

USPS-T-2

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

PARCEL RETURN SERVICES

Docket No. MC2006-1

**DIRECT TESTIMONY
OF
MICHAEL W. MILLER
ON BEHALF OF
UNITED STATES POSTAL SERVICE**

TABLE OF CONTENTS

AUTOBIOGRAPHICAL SKETCH ii

I. PURPOSE AND SCOPE OF TESTIMONY 1

II. GUIDE TO TESTIMONY 1

III. PARCEL RETURN SERVICE COST METHODOLOGY 1

 A. ACCEPTANCE COST ESTIMATES..... 2

 B. MAIL PROCESSING COST ESTIMATES..... 3

 C. STORAGE COST ESTIMATES 5

 D. TRANSPORTATION COST ESTIMATES..... 5

 E. SCANNING COST ESTIMATES 6

 F. POSTAGE DUE COST ESTIMATES 6

IV. SUMMARY OF RESULTS 6

LIST OF TABLES

TABLE 1: PRS UNIT COST SAVINGS ESTIMATES 6

**DIRECT TESTIMONY
OF
MICHAEL W. MILLER**

AUTOBIOGRAPHICAL SKETCH

My name is Michael W. Miller. I am an Economist in Special Studies at the United States Postal Service. Special Studies is a unit of Corporate Financial Planning in Finance at Headquarters. I have testified before the Postal Rate Commission on nine separate occasions.

Most recently, I presented two direct testimonies on behalf of the Postal Service in Docket No. R2005-1. The first testimony covered First-Class Mail, Periodicals, and Standard Mail flats mail processing unit cost estimates. The second testimony presented Parcel Post, Bound Printed Matter, and Media Mail / Library Mail cost estimates.

In Docket No. C2004-1, I testified as a witness in opposition to the Time Warner, et al. complaint case.

In Docket No. R2001-1, I sponsored two separate testimonies as a direct witness on behalf of the Postal Service. The first testimony presented First-Class Mail letters/cards and Standard Mail letters mail processing unit cost estimates and worksharing related savings estimates, the Qualified Business Reply Mail (QBRM) worksharing related savings estimate, the nonstandard surcharge/nonmachinable surcharge cost studies, and the Business Reply Mail (BRM) fee cost studies. The second testimony presented First-Class Mail, Periodicals, and Standard Mail flats mail processing unit cost estimates.

In Docket No. R2000-1, I testified as the direct witness presenting First-Class Mail letters/cards and Standard Mail letters mail processing unit cost estimates and worksharing related savings estimates. My testimony also included the cost study supporting the nonstandard surcharge. In that same docket, I also testified as a rebuttal witness. My testimony contested key elements of the worksharing discount proposals

presented by several First-Class Mail intervenors, as well as the Office of the Consumer Advocate (OCA).

In Docket No. R97-1, I testified as a direct witness concerning Prepaid Reply Mail (PRM) and QBRM mail processing cost avoidance estimates. In that same docket, I also testified as a rebuttal witness concerning the Courtesy Envelope Mail (CEM) proposal presented by the OCA.

Prior to joining the Special Studies unit in January 1997, I served as an Industrial Engineer at the Margaret L. Sellers Processing and Distribution Center in San Diego, California. In that capacity, I worked on field implementation projects. For example, I was the local coordinator for automation programs in San Diego such as the Remote Bar Coding System (RBCS) and the Delivery Bar Code Sorter (DBCS). I was also responsible for planning the operations for a new Processing and Distribution Center (P&DC) that was activated in 1993. In addition to field work, I have completed detail assignments within the Systems/Process Integration group in Engineering. My primary responsibility during those assignments was the development of Operating System Layouts (OSL) for new facilities.

Prior to joining the Postal Service, I worked as an Industrial Engineer at General Dynamics Space Systems Division, where I developed labor and material cost estimates for new business proposals. These estimates were submitted as part of the formal bidding process used to solicit government contracts.

I was awarded a Bachelor of Science degree in Industrial Engineering from Iowa State University in 1984 and a Master of Business Administration from San Diego State University in 1990. I also earned a Professional Engineer registration in the State of California in 1990 and a Methods Time Measurement (MTM) "blue card" certification in 2004.

I. PURPOSE AND SCOPE OF TESTIMONY

The purpose of this testimony is to develop Test Year 2006 Parcel Return Service (PRS) cost estimates. Cost estimates can be found in Attachment A and are developed for both the Parcel Select Return Bulk Mail Center (RBMC) service and the Parcel Select Return Delivery Unit (RDU) service. These estimates are referenced in the testimony of witness Koroma (USPS-T-3) and rely on the cost methodology and cost model presented in Docket No. MC2003-2 by witness Eggleston (USPS-T-2). The cost model has been modified to incorporate Docket No. R2005-1 data, as well as information obtained from field personnel.

II. GUIDE TO TESTIMONY

This testimony includes eight attachments:

- A. Cost Summary
- B. Acceptance Cost Estimates
- C. Mail Processing Cost Estimates
- D. Storage Cost Estimates
- E. Transportation Cost Estimates
- F. Scanning Cost Estimates
- G. Postage Due Cost Estimates
- H. Postage Due Survey Data

In addition, this testimony relies on data previously submitted to the Postal Rate Commission. These data are referenced, as necessary, in this testimony and the cost model contained in the attachments.

III. PARCEL RETURN SERVICE COST METHODOLOGY

The PRS cost estimates have been separated into six categories: acceptance, mail processing, storage, transportation, scanning, and postage due. The analysis relies on a cost avoidance approach. Rather than estimating bottom-up costs, the cost difference between a benchmark and each rate category is measured. The benchmark is Intra-BMC Parcel Post.

A. ACCEPTANCE COST ESTIMATES

The acceptance cost estimates are calculated in Attachment B. The analysis is limited to window service costs. It is also assumed that the PRS acceptance costs for the RBMC and RDU services are identical.

Intra-BMC Acceptance Cost Estimates: Intra-BMC mail pieces are assumed to be either entered individually through retail channels, where they must be weighed and rated, or entered in bulk at the BMEU.

The Test Year (TY) 2006 unit cost estimate for individual retail transactions can be found in Attachment B, page 2. The cost methodology used to develop this estimate is identical to that relied upon in Docket No. MC2003-2. A time estimate for a "weigh/rate" transaction has been taken from Table 3.1 of the transaction time study conducted in Docket No. R97-1, USPS-LR-H-167. A direct cost per transaction is then estimated by applying the Docket No. R2005-1 TY 2006 window service wage rate to the transaction time estimate. Window service adjustments have then been made using Base Year 2004 data from Docket No. R2005-1, USPS-T-5, Workpapers B. Finally, a window service piggyback factor is applied.

The unit cost estimate for bulk transactions can be found in Attachment B, page 4. This estimate relies on the TY 2003 estimate from Docket No. MC2003-2. A cost escalation factor has been calculated by dividing the Docket No. R2005-1 TY 2006 window service wage rate by the Docket No. R2001-1 TY 2003 window service wage rate. The TY 2006 bulk acceptance unit cost is estimated to be the product of the cost escalation factor and the Docket No. MC2003-2 bulk acceptance unit cost estimate.

PRS Acceptance Cost Estimates: The TY 2006 unit cost estimate for PRS mail pieces can be found in Attachment B, page 3. PRS mail pieces can be given to a carrier, placed in a collection box, or submitted to a window service clerk. The cost methodology used to develop this estimate is identical to that relied upon in Docket No. MC2003-2. A time estimate for an "acceptance" transaction has been taken from Table 3.1 of the Docket No. R97-1 transaction time study. A direct cost per transaction is then estimated by applying the Docket No. R2005-1 TY 2006 window service wage rate to the transaction time estimate. Window service adjustments have then been made using

Docket No. R2005-1 Base Year 2004 data. Finally, a window service piggyback factor is applied.

The acceptance cost differences between PRS and retail Intra-BMC and PRS and bulk Intra-BMC are measured in Attachment B, page 1. Those cost difference estimates are then weighted together using the Docket No. R2005-1 retail and bulk percentage figures, which are 38.5 percent and 61.5 percent, respectively. The aggregate cost difference estimate is then applied to all PRS rate categories, as shown in Attachment A, page 1.

B. MAIL PROCESSING COST ESTIMATES

The mail processing unit cost estimates by rate category are shown in Attachment C, page 1. Model cost estimates are developed for Intra-BMC, Return Bulk Mail Center (RBMC), and Return Delivery Unit (RDU) mail pieces that are machinable, nonmachinable, and oversized. CRA adjustment factors from the Docket No. R2005-1 Parcel Post cost models (USPS-LR-K-46) are then applied. For each rate category, the mail processing unit cost savings estimates are calculated to be the difference between the CRA-adjusted mail processing unit cost estimate for a given rate category and the CRA-adjusted mail processing unit cost estimate for the corresponding Intra-BMC rate category. For example, the mail processing unit cost savings estimate for the RBMC machinable rate category reflects the mail processing unit cost difference between an Intra-BMC machinable mail piece and a RBMC machinable mail piece.

Intra-BMC Mail Processing Unit Cost Estimates: The cost models found in Attachment C contain updated Test Year 2006 inputs (wage rates, piggyback factors, volumes, etc.) from Docket No. R2005-1, USPS-LR-K-46. In addition, they also contain the Parcel Post cost methodology changes I described in my USPS-T-20 testimony in that docket. Consequently, the Intra-BMC machinable, Non Machinable Outsides (NMO), and oversize CRA-adjusted mail processing unit cost estimates calculated in Attachment C, page 1 are identical to those developed in Docket No. R2005-1, USPS-LR-K-46.

RBMC Mail Processing Unit Cost Estimates: The RBMC cost models also contain the updated TY 2006 inputs and the Parcel Post cost methodology changes from Docket No. R2005-1. Other modifications have been made as well. Field

observations indicate that the Bulk Mail Centers (BMC) isolate the PRS mail on either the Primary Parcel Sorting Machine (PPSM) or the Secondary Parcel Sorting Machine (SPSM) and that the mail for both participants at a given facility is isolated using the same machine. A BMC survey has been conducted in order to determine the methods in which the 21 facilities are currently isolating PRS machinable mail pieces. Using the survey results and PRS mail volume data, coverage factors have been developed. It is estimated that 97.36 percent of the PRS machinable mail is processed through the PPSM and 24.82 percent is further processed on the SPSM.¹ These coverage factors have been incorporated into the RBMC machinable cost model found in Attachment C, page 10.

