

RECEIVED

SEP 24 4 57 PM '01

POSTAL RATE COMMISSION
OFFICE OF THE SECRETARY

City Carrier Cost System (CCCS)

Statistical and Computer Documentation

(Source Code and Data on CD-ROM)

USPS-LR-J-12/R2001-1

This document is a Category 1 library reference. It replaces USPS-LR-I-16/R2000-1. It relates to the City Carrier Cost data reporting system, which is the subject of the testimony of witness Harahush, USPS-T-5.

TABLE OF CONTENTS

Overview	2
Use of CCCS Data in Cost Attribution	2
Use of CCCS Data in Costs to Mail Categories	2
Other Uses of CCCS Data	3
Statistical Study Design	4
First Stage Sample	4
Second Stage Sample	4
Third Stage Sample	4
System Flowchart	5
Creating the Sample Frame	6
Selecting the First Stage Sample	9
Stratification	9
Sample Allocation	10
Sample Selection	10
Joint Scheduling	12
Partitioning the Sample	13
Administering Tests in the Field	14
Downloading the Sample	14
Administrative Functions	14
Collecting the Data	14
Transmitting the Data to San Mateo	15
Data Validation and Editing	16
Creating Check-in File	16
Creating Working Files	16
Manual Editing	17
Computerized Editing	17
Estimation	19
Quarterly Estimation and Distribution Keys	22
Annual Distribution Keys	24
File Layouts	26
City Route (Header) File Layout 001	26
City Shape File Layout 002	29
City Stop File Layout 003	30
City Mailcode File 004	32
City Sample Selection File 005	33
City Z File 006	34
City PQ Total File 007	36
City Lotus File 008	38
City Lotus Stops File 009	42

OVERVIEW

The City Carrier Cost System (CCCS) is a continuous, ongoing cross-sectional statistical study, or probability sample of city carrier route-days. For each sampled route-day, a subsample of stops is selected, and for each selected stop, the type of stop and volume of mail by shape and category of mail is recorded directly into a portable microcomputer using the Computerized On-Site Data Entry Systems (CODES) software.

The CCCS gathers data for distributing major portions of carriers salaries, benefits and related costs to the various classes of mail for postal rate-making and related USPS management purposes. Accrued carrier costs, available from payroll data, are total amounts and are not generally associated with any particular class of mail or service. Therefore, special methods are needed to determine the costs associated with the various classes of mail.

Total accrued labor costs for city carriers are prorated between office activity Cost Segment 6 (CS 6) and street activity Cost Segment 7 (CS 7) on the basis of time proportion estimates obtained from the In-Office Cost System (IOCS). The data from CCCS are primarily used for apportioning street activity costs to categories of mail. The accrued costs for street activity (CS 7) in FY00 were approximately 9.0 billion dollars. Carrier street activity consists primarily of delivering mail to customers located within the zones served by city delivery. In addition it includes certain other street-related carrier activities such as delivering relays, making collection and pickups, and moving mail to and from post offices and other postal facilities.

City delivery is organized and operated in terms of individual routes. Because of their different operating characteristics, routes are considered for cost development in two groups: letter routes and special purpose routes. Letter routes account for more than 95 percent of street activity costs. The city carrier system only considers regular letter routes. They are categorized for cost analysis as (1) business foot, (2) business motorized, (3) residential foot, (4) residential park & loop, (5) residential curblane, (6) mixed foot, (7) mixed park & loop, and (8) mixed curblane.

Street activity costs are prorated for each route type into four components: route time, access time, load time, and street support time. Attributable costs are determined separately for each component.

Use of CCCS Data in Cost Attribution

Data from the CCCS are used in determining attributable costs, by estimating the volume variability or percentage change in cost with respect to a percentage change in volume for two components of street activity -- access time and coverage related load time. Attributable costs for the other components of street activity are determined based on other data sources.

Access time is the time spent deviating from the line of travel along a route, to deliver mail to an individual stop. Not all stops receive mail each day, so the access time depends on the proportion of possible stops actually receiving delivery. This proportion is called the "coverage". The attributable cost of access time is determined by analyzing the behavior of the numbers of actual stops and deliveries with changes in the distribution of volumes and classes among stops. The variability of number of stops actually made with respect to delivered pieces, estimated by multivariate regression analysis of CCCS actual stop data, determines attributable access time costs. On letter routes, estimates for the variability of the number of stops actually made with respect to delivered pieces by class, are developed separately, for single delivery residential (SDR) stops, multiple delivery residential (MDR) stops, and business and mixed (BAM) stops. This variability analysis is based on CCCS estimates of the number of actual and potential stops, by stop type, for letter routes. The individual mail classes and subclasses are

treated as separate, independent variables for this development, except for certain low-volume subclasses which are combined into a single variable. This multivariate approach is necessary, because each of the mail subclasses tends to have its own characteristic distribution over stops, and hence its own coverage variable characteristics with regard to the different stop types.

Coverage-related load time is that portion of load time that occurs at previously uncovered stops. Actual and potential deliveries are estimated from CCCS data by stop type. Coverage-related load time variability for letter routes are estimated by regression analysis of CCS data based on the number of actual and potential stops.

Use of CCCS Data in Distribution of Costs to Mail Categories

Attributable costs for access time, elemental load time, and coverage related load time are all distributed to categories of mail on the basis of CCCS distribution keys -- sample estimates of mail category proportions of volume by shape and stop type. For each of the three types of stops, CCCS sample data are used to estimate the distribution of mail volume by shape (letter, flat, and parcel), and within shape the distribution to category of mail.

Other Uses of CCCS Data

National and sub-national volume estimates by shape, subclass and route-type are also derived from the CCCS data to support cost-effective management of postal operations. Volume estimates, by area, are combined with IOCS estimates of casing time to assess effectiveness of automation implementation, upon which budget adjustments are based.

STATISTICAL STUDY DESIGN

The universe under study in CCCS is all mail being delivered on city letter routes. A stratified, three-stage sample design is used for CCCS. The details for each of the stages are listed below.

First Stage Sample

The first stage sample is a stratified random sample of route-days. Every city letter route is assigned to one of four strata based upon whether the route is a business or a residential route, and also on the size of the route's post office (CAG A-E or F-L). Within each stratum, routes are geographically ordered, and a systematic random sample of routes is selected. Possible delivery dates (every Monday through Saturday, excluding holidays) are randomized, and systematically assigned to selected routes, to determine the route-days, or first stage sample units to be enumerated. This selection process ensures both geographic and temporal dispersion of the sampled route-days, and helps control workload at the District level.

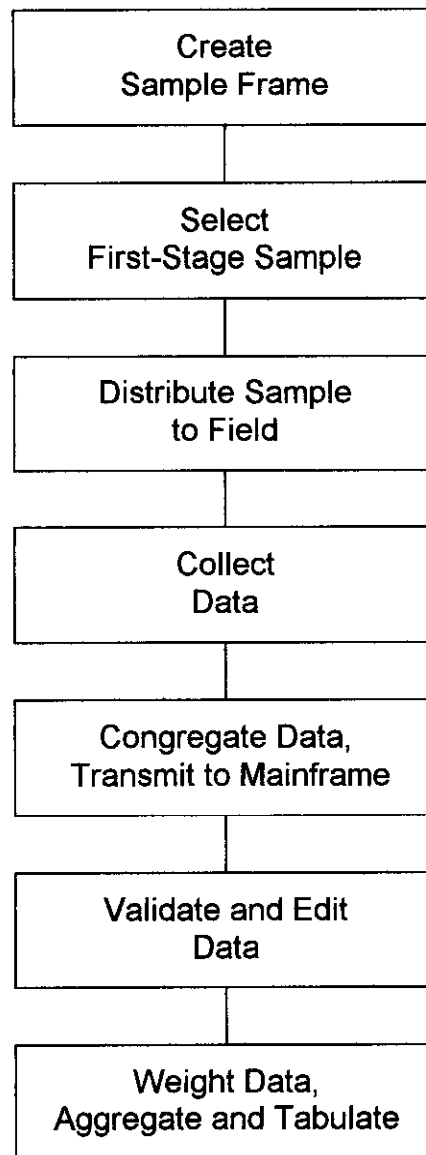
Second Stage Sample

The second stage sample unit is the trip, or part of a route when the selected route is a multi-trip or multi-carrier route. Counting mail for all parts of these large routes would be time consuming, and would likely delay delivery or require multiple data collectors. Therefore, a second stage of sampling was instituted, whereby one portion of the route is randomly selected for enumeration. Over 99% of the city delivery letter routes are single carrier, single trip routes, in which case the entire route is included at the second stage.

