CALIFORNIA CRIMINAL JUSTICE COST STUDY:

Computer Program Documentation

ASSEMBLY OFFICE OF RESEARCH
CALIFORNIA LEGISLATURE
SACRAMENTO

September 1972

VOLUME II OF 3 VOLUMES

CALIFORNIA CRIMINAL JUSTICE COST STUDY:

Computer Program Documentation

Prepared for the California Assembly under

LEAA Grant No. NI 72-012G by

Public Systems Incorporated
1197 East Arques Avenue
Sunnyvale, California 94086

Authors:

Paul L. Patterson, Project Director
Ernest A. Unwin, Ph.D.
Michael A. Zimmerman
Howard A. Hayes
James E. Swenson

AOR No. 3
Volume II

CONTENTS

EXHIBITS

EXHIBITS

Section 1

INTRODUCTION

This volume contains an explanation of the operations performed by the Cost Study Model. The overall system structure is illustrated in the logic flow diagram given in Exhibit 1-1.

The model is composed of three phases: initialization, computation, and report generation.

The initialization phase is responsible for handling all data inputs and creates the master data file on magnetic tape. The master data file is maintained by the use of an update program. In this manner, only new input data cards are required to update the master file.

The computation phase creates account records for all organizational positions and processes from the basic input data. All needed calculations are performed to generate an augmented master file from which the reports are generated.

Finally, the report generation phase takes the augmented master file, extracts necessary information, and compiles the data into the reporting forms.

The following sections give additional details on the internal operations performed in each of the three phases of the Cost Study Model. In addition, terms are defined and coding specifications are presented in a separate section.

The information in this volume will be of interest to system analysts or programmers. A user-oriented description of the Cost Model is presented in Volume I of this report.

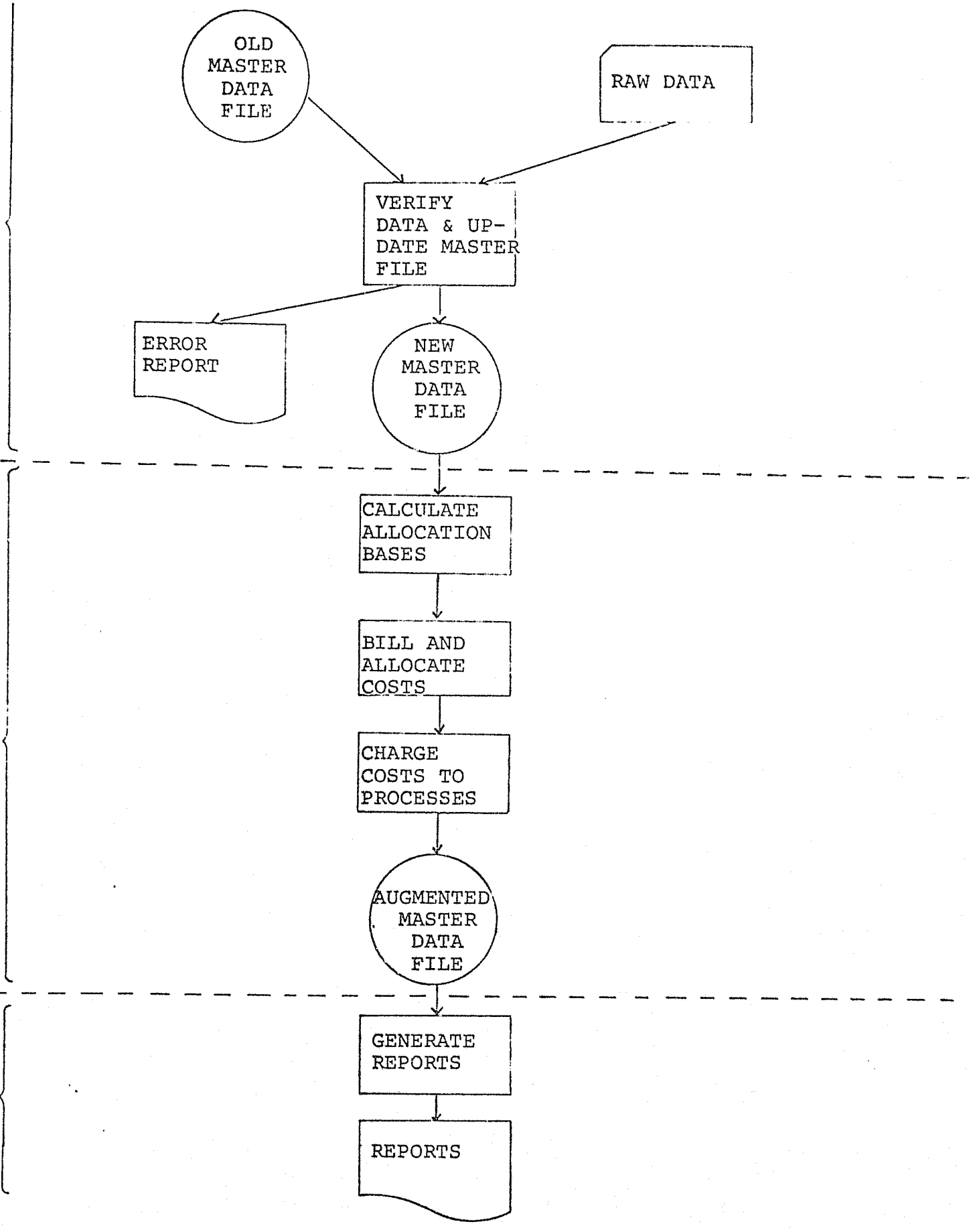

Exhibit 1-1. Cost Model Structure

Section 2

INITIALIZATION PHASE

The initialization phase is responsible for the maintenance of the master file. A logic flow diagram of this phase is presented in Exhibit 2-1. This phase is composed of two programs.

The first program, VERIFY, checks the raw data from the cards and converts this data into proper format for the computation phase. VERIFY checks the raw data and verifies that only valid codes are used in each data field. Erroneous data is rejected and an indication of the errors detected is printed on an error report. The erroneous data cards are corrected and then resubmitted. Finally, it generates an update file which contains the correctly formatted data sorted in the proper order.

The second program in the initialization phase, UPDATE, is responsible for updating the master file. This program uses the update file to add, change, or delete records from the old master file. Any errors detected at this phase of the operation are printed on an error report. The new master data file magnetic tape is used as the input to the computation phase.

PROGRAM VERIFY

This program reads and verifies the data cards, generates an error report if there are invalid data cards, and creates a sorted update file. This file is sorted by address type, account address, and class code. A logic flow diagram of VERIFY is presented as Exhibit 2-2.

Data cards must be preceded by either a "CHANGE", "ADD", or "DELETE" cart. All data cards following a "CHANGE", "ADD", or "DELETE" card will be considered to be of that class until a new "CHANGE", "ADD", or "DELETE" card is encountered. Comment cards may be inserted at any place in the data cards. Comment cards must have a "C" in Column 1.

Continuation cards must have a "-" in Column 1 and only fields 1, 9-12 are verified. All other fields should be left blank. An item may be allocated to no more than 9 account addresses, i.e., there may be no more than 8 continuation cards.

If a data card is a deletion, only fields 1, 5-7 are verified. Fields 2-4, 8-12 are not verified and should be left blank.

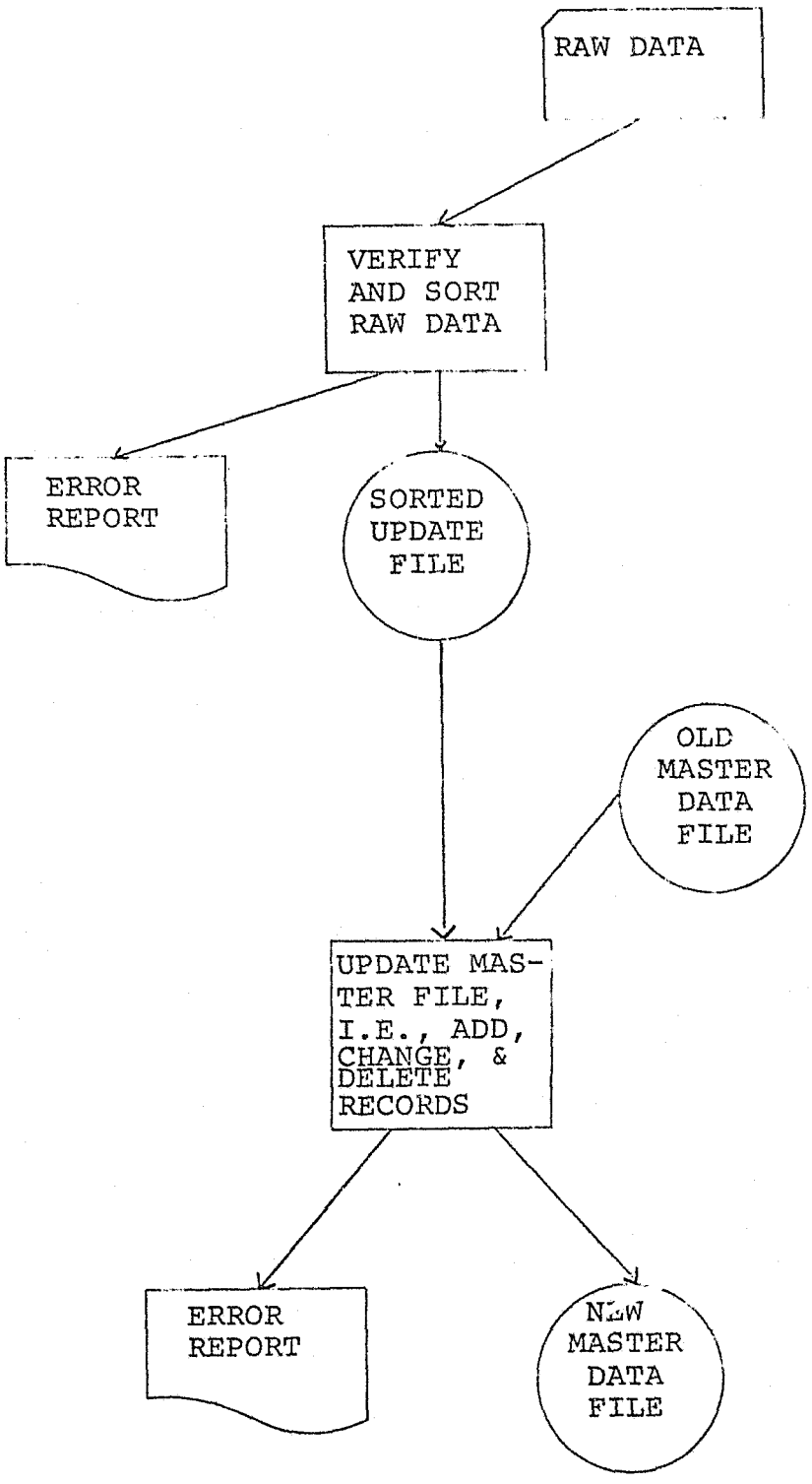

Exhibit 2-1. Initialization Phase Logic Flow Diagram

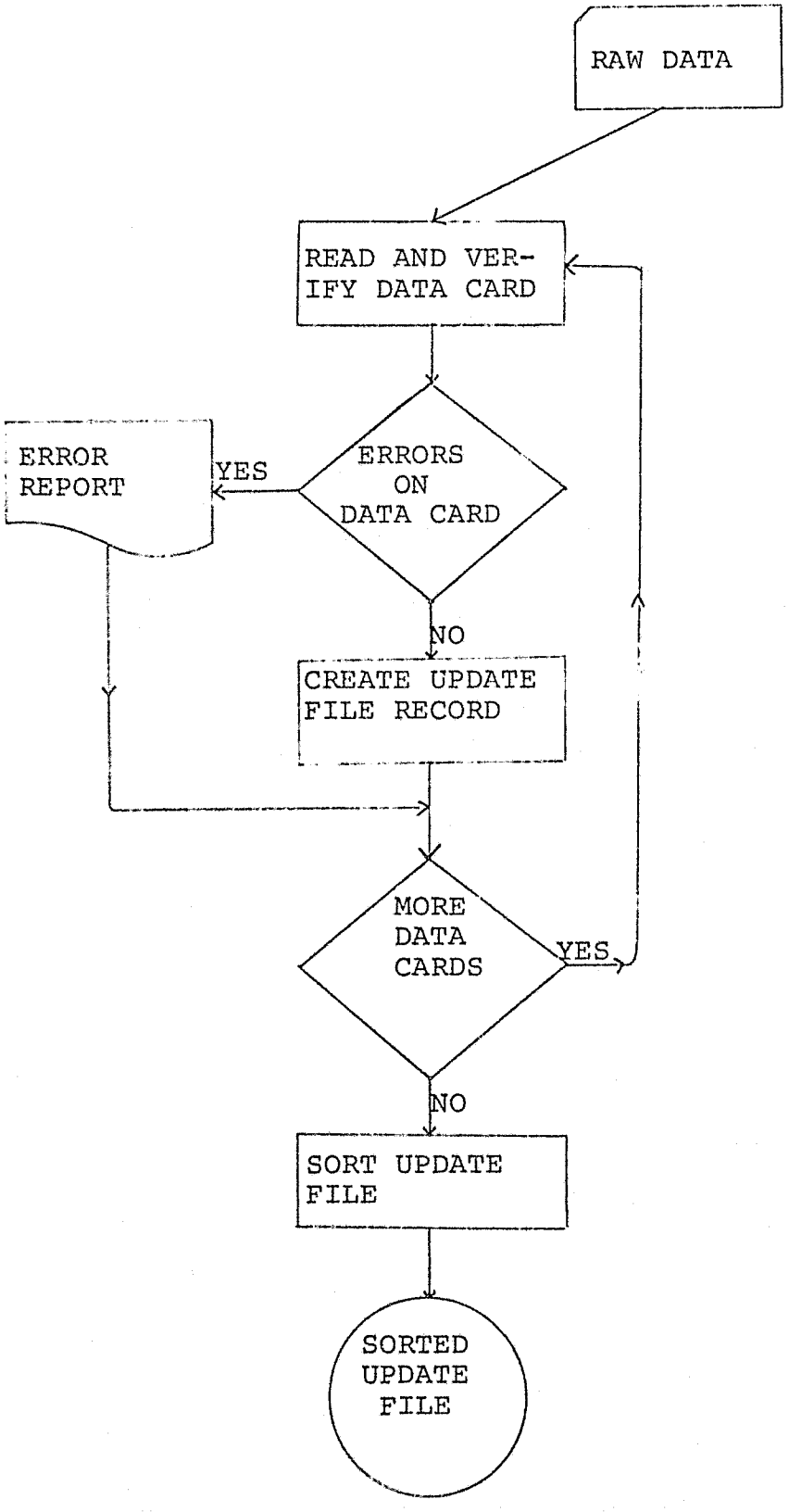

Exhibit 2-2. Program VERIFY Logic Flow Diagram

Exhibit 2-3. Nomenclature of Program VERIFY

A:	contains first character of RATE.
ACC:	contains field 10.
ACCNT-CODE-X:	the 16-digit destination billing address.
ACCNT-TYPE-X:	identifies billing address as to type, i.e., P, I, E, N, or S.
ADD-COD-X:	the 16-digit account address which appears on the input data card.
ADD-TYP-X:	a 1-position field which indicates the type of address which follows, i.e., P (process), I (internal organizational address), E (external), or N (non-government).
ADDR:	contains field 7.
AL:	contains field 12.
AL-X:	see AL.
ALLOCAT-X:	same definition as GROUP-X.
B:	contains middle character of RATE.
BASIS-1:	contains the first nine positions of field number three.
BASIS-2:	contains the last two positions of field number three.
BASIS-IN:	composed of BASIS-1 and BASIS-2.
BASIS-OUT-X:	equals (+1*(BASIS-1 + (BASIS-2*.01))) if D-C equals D or - else (-1*(BASIS-1 + (BASIS-2*.01))) if D-C equals C or +.
C:	contains last character of RATE.
CARD-IMAGE:	the edited input data card image.
CARD-MAST:	name of record on input data card file.
CARD-NO:	the edited input data card number.
CARD-NUM:	the edited input data card number.
CAT:	see CODE-1.
CATAG-X:	see definition of CODE-1.

Exhibit 2-3. Continued

CHRG-TYPE-X:	indicates whether the billing charge is direct, support, OVH, or G&A.
CLASS-CODE-X:	see definition of CLASS-OUT in program BILLING.
CODE-1:	contains the first two positions of field 5.
CODE-2:	contains the last five positions of field 5.
CONT:	field number 1 on the input data card; this is a 1-character field.
CONT-STOR:	when an ADD, CHANGE, or DELETE card is encountered, this variable contains respectively A, C, or D.
CONT-SW:	a counter which contains the number of input data cards per logical record.
CONT-SW-2:	a counter which is reset every time a CHANGE, ADD, or DELETE card is encountered.
D-C:	contains field 8.
D-I:	contains field 11.
DESC:	field number 2 on the input data card; contains a description of the item being coded.
DESC-OUT-X:	contains description of the item being coded.
ENDING-X:	composed of CODE-1 and CODE-2.
ENDING-Z:	composed of D-C, TYPE-2, ACC, D-I, and AL.
ERR-CNT:	contains the number of errors detected on the input data cards.
ERR-LINCNT:	linecounter used for the printing of error messages.
ERR-MESS:	if an error message is printed, this item contains the field number on the input card which is in error.
ERR-SW:	an error flag; set to 1 if an error is discovered on the input data card.
FIRST-1:	the first 234 characters of record SORT-CARD.
FIRST-SW:	a flag the program uses to identify the first data card.
GOOD-RCD-CNT:	contains the number of new master file records written.

GROUP-X:	composed of the following four items: ACCNT-TYPE-X, ACCNT-CODE-X, CHRG-TYPE-X, and PERC-ALLOC-X.
IFLAG:	a flag used to identify a data record that is an addition, change, or deletion to a dummy node.
INDICATOR-X:	should contain either A, C, or D; identifies output record as an addition, change, or deletion.
INV-NUMB-X:	see definition of CODE-2.
MIDDLE:	contains RATE.
NUMB-ALLOC:	see definition of NUMB-ALLOC-X.
NUMB-ALLOC-X:	the number of destination addresses the item coded by the analyst is allocated to.
OUT-ERR-SW:	a flag which is set to 1 if any part, i.e., data card, of the logical record contains an error.
PAGE-CTR:	page counter.
PERC-ALLOC-X:	contains the numeric equivalent of field 12.
PERCENT:	contains the sum of the allocation percentages for any item that is coded; must not exceed 100, i.e., 100%.
PER-CENT:	the edited sum of allocation percentages for an item.
PGNO:	the edited page counter.
RATE:	contains field number 4.
RATE-OUT-X:	contains the numeric equivalent of field 4.
RD-CNT:	contains the number of input data cards read from the card reader.
SECOND:	the last 189 characters of record SORT-CARD.
SORT-CARD:	name of record on sort file.
TEMP:	a temporary location used to save the value of ERR-SW.
TYPE-1:	contains field 6.
TYPE-2:	contains field 9.

UPDATE-RECORD: name of record on output master file.

WORK-1: used to redefine RATE into its three separate components: A--position 1; B--position 2; C--position 3.

If a data card is an addition, change or deletion to a dummy node, only fields 1, 2, 6, and 7 are verified. Fields 3-5, 8-12 are not verified and should be left blank. The description field is the only item an analyst may alter on a dummy node (i.e., non-end item) record.

If an old master data file does not exist, the following cards must be input:

1.	Columns 1-6 "DELETE"	first card
2.	Columns 2-19 "NO PREVIOUS MASTER" Columns 36-42 "FA00001" Column 43 "E" Columns 44-59 "000...0"	second card

All other columns on both cards should be left blank. When the update file is sorted, the first record on the sorted file will be the dummy record with the description "NO PREVIOUS MASTER".

The names and descriptions of major variables, computations, and subroutines used in program VERIFY are presented in Exhibit 2-3.

PROGRAM UPDATE

This program creates an updated master data file which will be used as input to the calculations and report generation phase of the Cost Study Model. A logic flow diagram of UPDATE is presented as Exhibit 2-4.

UPDATE expands the 16-digit addresses on the update file records to 20-digit addresses. This is accomplished by putting a zero in front of characters 9, 10, 15, and 16. A new master data file is then created. If a previous master data file exists then the new master data file is created by updating the old master data file with the update file. If an old master data file does not exist, then the first record on the update file must be a dummy with columns 2-19 containing "NO PREVIOUS MASTER". In this case, the new master data file is created from the update file.

The names and descriptions of major variables, computations, and subroutines used in program UPDATE are presented in Exhibit 2-5.