The RBMC machinable cost model from Docket No. MC2003-2 also contained a line item titled "sort parcels to mailers." That model was developed assuming that the PRS mail pieces for all participants would be sorted to a single parcel runout or chute, at which point they would have to be sorted by the participant's ID code in a separate operation. In reality, the mail pieces bear unique ZIP Codes. Most operations have been set up such that each participant's mail is sorted to dedicated runouts or chutes. In some instances, the mail may be sent to the same runout or chute as other parcels and require further sorting. This circumstance, however, occurs throughout PSM operations and is already reflected in the productivity figures for those operations. The "sort parcels to mailers" line item has therefore been deleted from the cost model in Attachment C, page 10.

The RBMC NMO and oversize cost models from Docket No. MC2003-2 both contained two line items titled "move NMOs to mach runoff" and "sort by mailer ID." During field observations, it became apparent that these mail pieces are sorted like any other mail pieces in NMO operations. Separate containers are located at the NMO mechanism for both participants. While NMO operations generally involve 3-digit separations, there are instances, especially for local mail, where 5-digit separations are being made. The "move NMOs to mach runoff" and "sort by mailer ID" tasks have

¹ The PPSM coverage factor is less than 100 percent due to the fact that one facility inducts all outbound mail "direct-to-secondary."

therefore been deleted from the cost models, as it is assumed that these tasks would be covered by the NMO productivity figure.

RDU Mail Processing Unit Cost Estimates: The RDU cost models also contain the updated TY 2006 inputs and the Parcel Post cost methodology changes from Docket No. R2005-1. Based on initial field observations, it has been determined that no other modifications are necessary.

C. STORAGE COST ESTIMATES

The storage cost methodology in the instant proceeding follows that used by witness Eggleston in Docket No. MC2003-2. Updated cost model inputs for cost of space have been obtained from Docket No. R2005-1, USPS-LR-K-52. Furthermore, two other changes have been made, both of which concern the RBMC storage costs only. The first change concerns the number of storage days. Witness Eggleston converted the annual cost of space to a daily cost of space using 250 days per year. It is my understanding that these data are expressed in terms of delivery days. Furthermore, other postal analyses assume that there are 303 delivery days per year. Consequently, I have used the latter figure. Witness Eggleston's cost model also assumed two storage days for RBMC mail pieces. The BMC survey described above asked the respondents for the specific days of the week the participants picked up their PRS mail pieces. The number of storage days for each BMC has been calculated by dividing six delivery days by the number of pick-up days per week. Using PRS BMC-specific volume data, the weighted average number of storage days is calculated to be 1.834 storage days. That figure has been incorporated into Attachment D, page 1.

D. TRANSPORTATION COST ESTIMATES

Transportation cost estimates can be found in Attachment E, page 1. The transportation cost methodology relied upon in this docket is identical to the four-step approach used in Docket No. MC2003-2.² Test Year 2006 Parcel Post transportation data from Docket No. R2005-1, USPS-LR-K-89 have been incorporated into the cost model. The magnitude of the transportation results has also been affected by the Docket No. R2005-1 average cubic volume for a machinable Parcel Post mail piece, which is smaller than the figure relied upon in Docket No. MC2003-2.

² Please see Docket No. MC2003-2, USPS-T-2, page 6 at line 12 to page 8 at line 10.

E. SCANNING COST ESTIMATES

The scanning cost estimates have been developed using a methodology identical to that used in Docket No. MC2003-2. RDU machinable and non-machinable mail pieces require two "active" scans. RDU oversize mail pieces require three active scans. No active RBMC scans are required. The basis for the Docket No. MC2003-2 estimate is the time required for a box section clerk to perform a delivery confirmation scan. That time estimate was obtained from Docket No. R97-1. A more recent estimate can be found in Docket No. R2000-1, USPS-T-30, Section A, Data Sheet A-8. That estimate of 2.46 seconds has been relied upon in the instant proceeding. A Docket No. R2005-1 wage rate and piggyback factor have also been incorporated into the analysis.

F. POSTAGE DUE COST ESTIMATES

Postage due cost estimates are calculated using a cost methodology identical to that relied upon in Docket No. MC2003-2. These cost estimates have been developed for RBMC only. It is assumed that there are no postage due costs for RDU mail pieces. The current sampling matrix can be found in Attachment G, page 2. The sampling operations survey that was presented in USPS-T-2, Attachment H in Docket No. MC2003-2 is again relied upon in the instant proceeding. A Docket No. R2005-1 wage rate and piggyback factor have also been incorporated into the analysis.

IV. SUMMARY OF RESULTS

The total unit cost savings estimates by rate category are shown in Table 1 below:

TABLE 1: PRS UNIT COST SAVINGS ESTIMATES

CATEGORY	RBMC	RDU
Machinable	(\$1.421)	(\$2.270)
Non Machinable	(\$7.146)	(\$11.384)
Oversize	(\$19.096)	(\$30.513)

Summary of Estimated Cost Differences Compared to Benchmark

	Acceptance [1]	Mail Processing [2]	Storage [3]	Transportation [4]	Scanning [5]	Postage Due [6]	Total [7]
RBMC							
Machinable	(\$0.034)	(\$0.532)	\$0.014	(\$0.939)	\$0.000	\$0.070	(\$1.421)
Non-machinable	(\$0.034)	(\$1.134)	\$0.096	(\$6.144)	\$0.000	\$0.070	(\$7.146)
Oversize	(\$0.034)	(\$1.857)	\$0.284	(\$17.560)	\$0.000	\$0.070	(\$19.096)
RDU							
Machinable	(\$0.034)	(\$1.306)	\$0.039	(\$1.037)	\$0.069	\$0.000	(\$2.270)
Non-machinable	(\$0.034)	(\$4.897)	\$0.262	(\$6.784)	\$0.069	\$0.000	(\$11.384)
Oversize	(\$0.034)	(\$11.970)	\$0.775	(\$19.387)	\$0.103	\$0.000	(\$30.513)

Sources

- [1]: Attachment B, page 1.
- [2]: Attachment C, page 1.
- [3]: Attachment D, page 1.
- [4]: Attachment E, page 1.
- [5]: Attachment F, page 1.
- [6]: Attachment G, page 1.
- [7]: Sum of [1] through [6].

Acceptance Cost Difference Summary (per piece)

Retail Cost Difference

	Unit Costs	
PRS	\$0.237	1/
Intra-BMC (retail)	\$0.677	2/
Cost Difference	(\$0.440)	3/

Bulk Cost Difference

	Unit Costs	
PRS	\$0.237	4/
Intra-BMC (bulk)	\$0.016	5/
Cost Difference	\$0.221	6/

Weighted Average Cost Difference

	Distribution [1]	Cost Difference [2]	
Entered at Window (Retail)	38.5%	(\$0.440)	2a
Entered in Bulk (Non-retail)	61.5%	\$0.221	2b
Weighted Average Cost Difference per piece		(\$0.034)	2c

Sources

- 1/: Attachment B, page 3.
- 2/: Attachment B, page 2.
- 3/: (1) -(2),
- 4/: Attachment B, page 3.
- 5/: Attachment B, page 4..
- 6/: (4) - (5).

[1]: Docket R2005-1, USPS-LR-K-46, page 6.

[2]: Estimated cost differences

[2a]: (3).

[2b]: (6).

[2c]: Estimated costs in [2a] and [2b] weighted by percentages in [1].

**Intra-BMC Retail Transactions
Cost Per "Weight/Rate" Transaction**

Transaction Time (in seconds)			64.800		1/
Transaction Time (in minutes)			1.080		2/
TY 06 Wage Rate (per hour)			\$36.344		3/
TY 06 Wage Rate (per minute)			\$0.606		4/
Direct Cost per transaction			\$0.654		5/
Misc. Volume Variable Window Costs	9.52% x	\$0.654 =	\$0.062		6/
			+ <u>\$0.654</u>		
			\$0.716		
Waiting Time Adjustment	26.64% x	\$0.654 =	\$0.174		7/
			+ <u>\$0.716</u>		
			\$0.891		
Variability	56.37% x	\$0.891 =	\$0.502		8/
Piggyback Factor	1.348 x	\$0.502 =	\$0.677		9/
Cost per minute for Retail Transaction		=	\$0.677		10/

Sources

- 1/: Docket No. R97-1, LR-H-167 (Transaction Time Study), Table 3.1, page 160, "weight/rate" tas
- 2/: (1) / 60.
- 3/: Attachment C, page 4, line (6).
- 4/: (3) / 60.
- 5/: (2) x (4).
- 6/: Docket No. R2005-1, USPS-LR-K-5, Workpapers B, Worksheet 3.2.1 (break time, clocking in and out, moving equip.).
- 7/: Docket No. R2005-1, USPS-LR-K-5, Workpapers B, Worksheet 3.2.1
- 8/: Docket No. R2005-1, USPS-LR-K-5, Workpapers B, Worksheet 3.2.1
- 9/: Docket No. R2005-1, USPS-LR-K-52
- 10/: Product from (9).

**PRS Retail Transactions
Cost Per "Acceptance" Transaction**

Transaction Time (in seconds)		22.650	1/
Transaction Time (in minutes)		0.378	2/
TY 06 Wage Rate (per hour)		\$36.344	3/
TY 06 Wage Rate (per minute)		\$0.606	4/
Direct Cost per transaction		\$0.229	5/
Misc. Volume Variable Window Costs	9.52% x \$0.229 =	\$0.022	6/
		+ <u>\$0.229</u>	
		\$0.250	
Waiting Time Adjustment	26.64% x \$0.229 =	\$0.061	7/
		+ <u>\$0.250</u>	
		\$0.311	
Variability	56.37% x \$0.311 =	\$0.176	8/
Piggyback Factor	1.348 x \$0.176 =	\$0.237	9/
Cost per minute for Retail Transaction	=	\$0.237	10/

Sources

- 1/: Docket No. R97-1, LR-H-167 (Transaction Time Study), Table 3.1, page 160, "accepta
- 2/: (1) / 60.
- 3/: Attachment C, page 4, line (6).
- 4/: Row (3) / 60.
- 5/: (2) x (4).
- 6/: Docket No. R2005-1 , USPS-LR-K-5, Workpapers B, Worksheet 3.2.1 (break time, clocking in and out, moving equip.).
- 7/: Docket No. R2005-1, USPS-LR-K-5, Workpapers B, Worksheet 3.2.1.
- 8/: Docket No. R2005-1, USPS-LR-K-5, Workpaper B, Worksheet 3.2.1.
- 9/: Docket No. R2005-1, USPS-LR-K-52
- 10/: Product from (9).

