

NATIONAL BUREAU OF STANDARDS REPORT

6365

DISTRIBUTION OF OUTGOING FIRST CLASS LETTERMAIL AT THE WASHINGTON, D. C. POST OFFICE

by

Arthur E. Newman

and

Bernard M. Levin

To

**Post Office Department
Office of Research and Engineering**



**U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS**

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Applications Engineering Section
Data Processing Systems
Division

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U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS

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REVIEW OF THE

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ASTRONOMY AND
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Office of the Inspector General

FOREWORD

The Chain Ratio method of sampling to determine the distribution of mail by destination was developed as a result of the great need of the Post Office Department and National Bureau of Standards to have an accurate yet reasonably inexpensive and practical method for acquiring such data. Heretofore, complete enumerations were made whenever destination data have been desired. The Chain Ratio method was developed and first applied to Outgoing mail in the Baltimore City Post Office. Subsequent applications were made in Los Angeles and San Francisco Outgoing Mails Divisions. Still later, the method was utilized to study Incoming distributions in the Washington, D. C. and Baltimore post offices. This report presents the results of a study of the Outgoing Mail in Washington, D. C.

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DISTRIBUTION OF OUTGOING FIRST CLASS LETTERMAIL
AT THE WASHINGTON, D. C. POST OFFICE

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1. INTRODUCTION

This report presents the results of a sampling study of Washington, D. C. outgoing mail conducted for the purpose of determining the distribution of mail by destination. The sampling procedures used were based on those developed by Dr. Norman Severo and Mr. Arthur E. Newman, as reported in National Bureau of Standards Report 5685 entitled "A Statistical Chain Ratio Method for Determining the Distribution of Mail by Destination."

This study was conducted in the Outgoing Division of the Washington City Post Office during the week of August 11 through 15, 1958. Observations were made during the evening peak period on each day. The population of mail studied was First Class mail originating in the Washington, D. C. area, excluding special mailings. This population is described more completely in Section 2. The population and the sampling procedures used are comparable to those used in three previous studies of outgoing mail, i. e., Baltimore, Los Angeles and San Francisco. The results of this study, therefore, can be compared with those of the previous studies.

The results of the study are presented in Section 3. Appendix A contains a list of all final sorts with the percentage of mail going to those sorts according to the sampling study. Summary graphs are also presented.

2. PROCEDURE

2.1 Chain Ratio Method

The sampling procedure used in this study is the Chain Ratio Method developed by Severo and Newman. A minor modification in the procedure is discussed in Appendix B.

2. 2 Definitions

A list of definitions of terms, as used in this report, is given here for reference.^{1/} These definitions are given in order to avoid misinterpretation and ambiguity because of postal language differences between post offices.

1. **Separation.** - A Separation is a classification characterized by a labeled pigeon-hole on a sorting case.
2. **Destination.** - A Destination for a given post office is a final Separation made at that post office. All directs and residues are included in this classification.^{2/}
3. **Direct.** - Any post office for which a manual sort is normally made for letter size mail, is considered to be a Direct in this study. Virginia mail is normally sorted by machine: it was, therefore, necessary to add to the list of directs those cities that are on the manual Virginia Primary now used to sort odd sized letters.
4. **Distribution.** - A Distribution is the function of physically sorting letters into their respective separation boxes.
5. **Primary.** - The term Primary (often referred to as Mailing Primary), is the first stage of Distribution of outgoing mail.
6. **Secondary.** - The term Secondary (often referred to as State Primary), is the second stage of Distribution of outgoing mail. Secondary mail has not been distributed to a final Destination on the Primary.
7. **Tertiary.** - The term Tertiary (often referred to as State Secondary), is the third stage of Distribution of outgoing mail. Tertiary mail has not been distributed to a final Destination on the Secondary.

1/ Terms not defined in this section are used as given in the "Glossary of Postal Terms in Common Use."

2/ Nixies, Go-backs, Skips, Foreign off Primary and Holdouts are also considered Destinations in this study.

8. By-pass mail. - The term By-pass mail refers to mail which receives its first Distribution in the Secondary or Tertiary cases. Also the term refers to mail which goes directly to the city section.
9. Residue. - All of the sortable mail for a given state not sorted to a Direct, is considered to be Residue mail for that state. Thus all RPO mail is considered to be Residue mail.
10. Total volume. - The term Total Volume refers to the defined classes of mail studied. (Total Volume is defined more explicitly as used in this study in Section 2.4).
11. Holdout Mail. - Air mail letters require special handling and should not be sorted with other first class mail. This mail plus special delivery mail and other mail that should not be worked with first class mail, is classified as Holdout Mail. A Holdout separation box may also be used for any Destination temporarily receiving a large quantity of mail and which does not occupy a designated separation box on the case.

2.3 The Model

The model of the flow of outgoing mail, discussed in this report, consists of a three-stage sorting scheme as represented by the flow diagram given in Figure 1. The Total volume of mail is represented in the top box as the following types of mail; Cancellation mail, Non-cancellation mail and By-pass mail. All of the cancellation and non-cancellation mail goes through the Primary. In the Primary the mail may be sorted to a final Destination, to a Residue category or to a Secondary case. The By-pass mail, on the other hand, goes either to the city section (which is a final Destination) or to a Secondary case. The mail in the Secondary cases could be sorted either to a final Destination, to a Residue category, or to a Tertiary case. In the Tertiary stage the mail must be sorted to a final Destination or to a Residue category. For the purposes of this study, RPO mail is considered to be Residue mail. Mail going to the states of Illinois, Wisconsin, Iowa and Florida is carried Red-line and, except for mail going to a few of the largest cities in those states, is not broken down in the Washington Post Office beyond the breakdown to state. Mail going to these states--except for the mail going to the largest cities--is considered to be Residue mail.

2.4 Types of Mail Studied

The following types of mail were included in this study.

(1) Cancellation mail

- a. Stamped mail into the mailing Primary
- b. Franked, penalty and metered mail deposited unbundled into collection boxes and thus mixed with stamped mail

(2) Non-cancellation mail

- a. Metered mail into the Primary
- b. Permit mail into the Primary
- c. Penalty mail into the Primary

(3) By-pass mail

- a. Stamped mail into a Secondary or the city section, by-passing the Primary
- b. Metered mail into a Secondary or the city section, by-passing the Primary
- c. Permit mail into a Secondary, or the city section, by-passing the Primary

The following types of mail were excluded from this study:

(1) Air Mail

(2) Special Delivery

(3) Second, Third and Fourth Class Mail

(4) Non-letter sized mail; i. e., flats

(5) Registered mail

- (6) Transit mail into the Secondary, Tertiary or city section
- (7) DIS mail that is dispatched without a separation
- (8) Large special mailings
- (9) Franked mail that received its initial handling at the Secondary level.

2.5 Volume Count Data

Volume counts regularly made by the Work Performance Standards group at the Washington City Post Office, were used to determine the Total Volume flowing into the Primary, and the amount by-passing the Primary and flowing either into the Secondary or into the City section for local distribution. Special volume counts were made to determine the amount of mail receiving its initial sorting at each Secondary case. These counts were made on five days: August 11, 12, 13, 14, and 15, 1958 between the hours of 7:00 AM and 12:00 Midnight.

3. RESULTS

The total volume figures and the corresponding percentages are summarized in Table 1; they may be used by the reader to convert the reported percentage figures of mail to pieces. The flow chart given in Figure 2 contains the basic percentages of the Total Volume of mail to each stage of distribution.

The tabulation of the estimated proportions of the Total Volume of mail going to each Destination is given in Appendix A. The destinations are listed in order of descending value and are identified by name. A selected portion of the data in Appendix A is presented in Table 2.

Figure 3 portrays graphically the cumulative percentage of the mail destined for the 200 post offices receiving the greatest volume of mail.

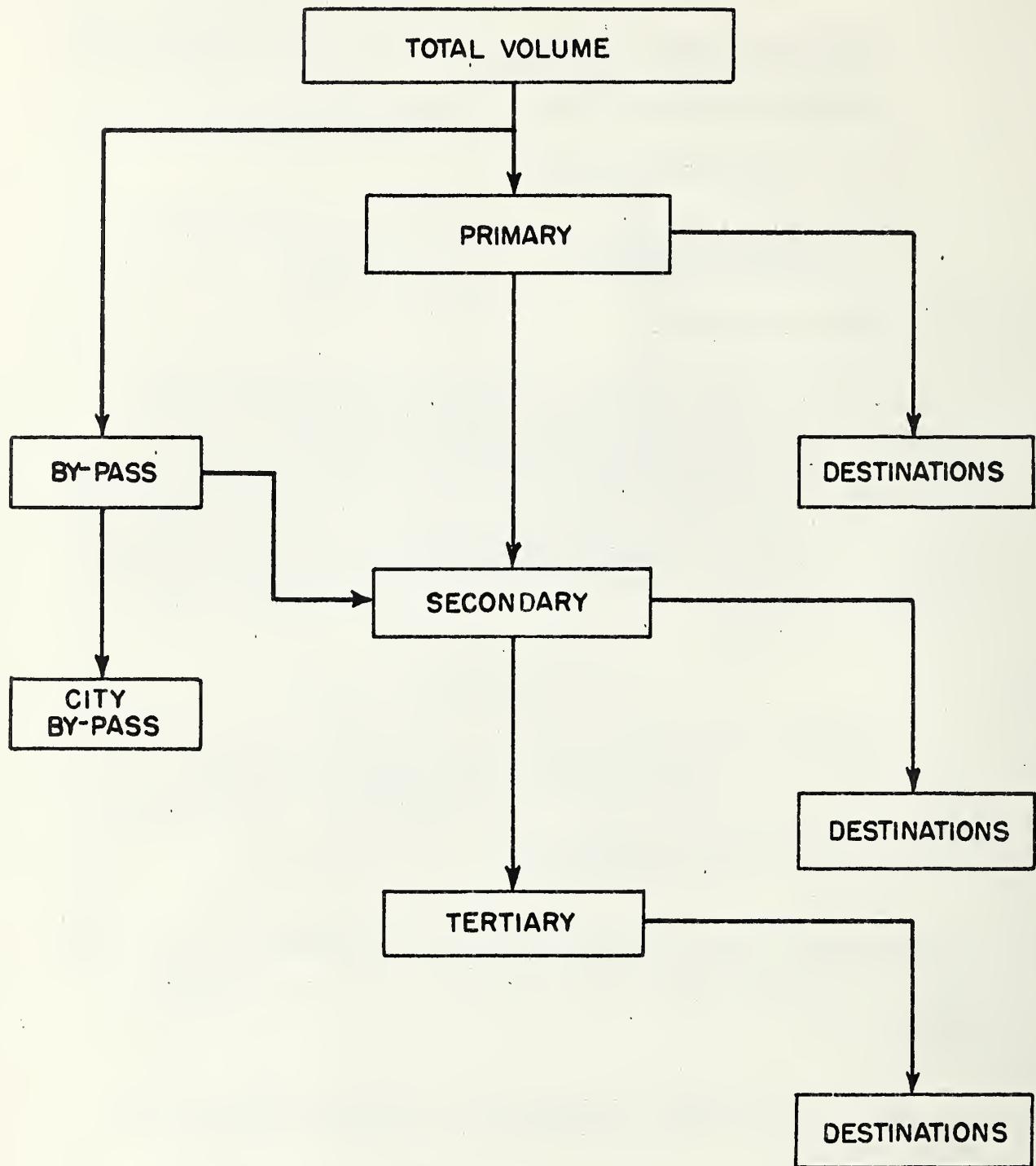


Figure 1. Flow Chart Model for the Distribution of Outgoing Mail

Table 1A

Distribution of the Total Volume of Outgoing First Class Letter Mail
 At the Washington, D. C. City Post Office -- Input
 (August 11-15, 1958 7:00 AM to 12:00 PM)

	Pieces	Pieces	%	%	%	%
Total Volume		10,570,015				100.000
Total Primary		9,445,871				89.365
Cancel	4,423,628					41.851
Non-Cancel	<u>5,022,243</u>					<u>47.514</u>
Metered	3,119,820					29.516
Permit	406,773					3.848
Penalty	<u>1,495,650</u>					<u>14.150</u>
		<u>1,124,144</u>				<u>10.635</u>
Total By-Pass		1,105,584				10.459
City By-Pass						
Cancel	5,900					.056
Metered	925,680					8.758
Permit	<u>174,004</u>					<u>1.645</u>
Secondary By-Pass		<u>18,560</u>				<u>.176</u>

Table 1B

Distribution of the Total Volume of Outgoing First Class Letter Mail
At the Washington, D. C. City Post Office -- Input
(August 11-15, 1958 7:00 AM to 12:00 PM)

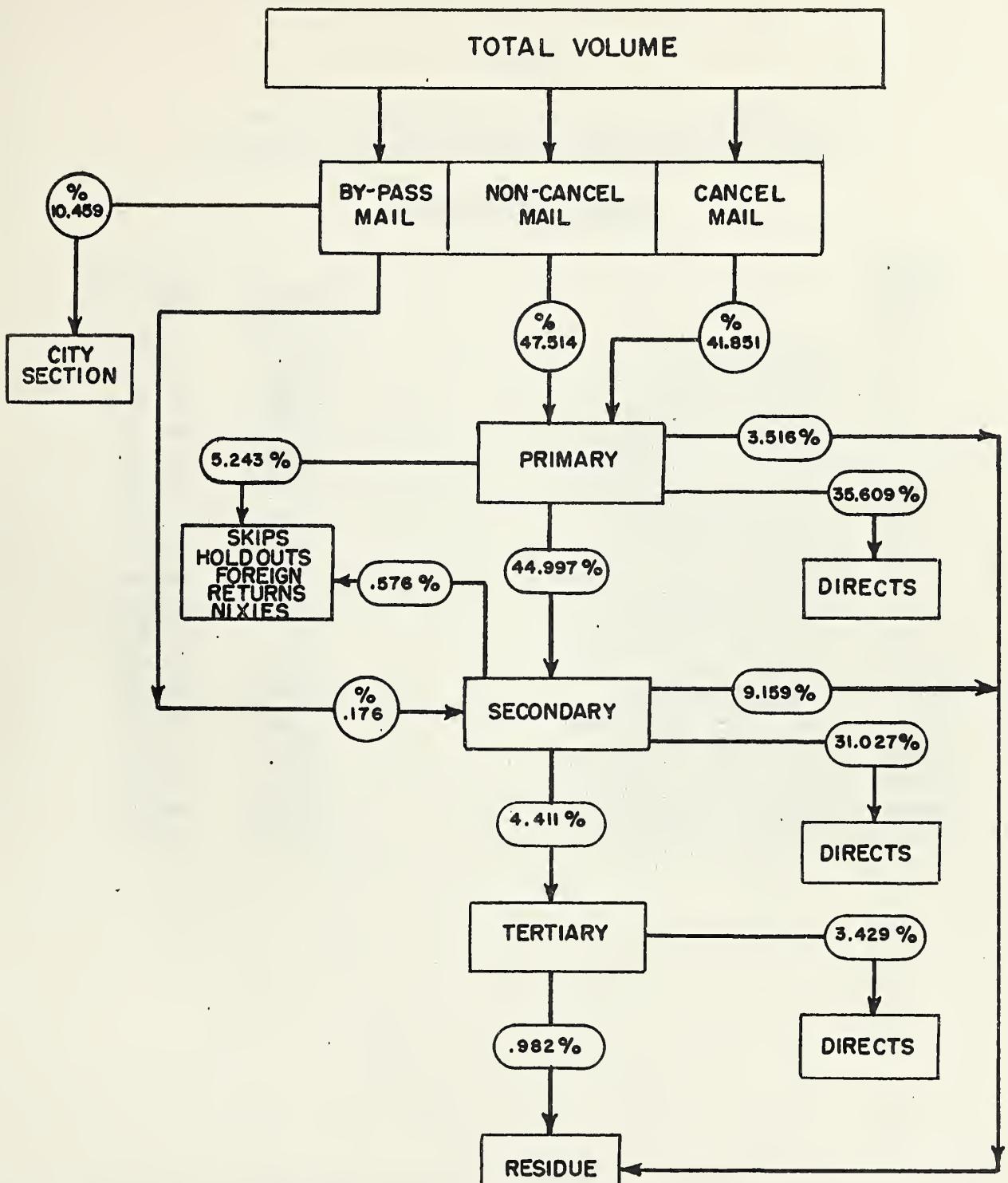


Figure 2. Distribution of Outgoing First Class Lettermail at the Washington CPO

Table 2

Tabulation of Estimated Percentages of the
Total Volume to Each Destination for Washington

Selected Destinations

<u>Rank Order</u>		<u>Percent</u>	<u>Cumulative .Percent</u>
1	Washington, D. C.	31. 919	31. 919
2	New York City	5. 276	37. 195
3	Chicago, Illinois	1. 866	39. 061
4	Arlington, Virginia	1. 660	40. 721
5	Baltimore, Maryland	1. 637	42. 360
10	Hyattsville, Maryland	. 793	47. 676
15	Detroit, Michigan	. 558	50. 910
20	Miami, Florida	. 369	52. 974
30	Milwaukee, Wisconsin	. 244	56. 049
50	Tulsa, Oklahoma	. 137	59. 550
80	Hartford, Connecticut	. 094	62. 944
100	Toledo, Ohio	. 072	64. 573
150	Lansing, Michigan	. 044	67. 346
200	Ocean City, Maryland	. 033	69. 241
300	Brandywine, Maryland	. 021	71. 847
500	Chula Vista, California	. 011	74. 877
1000	Cascade, Maryland	. 004	78. 416
2000	Gallitzin, Pennsylvania	< . 0005	80. 542

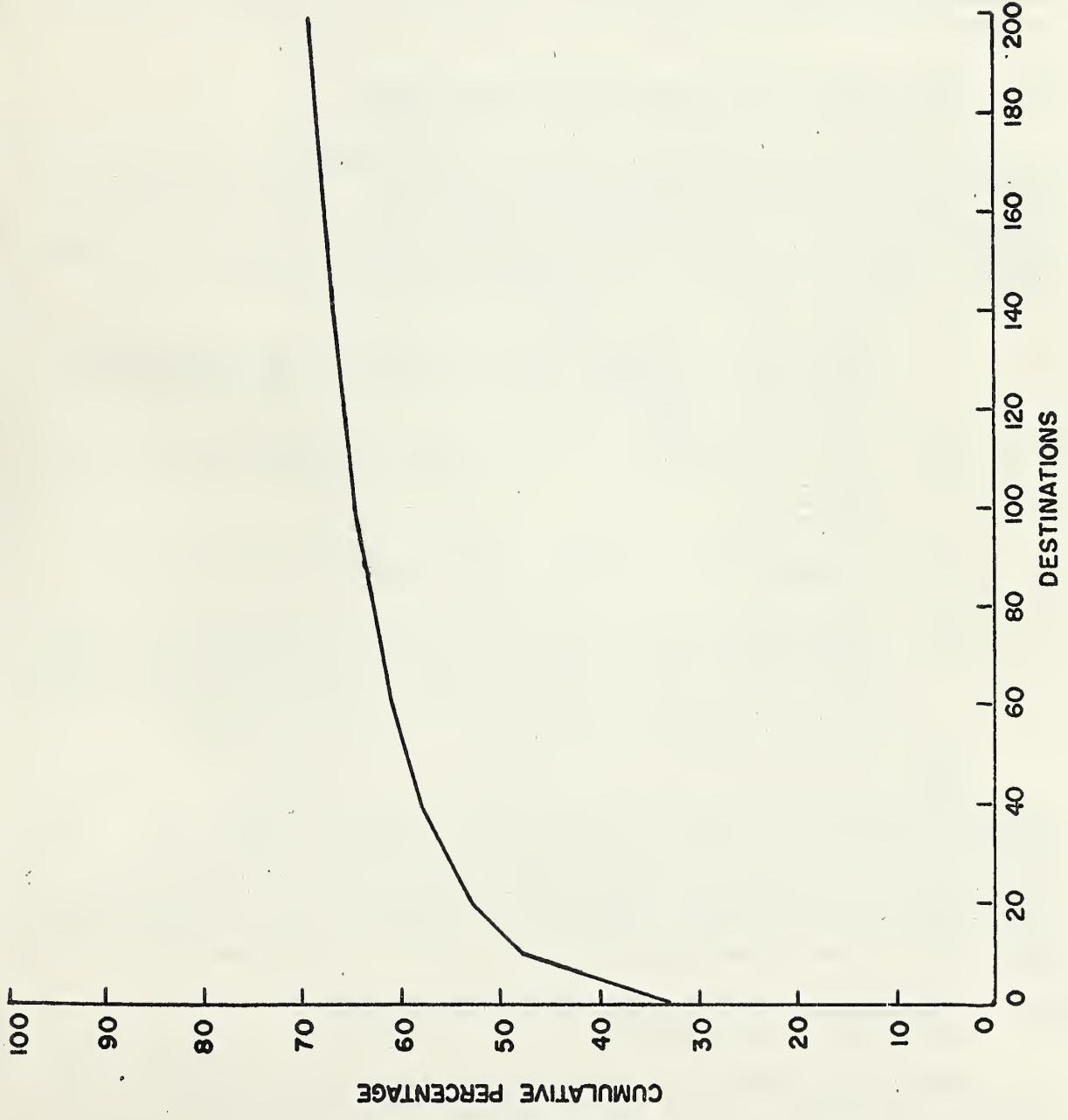


Figure 3. Cumulative Percentage Graph of the Largest 200 Outgoing Destinations for Washington, D.C.

