

Before The  
POSTAL RATE COMMISSION  
WASHINGTON, D.C. 20268-0001

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Postal Rate and Fee Changes

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Docket No. R2000-1

RESPONSE OF THE UNITED STATES POSTAL SERVICE  
WITNESS CRUM TO INTERROGATORIES OF  
DISTRICT PHOTO, ET AL.  
(DMC/USPS-T27-8-19)

The United States Postal Service hereby provides the responses of witness Crum to the following interrogatories of District Photo, et al.: DMC/USPS-T27-8-19, filed on March 22, 2000.

Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

Daniel J. Foucheaux, Jr.  
Chief Counsel, Ratemaking



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April 5, 2000

**U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM  
RESPONSE TO INTERROGATORIES OF  
DISTRICT PHOTO, INC., MYSTIC COLOR LAB, AND COX SAMPLING**

**DMC/USPS-T27-8.** In the following table, BY 1996 Costs were taken from USPS-T-28, Docket No. R97-1 (revised 10/1/97), Exhibit K, Table 3: BY 1998 Costs were taken from your response to PSA/USPS-T27-3.

<u>Parcels</u>	<u>BY 1996 Costs</u>	<u>BY 1998 Costs</u>	<u>Percentage Incr.</u>
Std. A Reg.	\$0.513	\$0.768	49.7%
Std. A ECR	\$0.455	\$0.746	64.0%
Std. A Nonprofit	\$0.659	\$0.984	49.3%
Std. A N. ECR	\$1.382	\$2.262	63.7%

- a. Please confirm the data in this table, or supply correct figures.
- b. Do you believe that these disproportionately high unit cost increases have resulted from: (i) sharp decreases in productivity, as has occurred with flats; (ii) random variations in the number of tallies in the IOCS; (iii) changes in the mail mix (i.e., relatively more high cost pieces and relatively fewer low-cost pieces; or (iv) maybe something else. Please explain if these factors are different for each category of parcels?
- c. Did parcel processing become more mechanized between 1996 and 1998? If so, please detail how, and describe the impact that such mechanization would have on parcel cost incurrence.
- d. Did any changes occur in the processes for identification of costs incurred by shape between 1996-98?

**RESPONSE**

- a. Confirmed.
- b. As described in my response to RIAA/USPS-T27-1 "the purpose of my testimony is to estimate the total cost difference between parcels and flats in all of bulk Standard Mail (A) ... I have provided Tables 3.1 through 3.4 because

**U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM  
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external parties expressed an interest in those numbers in Docket No. R97-1 and to present a more complete record."

Any changes you note for Nonprofit ECR parcel unit costs are likely to be related to variability associated with their very low volume. Please refer to my response to RIAA/USPS-T27-3(a). I believe the majority of the other cost increases you note can be explained by the change in mail processing approach between Docket No. R97-1 and Docket No. R2000-1. Please refer to page 8, lines 7-14 of my testimony and my response to Postcom/USPS-T27-1.

c. I am unaware of any major changes in parcel processing between 1996 and 1998.

d. I believe the only change of consequence is the new mail processing approach referred to in my response to b. I am informed that other smaller changes in approach can be found in the testimonies of witnesses Degen (USPS-T-16) and Van-Ty-Smith (USPS-T-17). I do know that the single Non-MODS cost pool in Docket No. R97-1 was broken into 8 cost pools in this docket though I am unsure what, if any, impact that particular change had on my cost results.

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**DMC/USPS-T27-9.** Please provide data for FY 97 and FY 99 as presented in Attachment F.

**RESPONSE**

Please refer to the attached pages for all the FY 1997 data I have. I do not have the complete set as presented in Attachment F. These pages are not intended to be part of my testimony and are being provided only to fully comply with this discovery request. I have not carefully reviewed the results. I believe the Docket No. R97-1 mail processing volume variability approach was followed.

In the preparation of my testimony, I did not develop the requested Attachment F information for FY 1999 and, thus, cannot provide it.