Intra-BMC Bulk Acceptance/Verification Cost Methodology

Docket No. MC2003-2 Unit Cost Estimate	1/	\$0.014
TY 2003 Window Service Wage Rate	2/	\$32.306
TY 2006 Window Service Wage Rate	3/	\$36.344
Cost Escalation Factor	4/	1.125
TY 2006 Unit Cost Estimate	5/	\$0.016

Sources

- 1/: Docket No. MC2003-2, USPS-T-2, Attachment B, page 4
- 2/: Docket No. MC2003-2, USPS-T-2, Attachment C, page 4
- 3/: Docket No. MC2006-1, USPS-T-2, Attachment C, page 4
- 4/: (3) / (2)

Mail Processing Cost Estimate Summary Page

Estimated Mail Processing Costs

	Modeled Costs [1]	CRA Adjustment Factors		Adjusted Costs [4]	
		Proportional [2]	Fixed [3]		
Intra-BMC Machinable	\$1.222	1.219	\$0.120	\$1.609	4a
Intra-BMC Non Machinable	\$4.353	1.219	\$0.120	\$5.424	4b
Intra-BMC Oversize	\$10.588	1.219	\$0.120	\$13.022	4c
RBMC Machinable	\$0.785	1.219	\$0.120	\$1.077	4d
RBMC Nonmachinable	\$3.422	1.219	\$0.120	\$4.290	4e
RBMC Oversize	\$9.064	1.219	\$0.120	\$11.165	4f
RDU Machinable	\$0.150	1.219	\$0.120	\$0.303	4g
RDU Nonmachinable	\$0.334	1.219	\$0.120	\$0.527	4h
RDU Oversize	\$0.765	1.219	\$0.120	\$1.052	4i

Estimated Mail Processing Cost Differences

Rate Category	Benchmark	Cost Difference [5]	
RBMC Machinable	Intra-BMC mach	(\$0.532)	5a
RBMC Nonmachinable	Intra-BMC nmo	(\$1.134)	5b
RBMC Oversize	Intra-BMC over	(\$1.857)	5c
RDU Machinable	Intra-BMC mach	(\$1.306)	5d
RDU Nonmachinable	Intra-BMC nmo	(\$4.897)	5e
RDU Oversize	Intra-BMC over	(\$11.970)	5f

Sources

- [1]: Modeled costs from Attachment C, pages 7-15.
- [2]: Docket No. R2005-1, USPS-LR-K-46
- [3]: Docket No. R2005-1, USPS-LR-K-46
- [4]: [1] * [2] + [3].
- [5]: Difference between Cost Category and Benchmark.
 - [5a]: (4a)-(4d).
 - [5b]: (4b)-(4e)
 - [5c]: (4c)-(4f).
 - [5d]: (4a)-(4g)
 - [5e]: (4b)-(4h).
 - [5f]: (4c)-(4i).

Productivities and Variabilities for Direct Labor Operations

	Productivities (Units per Wkhr)	
UNLOADING		
Unload sacked machinable parcels to extended conveyor	213.2	1/
Unload machinable parcels to extended conveyor	709.8	1/
Unload non-machinable parcels	183.9	1/
Unload non-machinable parcels to IHC only (proxy for sacks)	175.6	1/
Unload wheeled containers	23.7	1/
Unload Pallets/Postal Paks/Pallet Box	14.0	1/
DUMPING & SACK HANDLING		
Dump Containers	7.6	1/
Sack shake out	85.4	1/
Manually dump sacks at Non-BMC	119.8	2/
Sack sorter (PIRS 98)	419.7	3/
PARCEL SORTING MACHINE DISTRIBUTION		
PPSM	897.4	3/
SPSM	2005.2	3/
SPSM (Before the SSIU)	1474.7	4/
100 percent Key Rate	971.1	5/
NONMACHINABLE OUTSIDES DISTRIBUTION		
NMO Distribution	82.7	3/
NMO Distribution at SCFs	452.6	6/
Parcel Sort at AO	521.7	8/
OTHER OPERATIONS		
Tend container loader/sweep runouts	6.4	1/
Crossdock containers	8.0	1/
Sack and Tie	148.1	1/
LOADING		
Bedload NMOs to van from IHCs (proxy for machinables)	201.3	1/
Bedload Sacked Machinables	208.1	1/
Load wheeled containers	11.9	1/
Load Pallets/Postal Paks/Pallet Boxes	15.3	1/
Variabilities		
BMC Platform	0.83	7/
BMC Other	0.83	7/
PSM	0.83	7/
SSM	0.83	7/
SPBS	0.83	7/
NMO Distribution at BMCs	0.83	7/
Platform Non-BMC	0.83	7/
NMO Distribution at Non-BMCs	0.78	7/
LDC43	0.83	7/

Sources

- 1/: Docket No. R97-1, LR-H-132, page 329.
- 2/: Proxy based on Planning Guidelines (PGLs).
- 3/: GFY 2003 PIMS
- 4/: National Database, PIRS average 1995 - 2000.
- 5/: National Database, PIRS FY93, (pure keying, no prebarcode).
- 6/: Docket No. R2005-1, USPS-LR-K-56
- 7/: Docket No. R2005-1, USPS-T-11, Table 1
- 8/: Docket No. R2001-1, LR-J-64, Attachment D, page 2 (sorting 5-digit to carrier-route).

Arrival and Dispatch Profiles

Mail Flow Arrival Profile at Originating BMCs	Arrival and Dispatch Percentages	
Machinable Parcels Arriving in Bedloaded Sacks at BMC	4.3%	1/
Machinable Parcels Arriving Bedloaded at BMC	7.0%	1/
Machinable Parcels Arriving sacked in OTRs at BMC	11.5%	1/
Machinable Parcels Arriving loose in OTRs at BMC	51.1%	1/
Machinable Parcels Arriving Palletized at BMC	1.6%	1/
Machinable Parcels Arriving in Pallet Boxes at BMC	0.9%	1/
Machinable Parcels Arriving in Hampers/APC/OWC (OWC) at BMC	23.6%	1/
Non-Machinable Parcels Arriving Bedloaded at BMC	4.0%	1/
Non-Machinable Parcels Arriving Palletized at BMC	1.3%	1/
Non-Machinable Parcels Arriving in OTR Containers at BMC	72.5%	1/
Non-Machinable Parcels Arriving in Hampers/APC/OWC (OWC) at BMC	22.2%	1/
Mail Flow Arrival Profile from Origin BMCs to Destination BMCs		
Machinable Parcels Arriving in Postal Paks at Destination BMC (from Origin BMC)	100.0%	2/
NMOs Arriving Palletized at Destination BMC (from Origin BMC)	100.0%	2/
Mail Flow Arrival at Destinating BMCs for DBMC parcels		
Machinable Parcel Arriving Bedloaded at DBMC	96.2%	3/
Machinable Parcels Arriving on Pallets at DBMC	0.3%	3/
Machinable Parcels Arriving in OTRs at BMC	0.8%	3/
Machinable Parcels Arriving in Gaylords at DBMC	2.6%	3/
Machinable Parcels arriving in OWC at DBMC	0.1%	3/
Non-Machinable Parcels Arriving Bedloaded at DBMCs	98.5%	3/
Non-Machinable Parcels Arriving in Pallet Boxes at DBMC	0.7%	3/
Non-Machinable Parcels Arriving on Pallets at DBMC	0.8%	3/
Mail Flow Dispatch Profiles From BMCs to Service Area		
Machinable Parcels Dispatched in Bedloaded Sacks to Service Area	23.8%	4/
Machinable Parcels Dispatched loose in OTRs to Service Area	60.3%	4/
Machinable Parcels Dispatched sacked in OTRs to Service Area	2.9%	4/
Machinable Parcels Dispatched in Hampers/APC/OWC (OWC) to Service Area	13.0%	4/
Non-Machinable Parcels Dispatched Bedloaded to Service Area	12.9%	5/
Non-Machinable Parcels Dispatched on Pallets to Service Area	31.0%	5/
Non-Machinable Parcels Dispatched in OTRs to Service Area	53.6%	5/
Non-Machinable Parcels Dispatched in Hampers/APC/OWC (OWC) to Service Area	2.5%	5/
Mail Flow Dispatch Profiles to Delivery Unit		
Machinable Parcels Dispatched in Bedloaded Sacks to Delivery Unit	26.7%	6/
Machinable Parcels Dispatched loose in OTRs to Service Area to Delivery Unit	60.3%	6/
Machinable Parcels Dispatched in OWC to Delivery Unit	13.0%	6/
Non-Machinable Parcels Dispatched Bedloaded to Delivery Unit	26.7%	7/
Non-Machinable Parcels Dispatched in OTRs to Delivery Unit	60.3%	7/
Non-Machinable Parcels Dispatched in Hampers/APC/OWC (OWC) to Delivery Unit	13.0%	7/

Sources

- 1/: Docket No. R97-1 USPS LR-H-131, Table 1. Assume 61.6 of bedloaded is loose and 38.4 is sacked.
Assume 81.6 percent of mail in OTRs is loose and 18.4 percent is sacked (Docket No. R97-1, LR-H-132, page 277).
- 2/: Assumptions that 100 percent of parcels going from BMC to BMC will be in Postal Paks.
- 3/: Unload Profile and # of handlings are from Docket No. R97-1 USPS-LR-H-131, Table 2.
- 4/: Docket No. R97-1 USPS LR-H-132, Attachment 1, page 274.
- 5/: Docket No. R97-1 USPS LR-H-132, Attachment 3, page 278.
- 6/: Assume same as dispatch profile as BMC, but sacks in OTRs get bedloaded.
- 7/: Use Dispatch profile of machinables as a proxy, use bedloaded sacks for bedloaded NMOs.

