1.168 | 1.042 |
| 7 | TOTAL CARDS | 1.193 | 1.117 | 1.116 | 1.168 | 1.042 |
| 8 | TOTAL FIRST | 1.214 | 1.117 | 1.116 | 1.169 | 1.042 |
| 9 | PRIORITY MAIL | 1.145 | 1.117 | 1.127 | 1.169 | 1.041 |
| 10 | EXPRESS MAIL | 1.112 | 1.117 | 1.134 | 1.169 | 1.042 |
| 11 | MAILGRAMS | 1.090 | 1.000 | 1.138 | 1.000 | 1.000 |
| 12 | PERIODICALS: | | | | | |
| 13 | WITHIN COUNTY | 1.139 | 1.117 | 1.116 | 1.169 | 1.041 |
| 14 | OUTSIDE COUNTY | 1.207 | 1.117 | 1.112 | 1.169 | 1.041 |
| 15 | TOTAL PERIODICALS | 1.205 | 1.117 | 1.112 | 1.169 | 1.041 |
| 16 | STANDARD MAIL: | | | | | |
| 17 | ENHANCED CARR RTE | 1.178 | 1.117 | 1.116 | 1.169 | 1.041 |
| 18 | REGULAR | 1.201 | 1.117 | 1.114 | 1.169 | 1.041 |
| 19 | TOTAL STANDARD MAIL | 1.199 | 1.117 | 1.115 | 1.169 | 1.041 |
| 20 | PACKAGE SERVICES: | | | | | |
| 21 | PARCEL POST | 1.172 | 1.117 | 1.128 | 1.169 | 1.041 |
| 22 | BOUND PRINTED MATTER | 1.194 | 1.117 | 1.130 | 1.169 | 1.041 |
| 23 | MEDIA MAIL | 1.184 | 1.117 | 1.127 | 1.169 | 1.041 |
| 24 | TOTAL PACKAGE SERVICES | 1.181 | 1.117 | 1.129 | 1.169 | 1.041 |
| 25 | U.S. POSTAL SERVICE | 1.168 | 1.117 | 1.111 | 1.169 | 1.043 |
| 26 | FREE MAIL | 1.177 | 1.116 | 1.118 | 1.169 | 1.041 |
| 27 | INTERNATIONAL MAIL | 1.164 | 1.117 | 1.121 | 1.169 | 1.042 |
| 28 | TOTAL ALL MAIL | 1.200 | 1.117 | 1.116 | 1.169 | 1.042 |
| 29 | SPECIAL SERVICES: | | | | | |
| 30 | REGISTRY | 1.119 | 1.117 | 1.122 | 1.000 | 1.041 |
| 31 | CERTIFIED | 1.117 | 1.117 | 1.117 | 1.000 | 1.041 |
| 32 | INSURANCE | 1.122 | 1.117 | 1.119 | 1.000 | 1.041 |
| 33 | COD | 1.117 | 1.117 | 1.118 | 1.000 | 1.042 |
| 34 | MONEY ORDERS | 1.000 | 1.117 | 1.000 | 1.000 | 1.041 |
| 35 | STAMPED CARDS | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 36 | STAMPED ENVELOPES | 1.000 | 1.116 | 1.000 | 1.000 | 1.000 |
| 37 | SPECIAL HANDLING | 1.128 | 1.116 | 1.000 | 1.000 | 1.000 |
| 38 | POST OFFICE BOX | 1.104 | 1.117 | 1.107 | 1.000 | 1.000 |
| 39 | OTHER | 1.194 | 1.117 | 1.119 | 1.000 | 1.041 |
| 40 | TOTAL SPECIAL SERVICES | 1.148 | 1.117 | 1.118 | 1.000 | 1.041 |
| 41 | TOTAL VOLUME VARIABLE | 1.199 | 1.117 | 1.116 | 1.169 | 1.042 |

Source: USPS LR-K-52, Part II.