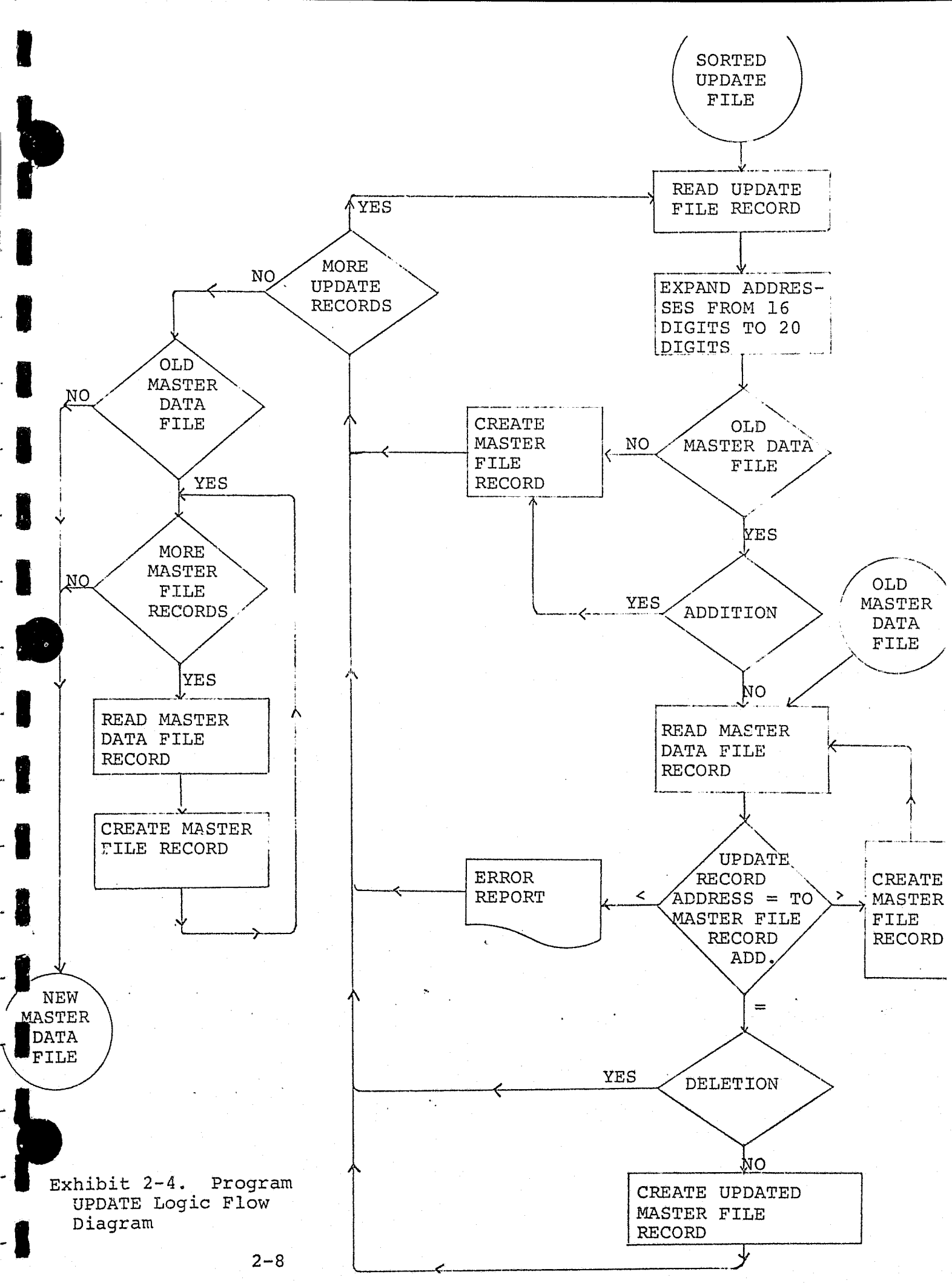

Exhibit 2-4. Program UPDATE Logic Flow Diagram

Exhibit 2-5. Nomenclature of Program UPDATE

A-1:	contains the first eight characters of the 16-digit account or destination address.
A-2:	contains the ninth character of the 16-digit account or destination address.
A-3:	contains the tenth character of the 16-digit account or destination address.
A-4:	contains characters 11 through 14 of the 16-digit account or destination address.
A-5:	contains the fifteenth digit of the 16-digit account or destination address.
A-6:	contains the last digit of the 16-digit account or destination address.
ADD-TRANS-CNT:	contains the number of transaction file records which are additions to the master file.
ADDRS-N:	the 21-digit field on the new master file record which contains account type and account address.
ADDRS-N-2:	a 7-digit field on the new master file record which contains field five from the input data card.
ADDRS-O:	a 21-character field on the input master file record composed of a one digit account type and a 20 digit account address.
ADDRS-O-2:	a 7-character field on the input master file record which contains field five from the input data card.
ADDRS-T:	contains the account type and the 16-character account address on the transaction file record.
ADDRS-T-2:	contains field 5 from the input data card on the transaction file record.
ADRS-16:	splits the 17-character account type and account address field into the following components: A-Z-16, A-1, A-2, A-3, A-4, A-5, A-6.

Exhibit 2-5. Continued

ADRS-20:	splits the 21-character account type and account address field into the following 7 components: A-Z-20, B-1, B-2, B-3, B-4, B-5, and B-6.
ADRS-AL:	a 17-character field which contains a 1-digit account type and a 16-digit account address.
ALL-REC:	a 21-character field composed of the following two items: ADRS-AL and FILLER-ALL.
ALLOCAT:	an array on the transaction file record which contains destination address information.
ALLOCAT-N:	an array on the new master file record which contains destination address information.
ARND-SW:	flag which is set to one if there is no previous master file.
A-Z-16:	contains account type.
A-Z-20:	contains account type.
B-1:	contains the first eight characters of the 20-digit account or destination address.
B-2:	contains the tenth character of the 20-digit account or destination address.
B-3:	contains the twelveth character of the 20-digit account or destination address.
B-4:	contains characters 13 through 16 of the 20-digit account or destination address.
B-5:	contains digit 18 of the 20-digit account or destination address.
B-6:	contains the last digit of the 20-digit account or destination address.
CHANG-CNT:	contains the number of transaction file records which result in changes to the master file.
COD:	the one digit code on the transaction file record which identifies the record as a change, deletion or addition.
DEL-CNT:	contains the number of transaction file records which result in deletions to the master file.

ERR-COD-CNT:	contains the number of transaction file records rejected as being in error.
FILLER-1:	if an old master file does not exist, then this field on the first transaction file record must contain "NO PREVIOUS MASTER".
FILLER-ALL:	a 4-digit field containing charge type and percentage information.
FILLER-N:	the 20-character field on the new master file record which contains a description of the item.
GR-AL:	a 21-digit field which contains account type and account address.
GR-END:	a 4-digit field which contains charge type and percentage information.
GROUP-STOR:	a 25-digit field which is composed of GR-AL and GR-END.
NEW-MAST:	name of record on output master file.
NEW-MAST-CNT:	contains the number of records written on the new master file.
NEW-REST:	a 196-character field on the new master file record which contains ADDRS-N-2, NUMB-ALLOC-N and FILLER.
NUMB-ALLOC-N:	see definition of NUMB-ALLOC-O.
NUMB-ALLOC-O:	the number of destination addresses the item coded by the analyst is allocated to.
NUMB-ALLOC-T:	see definition of NUMB-ALLOC-O.
OLD-MAST:	name of record on input master file.
PREV-ADDRS-O:	a temporary storage location used to hold the contents of ADDRS-O.
PREV-ADDRS-O-2:	a temporary storage location used to hold the contents of ADDRS-O-2.
RD-MAST-CNT:	contains the number of records read from the old master file.
RD-TRANS-CNT:	contains the number of records read from the transaction file.
REC-T:	contains the 20-character description of the item coded by the analyst which appears on the transaction file record.

Exhibit 2-5. Continued

REC-T-3:	a 196-character field on the transaction file record which contains ADDRS-T-2, NUMB-ALLOC-T and FILLER.
STOR-AL:	an array which contains account type and the 20-digit destination address.
STOR-END:	an array which contains charge type and percentage information.
SUB:	counter which varies from zero to nine.
TRAN:	name of record on input transaction file.

Section 3

COMPUTATION PHASE

The computation phase is responsible for reading the master data file and performing the computations for the cost analysis. This phase is composed of nine programs, each performing certain computations and creating information for subsequent programs. The computation phase logic flow diagrams are given in Exhibit 3-1. The data contained on the master file contains the same basic information that was collected from the governmental units. To facilitate data collection and to require the minimum amount of training on behalf of the recording clerks, this information contains only the first level cost refinement; that is, administrative costs are charged to the organizational level at which they appear, support costs are charged to the organization they support, and only direct costs are charged to the criminal justice processes. The nine computer programs construct the logic chains connecting all of the costs to the criminal justice processes. This is accomplished by working down the organizational structure, cascading the billing from one level to the next, to the lowest operating level from which the charges are assessed to the criminal justice processes.

The nine programs of the computation phase are:

- BILLING
- BURDEN
- NONSUP
- OVH
- ALLOC
- OVHGA
- ASSESS
- SUPPORT
- PRO

PROGRAM BILLING

The primary function of BILLING is to examine all non-labor support costs and to create a billing file used by NONSUP to post the non-labor support charges to the proper accounts. The non-labor support costs at any point are determined by transferring the charges from the organizational position where they appear to the billing address of the supported organization. At the