Piggyback Factors, Wages, Mail Flow Operating Assumptions

Wage Rate with Premium Pay Factor Applied	\$35.371	1/
Premium Pay Factor	0.989	2/
TY Other mail processing wage rate	\$35.772	3/
Window Service Adjustment Factor	1.075	4/
Window Service Base year wage rate	33.804	5/
Window Service Test year wage rate	36.344	6/
Mail Processing Operation Specific Piggyback Factors		
NMO Sorting at BMC	1.571	7/
Other Operations at BMCs	1.545	7/
Platform BMC	1.622	7/
Primary Parcel Sorting Machine	2.145	7/
Secondary Parcel Sorting Machine	5.391	7/
Sack Sorting Machine - BMC	2.159	7/
NMO Sorting at SCF	1.419	7/
Platform Non-BMC	1.458	7/
NonMODS Allied	1.738	7/
NonMODSMANP	1.510	7/
Window Service Piggyback factor (Parcel Post)	1.348	8/
Mail Flow Operating Assumptions		
Percent with direct transportation to destinating delivery unit from BMC	12.3%	9/
Percent Sorted to 5-Digits by Primary Parcel Sorting Machine	20.1%	10/
Destinating BMCs will feed barcoded destinating mail unfiltered to secondary	20.8%	11/
Probability that mail fed directly to nonspecific secondary will receive more than one sort	50.0%	12/
Probability that barcode on secondary will not be readable	3.0%	13/
Proportion of parcel singulators (SSIU) being at secondary	100.0%	14/
Proportion sent from secondary to primary due to SSIU	3.0%	15/
Probability of Inter-BMC parcel going to primary psm at destination BMC	85.7%	16/
Probability of Inter-BMC parcel being handled by SSIU in destination BMC	94.5%	17/
Probability of Intra-BMC and DBMC parcels going to primary psm (or get keyed)	100.00%	18/
Probability of Intra-BMC and DBMC on secondary psm	79.9%	19/
Probability that NMOs will NOT be inducted on the conveyor system (not used for NMOs over 10)	41.2%	20/
Probability that NMOs will be NOT be moved using towveyor (not used for pallets)	31.4%	20/
Probability that PRS machinable mail pieces are processed on the PPSM	97.4%	21/
Probability that PRS machinable mail pieces are processed on the SPSM	24.8%	21/

Sources

- 1/: (2) x (3).
2/: Docket No. R2005-1, USPS-LR-K-55
3/: Docket No. R2005-1, USPS-LR-K-55
4/: (6) / (5).
5/: Docket No. R2005-1, USPS-LR-K-55
6/: Docket No. R2005-1, USPS-LR-K-55
7/: Docket No. R2005-1, USPS-LR-K-52
8/: Docket No. R2005-1, USPS-LR-K-52
9/: USPS LR-PCR-40, page 64.
10/: Docket R2001-1, USPS LR-J-64, Attachment J, page 1, [10].
11/: Docket R2001-1, USPS LR-J-64, Attachment J, page 1, [9].
12/: Assumption that mail going to secondary PSM will be evenly split between scheme 1 and scheme 2.
13/: Assumption used by Operations.
14/: Assumption used by Operations.
15/: (14) x (15).
16/: $[1 - (12)] + [(16) \times (12)] + \{[(1) - (12)] \times [(1) - (11)] \times (16)\} + \{(11) \times (12) \times [(1) - (16)]\}$.
17/: $(12) + [(11) \times (13)] + [1 - (12)] \times [(1) - (11)]$.
18/: $1 + [1 - (11)] \times (16)$.
19/: $1 - (11)$.
20/: Docket R2001-1, USPS LR-J-64, Attachment J, page 1, [11].

Other Inputs

FY 2004 Volumes

	Percents		machinable [3]	NMO		Total [6]
	% mach [1]	% over [2]		(non oversize) [4]	Oversize [5]	
Inter-BMC	94.5%	0.063%	73,627,919	4,217,546	48,858	77,894,322
Intra-BMC	94.3%	0.099%	29,007,959	1,710,042	30,331	30,748,332
DBMC	93.4%	0.094%	81,164,769	5,617,204	81,739	86,863,713
DSCF	93.4%	0.094%	2,787,960	192,948	2,808	2,983,715
DDU	93.4%	0.094%	<u>160,094,387</u>	<u>11,079,720</u>	<u>161,227</u>	<u>171,335,334</u>
Total			346,682,994	22,817,459	324,963	369,825,416

Calculation of Percent of Inter and Intra entered at origin AO

Percent of inter-BMC that is retail	25.6%	1/
Percent of intra-BMC that is retail	38.5%	2/

Average Cubic Feet of Parcel Post

	[7]
Machinable	0.425
Non-machinable	2.777
Oversize	7.938

Sources

Rows (1&2)/: Docket R2001-1, LR-J-64, Attachment A, page 6.

Column [1]: Docket R2001-1, LR-J-67, Attachment A, page 6. Machinable volume / total volume.

Column [2]: Docket R2001-1, LR-J-67, Attachment A, page 6. Nonmachinable volume / total nonmachinable volume.

Column [3]: Column [1] * column [6].

Column [4]: Column [6] - column [3] - column [5].

Column [5]: Column [2] * column [6].

Column [6]: GFY2004 RPW volumes.

Column [7]: Docket No. R2005-1, USPS-LR-K-47

Conversion Factor Calculations

Container Type	Outside Dim. Per Container (Inches) [1]	Inside Dim. Per Container (Inches) [2]	Cubic Feet Per Container [3]	Effective Parcel Capacity (# of Parcels) [4]	Capacity at Average Fullness (# of Parcels) [5]	Average % FULL [6]
Machinable						
Pallet	48x40x48	48x40x48	53.3	125.6	106.8	85%
Postal Pak	48x40x69	46.5x38.5x69	71.5	153.1	130.1	85%
Pallet Box	48x40x69	46.5x38.5x69	71.5	153.1	134.7	88%
Pallet Box (for space)	48x40x70	46.5x38.5x70	71.5	153.1	114.8	75%
Sacks on In-house Container	65x41.5x36	65x41.5x36	56.2	120.3	102.3	85%
NMOs						
Pallet	48x40x48	48x40x48	53.3	19.2	19.2	100%
Pallet Box	48x40x69	46.5x38.5x69	71.5	23.4	19.9	85%
In-house Container	65x41.5x36	65x41.5x36	56.2	18.4	15.6	85%
Oversize NMOs						
108"-130" on Pallet	48x40x48	48x40x48	53.3	6.7	6.7	100%
108"-130" in IHC	65x41.5x36	65x41.5x36	56.2	6.4	6.4	100%

Pieces Per Container	Machinable		Nonmachinable		108"-130"
	R2000-1 (FY98) [7]	R2005-1 (FY04) [8]	R2000-1 (FY98) [9]	R2005-1 (FY04) [10]	R2005-1 (FY04) [11]
Sack	5.1	7.0	n/a	n/a	n/a
Sack in OTR	81.8	112.0	n/a	n/a	n/a
OTR	69.0	94.5	27.1	19.5	6.8
APC	35.7	48.8	14.0	10.1	3.5
Hamper	23.0	31.5	9.0	6.5	2.3

	Cubic Feet Per Parcel Post			No. of Sacks	No. of Sacks
	Machinable [12]	NMO [13]	108"-130" [14]	on IHC [15]	on Postal Pak [16]
R2005-1 (BY04)	0.425	2.777	7.94	14.61	18.59
R2000 (BY98)	0.581	1.992			

Sources

- Columns [1 & 2]: Container Methods, Handbook PO-502 (September 1992), USPS LR-H-133.
- Column [3]: (Length * width * height) / (12*12*12).
- Column [4]: (Column [3]) / ((column [13]) * air factor), to account for "effective cube" and (column [3]) / ((column [14]) * air factor) and (column [3]) / ((column [16]) * air factor).
Air factor =1 for pallets, and 1.1 for all else.
- Column [5]: Effective cubic capacity (column [4]) * average % fullness (column [6]).
- Column [6]: Pallets, postal paks and IHCs should be as full as practicable before dispatch so it is reasonable to assume these containers will be at least 85% full.
The majority of pallet boxes come from mailers who must have 75 percent full boxes, and tend to fill them to maximize capacity.
Therefore 88 percent, the average of 75 and 100 percent was used.
- Column [7]: Docket No. R84-1, Exhibit USPS-141.
- Column [8]: Pieces per container in Docket No. R84-1 (column [7]) * FY82 cubic feet per piece (column [14]) / FY98 cubic feet per piece (column [14]).
- Column [9]: Docket No. R84-1, Exhibit USPS-141.
- Column [10]: Pieces per container in Docket No. R84-1 (column [9]) * FY82 cubic feet per piece (column [14]) / FY98 cubic feet per piece (column [14]).
- Column [11]: Column [10] * column [13] / column [15].
- Column [12]: Attachment C, page 5, column [7], machinable parcels.
- Column [13]: Attachment C, page 5 column [7], non-machinable parcels.
- Column [14]: Attachment C, page 5, column [7], oversize parcels.
- Column [15]: No. of parcels on IHC (column 5) divided by no. of parcels in a sack (column 8).
- Column [16]: No of parcels on a parcel (column5) divided by no. of parcels in a sack (column 8).