4. DISCUSSION

4.1 Applicability of the Chain Ratio Method

The statistical chain ratio method developed by Severo and Newman (2) was the sampling procedure used in this study. This method was specifically developed for studying the distribution characteristics of outgoing mail and it was found to be as useful for studying Washington outgoing mail as it was found to be in other studies.

4.2 Discussion of the Cumulative Percentages

Figure 3 and Appendix A show the percentages of mail going to the largest N Destinations, for any N from 1 to 200. They do not indicate the percentage of mail entering the Primary that could be sorted to the largest N final sorts if the Primary had an unlimited number of pigeon holes. There are several reasons for this which are listed below:

1. About 10% of the total mail never enters the Primary but rather goes directly to the city section. No outgoing sort is needed for these letters.
2. Many of the Residue sorts would be among the 200 largest sorts.
3. Foreign mail is included in the total but not in the list.
4. Categories such as air mail and skips would require special sorts that would probably be among the top 200. If, on the other hand, these were prevented from getting to the Primary, all other figures would need an upward adjustment.

No attempt has been made to indicate the percentage of mail entering the Primary that could be sorted to the largest N final sorts. This is because there are many possible ways of handling Residue and miscellaneous mail. The data, as presented, can be used as the basis for finding the percentage of mail sortable to the largest N final sorts for any proposed method of handling the Residue and miscellaneous mail.

4.3 Estimation of Chain Ratio Values by Equation

The graph showing the percentage of mail going to individual destinations, is plotted in Figure 4 with both axes having logarithmic scales.

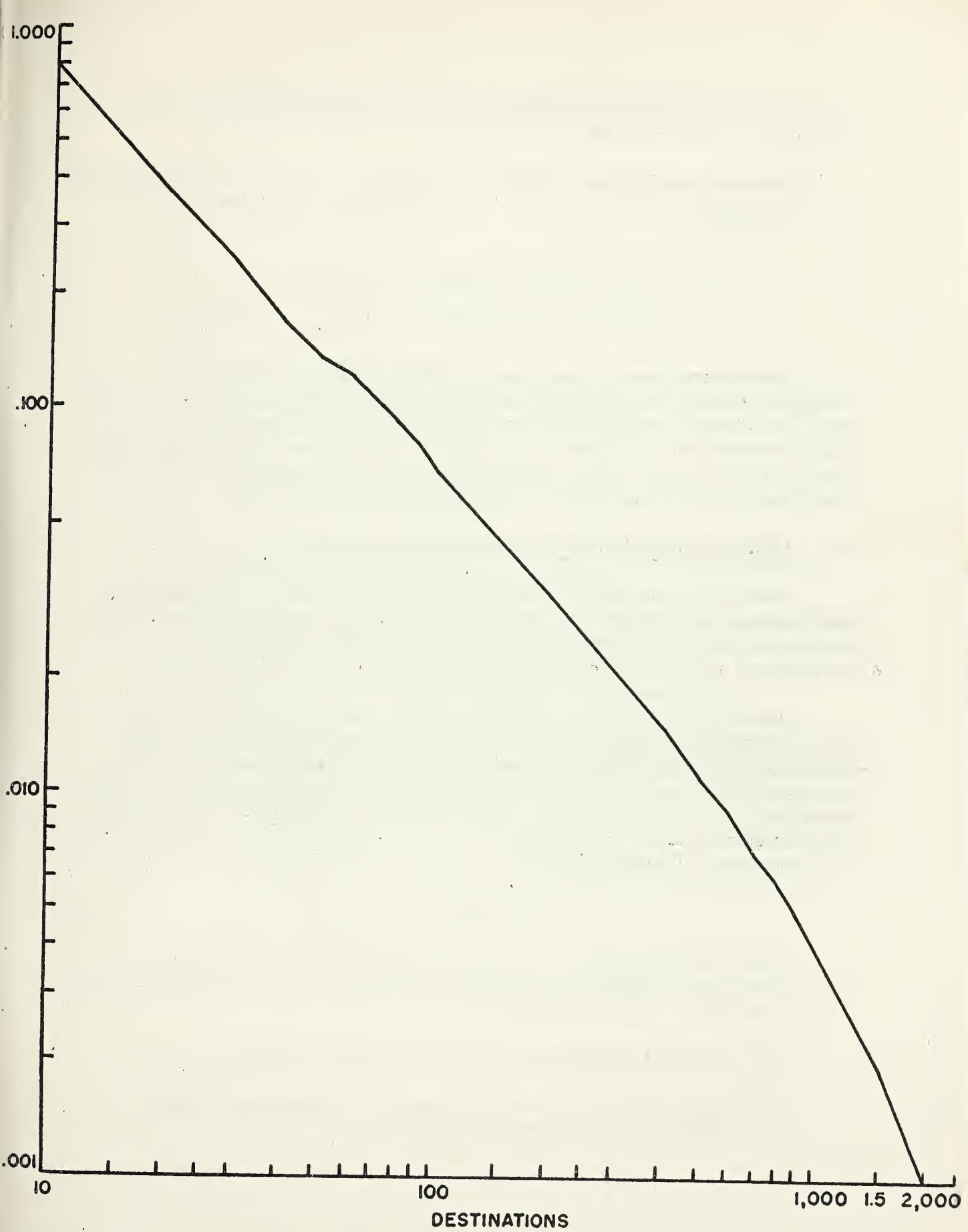


Figure 4. Logarithmic Curve of Percentage to Each Destination for Washington, D.C.

The nine Destinations receiving the most mail are not shown on the graph; the plots for these Destinations formed an irregular pattern.

Between the 10th and 500th Destinations, the curve is approximated by a straight line of slope - 1.07. By inspection, the equation of this line was found to be:

$$\log y = .968 - 1.07 \log x$$

or $y = 9.29 x^{-1.07}$

The most errant value on a percentage basis is for the 87th Destination where the equation predicts a value of $y = .090$ but the actual value is $y = .085$. Thus, for the range considered, the equation gives results which are accurate to within 11% of the chain ratio values. The error for the range between Destinations 500 and 1000 is not excessive; the maximum error being 31% for Destination 1000.

4.4 Comparison with Results of Previous Studies

Severo and Newman (2) have previously studied the Destination characteristics of three other cities: Baltimore, Los Angeles and San Francisco. The Distribution characteristics obtained here for Washington can be compared with those for the other three cities.

Figure 5 shows the cumulative percentage curves for the four cities studied up to this time. It should be noted that the curves for San Francisco, Los Angeles and Baltimore are quite similar but the curve for Washington is different from the other three. The Washington curve is in all respects lower, indicating that a smaller percentage of the Washington mail is accounted for by the largest N Destinations where N is any number from 1 to 400.

5, SUMMARY

This report presents the results of a sampling study done to determine the distribution of Outgoing First Class Mail at the Washington, D. C. Post Office, by Destination.

The principal results of this study are listed below:

- (1) 2,051 Direct separations together received approximately 80% of the total volume of mail.

- (2) There were 7 Directs including Washington, D. C. that received more than 1% of the total volume of mail.
- (3) Local mail (including city By-pass mail) received about 32% of the total volume.
- (4) 13.7% of the mail was sorted to Residue categories. This figure includes RPO mail and much of the mail going to Iowa, Illinois, Wisconsin, and Florida, where only a few of the largest cities were treated as Directs.
- (5) The largest 200 Direct Destinations received a cumulative total of 69% of the mail as compared with 80% for San Francisco, 81% for Los Angeles and 78% for Baltimore.
- (6) Cancellation mail going through the Primary amounted to 41.9% of the total volume.
- (7) Non-cancellation going through the Primary amounted to 47.5% of the total volume.
- (8) By-pass mail accounted for 10.6% of the mail with all but .18% going to the city section.
- (9) 44% of the mail left the Primary as final sorts.
- (10) 45% of the mail was processed through the Secondary and all but 4% received a final sort in the Secondary; thus, only 4% of the Total Volume of mail was processed through the Tertiary.
- (11) Miscellaneous categories including holdouts, skips, Primary returns, and nixies accounted for 4.7% of the total volume.
- (12) Foreign mail accounted for 1.1% of the total volume.

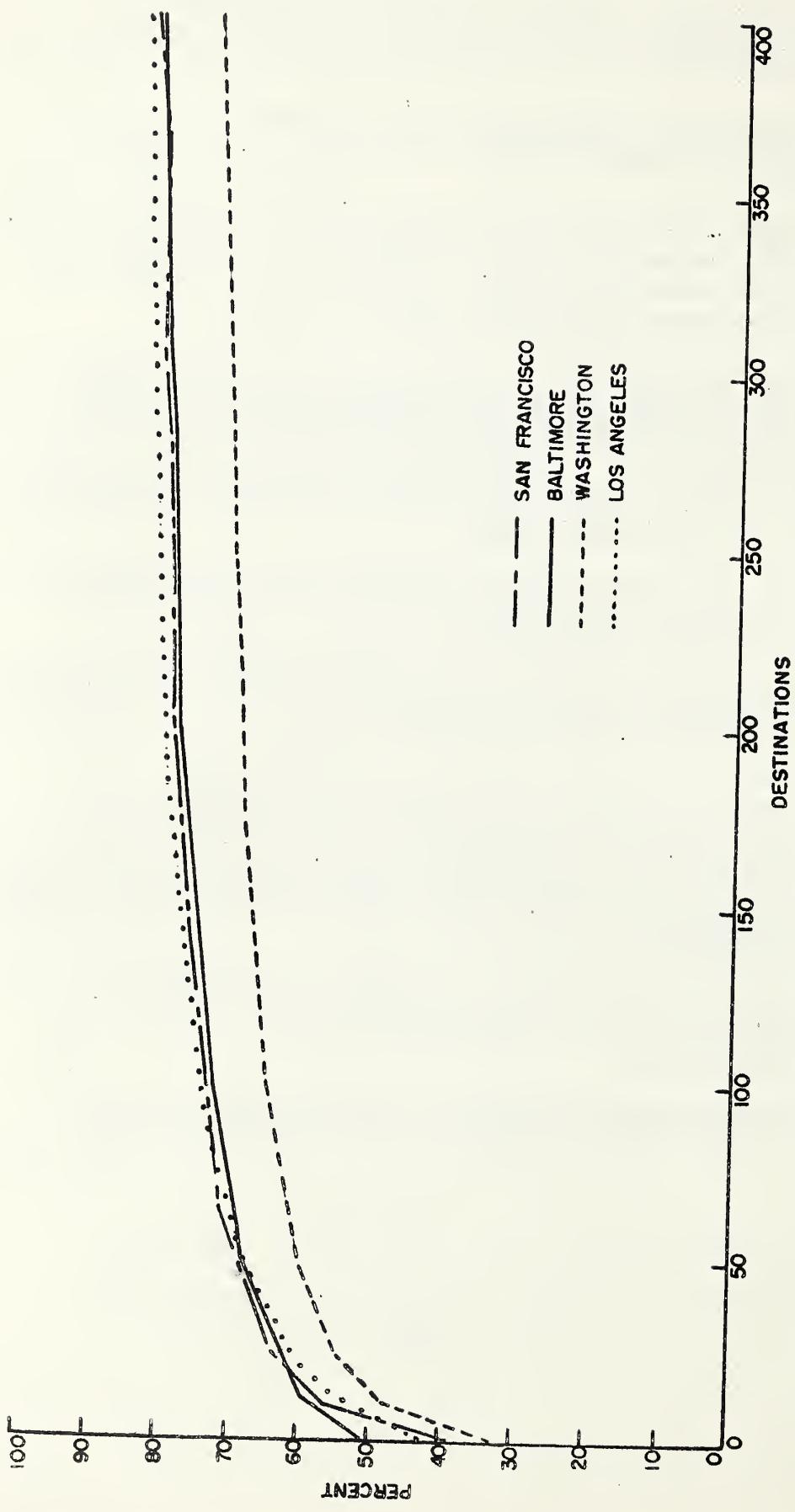


Figure 5. Cumulative Percentage Graphs of the Largest 400 Outgoing Destinations for Four Cities

APPENDIX A
TABULATION OF DESTINATIONS IN RANK ORDER

		<u>Percent</u>	<u>Cumulative Percent</u>
1	Washington, D. C.	31.919	31.919
2	New York City, N. Y.	5.276	37.195
3	Chicago, Ill.	1.866	39.061
4	Arlington, Va.	1.660	40.721
5	Baltimore, Md.	1.639	42.360
6	Silver Spring, Md.	1.607	43.967
7	Philadelphia, Penn.	1.170	45.137
8	Cincinnati, Ohio	00.951	46.088
9	Richmond, Va.	00.795	46.883
10	Hyattsville, Md.	00.793	47.676
11	Brooklyn, N. Y.	00.769	48.445
12	Alexandria, Va.	00.759	49.204
13	Boston, Mass.	00.577	49.781
14	Los Angeles, Cal.	00.571	50.352
15	Detroit, Mich.	00.558	50.910
16	Pittsburgh, Penn.	00.462	51.372
17	Cleveland, Ohio	00.453	51.825
18	Norfolk, Va.	00.408	52.233
19	San Francisco, Cal.	00.372	52.605
20	Miami, Fla.	00.369	52.974
21	Atlanta, Ga.	00.369	53.343
22	St. Louis, Mo.	00.342	53.685
23	Jamaica Term., N. Y.	00.331	54.016
24	Falls Church, Va.	00.330	54.346
25	Rockville, Md.	00.316	54.662
26	Denver, Colo.	00.310	54.972
27	Minneapolis, Minn.	00.307	55.279
28	Indianapolis, Ind.	00.280	55.559
29	Newark, N. J.	00.246	55.805
30	Milwaukee, Wisc.	00.244	56.049
31	Columbus, Ohio	00.236	56.285
32	Mt. Rainier, Md.	00.232	56.517
33	Kansas City, Mo.	00.208	56.725
34	Seattle, Wash.	00.199	56.924
35	Buffalo, N. Y.	00.196	57.120
36	Dallas, Texas	00.193	57.313
37	Jacksonville, Fla.	00.186	57.499
38	New Orleans, La.	00.179	57.678

APPENDIX A (Cont'd)

		<u>Percent</u>	<u>Cumulative Percent</u>
39	Houston, Texas	00.176	57.854
40	San Diego, Cal.	00.172	58.026
41	APO New York	00.169	58.195
42	Kensington, Md.	00.164	58.359
43	Flushing, N. Y.	00.163	58.522
44	Louisville, Ky.	00.158	58.680
45	San Antonio, Texas	00.150	58.830
46	St. Paul, Minn.	00.149	58.979
47	Omaha, Nebr.	00.146	59.125
48	FPO San Fran.	00.145	59.270
49	Atlantic City, N. J.	00.143	59.413
50	Tulsa, Okla.	00.137	59.550
51	Jamaica, N. Y.	00.134	59.684
52	Dayton, Ohio	00.131	59.815
53	Roanoke, Va.	00.130	59.945
54	Annapolis, Md.	00.128	60.073
55	Long Beach, Cal.	00.128	60.201
56	Bronx, N. Y.	00.127	60.328
57	St. Petersburg	00.127	60.455
58	College Park, Md.	00.125	60.580
59	Fairfax, Va.	00.125	60.705
60	FPO New York	00.125	60.830
61	Memphis, Tenn.	00.123	60.953
62	Rochester, N. Y.	00.116	61.069
63	Charlottesville, Va.	00.115	61.184
64	Oklahoma City, Okla.	00.115	61.299
65	Providence, R. I.	00.115	61.414
66	Phoenix, Ariz.	00.114	61.528
67	Charlotte, N. C.	00.113	61.641
68	Portland, Oregon	00.113	61.754
69	Wilmington, Del.	00.109	61.863
70	Riverdale, Md.	00.107	61.970
71	Nashville, Tenn.	00.103	62.073
72	Terre Haute, Ind.	00.101	62.174
73	Albany, N. Y.	00.100	62.274
74	Pasadena, Cal.	00.098	62.372
75	Raleigh, N. C.	00.098	62.470
76	Trenton, N. J.	00.096	62.566
77	Albuquerque, N. Mex.	00.095	62.661
78	Oakland, Cal.	00.095	62.756
79	Garden City, N. Y.	00.094	62.850