# ATTACHMENT TO WITNESS CRUM'S RESPONSE TO DML/USPS-T27-9

FY 1997 Bulk Standard Mail (A) Enhanced Carrier Route

**Table 3A(1)**  
**Costs by Shape (\$000)**

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation
<b>C.S. 3.1 Mail Processing</b>					
3.1a Mail Processing Variable w/ Pigbk	444,112	182,721	246,580	14,811	
3.1b Remote Encoding Costs	0	0			WS 3.1.1
<b>3.1 Total</b>	<b>444,112</b>	<b>182,721</b>	<b>246,580</b>	<b>14,811</b>	<b>=sum(3.1a,3.1b)</b>
<b>C.S. 3.2 Window Service</b>					
3.2b CRA Window Service Total	6,757	2,418	4,331	8	C.S. 3.2 Total from CRA
3.2d Window Service Piggyback Factor		1.42261	1.42261	1.42261	LR-H-77
3.2e Piggybacked Costs		1,022	1,830	4	=sum(3.2a,3.2c)*(3.2d - 1)
		3440	6161	12	bozzo
<b>3.2 Total</b>	<b>9,613</b>	<b>3,440</b>	<b>6,161</b>	<b>12</b>	<b>=sum(3.2a,3.2c,3.2e)</b>
<b>C.S. 6 &amp; 7 City Delivery Carriers</b>					
6 Liocatt In-Office	313,504	133,136	173,161	7,207	C.S. 6 CRA total
7.1 Route	21,089	7,940	13,113	36	= CS total from CRA dist. to shape by Volume
7.2 Access	43,873	16,519	27,279	75	= CS total from CRA dist. to shape by Volume
7.3 Elemental Load	232,871	108,471	119,509	4,890	= CS total from CRA dist. to shape by ElemLoad
7.4 Other Load	0	0	0	0	= CS total from CRA dist. to shape by Volume
7.5 Street Support	96,504	43,072	52,576	1,927	= CS total from CRA dist. to shape by 7.1 - 7.4
6&7 Subtotal	707,841	309,138	385,639	14,136	= sum of 6 through 7.5
6&7 Piggyback Factors		1.30602	1.30602	1.30602	LR-H-77
6&7 Piggybacked Costs	216,941	94,603	118,013	4,326	= 6&7 subtotal *( 6&7 pig. fact. - 1)
<b>6&amp;7 Total</b>	<b>924,782</b>	<b>403,741</b>	<b>503,652</b>	<b>18,461</b>	<b>= sum( 6&amp;7 subtotal, 6&amp;7 piggybacked costs)</b>
<b>C.S. 8 Vehicle Service Drivers</b>					
8a Vehicle Service Drivers	43,115	4,638	37,994	484	= CS total from CRA dist. to shape by Cube
8b Piggyback Factors		1.55010	1.55010	1.55010	LR-H-77
8c Piggybacked Costs	23,718	2,551	20,900	266	= 8a * (8b -1)
<b>8 Total</b>	<b>66,833</b>	<b>7,189</b>	<b>58,894</b>	<b>749</b>	<b>=sum( 8a, 8c)</b>
<b>C.S. 10 Rural Delivery Carriers</b>					
10a Rural Delivery Carriers	265,830	51,491	214,259	80	= CS total from CRA dist. to shape by RuralDel
10b Piggyback Factors		1.19855	1.19855	1.19855	LR-H-77
10c Piggybacked Costs	52,781	10,224	42,541	16	= 9a * (9b -1)
<b>10 Total</b>	<b>318,611</b>	<b>61,715</b>	<b>256,800</b>	<b>96</b>	<b>=sum( 9a, 9c)</b>

ATTACHMENT TO WITNESS CRUM'S RESPONSE TO DMC/USPS-TZ7-9 (PAGE 2)

FY 1997 Bulk Standard Mail (A) Enhanced Carrier Route

Table 3A(1)  
Costs by Shape (\$000)

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation
<b>C.S 14 Transportation</b>					
14.1a Domestic Air	1,392	200	1,189	3	C.S. Total dist to shape by Weight
14.1b Highway	38,401	4,130	33,840	431	C.S. Total dist to shape by Cube
14.1c Railroad	13,066	1,405	11,514	147	C.S. Total dist to shape by Cube
14.1d Domestic Water	1,048	150	895	2	C.S. Total dist to shape by Weight
14.2 International Transportation	0	0	0	0	C.S. Total dist to shape by Weight
14 Total	53,907	5,886	47,438	583	= sum of 14.1a through 14.2
<b>All Other Costs</b>					
A. CRA Total for Rate Category	1,883,024				CRA total attributable for rate category
B. Sum of C.S. Totals from above	1,817,857				Sum of C.S. totals above
C. Difference	65,167				= A - B
Total All Other	65,167	24,536	40,519	112	= C dist. to shape by Volume
<b>Total Attributable</b>	<b>1,883,024</b>	<b>689,227</b> 36.60%	<b>1,160,044</b> 61.61%	<b>34,824</b> 1.85%	
<b>Attributable Cost per Piece (Dollars)</b>	<b>0.060</b>	<b>0.058</b>	<b>0.059</b>	<b>0.644</b>	

**Distribution Keys**

					Key Name	Source
1	Volume of Mail (000)	31,504,820	11,861,918	19,588,836	54,066	Table 1
2	Weight of Mail (000)	4,516,459	648,047	3,857,952	10,460	Table 1
3	Density of Mail (pounds / cubic feet)	21.3060	28.4219	20.6526	4.4	LR-MCR-13, LR-PCR-38
4	Cube of Mail (000)	211,980	22,801	186,802	2,377	= Weight / Density
5	Key - Volume of Mail (percent by shape)	100.00%	37.65%	62.18%	0.17%	Volume Share of (1) by shape
6	Key - Weight of Mail (percent by shape)	100.00%	14.35%	85.42%	0.23%	Weight Share of (2) by shape
7	Key - Cube of Mail (percent by shape)	100.00%	10.76%	88.12%	1.12%	Cube Share of (4) by shape
8						
9	Elemental Load Key	100.00%	46.58%	51.32%	2.10%	ElemLoad Table 5
10	Rural Delivery Key	100.00%	19.37%	80.60%	0.03%	RuralDel Table 6
	Carrier In-Office Key	100.00%	42.47%	55.23%	2.30%	
	Window Service Key	100.00%	35.78%	64.09%	0.12%	

ATTACHMENT TO WITNESS CRUM'S RESPONSE TO DMC/USPS- T27-9 (PAGE 3)