Intra-BMC Machinable Mail Processing Cost Model

	[1] # handlings	[2] units/hr	[3] conversion	[4] piggyback	[5] \$ per oper.	[6] \$ per facility
Origin AO¹						\$0.068
Move Containers to Dock	0.3849	32.1	40.1	1.738	\$0.048	\$0.018
Load Containers	0.3849	11.9	40.1	1.738	\$0.129	\$0.050
Origin SCF						\$0.303
Unload Containers ²	1.0000				\$0.038	\$0.038
Crossdock containers	1.0000	8.0	40.1	1.738	\$0.191	\$0.191
Bedload Sacks	0.0434	208.1	7.0	1.458	\$0.035	\$0.002
Bedload loose	0.0696	201.3	1.0	1.458	\$0.256	\$0.018
Load Sacks in OTRs	0.1152	11.9	112.0	1.458	\$0.039	\$0.004
Load Loose in OTRs	0.5108	11.9	94.5	1.458	\$0.046	\$0.023
Load Pallets	0.0160	15.3	106.8	1.458	\$0.032	\$0.001
Load Pallet Boxes	0.0090	15.3	134.7	1.458	\$0.025	\$0.000
Load OWCs	0.2360	11.9	40.1	1.458	\$0.108	\$0.026
Destination BMC						\$0.529
Unload Bedload Sack	0.0434	213.2	7.0	1.622	\$0.038	\$0.002
Unload Bedload Loose	0.0696	709.8	1.0	1.622	\$0.081	\$0.006
Unload Sacks in OTR	0.1152	23.7	112.0	1.622	\$0.022	\$0.002
Unload loose in OTR	0.5108	23.7	94.5	1.622	\$0.026	\$0.013
Unload Pallet	0.0160	14.0	106.8	1.622	\$0.038	\$0.001
Unload Pallet Boxes	0.0090	14.0	134.7	1.622	\$0.030	\$0.000
Unload Other Wheeled Cont.	0.2360	23.7	40.1	1.622	\$0.060	\$0.014
Dump OTR of sacks	0.1152	7.6	112.0	1.545	\$0.064	\$0.007
Dump OTR of loose	0.5108	7.6	94.5	1.545	\$0.076	\$0.039
Dump Pallet	0.0160	7.6	106.8	1.545	\$0.067	\$0.001
Dump Pallet Boxes	0.0090	7.6	134.7	1.545	\$0.053	\$0.000
Dump Other Wheeled Cont.	0.2360	7.6	40.1	1.545	\$0.179	\$0.042
Sack Sorter	0.1586	419.7	7.0	2.159	\$0.026	\$0.004
Sack shakeout	0.1586	85.4	7.0	1.545	\$0.091	\$0.015
PPSM	1.0000	897.4	1.0	2.145	\$0.085	\$0.085
SPSM	0.7991	2005.2	1.0	5.391	\$0.095	\$0.076
Sweep Runouts OTR	0.7327	6.4	94.5	1.545	\$0.090	\$0.066
Sack and Tie	0.2673	148.1	1.0	1.545	\$0.369	\$0.099
Bedload Sacks	0.2384	208.1	7.0	1.622	\$0.039	\$0.009
Load OTRs w/ sacks	0.0289	11.9	112.0	1.622	\$0.043	\$0.001
Load OTRs w/ loose	0.6025	11.9	94.5	1.622	\$0.051	\$0.031
Load Hampers/OWC	0.1302	11.9	40.1	1.622	\$0.121	\$0.016
Destination SCF						\$0.141
Unload Bedload Sacks	0.2091	175.6	7.0	1.458	\$0.042	\$0.009
Unload Sacks in OTR	0.0253	23.7	112.0	1.458	\$0.019	\$0.000
Unload loose in OTR	0.5284	23.7	94.5	1.458	\$0.023	\$0.012
Unload OWC	0.1142	23.7	40.1	1.458	\$0.054	\$0.006
Crossdock IHC (Bedload Sack)	0.2091	8.0	102.3	1.458	\$0.063	\$0.013
Crossdock Sacks in OTR	0.0253	8.0	112.0	1.458	\$0.057	\$0.001
Crossdock loose in OTR	0.5284	8.0	94.5	1.458	\$0.068	\$0.036
Crossdock OWC	0.1142	8.0	40.1	1.458	\$0.160	\$0.018
Bedload Sacks	0.2344	208.1	7.0	1.458	\$0.035	\$0.008
Load OTRs w/ loose	0.5284	11.9	94.5	1.458	\$0.046	\$0.024
Load Hampers/OWC	0.1142	11.9	40.1	1.458	\$0.108	\$0.012
Destination Delivery Unit						\$0.181
Unload Bedload Sacks	0.2673	175.6	7.0	1.458	\$0.042	\$0.011
Unload loose in OTR	0.6025	23.7	94.5	1.458	\$0.023	\$0.014
Unload OWC	0.1302	23.7	40.1	1.458	\$0.054	\$0.007
Dump Sacks	0.2673	119.8	7.0	1.458	\$0.062	\$0.016
Move Containers from Dock	1.0000	32.1	64.0	1.738	\$0.030	\$0.030
Sort Parcels	1.0000	521.7	1.0	1.510	\$0.102	\$0.102

Model Cost	\$1.222
-------------------	----------------

Sources

- Column [1]: Attachment C, page 3 (arrival and dispatch profiles).
- Column [2]: Attachment C, page 2 (units per workhour).
- Column [3]: Attachment C, page 6 (conversion factors).
- Column [4]: Attachment C, page 4 (piggyback factors).
- Column [5]: (TY wage rate * column [4]) / (column [2] * column [3]).
- Column [6]: (column [1] * column [5]).

¹ Number of Handlings at Origin AO from Attachment C, page 5.

² Unload Containers cost at OSCF uses the average cost of unloading containers at origin BMC as proxy.

Intra-BMC Non-machinable Mail Processing Cost Model

	[1] # handlings	[2] units/hr	[3] conversion	[4] piggyback	[5] \$ per oper.	[6] \$ per facility
Origin AO¹						\$0.330
Move Containers to Dock	0.3849	32.1	8.3	1.738	\$0.232	\$0.089
Load Containers	0.3849	11.9	8.3	1.738	\$0.627	\$0.241
Origin SCF						\$1.388
Unload Containers ²	1.0000				\$0.170	\$0.170
Crossdock containers	1.0000	8.0	8.3	1.738	\$0.927	\$0.927
Bedload NMOs	0.0400	201.3	1.0	1.458	\$0.256	\$0.010
Load NMOs in OTRs	0.7250	11.9	19.5	1.458	\$0.223	\$0.162
Load NMOs in OWCs	0.2220	11.9	8.3	1.458	\$0.526	\$0.117
Load NMOs on Pallets	0.0130	15.3	19.2	1.458	\$0.176	\$0.002
Destination BMC						\$1.277
Unload Bedloaded NMOs	0.0400	183.9	1.0	1.622	\$0.312	\$0.012
Unload NMOs in OTRs	0.7250	23.7	19.5	1.622	\$0.124	\$0.090
Unload NMOs in OWC	0.2220	23.7	8.3	1.622	\$0.292	\$0.065
Unload NMOs on Pallets	0.0130	14.0	19.2	1.622	\$0.214	\$0.003
Move IHCs (from bedload)	0.0165	16.0	15.6	1.545	\$0.218	\$0.004
Move OTRs	0.2988	16.0	19.5	1.545	\$0.175	\$0.052
Move OWC	0.0915	16.0	8.3	1.545	\$0.412	\$0.038
Move Pallets	0.0054	16.0	19.2	1.545	\$0.177	\$0.001
D. Primary NMO Sort	1.0000	82.7	1.0	1.571	\$0.672	\$0.672
Move IHCs	0.0405	16.0	18.4	1.545	\$0.185	\$0.007
Move OTRs	0.1681	16.0	19.5	1.545	\$0.175	\$0.029
Move OWC	0.0078	16.0	8.3	1.545	\$0.412	\$0.003
Move Pallets	0.3098	16.0	19.2	1.545	\$0.177	\$0.055
Bedload from IHC	0.1291	201.3	1.0	1.622	\$0.285	\$0.037
Load NMOs in OTRs	0.5363	11.9	19.5	1.622	\$0.249	\$0.133
Load NMOs in OWC	0.0248	11.9	8.3	1.622	\$0.585	\$0.015
Load NMOs on Pallet	0.3098	15.3	19.2	1.622	\$0.196	\$0.061
Destination SCF						\$0.928
Unload Bedload to IHC	0.1291	175.6	1.0	1.458	\$0.294	\$0.038
Unload OTRs	0.5363	23.7	19.5	1.458	\$0.112	\$0.060
Unload OWC	0.0248	23.7	8.3	1.458	\$0.263	\$0.007
Unload Pallet	0.3098	14.0	19.2	1.458	\$0.192	\$0.059
Move IHC	0.1291	16.0	15.6	1.458	\$0.205	\$0.027
Move OTRs	0.5363	16.0	19.5	1.458	\$0.165	\$0.089
Move OWC	0.0248	16.0	8.3	1.458	\$0.389	\$0.010
Move Pallet	0.3098	16.0	19.2	1.458	\$0.167	\$0.052
Manual Sort	1.0000	452.6	1.0	1.419	\$0.111	\$0.111
Move IHC	0.2673	16.0	15.6	1.458	\$0.205	\$0.055
Move OTRs	0.6025	16.0	19.5	1.458	\$0.165	\$0.100
Move OWC	0.1302	16.0	8.3	1.458	\$0.389	\$0.051
Bedload NMOs	0.2673	201.3	1.0	1.458	\$0.256	\$0.068
Load OTRs w/ loose	0.6025	11.9	19.5	1.458	\$0.223	\$0.135
Load Hampers/OWC	0.1302	11.9	8.3	1.458	\$0.526	\$0.068
Destination Delivery Unit						\$0.429
Unload Bedload NMOs	0.2673	175.6	1.0	1.458	\$0.294	\$0.078
Unload loose in OTR	0.6025	23.7	19.5	1.458	\$0.112	\$0.067
Unload OWC	0.1302	23.7	8.3	1.458	\$0.263	\$0.034
Move Containers from Dock	1.0000	32.1	13.1	1.738	\$0.147	\$0.147
Sort Parcels	1.0000	521.7	1.0	1.510	\$0.102	\$0.102
Model Cost						\$4.353

Column [1]: Attachment C, page 3 (arrival and dispatch profiles).
 Column [2]: Attachment C, page 2 (units per workhour).
 Column [3]: Attachment C, page 6 (conversion factors).
 Column [4]: Attachment C, page 4 (piggyback factors).
 Column [5]: (TY wage rate * column [4]) / (column [2] * column [3]).
 Column [6]: (column [1] * column [5]).

¹ Number of Handlings at Origin AO from Attachment C, page 5.

² Unload Containers cost at OSCF uses the average cost of unloading containers at origin BMC as proxy.