**TEST YEAR MAIL PROCESSING
COST POOL PIGGYBACK FACTORS**

| COST POOL | PIGGYBACK FACTOR | COST POOL | PIGGYBACK FACTOR |
|---|-------------------------|--|-------------------------|
| BCS - Other than CBCS/DBCS | 1.778 | Air Contract DCS and Incoming/SWYB | 1.786 |
| CBCS / DBCS | 1.800 | Business Reply / Postage Due | 1.330 |
| OCR | 2.073 | Express Mail | 1.350 |
| AFSM100 - LDC 12 (incl LDC 15 VCS keying) | 1.910 | Mailgram | 1.242 |
| FSM - Other than FSM 1000 & AFSM100 | - | Registry | 1.390 |
| FSM 1000 | 1.899 | Damaged Parcel Rewrap | 1.338 |
| Mechanized Parcels | 1.477 | Empty Equipment | 2.955 |
| SPBS - Non Priority | 1.764 | International | 1.456 |
| SPBS - Priority | 1.764 | PMPCs | 1.576 |
| Mechanical Sort - Sack Outside | 2.219 | LDC 49 - Computerized Forwarding Syst. | 1.607 |
| Mechanical Tray Sorter | 1.562 | LDC 79 - Mailing Req' & Bus. Mail Entry | 1.322 |
| Manual Flats | 1.283 | Miscellaneous/Support | 1.263 |
| Manual Letters | 1.267 | BMC: Non-Machinable Outside (NMO) | 1.571 |
| Manual Parcels | 1.419 | BMC: Allied Labor & all other Mail Processing | 1.545 |
| Manual Priority | 1.440 | BMC: Platform | 1.622 |
| LDC 15 - RBCS | 1.779 | BMC: Parcel Sorting Machine | 3.046 |
| Cancellation | 2.293 | BMC: SPBS & Irregular Parcels (IPP & 115) | 1.785 |
| Dispatch | 1.517 | BMC: Sack Sorting Machine | 2.159 |
| Flats Preparation | 1.302 | Post Office, Station & Branch Allied | 1.738 |
| Mail Preparation - metered | 1.539 | Post Office, Station & Branch Automated/Mechanized | 2.178 |
| Opening Unit - BBM | 1.330 | Post Office, Station & Branch Express Mail | 1.381 |
| Opening Unit - Preferred Mail | 1.308 | Post Office, Station & Branch Manual Flat | 1.339 |
| Opening - Manual transport | 1.306 | Post Office, Station & Branch Manual Letter | 1.312 |
| Platform | 1.458 | Post Office, Station & Branch Manual Parcel | 1.510 |
| Pouching Operations | 1.312 | Post Office, Station & Branch Miscellaneous | 1.261 |
| Presort | 1.594 | Post Office, Station & Branch Registry | 2.729 |
| Manual Sort - Sack Outside | 1.332 | | |

Source: USPS LR-K-52, Part III.

**TEST YEAR MAIL PROCESSING
COST POOL PIGGYBACK FACTORS**

Disaggregated Cost Pool Piggyback Factors for BCS, RBCS, PSM, OCR, APPS AND SPBS

| COST POOL | PIGGYBACK FACTOR |
|--|-----------------------------|
| PRIMARY PSM | 2.145 |
| SECONDARY PSM | 5.391 |
| NMO | 1.571 |
| TOTAL | 2.524 |
| | |
| DBCS | 1.846 |
| CSBCS | 2.025 |
| CIOSS | 1.671 |
| | |
| RBCS: LMLM | 3.446 |
| RBCS: REMOTE ENCODING (w/o AFSM 100 REC) | 1.337 |
| TOTAL | 1.779 |
| | |
| OCR w/RCR & IPSS, BCS-OSS (OTHER WORKROOM) | 2.396 |
| AFSM 100 (w/o VCS OR FLATS REC) | 1.630 |
| REC -- TOTAL (LETTER, FLAT, PARCEL, PARS) | 1.343 |
| | |
| SPBS | 1.630 |
| APPS (w/o REC COSTS) | 2.333 |
| APPS (W/REC COST AS INDIRECT) | 2.814 |

Source: USPS LR-K-52, Part III.