**FY 1997 Bulk Standard Mail (A) Regular**

**Table 3B(1)  
Costs by Shape(\$000)**

<b>Cost Category</b>	<b>Sum over Shapes</b>	<b>Letters</b>	<b>Flats</b>	<b>IPPs &amp; Parcels</b>	<b>Source / Derivation</b>
<b>C.S. 3.1 Mail Processing</b>					
3.1a Mail Processing Variable w/ Pigbk	2,526,358	1,055,498	1,174,972	295,888	
3.1b Remote Encoding Costs	0	0			
<b>3.1 Total</b>	<b>2,526,358</b>	<b>1,055,498</b>	<b>1,174,972</b>	<b>295,888</b>	=sum(3.1a,3.1b)
<b>C.S. 3.2 Window Service</b>					
3.2b CRA Window Service Total	24,041	12,907	9,918	1,216	C.S. 3.2 Total from CRA
3.2d Window Service Piggyback Factor		1.42210	1.42210	1.42210	LR-H-77.
3.2e Piggybacked Costs		5,448	4,187	513	=sum(3.2a,3.2c)*(3.2d - 1)
CHECK		18355	14105	1729	bozzo
<b>3.2 Total</b>	<b>34,189</b>	<b>18,355</b>	<b>14,105</b>	<b>1,729</b>	=sum(3.2a,3.2c,3.2e)
<b>C.S. 6 &amp; 7 City Delivery Carriers</b>					
6 Liocatt In-Office	525,293	265,332	220,838	39,123	C.S. 6 CRA total
7.1 Route	17,206	10,323	6,465	418	= CS total from CRA dist. to shape by Volume
7.2 Access	23,124	13,874	8,689	561	= CS total from CRA dist. to shape by Volume
7.3 Elemental Load	186,738	92,977	56,264	37,497	= CS total from CRA dist. to shape by ElemLoad
7.4 Other Load	0	0	0	0	= CS total from CRA dist. to shape by Volume
7.5 Street Support	116,391	60,061	45,212	12,005	= CS total from CRA dist. to shape by 7.1 - 7.4
6&7 Subtotal	868,752	442,566	337,469	89,604	= sum of 6 through 7.5
6&7 Piggyback Factors		1.31245	1.31245	1.31245	LR-H-77.
6&7 Piggybacked Costs	271,719	138,280	105,442	27,997	= 6&7 subtotal *( 6&7 pig. fact. - 1)
<b>6&amp;7 Total</b>	<b>1,140,471</b>	<b>580,846</b>	<b>442,911</b>	<b>117,601</b>	= sum( 6&7 subtotal, 6&7 piggybacked costs)
<b>C.S. 8 Vehicle Service Drivers</b>					
8a Vehicle Service Drivers	40,862	12,568	17,929	10,365	= CS total from CRA dist. to shape by Cube
8b Piggyback Factors		1.54487	1.54487	1.54487	LR-H-77.
8c Piggybacked Costs	22,264	6,848	9,769	5,648	= 8a * (8b -1)
<b>8 Total</b>	<b>63,126</b>	<b>19,415</b>	<b>27,698</b>	<b>16,013</b>	=sum( 8a, 8c)
<b>C.S. 10 Rural Delivery Carriers</b>					
10a Rural Delivery Carriers	325,202	89,658	214,276	21,268	= CS total from CRA dist. to shape by RuralDel
10b Piggyback Factors		1.19851	1.19851	1.19851	LR-H-77.
10c Piggybacked Costs	64,556	17,798	42,536	4,222	= 9a * (9b -1)
<b>10 Total</b>	<b>389,758</b>	<b>107,456</b>	<b>256,811</b>	<b>25,490</b>	=sum( 9a, 9c)

ATTACHMENT TO WITNESS CRUM'S RESPONSE TO DMC/USPS-T27-9 (PAGE 4)

**FY 1997 Bulk Standard Mail (A) Regular**

**Table 3B(1)  
Costs by Shape(\$000)**

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation
<b>C.S 14 Transportation</b>					
14.1a Domestic Air	19,309	8,491	8,802	2,016	C.S. Total dist to shape by Weight
14.1b Highway	184,333	56,694	80,881	46,759	C.S. Total dist to shape by Cube
14.1c Railroad	63,010	19,380	27,647	15,983	C.S. Total dist to shape by Cube
14.1d Domestic Water	5,371	2,362	2,448	561	C.S. Total dist to shape by Weight
14.2 International Transportation	0	0	0	0	C.S. Total dist to shape by Weight
<b>14 Total</b>	<b>272,023</b>	<b>86,927</b>	<b>119,778</b>	<b>65,318</b>	= sum of 14.1a through 14.2
<b>All Other Costs</b>					
A. CRA Total for Rate Category	4,405,671				CRA total attributable for rate category
B. Sum of C.S. Totals from above	4,425,925				Sum of C.S. totals above
C. Difference	-20,254				= A - B
<b>Total All Other</b>	<b>-20,254</b>	<b>-12,152</b>	<b>-7,611</b>	<b>-492</b>	= C dist. to shape by Volume
<b>Total Attributable</b>	<b>4,405,671</b>	<b>1,856,345</b>	<b>2,028,665</b>	<b>521,547</b>	
		42.14%	46.05%	11.84%	
<b>Attributable Cost per Piece (Dollars)</b>	<b>0.135</b>	<b>0.095</b>	<b>0.166</b>	<b>0.661</b>	