APPENDIX A (Cont'd) }

		<u>Percent</u>	<u>Cumulative Percent</u>
80	Hartford, Conn.	00.094	62.944
81	Springfield, Va.	00.093	63.037
82	Cambridge, Mass.	00.091	63.128
83	Tampa, Fla.	00.089	63.217
84	Salt Lake City, Utah	00.086	63.303
85	Camden, N. J.	00.085	63.388
86	Sacramento, Cal.	00.085	63.473
87	Wichita, Kans.	00.085	63.558
88	Akron, Ohio	00.084	63.642
89	Birmingham, Ala.	00.084	63.726
90	Little Rock, Ark.	00.083	63.809
91	Upper Marlboro, Md.	00.082	63.891
92	Grand Rapids, Mich.	00.081	63.972
93	Greensboro, N.C.	00.081	64.053
94	Lincoln, Nebr.	00.078	64.131
95	Ft. Worth, Texas	00.076	64.207
96	Syracuse, N. Y.	00.075	64.282
97	Ft. Wayne, Ind.	00.074	64.356
98	Laurel, Md.	00.073	64.429
99	New Haven, Conn.	00.072	64.501
100	Toledo, Ohio	00.072	64.573
101	Brentwood, Md.	00.071	64.644
102	Charleston, W. Va.	00.071	64.715
103	Durham, N. C.	00.071	64.786
104	Harrisburg, Penn.	00.071	64.857
105	Long Island City, N. Y.	00.070	64.927
106	Topeka, Kans.	00.070	64.997
107	New York Dis., N. Y.	00.070	65.067
108	Pleasantville, N. Y.	00.067	65.134
109	McLean, Va.	00.065	65.199
110	Tacoma, Wash.	00.065	65.264
111	Lynchburg, Va.	00.064	65.328
112	Jersey City, N. J.	00.063	65.391
113	Spokane, Wash.	00.062	65.453
114	Vienna, Va.	00.061	65.514
115	Ann Arbor, Mich.	00.060	65.574
116	Worcester, Mass.	00.060	65.634
117	Manassas, Va.	00.059	65.693
118	Winston-Salem, N. C.	00.059	65.752
119	New Brunswick, N. J.	00.058	65.810
120	Knoxville, Tenn.	00.057	65.867

APPENDIX A (Cont'd)

121	Portsmouth, Va.	00.057	65.924
122	Tucson, Ariz.	00.057	65.981
123	Austin, Texas	00.056	66.037
124	Bridgeport, Conn.	00.055	66.092
125	Lorton, Va.	00.055	66.147
126	So. Bend, Ind.	00.054	66.201
127	Springfield, Mass.	00.053	66.254
128	APO San Fran.	00.052	66.306
129	Bladensburg, Md.	00.052	66.358
130	Berkeley, Cal.	00.050	66.408
131	Colorado Springs, Colo.	00.050	66.458
132	Columbia, S. C.	00.050	66.508
133	Frederick, Md.	00.050	66.558
134	Elizabeth, N. J.	00.049	66.607
135	Hagerstown, Md.	00.049	66.656
136	Scranton, Penn.	00.049	66.705
137	Hampton, Va.	00.048	66.753
138	Montgomery, Ala.	00.048	66.801
139	Reading, Penn.	00.048	66.849
140	Evansville, Ind.	00.047	66.896
141	Clinton, Md.	00.046	66.942
142	Schenectady, N. Y.	00.046	66.988
143	Fredericksburg, Va.	00.045	67.033
144	Lexington, Ky.	00.045	67.078
145	Palo Alto, Cal.	00.045	67.123
146	Paterson, N. J.	00.045	67.168
147	Staunton, Va.,	00.045	67.213
148	Youngstown, Ohio	00.045	67.258
149	Ft. Belvoir, Va.	00.044	67.302
150	Lansing, Mich.	00.044	67.346
151	Portland, Me.	00.044	67.390
152	San Jose, Cal.	00.044	67.434
153	Burbank, Cal.	00.043	67.477
154	Canton, Ohio	00.043	67.520
155	Chattanooga, Tenn.	00.043	67.563
156	El Paso, Texas	00.043	67.606
157	Savannah, Ga.	00.043	67.649
158	Gaithersburg, Md.	00.042	67.691
159	Huntington, W. Va.	00.042	67.733
160	Columbus, Ga.	00.041	67.774
161	Mobile, Ala.	00.041	67.815

APPENDIX A (Cont'd)

162	Ridgewood, N. J.	00. 041	67. 856
163	Utica, N. Y.	00. 041	67. 897
164	Lancaster, Penn.	00. 041	67. 938
165	Asheville, N. C.	00. 040	67. 978
166	Flint, Mich.	00. 040	68. 018
167	Mt. Vernon, N. Y.	00. 040	68. 058
168	York, Penn.	00. 040	68. 098
169	Baton Rouge, La.	00. 039	68. 137
170	Fort Meade, Md.	00. 039	68. 176
171	Kalamazoo, Mich.	00. 039	68. 215
172	Newport News, Va.	00. 039	68. 254
173	San Diego, Naval, Cal.	00. 039	68. 293
174	Wilkes Barre, Penn.	00. 039	68. 332
175	Charleston, S. C.	00. 038	68. 370
176	Beverly Hills, Cal.	00. 037	68. 407
177	Gary, Ind.	00. 037	68. 444
178	Wheeling, W. Va.	00. 037	68. 481
179	Battle Creek, Mich.	00. 036	68. 517
180	Cumberland, Md.	00. 036	68. 553
181	Edgewater, Md.	00. 036	68. 589
182	Greenbelt, Md.	00. 036	68. 625
183	New London, Conn.	00. 036	68. 661
184	Petersburg, Va.	00. 036	68. 697
185	Princeton, N. J.	00. 036	68. 733
186	Front Royal, Va.	00. 035	68. 768
187	Landover, Md.	00. 035	68. 803
188	Shreveport, La.	00. 035	68. 838
189	Staten Island, N. Y.	00. 035	68. 873
190	Wilmington, N. C.	00. 035	68. 908
191	Allentown, Penn.	00. 035	68. 943
192	White Plains, N. Y.	00. 034	68. 977
193	Annandale, Va.	00. 033	69. 010
194	Danville, Va.	00. 033	69. 043
195	Glendale, Cal.	00. 033	69. 076
196	Ithaca, N. Y.	00. 033	69. 109
197	Jackson, Miss.	00. 033	69. 142
198	LaFayette, Ind.	00. 033	69. 175
199	Manchester, N. H.	00. 033	69. 208
200	Ocean City, Md.	00. 033	69. 241
201	Virginia Beach, Va.	00. 033	69. 274
202	Waterbury, Conn.	00. 033	69. 307

APPENDIX A (Cont'd)

203	Camp LeJeune, N. C.	00.032	69.339
204	Duluth, Minn.	00.032	69.371
205	Leesburg, Va.	00.032	69.403
206	Newport, R. I.	00.032	69.435
207	Santa Monica, Cal.	00.032	69.467
208	Augusta, Ga.	00.031	69.498
209	Boise, Idaho	00.031	69.529
210	Fresno, Cal.	00.031	69.560
211	Kansas City, Kansas	00.031	69.591
212	Stockton, Cal.	00.031	69.622
213	Yonkers, N. Y.	00.031	69.653
214	Bethlehem, Penn.	00.031	69.684
215	Camden Term '2 N. J.,	00.031	69.715
216	Erie, Penn.	00.031	69.746
217	La Plata, Md.	00.031	69.777
218	Alaska	00.030	69.807
219	Culver City, Cal.	00.030	69.837
220	Dearborn, Mich.	00.030	69.867
221	East Lansing, Mich.	00.030	69.897
222	Fayetteville, N. C.	00.030	69.927
223	Winchester, Va.	00.030	69.957
224	Macon, Ga.	00.029	69.986
225	Quantico M-CS, Va.	00.029	70.015
226	Towson, Md.	00.029	70.044
227	Warrenton, Va.	00.029	70.073
228	Whittier, Cal.	00.029	70.102
229	Bloomington, Ind.	00.028	70.130
230	Clarksburg, W. Va.	00.028	70.158
231	Fort Benning, Ga.	00.028	70.186
232	High Point, N. C.	00.028	70.214
233	No. Hollywood, Cal.	00.028	70.242
234	Occoquan, Va.	00.028	70.270
235	Poughkeepsie, N. Y.	00.028	70.298
236	Saginaw, Mich.	00.028	70.326
237	Springfield, Mo.	00.028	70.354
238	East Orange, N. J.	00.027	70.381
239	Great Neck, N. Y.	00.027	70.408
240	Greenville, S. C.	00.027	70.435
241	Hempstead, N. Y.	00.027	70.462
242	Parkersburg, W. Va.	00.027	70.489
243	Anderson, Ind.	00.026	70.515

APPENDIX A (Cont'd)

244	Clifton, N. J.	00.026	70.541
245	Elkhart, Ind.	00.026	70.567
246	Hammond, Ind.	00.026	70.593
247	New Rochelle, N. Y.	00.026	70.619
248	Rocky Mount, N. C.	00.026	70.645
249	Santa Ana, Cal.	00.026	70.671
250	Waldorf, Md.	00.026	70.697
251	Chapel Hill, N. C.	00.025	70.722
252	Galveston, Texas	00.025	70.747
253	Hackensack, N. J.	00.025	70.772
254	Jefferson City, Mo.	00.025	70.797
255	Las Vegas, Nev.	00.025	70.822
256	Plainfield, N. J.	00.025	70.847
257	Van Nuys, Cal.	00.025	70.872
258	Waltham, Mass.	00.025	70.897
259	Beltsville, Md.	00.024	70.921
260	Englewood, N. J.	00.024	70.945
261	Lanham, Md.	00.024	70.969
262	Monterey, Cal.	00.024	70.993
263	New Bedford, Mass.	00.024	71.017
264	Ocean City, N. J.	00.024	71.041
265	Pontiac, Mich.	00.024	71.065
266	Riverside, Cal.	00.024	71.089
267	San Bernardino, Cal.	00.024	71.113
268	Springfield, Ohio	00.024	71.137
269	West Hartford, Conn.	00.024	71.161
270	Camden Term 1, N. J.	00.024	71.185
271	Johnstown, Penn.	00.024	71.209
272	Burlington, Vt.	00.023	71.232
273	Culpepper, Va.	00.023	71.255
274	Glen Burnie, Md.	00.023	71.278
275	Harrisonburg, Va.	00.023	71.301
276	Martinsburg, W. Va.	00.023	71.324
277	Santa Fe, N. Mex.	00.023	71.347
278	Spartanburg, S. C.	00.023	71.370
279	Tuscaloosa, Ala.	00.023	71.393
280	Oil City, Penn.	00.023	71.416
281	Binghamton, N. Y.	00.022	71.438
282	Bloomfield, N. J.	00.022	71.460
283	Concord, N. H.	00.022	71.482

APPENDIX A(Cont'd)

284	Dorchester, Mass.	00.022	71.504
285	Fort Bragg, N. C.	00.022	71.526
286	Greenwich, Conn.	00.022	71.548
287	Patuxent River, Md.	00.022	71.570
288	Portsmouth, N.H.	00.022	71.592
289	Santa Barbara, Cal.	00.022	71.614
290	Summit, N.J.	00.022	71.636
291	Altoona, Penn.	00.022	71.658
292	Geneva, N.Y.	00.021	71.679
293	Jackson, Mich.	00.021	71.700
294	Lawrence, Mass.	00.021	71.721
295	Muncie, Ind.	00.021	71.742
296	Muskegon, Mich.	00.021	71.763
297	St. Joseph, Mo.	00.021	71.784
298	Williamsburg, Va.	00.021	71.805
299	Wright Field, Ohio	00.021	71.826
300	Brandywine, Md.	00.021	71.847
301	Albany, Ga.	00.020	71.867
302	Bakersfield, Cal.	00.020	71.887
303	Bangor, Me.	00.020	71.907
304	Haddonfield, N.J.	00.020	71.927
305	Herndon, Va.	00.020	71.947
306	Newport Naval Sta., R.I.	00.020	71.967
307	Norwalk, Conn.	00.020	71.987
308	Port Washington, N.Y.	00.020	72.007
309	Salem, Va.	00.020	72.027
310	Waco, Texas	00.020	72.047
311	Carlisle, Penn.	00.020	72.067
312	Burlington, N.C.	00.019	72.086
313	Camp Pendleton, Cal.	00.019	72.105
314	Corpus Christi, Texas	00.019	72.124
315	Covington, Va.	00.019	72.143
316	Indian Head, Md.	00.019	72.162
317	Jacksonville, N.C.	00.019	72.181
318	Lynn, Mass.	00.019	72.200
319	Martinsville, Va.	00.019	72.219
320	Montclair, N.J.	00.019	72.238
321	Morgantown, W. Va.	00.019	72.257
322	Niagara Falls, N.Y.	00.019	72.276
323	Ogden, Utah	00.019	72.295
324	Pittsfield, Mass.	00.019	72.314

APPENDIX A(Cont'd)

325	Rehoboth Beach, Del.	00. 019	72. 333
326	Leonardtown, Md.	00. 019	72. 352
327	Athens, Ga.	00. 018	72. 370
328	Beaumont, Texas	00. 018	72. 388
329	Brookline, Mass.	00. 018	72. 406
330	Cherry Point, N. C.	00. 018	72. 424
331	Downey, Cal.	00. 018	72. 442
332	Fall River, Mass.	00. 018	72. 460
333	Fort Smith, Ark.	00. 018	72. 478
334	Gastonia, N. C.	00. 018	72. 496
335	Lima, Ohio	00. 018	72. 514
336	Lubbock, Texas	00. 018	72. 532
337	Marysville, Ohio	00. 018	72. 550
338	Naval Academy, Md.	00. 018	72. 568
339	New Britain, Conn.	00. 018	72. 586
340	Pawtucket, R. I.	00. 018	72. 604
341	Reno, Nevada	00. 018	72. 622
342	Rockville Center, N. Y.	00. 018	72. 640
343	Salem, Oregon	00. 018	72. 658
344	Salisbury, Md.	00. 018	72. 676
345	U. of Cal., Berkeley, Cal.	00. 018	72. 694
346	Waynesboro, Va.	00. 018	72. 712
347	Camden Term 3, N. J.	00. 018	72. 730
348	Augusta, Me.	00. 017	72. 747
349	Brockton, Mass.	00. 017	72. 764
350	Decatur, Ga.	00. 017	72. 781
351	Dover, N. J.	00. 017	72. 798
352	East Hartford, Conn.	00. 017	72. 815
353	Elmira, N. Y.	00. 017	72. 832
354	Huntsville, Ala.	00. 017	72. 849
355	Nashua, N. H.	00. 017	72. 866
356	Pomona, Cal.	00. 017	72. 883
357	Rochester, Minn.	00. 017	72. 900
358	Royal Oak, Mich.	00. 017	72. 917
359	San Mateo, Cal.	00. 017	72. 934
360	Twenty Nine Palms, Cal.	00. 017	72. 951
361	Vallejo, Cal.	00. 017	72. 968
362	Chester, Penn.	00. 017	72. 985
363	Easton, Penn.	00. 017	73. 002
364	Washington, Penn.	00. 017	73. 019
365	Abilene, Texas	00. 016	73. 035

APPENDIX A (Cont'd)

366	Bay City, Mich.	00.016	73.051
367	Bayonne, N.J.	00.016	73.067
368	Beckley, W.Va.	00.016	73.083
369	Cheyenne, Wyo.	00.016	73.099
370	Columbus, Ind.	00.016	73.115
371	Helena, Mont.	00.016	73.131
372	Lexington, Va.	00.016	73.147
373	Mansfield, Ohio	00.016	73.163
374	Oak Ridge, Tenn.	00.016	73.179
375	Orange, N.J.	00.016	73.195
376	Rahway, N.J.	00.016	73.211
377	Salisbury, N.C.	00.016	73.227
378	Tyler, Texas	00.016	73.243
379	Warren, Ohio	00.016	73.259
380	Hazelton, Penn.	00.016	73.275
381	Norristown, Penn.	00.016	73.291
382	Williamsport, Penn.	00.016	73.307
383	Accokeek, Md.	00.015	73.322
384	Amarillo, Texas	00.015	73.337
385	Anaheim, Cal.	00.015	73.352
386	Birmingham, Mich.	00.015	73.367
387	Bismarck, N.Dak.	00.015	73.382
388	Chevy Chase, Md.	00.015	73.397
389	Dover, Del.	00.015	73.412
390	Fairmont, W.Va.	00.015	73.427
391	Fort Knox, Ky.	00.015	73.442
392	Garrett Park, Md.	00.015	73.457
393	Glenn Dale, Md.	00.015	73.472
394	Hamilton, Ohio	00.015	73.487
395	Inglewood, Cal.	00.015	73.502
396	Jamestown, N.Y.	00.015	73.517
397	Lowell, Mass.	00.015	73.532
398	Midland, Mich.	00.015	73.547
399	Morristown, N.J.	00.015	73.562
400	Newark, N.Y.	00.015	73.577
401	Red Bank, N.J.	00.015	73.592
402	Scarsdale, N.Y.	00.015	73.607
403	Stanford, Cal.	00.015	73.622
404	Union City, N.J.	00.015	73.637
405	Westminster, Md.	00.015	73.652
406	Wildwood, N.J.	00.015	73.667

APPENDIX A (Cont'd)

407	Lexington Park, Md.	00.015	73.682
408	McKeesport, Penn.	00.015	73.697
409	Uniontown, Penn.	00.015	73.712
410	Upper Darby, Penn.	00.015	73.727
411	Warren, Penn.	00.015	73.742
412	Barstow, Cal.	00.014	73.756
413	Bluefield, W. Va.	00.014	73.770
414	Bowie, Md.	00.014	73.784
415	Fargo, N. Dak.	00.014	73.798
416	Fort Jackson, S. C.	00.014	73.812
417	Goldsboro, N. C.	00.014	73.826
418	Hanover, N. H.	00.014	73.840
419	Hayward, Cal.	00.014	73.854
420	Hughesville, Md.	00.014	73.868
421	Irvington, N. J.	00.014	73.882
422	Kingsport, Tenn.	00.014	73.896
423	Lackland A. F. B., Texas	00.014	73.910
424	Marion, Ind.	00.014	73.924
425	Montpelier, Vt.	00.014	73.938
426	Notre Dame, Ind.	00.014	73.952
427	Nutley, N. J.	00.014	73.966
428	Oceanside, Cal.	00.014	73.980
429	Odessa, Texas	00.014	73.994
430	Passaic, N. J.	00.014	74.008
431	Stamford, Conn.	00.014	74.022
432	Stratford, Conn.	00.014	74.036
433	Sumter, S. C.	00.014	74.050
434	Wilson, N. C.	00.014	74.064
435	Greensburg, Penn.	00.014	74.078
436	Alexandria, La.	00.013	74.091
437	Arlington, Mass.	00.013	74.104
438	Asbury Park, N. J.	00.013	74.117
439	Bronxville, N. Y.	00.013	74.130
440	Cape May, N. J.	00.013	74.143
441	Findlay, Ohio	00.013	74.156
442	Fitchburg, Mass.	00.013	74.169
443	Lake Charles, La.	00.013	74.182
444	Lakewood, Ohio	00.013	74.195
445	Lawrence, Kans.	00.013	74.208
446	Linden, N. J.	00.013	74.221
447	Lorain, Ohio	00.013	74.234

APPENDIX A (Cont'd)