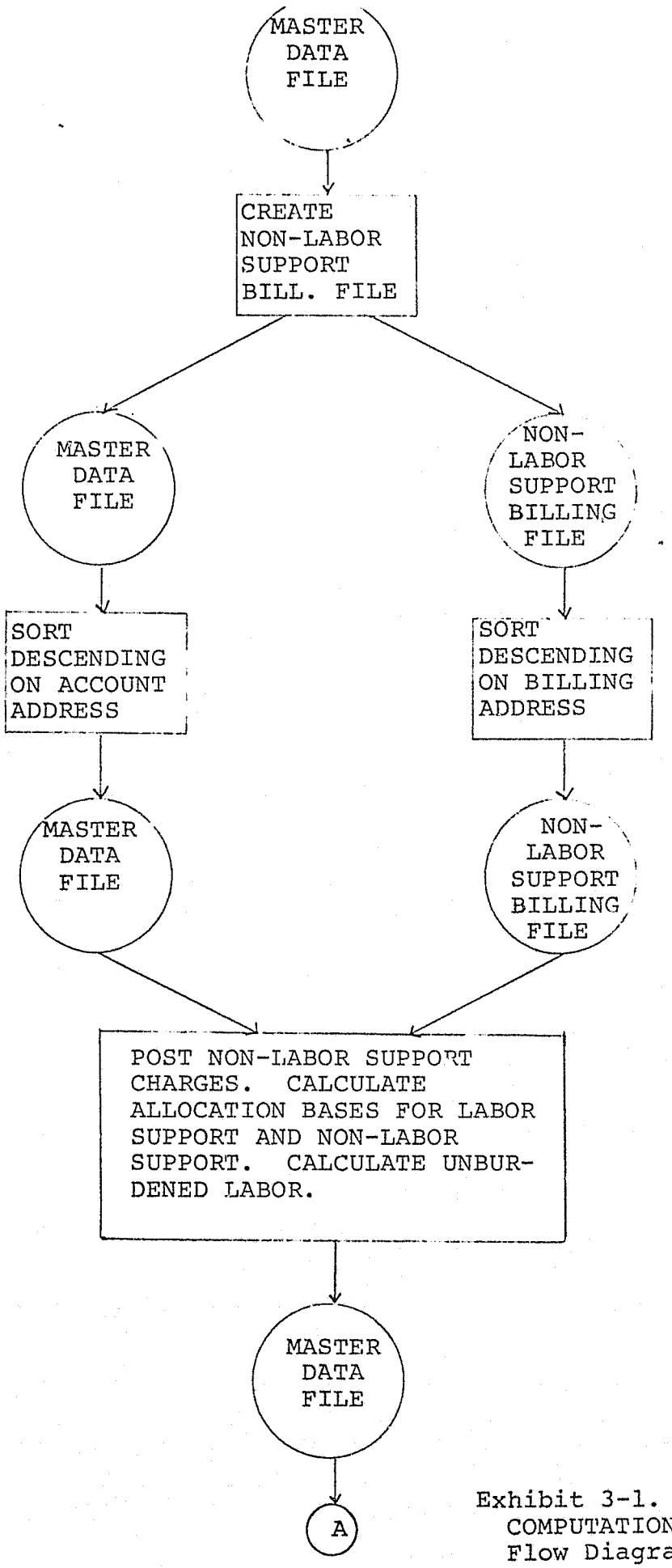

Exhibit 3-1. Program COMPUTATION PHASE Logic Flow Diagram

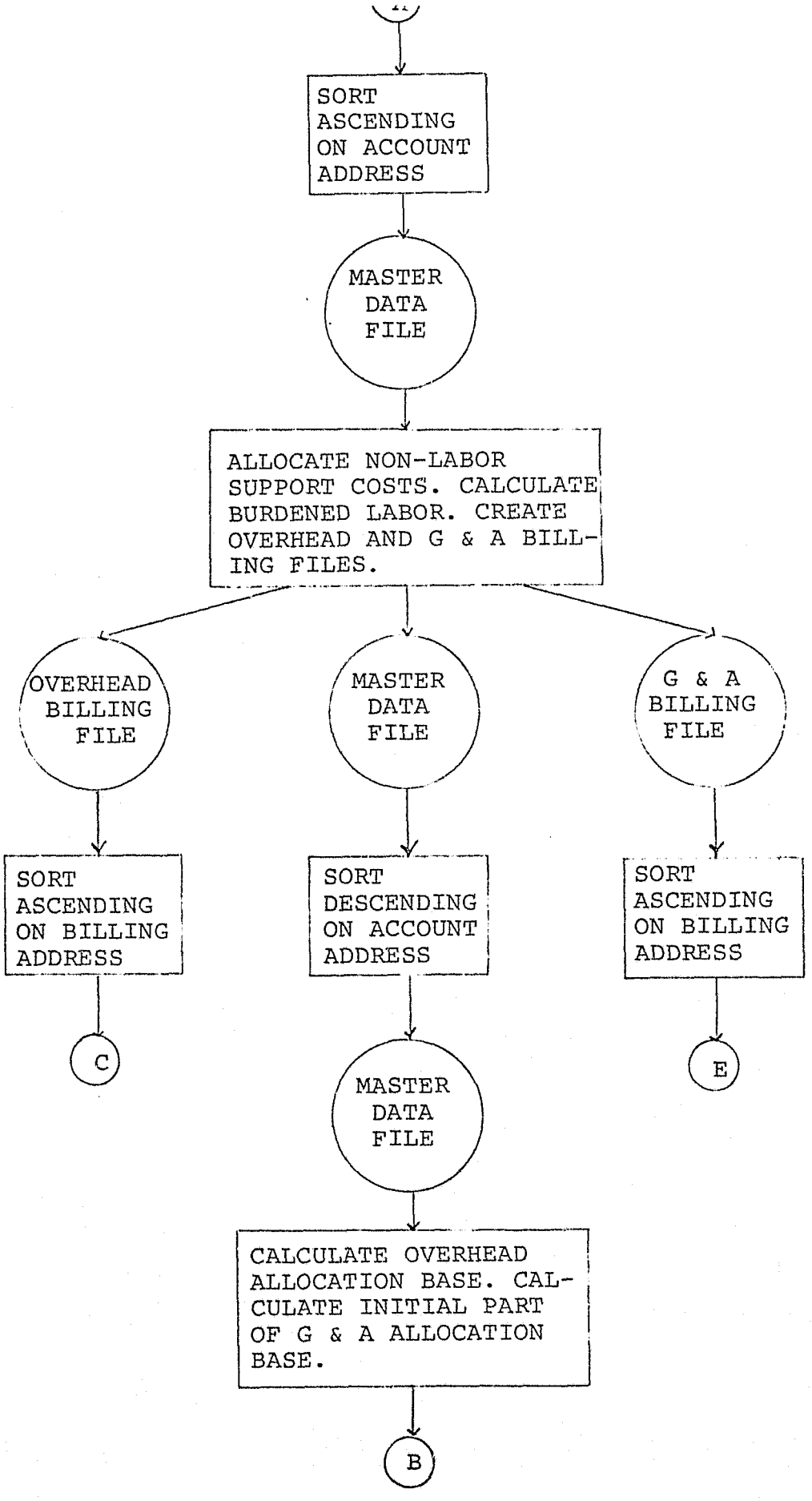

Exhibit 3-1. Continued

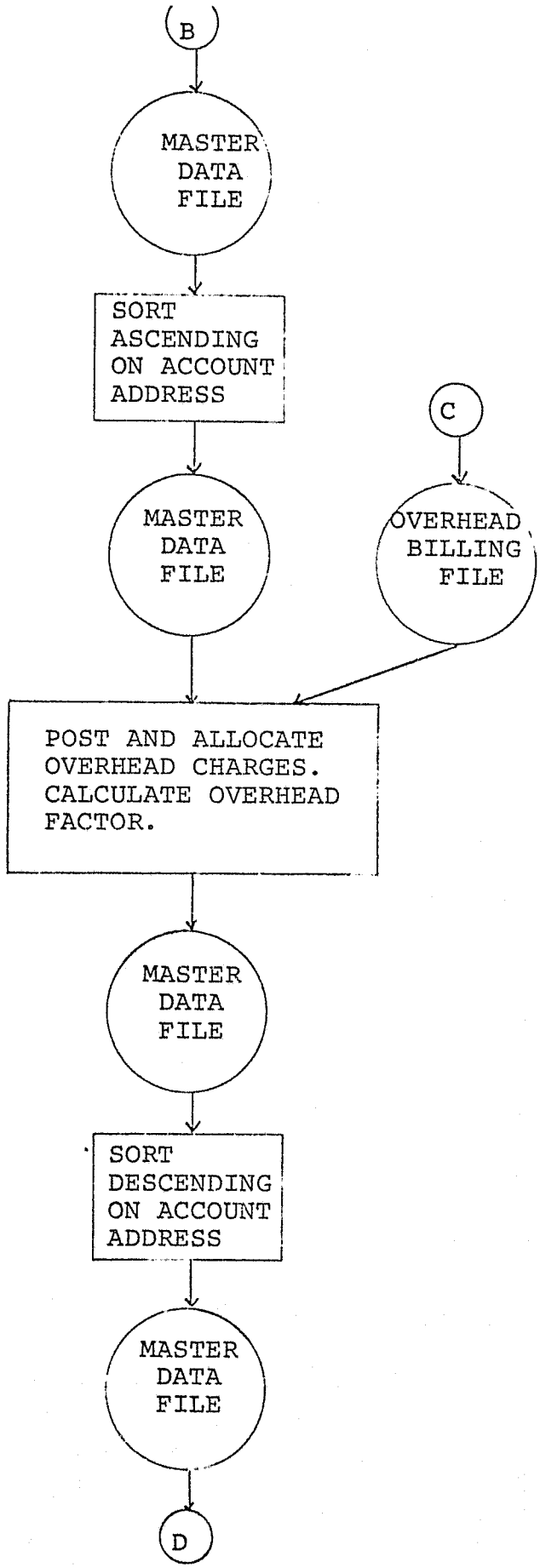

Exhibit 3-1. Continued

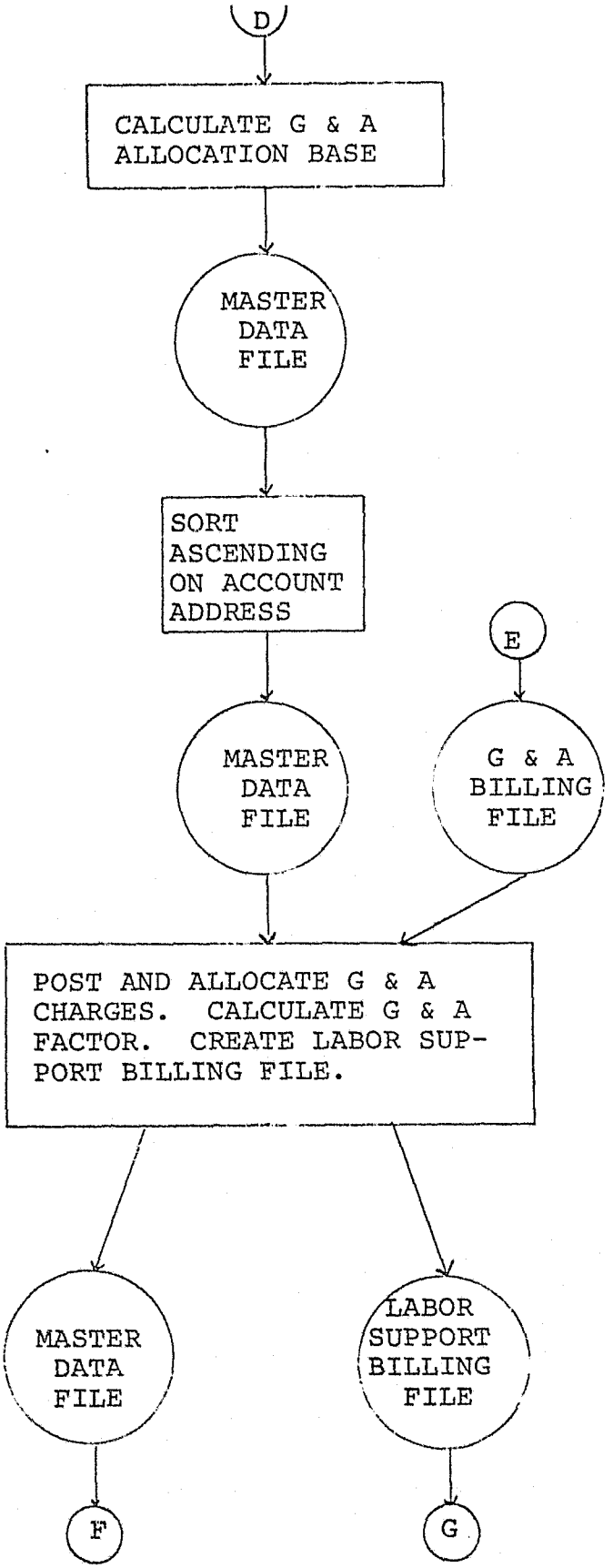

Exhibit 3-1. Continued

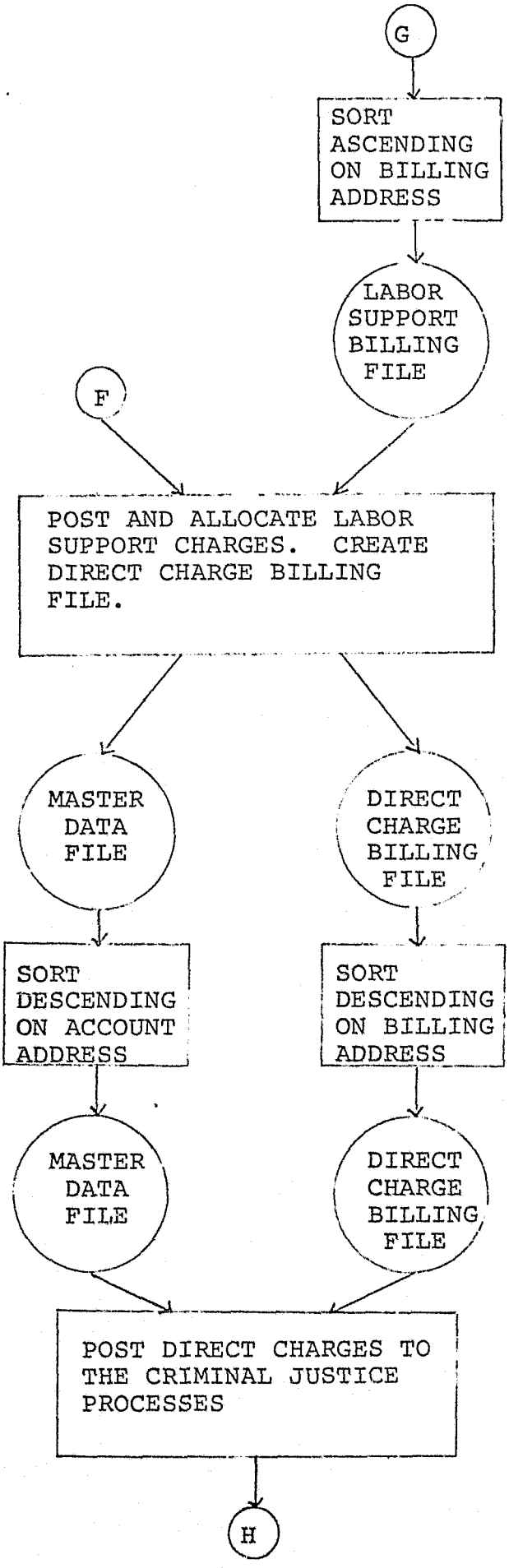

Exhibit 3-1. Continued

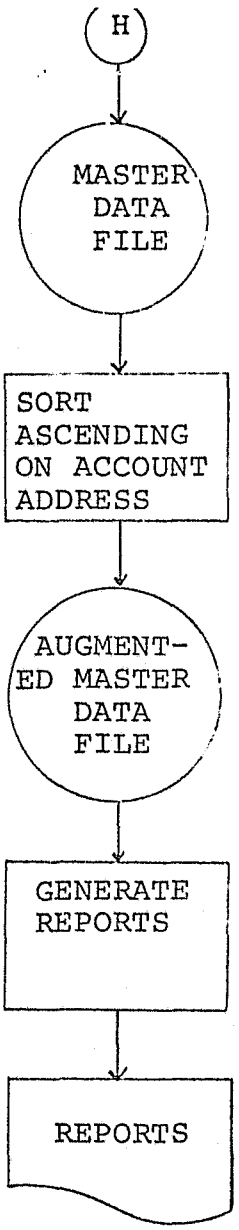

Exhibit 3-1. Continued

same time, the program examines each record to determine the amount of support charges and direct charges at that point. The program also generates node records for each organizational position. As allocations to the criminal justice processes are encountered, a node record for the process and all of its superior processes is generated. Duplicates will usually be generated.

Following these operations, the non-labor support billing file and the master data file are sorted in descending order in preparation for the next program.

The logic flow diagram of BILLING is presented in Exhibit 3-2.

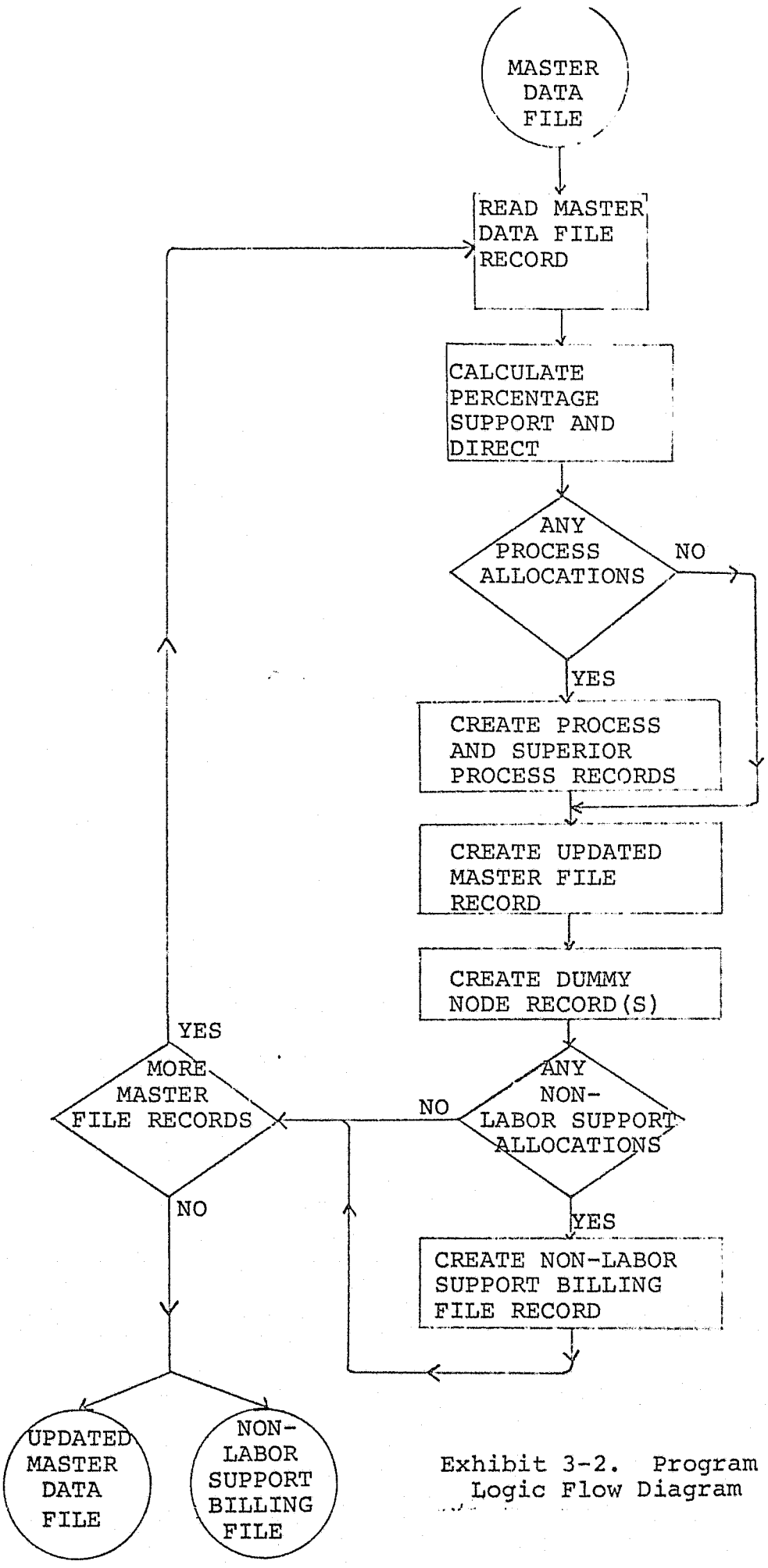

Exhibit 3-2. Program BILLING Logic Flow Diagram

The names and descriptions of major variables, computations, and subroutines used in program BILLING are presented in Exhibit 3-3.

PROGRAM BURDEN

This program performs several functions. The non-labor support charges billed to an organizational position are posed to the proper accounts. Unburdened labor is calculated. The labor support and non-labor support allocation bases are calculated.

This operation starts at the lowest level of the organizational chart. The program works up through the organizational structure generating total labor dollars and direct labor dollars appearing up to any organizational position. These form the non-labor support and labor support allocation bases for that position. In this manner, the bases are cascaded upward through the organization. Thus, any organizational position will have the total bases of the positions below it, plus its own base added to it.

When the process reaches the top of the organization, the account will contain the total for that unit. The master data file is then sorted in ascending order for the next program.

The logic flow diagram of program BURDEN is presented in Exhibit 3-4.

The names and descriptions of major variables, computations, and subroutines used in program BURDEN are presented in Exhibit 3-5.

PROGRAM NONSUP

This program allocates non-labor support costs based on total labor dollars. The non-labor support costs charged to any organizational position are proportioned according to the accumulated total labor dollars appearing at that position. The non-labor support assessments become a cost burden that adds to the total cost of labor.

Thus, burdened labor is calculated as unburdened labor plus non-labor support. At the same time that the program is allocating non-labor support charges to an organizational position, the account for that position is examined for both overhead and G & A charges. If an overhead charge is found, an overhead billing record is created. In a similar manner, if a G & A charge is encountered then a G & A billing record is created. The overhead billing file and the G & A billing file are then sorted in ascending order. The master data file is sorted in descending order in preparation for the next program.

The logic flow diagram of program NONSUP is presented in Exhibit 3-6.

Exhibit 3-3. Nomenclature of Program BILLING

Program BILLING

ACCNT-CODE-X: see account code under ALLOCAT-X.

ACCNT-TYPE-X: see account type under ALLOCAT-X.

ADD-COD: 20-character field which is the address of the organization incurring the charge which will be billed to one or more organizations. See definitions of POS-1 through POS-10 for a breakdown of this address into its component parts.

ADD-COD-OUT: see definition of ADD-COD.

ADD-TYP: 1-character field which contains address type; see definition of account type under ALLOCAT-X.

ADD-TYP-OUT: see definition of ADD-TYP.

ALLOCAT-IN: see definition of ALLOCAT-X.

ALLOCAT-X: 25-character field which occurs from one to nine times per record. Each item that is coded by the analyst may be allocated to n account addresses, where n varies from 1 to 9. This field has the following components:

account type-1 position; indicates the type of address the next field is where P = process, I = internal organizational address, E = external, and N = non-government.

account code-20 positions; contains the address where the item coded by the analyst is to be charged.

charge type-1 position where D = direct charge, S = support, M = direct administration, G = general administration, and R = revenue.

percentage-3 positions, percentage of dollar amount for item that is charged to this account code.

BASIS-IN: the amount which when multiplied by the rate will generate the dollar charge.

BILL-AMNT: non-labor support amount billed equals PERC-ALLOC-X*RATE-IN*BASIS-IN.

BILL-CNT: contains the number of non-labor support billing file records written.

Exhibit 3-3. Continued

BILL-REC: name of record on output non-labor support billing file.

BILL-TYPE: a 1-character field which appears on the non-labor support billing file record. Contains the letter S.

CATAG: 2 character field where LA= labor, FA = facilities, SU = supplies, SE = services, TR = transfers and reimbursements, MI = miscellaneous and 00-99 = equipment and maintenance of equipment.

CHRG-TYPE-X: see charge type under ALLOCAT-X.

CLASS-OUT: 7-digit field composed of two items: CATAG and INV-NUMB.

DESC-IN: 20-character field describing the item coded.

DESC-OUT: see DESC-IN.

DEST-ADD: the 21-character field which appears on the non-labor support billing file record. Contains account type and account code. See definitions under ALLOCAT-X.

DUMMY-CNT: contains the number of new master file records written.

DUMMY-FILE-REC: name of record on output master file.

DUMMY-STORE: see definition of ADD-COD.

FIRST-Y: the first 237 characters of the output master file record.

GROUP-1: 4-digit field which contains POS-1 and POS-2.

GROUP-2: 4-digit field which contains POS-3 and POS-4.

GROUP-3: 4-digit field which contains POS-5 and POS-6.

GROUP-4: 4-digit field which contains POS-7 and POS-8.

GROUP-5: 4-digit field which contains POS-9 and POS-10.

GROUP-6: 4-digit field which contains POS-K and POS-L.

GROUP-7: 4-digit field which contains POS-M and POS-N.

GROUP-8: 4-digit field which contains POS-O and POS-P.

GROUP-9: 4-digit field which contains POS-Q and POS-R.

Exhibit 3-3. Continued

GROUP-10:	4-digit field which contains POS-S and POS-T.
GROUP-X:	a 25-character field composed of GROUP-Y and GROUP-Z.
GROUP-Y:	a 21-character field composed of ACCNT-TYPE-X and ACCNT-CODE-X.
GROUP-Z:	4-character field composed of CHRG-TYPE-X and PERC-ALLOC-X.
INV-NUMB:	a 5-digit field containing the following: if CATAG is numeric, i.e., equipment and maintenance of equipment then INV-NUMB contains the last five digits of the inventory number. If CATAG is alphabetic then these five positions must contain a non-zero sub-address code.
LOCATOR-CTR	Each item coded by the analyst may be allocated to n account addresses, n=1,...,9. The program processes the account addresses sequentially. This counter tells which account address is currently being processed.
MAST-IN:	name of record from input master file.
NUMB-ALLOC:	the actual number of account addresses the item coded by the analyst is allocated to; varies from 1 to 9.
NUMB-ALLOC-X:	see definition of NUMB-ALLOC.
PERC-ALLOC-X:	see percentage under ALLOCAT-X.
PERC-DIR:	percentage of total dollar amount charged to processes.
PERC-SUPP:	percentage of total dollar amount charged to support.
POS-1:	positions 1 and 2 in account code, contains code for county.
POS-2:	positions 3 and 4 in account code, contains code for city.
POS-3:	positions 5 and 6 in account code, contains code for agency.
POS-4:	positions 7 and 8 in account code, contains code for department.

POS-5:	positions 9 and 10 in account code, contains code for division.
POS-6:	positions 11 and 12 in account code, contains code for ?
POS-7:	positions for 13 and 14 in account code, contains code for section.
POS-8:	positions 15 and 16 in account code, contains code for unit.
POS-9:	positions 17 and 18 in account code, contains code for element.
POS-10:	positions 19 and 20 in account code, contains code for position.
POS-1A:	position 1 of process account code.
POS-2A:	position 2 of process account code.
POS-3A:	position 3 of process account code.
POS-4A:	position 4 of process account code.
POS-A1:	see POS-1A.
POS-A2:	see POS-2A.
POS-A3:	see POS-3A.
POS-A4:	see POS-4A.
POS-A:	see POS-1.
POS-B:	see POS-2.
POS-C:	see POS-3.
POS-D:	see POS-4.
POS-E:	see POS-5.
POS-F:	see POS-6.
POS-G:	see POS-7.
POS-H:	see POS-8.
POS-I:	see POS-9.
POS-J:	see POS-10.
POS-K:	see POS-1.

Exhibit 3-3. Continued

POS-L:	see POS-2.
POS-M:	see POS-3.
POS-N:	see POS-4.
POS-O:	see POS-5.
POS-P:	see POS-6.
POS-Q:	see POS-7.
POS-R:	see POS-8.
POS-S:	see POS-9.
POS-T:	see POS-10.
RATE-IN:	the amount which when multiplied by the basis will generate the dollar charge, e.g., $4.80/sq. foot.
RD-CNT:	contains the number of input records read from the master file.
SECOND-X:	see definition of ADD-COD.

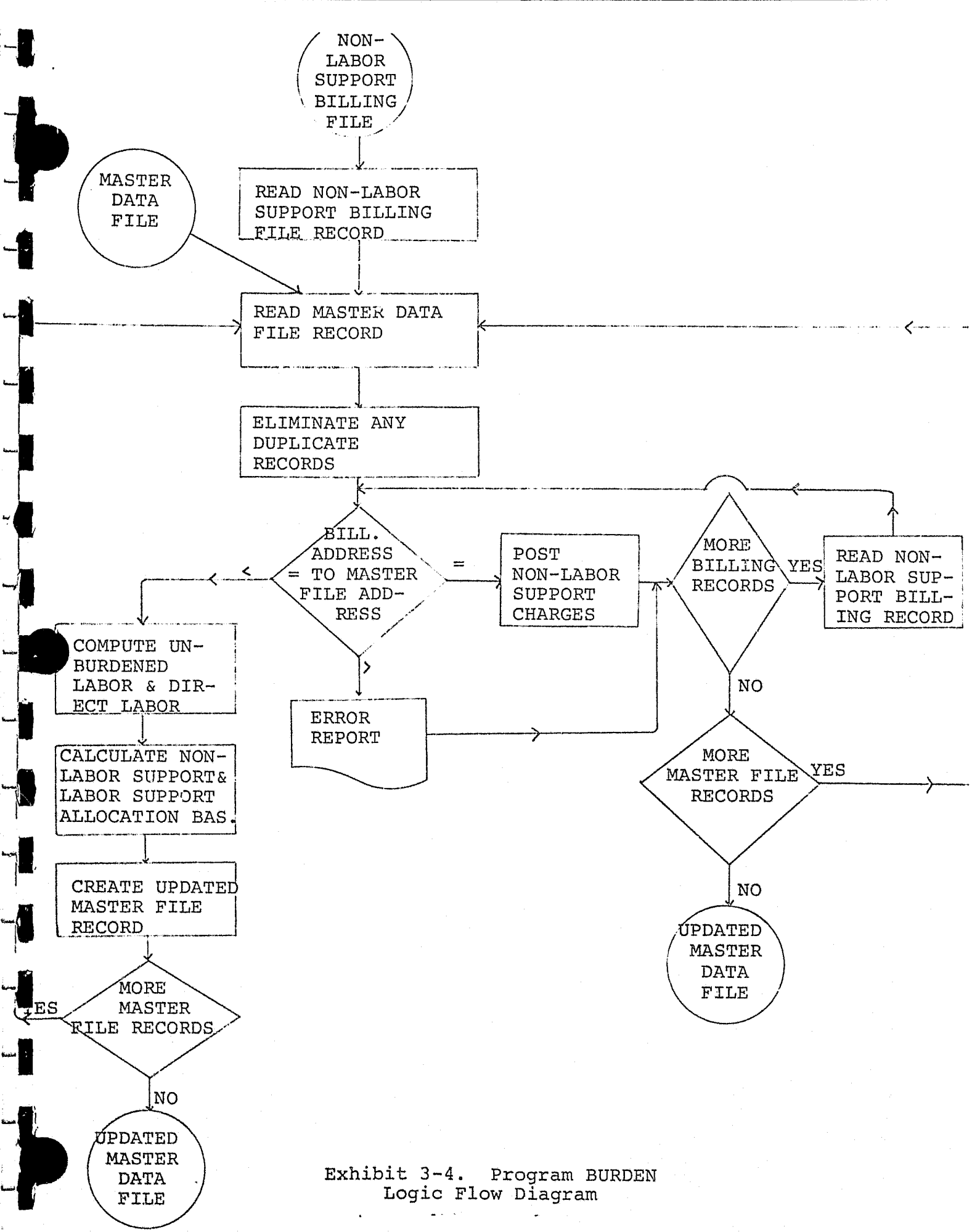

Exhibit 3-4. Program BURDEN
Logic Flow Diagram

Exhibit 3-5. Nomenclature of Program BURDEN

ADD-COD:	the 20-character account address which appears on the input master record.
ADD-COD-IN:	the 1-character field on the billing record which contains address type. See definition of account type under ALLOCAT-X in program BILLING.
ADD-TYP:	the 1-character field on the input master file record which contains address type. See definition of account type under ALLOCAT-X in program BILLING.
ADRS:	array which breaks the 20-character account address from the input master file record into its 10 two-digit components. See definitions of POS-1 through POS-10 in program BILLING.
ALLOC-OUT:	a 25-character array which appears from 1 to 9 times on the output master file record. Contains billing address information.
BASIS-IN:	see definition of BASIS-IN in program BILLING.
BILL-AMNT-IN:	the non-labor support dollar amount which appears on the input billing record.
BILL-ERR-CNT:	contains the number of bills without a matching master file record.
BILL-IN-CNT:	contains the number of non-labor support billing file records read from the billing file.
BILL-IN-REC:	name of record on non-labor support input billing file.
CATAG:	see definition of CATAG in program BILLING.
CLASS-CODE:	see definition of CLASS-OUT in program BILLING.
DEST-ADD-IN:	the 20-character destination address which appears on the input billing file record.
DIR-LABOR:	direct labor equals PERC-DIR * UNBURD-LAB.
DIR-LABOR-BASE:	if an end item, contains total direct labor dollars for that item, i.e., PERC-DIR * UNBURD-LAB. If a non-end item, contains the sum of the total direct labor dollars for all children. Children may be either end items or non-end items.