**Distribution Keys**

					Key Name	Source
1	Volume of Mail (000)	32,527,735	19,515,470	12,222,726	789,539	Table 1
2	Weight of Mail (000)	4,280,468	1,882,342	1,951,316	446,810	Table 1
3	Density of Mail (pounds / cubic feet)	19.8783	28.4219	20.6526	8.18	LR-MCR-13, LR-PCR-38
4	Cube of Mail (000)	215,334	66,229	94,483	54,622	= Weight / Density
5	Key - Volume of Mail (percent by shape)	100.00%	60.00%	37.58%	2.43%	Volume Share of (1) by shape
6	Key - Weight of Mail (percent by shape)	100.00%	43.98%	45.59%	10.44%	Weight Share of (2) by shape
7	Key - Cube of Mail (percent by shape)	100.00%	30.76%	43.88%	25.37%	Cube Share of (4) by shape
8						
9	Elemental Load Key	100.00%	49.79%	30.13%	20.08%	ElemLoad Table 5
10	Rural Delivery Key	100.00%	27.57%	65.89%	6.54%	RuralDel Table 6
	Carrier In-Office Key	100.00%	50.51%	42.04%	7.45%	
	Window Service Key	100.00%	53.69%	41.26%	5.06%	



FY 1997 Standard Mail (A) Bulk Regular Rate

Letters	PERMIT Estimate			Controlled to GFY RPW			Revenue per Piece (cents)	Weight per Piece (oz.)
	Revenue	Pieces	Weight	Revenue	Pieces	Weight		
Basic	430,498	1,679,583	97,317	430,828	1,683,678	97,625	25.6	0.9
Basic BC	547,682	3,007,201	169,663	548,102	3,014,532	170,199	18.2	0.9
3/5-Digit	569,364	2,802,506	128,747	569,800	2,809,337	129,154	20.3	0.7
3/5 Digit BC	1,965,352	11,965,370	669,095	1,966,858	11,994,539	671,211	16.4	0.9
Carrier Route	1,131,260	8,216,548	405,713	1,164,483	8,480,231	428,498	13.7	0.8
High Density	41,475	326,947	21,426	42,693	337,440	22,629	12.7	1.1
Saturation	345,451	2,949,590	186,404	355,596	3,044,247	196,872	11.7	1.0
<b>Total Letters</b>	<b>5,031,083</b>	<b>30,947,746</b>	<b>1,678,366</b>	<b>5,078,362</b>	<b>31,364,005</b>	<b>1,716,189</b>	<b>16.2</b>	<b>0.9</b>
<b>Flats</b>								
	Revenue	Pieces	Weight	Revenue	Pieces	Weight	Revenue per Piece (cents)	Weight per Piece (oz.)
Basic	357,948	1,005,113	230,613	358,222	1,007,563	231,342	35.6	3.7
Basic BC	85,878	254,559	64,727	85,943	255,180	64,932	33.7	4.1
3/5-Digit	463,939	1,818,866	374,892	464,294	1,823,300	376,077	25.5	3.3
3/5 Digit BC	1,961,489	9,106,682	2,081,313	1,962,992	9,128,883	2,087,893	21.5	3.7
Carrier Route	1,685,089	10,019,153	2,101,877	1,734,577	10,340,684	2,219,919	16.8	3.4
High Density	175,433	1,173,430	223,330	180,585	1,211,087	235,872	14.9	3.1
Saturation	1,035,854	7,787,162	1,327,581	1,066,275	8,037,065	1,402,139	13.3	2.8
<b>Total Flats</b>	<b>5,765,629</b>	<b>31,164,964</b>	<b>6,404,333</b>	<b>5,852,890</b>	<b>31,803,762</b>	<b>6,618,174</b>	<b>18.4</b>	<b>3.3</b>
<b>IPPs and Parcels</b>								
	Revenue	Pieces	Weight	Revenue	Pieces	Weight	Revenue per Piece (cents)	Weight per Piece (oz.)
Basic	131,410	254,677	129,926	131,511	255,298	130,337	51.5	8.2
Basic BC	-	-	-	-	-	-	-	-
3/5-Digit	258,097	554,075	320,684	258,295	555,426	321,698	46.5	9.3
3/5 Digit BC	-	-	-	-	-	-	-	-
Carrier Route	3,271	19,700	3,594	3,367	20,332	3,795	16.6	3.0
High Density	845	5,198	1,208	870	5,365	1,276	16.2	3.8
Saturation	3,714	27,487	5,168	3,823	28,369	5,458	13.5	3.1
<b>Total IPPs and Parcels</b>	<b>397,337</b>	<b>861,137</b>	<b>460,580</b>	<b>397,866</b>	<b>864,790</b>	<b>462,565</b>	<b>46.0</b>	<b>8.6</b>
<b>All Shapes</b>								
	Revenue	Pieces	Weight	Revenue	Pieces	Weight	Revenue per Piece (cents)	Weight per Piece (oz.)
Basic	919,856	2,939,374	457,856	920,561	2,946,539	459,304	31.2	2.5
Basic BC	633,560	3,261,760	234,390	634,045	3,269,712	235,131	19.4	1.2
3/5-Digit	1,291,399	5,175,447	824,323	1,292,389	5,188,063	826,929	24.9	2.6
3/5 Digit BC	3,926,841	21,072,053	2,750,408	3,929,850	21,123,422	2,759,104	18.6	2.1
Carrier Route	2,819,620	18,255,400	2,511,183	2,902,428	18,841,247	2,652,212	15.4	2.3
High Density	217,753	1,505,575	245,964	224,148	1,553,892	259,778	14.4	2.7
Saturation	1,385,019	10,764,239	1,519,153	1,425,695	11,109,681	1,604,469	12.8	2.3
<b>Total All Shapes</b>	<b>11,194,050</b>	<b>62,973,847</b>	<b>8,543,279</b>	<b>11,329,117</b>	<b>64,032,556</b>	<b>8,796,928</b>	<b>17.7</b>	<b>2.2</b>
<b>GFY RPW Total</b>								
	Revenue	Pieces	Weight					
Basic and 3/5-Digit	6,776,846	32,527,736	4,280,469					
Carrier Route	4,552,271	31,504,820	4,516,459					
	11,329,117	64,032,556	8,796,928					
<b>GFY RPW Factors</b>								
	Revenue	Pieces	Weight					
Basic and 3/5-Digit	1.00077	1.00244	1.00316					
Carrier Route	1.02937	1.03209	1.05616					