448	Meriden, Conn.	00. 013	74. 247
449	Michigan City, Ind.	00. 013	74. 260
450	Mineola, N. Y.	00. 013	74. 273
451	Mount Clemens, Mich.	00. 013	74. 286
452	Purcellville, Va.	00. 013	74. 299
453	Quincy, Mass.	00. 013	74. 312
454	Richmond, Ind.	00. 013	74. 325
455	Richmond, Cal.	00. 013	74. 338
456	Rome, N. Y.	00. 013	74. 351
457	San Pedro, Cal.	00. 013	74. 364
458	Steubenville, Ohio	00. 013	74. 377
459	Troy, N. Y.	00. 013	74. 390
460	Vineland, N. J.	00. 013	74. 403
461	Washington, N. C.	00. 013	74. 416
462	Ypsilanti, Mich.	00. 013	74. 429
463	State College, Penn.	00. 013	74. 442
464	Berryville, Va.	00. 012	74. 454
465	Cleveland Heights, Ohio	00. 012	74. 466
466	Danbury, Conn.	00. 012	74. 478
467	Ft. Eustis, Va.	00. 012	74. 490
468	Germantown, Md.	00. 012	74. 502
469	Holyoke, Mass.	00. 012	74. 514
470	Jackson, Tenn.	00. 012	74. 526
471	Johnson City, Tenn.	00. 012	74. 538
472	Middleburg, Va.	00. 012	74. 550
473	Middletown, Conn.	00. 012	74. 562
474	Morganton, N. C.	00. 012	74. 574
475	New Bern, N. C.	00. 012	74. 586
476	North Wilesboro, N. C.	00. 012	74. 598
477	Olympia, Wash.	00. 012	74. 610
478	Pueblo, Colo.	00. 012	74. 622
479	Pulaski, Va.	00. 012	74. 634
480	San Leandro, Cal.	00. 012	74. 646
481	Shaw AFB, S. C.	00. 012	74. 658
482	Suffolk, Va.	00. 012	74. 670
483	Tarrytown, N. Y.	00. 012	74. 682
484	Westfield, N. J.	00. 012	74. 694
485	Butler, Penn.	00. 012	74. 706
486	New Castle, Penn.	00. 012	74. 718
487	New Kensington, Penn.	00. 012	74. 730
488	Trenton Dis., N. J.	00. 012	74. 742
489	Waynesboro, Penn.	00. 012	74. 754
490	West Chester, Penn.	00. 012	74. 766

APPENDIX A (Cont'd)

491	Lutherville and Timonium, Md.	00.012	74.778
492	Alameda, Cal.	00.011	74.789
493	Ansonia, Conn.	00.011	74.800
494	Bedford, Va.	00.011	74.811
495	Benton Harbor, Mich.	00.011	74.822
496	Blacksburg, Va.	00.011	74.833
497	Bristol, Va.	00.011	74.844
498	Brunswick, Ga.	00.011	74.855
499	Cambridge, Md.	00.011	74.866
500	Chula Vista, Cal.	00.011	74.877
501	Easton, Md.	00.011	74.888
502	E. Chicago, Ind.	00.011	74.899
503	Ft. Myer, Va.	00.011	74.910
504	Grand Island, Nebr.	00.011	74.921
505	Greenville, N. C.	00.011	74.932
506	Hendersonville, N. C.	00.011	74.943
507	Huntington, Ind.	00.011	74.954
508	Kearny, N. J.	00.011	74.965
509	Kokomo, Ind.	00.011	74.976
510	La Jolla, Cal.	00.011	74.987
511	Leavenworth, Kans.	00.011	74.998
512	Levittown, Penn.	00.011	75.009
513	Malden, Mass.	00.011	75.020
514	March AFB, Cal.	00.011	75.031
515	Marietta, Ga.	00.011	75.042
516	Medford, Mass.	00.011	75.053
517	Menlo Park, Cal.	00.011	75.064
518	Middletown, Ohio	00.011	75.075
519	Mishawaka, Ind.	00.011	75.086
520	Mitchellville, Md.	00.011	75.097
521	Newark, Del.	00.011	75.108
522	Oakland, Md.	00.011	75.119
523	Olney, Md.	00.011	75.130
524	Ontario, Cal.	00.011	75.141
525	Perth Amboy, N.J.	00.011	75.152
526	Peru, Ind.	00.011	75.163
527	Port Huron, Mich.	00.011	75.174
528	Reisterstown, Md.	00.011	75.185
529	Rome, Ga.	00.011	75.196
530	Rutland, Vt.	00.011	75.207
531	Santa Rosa, Cal.	00.011	75.218

APPENDIX A (Cont'd)

532	South Charleston, W. Va.	00.011	75.229
533	Valdosta, Ga.	00.011	75.240
534	Watertown, Mass.	00.011	75.251
535	W. LaFayette, Ind.	00.011	75.262
536	Wyandotte, Mich.	00.011	75.273
537	Bradford, Penn.	00.011	75.284
538	Chambersburg, Penn.	00.011	75.295
539	Belleville, N. J.	00.010	75.305
540	Bethesda, Md.	00.010	75.315
541	Bristol, Conn.	00.010	75.325
542	Cabin John, Md.	00.010	75.335
543	Coronado, Cal.	00.010	75.345
544	Cuyahoga Falls, Ohio	00.010	75.355
545	Elkins, W. Va.	00.010	75.365
546	Elyrie, Ohio	00.010	75.375
547	Fairborn, Ohio	00.010	75.385
548	Fort Sam Houston, Texas	00.010	75.395
549	Frankfort, Ky.	00.010	75.405
550	Garden Grove, Cal.	00.010	75.415
551	Goshen, Ind.	00.010	75.425
552	Havelock, N. C.	00.010	75.435
553	Hoboken, N. J.	00.010	75.445
554	Kinston, N. C.	00.010	75.455
555	La Porte, Ind.	00.010	75.465
556	Lebanon, Penn.	00.010	75.475
557	Lewiston, Me.	00.010	75.485
558	Marion, Ohio	00.010	75.495
559	Metuchen, N. J.	00.010	75.505
560	Millville, N. J.	00.010	75.515
561	Monroe, La.	00.010	75.525
562	Morris Plains, N. J.	00.010	75.535
563	Newburgh, N. Y.	00.010	75.545
564	North Bergen, N. J.	00.010	75.555
565	Parris Island, S. C.	00.010	75.565
566	Pasadena, Md.	00.010	75.575
567	Salinas, Cal.	00.010	75.585
568	Sandusky, Ohio	00.010	75.595
569	Sharon, Penn.	00.010	75.605
570	Sunnyvale, Cal.	00.010	75.615
571	Taunton, Mass.	00.010	75.625
572	Union, N. J.	00.010	75.635

APPENDIX A (Cont'd)

573	Westfield, Mass.	00.010	75. 645
574	Wichita Falls, Texas	00.010	75. 655
575	Zanesville, Ohio	00.010	75. 665
576	Drexel Hill, Penn.	00.010	75. 675
577	Lewisburg, Penn.	00.010	75. 685
578	Pittston, Penn.	00.010	75. 695
579	Aberdeen, Md.	00.009	75. 704
580	Aiken, S. C.	00.009	75. 713
581	Alhambra, Cal.	00.009	75. 722
582	Anniston, Ala.	00.009	75. 731
583	Ashtabula, Ohio	00.009	75. 740
584	Attleboro, Mass.	00.009	75. 749
585	Belmont, Mass.	00.009	75. 758
586	Bergenfield, N. J.	00.009	75. 767
587	Bridgeton, N. J.	00.009	75. 776
588	Charlestown, W. Va.	00.009	75. 785
589	Chillicothe, Ohio	00.009	75. 794
590	Clairemont, Cal.	00.009	75. 803
591	Elizabeth City, N. C.	00.009	75. 812
592	Fairlawn, N. J.	00.009	75. 821
593	Fort Monmouth, N. J.	00.009	75. 830
594	Ft. Bliss, Texas	00.009	75. 839
595	Ft. Lee, Va.	00.009	75. 848
596	Fullerton, Cal.	00.009	75. 857
597	Glen Echo, Md.	00.009	75. 866
598	Groton, Conn.	00.009	75. 875
599	Harrison, N. J.	00.009	75. 884
600	Hattiesburg, Miss.	00.009	75. 893
601	Haverhill, Mass.	00.009	75. 902
602	Henderson, N. C.	00.009	75. 911
603	Hickory, N. C.	00.009	75. 920
604	Hollywood, Md.	00.009	75. 929
605	Huntington Park, Cal.	00.009	75. 938
606	Jeffersonville, Ind.	00.009	75. 947
607	Keyser, W. Va.	00.009	75. 956
608	Kingston, N. Y.	00.009	75. 965
609	Long Branch, N. J.	00.009	75. 974
610	Longview, Texas	00.009	75. 983
611	Los Altos, Cal.	00.009	75. 992
612	Modesto, Cal.	00.009	76. 001
613	Newark, Ohio	00.009	76. 010

APPENDIX A (Cont'd)

614	Norwich, Conn.	00.009	76.019
615	Painesville, Ohio	00.009	76.028
616	Port Chester, N. Y.	00.009	76.037
617	Portsmouth, Ohio	00.009	76.046
618	Prince Frederick, Md.	00.009	76.055
619	Princeton, W. Va.	00.009	76.064
620	Redwood City, Cal.	00.009	76.073
621	Rock Hill, S. C.	00.009	76.082
622	Roxbury, Mass.	00.009	76.091
623	Rutherford, N. J.	00.009	76.100
624	Salem, Mass.	00.009	76.109
625	San Rafael, Cal.	00.009	76.118
626	Sherman Oaks, Cal.	00.009	76.127
627	Short Hills, N. J.	00.009	76.136
628	South Orange, N. J.	00.009	76.145
629	Statesville, N. C.	00.009	76.154
630	St. Joseph, Mich.	00.009	76.163
631	Tarawa Terrace, N. C.	00.009	76.172
632	Texarkana, Texas	00.009	76.181
633	Thomasville, N. C.	00.009	76.190
634	Thurmont, Md.	00.009	76.199
635	Torrance, Cal.	00.009	76.208
636	Upper Montclair, N. J.	00.009	76.217
637	Vincennes, Ind.	00.009	76.226
638	Weirton, W. Va.	00.009	76.235
639	Kingston, Penn.	00.009	76.244
640	Pottsville, Penn.	00.009	76.253
641	Adrian, Mich.	00.008	76.261
642	Ashland, Ky.	00.008	76.269
643	Auburn, N. Y.	00.008	76.277
644	Auburn, Ala.	00.008	76.285
645	Azusa, Cal.	00.008	76.293
646	Batavia, N. Y.	00.008	76.301
647	Big Spring, Texas	00.008	76.309
648	Bryan, Texas	00.008	76.317
649	Bryans Road, Md.	00.008	76.325
650	Caldwell, N. J.	00.008	76.333
651	Canoga Park, Cal.	00.008	76.341
652	Compton, Cal.	00.008	76.349
653	Costa Mesa, Cal.	00.008	76.357
654	Cranford, N. J.	00.008	76.365

APPENDIX A (Cont'd)

655	El Cajon, Cal.	00.008	76.373
656	El Monte, Cal.	00.008	76.381
657	Ellicott City, Md.	00.008	76.389
658	Everett, Mass.	00.008	76.397
659	Fort Arthur, Texas	00.008	76.405
660	Framingham, Mass.	00.008	76.413
661	Frostburg, Md.	00.008	76.421
662	Gainesville, Ga.	00.008	76.429
663	Gardena, Cal.	00.008	76.437
664	Hawthorne, Cal.	00.008	76.445
665	Lakewood, Cal.	00.008	76.453
666	La Mesa, Cal.	00.008	76.461
667	Lenoir, N. C.	00.008	76.469
668	Lexington, N. C.	00.008	76.477
669	Lumberton, N. C.	00.008	76.485
670	Maplewood, N. J.	00.008	76.493
671	Marietta, Ohio	00.008	76.501
672	Midland, Texas	00.008	76.509
673	Napa, Cal.	00.008	76.517
674	Owensboro, Ky.	00.008	76.525
675	Paducah, Ky.	00.008	76.533
676	Phillipsburg, N. J.	00.008	76.541
677	Phoenixville, Penn.	00.008	76.549
678	Redlands, Cal.	00.008	76.557
679	Reseda, Cal.	00.008	76.565
680	Roanoke Rapids, N. C.	00.008	76.573
681	Severna Park, Md.	00.008	76.581
682	Somerville, N. J.	00.008	76.589
683	Somerville, Mass.	00.008	76.597
684	South Norwalk, Conn.	00.008	76.605
685	Springfield, Penn.	00.008	76.613
686	Takoma Park, Md.	00.008	76.621
687	Tarboro, N. C.	00.008	76.629
688	West Point, N. Y.	00.008	76.637
689	West Haven, Conn.	00.008	76.645
690	Whippany, N. J.	00.008	76.653
691	Woodstock, Va.	00.008	76.661
692	Ardmore, Penn.	00.008	76.669
693	Beaver Falls, Penn.	00.008	76.677
694	Coatesville, Penn.	00.008	76.685
695	Indiana, Penn.	00.008	76.693

APPENDIX A (Cont'd)

696	Paterson Dis., 2, N. J.	00.008	76.701
697	Anderson, S. C.	00.007	76.708
698	Bainbridge, Md.	00.007	76.715
699	Bristol, Tenn.	00.007	76.722
700	Burlingame, Cal.	00.007	76.729
701	Camp Hill, Penn.	00.007	76.736
702	Cheltenham, Md.	00.007	76.743
703	Chico, Cal.	00.007	76.750
704	Clinton, N. C.	00.007	76.757
705	Concord, Cal.	00.007	76.764
706	Corning, N. Y.	00.007	76.771
707	Covington, Ky.	00.007	76.778
708	Covina, Cal.	00.007	76.785
709	Dalton, Ga.	00.007	76.792
710	East Liverpool, Ohio	00.007	76.799
711	Edenton, N. C.	00.007	76.806
712	Florence, S. C.	00.007	76.813
713	Ft. Monroe, Va.	00.007	76.820
714	Gadsden, Ala.	00.007	76.827
715	Grafton, W. Va.	00.007	76.834
716	Greenwood, S. C.	00.007	76.841
717	Hamden, Conn.	00.007	76.848
718	Holland, Mich.	00.007	76.855
719	Hopewell, Va.	00.007	76.862
720	Jessups, Md.	00.007	76.869
721	Kannapolis, N. C.	00.007	76.876
722	Kent, Ohio	00.007	76.883
723	La Fayette, La.	00.007	76.890
724	Lancaster, Cal.	00.007	76.897
725	Lewistown, Penn.	00.007	76.904
726	Linthicum Hgts., Md.	00.007	76.911
727	Logansport, Ind.	00.007	76.918
728	Madison, N. J.	00.007	76.925
729	Massillon, Ohio	00.007	76.932
730	Milford, Conn.	00.007	76.939
731	Moundsville, W. Va.	00.007	76.946
732	Mount Holly, N. J.	00.007	76.953
733	Mountain View, Cal.	00.007	76.960
734	Mt. Airy, Md.	00.007	76.967
735	Mt. Vernon, Ohio	00.007	76.974
736	New Albany, Ind.	00.007	76.981

APPENDIX A (Cont'd)

737	North Adams, Mass.	00.007	76. 988
738	Northampton, Mass.	00.007	76. 995
739	Oak Park, Mich.	00.007	77. 002
740	Orangeburg, S. C.	00.007	77. 009
741	Oxford, N. C.	00.007	77. 016
742	Oxnard, Cal.	00.007	77. 023
743	Paoli, Penn.	00.007	77. 030
744	Paramus, N. J.	00.007	77. 037
745	San Angelo, Texas	00.007	77. 044
746	San Carlos, Cal.	00.007	77. 051
747	Santa Cruz, Cal.	00.007	77. 058
748	Southgate, Cal.	00.007	77. 065
749	Teaneck, N. J.	00.007	77. 072
750	Tonawanda, N. Y.	00.007	77. 079
751	Torrington, Conn.	00.007	77. 086
752	Traverse City, Mich.	00.007	77. 093
753	University Park, Penn.	00.007	77. 100
754	Valpariso, Ind.	00.007	77. 107
755	Ventura, Cal.	00.007	77. 114
756	Vicksburg, Miss.	00.007	77. 121
757	Wallingford, Conn.	00.007	77. 128
758	Walnut Creek, Cal.	00.007	77. 135
759	Watertown, N. Y.	00.007	77. 142
760	Westport, Conn.	00.007	77. 149
761	Woodbury, N. J.	00.007	77. 156
762	Du Bois, Penn.	00.007	77. 163
763	Havertown, Penn.	00.007	77. 170
764	Sunbury, Penn.	00.007	77. 177
765	Arcadia, Cal.	00.006	77. 183
766	Army Chemical Center, Md.	00.006	77. 189
767	Asheboro, N. C.	00.006	77. 195
768	Athens, Ohio	00.006	77. 201
769	Bala Cynwyd, Penn.	00.006	77. 207
770	Baldwin, N. Y.	00.006	77. 213
771	Berkeley Springs, W. Va.	00.006	77. 219
772	Branford, Conn.	00.006	77. 225
773	Brownsville, Texas	00.006	77. 231
774	California, Md.	00.006	77. 237
775	Carmel, Cal.	00.006	77. 243
776	Charleston Shipyard, S. C.	00.006	77. 249
777	College Station, Texas	00.006	77. 255

APPENDIX A (Cont'd)

778	Concord, N. C.	00.006	77.261
779	Connersville, Ind.	00.006	77.267
780	Coraopolis, Penn.	00.006	77.273
781	Corpus Christi N.A. Br., Tex.	00.006	77.279
782	Crawfordsville, Ind.	00.006	77.285
783	Dameron, Md.	00.006	77.291
784	Delaware, Ohio	00.006	77.297
785	East Paterson, N.J.	00.006	77.303
786	El Cerrito, Cal.	00.006	77.309
787	El Segundo, Cal.	00.006	77.315
788	Federalsburg, Md.	00.006	77.321
789	Ft. Hood, Texas	00.006	77.327
790	Gettysburg, Penn.	00.006	77.333
791	Glen Falls, N.Y.	00.006	77.339
792	Griffin, Ga.	00.006	77.345
793	Hanover, Penn.	00.006	77.351
794	Hatboro, Penn.	00.006	77.357
795	Lancaster, Ohio	00.006	77.363
796	Langley AFB, Va.	00.006	77.369
797	Lansdale, Penn.	00.006	77.375
798	Leaksville, N.C.	00.006	77.381
799	Livingston, N.J.	00.006	77.387
800	Los Gatos, Cal.	00.006	77.393
801	Louisa, Va.	00.006	77.399
802	Manchester, Conn.	00.006	77.405
803	Marysville, Tenn.	00.006	77.411
804	Maxwell AFB, Ala.	00.006	77.417
805	Mechanicsburg, Penn.	00.006	77.423
806	Melrose, Mass.	00.006	77.429
807	Merced, Cal.	00.006	77.435
808	Meridian, Miss.	00.006	77.441
809	Monroe, Mich.	00.006	77.447
810	Moorestown, N.J.	00.006	77.453
811	Mt. Airy, N.C.	00.006	77.459
812	New Cumberland, Penn.	00.006	77.465
813	North Tonawanda, N.Y.	00.006	77.471
814	Norwalk, Cal.	00.006	77.477
815	Olean, N.Y.	00.006	77.483
816	Orange, Cal.	00.006	77.489
817	Perry Point, Md.	00.006	77.495
818	Pleasantville, N.J.	00.006	77.501

APPENDIX A (Cont'd)