Third Stage Sample

The third stage sample unit is the mail stop. All possible mail stops on the selected route or route part/trip are identified, regardless whether there is mail for the stop on the test day. One of the first ten stops is randomly selected, and every tenth stop thereafter. For each selected stop, data to determine the type of stop and volume of mail by shape and category of mail is recorded directly into a portable microcomputer using the Computerized On-Site Data Entry Systems (CODES) software.

SYSTEM FLOWCHART



CREATING THE SAMPLE FRAME

The sampling frame, or City Master Frame, is extracted from the Address Management System (AMS) II database, which contains a list of all city carrier routes. To develop the City Master Frame, the following entries are eliminated from the AMS database: unique ZIP Codes; post office boxes; APO (military); phantom routes; routes in Guam and Wake Island; routes with blank delivery mode; zero delivery routes; NY phantom routes (special); and routes with a blank CAG designation. The remaining routes are included in the City Master Frame file.

The San Mateo ISSC runs an extraction program once each month to generate a current list of city carrier routes. Four weeks prior to the start of a Postal Quarter (PQ), the most recently extracted list of city carrier letter routes becomes the City Master Frame for the upcoming Postal Quarter. Headquarters gets that extract by executing the program ALDRAN.FY&&&&.MASTER.

SAMPLE.PROD.JOBS(GENLDL1). Before executing the program four parameters located in lines 21-24 of the file need to be entered. The parameters are the following:

Line 21 FY= (fiscal year four digits)

Line 22 M= (number of month two digit- 01-12)

Line 23 MNAME=(three character abbreviation for the name of month-e.g. FEB for FEBRUARY)

Line 24 DAY= (day of month two digit – 01-31)

The input and output file(s) for the program are the following:

INPUTS

1. AMS File - LDLSMN.PS372D03.NATL.DELCARR.STCNT(0)

OUTPUT

1. Monthly Frame File -ALDRAN.PS372T01.CITY.FY&FY..M&M&MNAME&DAY

To further clean the frame, a program is run to label the phantom routes in New York. These routes will be excluded from the sample selection process. This program is executed from ALDRAN.FY&&&&.MASTER.SAMPLE.PROD.JOBS(MFNYPHNT). The input and output file(s) are the following:

INPUTS

1. AMS File - LDLSMN.PS372D03.NATL.DELCARR.STCNT(0)
2. NY Phantoms File -ALDRAN.CITY.NY.PHANTOM.ROUTES

OUTPUTS

1. Frame File - ALDRAN.HQ059T01.CITY.PQ&FY&&

Creation of Date File

After the creation of the frame, but before the beginning of sample selection a date file is produced. As an input, the first line of the previous year's date file is used. That line contains the sample percentages for the same quarter of the previous year. The output is last year's sample percentages with this year's delivery days.

The date file (a file that contains the day of week and date for each delivery day in a quarter) is created by executing the ALDRAN.FY&&&&.MASTER.SAMPLE.PROD.JOBS(DATEFIL1). The date file serves two functions 1) to allocate the sample evenly throughout the quarter and 2) to give the sample selection program the sampling percentages (row 1 of date file).

The input and output file(s) for executing DATEFIL1 are the following:

INPUTS

1. RPW Date File - HSF.HQ000D01.CARDATA(HSF020SA)
2. Date File - ALDRAN.PS000D01.DATE.PQ&PQ
3. SAS Program -ALDRAN.CCSREDES.PDS.SRC(ALD080C1)

OUTPUTS

1. Date File - ALDRAN.PS000D01.DATE.PQ&PQ

In order to ensure the correct sample size for each of the four strata, the program is executed from ALDRAN.FY&&&&.MASTER.SAMPLE.PROD.JOBS(MUNIVSIZ). MUNIVSIZ performs two major functions. First, it calculates the total routes in each of the four strata (see "Stratification" in the next section). Then the program uses the sampling percentages in each stratum to obtain the sample sizes using last year's sample percentages on this year's frame counts and recomputes sample size by holding total sample size constant at 1944 (for the first three quarters). This comparison requires the analyst to change any percentage in the date file in order to maintain a constant sample size for field considerations. See "Allocation" in the next section. Before the program is executed two parameters need to be changed:

Line 11400 PQ = (one digit 1-4)

Line 11500 FY = (two digit year)

The input and output file(s) are the following:

INPUTS

1. Frame File -ALDRAN.HQ059T01.CITY.PQ&.FY&&
2. Date File - ALDRAN.PS000D01.DATE.PQ&PQ
3. SAS Program -ALDRAN.CCSREDES.PDS.SRC(ALD100C5)

OUTPUTS

1. Totals File -&&CRTOTALS (temporary SAS data set with the number of routes in each stratum)

After the percentages have been reviewed and changed in the date file, the quarterly sample of city routes is ready to be selected. The sample is selected by executing the program ALDRAN.FY&&&&.MASTER.SAMPLE.PROD.JOBS(SMPLSEL).

INPUTS

1. Frame File - ALDRAN.HQ059T01.CITY.PQ&.FY&&
2. Date File -ALDRAN.PS000D01.DATE.PQ&PQ
3. Ziptable File – HSFRAN.PS001D01.ZIPTABLE.ORFEO
4. Totals File - &&CRTOTALS (temporary SAS data set with the correct sampling percentages for each stratum)

OUTPUTS

1. Sample File - ALDRAN.PS400T01.CITY.PQ&FY&&

SELECTING THE FIRST STAGE SAMPLE

The first stage sample is a stratified random sample of route-days. There are four steps in this process. In the first step, stratification, routes with similar characteristics are grouped. In the second step, allocation, the number of routes to be sampled in each strata is determined. In the third step, selection, routes from each strata are randomly selected. In the fourth step, test dates are randomized and assigned to selected routes, thereby determining the route-days to be sampled. Each postal quarter (PQ), a new sample of route-days is selected, independently from those selected in prior quarters.

Stratification

Stratification is the process of assigning units with similar characteristics to the same group. Approximately four weeks prior to the start of a PQ, eligible city carrier routes are stratified (categorized) on the basis of their cost ascertainment group (CAG) and the percentage of business deliveries on the route. If the ratio of business deliveries to total deliveries is 70% or more, the route is classified as a business route. Otherwise, the route is classified as a residential or mixed route. Listed below are the four strata in the City Carrier Cost System:

- 1) Business routes in CAG A-E Post Offices (SBSA2E)
- 2) Residential and mixed routes in CAG A-E Post Offices (SRSA2E)
- 3) Business routes in CAG F-L Post Offices (SBSF2L)
- 4) Residential and mixed routes in CAG F-L Post Offices (SRSF2L)

The program ALDRAN.CCSREDES.PDS.SRC(ALD100C4) stratifies the City Master Frame. It also determines the route type for each route, and adds that information to each record on the City Master Frame, and creates a file containing the total number of eligible routes in each stratum.

There are eight route types. Route type, or RCAT, is determined from the ratio of business deliveries to total deliveries, the delivery mode and the auxiliary flag. The RCAT values and route types are: (1) business foot, (2) business motorized, (3) residential foot, (4) residential park & loop, (5) residential curblane, (6) mixed foot, (7) mixed park & loop, and (8) mixed curblane.

INPUTS

1. City Master Frame: DSN = ALDRAN.HQ059T01.CITY.PQ&PQ.FY&FY

OUTPUTS

1. Total number of routes in each stratum: DSN = &&TOTALS
(temporary SAS data set)
2. City Extract records eligible for sample selection: DSN = &&CITYEXT
(temporary SAS data set)

The program ALDRAN.CCSREDES.PDS.SRC(ALD101C1) retrieves the base unit Site-Code from the ZIPTABLE file and merges it into the City Master Frame file of eligible routes in preparation for sampling. The ZIPTABLE file is read and sorted in 3-digit ZIP Code order. The City Extract file is read and sorted by the first 3 digits of the Route ZIP Code (5-digit). The two files are then merged by 3-digit ZIP Code,

adding the Site Code file from the ZIP Table file to the reformatted City Master Frame. The new reformatted Master file is then sorted by Site Code, Finance Number, Route Number, and written to a temporary file as input to the sampling program.