Table 2

(PAGE 6)

## FY 1997 Standard Mail (A) Bulk Nonprofit Rate

Letters	PERMIT Estimate			Controlled to GFY RPW			Revenue per Piece (cents)	Weight per Piece (oz.)
	Revenue	Pieces	Weight	Revenue	Pieces	Weight		
Basic	166,146	1,272,000	55,527	165,512	1,271,096	55,257	13.0	0.7
Basic BC	105,528	1,066,144	55,140	105,125	1,065,386	54,872	9.9	0.8
3/5-Digit	238,965	2,242,736	86,747	238,053	2,241,143	86,326	10.6	0.6
3/5 Digit BC	336,610	3,910,717	197,659	335,326	3,907,938	196,700	8.6	0.8
Carrier Route	110,049	1,488,121	65,014	110,221	1,497,748	64,508	7.4	0.7
High Density	2,519	39,677	1,027	2,523	39,934	1,019	6.3	0.4
Saturation	31,170	535,083	27,769	31,219	538,545	27,553	5.8	0.8
<b>Total Letters</b>	<b>990,987</b>	<b>10,554,477</b>	<b>488,882</b>	<b>987,980</b>	<b>10,561,790</b>	<b>486,235</b>	<b>9.4</b>	<b>0.7</b>
Flats	Revenue	Pieces	Weight	Revenue	Pieces	Weight	Revenue per Piece (cents)	Weight per Piece (oz.)
Basic	67,935	318,690	56,290	67,676	318,463	56,017	21.3	2.8
Basic BC	9,127	48,541	8,743	9,092	48,507	8,701	18.7	2.9
3/5-Digit	74,075	472,690	71,070	73,792	472,355	70,725	15.6	2.4
3/5 Digit BC	107,409	811,610	128,984	106,999	811,033	128,358	13.2	2.5
Carrier Route	54,407	534,477	66,254	54,492	537,935	65,739	10.1	2.0
High Density	1,186	12,870	1,371	1,187	12,953	1,360	9.2	1.7
Saturation	20,164	242,313	33,627	20,195	243,881	33,365	8.3	2.2
<b>Total Flats</b>	<b>334,302</b>	<b>2,441,192</b>	<b>366,340</b>	<b>333,434</b>	<b>2,445,127</b>	<b>364,265</b>	<b>13.6</b>	<b>2.4</b>
IPPs and Parcels	Revenue	Pieces	Weight	Revenue	Pieces	Weight	Revenue per Piece (cents)	Weight per Piece (oz.)
Basic	4,743	17,704	5,875	4,724	17,692	5,846	26.7	5.3
Basic BC	-	-	-	-	-	-	-	-
3/5-Digit	6,030	24,318	9,734	6,007	24,300	9,687	24.7	6.4
3/5 Digit BC	-	-	-	-	-	-	-	-
Carrier Route	44	380	80	44	382	79	11.5	3.3
High Density	0	6	1	0	6	1	7.6	2.7
Saturation	47	585	111	47	589	110	8.0	3.0
<b>Total IPPs and Parcels</b>	<b>10,864</b>	<b>42,992</b>	<b>15,800</b>	<b>10,823</b>	<b>42,969</b>	<b>15,723</b>	<b>25.2</b>	<b>5.9</b>
All Shapes	Revenue	Pieces	Weight	Revenue	Pieces	Weight	Revenue per Piece (cents)	Weight per Piece (oz.)
Basic	238,823	1,608,393	117,692	237,912	1,607,251	117,120	14.8	1.2
Basic BC	114,655	1,114,685	63,883	114,217	1,113,893	63,573	10.3	0.9
3/5-Digit	319,070	2,739,744	167,550	317,853	2,737,798	166,737	11.6	1.0
3/5 Digit BC	444,019	4,722,327	326,643	442,325	4,718,972	325,058	9.4	1.1
Carrier Route	164,499	2,022,977	131,348	164,757	2,036,065	130,326	8.1	1.0
High Density	3,705	52,553	2,399	3,711	52,893	2,380	7.0	0.7
Saturation	51,381	777,981	61,507	51,461	783,015	61,028	6.6	1.2
<b>Total All Shapes</b>	<b>1,336,152</b>	<b>13,038,661</b>	<b>871,022</b>	<b>1,332,237</b>	<b>13,049,886</b>	<b>866,223</b>	<b>10.2</b>	<b>1.1</b>
GFY RPW Total	Revenue	Pieces	Weight					
Basic and 3/5-Digit	1,112,308	10,177,913	672,489					
Carrier Route	219,929	2,871,973	193,734					
	<b>1,332,237</b>	<b>13,049,886</b>	<b>866,223</b>					
GFY RPW Factors	Revenue	Pieces	Weight					
Basic and 3/5-Digit	0.99619	0.99929	0.99515					
Carrier Route	1.00157	1.00647	0.99222					