DIR-LAB-POS:	accumulation array, containing direct labor, which is used to calculate the direct labor base for each organizational position.
DUP-CNT:	contains the number of duplicate records rejected from the input master file.
FILLER-N-AL:	contains the first 236 characters of the output master file record.
LABOR-BASE:	if an end item, contains total labor dollars for that item, i.e., UNBURD-LAB. If a non-end item, i.e., CLASS-CODE is blank, contains the sum of total labor dollars for all children. Children may be either end items or non-end items.
LAB-POS:	accumulation array, containing unburdened labor, which is used to calculate the labor base for each organizational position.
MAST-IN-CNT:	contains the number of input records read from the master file.
MAST-IN-REC:	name of record from input master file.
MAST-OUT-CNT:	contains the number of output records written on the master file.
MAST-OUT-REC:	name of record on output master file.
N-AL-OUT:	contains the number of billing addresses the item coded by the analyst is allocated to.
NONLAB-SUPP:	non-labor support is the difference between burdened labor and unburdened labor.
PERC-DIR:	percentage of total dollar amount charged directly to the criminal justice processes.
POS-SW:	flag used in the accumulation loop which computes the labor and direct labor bases for each organizational position.
PREV-ADRS:	used to store the account address from the previous input master file record.
PREV-CLASS:	used to store the class code from the previous input master file record.
RATE-IN:	see definition of RATE-IN in program BILLING.
SUB:	counter which varies from 0 to 12.
UNBURD-LAB:	unburdened labor equals RATE-IN times BASIS-IN.

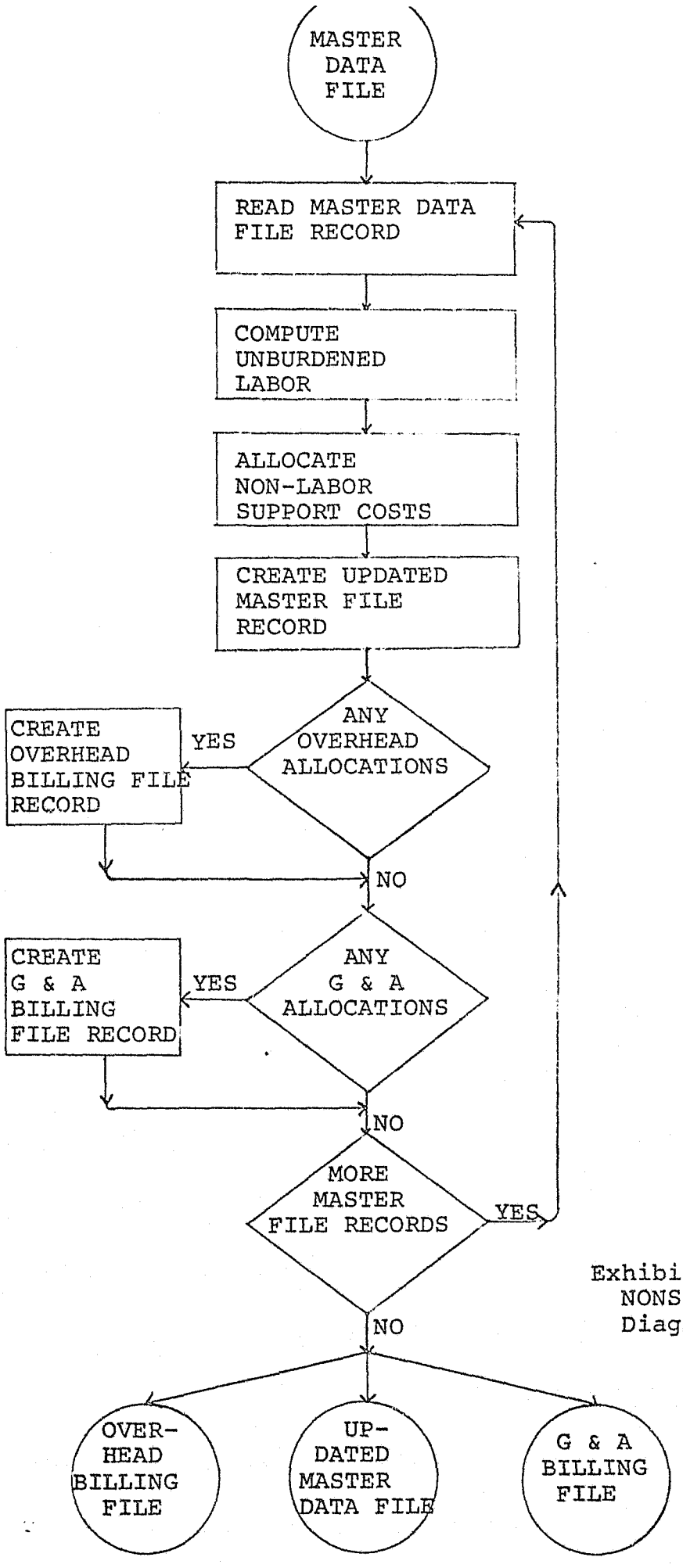

Exhibit 3-6. Program NONSUP Logic Flow Diagram

The names and descriptions of major variables, computations, and subroutines used in program NONSUP are presented in Exhibit 3-7.

PROGRAM OVH

This program calculates the overhead allocation base and the initial part of the G & A allocation base. This operation begins at the lowest level of the organization chart. The program works up through the organizational structure generating direct and support labor dollars burdened with non-labor support and direct and support labor dollars burdened with non-labor support plus non-labor direct appearing up to an organizational position. These form the overhead allocation base and the initial part of the G & A allocation base for that position. In this way, the bases are cascaded up through the organization. Thus, any organizational position will have the total bases of the positions below it, plus its own base added to it. When the process reaches the top of the organization, the account will contain the total for that unit. The master data file is then sorted in ascending order for the next program.

For a labor end item, the overhead and G & A bases are equal to (percentage direct plus percentage support) x burdened labor.

For a non-labor end item, the G & A allocation base equals percentage direct x basis x rate.

For a non-end item record, the overhead allocation base equals the sum over all children of the overhead allocation base. In a similar manner, the G & A allocation base equals the sum over all children of the G & A allocation base.

The logic flow diagram for program OVH is presented in Exhibit 3-8.

The names and descriptions of major variables, calculations, and subroutines used in program OVH are presented in Exhibit 3-9.

PROGRAM ALLOC

This program performs several functions. The overhead charges billed to an organizational position are posted to the proper accounts. The overhead charges are then allocated to lower organizational positions. The overhead costs charged to any organizational position are assessed according to the accumulated direct and support labor dollars burdened with non-labor support appearing at that position. The overhead factor is also calculated for each organizational position. The master data file is then sorted in descending order for the next program.

The logic flow diagram of program ALLOC is presented in Exhibit 3-10.

The names and descriptions of major variables, calculations, and subroutines used in program ALLOC are presented in Exhibit 3-11.

Exhibit 3-7. Nomenclature of Program NONSUP

ACCNT-CODE-X:	the 20-digit billing account address.
ACCNT-TYPE-X:	see definition of account type under ALLOCAT-X in program BILLING.
ADD-COD:	contains the 20-digit account address from the input master file record.
ADD-COD-GA:	identifies billing address as to type, i.e., process, internal organizational address, etc.
ADD-COD-OVH:	identifies billing address as to type, i.e., process, internal organizational address, etc.
ADD-TYP:	the 1-character field on the input master file record which contains address type.
ADD-TYP-OUT:	the 1-character field on the output master file record which contains address type.
ADRS:	array which breaks the 20-character account address from the input master file record into its ten two digit components. See definitions of POS-1 through POS-10 in program BILLING.
ADRS-AL:	same as ADD-COD.
ALLOC-OUT:	a 25-character array which appears from 1 to 9 times on the output master file record. Contains billing address information.
ALLOCAT-IN:	see definition of ALLOCAT-X in program BILLING.
BASIS-IN:	see definition of BASIS-IN in program BILLING.
BILL-AMNT-GA:	G and A billed amount equals: a) for labor charge: PERC-ALLOC-X * BURD-LAB. b) for non-labor charge: PERC-ALLOC-X * BASIS-IN * RATE-IN.
BILL-AMNT-OVH:	overhead billed amount equals: a) for labor charge: PERC-ALLOC-X * BURD-LAB. b) for non-labor charge: PERC-ALLOC-X * BASIS-IN * RATE-IN.
BILL-GA-REC:	name of record on output G and A billing file.

Exhibit 3-7. Continued

BILL-OVH-REC:	name of record on output overhead billing file.
BILL-TYPE-GA:	identifies bill as a G and A type charge.
BILL-TYPE-OVH:	identifies bill as an overhead type charge.
BURD-LAB:	burdened labor equals UNBURD-LAB plus NONLAB-SUPP plus SUPPORT-ASSESS-NL.
CATAG:	see definition of CATAG in program BILLING.
CHRG-TYPE-X:	see definition of charge type under ALLOCAT-X in program BILLING.
CLASS-CODE:	see definition of CLASS-OUT in program BILLING.
DEST-ADD-GA:	the 20-character destination address which appears on the output G and A billing file record.
DEST-ADD-OVH:	the 20-character destination address which appears on the output overhead billing file record.
DUP-CNT:	contains the number of duplicate records rejected from the input master file.
EACH:	an accumulation table which is composed of the following items: POS (or POS-AL), LABOR-SAV and NON-LA-SAV.
FILLER-N-AL:	the first 236 characters on the output master file record.
FIRST-SW:	flag which is used to test for top level address component changes.
GA-BILL-CNT:	contains the number of G and A records written on the output billing file.
GROUP-X:	composed of GROUP-Y and GROUP-Z.
GROUP-Y:	composed of ACCNT-TYPE-X and ACCNT-CODE-X.
GROUP-Z:	composed of CHRG-TYPE-X and PERC-ALLOC-X.
LABOR-BASE:	total labor dollars, i.e., direct, support, OVH and G and A.
LABOR-SAV:	contains the labor base which is used to assess non-labor support to subordinate positions.
MAST-IN-CNT:	contains the number of input records read from the master file.

Exhibit 3-7. Continued

MAST-IN-REC:	name of record from input master file.
MAST-OUT-CNT:	contains the number of records written on the output master file.
MAST-OUT-REC:	name of record on output master file.
N-AL-OUT:	contains the number of billing addresses the item coded by the analyst is allocated to.
NON-LA-SAV:	contains the non-labor support dollar amount which is to be assessed to subordinate positions.
NONLAB-SUPP:	non-labor support charged to an organizational position.
NUMB-ALLOC:	contains the number of billing addresses the item coded by the analyst is allocated to.
OVH-BILL-CNT:	contains the number of overhead records written on the output billing file.
PERC-ALLOC-X:	percentage of dollar amount for an item that is charged to an account code.
POS:	contains the 20-digit account address from the input master file record broken down into its ten two digit components.
POS-AL:	a 20-digit account address from the input master file record.
POS-CNT:	counter which varies from 0 to 11.
PREV-ADRS:	used to store the account address from the previous input master file record.
PREV-CLASS:	used to store the class code from the previous input master file record.
RATE-IN:	see definition of RATE-IN in program BILLING.
SUB:	counter which varies from 0 to 11.
SUB-1:	counter which varies from 1 to 11.
SUPPORT-ASSESS-NL:	non-labor support assessed to an organizational position.
UNBURD-LAB:	unburdened labor.

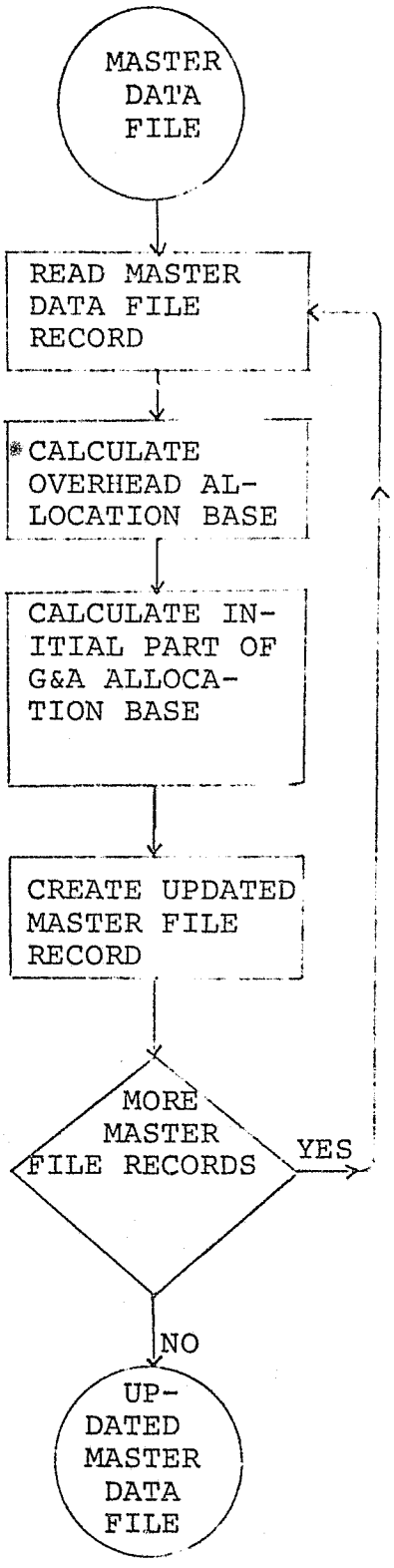

Exhibit 3-8. Program OVH Logic Flow Diagram

Exhibit 3-9. Nomenclature of Program OVH

ADD-COD:	the 20-digit account address which appears on the input master file record.
ADD-TYP:	the 1-character field on the input master file record which contains address type.
ADRS:	contains the 20-digit account address broken down into its ten 2-digit components.
ALLOC-OUT:	a 25-character field on the output master file record which occurs from 1 to 9 times. Contains billing account address information.
BASIS-IN:	see definition in program BILLING.
BURD-LAB:	labor burdened with non-labor support.
CATAG:	see CATAG in program BILLING.
CLASS-CODE:	see CLASS-OUT in program BILLING.
DUP-CNT:	contains the number of duplicate records rejected from the input master file.
FILLER-N-AL:	the first 236 characters of the output master file record.
LOC-GA-AL-BAS:	G and A allocation base.
LOC-OVH-AL-BAS:	overhead allocation base equals direct and support labor burdened with non-labor support.
MAST-IN-CNT:	contains the number of input records read from the master file.
MAST-IN-REC:	name of record on input master file.
MAST-OUT-CNT:	contains the number of output records written on the master file.
MAST-OUT-REC:	name of record on output master file.
N-AL-OUT:	contains the number of billing addresses the item coded by the analyst is allocated to.
PERC-DIR:	percentage of total dollar amount charged directly to the criminal justice processes.

PERC-SUP:	percentage of total dollar amount charged to supporting the criminal justice processes.
POS-SW:	flag used in the accumulation loop which computes the overhead allocation bases.
POSIT:	an accumulation table containing overhead allocation bases.
PREV-ADRS:	used to store the 20-digit account address from the previous input master file record.
PREV-CLASS:	used to store the class code from the previous input master file record.
RATE-IN:	rate, e.g., $4.80/sq. foot.
SUB:	counter which varies from 0 to 12.

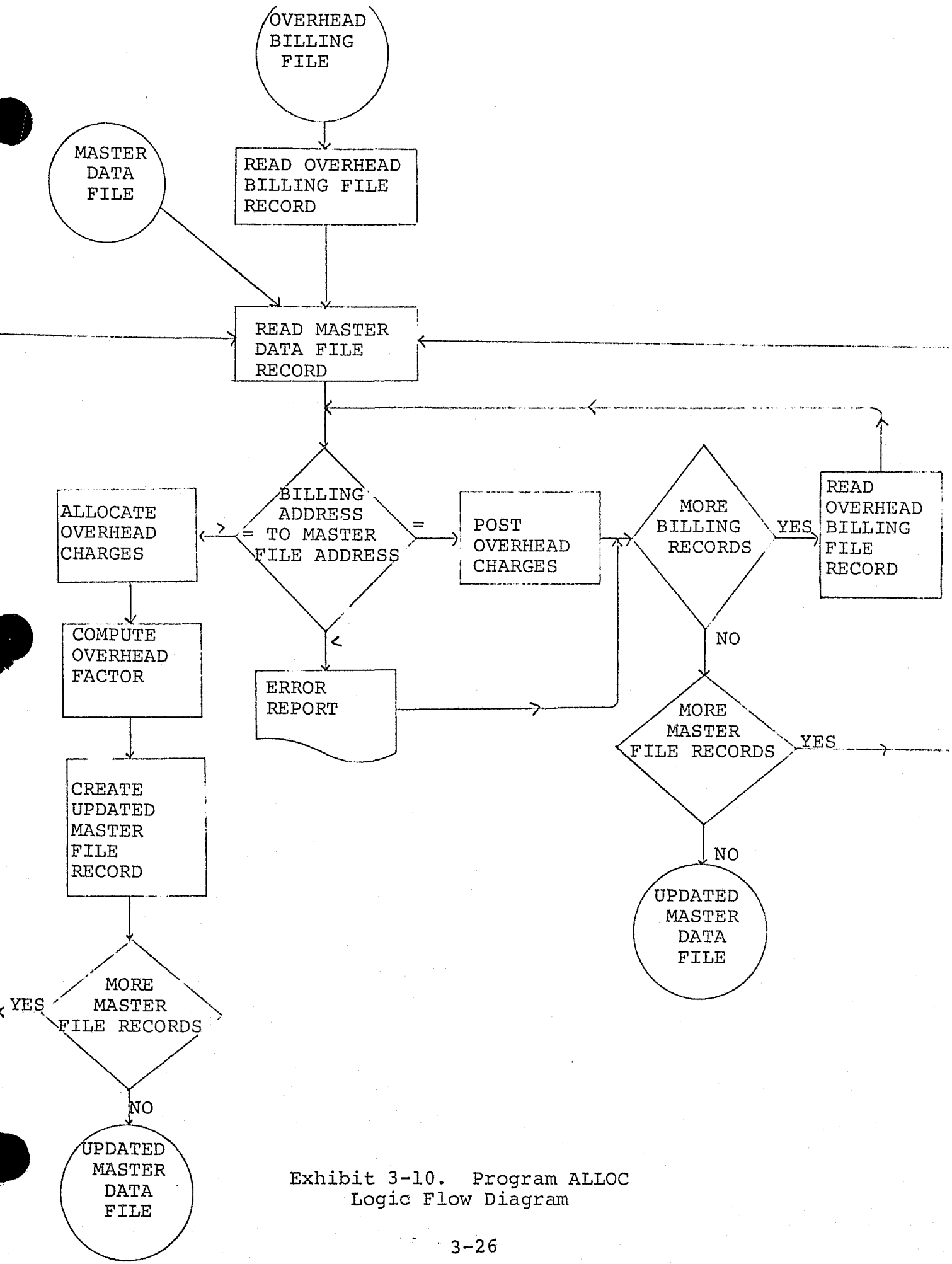

Exhibit 3-10. Program ALLOC
Logic Flow Diagram

Exhibit 3-11. Nomenclature of Program ALLOC

ADD-COD:	the 20-digit account address which appears on the input master file record.
ADD-COD-IN:	the 1-character field on the input overhead billing file record which contains address type. See definition of account type under ALLOCAT-X in Program BILLING.
ADD-TYP:	the 1-character field on the input master file record which contains address type.
ADD-TYP-OUT:	identifies output master file record as to address type.
ADRS:	contains the 20-digit account address broken down into its ten two digit components.
ADRS-AL:	same as ADD-COD.
ALLOC-OUT:	a 25-character field on the output master file record which occurs from 1 to 9 times. Contains billing account address information.
BILL-AMNT-IN:	the overhead dollar amount which appears on the input billing file record.
BILL-ERR-CNT:	contains the number of input bills which are in error, i.e., they are not overhead bills or have no matching master file record.
BILL-IN-CNT:	contains the number of billing records read from the overhead billing file.
BILL-IN-REC:	name of record on the input overhead billing file.
BILL-TYPE-IN:	identifies input bill as an overhead bill.
CATAG:	see definition of CATAG in Program BILLING.
CLASS-CODE:	see definition of CLASS-OUT in Program BILLING.
COMP-OVHD:	equals WORK-2/LOC-OVH-AL-BAS.
DEST-ADD-IN:	the 20-character destination address which appears on the overhead input billing file record.
DUP-CNT:	contains the number of duplicate records rejected from the input master file.