INPUT

1. ZIPTABLE HSFRAN.PS001D01.ZIPTABLE.ORFEO (Maps 3 Digit Zip to Site-Code)
2. City Extract from Program ALD100C1: DSN = &&CITYEXT

OUTPUT

1. City Extract1 with the Site Code: DSN = &&CITYEXT1

Sample Allocation

The primary sampling unit is the route-day. The sampling percentage in the residential high CAG stratum is kept fixed, the same percentage of route-days is selected each postal quarter. The percentage of route days in the other three strata is adjusted to arrive at the desired total sample size. The allocation does not vary much from year to year. The sample size is larger in the fourth quarter due to the increase in the number of delivery days. The percentages are stored in the first row of the DATE file.

Business routes tend to be less homogeneous than residential routes. Thus, business routes are sampled at a higher rate than residential and mixed routes. However, routes in CAG A-E offices are sampled at a slightly lower rate than routes in CAG F-L offices. Since the sample allocation is basically fixed, no program is associated with sample allocation.

Sample Selection

Each postal quarter, a systematic sample of route-days is randomly selected from each stratum. First, a random sample of routes is systematically selected without replacement. Then, randomized delivery dates are systematically assigned to selected routes. These steps are discussed in more detail below.

Based on sampling percentages, the sample size is determined for each stratum. The skip interval for each stratum is determined by dividing the stratum sample size into the number of routes for that stratum. As each route is selected for the sample, the test date is sequentially assigned from the randomized test date file. Test dates are assigned without replacement until all dates have been used, and then they are reused in the same randomized, sequential order.

A six-digit test identification number is assigned to each selected route-day, and is used for tracking tests throughout subsequent processing. The test identification number starts with the postal quarter number followed by a 4-digit sequential number and a one-digit check sum. The check sum is computed using the 'MODULUS 10' check digit algorithm, whereby the first, third, and fifth digits of the test identification are multiplied by two, and all digits of these products are added along with the second and fourth digits of the test identification number. The check sum is the difference between that number and the next highest multiple of 10.

For example, if the Test ID is 14627

1 st digit	2 nd digit	3 rd digit	4 th digit	5 th digit						
1*2=2		6*2=12		7*2=14						
		/		/						
		/		/						
2	+	4	+	1+2	+	2	+	1+4	=	16

The next highest multiple of 10, after 16, is 20, so the check sum is 20-16=4.

The complete Test Identification Number is 146274.

Program DDARAN.PRODSRC(ALD410C8) generates the random selection of city records from the extracted files created in Programs ALD101C1. The District Code is added to the sample record.

INPUTS

1. City Extract1 File: DSN = &&CITYEXT1
2. Group Totals - eligible routes for each stratum: DSN = &&CRTOTALS
3. Percentage And Dates: DSN = &&RANDATE
4. District codes: DSN = HSFRAN.PS001D01.ZIPTABLE.ORFEO

OUTPUT

1. City Samples - Random sample of city routes: DSN= &&CSAMPLES

Program DDARAN.PRODSRC(ALD405C7) randomizes the DATES File by randomly numbering the delivery dates for a postal quarter. This ensures that the sample tests and test dates are randomly assigned.

INPUTS

1. Date File – ALDRAN.PS000D01.DATE.PQ&PQ

OUTPUT

1. Percentage And Dates: DSN = &&RANDATE

Program DDARAN.PRODSRC(ALD412C5) assigns the test dates to the city sample records. Test dates are assigned sequentially to the city sample.

INPUTS

- 1.City Samples - Random sample of city routes: DSN = &&CSAMPLES
- 2.Percentage And Dates: DSN = &&RANDATE

OUTPUT

1. City Sample - Random City sample selection with test dates: DSN = &&CSAMPLES

The sampled records are sorted into various sequences for generating reports.

Program ALD420C0 creates a file with one record for each district by selecting the first record of each District group for use in downstream processing.

INPUT

1. ZIPTABLE: DSN = HSFRAN.PS001D01.ZIPTABLE.ORFEO

OUTPUT

1. Consolidated District File - one record per District: DSN = ALDRAN.PS420D01.MSC

Program (ALD430C0) generates summary reports of number of tests by day, office, plant, district, area and CAG.

INPUTS

1. Samples - city samples merged in a prior sort : DSN = &&SAMPLES1
2. District - consolidated list of district's: DSN = ALDRAN.PS420D01.MSC
3. City Routes - Contains route types and descriptions: DSN = ALDRAN.PS000D01.RTNUM

OUTPUT Reports

1. ALD450P1 - summary of sample routes by District and Day
2. ALD450P2 - summary of sample routes by Area and Day
3. ALD450P3 - summary of sample routes by Stratum

Joint Scheduling

Most data collectors within a district conduct tests from many of the major statistical systems: ODIS, RPW, TRACS, City Carrier Cost, Rural Carrier Cost, etc. Selecting test dates for each system independently causes some days with substantially more tests than other days. To help alleviate this peak load problem, tests for ODIS, RPW, CCCS, and RCCS are jointly scheduled, taking into account the workload for TRACS tests. Although the sample selection programs for each of these systems randomly assign testdates, there are only three groups of tests for which those originally assigned testdates are retained: ODIS Sunday and holiday tests; RPW Sunday and holiday tests; and, TRACS tests.

The available dates for the postal quarter are randomized in a manner that ensures good temporal distribution. For a typical postal quarter with three accounting periods, any three consecutive records in the randomized list of dates will have one date from each accounting period, and any six consecutive records will have one date from each pay period.

Sample files for the five systems are concatenated, and Sunday and holiday tests, along with TRACS tests, are excluded from joint scheduling. Within a district, tests are sorted by ODIS area (almost one-to-one correspondence with 3-digit ZIP Codes), size of test, and statistical system. Dates from the randomized date file are sequentially assigned to the ODIS, RPW, CCCS, and RCCS tests, taking into consideration the workload for TRACS tests. (NOTE: The Managers of Statistical Programs in each site are given some flexibility as to how tests are jointly scheduled in their sites). For each system, the output sample file is the same format as the input sample files, and contains the same records, except the jointly scheduled test date and day of week have been substituted for the originals. After joint

scheduling has been completed, the city carrier sample is written out to the file ALDRAN.PS400T02.CITY.PQFYyy. (NOTE: The input city carrier sample file is PS400T01).

Partitioning the Sample

The NOVA Statistical Programs Service Center (SPSC) is notified after the tests have been jointly scheduled. They execute a C-list, **HSD3401P**, which partitions the sample file for each base unit computer (typically, one per district). The sample files are then made available for each CODES site to download, after going through a two-step quality assurance process. In the first step, the NOVA SPSC downloads and checks the sample of one CODES site. After the first step is successfully completed, several CODES sites download and review the sample file. The sample file is made available to all CODES sites only after this second step is successfully completed.

INPUTS

1. Manual: Fiscal Year, Postal Quarter, Begin Quarter Date and End Quarter Date
2. Sample File: DSN=ALDRAN.PS400T02.CITY.PQpFYyy

OUTPUTS

1. VSAM File – DSN=HSDHQV.VS340D01.CCS.SAMPLE

The VSAM record begins with an 11 byte key, where the first three bytes are SITE ID, the next six bytes are TESTID, and the last two bytes are '03' to indicate that the record is a city carrier test record.

ADMINISTERING TESTS IN THE FIELD

Within each district, the Manager of Statistical Programs (MSP) is responsible for downloading the sample file, assigning tests to data collectors, reviewing the data after tests are conducted, and ensuring timely transmission of the data to the mainframe computer system at San Mateo.

Downloading the Sample

The CODES base unit contains a function that allows each site to download its sample. Site personnel utilize functions in the COMMUNICATION portion of the base unit software to download sample. Once the site's sample is downloaded to its base unit, site personnel can download individual sample testid information to disks which allow a test to be performed on the CODES laptop computer.

Administrative Functions

Administrative tracking of tests is performed on the base unit computer(s) in each district. Administrative functions available on the base unit computer include the following: preparing disks with the sample file, so tests can be conducted; generating paper forms, for use when a CODES computer cannot be used for data collection; rescheduling tests; transferring data from tests taken on the CODES laptop computer to the base unit computer; editing tests; deleting tests; etc.

System documentation for these administrative functions is contained in USPS-LR-J-15, CCCS-RCCS CODES Computer System and Source Code, Section 2, City CCS CODES Base Unit Technical Documentation.