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**DMC/USPS-T27-10.** In the last docket, the Commission found merit in Dr. Haldi's alternative proposals that the shape costs be based on average transportation cost or, alternatively, that destination entry discounts be deaveraged by shape, because "the base rate should be consistent with the discount subtracted from it." Op. & Rec. Dec., Docket No. R97-1, para. 5483. In light of the Commission's finding:

- a. Did you or the Postal Service calculate destination entry discounts based on shape? If so, please provide such calculations and explain why you decided not to employ such a methodology in this case. If not, why did the Postal Service opt to ignore the Commission's analysis?
- b. Did you or the Postal Service calculate presortation discounts based on shape? If so, please provide such calculations and explain why you decided not to employ such a methodology in this case. If not, why not?

**RESPONSE**

- a. I calculated estimated transportation cost savings by shape. Please refer to the attachment to my response to DMC/USPS-T27-7. Please refer to pages 15-16 of witness Moeller's testimony (USPS-T-35) for a discussion as to why shape-based dropship discounts were not proposed in this docket.
- b. It is my understanding that the Standard Mail (A) rate design includes different presort discounts for the letter and nonletter shapes. Please refer to USPS-T-35, WP 1, page 11.

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DMC/USPS-T27-11.

a. Please confirm the following figures, derived from USPS-T-28 (revised 10/1/97), Docket No. R97-1, Exhibit K, and USPS-T-27, Attachment F, Table 3. If you do not confirm, please provide the correct data.

Std. A Parcels	FY 96 Mail Proc. Costs	FY98 Mail Proc. Costs	FY96 Deliv. Costs	FY98 Deliv. Costs
Regular	\$0.2901	\$0.483	\$0.1261	\$0.1818
ECR	\$0.1462	\$0.274	\$0.2843	\$0.458
Nonprofit	\$0.3705	\$0.7004	\$0.2229	\$0.1895
NP ECR	\$0.3672	\$2.0193	\$0.9938	\$0.1876

b. Please explain why mail processing costs have increased by over 70 percent for non-ECR parcels, and more than doubled for ECR parcels.

c. Please explain why Nonprofit ECR parcels' mail processing costs increased by a factor of 5.5 between 1996 and 1998, while delivery costs for the same parcels decreased by a factor of 5.3.

d. Please explain why ECR parcel delivery costs are more than twice as high as delivery costs for parcels in the other three subclasses? Is there any difference in how Commercial ECR parcels are delivered?

e. Do you have confidence in the reliability of these cost data? Please explain your answer in light of the cost variances documented above.

**RESPONSE**

a. The corrected data has been provided in the table above. Like the table, I have interpreted "Delivery" as the sum of City Delivery Carriers plus Rural Delivery Carriers.

b. Please refer to my responses to DMC/USPS-T27-8(b).

c. Please refer to my response to DMC/USPS-T27-8(b).

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- d. Please refer to my response to PSA/USPS-T27-5(a). I am unaware of any difference in how commercial ECR parcels are delivered.
- e. I have confidence in the cost results presented on page 10 of my testimony and used by witness Moeller to support the surcharge on Standard Mail (A) parcels. Please also refer to my response to PSA/USPS-T27-5.

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**DMC/USPS-T27-12.** Please refer to your testimony at page 8 (ll. 8-13), where you state that "In Docket No. R97-1, the Postal Service proposed explicit econometric-based volume variability factors as part of their mail processing cost presentation. That was not done in this docket for effectively all of the parcel operations and some portion of the flats operations. The impact of this change is to expand the cost difference between flats and parcels beyond its level under the Docket No. R97-1 volume variability proposal."

a. Why did the Postal Service not propose explicit econometric-based volume variability factors as part of their parcel mail processing cost presentation?

b. Did the Postal Service desire to expand the cost difference between flats and parcels beyond its level under the Docket No. R97-1 volume variability proposal?

**RESPONSE**

a. Please refer to pages 132-139 of the testimony of witness Bozzo (USPS-T-15). Please also refer to my response to Postcom/USPS-T27-1.

b. It is my understanding that the choice of volume variability approach was made without regard to its impact on the parcel/flat cost differential in Standard Mail (A). Please refer to pages 132-139 of the testimony of witness Bozzo.

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DMC/USPS-T27-13.

- a. For each of the four Standard A subclasses, please provide the volume of Standard A parcels (i.e., pieces subject to the Standard A parcel surcharge) in FY 1999. If these data are not yet available, please provide them as soon as they become available.
- b. For each of the four Standard A subclasses, what is the projected volume of Standard A parcels in Test Year 2001?
- c. When projecting the parcel volume for FY 2000, is the higher percentage increase in rates for parcels proposed by witness Moeller taken into account? If so, please explain how, and to what extent. If not, please explain why not.