819	Port Deposit, Md.	00.006	77.507
820	Princess Anne, Md.	00.006	77.513
821	Radford, Va.	00.006	77.519
822	Radnor, Penn.	00.006	77.525
823	Redondo Beach, Cal.	00.006	77.531
824	Roxboro, N. C.	00.006	77.537
825	San Bruno, Cal.	00.006	77.543
826	San Luis Obispo, Cal.	00.006	77.549
827	Sandy Spring, Md.	00.006	77.555
828	Sanford, N. C.	00.006	77.561
829	Santa Clara, Cal.	00.006	77.567
830	Selma, Ala.	00.006	77.573
831	Shelby, N. C.	00.006	77.579
832	So. Pasadena, Cal.	00.006	77.585
833	Temple, Texas	00.006	77.591
834	Venice, Cal.	00.006	77.597
835	Visalia, Cal.	00.006	77.603
836	Wabash, Ind.	00.006	77.609
837	Warren, Mich.	00.006	77.615
838	Wayne, N. J.	00.006	77.621
839	West New York, N. J.	00.006	77.627
840	West Covina, Cal.	00.006	77.633
841	Whiting, Ind.	00.006	77.639
842	Woonsocket, R. I.	00.006	77.645
843	Wooster, Ohio	00.006	77.651
844	Yellow Springs, Ohio	00.006	77.657
845	Connellsville, Penn.	00.006	77.663
846	Meadville, Penn.	00.006	77.669
847	Pottstown, Penn.	00.006	77.675
848	Asheville Dis., N. C.	00.006	77.681
849	Aberdeen Proving Grounds, Md.	00.005	77.686
850	Aliquippa, Penn.	00.005	77.691
851	Alliance, Ohio	00.005	77.696
852	Ambler, Penn.	00.005	77.701
853	Ashland, Ohio	00.005	77.706
854	Beaufort, S. C.	00.005	77.711
855	Bedford, Ind.	00.005	77.716
856	Bedford, Ohio	00.005	77.721
857	Berrien Springs, Mich.	00.005	77.726
858	Bloomfield, Conn.	00.005	77.731
859	Boundbrook, N. J.	00.005	77.736

APPENDIX A (Cont'd)

860	Bristol, Penn.	00.005	77.741
861	Brookville, Md.	00.005	77.746
862	Buckhanon, W. Va.	00.005	77.751
863	Camp Campbell, Ky.	00.005	77.756
864	Canonsburg, Penn.	00.005	77.761
865	Carnegie, Penn.	00.005	77.766
866	Castro Valley, Cal.	00.005	77.771
867	Celina, Ohio	00.005	77.776
868	Centreville, Md.	00.005	77.781
869	Charleroi, Penn.	00.005	77.786
870	Chesapeake Beach, Md.	00.005	77.791
871	Clairton, Penn.	00.005	77.796
872	Cleveland, Tenn.	00.005	77.801
873	Cockeysville, Md.	00.005	77.806
874	Conshohocken, Penn.	00.005	77.811
875	Corona, Cal.	00.005	77.816
876	Daly City, Cal.	00.005	77.821
877	Damascus, Md.	00.005	77.826
878	Denton, Md.	00.005	77.831
879	Derwood, Md.	00.005	77.836
880	Dover, N. H.	00.005	77.841
881	Doylestown, Penn.	00.005	77.846
882	East Detroit, Mich.	00.005	77.851
883	East Pittsburgh, Penn.	00.005	77.856
884	East Point, Ga.	00.005	77.861
885	Edgewood, Md.	00.005	77.866
886	Elizabeth, Penn.	00.005	77.871
887	Elkton, Md.	00.005	77.876
888	Encino, Cal.	00.005	77.881
889	Follansbee, W. Va.	00.005	77.886
890	Fort McPherson, Ga.	00.005	77.891
891	Fort Ord, Cal.	00.005	77.896
892	Frankfort, Ind.	00.005	77.901
893	Freehold, N. J.	00.005	77.906
894	Fremont, Ohio	00.005	77.911
895	Galion, Ohio	00.005	77.916
896	Garfield, N. J.	00.005	77.921
897	Glendora, Cal.	00.005	77.926
898	Glenridge, N. J.	00.005	77.931
899	Gloucester, Mass.	00.005	77.936
900	Gloversville, N. Y.	00.005	77.941

APPENDIX A (Cont'd)

901	Grand Haven, Mich.	00.005	77.946
902	Greenville, Miss.	00.005	77.951
903	Hancock, Md.	00.005	77.956
904	Hanford, Cal.	00.005	77.961
905	Hinton, W. Va.	00.005	77.966
906	Homestead, Penn.	00.005	77.971
907	Huntingtown, Md.	00.005	77.976
908	Imperial Beach, Cal.	00.005	77.981
909	Irwin, Penn.	00.005	77.986
910	Jeannette, Penn.	00.005	77.991
911	Jenkintown, Penn.	00.005	77.996
912	Kenilworth, N. J.	00.005	78.001
913	Lakehurst, N. J.	00.005	78.006
914	Lancaster, S. C.	00.005	78.011
915	Lansdowne, Penn.	00.005	78.016
916	Laredo, Texas	00.005	78.021
917	Latrobe, Penn.	00.005	78.026
918	Lincolnton, N. C.	00.005	78.031
919	Livermore, Cal.	00.005	78.036
920	Lynwood, Cal.	00.005	78.041
921	Mechanicsville, Md.	00.005	78.046
922	Media, Penn.	00.005	78.051
923	Middletown, N. Y.	00.005	78.056
924	Monrovia, Cal.	00.005	78.061
925	Murfreesboro, Tenn.	00.005	78.066
926	Murray Hill, N. J.	00.005	78.071
927	National City, Cal.	00.005	78.076
928	New Canaan, Conn.	00.005	78.081
929	New Martinsville, W. Va.	00.005	78.086
930	New Windsor, Md.	00.005	78.091
931	Newport Beach, Cal.	00.005	78.096
932	Newton Center, Mass.	00.005	78.101
933	Niles, Ohio	00.005	78.106
934	Niles, Mich.	00.005	78.111
935	Oberlin, Ohio	00.005	78.116
936	Olmsted AFB, Penn.	00.005	78.121
937	Owings Mill, Md.	00.005	78.126
938	Owosso, Mich.	00.005	78.131
939	Port Clinton, Ohio	00.005	78.136
940	Port Hueneme, Cal.	00.005	78.141

APPENDIX A (Cont'd)

941	Randolph Field, Texas	00.005	78.146
942	Salem, Ohio	00.005	78.151
943	San Fernando, Cal.	00.005	78.156
944	San Gabriel, Cal.	00.005	78.161
945	San Lorenzo, Cal.	00.005	78.166
946	San Marino, Cal.	00.005	78.171
947	Shadyside, Md.	00.005	78.176
948	Shamokin, Penn.	00.005	78.181
949	Shelby, Ohio	00.005	78.186
950	Sherman, Texas	00.005	78.191
951	Smithfield, N. C.	00.005	78.196
952	Somerset, Penn.	00.005	78.201
953	St. Albans, W. Va.	00.005	78.206
954	Sykesville, Md.	00.005	78.211
955	Temple City, Cal.	00.005	78.216
956	Tenafly, N. J.	00.005	78.221
957	Thomasville, Ga.	00.005	78.226
958	Tiffin, Ohio	00.005	78.231
959	Victoria, Texas	00.005	78.236
960	Warsaw, Ind.	00.005	78.241
961	Washington, Ind.	00.005	78.246
962	Waycross, Ga.	00.005	78.251
963	Wayne, Penn.	00.005	78.256
964	Waynesville, N. C.	00.005	78.261
965	Wellesley Hills, Mass.	00.005	78.266
966	Wellsburg, W. Va.	00.005	78.271
967	Western Port, Md.	00.005	78.276
968	Westwood, N. J.	00.005	78.281
969	Williamston, N. C.	00.005	78.286
970	Willow Grove, Penn.	00.005	78.291
971	Willoughby, Ohio	00.005	78.296
972	Braddock, Penn.	00.005	78.301
973	Carbondale, Penn.	00.005	78.306
974	Lock Haven, Penn.	00.005	78.311
975	Paterson Dis., 1, N. J.	00.005	78.316
976	Albany, Cal.	00.004	78.320
977	Albermarle, N. C.	00.004	78.324
978	Amsterdam, N. Y.	00.004	78.328
979	Arlington, Cal.	00.004	78.332
980	Arnold, Md.	00.004	78.336
981	Beaver, Penn.	00.004	78.340

APPENDIX A (Cont'd)

982	Bedford, Penn.	00.004	78.344
983	Bel Air, Md.	00.004	78.348
984	Bell, Cal.	00.004	78.352
985	Belmont, Cal.	00.004	78.356
986	Berlin, Md.	00.004	78.360
987	Bessemer, Ala.	00.004	78.364
988	Biloxi, Miss.	00.004	78.368
989	Boonsboro, Md.	00.004	78.372
990	Boonton, N. J.	00.004	78.376
991	Bordentown, N. J.	00.004	78.380
992	Boyds, Md.	00.004	78.384
993	Branchville, Md.	00.004	78.388
994	Broomall, Penn.	00.004	78.392
995	Brunswick, Md.	00.004	78.396
996	Burlington, N. J.	00.004	78.400
997	Camp Saginaw	00.004	78.404
998	Carlsbad, Cal.	00.004	78.408
999	Carrollton, Ga.	00.004	78.412
1000	Cascade, Md.	00.004	78.416
1001	Chamblee, Ga.	00.004	78.420
1002	Charlotte Hall, Md.	00.004	78.424
1003	Chatham, N. J.	00.004	78.428
1004	Chestertown, Md.	00.004	78.432
1005	Chester, S. C.	00.004	78.436
1006	Clarksville, Tenn.	00.004	78.440
1007	Cliffside Park, N. J.	00.004	78.444
1008	Corsicana, Texas	00.004	78.448
1009	Coshocton, Ohio	00.004	78.452
1010	Crisfield, Md.	00.004	78.456
1011	Crown Point, Ind.	00.004	78.460
1012	Crownsville, Md.	00.004	78.464
1013	Darby, Penn.	00.004	78.468
1014	Darlington, Md.	00.004	78.472
1015	Darlington, S. C.	00.004	78.476
1016	Denton, Texas	00.004	78.480
1017	Denville, N.J.	00.004	78.484
1018	Dickerson, Md.	00.004	78.488
1019	Dowington, Penn.	00.004	78.492
1020	Dunn, N. C.	00.004	78.496
1021	Duquesne, Penn.	00.004	78.500
1022	East Rutherford, N. J.	00.004	78.504

APPENDIX A (Cont'd)

1023	East Stroudsburg, Penn.	00.004	78.508
1024	Eatontown, N. J.	00.004	78.512
1025	El Centro, Cal.	00.004	78.516
1026	Elizabethton, Tenn.	00.004	78.520
1027	Elkins Park, Penn.	00.004	78.524
1028	Emmitsburg, Md.	00.004	78.528
1029	Enfield, N. C.	00.004	78.532
1030	Ephrata, Penn.	00.004	78.536
1031	Escondido, Cal.	00.004	78.540
1032	Fairfield, Conn.	00.004	78.544
1033	Farmville, Va.	00.004	78.548
1034	Fontana, Cal.	00.004	78.552
1035	Fort Gordon, Ga.	00.004	78.556
1036	Fort Lee, N. J.	00.004	78.560
1037	Fostoria, Ohio	00.004	78.564
1038	Franklin, Penn.	00.004	78.568
1039	Gaffney, S. C.	00.004	78.572
1040	Gambrills, Md.	00.004	78.576
1041	Georgetown, S. C.	00.004	78.580
1042	Glenside, Penn.	00.004	78.584
1043	Graham, N. C.	00.004	78.588
1044	Grand Prairie, Texas	00.004	78.592
1045	Grantsville, Md.	00.004	78.596
1046	Granville, Ohio	00.004	78.600
1047	Great Mills, Md.	00.004	78.604
1048	Greenville, Penn.	00.004	78.608
1049	Greencastle, Ind.	00.004	78.612
1050	Greenville, Tenn.	00.004	78.616
1051	Gulfport, Miss.	00.004	78.620
1052	Harlingen, Texas	00.004	78.624
1053	Hartsville, S. C.	00.004	78.628
1054	Hermosa Beach, Cal.	00.004	78.632
1055	Hershey, Penn.	00.004	78.636
1056	Huntingdon, Penn.	00.004	78.640
1057	Inyokern N. O. T. S., Cal.	00.004	78.644
1058	Ironton, Ohio	00.004	78.648
1059	Jasper, Ind.	00.004	78.652
1060	Kittanning, Penn.	00.004	78.656
1061	Knoxville, Md.	00.004	78.660
1062	La Canada, Cal.	00.004	78.664

APPENDIX A (Cont'd)

1063	La Crescenta, Cal.	00.004	78. 668
1064	Laguna Beach, Cal.	00.004	78. 672
1065	La Habra, Cal.	00.004	78. 676
1066	Lakewood, N. J.	00.004	78. 680
1067	Laurens, S. C.	00.004	78. 684
1068	Laurinburgh, N. C.	00.004	78. 688
1069	Lehighton, Penn.	00.004	78. 692
1070	Lodi, N. J.	00.004	78. 696
1071	Lodi, Cal.	00.004	78. 700
1072	Lonaconing, Md.	00.004	78. 704
1073	Louisburg, N. C.	00.004	78. 708
1074	Manhattan Beach, Cal.	00.004	78. 712
1075	Marbury, Md.	00.004	78. 716
1076	Marshall, Texas	00.004	78. 720
1077	Martins Ferry, Ohio	00.004	78. 724
1078	Marysville, Cal.	00.004	78. 728
1079	McAllen, Texas	00.004	78. 732
1080	McKees Rock, Penn.	00.004	78. 736
1081	Mentor, Ohio	00.004	78. 740
1082	Middletown, Md.	00.004	78. 744
1083	Milledgeville, Ga.	00.004	78. 748
1084	Milltown, N. J.	00.004	78. 752
1085	Milton, Mass.	00.004	78. 756
1086	Monessen, Penn.	00.004	78. 760
1087	Montbello, Cal.	00.004	78. 764
1088	Morehead City, N. C.	00.004	78. 768
1089	Moultrie, Ga.	00.004	78. 772
1090	Mountain Lake Park, Md.	00.004	78. 776
1091	Mt. Olive, N. C.	00.004	78. 780
1092	Narbath, Penn.	00.004	78. 784
1093	Neptune, N. J.	00.004	78. 788
1094	New Castle, Ind.	00.004	78. 792
1095	Newberry, S. C.	00.004	78. 796
1096	Newnan, Ga.	00.004	78. 800
1097	North East, Md.	00.004	78. 804
1098	North Charleston, S. C.	00.004	78. 808
1099	Norwalk, Ohio	00.004	78. 812
1100	Oak Hill, W. Va.	00.004	78. 816
1101	Oneonta, N. Y.	00.004	78. 820
1102	Oxford, Ohio	00.004	78. 824
1103	Pacific Grove, Cal.	00.004	78. 828

APPENDIX A (Cont'd)

1104	Pacific Palisades, Cal.	00.004	78.832
1105	Penns Grove, N. J.	00.004	78.836
1106	Petaluma, Cal.	00.004	78.840
1107	Petersburg, W. Va.	00.004	78.844
1108	Piedmont, Cal.	00.004	78.848
1109	Piqua, Ohio	00.004	78.852
1110	Plymouth, Ind.	00.004	78.856
1111	Point Pleasant Beach, N. J.	00.004	78.860
1112	Poolesville, Md.	00.004	78.864
1113	Portland, Ind.	00.004	78.868
1114	Punxsutawney, Penn.	00.004	78.872
1115	Randallstown, Md.	00.004	78.876
1116	Ravenna, Ohio	00.004	78.880
1117	Redding, Cal.	00.004	78.884
1118	Reidsville, N. C.	00.004	78.888
1119	Ridgefield, N. J.	00.004	78.892
1120	River Edge, N. J.	00.004	78.896
1121	Robins AFB, Ga.	00.004	78.900
1122	Romney, W. Va.	00.004	78.904
1123	San Clemente, Cal.	00.004	78.908
1124	Scotland, Md.	00.004	78.912
1125	Seabrook, Md.	00.004	78.916
1126	Sewickley, Penn.	00.004	78.920
1127	Seymour, Ind.	00.004	78.924
1128	Shelbyville, Ind.	00.004	78.928
1129	South Boston, Va.	00.004	78.932
1130	Stroudsburg, Penn.	00.004	78.936
1131	Swarthmore, Penn.	00.004	78.940
1132	Taneytown, Md.	00.004	78.944
1133	Toms River, N. J.	00.004	78.948
1134	Travis AFB, Cal.	00.004	78.952
1135	Troy, Ohio	00.004	78.956
1136	Union Bridge, Md.	00.004	78.960
1137	V. A. N. D. Baker Hosp., W. Va.	00.004	78.964
1138	Welch, W. Va.	00.004	78.968
1139	Weston, W. Va.	00.004	78.972
1140	Williamsport, Md.	00.004	78.976
1141	Wilmington, Ohio	00.004	78.980
1142	Wilmington, Cal.	00.004	78.984
1143	Woodbridge, N. J.	00.004	78.988
1144	Woodridge, N. J.	00.004	78.992

APPENDIX A (Cont'd)

1145	Worthington, Ohio	00.004	78.996
1146	Wynnewood, Penn.	00.004	79.000
1147	Wytheville, Va.	00.004	79.004
1148	Xenia, Ohio	00.004	79.008
1149	Bryn Mawr, Penn.	00.004	79.012
1150	Camden Term 4, N. J.	00.004	79.016
1151	Tyrone, Penn.	00.004	79.020
1152	Goldsboro Dis., N. C.	00.004	79.024
1153	Abington, Penn.	00.003	79.027
1154	Ahoskie, N. C.	00.003	79.030
1155	Alpena, Mich.	00.003	79.033
1156	Altadena, Cal.	00.003	79.036
1157	Ambridge, Penn.	00.003	79.039
1158	Americus, Ga.	00.003	79.042
1159	Aquasco, Md.	00.003	79.045
1160	Bainbridge, Ga.	00.003	79.048
1161	Baldwin Park, Cal.	00.003	79.051
1162	Barberton, Ohio	00.003	79.054
1163	Bel Alton, Md.	00.003	79.057
1164	Belle Vernon, Penn.	00.003	79.060
1165	Bellefonte, Penn.	00.003	79.063
1166	Bellflower, Cal.	00.003	79.066
1167	Belmar, N. J.	00.003	79.069
1168	Berwick, Penn.	00.003	79.072
1169	Bethel Park, Penn.	00.003	79.075
1170	Blue Ridge Summit, Penn.	00.003	79.078
1171	Boone, N. C.	00.003	79.081
1172	Borger, Texas	00.003	79.084
1173	Bowling Green, Ohio	00.003	79.087
1174	Boyertown, Penn.	00.003	79.090
1175	Brazil, Ind.	00.003	79.093
1176	Bridgeport, Ohio	00.003	79.096
1177	Bridgeport, W. Va.	00.003	79.099
1178	Bryan, Ohio	00.003	79.102
1179	Buena Park, Cal.	00.003	79.105
1180	Cambridge, Ohio	00.003	79.108
1181	Camden, S. C.	00.003	79.111
1182	Camp Rucker, Ala.	00.003	79.114
1183	Carmichael, Cal.	00.003	79.117
1184	Carteret, N. J.	00.003	79.120
1185	Cedar Grove, N. J.	00.003	79.123

APPENDIX A (Cont'd)