Collecting The Data

Data collectors knowledgeable in mail identification – determining the appropriate subclass or rate category and the special services provided to the mail - conduct the CCCS tests. The office with the sample route is called the day before the test to ensure that a carrier who knows the route will be available on the day of the test. In addition, the data collector gets the time the carrier is expected to pull down, or remove mail from the case in preparation for delivery, on the day of the test. The data collector typically arrives at the test facility about one hour before the carrier is expected to pull down. With assistance from the carrier, the data collector identifies the stops on the test route, and after randomly selecting one of the first ten stops on the route, systematically selects every tenth stop thereafter. For the selected stops, the data collector counts and records the number of pieces to be delivered by class, subclass, and shape.

Data collection procedures are contained in Chapter 3 of Handbook F-65, the Data Collection User's Guide for the Cost Systems (USPS-LR-J-14) with supplemental instructions in Supplemental Statistical Programs Policies and Data Collection Instructions (USPS-LR-J-34). The CODES software, used on laptop computers to record the data, is documented in USPS-LR-J-15, CCCS-RCCS CODES Computer System Documentation and Source Code, Section 1, City CCS CODES Data Entry Technical Documentation.

Transmitting the Data to San Mateo

Each week, the MSP transmits all tests from the base unit to the mainframe computer at San Mateo. A backup copy of the data is made as they are transmitted, in case of transmission errors or loss of data on the mainframe computer system.

DATA VALIDATION AND EDITING

Creating Check-in File

In the first quarter of each fiscal year a check-in file that includes testid, testdate and test location is created from the sample file. Each subsequent quarter, that information from the quarterly sample selection file is appended to the check-in file, so at the end of the year, the check-in file has a list of all tests scheduled for the year. The check-in file is a VSAM file. It is created in PQ1 or appended to by executing the program in the file

ALDRAN.FY&&&&.PRODPROC(ALD6000P)

(Example: In FY2000 the file is ALDRAN.FY2000.PRODPROC(ALD6000P)

For quarters 2 through 4, the sample data is appended to the VSAM file by executing the program

ALDRAN.FY&&&&.PRODPROC(ALD6000P)

INPUT:

1. DSN=ALDRAN.PS400T02.CITY.PQ&FY&& (LAYOUT 005)

(Example: for PQ4FY00 the file is ALDRAN.PS400T02.CITY.PQ4FY00).

OUTPUT:

1. VSAM file -- DSN=ALDRAV.PS605D01.FY&&
2. (Example: for FY00 the file is ALDRAN.PS605D01.FY00).

Creating Working Files

As the raw data is uploaded from the base unit computer to the mainframe computer, it is stored in four flat files with HSDHQN prefixes: route, shape, stop, and comment files. The route file contains the general information about the route-days sampled, with one record for each tested route-day. The stop file contains information about the stops that were sampled, with each record corresponding to a stop. Each record contains the stop number, the numbers of actual and possible business deliveries, and the numbers of actual and possible residential deliveries. The shape file contains information about the shape and subclasses of mail being delivered to a particular stop on the test day, with each record corresponding to a subclass and shape combination. The comment file contains data collectors comments pertaining to the test.

Prior to any editing or processing, the files with HSDHQN prefixes are copied to files with ALDRAN prefixes, except for the comment file. The HSDHQN files are retained to provide an audit trail of the raw data. All edits are performed on the ALDRAN files. Only the ALDRAN files are used in computing estimates. The record layouts for the ALDRAN files are the same as the file layouts for the HSDHQN files.

The program used to create the working files is contained in:

ALDRAN.FY&&&&.PRODPROC(ALD150MP).

INPUTS:

1. Route File – DSN=HSDHQN.PS344T01.CODES.CROUTE.CCSFY&&PP&&WEEK&&
2. Shape File – DSN=HSDHQN.PS344T01.CODES.CSHAPE.CCSFY&&PP&&WEEK&&
3. Stop File – DSN=HSDHQN.PS344T01.CODES.CSTOP.CCSFY&&PP&&WEEK&&

OUTPUTS:

1. Route File – DSN=ALDRAN.PS344D01.CODES.CROUTE.CCSFY&&PP&&WEEK&& (LAYOUT 001)
2. Shape File – DSN=ALDRAN.PS344D01.CODES.CSHAPE.CCSFY&&PP&&WEEK&& (LAYOUT 002)
3. Stop File – DSN=ALDRAN.PS344D01.CODES.CSTOP.CCSFY&&PP&&WEEK&& (LAYOUT 003)

Manual Editing

Each week the data are reviewed manually for errors and outliers. The route, shape, and stop files are merged to ensure that no records were lost. Data collectors or MSPs are generally contacted whenever an unusual number of pieces were recorded for a shape and subclass combination. When errors are identified, the ALDRAN files are changed, and the change is logged in an Excel workbook to provide an audit trail.

Computerized Editing

A computerized edit is run each pay period to help ensure data quality. The test identification number (testid) is merged with an extract of the sample selection file to ensure that the testid is correct. VIM routes that were unable to be tested are deleted from further processing. The sampled stop numbers are checked against the last digit of the testid to ensure that the correct stops were sampled. When the stop record indicates there is mail for the stop, the shape file is checked to ensure that there are mail counts for the stop. The combination of shape and subclasses or rate category is validated to insure that each shape record identifies a valid mail piece. The recorded numbers of pieces are checked against a list of high counts by shape/rate category to identify outliers.

The file that executes the edits is ALDRAN.FY&&&&.CNTL(ALD200&P), where the & corresponds to a letter that is indexed by FY-e.g. for FY 2000, the letter is K, and the file is ALDRAN.FY2000.CNTL(ALD200KP). Actually several programs are executed within ALDRAN.FY&&&&.CNTL(ALD200&P). The source code for all SAS programs is ALDRAN.FY2000.CNTLLIB. The source code for COBOL programs is ALDRAN.FY2000.PRODSRC.

Program ALD205C2 is a COBOL program that flags possible errors in the Route file.

Program ALD220C1 is a SAS program that deletes or corrects possible errors in the Route file.

Program ALD210C2 is a COBOL program that flags possible errors in the Stop file.

Program ALD225C1 is a SAS program that deletes or corrects possible errors in the Stop file.

Program ALD215C2 is a COBOL program that flags possible errors in the Shape file.

Program ALD230C1 is a SAS program that deletes or corrects possible errors in the Shape file.

The output files are flat files that are used in the estimation process. The layouts for these files are the same as the layouts for the corresponding input files.

INPUTS

1. VSAM Check-In File – DSN=ALDRAV.PS605D01.FY&&
2. Route File – DSN=ALDRAN.PS344D01.CODES.CROUTE.CCSFY&&PP&&WEEK&& (LAYOUT 001)
3. Shape File – DSN=ALDRAN.PS344D01.CODES.CSHAPE.CCSFY&&PP&&WEEK&& (LAYOUT 002)
4. Stop File – DSN=ALDRAN.PS344D01.CODES.CSTOP.CCSFY&&PP&&WEEK&& (LAYOUT 003)
(Two weeks per pay period – week 01 and week 02 for each of the route, shape and stop files)
5. Link mailcodes to subclass/shape – DSN=ALDRAN.CITYYEAR&&&&.MAILCODE (LAYOUT 004)
6. Date file – DSN=ALDRAN.FY2000.PARMLIB.DATEPQq
The date file gives the number of delivery days per postal quarter. The delivery days are located in fields 21-22 of the first record only.

(Example: For FY00 PQ2, the file name is ALDRAN.PS000D01.DATE.PQ2)

OUTPUTS

1. Route File – DSN=ALDRAN.ROUTE.CCSFY&&PP&&.FINAL.DATA (LAYOUT 001)
2. Shape File – DSN=ALDRAN.SHAPE.CCSFY&&PP&&.FINAL.DATA (LAYOUT 002)
3. Stop File – DSN=ALDRAN.STOP.CCSFY&&PP&&.FINAL.DATA (LAYOUT 003)

ESTIMATION AND VARIANCE

The CCCS produces two types of estimates—volumes and distribution keys (ratios). A description of the estimates is provided in the overview. Estimates are computed on a quarterly and annual basis. The annual volume estimates are the sum of the four quarterly estimates. This section includes the formulas used to calculate the volumes and distribution keys as well as the formulas to compute the sampling errors on those estimates.

Notation:

y	variable of interest
w	weighting factor
h	postal quarter
i	stop type and shape domain
j	subclass or rate category domain
k	stratum
l	route-day
u	universe count – the number of routes in the stratum
n	completed tests in the stratum
d	delivery days in the postal quarter
\hat{Y}	estimate of the total
\hat{K}	estimate of the distribution key
Cov	estimate of the covariance
V	estimate of the variance
CV	estimate of the coefficient of variation

The weighting factor is:

$$w_{hk} = \left(\frac{10 \times u_{hk} \times d_h}{n_{hk} \times 1000} \right)$$

The 10 in the numerator accounts for sampling every tenth stop. Dividing by 1000 causes the estimates to be reported in thousands. This weighting process yields unbiased estimates of mail volumes assuming any missing tests are missing at random.