**RESPONSE**

- a. The numbers below represent Permit volumes tied to 1999 official RPW totals. They are calculated in a manner identical to the 1998 volumes presented in Attachment F, Tables 1 & 2 of my direct testimony.

Regular = 766,487,000

ECR = 22,747,000

Nonprofit = 33,352,000

NP ECR = 927,000

- b. The Test Year 2001 estimates of the volume of pieces paying the surcharge by subclass can be found in the workpapers of witness Moeller (USPS-T-35, WP1, page 14).
- c. I am informed that there is no FY 2000 parcel volume forecast.

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**DMC/USPS-T27-14.** Since Docket No. R97-1, has the Postal Service conducted any studies of any kind whatsoever on Standard A parcels, including, but not limited to, the effect of the Standard A parcel surcharge? For example, a study of the effect of the surcharge on volume, or a survey to ascertain whether (or how many) firms repackaged the contents so as to be able to qualify as flats and migrate to the flats category? If so, please provide as a library reference copies of all such studies.

**RESPONSE**

I am unaware of any such studies.



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**DMC/USPS-T27-15.** Other than the cost data which you present in your testimony, has the Postal Service conducted any other study or studies on the cost of processing and delivering parcels? Such a study or studies could be, for example: (i) an engineering-type study; (ii) an MTM study; (iii) a detailed cost model for Standard A parcels; (iv) an IOCS-based study of the cost of handling parcels classified in different ways, such as IPP Machinable, IPP Non-machinable, Parcel Machinable, and Parcel Outsides (i.e., using the IOCS-based definitions); and/or (v) a study regarding the cost of processing and delivering parcels with detached address labels ("DALs") versus the cost of handling parcels without DALs. If so, please provide as a library reference copies of all such studies.

**RESPONSE**

I assume you are referring specifically to Standard Mail (A) parcels. The only additional study I am aware of was originally presented in Appendix C of LR-PCR-38 in Docket No. MC97-2. It was called the Standard Mail (A) Bulk Parcel Characteristics Study and is most similar to option (iv) above. Additional portions of the study were also presented in LR-PCR-50 and LR-PCR-53.

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**DMC/USPS-T27-16.** As between the four subclasses within Standard A, the unit costs of processing and delivering parcels exhibit wide differences.

- a. Are these cost differences due chiefly or solely to vagaries in IOCS sampling, and the relatively small volume of parcels?
- b. Unless your answer to the preceding question is an unqualified affirmative, please itemize and discuss the principal cost drivers (e.g., shape, weight, other) and explain how they account for the substantial cost differences exhibited by your data.

**RESPONSE**

- a. I believe the unit cost differences relating to Nonprofit ECR parcels are due to the lack of volume in that category and the variability associated with that low volume. Please also see my response to DMC/USPS-T27-8(b).
- b. As stated in my response to subpart (a), Nonprofit ECR unit cost measurements are heavily impacted by their low volume, however, I do not rule out the possibility that other characteristics may be involved because of the historically high unit costs in Nonprofit ECR.

I think it makes sense to focus my discussion on the three major cost categories (Mail Processing, City Delivery Carriers, and Transportation) and am looking at the attachment to my response to RIAA/USPS-T27-1 as I respond here. Mail processing costs are much higher in Regular and Nonprofit than in ECR principally because ECR pieces are already presorted to carrier route. I do not know exactly why Nonprofit and Regular mail processing costs differ. Nonprofit and Regular unit delivery costs are quite similar. Please refer to my response to DMC/USPS-T27-11(d) for a discussion of ECR delivery costs.

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Nonprofit and Regular transportation costs are quite similar and exceed ECR transportation costs by a comfortable margin. This is predominantly because ECR pieces are more heavily dropshipped than Nonprofit or Regular pieces. Please refer to LR-I-225 for additional detail regarding dropship profile by subclass and shape.

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DMC/USPS-T27-17.

- a. For Standard A parcels, have you studied the relationship of weight to cost? If so, please provide a copy of any such study and the results.
- b. For Standard A parcels, have you studied the relationship of different shapes to cost? If so, please provide a copy of any such study and the results.

**RESPONSE**

- a. I have not specifically studied the relationship of weight to cost for Standard Mail (A) parcels. For general discussion regarding weight, machinability and cost of these pieces please refer to Docket No. R97-1 (Tr. 5, 2369-2370). The only study presented in this case that I am aware of relating weight to cost in Standard Mail (A) parcels can be found in USPS LR-I-92.
- b. I have conducted no such study. Because weight is limited to 1 pound, I expect the cost variance due to various shapes and sizes would be smaller than in a subclass such as Parcel Post where the weight limit is 70 pounds.

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**DMC/USPS-T27-18.** Other than the cost data which you present in your testimony, please provide a brief recap of all efforts which you have made to investigate the costs of handling parcels. Include in your recap visits to parcel handling operations at Postal Service Plants, discussions with or briefings from operations personnel who specialize in or are familiar with the processing and delivery of parcels, visits to facilities of mailers that regularly enter Standard A parcels, etc.

**RESPONSE**

Since the fall of 1995 when I began my career with the Postal Service, I have been involved in the Standard Mail (A) parcel issue (then known as bulk Third-Class parcels). I will make a good faith effort to briefly describe my investigations over the last 5 years, but can not guarantee where or from whom I learned each piece of information I have picked up. Most of my planned operational investigations preceded the filing of Docket No. R97-1, though I have continued to observe the handling of these pieces as a matter of course while focused on other duties.