Exhibit 3-11. Continued

EACH:	a 50-character field, which occurs ten times, composed of the following items: POS (or POS-AL), SOAL, TOV-LAB and TOV-NL.
FILLER-N-AL:	the first 236 characters of the output master file record.
FIRST-SW:	flag which is used to test for top level address component changes.
LOC-OVH-AL-BAS:	overhead allocation base.
LOCAL-OV-LAB:	overhead labor charged to an organizational position.
LOCAL-OV-NL:	non-labor overhead charged to an organizational position.
MAST-IN-CNT:	contains the number of input records read from the master file.
MAST-IN-REC:	name of record on the input master file.
MAST-OUT-CNT:	contains the number of output records written on the master file.
MAST-OUT-REC:	name of record on the output master file.
N-AL-OUT:	contains the number of billing addresses the item coded by the analyst is allocated to.
OV-ASSES-LAB:	overhead labor assessed to an organizational position.
OV-ASSESS-NL:	non-labor overhead assessed to an organizational position.
OV-FACTOR:	equals total overhead divided by the overhead allocation base.
POS:	contains the 20-digit account address from the input master file record broken down into its ten two digit components.
POS-AL:	a 20-digit account address from the input master file record.
POS-CNT:	counter which varies from 0 to 11.
PREV-ADRS:	used to store the 20-digit account address from the previous input master file record.

PREV-CLASS:	used to store the class code from the previous input master file record.
SOAL:	accumulation table containing the overhead allocation bases.
SUB:	counter which varies from 0 to 11.
SUB-1:	counter which varies from 1 to 11.
TOV-LAB:	accumulation table which contains total overhead labor. Total overhead labor equals LOCAL-OV-LAB plus OV-ASSESS-LAB.
TOV-NL:	accumulation table which contains total non-labor overhead. Total non-labor overhead equals LOCAL-OV-NL plus OV-ASSESS-NL.
TOTAL-OV:	total overhead.
WORK-2:	contains total overhead, i.e., LOCAL-OV-LAB plus LOCAL-OV-NL plus OV-ASSESS-LAB plus OV-ASSESS-NL.

PROGRAM OVHGA

This program completes the calculation of the G & A allocation base. This operation begins at the lowest level of the organization chart. The program works up through the organizational structure adding the overhead costs to the previously calculated G & A allocation base appearing up to an organizational position. This total comprises the G & A allocation base for that position. In this way, the G & A allocation base is cascaded up through the organization. Thus, any organizational position will have the total bases of the positions below it, plus its own base added to it.

When the process reaches the top of the organization, the account will contain the total for that unit. The master data file is then sorted in ascending order for the program ASSESS.

The logic flow diagram of program OVHGA is presented in Exhibit 3-12.

The names and descriptions of major variables, calculations, and subroutines used in program OVHGA are presented in Exhibit 3-13.

PROGRAM ASSESS

This program performs several functions. The G & A charges billed to an organizational position are posted to the proper accounts. The G & A charges are then allocated to lower organizational positions.

The G & A costs charged to any organizational position are assessed according to the accumulated direct and support labor dollars burdened with non-labor support plus non-labor direct plus overhead appearing at this position. The G & A factor is also calculated for each organizational position.

At the same time, the program examines each organizational position for labor support charges. For each labor support charge, a billing record is created. The amount billed as labor support equals direct and support labor dollars burdened with non-labor support plus overhead plus G & A.

The labor support billing file is then sorted in ascending order for program SUPPORT.

The logic flow diagram for program ASSESS is presented in Exhibit 3-14.

The names and descriptions of major variables, calculations, and subroutines used in program ASSESS are presented in Exhibit 3-15.

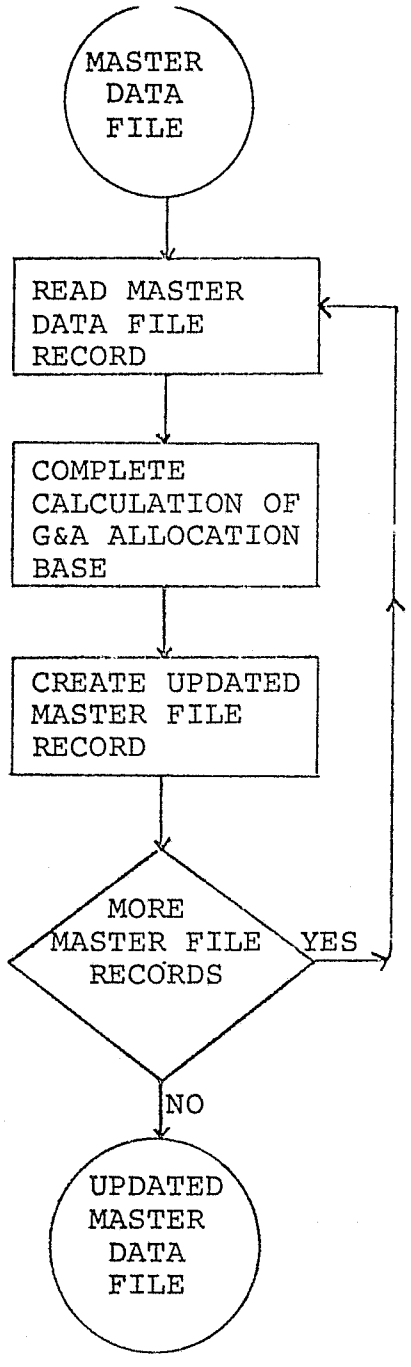

Exhibit 3-12. Program OVHGA
Logic Flow Diagram

Exhibit 3-13. Nomenclature of Program OVHGA

ADD-COD:	the 20-digit account address which appears on the input master file record.
ADD-TYP:	the 1-character field on the input master file record which contains address type.
ADRS:	contains the 20-digit account address broken down into its ten two digit components.
ALLOC-OUT:	a 25-character field on the output master file record which occurs from 1 to 9 times. Contains billing account address information.
CLASS-CODE:	see CLASS-OUT in Program BILLING.
DUP-CNT:	contains the number of duplicate records rejected from the input master file.
FILLER-N-AL:	the first 236 characters of the output master file record.
LOC-GA-AL-BAS:	G and A allocation base equals direct and support labor burdened with non-labor support plus overhead plus non-labor direct.
LOCAL-OV-LAB:	overhead labor charged to an organizational position.
LOCAL-OV-NL:	non-labor overhead charged to an organizational position.
MAST-IN-CNT:	contains the number of input records read from the master file.
MAST-IN-REC:	name of record on input master file.
MAST-OUT-CNT:	contains the number of output records written on the master file.
MAST-OUT-REC:	name of record on output master file.
N-AL-OUT:	contains the number of billing addresses the item coded by the analyst is allocated to.
OV-ASSESS-LAB:	overhead labor assessed to an organizational position.
OV-ASSESS-NL:	non-labor overhead assessed to an organizational position.

Exhibit 3-13. Continued

POS-SW:	flag used in the accumulation loop which computes the overhead allocation bases.
POSIT-2:	an accumulation table containing G and A allocation bases.
PREV-ADRS:	used to store the 20-digit account address from the previous input master file record.
PREV-CLASS:	used to store the class code from the previous input master file record.
SUB:	counter which varies from 0 to 12.

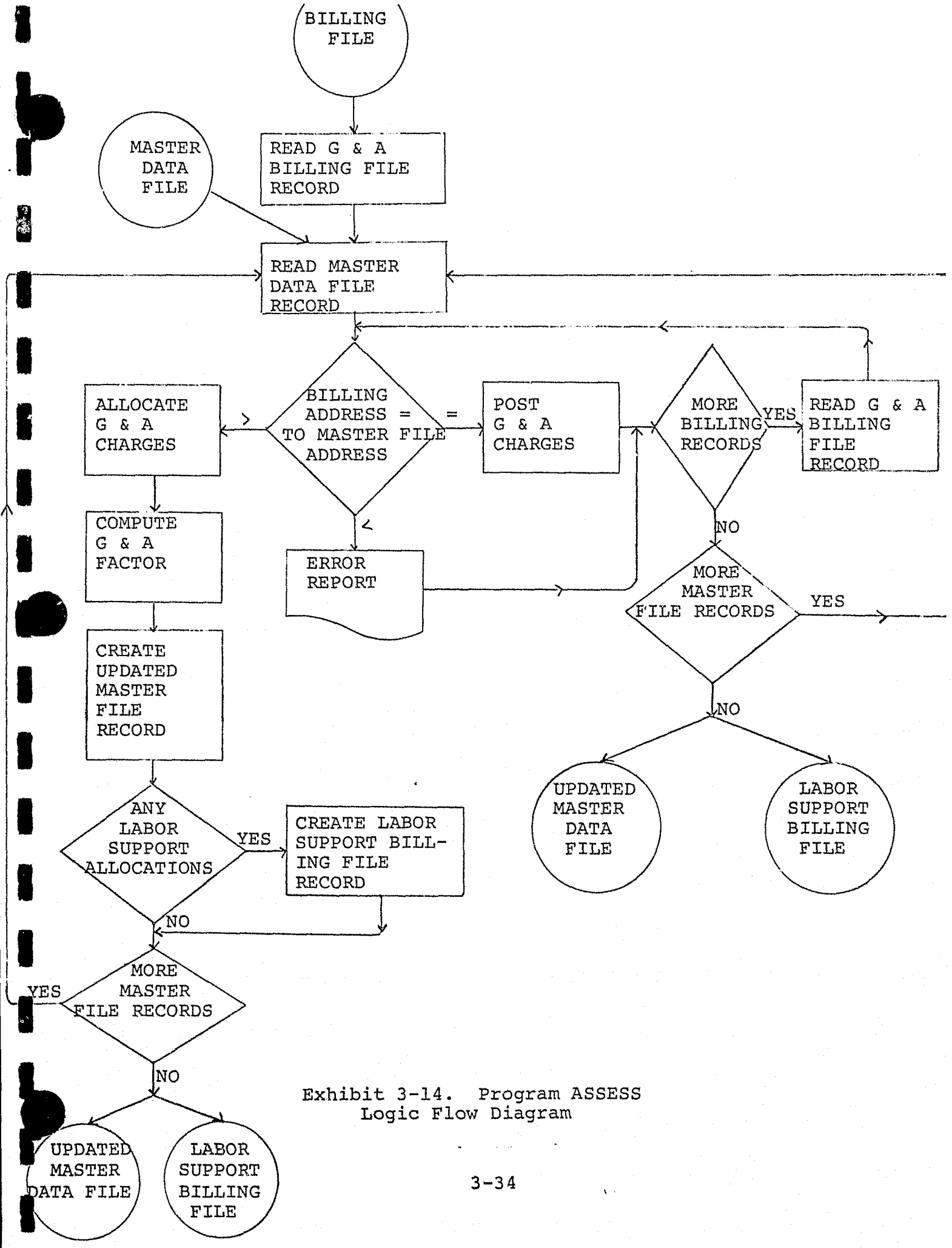

Exhibit 3-14. Program ASSESS
Logic Flow Diagram

Exhibit 3-15. Nomenclature of Program ASSESS

ACCNT-CODE-X:	the 20-digit billing account address.
ACCNT-TYPE-X:	a 1-character field which identifies the billing address as to type, i.e., I=internal organizational address, etc.
ADD-COD:	the 20-digit account address which appears on the input master file record.
ADD-COD-IN:	the 1-character field on the input G and A billing file record which contains address type. See definition of account type under ALLOCAT-X in program BILLING.
ADD-COD-OUT:	identifies billing record as to type, i.e., process, internal organizational address, etc.
ADD-TYP:	the 1-character field on the input master file record which contains address type.
ADRS:	contains the 20-digit account address broken down into its ten two digit components.
ADRS-AL:	same as ADD-COD.
ALLOC-OUT:	a 25-character field on the output master file record which occurs from 1 to 9 times. Contains billing account address information.
ALLOCAT-IN:	a 25-character array on the input master file record which occurs from 1 to 9 times. Contains billing account address information.
BILL-AMNT-IN:	the G and A dollar amount which appears on the input billing file record.
BILL-AMNT-OUT:	the labor support dollar amount which appears on the output billing file record; equals PERC-ALLOC-X *(BURD-LAB plus (LOCAL-OV-LAB plus LOCAL-OV-NL plus OV-ASSESS-LAB plus OV-ASSESS-NL plus LOCAL-GA plus GA-ASSESS)/(PERC-DIR plus PERC-SUP)).
BILL-ERR-CNT:	contains the number of input bills which are in error, i.e., are not G and A bills or have no matching master file record.
BILL-IN-CNT:	contains the number of billing records read from the G and A billing file.

BILL-IN-REC:	name of record on the input G and A billing file.
BILL-OUT-REC:	name of record on the output labor support billing file.
BILL-SUPPORT-CNT:	contains the number of labor support records written on the output billing file.
BILL-TYPE-IN:	identifies input bill as a G and A bill.
BILL-TYPE-OUT:	identifies bill as a labor support charge.
BURD-LAB:	burdened labor.
CATAG:	see definition of CATAG in program BILLING.
CHRG-TYPE-X:	identifies the charge as overhead, G and A, support or direct.
CLASS-CODE:	see definition of CLASS-OUT in program BILLING.
COMP-GADM:	equals WORK-1/LOC-GA-AL-BAS .
DEST-ADD-IN:	the 20-character destination address which appears on the G and A input billing file record.
DEST-ADD-OUT:	the 20-character destination address which appears on the output labor support billing file record.
DUP-CNT:	contains the number of duplicate records rejected from the input master file.
EACH:	a 40-character field, which occurs ten times, composed of the following items: POS (or POS-AL), SGAL and TGA.
FILLER-N-AL:	the first 236 characters of the output master file record.
FIRST-SW:	flag which is used to test for top level address component changes.
GA-ASSESS:	G and A assessed to an organizational position.
GA-FACTOR:	equals total G and A divided by the G and A allocation base.
GROUP-X:	composed of GROUP-Y and GROUP-Z.
GROUP-Y:	composed of ACCNT-TYPE-X and ACCNT-CODE-X.
GROUP-Z:	composed of CHRG-TYPE-X and PERC-ALLOC-X.

Exhibit 3-15. Continued

LOCAL-GA:	G and A charged to an organizational position.
LOC-GA-AL-BAS:	contains the allocation base for G and A.
LOCAL-OV-LAB:	overhead labor charged to an organizational position.
LOCAL-OV-NL:	non-labor overhead charged to an organizational position.
MAST-IN-CNT:	contains the number of input records read from the master file.
MAST-IN-REC:	name of record on the input master file.
MAST-OUT-CNT:	contains the number of output records written on the master file.
MAST-OUT-REC:	name of record on the output master file.
N-AL-OUT:	contains the number of billing addresses the item coded by the analyst is allocated to.
NUMB-ALLOC:	contains the number of destination addresses the item coded by the analyst is allocated to.
OV-ASSESS-LAB:	overhead labor assessed to an organizational position.
OV-ASSESS-NL:	non-labor overhead assessed to an organizational position.
PERC-ALLOC-X:	percentage of dollar amount for an item that is charged to an account code.
POS:	contains the 20-digit account address from the input master file record broken down into its ten two digit components.
POS-AL:	a 20-digit account address from the input master file record.
POS-CNT:	counter which varies from 0 to 11.
PREV-ADRS:	used to store the 20-digit account address from the previous input master file record.
PREV-CLASS:	used to store the class code from the previous input master file record.
SGAL:	accumulation table containing the G and A allocation bases.
SUB:	counter which varies from 0 to 11.

SUB-1: counter which varies from 1 to 11.

TGA: accumulation table which contains total G and A. Total G and A equals LOCAL-GA plus GA-ASSESS.

WORK-1: LOCAL-GA plus GA-ASSESS.

PROGRAM SUPPORT

This program performs several functions. The labor support charges billed to an organizational position are posed to the proper accounts.

The labor support charges are then allocated to lower organizational positions. The labor support costs charged to any organizational position are assessed according to direct labor dollars appearing at that position.

At the same time, the program identifies and separates all direct charges. A billing file for charging a direct charge to the criminal justice processes is constructed at this time. The amount billed as a direct charge equals direct and support labor dollars burdened with non-labor support plus overhead plus G & A plus labor support.

The master data file and the direct charge billing file are then sorted in descending order for the next program.

The logic flow diagram for program SUPPORT is presented in Exhibit 3-16.

The names and descriptions of major variables, calculations, and subroutines used in program SUPPORT are presented in Exhibit 3-17.

PROGRAM PRO

This program transfers all of the dollars in the direct charge accounts, as represented on the direct charge billing file, to the criminal justice processes. The direct charges are the only items connected with the criminal justice processes. The direct charge accounts at this point, how carry with them their share of the costs for support, overhead, and G & A.

The master data file is now sorted in ascending order. At this point, all dollar amounts appear in the proper process accounts on the augmented master data file which is now ready for the final report generation phase.

The logic flow diagram of program PRO is presented in Exhibit 3-18.

The names and descriptions of major variables, calculations, and subroutines used in program PRO are presented in Exhibit 3-19.

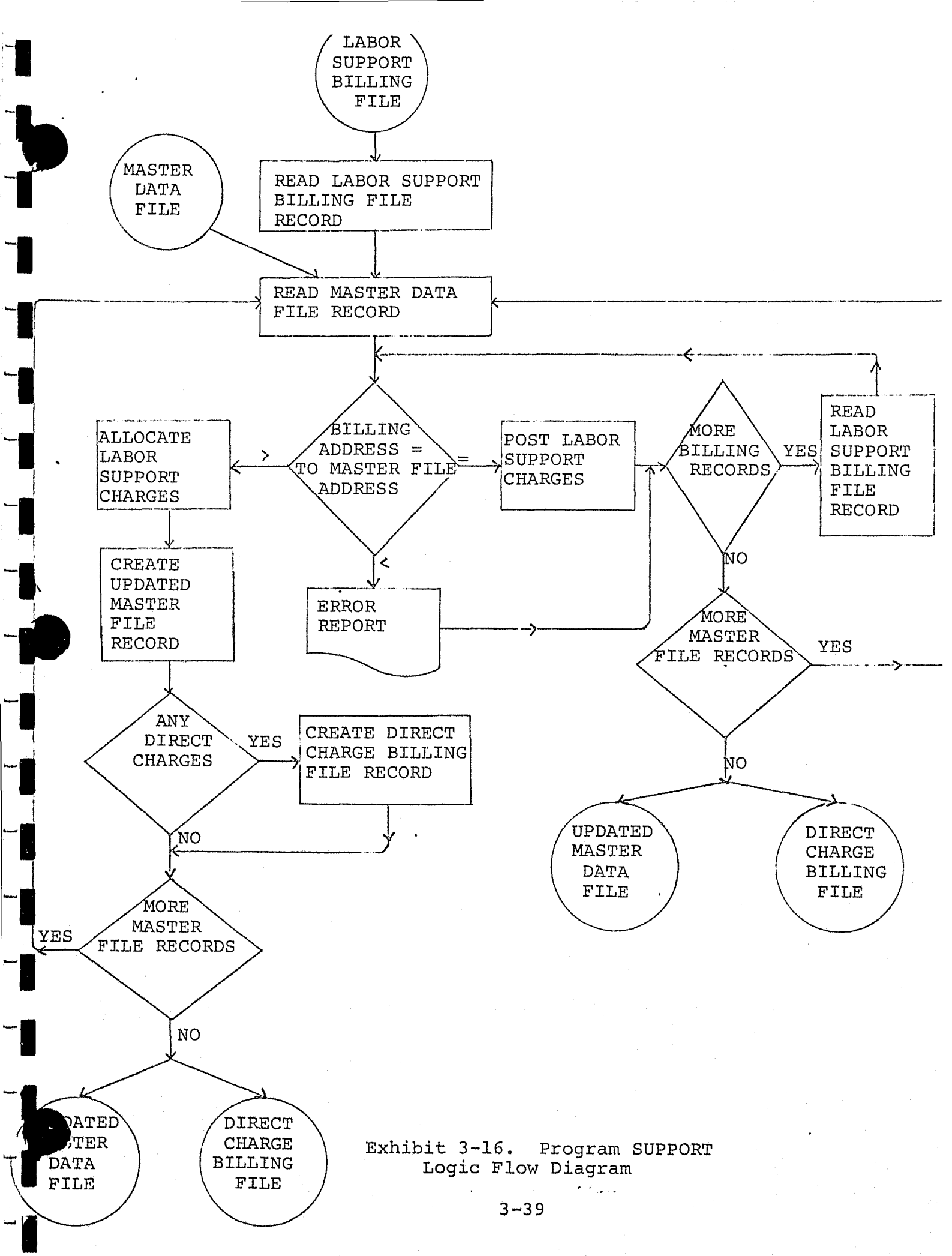

Exhibit 3-16. Program SUPPORT Logic Flow Diagram

Exhibit 3-17. Nomenclature of Program SUPPORT

ACCNT-CODE-X:	the 20-digit billing account address.
ACCNT-TYPE-X:	a 1-character field which identifies the billing address as to type.
ADD-COD:	the 20-digit account address which appears on the input master file.
ADD-COD-IN:	the 1-character field on the input labor support billing file record which contains address type. See definition of account type under ALLOCAT-X in program BILLING.
ADD-COD-OUT:	identifies billing file record as to type, i.e., process, internal organizational address, etc.
ADD-TYP:	the 1-character field on the input master file record which contains address type.
ADRS:	contains the 20-digit account address broken down into its ten two digit components.
ADRS-AL:	same as ADD-COD.
ALLOC-OUT:	a 25-character field on the output master file record which occurs from 1 to 9 times. Contains billing account address information.
ALLOCAT-IN:	a 25-character array on the input master file record which occurs from 1 to 9 times. Contains billing account address information.
BILL-AMNT-IN:	the labor support dollar amount which appears on the input billing file record.
BILL-AMNT-OUT:	the direct charge dollar amount which appears on the output billing file record.
BILL-ERR-CNT:	contains the number of input bills which are in error.
BILL-IN-CNT:	contains the number of billing records read from the input labor support billing file.
BILL-IN-REC:	name of record from input labor support billing file.
BILL-OUT-CNT:	contains the number of direct charge billing records written on the output billing file.
BILL-OUT-REC:	name of record on output direct charge billing file.