Intra-BMC Non-machinable Oversize Mail Processing Cost Model
Length plus Girth Between 108" and 130"

	[1] # handlings	[2] units/hr	[3] conversion	[4] piggyback	[5] \$ per oper.	[6] \$ per facility
Origin AO¹						\$0.944
Move Containers to Dock	0.3849	32.1	2.9	1.738	\$0.662	\$0.255
Load Containers	0.3849	11.9	2.9	1.738	\$1.791	\$0.689
Origin SCF						\$3.926
Unload Containers ²	1.0000				\$0.464	\$0.464
Crossdock containers	1.0000	8.0	2.9	1.738	\$2.650	\$2.650
Bedload NMOs	0.0400	201.3	1.0	1.458	\$0.256	\$0.010
Load NMOs in OTRs	0.7250	11.9	6.8	1.458	\$0.638	\$0.463
Load NMOs in OWCs	0.2220	11.9	2.9	1.458	\$1.502	\$0.333
Load NMOs on Pallets	0.0130	15.3	6.7	1.458	\$0.503	\$0.007
Destination BMC						\$2.629
Unload Bedloaded to IHC	0.0400	175.6	1.0	1.622	\$0.327	\$0.013
Unload NMOs in OTRs	0.7250	23.7	6.8	1.622	\$0.355	\$0.257
Unload NMOs in OWC	0.2220	23.7	2.9	1.622	\$0.836	\$0.185
Unload NMOs on Pallets	0.0130	14.0	6.7	1.622	\$0.611	\$0.008
Move IHC	0.0400	16.0	6.4	1.545	\$0.529	\$0.021
Move OTR	0.7250	16.0	6.8	1.545	\$0.500	\$0.363
Move OWC	0.2220	16.0	2.9	1.545	\$1.178	\$0.261
Move Pallet	0.0130	16.0	6.7	1.545	\$0.507	\$0.007
D. Primary NMO Sort	1.0000	82.7	1.0	1.571	\$0.672	\$0.672
Move IHC	0.0125	16.0	6.4	1.545	\$0.529	\$0.007
Move OTR	0.2273	16.0	6.8	1.545	\$0.500	\$0.114
Move OWC	0.0696	16.0	2.9	1.545	\$1.178	\$0.082
Move Pallet	0.0130	16.0	6.7	1.545	\$0.507	\$0.007
Bedload from IHC	0.1291	201.3	1.0	1.622	\$0.285	\$0.037
Load NMOs in OTRs	0.5363	11.9	6.8	1.622	\$0.711	\$0.381
Load NMOs on Pallet	0.3098	15.3	6.7	1.622	\$0.559	\$0.173
Load NMOs in OWC	0.0248	11.9	2.9	1.622	\$1.672	\$0.041
Destination SCF						\$2.213
Unload Bedload to IHC	0.1291	175.6	1.0	1.458	\$0.294	\$0.038
Unload OTRs	0.5363	23.7	6.8	1.458	\$0.319	\$0.171
Unload Pallet	0.3098	14.0	6.7	1.458	\$0.549	\$0.170
Unload OWC	0.0248	23.7	2.9	1.458	\$0.751	\$0.019
Move IHC	0.1291	16.0	6.4	1.458	\$0.499	\$0.064
Move OTRs	0.5363	16.0	6.8	1.458	\$0.472	\$0.253
Move Pallet	0.3098	16.0	6.7	1.458	\$0.478	\$0.148
Move OWC	0.0248	16.0	2.9	1.458	\$1.111	\$0.028
Manual Sort	1.0000	452.6	1.0	1.419	\$0.111	\$0.111
Move IHC	0.2673	16.0	6.4	1.458	\$0.499	\$0.133
Move OTRs	0.6025	16.0	6.8	1.458	\$0.472	\$0.284
Move OWC	0.1302	16.0	2.9	1.458	\$1.111	\$0.145
Bedload NMOs	0.2673	201.3	1.0	1.458	\$0.256	\$0.068
Load OTRs w/ loose	0.6025	11.9	6.8	1.458	\$0.638	\$0.385
Load Hampers/OWC	0.1302	11.9	2.9	1.458	\$1.502	\$0.196
Destination Delivery Unit						\$0.875
Unload Bedload NMOs	0.2673	175.6	1.0	1.458	\$0.294	\$0.078
Unload loose in OTR	0.6025	23.7	6.8	1.458	\$0.319	\$0.192
Unload OWC	0.1302	23.7	2.9	1.458	\$0.751	\$0.098
Move Containers from Dock	1.0000	32.1	4.7	1.738	\$0.404	\$0.404
Sort Parcels	1.0000	521.7	1.0	1.510	\$0.102	\$0.102
Model Cost						\$10.588

Sources

- Column [1]: Attachment C, page 3 (arrival and dispatch profiles).
- Column [2]: Attachment C, page 2 (units per workhour).
- Column [3]: Attachment C, page 6 (conversion factors).
- Column [4]: Attachment C, page 4 (piggyback factors).
- Column [5]: (TY wage rate * column [4]) / (column [2] * column [3]).
- Column [6]: (column [1] * column [5]).

¹ Number of Handlings at Origin AO from Attachment C, page 5.

² Unload Containers cost at OSCF uses the average cost of unloading containers at origin BMC as proxy.

RBMC Machinable Mail Processing Cost Model

	[1] # handlings	[2] units/hr	[3] conversion	[4] piggyback	[5] \$ per oper.	[6] \$ per facility
Origin AO¹						\$0.177
Move Containers to Dock	1.0000	32.1	40.1	1.738	\$0.048	\$0.048
Load Containers	1.0000	11.9	40.1	1.738	\$0.129	\$0.129
Origin SCF						\$0.303
Unload Containers ²	1.0000				\$0.038	\$0.038
Crossdock containers	1.0000	8.0	40.1	1.738	\$0.191	\$0.191
Bedload Sacks	0.0434	208.1	7.0	1.458	\$0.035	\$0.002
Bedload loose	0.0696	201.3	1	1.458	\$0.256	\$0.018
Load Sacks in OTRs	0.1152	11.9	112.0	1.458	\$0.039	\$0.004
Load Loose in OTRs	0.5108	11.9	94.5	1.458	\$0.046	\$0.023
Load Pallets	0.0160	15.3	106.8	1.458	\$0.032	\$0.001
Load Pallet Boxes	0.0090	15.3	134.7	1.458	\$0.025	\$0.000
Load OWCs	0.2360	11.9	40.1	1.458	\$0.108	\$0.026
Destination BMC						\$0.306
Unload Bedload Sack	0.0434	213.2	7.0	1.622	\$0.038	\$0.002
Unload Bedload Loose	0.0696	709.8	1.0	1.622	\$0.081	\$0.006
Unload Sacks in OTR	0.1152	23.7	112.0	1.622	\$0.022	\$0.002
Unload loose in OTR	0.5108	23.7	94.5	1.622	\$0.026	\$0.013
Unload Pallet	0.0160	14.0	106.8	1.622	\$0.038	\$0.001
Unload Pallet Boxes	0.0090	14.0	134.7	1.622	\$0.030	\$0.000
Unload Other Wheeled Cont.	0.2360	23.7	40.1	1.622	\$0.060	\$0.014
Dump OTR of sacks	0.1152	7.6	112.0	1.545	\$0.064	\$0.007
Dump OTR of loose	0.5108	7.6	94.5	1.545	\$0.076	\$0.039
Dump Pallet	0.0160	7.6	106.8	1.545	\$0.067	\$0.001
Dump Pallet Boxes	0.0090	7.6	134.7	1.545	\$0.053	\$0.000
Dump Other Wheeled Cont.	0.2360	7.6	40.1	1.545	\$0.179	\$0.042
Sack Sorter	0.1586	419.7	7.0	2.159	\$0.026	\$0.004
Sack shakeout	0.1586	85.4	7.0	1.545	\$0.091	\$0.015
PPSM	0.9736	897.4	1.0	2.145	\$0.085	\$0.082
SPSM	0.2482	2005.2	1.0	5.391	\$0.095	\$0.024
Move Pallets	1.0000	16.0	134.7	1.545	\$0.025	\$0.025
Load Pallet Boxes	1.0000	15.3	134.7	1.622	\$0.028	\$0.028

Model Cost	\$0.785
-------------------	----------------

Sources

- Column [1]: Attachment C, page 3 (arrival and dispatch profiles).
- Column [2]: Attachment C, page 2 (units per workhour).
- Column [3]: Attachment C, page 6 (conversion factors).
- Column [4]: Attachment C, page 4 (piggyback factors).
- Column [5]: (TY wage rate * column [4]) / (column [2] * column [3]).
- Column [6]: (column [1] * column [5]).

¹Assumption that all RBMC will be entered at origin AO.

²Unload Containers cost at OSCF uses the average cost of unloading containers at origin BMC as proxy.

RBMC Non-machinable Mail Processing Cost Model

	[1] # handlings	[2] units/hr	[3] conversion	[4] piggyback	[5] \$ per oper.	[6] \$ per facility
Origin AO¹						\$0.859
Move Containers to Dock	1.0000	32.1	8.3	1.738	\$0.232	\$0.232
Load Containers	1.0000	11.9	8.3	1.738	\$0.627	\$0.627
Origin SCF						\$1.388
Unload Containers ²	1.0000				\$0.170	\$0.170
Crossdock containers	1.0000	8.0	8.3	1.738	\$0.927	\$0.927
Bedload NMOs	0.0400	201.3	1.0	1.458	\$0.256	\$0.010
Load NMOs in OTRs	0.7250	11.9	19.5	1.458	\$0.223	\$0.162
Load NMOs in OWCs	0.2220	11.9	8.3	1.458	\$0.526	\$0.117
Load NMOs on Pallets	0.0130	15.3	19.2	1.458	\$0.176	\$0.002
Destination BMC						\$1.175
Unload Bedloaded NMOs	0.0400	183.9	1.0	1.622	\$0.312	\$0.012
Unload NMOs in OTRs	0.7250	23.7	19.5	1.622	\$0.124	\$0.090
Unload NMOs in OWC	0.2220	23.7	8.3	1.622	\$0.292	\$0.065
Unload NMOs on Pallets	0.0130	14.0	19.2	1.622	\$0.214	\$0.003
Move IHCs (from bedload)	0.0165	16.0	15.6	1.545	\$0.218	\$0.004
Move OTRs	0.2988	16.0	19.5	1.545	\$0.175	\$0.052
Move OWC	0.0915	16.0	8.3	1.545	\$0.412	\$0.038
Move Pallets	0.0054	16.0	19.2	1.545	\$0.177	\$0.001
D. Primary NMO Sort	1.0000	82.7	1.0	1.571	\$0.672	\$0.672
Move Pallets	1.0000	16.0	19.2	1.545	\$0.177	\$0.177
Load NMOs on Pallet	0.3098	15.3	19.2	1.622	\$0.196	\$0.061

Model Cost	\$3.422
-------------------	----------------

Sources

- Column [1]: Attachment C, page 3 (arrival and dispatch profiles).
- Column [2]: Attachment C, page 2 (units per workhour).
- Column [3]: Attachment C, page 6 (conversion factors).
- Column [4]: Attachment C, page 4 (piggyback factors).
- Column [5]: (TY wage rate * column [4]) / (column [2] * column [3]).
- Column [6]: (column [1] * column [5]).