Variates are defined as follows:

$$y'_{ijkl} = \begin{cases} y_{ijkl} & \text{if the unit is in the } i^{\text{th}} \text{ and } j^{\text{th}} \text{ domains} \\ 0 & \text{otherwise} \end{cases}$$

$$x'_{hikl} = \begin{cases} x_{hikl} & \text{if the unit is in the } i^{\text{th}} \text{ domain} \\ 0 & \text{otherwise} \end{cases}$$

The quarterly volume for the intersection of the i^{th} and j^{th} domains is

$$\hat{Y}_{hij} = \sum_k \sum_l w_{hk} y'_{hijkl}$$

The quarterly volume for the i^{th} domain is

$$\hat{X}_{hi} = \sum_k \sum_l w_{hk} x'_{hikl}$$

The quarterly distribution key for the intersection of the i^{th} and j^{th} domains is

$$\hat{K}_{hij} = \frac{\hat{Y}_{hij}}{\hat{X}_{hi}}$$

The annual volume for the intersection of the i^{th} and j^{th} domains is

$$\hat{Y}_{ij} = \sum_{h=1}^4 \hat{Y}_{hij}$$

The annual volume for the i^{th} domain is

$$\hat{X}_i = \sum_{h=1}^4 \hat{X}_{hi}$$

The annual distribution key for the intersection of the i^{th} and j^{th} domains is

$$\hat{K}_{ij} = \frac{\hat{Y}_{ij}}{\hat{X}_i}$$

Variance

In computing the sampling error on the estimates, an assumption is made that the sampling error within routes is very small relative to the overall sampling error. Therefore, the variance formula used is for a single stage total or ratio estimate ignoring the finite population correction (fpc) factor.

The estimated stratum mean by postal quarter for the intersection of the i^{th} and j^{th} domains is

$$\bar{y}'_{hijk} = \frac{\sum_l y'_{hijkl}}{n_{hk}}$$

$$\hat{S}_{hjk}^2 = \frac{\sum_l (y'_{hijkl} - \bar{y}'_{hijk})^2}{n_{hk} - 1}$$

The estimated stratum variance for the quarterly volume for the intersection of the i^{th} and j^{th} domains is

$$V(\hat{Y}_{hijk}) = \frac{w_{hk}^2 \hat{S}_{hijk}^2}{n_{hk}}$$

The estimated variance for the quarterly volume for the intersection of the i^{th} and j^{th} domains is

$$V(\hat{Y}_{hij}) = \sum_k V(\hat{Y}_{hijk})$$

The estimated variance for the annual volume for the intersection of the i^{th} and j^{th} domains is

$$V(\hat{Y}_{ij}) = \sum_h V(\hat{Y}_{hij})$$

The estimated stratum mean by postal quarter for the intersection of the i^{th} domain is

$$\bar{x}'_{hikl} = \frac{\sum_l x'_{hikl}}{n_{hk}}$$

$$S_{hik}^2 = \frac{\sum_l (x'_{hikl} - \bar{x}'_{hik})^2}{n_{hk} - 1}$$

The estimated stratum variance for the quarterly volume for the i^{th} domain is

$$V(\hat{X}_{hik}) = \frac{w_{hk}^2 \hat{S}_{hik}^2}{n_{hk}}$$

The estimated variance for the quarterly volume for the i^{th} domain is

$$V(\hat{X}_{hi}) = \sum_k V(\hat{X}_{hik})$$

The estimated variance for the annual volume for the i^{th} domain is

$$V(\hat{X}_i) = \sum_h V(\hat{X}_{hi})$$

The estimated stratum covariance between the quarterly volumes for the intersection of the i^{th} and j^{th} domains is

$$\text{Cov}(\hat{Y}_{hijk}, \hat{X}_{hik}) = w_{hk}^2 \hat{S}_{yxhijk}$$

where

$$\hat{S}_{yxhijk} = \frac{\sum_l (y'_{hijkl} - \bar{y}'_{hijk})(x'_{hikl} - \bar{x}'_{hik})}{n_{hk} - 1}$$

The estimated covariance between the quarterly volumes for the intersection of the i^{th} and j^{th} domains is

$$\text{Cov}(\hat{Y}_{hij}, \hat{X}_{hi}) = \sum_k \text{Cov}(\hat{Y}_{hijk}, \hat{X}_{hik})$$

The estimated covariance between the annual volumes for the intersection of the i^{th} and j^{th} domains is

$$\text{Cov}(\hat{Y}_{ij}, \hat{X}_i) = \sum_h \text{Cov}(\hat{Y}_{hij}, \hat{X}_{hi})$$

The estimated relative variance (the square of the coefficient of variation) for the quarterly distribution key for the intersection of the i^{th} and j^{th} domain is

$$(CV)^2(\hat{K}_{hij}) = \left(\frac{V(\hat{Y}_{hij})}{\hat{Y}_{hij}^2} + \frac{V(\hat{X}_{hi})}{\hat{X}_{hi}^2} - \frac{2\text{Cov}(\hat{Y}_{hij}, \hat{X}_{hi})}{\hat{X}_{hi}\hat{Y}_{hij}} \right)$$

The relative variance for the annual distribution key for the intersection of the i^{th} and j^{th} domain is

$$(CV)^2(\hat{K}_{ij}) = \left(\frac{V(\hat{Y}_{ij})}{\hat{Y}_{ij}^2} + \frac{V(\hat{X}_i)}{\hat{X}_i^2} - \frac{2\text{Cov}(\hat{Y}_{ij}, \hat{X}_i)}{\hat{X}_i\hat{Y}_{ij}} \right)$$

Quarterly Volume Estimates and Distribution Keys

Once the city carrier data for an entire quarter has been edited, quarterly distribution keys are produced. The quarterly volumes and distribution keys are used review the estimates. The estimated volumes and distribution keys are compared with the same period the previous year. Estimates are also summed across stop type and shape, and compared with the current RPW report. Substantial differences between the reports are investigated for additional quality assurance. The quarterly distribution keys program is executed from: ALDRAN.FY&&&.PRODPROC(ALD665MP)

(Example: for FY00 the file is ALDRAN.FY2000.PRODPROC(ALD665K1))

The SAS program that it executes is

ALDRAN.FY&&&.CNTLLIB(ALD665Kq)

The macros that are called in the SAS code come from the file

ALDRAN.SASAUTOS.CTYMACRO.LIBFY&&&

Before ALDRAN.FY&&&&.CNTL(ALD665&1) is executed parameters in four other files must be changed. Those files are the following:

PARAMETER FILES

1. ALDRAN.FY&&&&.PARMLIB(ALD665S1)

In the first line of each of the first two files the line of code reads INCLUDE COND=(A,B,C,D,E). The only parameter that needs to be changed is the E parameter. In ALDRAN.FY2000.PARMLIB(ALD665S1), the "E" field should be a two character representation of the first pay period of the quarter of interest.

2. ALDRAN.FY&&&&.PARMLIB(ALD665S2)

In ALDRAN.FY2000.PARMLIB(ALD665S2), the "E" field should be a two character representation of the last pay period of the quarter of interest.

3. ALDRAN.FY&&&&.PARMLIB(ALD665&1)

Lastly, the correct frame counts by stratum need to be input into the fourth file. The fourth file contains the SAS code to run the quarterly keys distribution estimates. The universe counts are entered in the program. Enter the universe counts for the appropriate strata and postal quarter. The strata definitions are the following:

UBSA2E	(Universe count for Business Routes in CAG A-E)
UBSF2L	(Universe count for Business Routes in CAG F-L)
RESA2E	(Universe count for Residential Routes in CAG A-E)
RESF2L	(Universe count for Residential Routes in CAG F-L)

INPUTS

1. Link mailcodes to subclass/shape – DSN = ALDRAV.CITY&&&&.MAILCODE

(Example: for FY00 the file is ALDRAV.CITY2000.MAILCODE)

2. Sample File – DSN = ALDRAN.PS400T02.CITY.PQ&FY&& (LAYOUT 005)

(Example: for PQ4 in FY2000 the file is ALDRAN.PS400T02.CITY.PQ4FY00)

3. Pay Period Data Files – DSN = ALDRAN.ROUTE.CCSFY&&PP&&.FINAL.DATA

4. ALDRAN.STOP.CCSFY&&PP&&.FINAL.DATA

5. ALDRAN.SHAPE.CCSFY&&PP&&.FINAL.DATA

6. ALDRAN.Fyyy.CNTLLIB(DATEPQq)

For each quarter, one pay period prior to the start of the quarter and one pay period after the conclusion of the quarter are included to check for any tests that may be in the files due to early or late transmission of completed tests. Only those tests that actually belong in the quarter (indicated by the first digit of the testid) are used for estimation. Below is a list of the pay periods that should be used as inputs for the estimation process.