1186	Cheraw, S. C.	00.003	79. 126
1187	Cheshire, Conn.	00.003	79. 129
1188	Churchton, Md.	00.003	79. 132
1189	Clarksburg, Md.	00.003	79. 135
1190	Clemson, S. C.	00.003	79. 138
1191	Clifton Heights, Penn.	00.003	79. 141
1192	Clinton, S. C.	00.003	79. 144
1193	Columbia, Penn.	00.003	79. 147
1194	Columbia, Tenn.	00.003	79. 150
1195	Corry, Penn.	00.003	79. 153
1196	Danville, Penn.	00.003	79. 156
1197	Denison, Texas	00.003	79. 159
1198	Dillon, S. C.	00.003	79. 162
1199	Donora, Penn.	00.003	79. 165
1200	Dublin, Ga.	00.003	79. 168
1201	Dumont, N. J.	00.003	79. 171
1202	Ebensburg, Penn.	00.003	79. 174
1203	Edinburg, Texas	00.003	79. 177
1204	Edward AFB, Cal.	00.003	79. 180
1205	Elberton, Ga.	00.003	79. 183
1206	Elm Grove, W. Va.	00.003	79. 186
1207	Ellwood City, Penn.	00.003	79. 189
1208	Emmaus, Penn.	00.003	79. 192
1209	Eureka, Cal.	00.003	79. 195
1210	Fallbrook, Cal.	00.003	79. 198
1211	Farmington, Mich.	00.003	79. 201
1212	Flemington, N. J.	00.003	79. 204
1213	Gallipolis, Ohio	00.003	79. 207
1214	Gardner, Mass.	00.003	79. 210
1215	Gloucester City, N. J.	00.003	79. 213
1216	Glyndon, Md.	00.003	79. 216
1217	Greensboro, Md.	00.003	79. 219
1218	Greenville, Ohio	00.003	79. 222
1219	Greenfield, Ohio	00.003	79. 225
1220	Grove City, Penn.	00.003	79. 228
1221	Hackettstown, N. J.	00.003	79. 231
1222	Hampstead, Md.	00.003	79. 234
1223	Hanover, Md.	00.003	79. 237
1224	Hapeville, Ga.	00.003	79. 240
1225	Harpers Ferry, W. Va.	00.003	79. 243
1226	Haverford, Penn.	00.003	79. 246

APPENDIX A (Cont'd)

1227	Havre De Grace, Md.	00.003	79. 249
1228	Hollidaysburg, Penn.	00.003	79. 252
1229	Hurlock, Md.	00.003	79. 255
1230	Jackson, Ohio	00.003	79. 258
1231	Joppa, Md.	00.003	79. 261
1232	Keesler AFB, Miss.	00.003	79. 264
1233	Kennett Square, Penn.	00.003	79. 267
1234	Kenton, Ohio	00.003	79. 270
1235	Kingwood, W. Va.	00.003	79. 273
1236	La Grange, Ga.	00.003	79. 276
1237	Laureldale, Penn.	00.003	79. 279
1238	Lewisburg, W. Va.	00.003	79. 282
1239	Lititz, Penn.	00.003	79. 285
1240	Lockport, N. Y.	00.003	79. 288
1241	Logan, W. Va.	00.003	79. 291
1242	Loma Linda, Cal.	00.003	79. 294
1243	Ludington, Mich.	00.003	79. 297
1244	Lyndhurst, N. J.	00.003	79. 300
1245	Madison, Ind.	00.003	79. 303
1246	Manheim, Penn.	00.003	79. 306
1247	Mare Island, Cal.	00.003	79. 309
1248	Marion, N. C.	00.003	79. 312
1249	Masontown, Penn.	00.003	79. 315
1250	Mayo, Md.	00.003	79. 318
1251	Maywood, N. J.	00.003	79. 321
1252	Medina, Ohio	00.003	79. 324
1253	Mercedes, Texas	00.003	79. 327
1254	Merion Station, Penn.	00.003	79. 330
1255	Middletown, Penn.	00.003	79. 333
1256	Midway Park, N. C.	00.003	79. 336
1257	Milford, Penn.	00.003	79. 339
1258	Mill Valley, Cal.	00.003	79. 342
1259	Millburn, N. J.	00.003	79. 345
1260	Moffet Field, Cal.	00.003	79. 348
1261	Monongahela, Penn.	00.003	79. 351
1262	Monroeville, Penn.	00.003	79. 354
1263	Monroe, N. C.	00.003	79. 357
1264	Monterey Park, Cal.	00.003	79. 360
1265	Montgomery, W. Va.	00.003	79. 363
1266	Moorefield, W. Va.	00.003	79. 366
1267	Mooresville, N. C.	00.003	79. 369

APPENDIX A (Cont'd)

1268	Morrisville, Penn.	00.003	79.372
1269	Myerstown, Penn.	00.003	79.375
1270	Nanjemoy, Md.	00.003	79.378
1271	Nanticoke, Penn.	00.003	79.381
1272	Naugatuck, Conn.	00.003	79.384
1273	New Brighton, Penn.	00.003	79.387
1274	New Milford, N.J.	00.003	79.390
1275	New Philadelphia, Ohio	00.003	79.393
1276	Newburg, Md.	00.003	79.396
1277	Newton, N.C.	00.003	79.399
1278	North Beach, Md.	00.003	79.402
1279	Oakmont, Penn.	00.003	79.405
1280	Oswego, N.Y.	00.003	79.408
1281	Pacoima, Cal.	00.003	79.411
1282	Palestine, Texas	00.003	79.414
1283	Palisades Park, N.J.	00.003	79.417
1284	Piney Point, Md.	00.003	79.420
1285	Pitman, N.J.	00.003	79.423
1286	Porterville, Cal.	00.003	79.426
1287	Preston, Md.	00.003	79.429
1288	Pt. Pleasant, W.Va.	00.003	79.432
1289	Ramsey, N.J.	00.003	79.435
1290	Ridge, Md.	00.003	79.438
1291	Ridgefield Park, N.J.	00.003	79.441
1292	Ridgefield, Conn.	00.003	79.444
1293	Rising Sun, Md.	00.003	79.447
1294	Riverside, N.J.	00.003	79.450
1295	Rochester, Penn.	00.003	79.453
1296	Rockaway, N.J.	00.003	79.456
1297	Rockingham, N.C.	00.003	79.459
1298	Ronceverte, W.Va.	00.003	79.462
1299	Roselle, N.J.	00.003	79.465
1300	Rosemead, Cal.	00.003	79.468
1301	Rutherfordton, N.C.	00.003	79.471
1302	Saint Marys, Penn.	00.003	79.474
1303	Salem, N.J.	00.003	79.477
1304	San Anselmo, Cal.	00.003	79.480
1305	Sausalito, Cal.	00.003	79.483
1306	Sayre, Penn.	00.003	79.486
1307	Scotch Plains, N.J.	00.003	79.489
1308	Scotland Neck, N.C.	00.003	79.492

APPENDIX A (Cont'd)

1309	Secaucus, N. J.	00.003	79.495
1310	Severn, Md.	00.003	79.498
1311	Shepherdstown, W. Va.	00.003	79.501
1312	Sidney, Ohio	00.003	79.504
1313	Siler City, N. C.	00.003	79.507
1314	Smithsburg, Md.	00.003	79.510
1315	Snow Hill, Md.	00.003	79.513
1316	Solomons, Md.	00.003	79.516
1317	South San Francisco, Cal.	00.003	79.519
1318	Southern Pines, N. C.	00.003	79.522
1319	Springfield, N. J.	00.003	79.525
1320	Statesboro, Ga.	00.003	79.528
1321	Sun Valley, Cal.	00.003	79.531
1322	Tarentum, Penn.	00.003	79.534
1323	Tifton, Ga.	00.003	79.537
1324	Toccoa, Ga.	00.003	79.540
1325	Towanda, Penn.	00.003	79.543
1326	Turtle Creek, Penn.	00.003	79.546
1327	Upland, Cal.	00.003	79.549
1328	Urbana, Ohio	00.003	79.552
1329	Vacaville, Cal.	00.003	79.555
1330	Vandergrift, Penn.	00.003	79.558
1331	Verona, Penn.	00.003	79.561
1332	Wadesboro, N. C.	00.003	79.564
1333	Wadsworth, Ohio	00.003	79.567
1334	Wake Forest, N. C.	00.003	79.570
1335	Walkersville, Md.	00.003	79.573
1336	Warrenton, N. C.	00.003	79.576
1337	Wash Court House, Ohio	00.003	79.579
1338	Washington, N. J.	00.003	79.582
1339	Waynesboro, Ga.	00.003	79.585
1340	Waynesburg, Penn.	00.003	79.588
1341	Wethersfield, Conn.	00.003	79.591
1342	White Plains, Md.	00.003	79.594
1343	White Sulphur Springs, W. Va.	00.003	79.597
1344	Whiteville, N. C.	00.003	79.600
1345	Wilberforce, Ohio	00.003	79.603
1346	Willimantic, Conn.	00.003	79.606
1347	Williamson, W. Va.	00.003	79.609
1348	Wilmerding, Penn.	00.003	79.612
1349	Windsor, Conn.	00.003	79.615

APPENDIX A (Cont'd)

1350	Woodsboro, Md.	00.003	79.618
1351	Yreka, Cal.	00.003	79.621
1352	Bloomsburg, Penn.	00.003	79.624
1353	Clearfield, Penn.	00.003	79.627
1354	Abbeville, S. C.	00.002	79.629
1355	Accident, Md.	00.002	79.631
1356	Adamstown, Md.	00.002	79.633
1357	Alderson, W. Va.	00.002	79.635
1358	Allison Park, Penn.	00.002	79.637
1359	Annville, Penn.	00.002	79.639
1360	Apollo, Penn.	00.002	79.641
1361	Athens, Tenn.	00.002	79.643
1362	Auburn, Ind.	00.002	79.645
1363	Auburn, Cal.	00.002	79.647
1364	Bangor, Penn.	00.002	79.649
1365	Barrington, N. J.	00.002	79.651
1366	Beaufort, N. C.	00.002	79.653
1367	Bellaire, Ohio	00.002	79.655
1368	Belle Fontaine, Ohio	00.002	79.657
1369	Bennettsville, S. C.	00.002	79.659
1370	Berea, Ohio	00.002	79.661
1371	Bernardsville, N. J.	00.002	79.663
1372	Berwyn, Penn.	00.002	79.665
1373	Biltmore, N. C.	00.002	79.667
1374	Blackwood, N. J.	00.002	79.669
1375	Black Mountain, N. C.	00.002	79.671
1376	Bogota, N. J.	00.002	79.673
1377	Braddock Hgts., Md.	00.002	79.675
1378	Brawley, Cal.	00.002	79.677
1379	Brecksville, Ohio	00.002	79.679
1380	Bridgeville, Penn.	00.002	79.681
1381	Bridgeport, Penn.	00.002	79.683
1382	Brookville, Penn.	00.002	79.685
1383	Brownsville, Penn.	00.002	79.687
1384	Bryantown, Md.	00.002	79.689
1385	Bucyrus, Ohio	00.002	79.691
1386	Bushwood, Md.	00.002	79.693
1387	Butler, N. J.	00.002	79.695
1388	Camp Stewart, Ga.	00.002	79.697
1389	Canton, N. C.	00.002	79.699
1390	Carlstadt, N. J.	00.002	79.701

APPENDIX A (Cont'd)

1391	Cartersville, Ga.	00.002	79.703
1392	Catasauqua, Penn.	00.002	79.705
1393	Cheltenham, Penn.	00.002	79.707
1394	Chesapeake City, Md.	00.002	79.709
1395	Circleville, Ohio	00.002	79.711
1396	Clarion, Penn.	00.002	79.713
1397	Clarks Summit, Penn.	00.002	79.715
1398	Clear Spring, Md.	00.002	79.717
1399	Cleburne, Texas	00.002	79.719
1400	Clements, Md.	00.002	79.721
1401	Clemonton, N.J.	00.002	79.723
1402	Cobb Island, Md.	00.002	79.725
1403	Collegeville, Penn.	00.002	79.727
1404	Collingdale, Penn.	00.002	79.729
1405	Colton, Cal.	00.002	79.731
1406	Compton, Md.	00.002	79.733
1407	Conneaut, Ohio	00.002	79.735
1408	Convent Station, N.J.	00.002	79.737
1409	Conway, S.C.	00.002	79.739
1410	Cordele, Ga.	00.002	79.741
1411	Cornwell Heights, Penn.	00.002	79.743
1412	Corydon, Ind.	00.002	79.745
1413	Coudersport, Penn.	00.002	79.747
1414	Crane, Ind.	00.002	79.749
1415	Cresson, Penn.	00.002	79.751
1416	Dallas, Penn.	00.002	79.753
1417	Deale, Md.	00.002	79.755
1418	Deer Park, Md.	00.002	79.757
1419	Defiance, Ohio	00.002	79.759
1420	Devon, Penn.	00.002	79.761
1421	Douglas, Ga.	00.002	79.763
1422	Dover, Ohio	00.002	79.765
1423	Dravosburg, Penn.	00.002	79.767
1424	Dunmore, Penn.	00.002	79.769
1425	Eagle Pass, Texas	00.002	79.771
1426	East McKeesport, Penn.	00.002	79.773
1427	East New Market, Md.	00.002	79.775
1428	Edgewater, N.J.	00.002	79.777
1429	Edison, N.J.	00.002	79.779
1430	Elizabethtown, Penn.	00.002	79.781
1431	Elkin, N.C.	00.002	79.783

APPENDIX A (Cont'd)

1432	Emeryville, Cal.	00.002	79.785
1433	Emporium, Penn.	00.002	79.787
1434	Fairfield, Cal.	00.002	79.789
1435	Fanwood, N. J.	00.002	79.791
1436	Farmville, N. C.	00.002	79.793
1437	Farrell, Penn.	00.002	79.795
1438	Faulkner, Md.	00.002	79.797
1439	Fayetteville, Tenn.	00.002	79.799
1440	Fayetteville, W. Va.	00.002	79.801
1441	Fitzgerald, Ga.	00.002	79.803
1442	Flintstone, Md.	00.002	79.805
1443	Ford City, Penn.	00.002	79.807
1444	Forest Hill, Md.	00.002	79.809
1445	Fort Valley, Ga.	00.002	79.811
1446	Franklin, N. C.	00.002	79.813
1447	Friendsville, Md.	00.002	79.815
1448	Fruitland, Md.	00.002	79.817
1449	Fullerton, Md.	00.002	79.819
1450	Galax, Va.	00.002	79.821
1451	Geneva, Ohio	00.002	79.823
1452	Gibsonia, Penn.	00.002	79.825
1453	Gibson Island, Md.	00.002	79.827
1454	Glassboro, N. J.	00.002	79.829
1455	Glenarm, Md.	00.002	79.831
1456	Glenolden, Penn.	00.002	79.833
1457	Glenshaw, Penn.	00.002	79.835
1458	Glenville, W. Va.	00.002	79.837
1459	Grayton, Md.	00.002	79.839
1460	Green Briar Hotel, W. Va.	00.002	79.841
1461	Haddon Heights, N. J.	00.002	79.843
1462	Hamburg, Penn.	00.002	79.845
1463	Hamilton AFB, Cal.	00.002	79.847
1464	Hamlet, N. C.	00.002	79.849
1465	Hammonton, N. J.	00.002	79.851
1466	Hasbrouck Heights, N. J.	00.002	79.853
1467	Hemet, Cal.	00.002	79.855
1468	Highlands, N. J.	00.002	79.857
1469	Hillsdale, N. J.	00.002	79.859
1470	Hohokus, N. J.	00.002	79.861
1471	Hollister, Cal.	00.002	79.863
1472	Honesdale, Penn.	00.002	79.865

APPENDIX A (Cont'd)

1473	Huntingdon Valley, Penn.	00.002	79.867
1474	Ironsides, Md.	00.002	79.869
1475	Jefferson, Md.	00.002	79.871
1476	Jersey Shore, Penn.	00.002	79.873
1477	Johnsville, Penn.	00.002	79.875
1478	Kane, Penn.	00.002	79.877
1479	Keedysville, Md.	00.002	79.879
1480	Kelly AFB, Texas	00.002	79.881
1481	Kendallville, Ind.	00.002	79.883
1482	Keyport, N. J.	00.002	79.885
1483	Kilgore, Texas	00.002	79.887
1484	Kingsville, Md.	00.002	79.889
1485	Kingstree, S. C.	00.002	79.891
1486	Kings Mountain, N. C.	00.002	79.893
1487	Kitzmiller, Md.	00.002	79.895
1488	Kutztown, Penn.	00.002	79.897
1489	Lake City, Penn.	00.002	79.899
1490	Lambertville, N. J.	00.002	79.901
1491	Langhorne, Penn.	00.002	79.903
1492	Lawrenceburg, Ind.	00.002	79.905
1493	Lebanon, Ohio	00.002	79.907
1494	Lemon Grove, Cal.	00.002	79.909
1495	Lemoyne, Penn.	00.002	79.911
1496	Lisbon, Ohio	00.002	79.913
1497	Littlestown, Penn.	00.002	79.915
1498	Little Falls, N. J.	00.002	79.917
1499	Logan, Ohio	00.002	79.919
1500	Lomita, Cal.	00.002	79.921
1501	Loretto, Penn.	00.002	79.923
1502	Lusby, Md.	00.002	79.925
1503	Madera, Cal.	00.002	79.927
1504	Mahanoy City, Penn.	00.002	79.929
1505	Malvern, Penn.	00.002	79.931
1506	Marlinton, W. Va.	00.002	79.933
1507	Matawan, N. J.	00.002	79.935
1508	Maywood, Cal.	00.002	79.937
1509	Miamisburg, Ohio	00.002	79.939
1510	Midland, Penn.	00.002	79.941
1511	Midland Park, N. J.	00.002	79.943
1512	Millersville, Md.	00.002	79.945
1513	Mitchell AFB, N. Y.	00.002	79.947

APPENDIX A (Cont'd)

1514.	Monaco, Penn.	00.002	79.949
1515	Monkton, Md.	00.002	79.951
1516	Monrovia, Md.	00.002	79.953
1517	Montoursville, Penn.	00.002	79.955
1518	Montrose, Penn.	00.002	79.957
1519	Morton, Penn.	00.002	79.959
1520	Mount Joy, Penn.	00.002	79.961
1521	Mount Pleasant, Penn.	00.002	79.963
1522	Mount Carmel, Penn.	00.002	79.965
1523	Mt. Hope, W. Va.	00.002	79.967
1524	Mullens, W. Va.	00.002	79.969
1525	Mullins, S. C.	00.002	79.971
1526	Muncy, Penn.	00.002	79.973
1527	Munhall, Penn.	00.002	79.975
1528	Muskegon Heights, Mich.	00.002	79.977
1529	Myersville, Md.	00.002	79.979
1530	Napoleon, Ohio	00.002	79.981
1531	Natrona, Penn.	00.002	79.983
1532	Newtown Square, Penn.	00.002	79.985
1533	Nitro, W. Va.	00.002	79.987
1534	North Wales, Penn.	00.002	79.989
1535	North East, Penn.	00.002	79.991
1536	Norton AFB, Cal.	00.002	79.993
1537	Norwood, Penn.	00.002	79.995
1538	Odenton, Md.	00.002	79.997
1539	Ojai, Cal.	00.002	79.999
1540	Old Forge, Penn.	00.002	80.001
1541	Oradell, N. J.	00.002	80.003
1542	Orange, Texas	00.002	80.005
1543	Oreland, Penn.	00.002	80.007
1544	Oroville, Cal.	00.002	80.009
1545	Oteen, N. C.	00.002	80.011
1546	Owings, Md.	00.002	80.013
1547	Palm Springs, Cal.	00.002	80.015
1548	Palmerton, Penn.	00.002	80.017
1549	Palmyra, Penn.	00.002	80.019
1550	Paris, Texas	00.002	80.021
1551	Parsons, W. Va.	00.002	80.023
1552	Paulsboro, N. J.	00.002	80.025
1553	Philipsburg, Penn.	00.002	80.027
1554	Philippi, W. Va.	00.002	80.029