BILL-TYPE-IN:	identifies bill as labor support.
BILL-TYPE-OUT:	identifies bill as direct charge.
CATAG:	see definition of CATAG in program BILLING.
CHRG-TYPE-X:	identifies the charge as overhead, G and A, support or direct.
CLASS-CODE:	see definition of CLASS-OUT in program BILLING.
DEST-ADD-IN:	the 20-character destination address which appears on the labor support billing file record.
DEST-ADD-OUT:	the 20-character destination address which appears on the output direct charge billing file record.
DIR-LABOR-BASE:	if an end item, contains total direct labor dollars for that item. If a non-end item, contains the sum of total direct labor dollars for all children.
DUP-CNT:	contains the number of duplicate records rejected from the input master file.
EACH:	a 40-character field, which occurs ten times, composed of the following items: POS (or POS-AL), SLS and TLS.
FILLER-N-AL:	the first 236 characters of the output master file record.
FIRST-SW:	flag which is used to test for top level address component changes.
GROUP-X:	composed of ACCNT-TYPE-X, ACCNT-CODE-X, CHRG-TYPE-X and PERC-ALLOC-X.
MAST-IN-CNT:	contains the number of input records read from the master file.
MAST-IN-REC:	name of record from input master file.
MAST-OUT-CNT:	contains the number of output records written on the master file.
MAST-OUT-REC:	name of record on output master file.
N-AL-OUT:	see NUMB-ALLOC.

NUMB-ALLOC:	contains the number of destination addresses the item coded by the analyst is allocated to.
PERC-ALLOC-X:	percentage of dollar amount for an item that is charged to an account code.
POS:	contains the 20-digit account address from the input master file record broken down into its ten two digit components.
POS-AL:	the 20-digit account address from the input master file record.
POS-CNT:	counter which varies from 0 to 11.
PREV-ADRS:	used to store the 20-digit account address from the previous input master file record.
PREV-CLASS:	used to store the class code from the previous input master file record.
SLS:	accumulation table containing the allocation bases for labor support. The allocation base is direct labor dollars.
SUB:	counter which varies from 0 to 11.
SUB-1:	counter which varies from 1 to 11.
SUPPORT:	contains labor support charged to an organizational position.
SUPPORT-ASSESS-LAB:	contains the labor support assessed to an organizational position.
TLS:	accumulation table which contains total labor support.

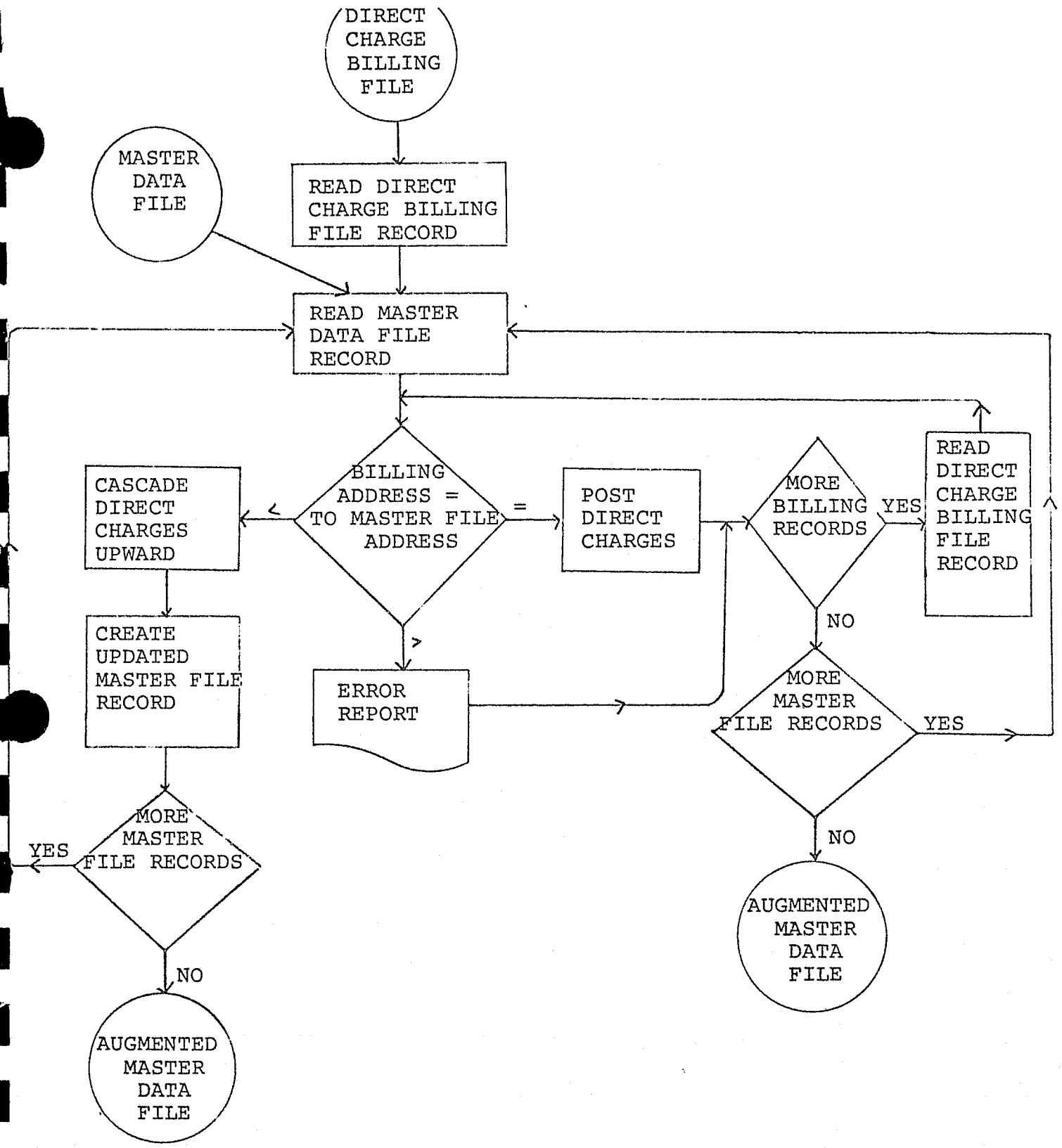

Exhibit 3-18. Program PRO Logic Flow Diagram

Exhibit 3-19. Nomenclature of Program PRO

ADD-COD:	the 20-digit account address which appears on the input master file record.
ADD-COD-IN:	the 1-character field on the input direct charge process billing file record which contains address type. See definition of account type under ALLOCAT-X in program BILLING.
ADD-TYP:	the 1-character field on the input master file record which contains address type.
ADRS:	splits the 20-digit account address into its 20 one digit components.
ALLOC-OUT:	a 25-character field on the output master file record which occurs from 1 to 9 times. Contains billing account address information.
BILL-AMNT-IN:	the direct charge dollar amount which appears on the input billing file record.
BILL-ERR-CNT:	contains the number of input bills which are in error.
BILL-IN-CNT:	contains the number of billing records read from the input direct charge billing file.
BILL-IN-REC:	name of record on input direct charge billing file.
BURD-LAB:	contains the criminal justice process charge.
CLASS-CODE:	see definition of CLASS-OUT in program BILLING.
DEST-ADD-IN:	the 20-character destination address which appears on the direct charge billing file record.
DUP-CNT:	contains the number of duplicate records rejected from the input master file.
FILLER-N-AL:	the first 236 characters of the output master file record.
MAST-IN-CNT:	contains the number of input records read from the master file.
MAST-IN-REC:	name of record from input master file.
MAST-OUT-CNT:	contains the number of output records written on the master file.

Exhibit 3-19. Continued

MAST-OUT-REC:	name of record on output master file.
N-AL-OUT:	contains the number of destination addresses the item coded by the analyst is allocated to.
POSIT:	accumulation table which contains process charges.
PREV-ADRS:	used to store the 20-digit account address from the previous input master file record.
PREV-CLASS:	used to store the class code from the previous input master file record.
SAVE-SUB:	temporary storage location used to save the contents of variable SUB.
SUB:	counter which varies from 0 to 5.

Section 4

REPORT GENERATION PHASE

The report generation phase constructs and prints formatted output from the contents of the augmented master data file and from the data cards.

The report generation phase consists of four programs:

- LIST
- PRINT1
- PRINT2
- PRINT3

PROGRAM LIST

Program LIST provides a formatted output of all records on the augmented data file.

The logic flow diagram of program LIST is presented in Exhibit 4-1.

The names and descriptions of major variables, calculations, and subroutines used in program LIST are presented in Exhibit 4-2.

An example of program LIST output is presented as Exhibit 4-3.

PROGRAM PRINT1

For each six-digit agency by department level code requested by the user, this program generates the cascaded total dollar cost for each four-digit process address starting with 1000, incrementing by 100, and terminating with 9900. If a given four-digit process address has a zero cost associated with it, the printed output for that process address is suppressed.

The user may input up to 10 data cards. Each data card must contain a six-digit agency by department level code in columns 1 through 6. If non-numeric characters appear in columns 1 through 6, the data card is ignored. If more than 10 data cards are input, only the first 10 will be accepted. All other data cards will be ignored.

The logic flow diagram of program PRINT1 is presented in Exhibit 4-4. A sample of the formatted output from program PRINT1 is presented in Exhibit 4-5.

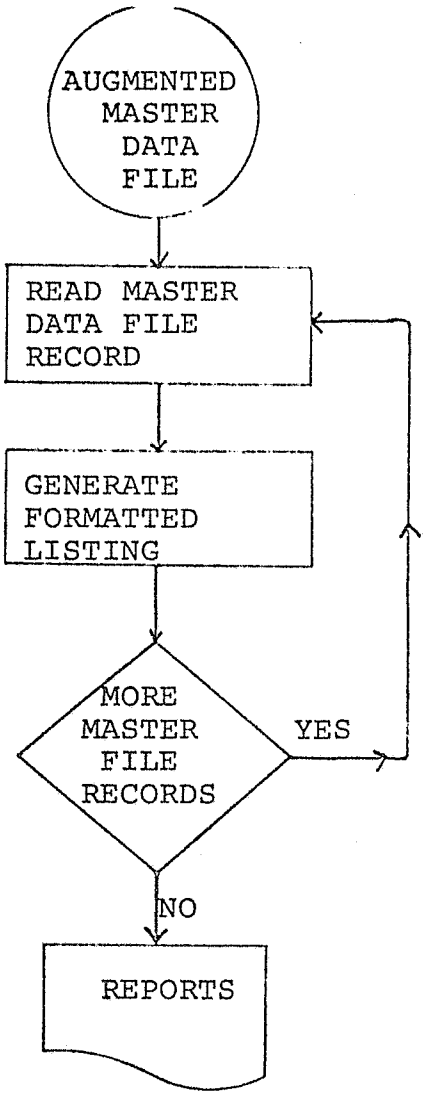

Exhibit 4-1. Program LIST
Logic Flow Diagram

Exhibit 4-2. Nomenclature of Program LIST

ACCNT-CODE:	contains the 20-digit billing address.
ACCNT-CODE-X:	see ACCNT-CODE.
ACCNT-TYPE:	a 1-character field which indicates address type.
ACCNT-TYPE-X:	see ACCNT-TYPE.
ADD-COD:	the 20-digit account address which appears on the input master file record.
ADD-COD-X:	see ADD-COD.
ADD-TYP:	the 1-character field on the input master file record which contains address type.
ADD-TYP-X:	see ADD-TYP.
BASIS-IN:	the amount which when multiplied by the rate will generate the dollar charge.
BASIS-IN-X:	see BASIS-IN.
BURD-LAB:	labor burdened with non-labor support.
BURD-LAB-X:	see BURD-LAB.
CHRG-TYPE:	identifies charge as direct, support, overhead or G and A.
CHRG-TYPE-X:	see CHRG-TYPE.
CLASS-CODE:	contains the seven digit class code.
CLASS-CODE-X:	see CLASS-CODE.
D-LABOR-BASE-X:	see DIR-LABOR-BASE.
DATE:	current date.
DESC-IN:	a 20-character description of the coded item.
DESC-IN-X:	see DESC-IN.
DIR-LABOR-BASE:	direct labor dollars.
GA-ASSESS:	G and A assessed to an organizational position.
GA-ASSESS-X:	see GA-ASSESS.

Exhibit 4-2. Continued

GA-FACTOR:	equals (LOCAL-GA plus GA-ASSESS)/LOC-GA-AL-BAS.
GA-FACTOR-X:	see GA-FACTOR.
LABOR-BASE:	total labor dollars, i.e., direct, support, overhead and G and A.
LABOR-BASE-X:	see LABOR-BASE.
LINE-CNT:	line counter.
LOC-GA-A-B-X:	see LOC-GA-AL-BAS.
LOC-GA-AL-BAS:	the G and A allocation base equals direct and support labor burdened with non-labor support plus overhead plus non-labor direct.
LOC-OV-LAB:	overhead labor charged to an organizational position.
LOC-OV-LAB-X:	see LOC-OV-LAB.
LOC-OV-NL:	non-labor overhead charged to an organizational position.
LOC-OV-NL-X:	see LOC-OV-NL.
LOC-OVH-AL-BAS:	the overhead allocation base equals direct and support labor burdened with non-labor support.
LOC-OVH-A-B-X:	see LOC-OVH-AL-BAS.
LOCAL-GA:	G and A charged to an organizational position.
LOCAL-GA-X:	see LOCAL-GA.
MAST-IN-REC:	name of record on input master file.
NONLAB-SUPP:	non-labor support charged to an organizational position.
NONLAB-SUPP-X:	see NONLAB-SUPP.
NUMB-ALLOC:	the number of account addresses the item coded by the analyst is allocated to.
NUMB-ALLOC-X:	see NUMB-ALLOC.
O-A-LAB-X:	see OV-ASSESS-LAB.
O-A-NL-X:	see OV-ASSESS-NL.

Exhibit 4-2. Continued

OV-ASSESS-LAB:	overhead labor assessed to an organizational position.
OV-ASSESS-NL:	non-labor overhead assessed to an organizational position.
OV-FACTOR:	equals (LOC-OV-LAB plus LOC-OV-NL plus OV-ASSESS-LAB plus OV-ASSESS-NL)/LOC-OVH-AL-BAS.
OV-FACTOR-X:	see OV-FACTOR.
PAGE-CTR:	page number.
PAGE-NUMBER:	page number.
PERC-ALLOC:	percentage of dollar amount charged to a given billing address.
PERC-ALLOC-X:	see PERC-ALLOC.
PERC-DIR:	percentage charged to process.
PERC-DIR-X:	see PERC-DIR.
PERC-SUP:	percentage charged to support.
PERC-SUP-X:	see PERC-SUP.
RATE-IN:	the amount which when multiplied by the basis will generate the dollar charge.
RATE-IN-X:	see RATE-IN.
S-A-LAB-X:	see SUPPORT-ASSESS-LAB.
S-A-NL-X:	see SUPPORT-ASSESS-NL.
SUPPORT:	support labor charged to an organizational position.
SUPPORT-ASSESS-LAB:	support labor assessed to an organizational position.
SUPPORT-ASSESS-NL:	non-labor support costs assessed to an organizational position.
SUPPORT-X:	see SUPPORT.
TODAYS-DATE:	current date.
UNBURD-LAB:	unburdened labor.
UNBURD-LAB-X:	see UNBURD-LAB.

I	DESCRIPTION		BASIS	RATE	CLASS-CODE	T	ACCOUNT ADDRESS	D/C	T	BILLING ADDRESS		
C	COMMUNICATIONS DIVISION											
	CAPT		1906800	ALL	LA00351	I	1400211040100000	D	I	1400211040000000	M	A
	LT	(5)	8460000	ALL	LA00352	I	1400211040101000	D	I	1400211040000000	M	A
	SGT	(5)	7488000	ALL	LA00353	I	1400211040101010	D	I	1400211040000000	M	A
	DEPUTY	(16)	19756800	ALL	LA00354	I	1400211040101011	D	I	1400211040000000	S	A
	COMM DISP	(10)	8832000	ALL	LA00355	I	1400211040101012	D	I	1400211040000000	S	A
	CADET (1/2)	(4)	1340000	ALL	LA00356	I	1400211040101013	D	I	1400211040000000	S	A
C	TELETYPE SECTION											
	OPERATOR	(3)	2109600	ALL	LA00357	I	1400211040101014	D	I	1400211040000000	S	A
C	SWITCHBOARD											
	TELE SUPER		738000	ALL	LA00358	I	1400211040101015	D	I	1400211040000000	S	A
	TELE OPERATORS	(5)	3516000	ALL	LA00359	I	1400211040101016	D	I	1400211040000000	S	A
C	TRANS SECTION											
	LT		1692000	ALL	LA00360	I	1400211040102000	D	S		M	A
	SGT		1497600	ALL	LA00361	I	1400211040102010	D	S		M	A
	DEPUTY	(14)	17287200	ALL	LA00362	I	1400211040102011	D	P	9130	D	70
									P	1220	D	30
	WATCHMAN	(3)	1965600	ALL	LA00363	I	1400211040102012	D	P	1220	D	A

Exhibit 4-3. Sample Output from Program LIST

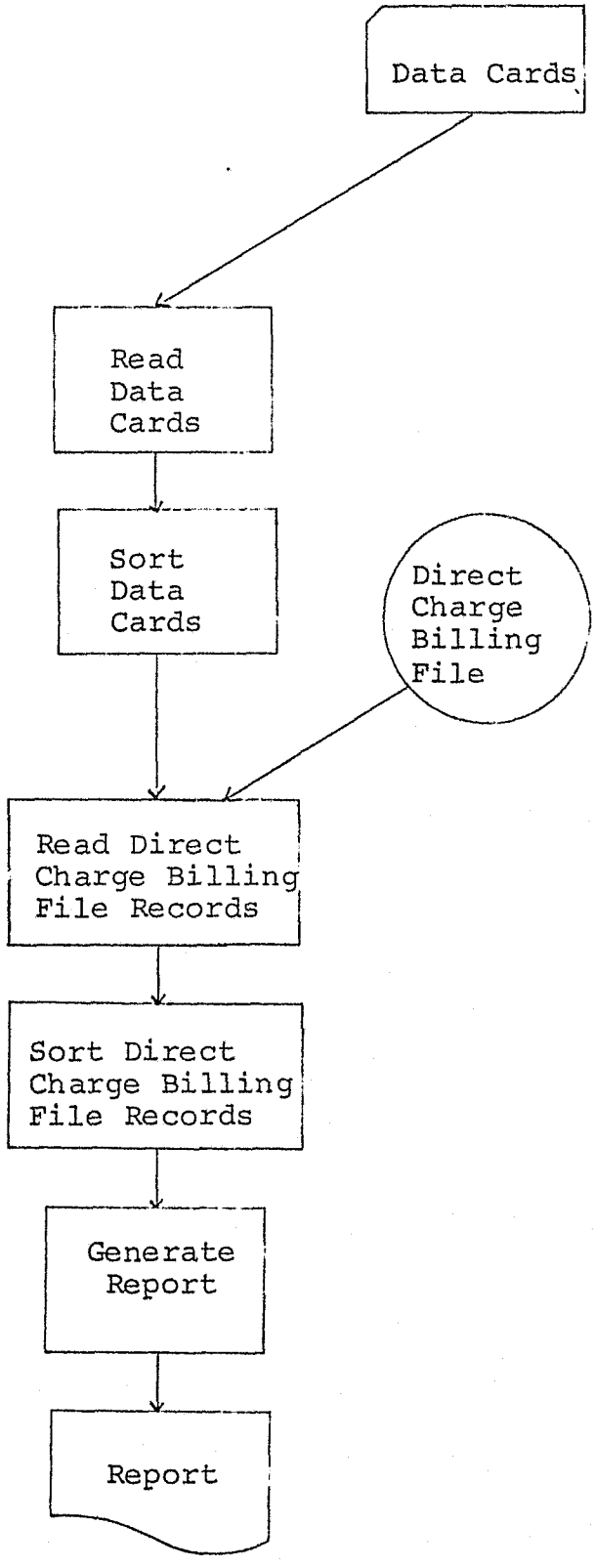

Exhibit 4-4. Program PRINT1
Logic Flow Diagram

Exhibit 4-5. Sample Partial Output from Program PRINT1

AGENCY	1000	1100	1200	1300	1400	2000	2100	2300	. . .
141121 (POLICE)	2,262,943					3,356,618			
		487,477	809,587	86,437	879,442		2,883,266	473,352	. . .
140021 (SHERIFF)	1,257,239					1,867,799			
		200,944	903,792	35,518	116,985		1,139,994	727,805	. . .