Additional Piggyback Factors and Other Costs

| | |
|---|-------|
| Test Year Window Service Piggyback Factor: | |
| All subclasses & Spec. Ser. Except P.O. Box | 1.348 |
| All subclasses & Spec. Ser. Except P.O. Box, excluding space related | 1.179 |
| Source: USPS LR-K-52, Part II. | |

| | |
|---|-------|
| Test Year City Carrier Piggyback Factor, Using Total Special Services Costs: | |
| Office | 1.246 |
| Street | 1.285 |
| Total | 1.273 |
| Source: USPS LR-K-52, Part II. | |

| | |
|---------------------------------|----------|
| Test Year Cost per Square Foot: | |
| Rent | \$ 9.07 |
| Facility-Support | \$ 8.40 |
| Total | \$ 17.47 |
| Source: USPS LR-K-52, Part III. | |

**Priority Mail Incremental Costs for
Priority Mail Processing Centers (PMPC)**

Summary of Volume Variable and Non-Volume Variable Costs
(000s of \$)

| | Volume Variable Costs | Non-Volume Variable Costs |
|-----------------------------------|-----------------------------|---------------------------------|
| Labor Costs: | | |
| Processing | 114,455 | 23,665 |
| Administrative | 1,222 | 1,005 |
| Processing Supervision | 8,969 | 7,198 |
| Other Supervision | - | 1,865 |
| Facility -Related | 1,222 | 0 |
| Other | 662 | 4,812 |
| Non-Personnel: | | |
| Facility-Related | 33,835 | - |
| Transportation | 6,314 | - |
| Miscellaneous Supplies & Services | 2,820 | 3,820 |
| Other | 0 | 10,111 |
| Totals | 169,500 | 52,475 |
| Total Accrued | 221,975 | |

Source: USPS LR-K-52, Part IV.

STANDARD REGULAR FLATS-PARCEL COST ADJUSTMENT FOR COSTS BY SHAPE

PART I CALCULATION OF RPW/RPW-ODIS RATIC

ORIGIN-DESTINATION INFORMATION SYSTEM - REVENUE PIECES & WEIGHT

DESTINATING VOLUME BY CLASS & SHAPE

Volumes in 000s

| ODIS | | Letters & Cards | Flats | IPPS/Parcels | Total |
|----------------------|----------------|-----------------|------------|--------------|------------|
| STANDARD MAIL | <i>ECR-RT</i> | 6,414,821 | 17,985,858 | 67,874 | 24,468,553 |
| All | <i>REGULAR</i> | 48,807,880 | 14,706,718 | 803,696 | 64,318,294 |
| | <i>ALL</i> | 55,222,701 | 32,692,577 | 871,570 | 88,786,847 |

| ODIS | | Letters & Cards | Flats | IPPS/Parcels | Total |
|---------------------------|----------------|-----------------|-------|--------------|-------|
| Distribution Key % | <i>ECR-RT</i> | 26.2% | 73.5% | 0.3% | 1 |
| | <i>REGULAR</i> | 75.9% | 22.9% | 1.2% | 1 |
| | <i>ALL</i> | | | | |

RPW Volumes with ODIS Shape Shares

| | | Letters & Cards | Flats | IPPS/Parcels | Total |
|----------------------|----------------|-----------------|------------|--------------|------------|
| RPW Adjusted | <i>ECR-RT</i> | 8,650,349 | 24,253,825 | 91,528 | 32,995,701 |
| STANDARD MAIL | <i>REGULAR</i> | 47,479,534 | 14,306,463 | 781,823 | 62,567,820 |
| All | <i>ALL</i> | 56,129,883 | 38,560,288 | 873,350 | 95,563,521 |
| | | | | 95,563,521 | |