APPENDIX A (Cont'd)

1555	Phoenix, Md.	00.002	80.031
1556	Pinehurst, N. C.	00.002	80.033
1557	Pisgah, Md.	00.002	80.035
1558	Pitcairn, Penn.	00.002	80.037
1559	Pittsburg, Cal.	00.002	80.039
1560	Placerville, Cal.	00.002	80.041
1561	Plymouth, Penn.	00.002	80.043
1562	Pocomoke City, Md.	00.002	80.045
1563	Pomfret, Md.	00.002	80.047
1564	Pompton Lakes, N. J.	00.002	80.049
1565	Pompton Plains, N. J.	00.002	80.051
1566	Port Tobacco, Md.	00.002	80.053
1567	Princeton, Ind.	00.002	80.055
1568	Quakertown, Penn.	00.002	80.057
1569	Queenstown, Md.	00.002	80.059
1570	Raritan, N. J.	00.002	80.061
1571	Red Lion, Penn.	00.002	80.063
1572	Ridgeway, Penn.	00.002	80.065
1573	Ridgely, Md.	00.002	80.067
1574	Ridley Park, Penn.	00.002	80.069
1575	Riverton, N. J.	00.002	80.071
1576	Rochelle Park, N. J.	00.002	80.073
1577	Rock Hall, Md.	00.002	80.075
1578	Rosemont, Penn.	00.002	80.077
1579	Roseville, Cal.	00.002	80.079
1580	Royersford, Penn.	00.002	80.081
1581	Salem, W. Va.	00.002	80.083
1582	Sanger, Cal.	00.002	80.085
1583	Savage, Md.	00.002	80.087
1584	Schuylkill Haven, Penn	00.002	80.089
1585	Scottdale, Penn.	00.002	80.091
1586	Sellersville, Penn.	00.002	80.093
1587	Selma, N. C.	00.002	80.095
1588	Sepulveda, Cal.	00.002	80.097
1589	Sharpsville, Penn.	00.002	80.099
1590	Shenandoah, Penn.	00.002	80.101
1591	Sheppard AFB, Texas	00.002	80.103
1592	Sherwood Forest, Md.	00.002	80.105
1593	Shillington, Penn.	00.002	80.107
1594	Shippensburg, Penn.	00.002	80.109
1595	Sinking Spring, Penn.	00.002	80.111
1596	Sistersville, W. Va.	00.002	80.113

APPENDIX A (Cont'd)

1597	Sonoma, Cal.	00.002	80.115
1598	Souderton, Penn.	00.002	80.117
1599	South Amboy, N. J.	00.002	80.119
1600	South Plainfield, N. J.	00.002	80.121
1601	South River, N. J.	00.002	80.123
1602	Spencer, W. Va.	00.002	80.125
1603	St. Clairsville, Ohio	00.002	80.127
1604	St. Leonard, Md.	00.002	80.129
1605	St. Marys, Ohio	00.002	80.131
1606	Street, Md.	00.002	80.133
1607	Swissvale, Penn.	00.002	80.135
1608	Taft, Cal.	00.002	80.137
1609	Tall Timbers, Md.	00.002	80.139
1610	Tamaqua, Penn.	00.002	80.141
1611	Tarzana, Cal.	00.002	80.143
1612	Taylorsville, N. C.	00.002	80.145
1613	Temple, Penn.	00.002	80.147
1614	Terra Alta, W. Va.	00.002	80.149
1615	Titusville, Penn.	00.002	80.151
1616	Trafford, Penn.	00.002	80.153
1617	Tujunga, Cal.	00.002	80.155
1618	Tunkhannock, Penn.	00.002	80.157
1619	Ukiah, Cal.	00.002	80.159
1620	Univ. of Cal. Davis, Cal.	00.002	80.161
1621	Upland, Penn.	00.002	80.163
1622	Valley Lee, Md.	00.002	80.165
1623	Van Wert, Ohio	00.002	80.167
1624	Villanova, Penn.	00.002	80.169
1625	Waldwick, N. J.	00.002	80.171
1626	Walterboro, S. C.	00.002	80.173
1627	Wapakoneta, Ohio	00.002	80.175
1628	Washington, Ga.	00.002	80.177
1629	Welcome, Md.	00.002	80.179
1630	Wellsboro, Penn.	00.002	80.181
1631	Wellsville, Ohio	00.002	80.183
1632	West Newton, Penn.	00.002	80.185
1633	West River, Md.	00.002	80.187
1634	West Point, Ga.	00.002	80.189
1635	West Union, W. Va.	00.002	80.191
1636	Whitehall, Md.	00.002	80.193
1637	White Marsh, Md.	00.002	80.195

APPENDIX A (Cont'd)

1638	Wilkinsburg, Penn.	00.002	80.197
1639	Windber, Penn.	00.002	80.199
1640	Woodbine, Md.	00.002	80.201
1641	Woodstock, Md.	00.002	80.203
1642	Wrightsville, Penn.	00.002	80.205
1643	Wycoff, N. J.	00.002	80.207
1644	Wyomissing, Penn.	00.002	80.209
1645	Yeadon, Penn.	00.002	80.211
1646	York, S. C.	00.002	80.213
1647	Yuba City, Cal.	00.002	80.215
1648	Zelienople, Penn.	00.002	80.217
1649	Newbern Dis., N. C.	00.002	80.219
1650	Abell, Md.	00.001	80.220
1651	Albion, Penn.	00.001	80.221
1652	Aldan, Penn.	00.001	80.222
1653	Allendale, N. J.	00.001	80.223
1654	Allenhurst, N. J.	00.001	80.224
1655	Alturas, Cal.	00.001	80.225
1656	Annapolis, Jct., Md.	00.001	80.226
1657	Arcata, Cal.	00.001	80.227
1658	Archbald, Penn.	00.001	80.228
1659	Arnold, Penn.	00.001	80.229
1660	Ashland, Penn.	00.001	80.230
1661	Ashley, Penn.	00.001	80.231
1662	Athens, Penn.	00.001	80.232
1663	Atwater, Cal.	00.001	80.233
1664	Avenue, Md.	00.001	80.234
1665	Avoca, Penn.	00.001	80.235
1666	Baden, Penn.	00.001	80.236
1667	Banning, Cal.	00.001	80.237
1668	Barnesboro, Penn.	00.001	80.238
1669	Barnesville, Ohio	00.001	80.239
1670	Barton, Md.	00.001	80.240
1671	Beachville, Md.	00.001	80.241
1672	Belington, W. Va.	00.001	80.242
1673	Bellevue, Ohio	00.001	80.243
1674	Bellwood, Penn.	00.001	80.244
1675	Belmont, N. C.	00.001	80.245
1676	Benedict, Md.	00.001	80.246
1677	Benicia, Cal.	00.001	80.247
1678	Benton, Penn.	00.001	80.248

APPENDIX A (Cont'd)

1679	Berlin, Penn.	00. 001	80. 249
1680	Biglerville, Penn.	00. 001	80. 250
1681	Birdsboro, Penn.	00. 001	80. 251
1682	Bishopville, S. C.	00. 001	80. 252
1683	Blairsville, Penn.	00. 001	80. 253
1684	Boothwyn, Penn.	00. 001	80. 254
1685	Brackenridge, Penn.	00. 001	80. 255
1686	Brockway, Penn.	00. 001	80. 256
1687	Brownwood, Texas	00. 001	80. 257
1688	Burgettstown, Penn.	00. 001	80. 258
1689	Burnham, Penn.	00. 001	80. 259
1690	Calexico, Cal.	00. 001	80. 260
1691	California, Penn.	00. 001	80. 261
1692	Callaway, Md.	00. 001	80. 262
1693	Cambridge Springs, Penn.	00. 001	80. 263
1694	Campbell, Cal.	00. 001	80. 264
1695	Canton, Penn.	00. 001	80. 265
1696	Carmichael, Penn.	00. 001	80. 266
1697	Catawissa, Penn.	00. 001	80. 267
1698	Cedartown, Ga.	00. 001	80. 268
1699	Chadds Ford, Penn.	00. 001	80. 269
1700	Chaptico, Md.	00. 001	80. 270
1701	Chester, Md.	00. 001	80. 271
1702	Cheswick, Penn.	00. 001	80. 272
1703	Church Hill, Md.	00. 001	80. 273
1704	Closter, N. J.	00. 001	80. 274
1705	Coaldale, Penn.	00. 001	80. 275
1706	Colora, Md.	00. 001	80. 276
1707	Coltons Point, Md.	00. 001	80. 277
1708	Commerce, Ga.	00. 001	80. 278
1709	Conneaut Lake, Penn.	00. 001	80. 279
1710	Coplay, Penn.	00. 001	80. 280
1711	Cranbury, N. J.	00. 001	80. 281
1712	Cresaptown, Md.	00. 001	80. 282
1713	Crescent City, Cal.	00. 001	80. 283
1714	Croydon, Penn.	00. 001	80. 284
1715	Curwensville, Penn.	00. 001	80. 285
1716	Dallastown, Penn.	00. 001	80. 286
1717	Davidsonville, Md.	00. 001	80. 287
1718	Davis, W. Va.	00. 001	80. 288
1719	Dawson, Ga.	00. 001	80. 289

APPENDIX A (Cont'd)

1720	Del Paso Hghts, Cal.	00.001	80.290
1721	Denver, Penn.	00.001	80.291
1722	Derry, Penn.	00.001	80.292
1723	Donaldson, AFB, S. C.	00.001	80.293
1724	Dover, Penn.	00.001	80.294
1725	Drayden, Md.	00.001	80.295
1726	Dunbar, Penn.	00.001	80.296
1727	Duncannon, Penn.	00.001	80.297
1728	Dunellen, N. J.	00.001	80.298
1729	Dunkirk, Md.	00.001	80.299
1730	Easley, S. C.	00.001	80.300
1731	Eddystone, Penn.	00.001	80.301
1732	Edinboro, Penn.	00.001	80.302
1733	Egg Harbor City, N. J.	00.001	80.303
1734	Elizabeth, W. Va.	00.001	80.304
1735	Essington, Penn.	00.001	80.305
1736	Evans City, Penn.	00.001	80.306
1737	Everett, Penn.	00.001	80.307
1738	Export, Penn.	00.001	80.308
1739	Fairchange, Penn.	00.001	80.309
1740	Fairview, N. J.	00.001	80.310
1741	Finksburg, Md.	00.001	80.311
1742	Finleyville, Penn.	00.001	80.312
1743	Fleetwood, Penn.	00.001	80.313
1744	Forest City, Penn.	00.001	80.314
1745	Forsyth, Ga.	00.001	80.315
1746	Frackville, Penn.	00.001	80.316
1747	Franklin, N. J.	00.001	80.317
1748	Franklin, W. Va.	00.001	80.318
1749	Freedom, Penn.	00.001	80.319
1750	Freeland, Penn.	00.001	80.320
1751	Freeport, Penn.	00.001	80.321
1752	Fullerton, Penn.	00.001	80.322
1753	Funkstown, Md.	00.001	80.323
1754	Galesville, Md.	00.001	80.324
1755	Gassaway, W. Va.	00.001	80.325
1756	Girard, Penn.	00.001	80.326
1757	Girardville, Penn.	00.001	80.327
1758	Gladwyne, Penn.	00.001	80.328
1759	Glassport, Penn.	00.001	80.329
1760	Glen Lyon, Penn.	00.001	80.330

APPENDIX A (Cont'd)

1761	Goldsboro, Md.	00.001	80.331
1762	Grasonville, Md.	00.001	80.332
1763	Greencastle, Penn.	00.001	80.333
1764	Gridley, Cal.	00.001	80.334
1765	Harmans, Md.	00.001	80.335
1766	Harrisville, W. Va.	00.001	80.336
1767	Hatfield, Penn.	00.001	80.337
1768	Hawley, Penn.	00.001	80.338
1769	Hebron, Md.	00.001	80.339
1770	Helen, Md.	00.001	80.340
1771	Hellertown, Penn.	00.001	80.341
1772	Hillsboro, Texas	00.001	80.342
1773	Holmes, Penn.	00.001	80.343
1774	Homer City, Penn.	00.001	80.344
1775	Houston, Penn.	00.001	80.345
1776	Hughesville, Penn.	00.001	80.346
1777	Hummelstown, Penn.	00.001	80.347
1778	Huntsville, Texas	00.001	80.348
1779	Hyattstown, Md.	00.001	80.349
1780	Ijamsville, Md.	00.001	80.350
1781	Indianhead, Md.	00.001	80.351
1782	Institute, W. Va.	00.001	80.352
1783	Issue, Md.	00.001	80.353
1784	Jamestown, Penn.	00.001	80.354
1785	Jermyn, Penn.	00.001	80.355
1786	Jessup, Penn.	00.001	80.356
1787	Jim Thorpe, Penn.	00.001	80.357
1788	Johnsonburg, Penn.	00.001	80.358
1789	Kenova, W. Va.	00.001	80.359
1790	Knox, Penn.	00.001	80.360
1791	Lansford, Penn.	00.001	80.361
1792	Lathrop, Cal.	00.001	80.362
1793	Leechburg, Penn.	00.001	80.363
1794	Library, Penn.	00.001	80.364
1795	Ligonier, Penn.	00.001	80.365
1796	Lindsay, Cal.	00.001	80.366
1797	Linesville, Penn.	00.001	80.367
1798	Little Ferry, N. J.	00.001	80.368
1799	Loveville, Md.	00.001	80.369
1800	Luke, Md.	00.001	80.370

APPENDIX A (Cont'd)

1801	Luzerne, Penn.	00.001	80.371
1802	Lyndora, Penn.	00.001	80.372
1803	Maddox, Md.	00.001	80.373
1804	Mahwah, N.J.	00.001	80.374
1805	Mansfield, Penn.	00.001	80.375
1806	Marcus Hook, Penn.	00.001	80.376
1807	Mardela Spgs., Md.	00.001	80.377
1808	Marietta, Penn.	00.001	80.378
1809	Marion, S.C.	00.001	80.379
1810	Martinez, Cal.	00.001	80.380
1811	Marysville, Penn.	00.001	80.381
1812	McDonald, Penn.	00.001	80.382
1813	McMechen, W.Va.	00.001	80.383
1814	Mercer, Penn.	00.001	80.384
1815	Mercersburg, Penn.	00.001	80.385
1816	Meyersdale, Penn.	00.001	80.386
1817	Mifflinburg, Penn.	00.001	80.387
1818	Mifflin Town, Penn.	00.001	80.388
1819	Mill Hall, Penn.	00.001	80.389
1820	Millersburg, Penn.	00.001	80.390
1821	Millersville, Penn.	00.001	80.391
1822	Millington, Md.	00.001	80.392
1823	Milton, Penn.	00.001	80.393
1824	Minersville, Penn.	00.001	80.394
1825	Mohnton, Penn.	00.001	80.395
1826	Montgomery, Penn.	00.001	80.396
1827	Morganza, Md.	00.001	80.397
1828	Mount Union, Penn.	00.001	80.398
1829	Mt. Savage, Md.	00.001	80.399
1830	Mt. Victoria, Md.	00.001	80.400
1831	Mt. Wilson, Md.	00.001	80.401
1832	Muirkirk, Md.	00.001	80.402
1833	Nanty Glo, Penn.	00.001	80.403
1834	Naylor, Md.	00.001	80.404
1835	Nazareth, Penn.	00.001	80.405
1836	Nesquehoning, Penn.	00.001	80.406
1837	New Bethlehem, Penn.	00.001	80.407
1838	New Freedom, Penn.	00.001	80.408
1839	New Holland, Penn.	00.001	80.409
1840	New Hope, Penn.	00.001	80.410
1841	New Market, Md.	00.001	80.411

APPENDIX A (Cont'd)

1842	New Oxford, Penn.	00.001	80.412
1843	New Wilmington, Penn.	00.001	80.413
1844	Newport, Md.	00.001	80.414
1845	Newport, Tenn.	00.001	80.415
1846	Newtown, Penn.	00.001	80.416
1847	Newville, Penn.	00.001	80.417
1848	Northumberland, Penn.	00.001	80.418
1849	North Hills, Penn.	00.001	80.419
1850	Northampton, Penn.	00.001	80.420
1851	Oakdale, Penn.	00.001	80.421
1852	Oakdale, Cal.	00.001	80.422
1853	Oakley, Md.	00.001	80.423
1854	Oaks, Penn.	00.001	80.424
1855	Olyphant, Penn.	00.001	80.425
1856	Oraville, Md.	00.001	80.426
1857	Oxford, Penn.	00.001	80.427
1858	Oxford, Md.	00.001	80.428
1859	Palmers, Md.	00.001	80.429
1860	Park Hall, Md.	00.001	80.430
1861	Park Ridge, N. J.	00.001	80.431
1862	Parkesburg, Penn.	00.001	80.432
1863	Parker, Penn.	00.001	80.433
1864	Parkton, Md.	00.001	80.434
1865	Paso Robles, Cal.	00.001	80.435
1866	Peckville, Penn.	00.001	80.436
1867	Pen Argyl, Penn.	00.001	80.437
1868	Pennsburg, Penn.	00.001	80.438
1869	Pennsboro, W. Va.	00.001	80.439
1870	Perkasie, Penn.	00.001	80.440
1871	Perryopolis, Penn.	00.001	80.441
1872	Perryville, Md.	00.001	80.442
1873	Piedmont, W. Va.	00.001	80.443
1874	Pine Forge, Penn.	00.001	80.444
1875	Pine Grove, Penn.	00.001	80.445
1876	Plymouth Meeting, Penn.	00.001	80.446
1877	Point Marion, Penn.	00.001	80.447
1878	Port Allegany, Penn.	00.001	80.448
1879	Portage, Penn.	00.001	80.449
1880	Prospect Park, Penn.	00.001	80.450
1881	Quarryville, Penn.	00.001	80.451
1882	Quitman, Ga.	00.001	80.452

APPENDIX A (Cont'd)