¹Assumption that all RBMC will be entered at origin AO.

²Unload Containers cost at OSCF uses the average cost of unloading containers at origin BMC as proxy.

RBMC Non-machinable Oversize Mail Processing Cost Model
Length plus Girth Between 108" and 130"

	[1] # handlings	[2] units/hr	[3] conversion	[4] piggyback	[5] \$ per oper.	[6] \$ per facility
Origin AO¹						\$2.454
Move Containers to Dock	1.0000	32.1	2.9	1.738	\$0.662	\$0.662
Load Containers	1.0000	11.9	2.9	1.738	\$1.791	\$1.791
Origin SCF						\$3.926
Unload Containers ²	1.0000				\$0.464	\$0.464
Crossdock containers	1.0000	8.0	2.9	1.738	\$2.650	\$2.650
Bedload NMOs	0.0400	201.3	1.0	1.458	\$0.256	\$0.010
Load NMOs in OTRs	0.7250	11.9	6.8	1.458	\$0.638	\$0.463
Load NMOs in OWCs	0.2220	11.9	2.9	1.458	\$1.502	\$0.333
Load NMOs on Pallets	0.0130	15.3	6.7	1.458	\$0.503	\$0.007
Destination BMC						\$2.683
Unload Bedloaded to IHC	0.0400	175.6	1.0	1.622	\$0.327	\$0.013
Unload NMOs in OTRs	0.7250	23.7	6.8	1.622	\$0.355	\$0.257
Unload NMOs in OWC	0.2220	23.7	2.9	1.622	\$0.836	\$0.185
Unload NMOs on Pallets	0.0130	14.0	6.7	1.622	\$0.611	\$0.008
Move IHC	0.0400	16.0	6.4	1.545	\$0.529	\$0.021
Move OTR	0.7250	16.0	6.8	1.545	\$0.500	\$0.363
Move OWC	0.2220	16.0	2.9	1.545	\$1.178	\$0.261
Move Pallet	0.0130	16.0	6.7	1.545	\$0.507	\$0.007
D. Primary NMO Sort	1.0000	82.7	1.0	1.571	\$0.672	\$0.672
Move Pallet	1.0000	16.0	8.0	1.545	\$0.426	\$0.426
Load NMOs on Pallet	1.0000	15.3	8.0	1.622	\$0.470	\$0.470
Model Cost						\$9.064

Sources

- Column [1]: Attachment C, page 3 (arrival and dispatch profiles).
- Column [2]: Attachment C, page 2 (units per workhour).
- Column [3]: Attachment C, page 6 (conversion factors).
- Column [4]: Attachment C, page 4 (piggyback factors).
- Column [5]: (TY wage rate * column [4]) / (column [2] * column [3]).
- Column [6]: (column [1] * column [5]).

¹Assumption that all RBMC will be entered at origin AO.

²Unload Containers cost at OSCF uses the average cost of unloading containers at origin BMC as proxy.

RDU Machinable Mail Processing Cost Model

	[1] # handlings	[2] units/hr	[3] conversion	[4] piggyback	[5] \$ per oper.	[6] \$ per facility
Origin AO						\$0.150
Sort by Shipper ID	1.0000	521.7	1.0	1.510	\$0.102	\$0.102
Move Containers to Dock	1.0000	32.1	40.1	1.738	\$0.048	\$0.048
Load Containers	0.0000	11.9	40.1	1.738	\$0.129	\$0.000
Model Cost						\$0.150

Sources

- Column [1]: All RDU parcels will be sorted to shipper and moved to dock (USPS-T-1, Section VII).
- Column [2]: Attachment C, page 2 (units per workhour).
- Column [3]: Attachment C, page 6 (conversion factors).
- Column [4]: Attachment C, page 4 (piggyback factors).
- Column [5]: (TY wage rate * column [4]) / (column [2] * column [3]).
- Column [6]: (column [1] * column [5]).

RDU Non-machinable Mail Processing Cost Model

	[1] # handlings	[2] units/hr	[3] conversion	[4] piggyback	[5] \$ per oper.	[6] \$ per facility
Origin AO						\$0.334
Sort by Shipper ID	1.0000	521.7	1.0	1.510	\$0.102	\$0.102
Move Containers to Dock	1.0000	32.1	8.3	1.738	\$0.232	\$0.232
Load Containers	0.0000	11.9	8.3	1.738	\$0.627	\$0.000
Model Cost						\$0.334

- Column [1]: All RDU parcels will be sorted to shipper and moved to dock (USPS-T-1, Section VII).
- Column [2]: Attachment C, page 2 (units per workhour).
- Column [3]: Attachment C, page 6 (conversion factors).
- Column [4]: Attachment C, page 4 (piggyback factors).
- Column [5]: (TY wage rate * column [4]) / (column [2] * column [3]).
- Column [6]: (column [1] * column [5]).

RDU Oversize Mail Processing Cost Model
Length plus Girth Between 108" and 130"

	[1] # handlings	[2] units/hr	[3] conversion	[4] piggyback	[5] \$ per oper.	[6] \$ per facility
Origin AO						\$0.765
Sort by Shipper ID	1.0000	521.7	1.0	1.510	\$0.102	\$0.102
Move Containers to Dock	1.0000	32.1	2.9	1.738	\$0.662	\$0.662
Load Containers	0.0000	11.9	2.9	1.738	\$1.791	\$0.000
Model Cost						\$0.765

Sources

- Column [1]: All RDU parcels will be sorted to shipper and moved to dock (USPS-T-1, Section VII).
- Column [2]: Attachment C, page 2 (units per workhour).
- Column [3]: Attachment C, page 6 (conversion factors).
- Column [4]: Attachment C, page 4 (piggyback factors).
- Column [5]: (TY wage rate * column [4]) / (column [2] * column [3]).
- Column [6]: (column [1] * column [5]).

Storage Cost Estimates

	Mail Category			
	Machinable	Non-Machinable	Oversize	
# of pieces in Container (Pallet Box)	134.7	19.9	6.7	1/
Total Square Feet taken up by one container	13.3	13.3	13.3	2/
Cost of Space (\$/sf) - Annual	\$17.470	\$17.470	\$17.470	3/
Space Variability	1.000	1.000	1.000	4/
Space Support Factor	1.354	1.354	1.354	5/
Cost of Space (\$/sf) - Annual	\$23.660	\$23.660	\$23.660	6/
Cost per square foot - Daily (303 days)	\$0.078	\$0.078	\$0.078	7
Cost per Container	\$1.041	\$1.041	\$1.041	8/
Cost per piece per day	\$0.008	\$0.052	\$0.155	9
Storage Days Required				
RBMC	1.834	1.834	1.834	10/
RDU	5.000	5.000	5.000	11/
Cost by PRS Rate Category				
RBMC	\$0.014	\$0.096	\$0.284	12/
RDU	\$0.039	\$0.262	\$0.775	13/

Sources

- 1/: Attachment C, page 6 (Conversion factors).
- 2/: Calculation using dimensions of containers.
- 3/: Docket No. MC2003-2, USPS-T-2, Attachment D, page 1
- 4/: Variability assumption implicit in data filed in Docket No. R2001-1.
- 5/: Docket No. R94-1, LR-G-120A, Schedule 5, page 1, line 39 and Schedule 4, page 1, line 44.
- 6/: (3) x (4) x (5).
- 7/: (6) / 303 days.
- 8/: (2) x (7).
- 9/: (8) / (1).
- 10/: August 2005 BMC PRS Survey
- 11/: Assumption from Product Definition (mailers must pick up RDU parcels every 5 days).
- 12/: (9) x (10).
- 13/: (9) x (11).

Transportation Cost Estimate Summary

PRS Rate Category	Benchmark	Total Cost Impact per Cubic Foot [1]	Average Cubic Feet per Piece [2]	Total Cost Impact per Piece [3]
RBMC - Machinable	Intra-BMC	(\$2.212)	0.425	(\$0.939)
RBMC - Non-machinable	Intra-BMC	(\$2.212)	2.777	(\$6.144)
RBMC - Oversize	Intra-BMC	(\$2.212)	7.938	(\$17.560)
RDU - Machinable	Intra-BMC Local	(\$2.442)	0.425	(\$1.037)
RDU - Non-machinable	Intra-BMC Local	(\$2.442)	2.777	(\$6.784)
RDU - Oversize	Intra-BMC Local	(\$2.442)	7.938	(\$19.387)

Sources

- [1]: Attachment E, page 2.
- [2]: Attachment C, page 5.
- [3]: [1] x [2].