<u>PQ1</u>	<u>PQ2</u>	<u>PQ3</u>	<u>PQ4</u>
FY(-1)PP19	FY(0)PP25	FY(0)PP05	FY(0)PP11
FY(0)PP20	FY(0)PP26	FY(0)PP06	FY(0)PP12
FY(0)PP21	FY(0)PP01	FY(0)PP07	FY(0)PP13
FY(0)PP22	FY(0)PP02	FY(0)PP08	FY(0)PP14
FY(0)PP23	FY(0)PP03	FY(0)PP09	FY(0)PP15
FY(0)PP24	FY(0)PP04	FY(0)PP10	FY(0)PP16
FY(0)PP25	FY(0)PP05	FY(0)PP11	FY(0)PP17
FY(0)PP26	FY(0)PP06	FY(0)PP12	FY(0)PP18
			FY(0)PP19
			FY(+1)PP20

where FY(-1), FY(0), and FY(+1), mean the previous fiscal year, current fiscal year, and the subsequent fiscal year respectively.

Two SAS files and two flat files are generated as output files from the quarterly distribution keys program. The Z file and PQTOTAL file are identical SAS files except that stop type is included in the Z file and not in the PQTOTAL file. The LOTUS CITY flat file gives the estimated total for each mail shape/subclass combination by stop type. The output was designed so that it could be easily transferred into a spreadsheet. The LOTUS STOPS flat file gives the estimated actual and possible stops by stop type. The output was also designed so that it could be easily transferred into a spreadsheet.

OUTPUTS

1. Z File – DSN=ALDRAN.CITY.PQ&.FY&&.Z.DATA (LAYOUT 006)
(Example for PQ1 in FY 2000 is ALDRAN.CITY.PQ1FY00.Z.DATA)
This is a SAS dataset. Each record corresponds to a stop.
2. PQTotal File – DSN=ALDRAN.CITY.PQTOTAL.PQ&.FY&& (LAYOUT 007)
This is a SAS dataset. Each record corresponds to a stop.
3. Lotus Keys File, flat file – DSN=ALDRAN.LOTUS.CITY.PQ&.FY&& (LAYOUT 008)
4. Lotus Stops File, flat file – DSN=ALDRAN.LOTUS.STOPS.CITY.PQ&.FY&& (LAYOUT 009)

Annual Volume Estimates and Distribution Keys

Annual distribution keys are used to distribute costs to subclasses of mail. The annual keys distribution program is executed from the following file: ALDRAN.FY&&&.PRODPROC(ALD695MP)

(Example: for FY00 the file is ALDRAN.FY2000.PRODPROC(ALD695MP))

The SAS program that it executes is ALDRAN.FY&&&.CNTLLIB(ALD695&1)

(Example for FY00 the file is ALDRAN.FY2000.CNTLLIB(ALD695K1))

INPUTS:

1. ALDRAN.CITY.PQTOTAL.PQ1FY&&
2. ALDRAN.CITY.PQTOTAL.PQ2FY&&
3. ALDRAN.CITY.PQTOTAL.PQ3FY&&
4. ALDRAN.CITY.PQTOTAL.PQ4FY&&

A SAS file and two flat files are generated as output files from the distribution keys program:

OUTPUTS:

1. Z-File – DSN=ALDRAN.CITY.FY&&&&.Z.DATA
(SAS File-each record is a stop)
2. Lotus Keys – DSN=ALDRAN.LOTUS.CITY.FY&&&&
3. Lotus Stops – DSN=ALDRAN.LOTUS.STOPS.CITY.FY&&&&

Special Reports

A special report is run for the Postal Rate Commission on Single Subclass Stops. The program is executed from the following file: ALDRAN.FY&&&&.PARMLIB(ALD699MZ).

(Example for FY00 the file is ALDRAN.FY2000.PARMLIB(ALD69MZ).)

INPUT

Z-File – DSN=ALDRAN.CITY.FY&&&&.Z.DATA
(SAS File-each record is a stop)

OUTPUT

The output is a written report that is manually entered into the PRC version of the CRA.

City Route (Header) File Layout-001

Field	Position	Edit(s)	Comments
PARMS		* PP -- 01 thru 27 * FY -- System Year or System Year +1.	
DUPLICATE STOPS CHECK		Testid, Stop Number and MAILCODE can determine if it is a DUPLICATE	
TEST-ID	1-6	Sample File must be checked to ensure that it is a valid TESTID	If invalid use Zipcode, Route Number and Original Test Date as key to Sample File to obtain information
TEST DATE - CENTURY YEAR	7-8 9-10	* 19 or 20 * Equal Current Calendar Year or Current Calendar Year + 1	If any element of the TEST DATE is invalid obtain from ORIGINAL TEST DATE
MONTH DAY	11-12 13-14	* 01 thru 12 * 01 thru 31	
PAY PERIOD	15-16	* 01 thru 27 * Equal PARM Pay Period or PARM Period -1	
CONTROL CHARACTER	17	* C = Cancelled * R = Rescheduled * V = VIM * Blank = Good Test	Added by base unit check in For CODES Use ONLY
CURRENT ROUTE TYPE	18-21	0000 Business 1500,1502,1504,1506, 1551,1552,1553,1554 1720,1730,1740,1750, Residential 1540,1560,1562,1557, 1571,1573,1770,1780, 1790 Mixed 1620,1640,1642,1559, 1575,1577,1810,1820, 1830,1840	If invalid go to Sample Selection File to obtain Route Type
NUMBER OF PARTS	22-23	01 thru 19	
TEST ZIP	24-28	00001 thru 99999	
VIM ROUTE	29-29	* Y = 'Yes' or N = 'No'	

City Route File Layout (cont)-001

Field	Position	Edit(s)	Comments
TEST TO BE RESCHEDULED	30-30	* Y = 'Yes' or N = 'No'	
RESCHEDULED TEST	31-31	* Y = 'Yes' or N = 'No'	
TRIP NUMBER	32-32	1 or 2 or 0	
POSSIBLE STOPS	33-36	0001 thru 9999	
NUMBER OF POSSIBLE DELIVERIES	37-40	0001 thru 9999	
SATURATION 2ND CLASS	41-41	0 thru 5	
SATURATION 3RD CLASS (REG)	42-42	0 thru 5	
SATURATION 3RD CLASS (NP)	43-43	0 thru 5	
SATURATION 4TH CLASS	44-44	0 thru 5	
CARRIER HOUR	45-45	* 0 thru 4 * If less than 1 then CARRIER MINUTE must be greater than zero	
CARRIER MINUTE	46-47	00 thru 59	
AUX. HELP HOUR	48-48	0 thru 4	
AUX. HELP MINUTE	49-50	00 thru 59	
DCT HOUR	51-52	* 00 thru 18 * If less than 1 then DCT MINUTE must be greater than zero	
DCT MINUTE	53-54	00 thru 59	
FINANCE NUMBER	55-60	* 000001 thru 999999 * Must be less than 600000	
CAG	61	A, B, C, D, E, F, G, H, J	
FILLER	62		
ROUTE NUMBER	63-66	* "C001" -- "C999" Must be a valid Route Number from the Route File	
DCT ID	67-69	000 thru 999	
COMMENT	70-70	* Y = 'Yes' or N = 'No'	
DATA ENTRY VERSION	71-74		
BASE UNIT VERSION	75-78		

City Route File Layout (cont)-001

Field	Position	Edit(s)	Comments
BASE UNIT EDIT FLAG	79	* Y = 'Yes' or Blanks = 'No'	
ORIGINAL TEST DATE - CENTURY YEAR MONTH DAY	80-81 82-83 84-85 86-87	* 19 or 20 * Equal Current Calendar Year or Current Calendar Year + 1 * 01 thru 12 * 01 thru 31	For Mainframe Use ONLY
RESCHEDULE TEST DATE - CENTURY YEAR MONTH DAY	88-89 90-91 92-93 94-95	* 19 or 20 * Equal Current Calendar Year or Current Calendar Year + 1 * 01 thru 12 * 01 thru 31	For CODES Use ONLY
BASE UNIT ID	96-98		For Mainframe Use ONLY
FILLER	99-120		