RPW Volumes by Shape

| | | Letters & Cards | Flats | IPPS/Parcels | Total |
|----------------------|----------------|-----------------|------------|--------------|------------|
| RPW | <i>ECR-RT</i> | 8,500,989 | 24,492,946 | 1,766 | 32,995,701 |
| STANDARD MAIL | <i>REGULAR</i> | 48,117,714 | 13,859,534 | 590,572 | 62,567,820 |
| All | <i>ALL</i> | 56,618,703 | 38,352,480 | 592,338 | 95,563,521 |
| | | | | 95,563,521 | |

RPW/RPW-ODIS *REGULAR* 0.755

PART II: CALCULATION OF ADJUSTMENT

| | Unadjusted Costs | Flats | IPPS/Parcels | Total |
|--|------------------|-----------|--------------|---------|
| Std. Reg. Unit Costs | | 13.85 | 80.72 | |
| Total Reg. Costs | | 1,919,626 | 476,697 | |
| Split of Parcel Costs to Flats & Parcels | | 116,610 | 360,087 | 476,697 |
| | Adjusted Costs | | | |
| Total Reg. Costs | | 2,036,236 | 360,087 | |
| Std. Reg. Unit Costs | | 14.69 | 60.97 | |
| Adjustment Ratios | | 1.061 | 0.755 | |

SOURCE: USPS LR-K-53, PART III

TEST YEAR MAIL PROCESSING UNIT COSTS BY SHAPE

(CENTS/PIECE)

| Subclass | Letters/Cds. | Flats | Parcels/IPPs | All Shapes Row Average | Subclass Average |
|---|--------------|-------|--------------|---------------------------|---------------------|
| First Class Letters Single Piece | 11.42 | 37.02 | 90.14 | 14.39 | 14.39 |
| First Class Letters Presort Carrier Route | 1.86 | - | - | 1.86 | 4.52 |
| First Class Letters Presort Non-Carrier Route | 4.16 | 24.34 | 288.91 | 4.56 | 4.52 |
| First Class Cards Single Piece | 9.89 | - | - | 9.89 | 9.89 |
| First Class Cards Presort Carrier Route | 1.84 | - | - | 1.84 | 2.53 |
| First Class Cards Presort Non-Carrier Route | 2.54 | - | - | 2.54 | 2.53 |
| IN COUNTY | 0.49 | 2.95 | 347.56 | 2.77 | 2.77 |
| OUT COUNTY | 16.50 | 12.28 | 2,619.08 | 12.76 | 12.76 |
| Periodicals Total | 10.61 | 11.57 | 2,553.72 | 11.95 | 11.95 |
| STD (A) ENH.CARR | 1.57 | 1.30 | 893.44 | 1.42 | 1.42 |
| STD (A) REG | 4.34 | 14.69 | 60.97 | 7.17 | 7.17 |
| STD (B) PARCELS | - | - | - | 102.00 | 102.00 |
| STD (B) BD PRINT | - | - | - | 38.08 | 38.08 |
| STD (B) MEDIA ML | - | - | - | 91.83 | 91.83 |

SOURCE: USPS LR-K-53, PAGE I-1

TEST YEAR MAIL PROCESSING UNIT COSTS BY SHAPE
(CENTS/PIECE)

| | <u>Unit Cost</u> |
|---|------------------|
| F-C Single Piece Metered Letters | 10.91 |
| F-C Presort Automated Letters | 3.50 |
| F-C Presort Non-Automated Letters | 18.97 |
| F-C Presort Automated Cards | 1.90 |
| F-C Presort Non-Automated Cards | 6.55 |
| Standard: Regular Letters Automated | 3.40 |
| Standard: Regular Letters Non-Automated | 16.26 |
| F-C Automated (both CR and non-CR)- Letters | 3.32 |
| F-C Automated (both CR and non-CR)- Cards | 1.89 |
| F-C Presort and Carrier Route Presort Letters | 4.12 |
| F-C Presort and Carrier Route Presort Cards | 2.53 |