Focused on the Standard Mail (A) parcel issue in the fall/winter of 1995, I visited approximately five delivery units in Arlington, Virginia and several delivery units in the Denver, Colorado area. I also visited the Washington Bulk Mail Center (BMC) and the Denver Bulk Mail Center and Processing and Distribution Center (P&DC). The Arlington visits were led by a local manager of delivery. The Washington BMC trip was led by a member of the Headquarters BMC Operations group and former BMC manager. The Denver trip was led by Docket No. R2000-1 witness Kingsley. I also spoke with numerous people local to these facilities regarding the handling of parcels.

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During 1996 and 1997 I met frequently with various members of the Headquarters BMC Operations Group and attended a meeting of BMC managers in Springfield, Massachusetts. I continued to visit various postal plants, BMCs, and delivery units as part of my cost study preparations and desire to learn more about postal operations. To date, I have been to 9 of the 21 BMCs and a larger number of plants and delivery units.

In 1995/1996, I called several meetings involving postal volume and cost experts to determine the most reliable approaches to developing unit cost estimates by shape.

Throughout the period 1995-2000, I worked with numerous people at Postal Headquarters regarding Standard Mail (A) parcel issues. Besides the BMC Operations group mentioned previously, I also spoke with various other people in Operations. I spoke with a former manager of carriers who also has experience in costing. I have worked closely with other member of my current department including my manager. I have had numerous meetings with members of the Pricing group. I have spoken with a former manager of data collectors who spoke with current data collectors regarding these pieces. I visited RJ Reynolds and Sara Lee Direct mailer plants in North Carolina. In December 1998 I visited a Cox Direct facility in Greenville, North Carolina.

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DMC/USPS-T27-19.

a. Based on your studies of the cost of parcels in Docket No. R97-1 and this Docket, and your knowledge about parcels in general, would it be your opinion that (i) the Postal Service loses a small amount of money on all, or almost all, Standard A parcels, or (ii) the Postal Service makes money on a significant subset of its Standard A parcel volume, but loses a substantial, offsetting amount on other parcels? Please discuss.

b. If your answer to part (a) is to the effect that the Postal Service loses a small amount of money on all, or almost all, Standard A parcels, please explain how this can be in light of the very different costs you present for the four Standard A subclasses.

c. If your answer to part (a) is to the effect that the Postal Service makes money on a significant subset of its Standard A parcel volume, but loses a substantial, offsetting amount on other parcels, please explain which types of parcels are generally profitable, which are highly unprofitable, and explain the principal factors that cause some parcels to be highly unprofitable.

**RESPONSE**

a. My testimony does not calculate contribution for individual pieces.

However, at current rates it is my belief that the Postal Service loses money on the vast majority of Standard Mail (A) parcels. As mentioned in my response to DMC/USPS-T27-17(b), I believe Standard Mail (A) parcels are relatively more homogeneous than a subclass such as Parcel Post. Revenue considerations aside, there would need to be large cost variations within subclasses if option (ii) was indeed the case.

If costs do not vary substantially within subclass and shape, then changes in revenue must be key in determining contribution. I suspect heavier pieces might lose somewhat less than lighter pieces because they pay higher rates. Regular parcels are the heaviest on average, pay the most in revenue,

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and have the smallest average loss per piece. Witness Daniel attempts to develop costs by ounce increment in USPS LR-I-92. Quickly scanning the existing rate schedule and her analysis of Standard Mail (A) parcels, only Regular parcels weighing 10-13 ounces appear to be close to covering their cost.

b. While the estimated loss per piece is indeed higher in ECR, Nonprofit, and Nonprofit ECR (not meaningful - please see my responses to DMC/USPS-T27-8(b) and DMC/USPS-T27-16) than it is in Regular, the volumes are vastly skewed towards Regular. Please refer to the data presented below gathered from my testimony.

<u>Category</u>	<u>1998 Estimated Loss/piece</u>	<u>Volume Share</u>
Regular	\$0.29	89.8%
ECR	\$0.59	5.3%
Nonprofit	\$0.73	4.7%
Nonprofit ECR	\$2.12	0.2%

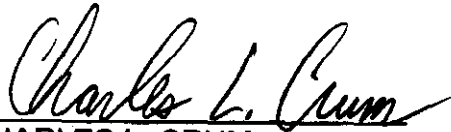
If the figures above are weighted together, the average pre-surge charge estimated loss per piece for parcels in all of Standard Mail (A) is \$0.33. This number is very close to the \$0.29 loss for Regular. Therefore, regardless of any variation (real or due to low volumes) in the other categories, the results for Regular will basically determine the results for all of Standard Mail (A). In regards to your question, I do not believe unit cost variation between subclasses is a major issue in that the final results are not greatly impacted by any variation.

c. Not applicable.



**DECLARATION**

I, Charles L. Crum, declare under penalty of perjury that the foregoing answers are true and correct, to the best of my knowledge, information, and belief.

  
CHARLES L. CRUM

Dated: 5 APRIL 2000

## CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon all participants of record in this proceeding in accordance with section 12 of the Rules of Practice.

  
Richard T. Cooper

475 L'Enfant Plaza West, S.W.  
Washington, D.C. 20260-1137  
April 5, 2000