City Shape File Layout-002

Field	Position	Edit(s)	Comments
PARMS		* PP -- 01 thru 27 * FY -- System Year or System Year +1.	
TEST-ID	1-6	Sample File must be checked to ensure that it is a valid TESTID	If invalid use TEST DATE, PP and STOP NUMBER as key to the Stop File to obtain information
TEST DATE - CENTURY YEAR MONTH DAY	7-8 9-10 11-12 13-14	* 19 or 20 * Equal Current Calendar Year or Calendar Year + 1 * 01 thru 12 * 01 thru 31	If any element of the TEST DATE is invalid use the TESTID and STOP NUMBER as key to the Stop File to obtain information
PAY PERIOD	15-16	* 01 thru 27 * Equal PARM Pay Period or PARM Pay Period - 1	If invalid use the TESTID and STOP NUMBER as key to the Stop File to obtain information
STOP NUMBER	17-20	* 0001 thru 9999	If invalid DELETE RECORD
MAIL CODE	21-26	Must be a valid Mail Code from the Mail Code File	If invalid DELETE RECORD
NUMBER OF PIECES	27-29	* 001 thru 999 * Must be within designated limits -- Delete if not within designated range	Ranges to be provided by headquarters personnel
DATA ENTRY VERSION	30-33		
BASE UNIT VERSION	34-37		
FILLER	38-50		

City Stop File Layout - 003

Field	Position	Edit(s)	Comments
PARMS		* PP -- 01 thru 27 * FY -- System Year or System Year +1.	
TEST-ID	1-6	Sample File must be checked to ensure that it is a valid TESTID	If invalid DELETE RECORD
TEST DATE - CENTURY YEAR	7-8 9-10	* 19 or 20 * Equal Current Calendar Year or Current Calendar Year + 1	If any element of the TEST DATE is invalid use the TESTID and PP as key to the Route File to obtain information
MONTH DAY	11-12 13-14	* 01 thru 12 * 01 thru 31	
PAY PERIOD	15-16	* 01 thru 27 * Equal PARM Pay Period or PARM Period -1	If invalid use TESTID and TEST DATE as key to the Route File to obtain information
STOP NUMBER	17-20	* 0001 thru 9999	If invalid DELETE RECORD and all associated Shape File Records
NUMBER OF POSSIBLE BUSINESS DELIVERIES	21-24	* 0000 thru 9999	
NUMBER OF BUSINESS DELIVERIES WITH MAIL	25-28	* 0000 thru 9999 * If this Field is greater than 0 NUMBER OF POSSIBLE BUSINESS DELIVERIES must be greater than 0	
NUMBER OF POSSIBLE RESIDENTIAL DELIVERIES	29-32	* 0000 thru 9999 * If this Field is equal to 0 NUMBER OF POSSIBLE BUSINESS DELIVERIES must be greater than 0	
NUMBER OF RESIDENTIAL DELIVERIES WITH MAIL	33-36	* 0000 thru 9999 * If this Field is greater than 0 NUMBER OF POSSIBLE RESIDENTIAL DELIVERIES must be greater than 0	

City Stop File Layout (cont) - 003

Field	Position	Edit(s)	Comments
<i>NO MAIL THIS STOP</i>	<i>37-37</i>	* Y = 'Yes' or N = 'No' * If equal to 'Y' Shape File must be checked to ensure there are no records equal to the Testid, Test Date, Postal Period and Stop No.	
<i>MAIL RELAYED TO STREET</i>	<i>38-38</i>	* Y = 'Yes' or N = 'No'	
<i>MULT-DELIVERY STOP</i>	<i>39-39</i>	* A, B, C, D, E, F, G, Blank	
<i>BUSINESS STOP</i>	<i>40-40</i>	* A, B, C, D, E, F, Blank	
<i>DATA ENTRY VERSION</i>	<i>41-44</i>		
<i>BASE UNIT VERSION</i>	<i>45-48</i>		
<i>FILLER</i>	<i>49-70</i>		

City Mailcode File Layout-004

Field	Position	Description
<i>MAILCODE</i>	<i>1-6</i>	<i>Mailcode used for subclass/shape of mail being recorded</i>
<i>TYPE MAIL</i>	<i>7</i>	<i>Blank Field</i>
<i>NAME</i>	<i>8-62</i>	<i>Description of Mailcode</i>
<i>BUCKET</i>	<i>63-65</i>	<i>Makes categories for Keys Program</i>
<i>STARTPOS</i>	<i>66-68</i>	
<i>LENGTH</i>	<i>69-71</i>	
<i>DATAVER</i>	<i>72-75</i>	<i>Data Version Used</i>
<i>LOWER</i>	<i>76-78</i>	<i>The lowest possible piece count allowed without a flag.</i>
<i>UPPER</i>	<i>79-81</i>	<i>The highest possible piece count allowed without a flag.</i>

City Sample Selection File Layout-005

Field	Position	Description
<i>FILLER</i>	<i>1-2</i>	<i>Value '03'</i>
<i>FINANCE NUMBER</i>	<i>3-8</i>	
<i>SERVICE CODE</i>	<i>9</i>	
<i>AREA CODE</i>	<i>10</i>	<i>Area in which test was completed</i>
<i>CAG</i>	<i>11</i>	<i>Cost Ascertainment Group (A-L)</i>
<i>GROUP</i>	<i>12-13</i>	<i>Stratum</i>
<i>PONAME</i>	<i>14-43</i>	<i>Post Office Name</i>
<i>STATE</i>	<i>44-45</i>	<i>State Abbreviation.</i>
<i>ROUTE ZIP</i>	<i>46-50</i>	<i>Route Zip Code for test</i>
<i>ROUTE TYPE</i>	<i>51-54</i>	<i>Route Type</i>
<i>PO ZIP</i>	<i>55-59</i>	<i>Post Office Zip Code</i>
<i>DATE OF TEST</i>	<i>60-67</i>	<i>YYYYMMDD</i>
<i>DAY OF TEST</i>	<i>68-70</i>	<i>Day of Week</i>
<i>TESTID</i>	<i>71-76</i>	
<i>POSSDEL</i>	<i>77-81</i>	<i>Possible Deliveries for a Route</i>
<i>FILLER</i>	<i>82-85</i>	
<i>ROUTENO</i>	<i>86-90</i>	<i>Route Number of tested Route</i>
<i>DIST NUMBER</i>	<i>91-93</i>	
<i>MONTH</i>	<i>94-96</i>	<i>Month of Test</i>
<i>DIVZIP3</i>	<i>97-99</i>	<i>First three digits of division ZIP Code</i>
<i>FILLER</i>	<i>100-117</i>	
<i>SITECODE</i>	<i>118-120</i>	<i>Site of Test</i>

City Z File Layout - 006

The variable names and explanations follow.

The individual key lines are expressed in terms of A, B, and C fields. A1 – A55 are the keys for letters, B1 – B55 are the keys for flats, and C1 – C55 are the keys for parcels. The numbers 1 – 55 are descriptions for each of the numbered fields. Buckets 43 through 54, Special Services are included in A only.

1	First-Class Mail (Label Only)
2	Letters, Flats, and Parcels
3	Presort Letters, Flats, and Parcels
4	Single Piece Cards
5	Presort Cards
6	Total First-Class Mail
7	Priority Mail
8	Express Mail
9	Mailgrams
10	Periodicals
11	Standard Mail (A) (Label Only)
12	Single Piece Rate
13	Regular Standard (Label Only)
14	Enhanced Carrier Route
15	Other
16	Total Regular
17	Nonprofit Standard (Label Only)
18	Enhanced Carrier Route
19	Other
20	Total Nonprofit
21	Total Standard (A)
22	Standard (B) (Label Only)
23	Parcel Zone Rate
24	Bound Printed Matter
25	Special Standard
26	Library Mail
27	Total Standard (B)
28	U. S. Postal Service
29	Free Mail – Blind and Handicapped
30	International Surface Mail (Label Only)
31	Letter Class
32	AO
33	Parcel Post
34	M-Bag
35	International Air Mail (Label Only)
36	Letter Class
37	AO
38	Parcel Post

City Z File Layout (cont) - 006

39	M-Bag
40	Express
41	Total International Mail
42	Total All Mail
43	Special Services (Label Only)
44	Postage Due
45	Business Reply
46	Certified
47	COD
48	Insured
49	Registered
50	Registered/COD
51	Return Receipt
52	Express Return Receipt
53	Other
54	Total Special Services
55	Other

BUSDELV	The number of actual business deliveries at the stop
CAG	The CAG (Cost Ascertainment Group) of the office of the route being tested
COUNT	The number of successfully completed tests in the corresponding stratum and quarter.
POSBUS	The number of possible business deliveries at a stop
POSRES	The number of possible residential deliveries at a stop
RCAT	Route category
RESDELV	The number of actual residential deliveries at a stop
STOPNUM	The stop number
STRATUM	The stratum code
STYP	Stop type code
TESTID	Testid
WGT	Weight

City PQ TOTAL File Layout -007

The variable names and explanations follow.