Transportation Cost Difference Estimates

Assumed Legs of Transportation [1]

		Local	Intermediate	Long Distance
Intra-BMC	[1a]	1.951	1.947	0.000
RBMC	[1b]	1.000	1.000	0.000
RDU	[1c]	0.000	0.000	0.000

Benchmark Transportation Cost per Cubic Foot [2]

Zone	Intra-BMC			
	Local	Intermediate	Long Distance	Total
Local	\$1.232	\$1.211	N/A	\$2.442
1-2	\$2.122	\$2.422	N/A	\$4.544
3	\$2.122	\$2.422	N/A	\$4.544
4	\$2.122	\$2.422	N/A	\$4.544
5	\$2.122	\$2.422	N/A	\$4.544
6	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A

PRS Transportation Cost per Cubic Foot [3]

(Benchmark) Zone	RBMC (Intra-BMC)				RDU (Intra-BMC)			
	Local	Intermediate	Long Distance	Total	Local	Intermediate	Long Distance	Total
Local	\$0.631	\$0.622	N/A	\$1.253	\$0.000	\$0.000	N/A	\$0.000
zone 1-2	\$1.088	\$1.244	N/A	\$2.332	\$0.000	\$0.000	N/A	\$0.000
3	\$1.088	\$1.244	N/A	\$2.332	\$0.000	\$0.000	N/A	\$0.000
4	\$1.088	\$1.244	N/A	\$2.332	\$0.000	\$0.000	N/A	\$0.000
5	\$1.088	\$1.244	N/A	\$2.332	\$0.000	\$0.000	N/A	\$0.000
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

PRS Transportation Cost Impact per Cubic Foot [4]

(Benchmark) Zone	RBMC (Intra-BMC)				RDU (Intra-BMC)			
	Local	Intermediate	Long Distance	Total	Local	Intermediate	Long Distance	Total
Local	(\$0.600)	(\$0.589)	N/A	(\$1.189)	(\$1.232)	(\$1.211)	N/A	(\$2.442)
1-2	(\$1.035)	(\$1.178)	N/A	(\$2.212)	(\$2.122)	(\$2.422)	N/A	(\$4.544)
3	(\$1.035)	(\$1.178)	N/A	(\$2.212)	(\$2.122)	(\$2.422)	N/A	(\$4.544)
4	(\$1.035)	(\$1.178)	N/A	(\$2.212)	(\$2.122)	(\$2.422)	N/A	(\$4.544)
5	(\$1.035)	(\$1.178)	N/A	(\$2.212)	(\$2.122)	(\$2.422)	N/A	(\$4.544)
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Sources

[1]: Assumed average number of legs of transportation.

[1a]: Docket No. R2005-1, USPS LR-K-89, Attachment B, page 9.

[1b]: RBMC will travel from origin AO to origin SCF (1 local leg) and from origin SCF to origin BMC (1 intermediate leg).

[1c]: Since mailers pick up RDU at origin AO, it will not incur any transportation legs.

[2]: Docket No. R2005-1, USPS LR-K-89, Attachment B, page 11.

[3]: Ratio of PSRS Rate Category transportation legs [1b&1c] to benchmark [1a] multiplied by benchmark cost [2].

[4]: PSRS transportation cost per cubic foot [3] minus benchmark transportation cost per cubic foot [2].

Scanning Cost Estimates

PRS Rate Category	Transaction Time (hours)	Wage Rate	Piggyback Factor	Cost per active scan	Number of active scans	Scan Cost
	[1]	[2]	[3]	[4]	[5]	[6]
RBMC - Machinable	0.0007	\$35.371	1.419	\$0.034	0	\$0.000
RBMC - Non-machinable	0.0007	\$35.371	1.419	\$0.034	0	\$0.000
RBMC - Oversize	0.0007	\$35.371	1.419	\$0.034	0	\$0.000
RDU - Machinable	0.0007	\$35.371	1.419	\$0.034	2	\$0.069
RDU - Non-machinable	0.0007	\$35.371	1.419	\$0.034	2	\$0.069
RDU - Oversize	0.0007	\$35.371	1.419	\$0.034	3	\$0.103

Sources

- [1]: Docket No. R2000-1, USPS-T-30, Section A, Data Sheet A-8
- [2]: Attachment C, page 4. Premium Pay Adjusted Wage Rate.
- [3]: Docket No. R2005-1, USPS-LR-K-52
- [4]: [1] x [2] x [3]. Follows methodology shown in Docket No. R2001-1 LR-J-135.
- [5]: Assumption taken from USPS product description.
- [6]: [4] x [5].

Postage Due Cost Estimates

RBMC	Value
Average Time per piece (minutes)	6.018 1/
Average Time per piece (hours)	0.100 2/
Wage Rate	\$35.371 3/
Piggyback Factor	1.330 4/
Postage Due Cost (for sampled parcels)	\$4.717 5/
Sampling Ratio	1.5% 6/
Postage Due Cost (for all parcels)	\$0.070 7/
 RDU	 \$0.000 8/

Sources

1/: Attachment H, page 4, column 7

2/: (1) / 60 minutes.

3/: Attachment C, page 4

4/: Docket No. R2005-1, USPS-LR-K-53, piggyback for mods 18 BUSREPLY cost pool

5/: (2) x (3) x (4).

6/: Attachment G, page 2

7/: (5) x (6).

8/: Assumed to be insignificant postage due costs since information from the scanned barcodes will generate a daily postage due manifest.

Postage Due Sampling Ratio

USPS Sample Size by Volume Range [1]

Volume		Pieces
Lower Bound	Upper Bound	
1	19	All pieces
20	99	20 % of pieces
100	199	15 % of pieces
200	299	10% of pieces
300	1,999	30 pieces
2,000	3,999	40 pieces
4,000	5,999	50 pieces
6,000	7,999	60 pieces
8,000	9,999	70 pieces
10,000	99,999	100 pieces
100,000	499,999	150 pieces
500,000	up	200 pieces

Daily Return Volume (5-day week) [2]

BMC	Pieces	Sample Size	Sampling Ratio
	[2]	[3]	[4]
Site A	2,500	40	1.6%
Site B	3,200	40	1.3%
Site C	1,100	30	2.7%
Site D	2,200	40	1.8%
Site E	4,400	50	1.1%
Total	13,400	200	1.5%

Sources

[1]: Supplied by the Business Mailer's Support HQ division.

[2]: Average returns per BMC per 5-day week.

Data collected by Marketing for existing customer

Data was collected in the Fall of 2002.

Postage Due

USPS Return Technician	Location A [1]										
	A	B	C	D	E	F	G	H	I	J	K
Pieces	30	30	30	30	30	30	30	30	30	30	30
Set Up	25	15	15	15	6	15	15	20	20	20	15
Selecting Samples	15	15	50	30	3	7	1	2	2	30	10
Weighing / Recording Samples	35	10	15	30	18	60	33	20	67	25	25
Matching Worksheet to Manifest	80	120	100	120	--	95	45	25	105	165	55
Validating Postage Statement to Manifest											
Transferring Postage Statement to Post Office											
Other (explanation)		135 meeting									
Post Office Tasks											
Permit System Entry of Postage Due	5	5	5	5	15	15	10	--	15	5	5
TOTAL											

Sources

- [1] through [4]: Data collected directly through survey.
- [5]: Only includes volume when have entered data.
- [6]: Sum of each row.
- [7]: [6] / [5].

Postage Due

USPS Return Technician	Location B [2]								
	A	B	C	D	E	F	G	H	I
Pieces	30	30	30	30	30	30	30	30	30
Set Up	2	2	5	2	3	2	2	2	2
Selecting Samples	10	6	14	6	7	8	8	8	4
Weighing / Recording Samples	20	35	9	21	20	30	20	28	16
Matching Worksheet to Manifest	25	21	30	22	27	25	28	25	18
Validating Postage Statement to Manifest	5	4	9	6	8	5	6	5	4
Transferring Postage Statement to Post Office	5	5	5	6	5	5	36	5	4
Other (explanation)									
Post Office Tasks									
Permit System Entry of Postage Due	5	8	7	15	15	10	5	5	15
TOTAL									

Sources

- [1] through [4]: Data collected directly through s
- [5]: Only includes volume when have entered d
- [6]: Sum of each row.
- [7]: [6] / [5].

Postage Due

USPS Return Technician	Location C [3] ¹							
	A	B	C	D	E	H ²	I	J
Pieces	45	40	45	50	50	80	40	40
Set Up	5	10	15	5	20	5	10	10
Selecting Samples	10	10	10	15	10	20	5	10
Weighing / Recording Samples	35	30	30	30	25	120	35	30
Matching Worksheet to Manifest	30	30	30	30	30	30	30	30
Validating Postage Statement to Manifest								
Transferring Postage Statement to Post Office								
Other	10	5	10	10	10			
(explanation)	travel	travel	travel	travel	travel			
Post Office Tasks								
Permit System Entry of Postage Due	10	10	15	10	30			
TOTAL								

Sources

[1] through [4]: Data collected directly through s
 [5]: Only includes volume when have entered d
 [6]: Sum of each row.
 [7]: [6] / [5].

Postage Due

	Location D [4]												
USPS Return Technician	A	B	C	D	E	F	G	H	I	J	K	L	M
Pieces	30	30	30	30	30	30	30	30	30	30	30	30	30
Set Up	55	35	25	25	30	30	21	29	30	31	30	20	30
Selecting Samples	34	30	--	31	45	25	34	--	63	45	33	32	40
Weighing / Recording Samples	38	28	35	85	70	55	87	65	65	70	37	85	75
Matching Worksheet to Manifest	80	70	70	95	75	67	92	75	80	75	65	90	105
Validating Postage Statement to Manifest	30	40	35	35	35	18	38	50	20	20	20	35	32
Transferring Postage Statement to Post Office													
Other													
(explanation)													
Post Office Tasks													
Permit System Entry of Postage Due													
TOTAL													

Sources

- [1] through [4]: Data collected directly through s
- [5]: Only includes volume when have entered d
- [6]: Sum of each row.
- [7]: [6] / [5].

Postage Due

	Volume	Time	
		Total	Per piece
USPS Return Technician	[5]	[6]	[7]
Pieces			
Set Up	1380	674	0.488
Selecting Samples	1320	738	0.559
Weighing / Recording Samples	1380	1667	1.208
Matching Worksheet to Manifest	1350	2410	1.785
Validating Postage Statement to Manifest	660	460	0.697
Transferring Postage Statement to Post Office	270	76	0.281
Other (explanation)	260	180	0.692
Post Office Tasks			
Permit System Entry of Postage Due	800	245	0.306
TOTAL			6.018

Sources

- [1] through [4]: Data collected directly through s
 [5]: Only includes volume when have entered d
 [6]: Sum of each row.
 [7]: [6] / [5].