ETC.

PROGRAM PRINT2

For each six-digit agency by department level code requested by the user, the program generates the following cascaded dollar costs associated with a given process address:

Direct, Overhead, G & A, Support, Non-Labor, Total, and Overhead Rate.

The four-digit process addresses start with 1000, increment by 10, and terminate with 2990. All dollar costs associated with other process addresses are shown under the heading OTHER.

A direct charge to a criminal justice process may be either labor or non-labor. If labor then this charge is broken down into its four components: direct, overhead, G & A, and support. If non-labor then this charge is shown under the non-labor column.

The overhead rate is defined to be equal to total overhead divided by the sum of direct and support.

The user may input up to 10 data cards. Each data card must contain a six-digit agency by department level code in columns 1 through 6. If non-numeric characters appear in columns 1 through 6, the data card is ignored. If more than 10 data cards are input, only the first 10 will be accepted. All other data cards will be ignored.

The logic flow diagram for program PRINT2 is presented in Exhibit 4-6. A sample of formatted output from program PRINT2 is presented in Exhibit 4-7.

PROGRAM PRINT3

For each six digit agency by department level code requested by the user, the program generates the following dollar costs: direct, overhead, G & A, support, non-labor, total, and overhead rate.

The overhead rate is defined to be equal to total overhead divided by the sum of direct and support.

The user may input up to 10 data cards. Each data card must contain a six-digit agency by department level code in columns 1 through 6. If non-numeric characters appear in columns 1 through 6, the data card is ignored. If more than 10 data cards are input, only the first 10 will be accepted. All other data cards will be ignored.

The logic flow diagram of program PRINT3 is presented in Exhibit 4-8. A sample of formatted output from program PRINT3 is presented in Exhibit 4-9.

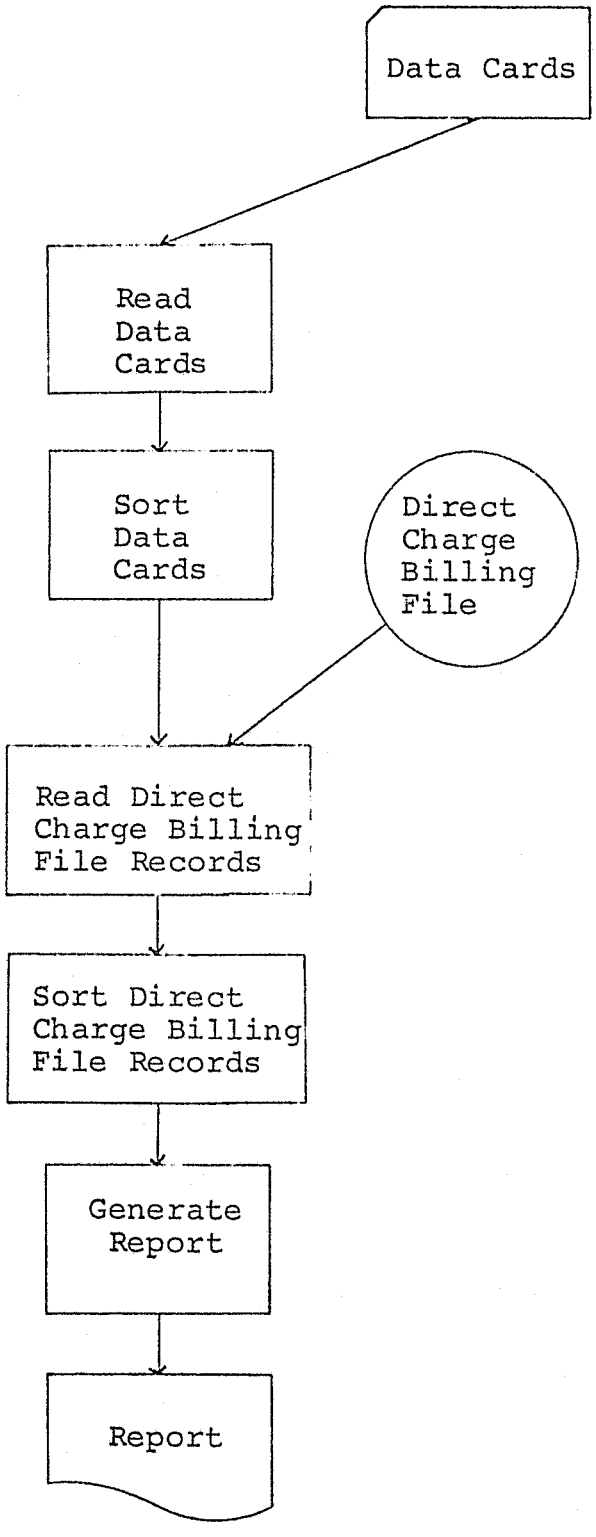

Exhibit 4-6. Program PRINT2 Logic Flow Diagram

141121	DIRECT	OVERHEAD	G AND A	SUPPORT	NON-LABOR	TOTAL	OVH RATE
1000	1412185	832356		18434		2262943	.58
1100	311898	161703		13888		487477	.49
1110	3616	2359		24		5998	.64
1120	46651	31980		330		78959	.68
1130	242153	113522		13390		369060	.44
1140	6415	4589		48		11051	.71
1180	6415	4589		48		11051	.71
1190	6648	4664		48		11358	.69
1200	475040	331049		3505		809587	.69
1210	428965	299099		3173		731238	.69
1220	2799	1971		24		4793	.69
1240	3032	2305		24		5360	.75
1260	34139	23454		240		57830	.68
1280	3306	2249		20		5573	.67
1290	2799	1971		24		4793	.69
1300	51633	34526		281		86437	.66
1340	34722	23624		204		58548	.67
1350	16911	10902		77		27889	.64
1400	573614	305078		760		879442	.53
1410	236567	119581		79		356221	.50
1420	68309	36855		75		105238	.53
1430	79430	46121		188		125737	.57
1440	127452	68151		321		195923	.53
1480	3306	2249		20		5573	.67
1490	58550	32121		77		90750	.54
2000	1780990	1275385		300271		3356618	.61
2100	1516302	1106820		260164		2883266	.62

Exhibit 4-7. Partial Output from Program PRINT2

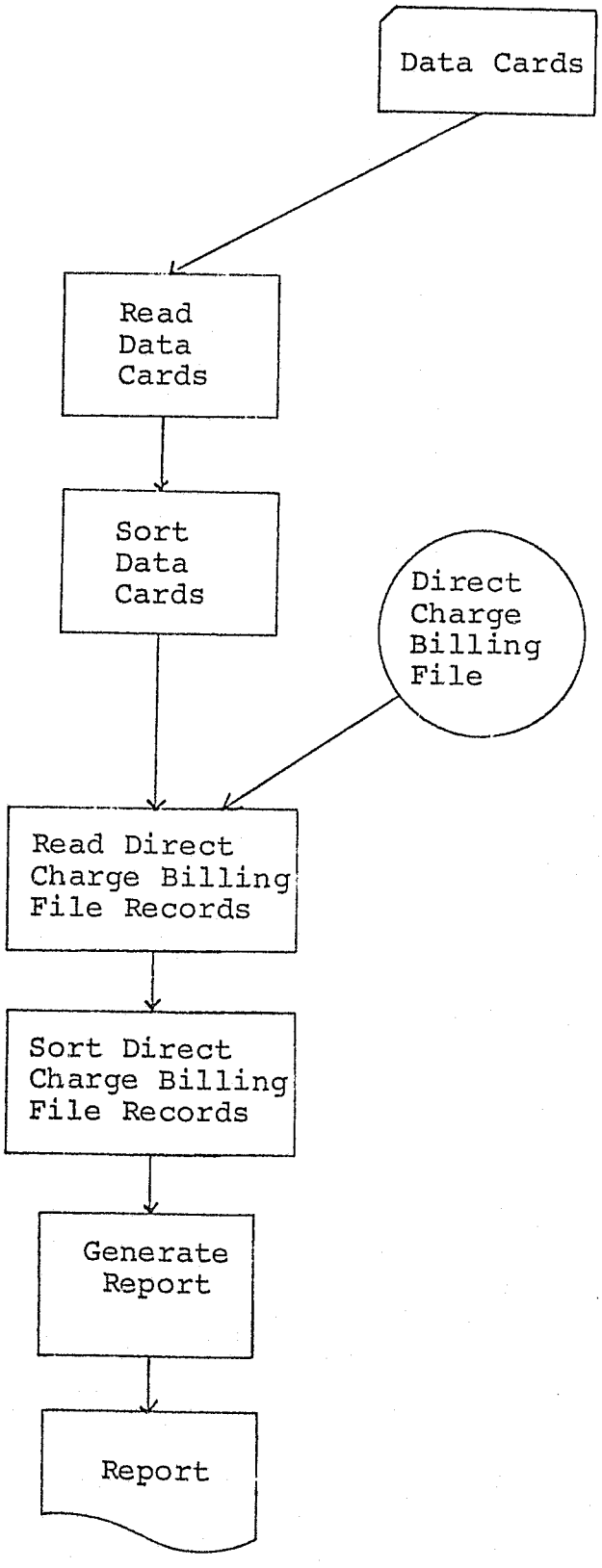

Exhibit 4-8. Program PRINT3 Logic Flow Diagram

Exhibit 4-9. Sample Partial Output from Program PRINT3

AGENCY	DIRECT	OVERHEAD	G&A	SUPPORT	NON-LABOR	TOTAL	OVH RATE
140021 (SHERIFF)	3,070,426	2,906,236	---	1,148,391	---	7,124,038	.69
141121 (POLICE)	3,433,472	4,124,459	---	1,788,164	---	9,346,017	.79
ETC.							

Section 5

COST ALLOCATION PRINCIPLES AND METHODS

COST ALLOCATION PRINCIPLES

The Cost Study Model is organization chart oriented. As a result, there are two types of account addresses: end items and non-end items. A dummy node (or node) is simply another name for a non-end item. A non-end items is part of the organizational structure, i.e., the position of director, the position of supervisor, etc. An end item, however, is a particular person or item that fills or occupies a given organizational position.

End items charge their costs to non-end items. For example, a person (end item) might charge 50% of his time as a G and A charge to the non-end item "Position of Director", 30% of his time as a labor support charge to the non-end item "Department One" and 20% of his time as a labor support charge to the dummy node "Department Two".

The total of all charges and assessments to a given non-end item are assessed to all children. Children may be either end items or non-end items. If a child is a non-end item, the allocation process continues.

The purpose of the charges and assessments is to cascade all the costs down to those end items which directly charge the criminal justice processes. In this way, the true cost of the various criminal justice processes is obtained.

The following conventions are applied in all cost allocation used in this model:

- Non-labor support is charged to a dummy node. It is allocated to total labor dollars below the node. To allocate, we need to know the total labor base at the node.
- Non-labor overhead is charged to a node. It is allocated to direct and support labor burdened with non-labor support below the node. To allocate, we need to know the direct and support labor burdened with non-labor support at the node.

- Overhead labor is labor burdened with non-labor support charged to a node. It is allocated to direct and support labor burdened with non-labor support below the node. To allocate, we need to know the direct and support labor burdened with non-labor support at the node.

- G & A labor is labor burdened with non-labor support charged to a node. It is allocated to direct and support labor burdened with non-labor support plus overhead plus non-labor direct below the node. To allocate, we need to know the direct and support labor burdened with non-labor support plus overhead plus non-labor direct at the node.

- Support labor is charged to a node. It is burdened with non-labor support plus overhead plus G & A before being allocated. Totally burdened, it is allocated to direct labor below the node.

- Non-labor must be either support or overhead.

- Only labor may be charged direct to a process.

COST ALLOCATION FORMULAE

The cost allocation formulae used in the Cost Model are presented in Exhibit 5-1.

Terms used in the allocation formulae are defined in Exhibit 5-2.

Records constructed and/or used during the allocation process are presented in Exhibit 5-3.

Exhibit 5-1. Cost Allocation Formulae

NON-LABOR SUPPORT

$$cost_{i,S-N} = PS_i * value_i \qquad i \in \{\text{non-labor end items}\}$$

$$charge_{m,j,S-N} = \frac{S_{m,j}}{PS_m} * cost_{m,S-N} = S_{m,j} * value_L$$

OVERHEAD LABOR

$$cost_{i,O-L} = PO_i * (salary_i + T_{i,S-N}) \qquad i \in \{\text{labor end items}\}$$

$$charge_{m,j,O-L} = \frac{O_{m,j}}{PO_m} * cost_{m,O-L} = O_{m,j} * (salary_m + T_{m,S-N})$$

NON-LABOR OVERHEAD

$$cost_{i,O-N} = PO_i * value_i \qquad i \in \{\text{non-labor end items}\}$$

$$charge_{m,O-N} = \frac{O_{m,j}}{PO_m} * cost_{m,O-N} = O_{m,j} * value_m$$

G & A LABOR

$$cost_{i,G-L} = PG_i * (salary_i + T_{i,S-N}) \qquad i \in \{\text{labor end items}\}$$

$$charge_{m,j,G-L} = \frac{G_{m,j}}{PG_m} * cost_{m,G-L} = G_{m,j} * (salary_m + T_{m,S-N})$$

NON-LABOR G & A

$$cost_{i,G-N} = PG_i * value_i \qquad i \in \{\text{non-labor end items}\}$$

$$charge_{m,j,G-N} = \frac{G_{m,j}}{PG_m} * cost_{m,G-N} = G_{m,j} * value_m$$

Exhibit 5-1. Continued

LABOR SUPPORT

$$cost_{i,S-L} = PS_i * (salary_i + T_{i,S-N})$$

$$+ (T_{i,O-L} + T_{i,O-N} + T_{i,G-L} + T_{i,G-N}) * \frac{PS_i}{PS_i+PD_i}$$

$$charge_{m,j,S-L} = \frac{S_{m,j}}{PS_m} * cost_{m,S-L} = S_{m,j} * [salary_m + T_{m,S-N}$$

$$+ (T_{m,O-L} + T_{m,O-N} + T_{m,G-L} + T_{m,G-N})/(PS_m+PD_m)]$$

DIRECT LABOR

$$cost_{i,D-L} = PD_i * (salary_i + T_{i,S-N}) \qquad i \in \{\text{labor end items}$$

$$+ \frac{PD_i}{PS_i+PD_i} * (T_{i,O-L} + T_{i,O-N} + T_{i,G-L} + T_{i,G-N})$$

$$+ T_{i,S-L}$$

$$charge_{m,k,D-L} = \frac{D_{m,k}}{PD_m} * cost_{m,D-L} = D_{m,k} * [salary_m + T_{m,S-N}$$

$$+ (T_{m,O-L} + T_{m,O-N} + T_{m,G-L} + T_{m,G-N})/$$

$$(PS_m + PD_m) + T_{m,S-L}/PD_m]$$

NON-LABOR DIRECT

$$cost_{i,D-N} = PD_i * value_i$$

$$charge_{m,k,D-N} = \frac{D_{m,k}}{PD_m} * cost_{m,D-N} = D_{m,K} * value_m$$

Exhibit 5-1. Continued

$$base_{i,X} = \sum_{j \in CH(i)} base_{j,X} \qquad i \notin \{\text{end items}\},\ X \in CAT$$

$$base_{i,S\text{-}N} = salary_i$$

$$base_{i,S\text{-}L} = PD_i * salary_i$$

$$base_{i,O\text{-}N} = base_{i,O\text{-}L} = (PD_i + PS_i) * (salary_i + T_{i,S\text{-}N})$$

$$base_{i,G\text{-}N} = base_{i,G\text{-}L} = (PD_i + PS_i) * (salary_i + T_{i,S\text{-}N}) + T_{i,O\text{-}L} + T_{i,O\text{-}N} + T_{i,D\text{-}N}$$

$i \in \{\text{labor end items}\}$

Exhibit 5-2. Definition of Terms for Cost Allocation

Variable Descriptions

$S_{i,j}$: % of position i cost chargeable to position j as support.

$O_{i,j}$: % of position i cost chargeable to position j as overhead.

$G_{i,j}$: % of position i cost chargeable to position j as G & A.

$D_{i,k}$: % of position i cost chargeable to process k as direct.

CH_i: The set of immediate children to the i-th position.

CAT: Categories of charges: CAT = {S-N, S-L, G-N, G-L, O-N, O-L, D-N, D-L}

$T_{m,X}$: Total value at position m, X ε CAT

$L_{m,X}$: Local charges at position m, X ε CAT

$A_{m,X}$: Assessments at position m, X ε CAT

$$T_{m,X} = L_{m,X} + A_{m,X}$$

$$PS_i = \sum_{j \varepsilon CH_i} S_{i,j}$$

$$PD_i = \sum_{j \varepsilon CH_i} D_{i,j}$$

$$PO_i = \sum_{j \varepsilon CH_i} O_{i,j}$$

$$PG_i = \sum_{j \varepsilon CH_i} G_{i,j}$$

Exhibit 5-3. Records Used in Cost Allocation

DESC-IN:	a 20-character description of the item coded by the analyst.
ADD-TYP:	the one character field which contains address type, i.e., P,I,E, or N.
ADD-COD:	the 20-character address.
BASIS-IN:	the amount which when multiplied by the rate will generate the total dollar charge, i.e., 2,000 square feet.
RATE-IN:	the amount which when multiplied by the basis will generate the total dollar charge, i.e., $4.80/square foot.
CLASS-CODE:	identifies the item coded by the analyst as labor, facilities, equipment, etc., and also provides a sub-address code.
BURD-LAB:	burdened labor equals labor burdened with non-labor support.
UNBURD-LAB:	unburdened labor equals rate x basis.
NONLAB-SUPP:	non-labor support charged to an organizational position.
PERC-DIR:	percentage direct equals the percentage of the total dollar amount charged to the criminal justice processes.
PERC-SUPP:	percentage support equals the percentage of the total dollar amount charged to supporting the criminal justice processes.
LOC-OVH-AL-BAS:	the overhead allocation base equals: 1) non-end item, i.e., node the sum over all children of the LOC-OVH-AL-BAS. 2) end item (PERC-DIR plus PERC-SUPP)*BURD-LAB, i.e., direct and support labor burdened with non-labor support.
LOC-GA-AL-BAS:	the G and A allocation base equals: 1) non-end item the sum over all children of the LOC-GA-AL-BAS. 2) end item (PERC-DIR plus PERC-SUPP)*BURD-LAB plus (LOCAL-OV-LAB plus LOCAL-OV-NL plus OV-ASSESS-LAB plus OV-ASSESS-NL) plus (non-labor direct), i.e., direct and support labor burdened with non-labor support plus overhead plus non-labor direct.

Exhibit 5-3. Continued

LABOR BASE:	labor base equals total labor dollars: 1) non-end item the sum over all children of the LABOR-BASE. 2) end item UNBURD-LAB.
DIR-LABOR-BASE:	direct labor base equals: 1) non-end item the sum over all children of the DIR-LABOR-BASE. 2) end item PERC-DIR*UNBURD-LAB.
LOCAL-OV-LAB:	overhead labor charged to an organizational position.
LOCAL-OV-NL:	non-labor overhead charged to an organizational position.
LOCAL-GA:	G and A charged to an organizational position.
OV-ASSESS-LAB:	overhead labor assessed to an organizational position.
OV-ASSESS-NL:	non-labor overhead assessed to an organizational position.
GA-ASSESS:	G and A assessed to an organizational position.
GA-FACTOR:	the G and A factor equals: (LOCAL-GA plus GA-ASSESS)/LOC-GA-AL-BAS.
OV-FACTOR:	the overhead factor equals: (LOCAL-OV-LAB plus LOCAL-OV-NL plus OV-ASSESS-LAB plus OV-ASSESS-NL)/LOC-OVH-AL-BAS.
SUPPORT:	support labor charged to an organizational position.
SUPPORT-ASSESS-LAB:	support labor assessed to an organizational position.
SUPPORT-ASSESS-NL:	non-labor support assessed to an organizational position.
NUMB-ALLOC:	number of allocations.
ALLOCAT-IN:	the allocation information is composed of the following: a) address type b) billing address c) direct/indirect d) percentage allocation

Section 6

DATA CARD CODING

A data card contains twelve data fields in 80 columns. These fields are described in this section. Fields 7 and 10 require more detailed explanation, which is presented following description of the twelve fields.

FIELD 1 - COLUMN 1 (CONTINUATION)

Blank — Indicates that the line is a single record or the first of a set of records. All cards should be coded with the first space blank unless they are a continuation of the previous line.

"-" — A dash in the first column indicates that the line is the same as the previous line with only a few exceptions, those being where an employee is allocated to more than one function. The first line would be completely coded but the second and subsequent lines only need to be coded for percentage allocation, direct/indirect, address type, and the account address to which his time is allocated.

C — Indicates the line is a comment only and is to be ignored in processing. It is used to write special comments about previous or following cards in a listing of the cards.

FIELD 2 - COLUMNS 2-21 (DESCRIPTION)

This is a 20 position field used to describe the item being coded. The field is only used as a reference to what the item is and need not be coded precisely. It may have abbreviations or any simplification of coding which will make the nature of the item being coded more clear.

Example:

E Q U I P T , 3 R A N D _ T Y P E W R T

Always code a description even if it is not very precise.