The individual key lines are expressed in terms of A, B, and C fields. A1 – A55 are the keys for letters, B1 – B55 are the keys for flats, and C1 – C55 are the keys for parcels. The numbers 1 – 55 are descriptions for each of the numbered fields. 43 through 54, Special Services are included in A only.

1	First-Class Mail (Label Only)
2	Letters, Flats, and Parcels
3	Presort Letters, Flats, and Parcels
4	Single Piece Cards
5	Presort Cards
6	Total First-Class Mail
7	Priority Mail
8	Express Mail
9	Mailgrams
10	Periodicals
11	Standard Mail (A) (Label Only)
12	Single Piece Rate
13	Regular Standard (Label Only)
14	Enhanced Carrier Route
15	Other
16	Total Regular
17	Nonprofit Standard (Label Only)
18	Enhanced Carrier Route
19	Other
20	Total Nonprofit
21	Total Standard (A)
22	Standard (B) (Label Only)
23	Parcel Zone Rate
24	Bound Printed Matter
25	Special Standard
26	Library Mail
27	Total Standard (B)
28	U. S. Postal Service
29	Free Mail – Blind and Handicapped
30	International Surface Mail (Label Only)
31	Letter Class
32	AO
33	Parcel Post
34	M-Bag
35	International Air Mail (Label Only)
36	Letter Class
37	AO
38	Parcel Post

City PQ TOTAL File Layout (cont)-007

39	M-Bag
40	Express
41	Total International Mail
42	Total All Mail
43	Special Services (Label Only)
44	Postage Due
45	Business Reply
46	Certified
47	COD
48	Insured
49	Registered
50	Registered/COD
51	Return Receipt
52	Express Return Receipt
53	Other
54	Total Special Services
55	Other

BUSDELV	The number of actual business deliveries at the stop
CAG	The CAG (Cost Ascertainment Group) of the office of the route being tested
COUNT	The number of successfully completed tests in the corresponding stratum and quarter.
POSBUS	The number of possible business deliveries at a stop
POSRES	The number of possible residential deliveries at a stop
RCAT	Route category
RESDELV	The number of actual residential deliveries at a stop
STOPNUM	The stop number
STRATUM	The stratum code
TESTID	Testid
WGT	Weight

City Lotus File Layout – 008

<i>Field</i>	<i>Position</i>	<i>Description</i>
<i>YEAR</i>	<i>1-4</i>	<i>Postal Fiscal Year</i>
<i>TIME PERIOD</i>	<i>5-6</i>	'1' PQ1 '2' PQ2 '3' PQ3 '4' PQ4 'A' Annual
<i>STOP TYPE</i>	<i>7-9</i>	'AW' Single Delivery Residential 'AX' Multi-Delivery Residential 'AY' Business and Mixed
<i>BUCKET</i>	<i>10-11</i>	<i>Mail subclass—check description for explanation of the contents of each bucket. See description below.</i>
<i>LETTERS</i>	<i>12-20</i>	<i>Estimate of the number of letters for a mail subclass category</i>
<i>FLATS</i>	<i>21-29</i>	<i>Estimate of the number of flats for a mail subclass category</i>
<i>PARCELS</i>	<i>30-38</i>	<i>Estimate of the number of parcels for a mail subclass category</i>

City Lotus File Layout (cont) - 008

Bucket	Description
1	<i>First Class Mail (zero field)</i>
2	<i>First Class Single Piece</i>
3	<i>First Class Presort</i>
4	<i>First Class Single Piece Post Card</i>
5	<i>First Class Presort Post Cards</i>
6	<i>Total First Class (sum of 2-5)</i>
7	<i>Priority Mail</i>
8	<i>Express Mail</i>
9	<i>Mailgram</i>
10	<i>Periodicals</i>
11	<i>Standard Mail (A) (zero field)</i>
12	<i>Standard A Single Piece</i>
13	<i>Regular Standard (zero field)</i>
14	<i>Standard A Regular ECR</i>
15	<i>Standard A Regular Other</i>
16	<i>Standard A Total Regular (sum of 14-15)</i>
17	<i>Standard A Nonprofit (zero field)</i>
18	<i>Standard A Nonprofit ECR</i>
19	<i>Standard A Nonprofit Other</i>
20	<i>Standard A Total Nonprofit(sum of 18-19)</i>
21	<i>Total Standard A (sum of 12, 16, and 20)</i>
22	<i>Standard Mail B (zero field)</i>
23	<i>Standard Mail B Parcel Post</i>
24	<i>Standard B Bound Printed Matter</i>
25	<i>Standard B Special Standard</i>
26	<i>Standard B Library Rate</i>
27	<i>Total Standard B (sum of 23-26)</i>
28	<i>United States Postal Service</i>
29	<i>Free for the Blind and Handicapped</i>
30	<i>International Surface Mail (zero field)</i>
31	<i>International Surface Letter Class</i>
32	<i>International Surface AO</i>
33	<i>International Surface Parcel Post</i>
34	<i>International Surface M-Bag</i>
35	<i>International Airmail (zero</i>

City Lotus File Layout (cont) - 008

	<i>field)</i>
36	<i>International Airmail Letter Class</i>
37	<i>International Airmail AO</i>

City Lotus File (cont) Layout - 008

38	<i>International Airmail Parcel Post</i>
39	<i>International Airmail M-Bag</i>
40	<i>International Airmail Express</i>
41	<i>Total International Mail (sum of 31-34, and 36-40)</i>
42	<i>Total All Mail (sum of 6-10, 21, 27-29, and 41)</i>
43	<i>Special Services (zero field)</i>
44	<i>Accountable Mail Postage Due</i>
45	<i>Accountable Mail Business Reply</i>
46	<i>Accountable Mail Certified</i>
47	<i>Accountable Mail COD</i>
48	<i>Accountable Mail Insured</i>
49	<i>Accountable Mail Registered</i>
50	<i>Accountable Mail Registered and COD</i>
51	<i>Accountable Mail Return Receipt</i>
52	<i>Accountable Mail Express Return Receipt</i>
53	<i>Accountable Mail Other</i>
54	<i>Total Special Services (sum of 44-53)</i>
55	<i>Other</i>

City Lotus Stops File Layout - 009

Field	Position	Description
<i>YEAR</i>	<i>1-4</i>	<i>Fiscal Year</i>
<i>TIME PERIOD</i>	<i>5-7</i>	<i>'1' PQ1 '2' PQ2 '3' PQ3 '4' PQ4 'A' Annual</i>
<i>STOPIND</i>	<i>8-12</i>	<i>'SSR#1' SDR Possible Stops 'SSR#2' MDR Possible Stops 'SSR#3' BAM Possible Stops 'SSR#4' SDR Actual Stops 'SSR#5' MDR Actual Stops 'SSR#6' BAM Actual Stops</i>
<i>BUSFOOT</i>	<i>13-26</i>	<i>Number of Business Foot Stops</i>
<i>BUSMOT</i>	<i>27-40</i>	<i>Number of Business Motorized Stops</i>
<i>RESFOOT</i>	<i>41-54</i>	<i>Number of Residential Foot Stops</i>
<i>RESPL</i>	<i>55-68</i>	<i>Number of Residential Park and Loop Stops</i>
<i>RESCURB</i>	<i>69-82</i>	<i>Number of Residential Curb Stops.</i>
<i>MIXFOOT</i>	<i>83-96</i>	<i>Number of Mixed Foot Stops.</i>
<i>MIXPL</i>	<i>97-110</i>	<i>Number of Mixed Park and Loop Stops</i>
<i>MIXCURB</i>	<i>111-125</i>	<i>Number of Mixed Curb Stops</i>