1883	Ravenswood, W. Va.	00.001	80.453
1884	Reedley, Cal.	00.001	80.454
1885	Republic, Penn.	00.001	80.455
1886	Reynoldsville, Penn.	00.001	80.456
1887	Richwood, W. Va.	00.001	80.457
1888	Riderwood, Md.	00.001	80.458
1889	Ripley, W. Va.	00.001	80.459
1890	Roaring Spring, Penn.	00.001	80.460
1891	Robesonia, Penn.	00.001	80.461
1892	Rock Point, Md.	00.001	80.462
1893	Rockwood, Penn.	00.001	80.463
1894	Roslyn, Penn.	00.001	80.464
1895	Royal Oak, Md.	00.001	80.465
1896	Saint Clair, Penn.	00.001	80.466
1897	Saltsburg, Penn.	00.001	80.467
1898	Sandersville, Ga.	00.001	80.468
1899	Sears Roebuck, Penn.	00.001	80.469
1900	Sebastopol, Cal.	00.001	80.470
1901	Selinsgrove, Penn.	00.001	80.471
1902	Shadyside, Ohio	00.001	80.472
1903	Sharon Hill, Penn.	00.001	80.473
1904	Sharpsburg, Md.	00.001	80.474
1905	Sheffield, Penn.	00.001	80.475
1906	Shickshinny, Penn.	00.001	80.476
1907	Shinnston, W. Va.	00.001	80.477
1908	Simsbury, Conn.	00.001	80.478
1909	Slatington, Penn.	00.001	80.479
1910	Slippery Rock, Penn.	00.001	80.480
1911	Smethport, Penn.	00.001	80.481
1912	Smithfield, Penn.	00.001	80.482
1913	Southampton, Penn.	00.001	80.483
1914	Sparks, Md.	00.001	80.484
1915	Spring City, Penn.	00.001	80.485
1916	Springdale, Penn.	00.001	80.486
1917	Spring Grove, Penn.	00.001	80.487
1918	Steelton, Penn.	00.001	80.488
1919	Stevensville, Md.	00.001	80.489
1920	Stewartstown, Penn.	00.001	80.490
1921	St. George Island, Md.	00.001	80.491
1922	St. Inigoes, Md.	00.001	80.492
1923	St. Michaels, Md.	00.001	80.493

APPENDIX A (Cont'd)

1924	St. Marys City, Md.	00.001	80.494
1925	St. Marys, W. Va.	00.001	80.495
1926	Sudlersville, Md.	00.001	80.496
1927	Summerville, S. C.	00.001	80.497
1928	Susquehanna, Penn.	00.001	80.498
1929	Sutton, W. Va.	00.001	80.499
1930	Swanton, Md.	00.001	80.500
1931	Telford, Penn.	00.001	80.501
1932	Terrell, Texas	00.001	80.502
1933	Thomas, W. Va.	00.001	80.503
1934	Tobyhanna, Penn.	00.001	80.504
1935	Tompkinsville, Md.	00.001	80.505
1936	Tower City, Penn.	00.001	80.506
1937	Tracy, Cal.	00.001	80.507
1938	Trappe, Md.	00.001	80.508
1939	Troy, Penn.	00.001	80.509
1940	Trucksville, Penn.	00.001	80.510
1941	Tulare, Cal.	00.001	80.511
1942	Union City, Penn.	00.001	80.512
1943	Union, S. C.	00.001	80.513
1944	Wallingford, Penn.	00.001	80.514
1945	War, W. Va.	00.001	80.515
1946	Washington Grove, Md.	00.001	80.516
1947	Waterford, Penn.	00.001	80.517
1948	Watsontown, Penn.	00.001	80.518
1949	Watsonville, Cal.	00.001	80.519
1950	Waxahachie, Texas	00.001	80.520
1951	Webster Springs, W. Va.	00.001	80.521
1952	Weldon, N. C.	00.001	80.522
1953	Wernersville, Penn.	00.001	80.523
1954	West Lawn, Penn.	00.001	80.524
1955	West Point, Penn.	00.001	80.525
1956	West Grove, Penn.	00.001	80.526
1957	Westwood, Md.	00.001	80.527
1958	Wexford, Penn.	00.001	80.528
1959	Willard, Ohio	00.001	80.529
1960	Williamsburg, Penn.	00.001	80.530
1961	Williamstown, W. Va.	00.001	80.531
1962	Winder, Ga.	00.001	80.532
1963	Windsor, N. C.	00.001	80.533
1964	Winnsboro, S. C.	00.001	80.534

APPENDIX A (Cont'd)

1965	Winsted, Conn.	00.001	80.535
1966	Wittman, Md.	00.001	80.536
1967	Womelsdorf, Penn.	00.001	80.537
1968	Wyncote, Penn.	00.001	80.538
1969	Wyoming, Penn.	00.001	80.539
1970	Yardley, Penn.	00.001	80.540
1971	Youngsville, Penn.	00.001	80.541
1972	Youngwood, Penn.	00.001	80.542
1973	Adamsville, Penn.	00.000	80.542
1974	Akron, Penn.	00.000	80.542
1975	Alexandria, Penn.	00.000	80.542
1976	Beallsville, Md.	00.000	80.542
1977	Bel Camp, Md.	00.000	80.542
1978	Bellville, Penn.	00.000	80.542
1979	Bishop, Cal.	00.000	80.542
1980	Blossburg, Penn.	00.000	80.542
1981	Boswell, Penn.	00.000	80.542
1982	Brooks AFB, Texas	00.000	80.542
1983	Browns Mills, N.J.	00.000	80.542
1984	Bruin, Penn.	00.000	80.542
1985	Cameron, W. Va.	00.000	80.542
1986	Carrolltown, Penn.	00.000	80.542
1987	Central City, Penn.	00.000	80.542
1988	Centralia, Penn.	00.000	80.542
1989	Christiana, Penn.	00.000	80.542
1990	Confluence, Penn.	00.000	80.542
1991	Conneautville, Penn.	00.000	80.542
1992	Croom Station, Md.	00.000	80.542
1993	Davis, Cal.	00.000	80.542
1994	Dinuba, Cal.	00.000	80.542
1995	Dushore, Penn.	00.000	80.542
1996	Emlenton, Penn.	00.000	80.542
1997	Enola, Penn.	00.000	80.542
1998	Fillmore, Cal.	00.000	80.542
1999	Galeton, Penn.	00.000	80.542
2000	Gallitzin, Penn.	00.000	80.542
2001	Greensboro, Penn.	00.000	80.542
2002	Houtzdale, Penn.	00.000	80.542
2003	Hurry, Md.	00.000	80.542
2004	Kersey, Penn.	00.000	80.542
2005	King City, Cal.	00.000	80.542

APPENDIX A (Cont'd)

2006	Kulpmont, Penn.	00.000	80.542
2007	Linwood, Penn.	00.000	80.542
2008	Lykens, Penn.	00.000	80.542
2009	Malcolm, Md.	00.000	80.542
2010	Mannington, W. Va.	00.000	80.542
2011	McAdoo, Penn.	00.000	80.542
2012	Mertztown, Penn.	00.000	80.542
2013	Middleburg, Penn.	00.000	80.542
2014	Mocanaqua, Penn.	00.000	80.542
2015	Mount Pocono, Penn.	00.000	80.542
2016	New Alexandria, Penn.	00.000	80.542
2017	New Bloomfield, Penn.	00.000	80.542
2018	New Enterprise, Penn.	00.000	80.542
2019	New Milford, Penn.	00.000	80.542
2020	Newport, Penn.	00.000	80.542
2021	Nicholson, Penn.	00.000	80.542
2022	North Warren, Penn.	00.000	80.542
2023	Orwigsburg, Penn.	00.000	80.542
2024	Osceola Mills, Penn.	00.000	80.542
2025	Paradise, Penn.	00.000	80.542
2026	Patton, Penn.	00.000	80.542
2027	Patuxent River, Md.	00.000	80.542
2028	Pinto, Md.	00.000	80.542
2029	Point of Rocks, Md.	00.000	80.542
2030	Popes Creek, Md.	00.000	80.542
2031	Port Carbon, Penn.	00.000	80.542
2032	Portersville, Penn.	00.000	80.542
2033	Portland, Penn.	00.000	80.542
2034	Prospectville, Penn.	00.000	80.542
2035	Reedsville, Penn.	00.000	80.542
2036	Renovo, Penn.	00.000	80.542
2037	Richeyville, Penn.	00.000	80.542
2038	Rimersburg, Penn.	00.000	80.542
2039	Rison, Md.	00.000	80.542
2040	Riva, Md.	00.000	80.542
2041	Russell, Penn.	00.000	80.542
2042	Salisbury, Penn.	00.000	80.542
2043	Saylorburg, Penn.	00.000	80.542
2044	Strasburg, Penn.	00.000	80.542
2045	Summit Hill, Penn.	00.000	80.542
2046	Tilghman, Md.	00.000	80.542

APPENDIX A (Cont'd)

2047	Waymart, Penn.	00.000	80.542
2048	Weatherly, Penn.	00.000	80.542
2049	White Haven, Penn.	00.000	80.542
2050	Williamstown, Penn.	00.000	80.542
2051	Greensboro Term, N. C.	00.000	80.542
	 Residue	13.657	
	Foreign	1.116	
	Skips	3.083	
	Holdouts (Primary Case)	1.044	
	Return to Primary & Nixies	.576	100.018

BREAKDOWN OF RESIDUE

Alabama	00.209
Arizona	00.072
Arkansas	00.210
California	00.379
Colorado	00.218
Connecticut	00.194
Delaware	00.092
Florida	00.896
Georgia	00.146
Idaho	00.082
Illinois	01.615
Indiana	00.236
Iowa	00.502
Kansas	00.323
Kentucky	00.196
Louisiana	00.117
Maine	00.251
Maryland	00.124
Massachusetts	00.520
Michigan	00.372
Minnesota	00.306
Mississippi	00.137
Missouri	00.463
Montana	00.158
North Carolina	00.330
Nebraska	00.175

Nevada	00.026
New Hampshire	00.146
New Jersey	00.152
New Mexico	00.135
North Dakota	00.061
New York	00.556
Ohio	00.288
Oklahoma	00.250
Oregon	00.145
Pennsylvania	00.268
Rhode Island	00.115
South Dakota	00.143
South Carolina	00.148
Tennessee	00.187
Texas	00.355
Utah	00.066
Vermont	00.108
Virginia	01.144
Washington	00.281
West Virginia	00.189
Wisconsin	00.503
Wyoming	00.068

APPENDIX B

B1 Summary

Severo and Newman (2) have presented the basic development of the Chain Ratio Method including three sets of equations for use with three different sets of magnitudes of By-pass mail entering the system at the Secondary stage of mail sorting. This appendix presents additional developments in the Chain Ratio Method including a fourth set of equations that may be used with any amount of By-pass mail.

B2 The Model

B. 2. 1 Notations

The notations used in this appendix are summarized here. The notation is compatible with that used by Severo and Newman. Ratios without parentheses are obtained from sample data.^{1/} Ratios in parentheses () are obtained from volume counts. Ratios in starred parentheses ()* are obtained by computation

T_p = Total Primary Volume.

S_i = Volume of mail going to i-th Secondary from the Primary.

Z_i = Volume of mail going to an i-th Secondary from all sources; i. e., Primary Mail plus By-pass Mail.

B_i = Volume of By-pass mail entering at the i-th Secondary or the Volume of By-pass mail to the i-th Direct off the Primary.

B_{ij} = Volume of By-pass mail entering at the j-th Tertiary off the i-th Secondary.

T_{ij} = Volume of mail to a j-th Tertiary (off i-th Secondary) from the Secondary.

Y_{ij} = Volume of mail to the j-th Tertiary from all sources.

1/ This convention is not used in equations 1-3, 5 and 7.

T = Total Volume; i. e., Primary Volume plus
By-pass Volume.

D_{pi} = Volume of mail to an i -th Primary Destination
through the Primary.

D_{si} = Volume of mail to an i -th Secondary Destination.

D_{tij} = Volume of mail to a j -th Tertiary Destination
(off i -th Secondary).

P_k = Volume of type k mail (e. g., metered mail) to
the Primary.

S_{ik} = Volume of type k mail to the i -th Secondary.

B2. 2 Identities

$$1. \quad Z_i = S_i + B_i$$

$$2. \quad Y_{ij} = T_{ij} + B_{ij}$$

These identities follow from the definitions of the terms involved.

B2. 3 Development

A chain for estimating the proportion of mail going to a Direct off the Primary is

$$3. \quad \frac{D_p}{T} = \frac{D_p}{T_p} \times \frac{T_p}{T} \quad \text{which can be written as}$$

$$4. \quad \left(\frac{D_p}{T} \right)^* = \frac{D_p}{T_p} \times \left(\frac{T_p}{T} \right)$$

A chain for estimating the proportion of mail going to a Secondary Direct is

$$5. \quad \frac{D_{Si}}{T} = \frac{D_{Si}}{Z_i} \times \frac{Z_i}{T_p} \times \frac{T_p}{T}$$

Using equation 1, this can be rewritten

$$6. \left(\frac{D_{S_i}}{T} \right)^* = \frac{D_{S_i}}{Z_i} \times \left[\frac{S_i}{T_P} + \left(\frac{B_i}{T_P} \right) \right] \times \left(\frac{T_P}{T} \right)$$

A chain for estimating the proportion of mail going to a Tertiary Direct is:

$$7. \frac{D_{t_{ij}}}{T} = \frac{D_{t_{ij}}}{Y_{ij}} \times \frac{Y_{ij}}{Z_i} \times \frac{Z_i}{T_P} \times \frac{T_P}{T}$$

Using equations 1 and 2, this can be rewritten:

$$8. \left(\frac{D_{t_{ij}}}{T} \right)^* = \frac{D_{t_{ij}}}{Y_{ij}} \times \left[\frac{T_{ij}}{Z_i} + \left(\frac{B_{ij}}{Z_i} \right) \right] \times \left[\frac{S_i}{T_P} + \left(\frac{B_i}{T_P} \right) \right] \times \left(\frac{T_P}{T} \right)$$

If there is no mail that by-passes the Secondary, equation 8 may be rewritten:

$$9. \left(\frac{D_{t_{ij}}}{T} \right)^* = \frac{D_{t_{ij}}}{Y_{ij}} \times \frac{Y_{ij}}{Z_i} \times \left[\frac{S_i}{T_P} + \left(\frac{B_i}{T_P} \right) \right] \times \left(\frac{T_P}{T} \right)$$

B2.4 Combining Different Types of Mail at the Primary

Usually there are several distinct types of mail entering the Primary, each type possibly having different distribution characteristics. For example, in a study of outgoing mail, cancellation mail may have different distribution characteristics than non-cancellation mail, and in a study of incoming mail, train mail, air mail, and local originating mail may all have different distribution characteristics.

One way of handling such situations is to put into the Primary sample the same proportions of each type of mail as is found in the Total Volume. Equations 4, 6, 8 and 9 can be used in this situation.

Another way of handling such situations is to sample each type of mail independently and to combine with weightings based on their proportions in the total volume. Since this is, in effect, stratified sampling, the results can be slightly more precise for a given sample size (Deming) 17.

Equations 10, 11 and 12 correspond to equations 4, 6 and 9 respectively, the difference being that equations 10, 11 and 12 are for the case where different types of mail entering the Primary are sampled independently.

$$10. \left(\frac{D_P}{T} \right)^* = \sum \left[\frac{D_{P_k}}{P_k} \times \left(\frac{P_k}{T} \right) \right]$$

$$11. \left(\frac{D_{S_i}}{T} \right)^* = \frac{D_{S_i}}{Z_i} \times \left[\sum \left\{ \frac{S_{ik}}{P_k} \times \left(\frac{P_k}{T} \right) \right\} + \left(\frac{B_i}{T} \right) \right]$$

$$12. \left(\frac{D_{t_{ij}}}{T} \right)^* = \frac{D_{t_{ij}}}{Y_{ij}} \times \frac{Y_{ij}}{Z_i} \times \left[\sum \left\{ \frac{S_{ik}}{P_k} \times \left(\frac{P_k}{T} \right) \right\} + \left(\frac{B_i}{T} \right) \right]$$

B2.4 Discussion

Equations 4, 6 and 9 may be used to compute the proportion of mail going to a Primary, Secondary and Tertiary Direct, respectively, for the case where all mail enters the system at the Primary and Secondary; i. e., the case considered by Severo and Newman. These equations are quite similar to some of those of those they presented. For example, if there is no By-pass mail, equations 4, 6 and 9 and the corresponding equations of Severo and Newman for "... the case where the percentage of By-pass mail that enters the system at the Secondary is small, say less than 2%," simplify to a single set of equations, the set of equations they presented for "... the case where there is no By-pass mail."

Equations 10, 11 and 12 allow for the independent sampling of various types of mail entering the Primary. The original equations presented by Severo and Newman could be and have been modified to allow for independent sampling of various types of mail entering the Primary. This was done by Newman (NBS #6142) [3] in his study of Washington Incoming Mail. It is anticipated that in future studies, the practice of sampling separately the various types of Primary mail, will be continued.

It would be possible to treat the various types of mail separately at the Secondary stage, also by modifying the equations. This would entail considerable additional computational work as well as making the sampling a much more difficult task. Furthermore, the additional precision would be slight. In the studies done so far, it has not been deemed worthwhile to do this.

The equations presented in this appendix should prove useful in future studies for the following reasons:

1. the necessary volume counts are often easily obtainable;
2. the equations can handle any amount of By-pass mail;
3. the equations lend themselves to simple computational procedures.

REFERENCES

- 1 W. E. Deming, Some Theory of Sampling, John Wiley and Sons, Inc., New York, 1950, p 40, and Chapters 2 and 7.
- 2 N. C. Severo and A. E. Newman, A Statistical Chain Ratio Method for Determining The Distribution of Mail by Destination, NBS Report 5685, November 1957.
- 3 A. E. Newman, Distribution of Incoming First Class Letter Mail At the Washington, D. C. Post Office, NBS Report 6142, August 1958.

U. S. DEPARTMENT OF COMMERCE

Lewis L. Strauss, *Secretary*

NATIONAL BUREAU OF STANDARDS

A. V. Astin, *Director*



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Electricity and Electronics. Resistance and Reactance. Electron Devices. Electrical Instruments. Magnetic Measurements. Dielectrics. Engineering Electronics. Electronic Instrumentation. Electrochemistry.

Optics and Metrology. Photometry and Colorimetry. Optical Instruments. Photographic Technology. Length. Engineering Metrology.

Heat. Temperature Physics. Thermodynamics. Cryogenic Physics. Rheology. Engine Fuels. Free Radicals Research.

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Mechanics. Sound. Mechanical Instruments. Fluid Mechanics. Engineering Mechanics. Mass and Scale. Capacity, Density, and Fluid Meters. Combustion Controls.

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Applied Mathematics. Numerical Analysis. Computation. Statistical Engineering. Mathematical Physics.

Data Processing Systems. SEAC Engineering Group. Components and Techniques. Digital Circuitry. Digital Systems. Analog Systems. Application Engineering.

- Office of Basic Instrumentation.
- Office of Weights and Measures.

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Cryogenic Engineering. Cryogenic Equipment. Cryogenic Processes. Properties of Materials. Gas Liquefaction.

Radio Propagation Physics. Upper Atmosphere Research. Ionospheric Research. Regular Propagation Services. Sun-Earth Relationships. VHF Research. Ionospheric Communication Systems.

Radio Propagation Engineering. Data Reduction Instrumentation. Modulation Systems. Navigation Systems. Radio Noise. Tropospheric Measurements. Tropospheric Analysis. Radio Systems Application Engineering. Radio-Meteorology.

Radio Standards. High Frequency Electrical Standards. Radio Broadcast Service. High Frequency Impedance Standards. Electronic Calibration Center. Microwave Physics. Microwave Circuit Standards.