FIELD 3 - COLUMNS 22-32 (BASIS)

A numeric field used to indicate the total dollar amount or square feet or some other basis (the basis times the rate must equal a dollar amount). The decimal is an assumed decimal two positions from the right so that the largest number which could be coded is 999,999,999.99 in the 11 position field.

FIELD 4 - COLUMNS 33-35 (RATE)

This is a numeric field used to indicate depreciation or the multiplier of the basis to obtain the charge. If "all" is coded, the rate is considered to be 1.0 (or 100%). The decimal is assumed to be in front of the three digits unless it is explicitly stated. If the rate is greater than 1.0, code a decimal in either the right most or middle of the three columns.

Examples: A L L = 1.0

3 2 1 = .321

1 . 6 = 1.6

3 2 . = 32.0

FIELD 5 - COLUMNS 36-42 (CODE)

The first two columns are to be coded as follows:

LA = LABOR (employees)
FA = FACILITIES (buildings, utilities, building and ground maintenance)
SU = SUPPLIES
SE = SERVICES
TR = TRANSFERS AND REIMBURSEMENTS
MI = MISCELLANEOUS
00-99 = EQUIPMENT AND MAINTENANCE OF EQUIPMENT. The first digits of the inventory number go in these columns and the last five digits go in the remaining positions of the field.

If the item is other than equipment and maintenance of equipment, the last five positions must be used to indicate a sub address code. The sub address code is just a continuation of FIELD 7 to obtain a more specific coding of an item.

FIELD 6 - COLUMN 43 (TYPE)

This is the type of address FIELD 7 is and is always to be coded with one of the following letters:

P = PROCESS
I = INTERNAL ORGANIZATIONAL ADDRESS
E = EXTERNAL (other state and federal government address)
N = NON-GOVERNMENT

FIELD 7 - COLUMNS 44-59 (INTERNAL ORGANIZATION)

This field is used to code the address of the item of the type specified by FIELD 6. It is a 16 position number and is described in the following section.

FIELD 8 - COLUMN 60 (DEBIT/CREDIT)

This indicates whether the charge is a debit or a credit. Debits may be coded as either D or -. Credits may be coded as either C or +.

FIELD 9 - COLUMN 61 (TYPE)

This is the type of address Field 10 is. It is always coded with one of the following letters:

S = SAME (the same type as Field 6 and also Field 10 is the same address as Field 7)
P = PROCESS
I = INTERNAL ORGANIZATIONAL ADDRESS
E = EXTERNAL
N = NON-GOVERNMENT

FIELD 10 - COLUMNS 62-77 (INTERNAL ORGANIZATION)

This field is to be coded the same as Field 7. It indicates where the amount is to be charged to (the amount being rate x basis x allocation). If Field 9 is coded as "S" (same) the field must be left blank and Field 7 will be used as the field charged to.

FIELD 11 - COLUMN 78 (DIRECT/INDIRECT)

This field is used to indicate direct or indirect and must be coded with one of the following letters:

D = DIRECT CHARGE
S = SUPPORT
M = DIRECT ADMINISTRATION (overhead)
G = GENERAL ADMINISTRATION
R = REVENUE

FIELD 12 - COLUMNS 79-80 ALLOCATION)

This field is used to indicate how much of the charge is to be allocated to the account address. The field is to be coded as either an "A" in the first position to indicate all (100%) or a number with the assumed decimal place before the 2 digits so that the largest amount which could be coded is .99. Other coding for special routines will be coded as a letter-number combination but these codes will not be resolved at this time.

CODING FOR INTERNAL ORGANIZATIONAL ADDRESS (FIELDS 7 & 10)

The following procedure is to be used when the type field is coded "I". It is used to indicate a single position in the organization or it may be used to code a higher level in the organization by coding zeros at the lower levels. The structure of the address is:

POSITIONS	DESCRIPTIVE TITLE
1,2	STATE LEVEL
3,4	CITY/AGENCY
5,6	DEPARTMENT
7,8	OFFICE
9	DIVISION
10	AREA
11,12	STATION
13,14	SECTION
15	UNIT
16	POSITION/ELEMENT

To determine the values of the positions, the following codes have been assigned at this time. The California Bureau of Criminal Statistics numerical codes are used for county designations with the exception of Los Angeles County for which the BCS code is 00.

STATE LEVEL	(POSITIONS 1,2)
01-09	U.S. Government
20	Alameda
50	Butte

State Level Positions (Continued)

73	Del Norte
19	Los Angeles
14	San Diego
45	San Joaquin
91	State Executive
92	State Legislative
93	State Judicial

CITY/AGENCY (POSITIONS 3,4)

For County and City Level (00-89 IN STATE LEVEL)

00	County Level
xx	NCIC City Codes

For State Executive (91 IN STATE LEVEL)

00	Governor's Office
21	Business and Transportation
22	Resources
23	Human Relations
24	Agriculture and Services
81	Office of Secretary of State
82	Office of Attorney General
83	Office of State Treasurer
84	Office of State Controller
85	Board of Equalization
86	Office of the Superintendent of Public Instruction

DEPARTMENT (POSITIONS 5,6)

For Human Relations

10	Corrections
20	Youth Authority
30	Health Care Services
40	Human Resource Development
50	Industrial Relations
60	Mental Hygiene
70	Public Health

Department Positions (Continued)

80	Rehabilitation
90	Social Welfare

For County and City Levels

21	Sheriff/Police
22	Coroner
23	Grand Jury
24	District Attorney
25	Public Defender
26	Private Defense Counsel
27	Justice Courts
28	Clerks of Justice Courts
29	Municipal Courts
30	Clerks of Municipal Courts
31	Superior Courts
32	Clerks of Superior Courts
33	Marshalls of Inferior Courts
34	Marshalls of Superior Courts
35	Probation - Joint or Juvenile
36	Probation - Adult

Section 7

COMPUTER OPERATIONS

The present set of computer programs have been developed for and run on a CDC 6600. Accordingly there are some machine-dependant requirements associated with their use. There are six steps required to utilize the two cost reporting systems:

- Coding the data, keypunching the coding sheets.
- Listing of input data.
- Data editing and verification, data file updating.
- Calculations and output.
- Report generation.
- Additional reports (Optional).

Each of these is described in the following paragraphs in enough detail to understand the requirements.

CODING DATA; KEYPUNCHING

A sample of the data collection form is shown in Exhibit 7-1. In using this coding form, the following restrictions must be observed:

- only labor may be charged directly to a criminal justice process;
- non-labor must be designated as either support or overhead;
- the first digit of a process address code cannot be zero.

Because of the specific computer requirements mentioned earlier, the data should be keypunched using an 026 keypunch.

LISTING INPUT DATA

The initialization phase generates a formated listing of the input data. This allows the user to verify readily that the data has been punched correctly. A sample of the formatted listing is given in Exhibit 7-2. To generate this listing, the following sequence of control cards is necessary:

California Criminal Justice Cost Study

Budget Unit ______________ 1 2 3 4 5 6

Page __ of __

Cost Category ______________

item						address		account		allo
description	basis	rate	code C	C	I	T	code	T	code	A

[redacted]	1	[redacted]ON	[redacted]	[redacted]BASI[redacted]RATE	[redacted]LASS[redacted]OF T[redacted]		[redacted]ACCOUNT ADDRESS		D/C	TYPE	BILLING ADDRESS	[redacted]	[redacted]PERC	
	D	ELETE												
		No PREVIOUS MASTER			FA00001	E	0000000000000000							
	A	DD												
		DIRECTOR	2500000	ALL	LA00001	I	2000000000000000		D	S		G	A	
		DIRECTORS OFFICE FUR	500000	.20	0000001	I	2000000000000000		D	S		S	A	
		BUILDINGS	10000000	025	FA00001	I	2000000000000000		D	S		M	A	
		DIRECTORS SECRETARY	600000	ALL	LA00002	I	2000000000000000		D	S		M	A	
		SECRETARYS FURNITURE	300000	.20	0000002	I	2000000000000000		D	S		S	A	
		SUPERVISOR 1	1000000	ALL	LA00003	I	2000010000000000		D	S		M	50	
									D	P	1000000000000000	D	50	
		SUPERVISOR 1 FURN	400000	.20	0000003	I	2000010000000000		D	S		S	A	
		SUPERVISOR 1 SECRE	500000	ALL	LA00004	I	2000010000000000		D	S		M	A	
		SECRETARY 1 FURNITUR	300000	.20	0000004	I	2000010000000000		D	S		S	A	
		WORKER A	800000	ALL	LA00005	I	2000010000000000		D	P	1001000000000000	D	60	
									D	P	1002000000000000	D	40	
		WORKER B	900000	ALL	LA00006	I	2000010000000000		D	P	1010000000000000	D	50	
										P	1020000000000000	D	50	
		WORKER C	1000000	ALL	LA00007	I	2000010000000000		D	I	2000030000000000	S	A	
		SUPERVISOR 2	1100000	ALL	LA00008	I	2000020000000000		D	S		M	A	
		SUPERVISOR 2 FURNIT	450000	.20	0000005	I	2000020000000000		D	S		S	A	

Exhibit 7-2

CONTINUED

1 OF 2

1. JIM(CM45000,T20,IØ300,P10)

2. MAP(OFF)

3. REDUCE.

4. INPUT.

5. 7/8/9

6. Program LIST relocatables

7. 7/8/9

8. Data Cards
   insert data cards here.

9. 6/7/8/9

DATA EDITING, VERIFYING, UPDATING

Program VERIDY reads and verifies the data cards, generates an error report if there are invalid data cards and creates a sorted update file on disk. This file is sorted by address type, account address and class code.

Data cards must be preceded by either a "CHANGE", "ADD" or "DELETE" card. All data cards following a "CHANGE", "ADD" or "DELETE" card will be considered to be of that class until a new "CHANGE", "ADD" or "DELETE" card is encountered.

Comment cards may be inserted at any place in the card deck. Comment cards must have a "C" in column 1.

Continuation cards must have a "-" in column 1 and only fields 1, 9-12 are verified. All other fields should be left blank. An item may be allocated to no more than 9 account addresses, i.e., there may be no more than 8 continuation cards.

If a data card is a deletion, only fields 1, 5-7 are verified. Fields 2-4, 8-12 are not verified and should be left blank.

If a data card is an addition, change or deletion to a node, i.e., non-end item, then fields 1,2,6 and 7 are verified. Fields 3-5, 8-12 are not verified and should be left blank. The description field is the only field the analyst may alter on a node record.

If an old master file does not exist, the following data cards must be input:

1.	Columns 1-6	"DELETE"	}	first card
2.	Columns 2-19	"NO PREVIOUS MASTER"	}	second card
	Columns 36-42	"FA00001"		
	Column 43	"E"		
	Columns 44-59	"000...0"		

All other columns on both cards should be left blank. When the update file is sorted, the first record on the sorted file will be the dummy record with the descriptor "NO PREVIOUS MASTER".

Program UPDATE expands the 16-digit addresses on the update file records to 20-digit addresses. This is accomplished by putting a zero in front of characters 9, 10, 15 and 16. A new master file is then created.

If a previous master data file exists then the new master data file is created by updating the old master data file with the update file.

If an old master data file does not exist, then the first record on the update file must be a dummy with columns 2-19 containing "NO PREVIOUS MASTER". The new master data file is created from the update file in this case.

To determine the core requirement for this step, first determine the number of records to be sorted from the formatted listing of the previous step. The core requirement can then be determined by consulting Exhibit 7-3. The control card sequence required for this step is as follows:

1. JIM(CMlength,T40,IØ300,MT1,P6)
   "length" equals the octal core requirement for sorting. The range is 65000 to 155000.

2. REQUEST,TAPE15,HI. (PArrrr/NORING)
   This card is used only if a previous master data file exists. "rrrr" is the magnetic tape number, i.e., for example, PA2855.

3. MAP(OFF)

4. INPUT.

5. RFL(60000)

6. REDUCE.

7. INPUT.

8. RFL(10000)

9. UNLOAD(TAPE15)
this card is used only if a previous master data file exists.

10. REQUEST,TAPE,HI. (SAVE)
this will become the new master data file.

11. COPYCF(TAPE20,TAPE)

12. UNLOAD(TAPE)

13. 7/8/9

14. Program VERIFY relocatables

15. 7/8/9

16. Data cards

Insert data cards here.

17. 7/8/9 15

18. Program UPDATE relocatables

19. 6/7/8/9

Exhibit 7-3

Core Requirements For Sorting

Program UPDATE

No. of Records To Be Sorted	Amount of Core Required (octal)
1- 2,496	65000
2,497- 5,472	70000
5,473- 7,560	75000
7,561-12,528	100000
12,529-16,120	105000
16,121-22,792	110000
22,793-26,880	115000
26,881-35,696	120000
35,697-40,768	125000
40,769-51,040	130000
51,041-58,056	135000
58,057-69,632	140000
69,633-77,792	145000
77,793-91,760	150000
91,761-99,792	155000

CALCULATIONS AND OUTPUT

This step utilizes programs which perform the computations and provide a standard listing of the augmented master data file. To determine the core requirements for this step, determine, as before, the number of records to be sorted (from the formatted listing produced by program VERIFY). The core requirement can then be determined by consulting Exhibit 7-4, based on current record length of 462 characters.

The control card sequence for this step is as follows:

1. JIM(CMlength,T300,IØ2000,MT1,P6)
   "length" equals the octal core requirement for sorting as computed or 60000 whichever is greater.

2. REQUEST,TAPE20,HI. (PArrrr/NORING)
"rrrr" is the magnetic tape number of the master data file, i.e., for example, PA2855.

3. MAP(OFF)

4. REDUCE.

5. INPUT.

6. RFL(length)
"length" equals the octal core requirement for sorting as computed. The range is 40000 to 130000.

7. REWIND(TAPE22)

8. SORTMRG.

9. REWIND(TAPE61)

10. SORTMRG.

11. RFL(60000)

12. REDUCE.

13. INPUT.

14. RFL(length)
"length" equals the octal core requirement for sorting as computed.

15. REWIND(TAPE24)

16. SORTMRG.

17. RFL(60000)

18. REDUCE.

19. INPUT.

20. RFL(length)
"length" equals the octal core requirement for sorting as computed.

21. REWIND(TAPE26)

22. SORTMRG.

23. RFL(60000)

24. REDUCE.

25. INPUT.

26. RFL(length)
"length" equals the octal core requirement for soring as computed.

27. REWIND(TAPE 28)

28. SORTMRG.

29. REWIND(TAPE64)

30. SORTMRG.

31. RFL(60000)

32. REDUCE.

33. INPUT.

34. RFL(length)
"length" equals the octal core requirement for sorting as computed.

35. REWIND(TAPE30)

36. SORTMRG.

37. RFL(60000)

38. REDUCE.

39. INPUT.

40. RFL(length)
"length" equals the octal core requirement for sorting as computed.

41. REWIND(TAPE32)

42. SORTMRG.

43. REWIND(TAPE65)

44. SORTMRG.

45. RFL(60000)

46. REDUCE.

47. INPUT.

48. RFL(length)
"length" equals the octal core requirement for sorting as computed.

49. REWIND(TAPE67)

50. SORTMRG.

51. RFL(60000)

52. REDUCE.

53. INPUT.

54. RFL(length)
"length" equals the octal core requirement for sorting as computed.

55. REWIND(TAPE35)

56. SORTMRG.

57. REWIND(TAPE69)

58. SORTMRG.

59. RFL(60000)

60. REDUCE.

61. INPUT.

62. RFL(length)
"length" equals the octal core requirement for sorting as computed.

63. REWIND(TAPE37)

64. SORTMRG.

65. RFL(60000)

66. REDUCE.

67. INPUT.

68. RFL(10000)

69. UNLOAD(TAPE20)

70. REQUEST,TAPE,HI. (SAVE)
this tape will become the augmented master data file.

71. COPYCF(TAPE37,TAPE)

72. UNLOAD(TAPE)

73. REQUEST,DIRECT,HI. (SAVE)
This tape will become the direct charge billing file.

74. COPYCF(TAPE69,DIRECT)

75. UNLOAD(DIRECT)

76. 7/8/9

77. Program BILLING relocatables

78. 7/8/9

79. Sortmerge control cards (Item No. 8)

80. 7/8/9

81. Sortmerge control cards (Item No. 10)

82. 7/8/9

83. Program BURDEN relocatables

84. 7/8/9

85. Sortmerge control cards (Item No. 16)

86. 7/8/9

87. Program NONSUP relocatables

88. 7/8/9

89. Sortmerge control cards (Item No. 22)

90. 7/8/9

91. Program OVH relocatables

92. 7/8/9

93. Sortmerge control cards (Item No. 28)

94. 7/8/9

95. Sortmerge control cards (Item No. 30)

96. 7/8/9

97. Program ALLOC relocatables

98. 7/8/9

99. Sortmerge control cards (Item No. 36)

100. 7/8/9

101. Program OVHGA relocatables

102. 7/8/9

103. Sortmerge control cards (Item No. 42)

104. 7/8/9

105. Sortmerge control cards (Item No. 44)

106. 7/8/9

107. Program ASSESS relocatables

108. 7/8/9

109. Sortmerge control cards (Item No. 50)

110. 7/8/9

111. Program SUPPORT relocatables

112. 7/8/9

113. Sortmerge control cards (Item No. 56)

114. 7/8/9

115. Sortmerge control cards (Item No. 58)

116. 7/8/9

117. Program PRO relocatables

118. 7/8/9

119. Sortmerge control cards (Item No. 64)

120. 7/8/9

121. Program LIST relocatables

122. 6/7/8/9

Exhibit 7-5 gives a complete listing of all sortmerge control cards.

Exhibit 7-4

Core Requirements for Sorting During Calculation and Output Phases*

No. of Records To Be Sorted	Amount of Core Required (octal)
1- 2,496	40000
2,497- 5,472	45000
5,473- 7,560	50000
7,561-12,528	55000
12,529-16,120	60000
16,121-22,792	65000
22,793-26,880	70000
26,881-35,696	75000
35,697-40,768	100000
40,769-51,040	105000
51,041-58,056	110000
58,057-69,632	115000
69,633-77,792	120000
77,793-91,760	125000
91,761-99,792	130000

*Based on current record length of 462 characters

Exhibit 7-5

COMPLETE LISTING OF ALL
SORTMERGE CONTROL CARDS

Item No.	Sortmerge Control Cards
8	SORT(1,3,470,1,2)
	FILE(TAPE21,S,D,,S,N)
	FILE(TAPE22,Ø,D,,R,N)
	KEY(D,C,21,21,1)
	KEY(D,C,58,7,2)
	KEY(D,C,1,20,3)
	RECORD(I,U,470)
	END
10	SORT(1,1,40,1,2)
	FILE(TAPE60,S,D,,S,N)
	FILE(TAPE61,O,D,,R,N)
	KEY(D,C,2,21)
	RECORD(I,U,40)
	END
16	SORT(1,2,470,1,2)
	FILE(TAPE23,S,D,,S,N)
	FILE(TAPE24,O,D,,R,N)
	KEY(A,C,21,21,1)
	KEY(A,C,58,7,2)
	RECORD(I,U,470)
	END
22	SORT(1,2,470,1,2)
	FILE(TAPE25,S,D,,S,N)
	FILE(TAPE26,O,D,,R,N)
	KEY(D,C,21,21,1)
	KEY(D,C,58,7,2)
	RECORD(I,U,470)
	END

Exhibit 7-5 Continued

Item No.	Sortmerge Control Cards
28	SORT(1,2,470,1,2)
	FILE(TAPE27,S,D,,S,N)
	FILE(TAPE28,O,D,,R,N)
	KEY(A,C,21,21,1)
	KEY(A,C,58,7,2)
	RECORD(I,U,470)
	END
30	SORT(1,1,40,1,2)
	FILE(TAPE62,S,D,,S,N)
	FILE(TAPE64,O,D,,R,N)
	KEY(A,C,2,21)
	RECORD(I,U,40)
	END
36	SORT(1,2,470,1,2)
	FILE(TAPE29,S,D,,S,N)
	FILE(TAPE30,O,D,,R,N)
	KEY(D,C,21,21,1)
	KEY(D,C,58,7,2)
	RECORD(I,U,470)
	END
42	SORT(1,2,470,1,2)
	FILE(TAPL31,S,D,,S,N)
	FILE(TAPE32,O,D,,R,N)
	KEY(A,C,21,21,1)
	KEY(A,C,58,7,2)
	RECORD(I,U,470)
	END
44	SORT(1,1,40,1,2)
	FILE(TAPE63,S,D,,S,N)

Exhibit 7-5 Continued

Item No.	Sortmerge Control Cards
28	SORT(1,2,470,1,2)
	FILE(TAPE27,S,D,,S,N)
	FILE(TAPE28,O,D,,R,N)
	KEY(A,C,21,21,1)
	KEY(A,C,58,7,2)
	RECORD(I,U,470)
	END
30	SORT(1,1,40,1,2)
	FILE(TAPE62,S,D,,S,N)
	FILE(TAPE64,O,D,,R,N)
	KEY(A,C,2,21)
	RECORD(I,U,40)
	END
36	SORT(1,2,470,1,2)
	FILE(TAPE29,S,D,,S,N)
	FILE(TAPE30,O,D,,R,N)
	KEY(D,C,21,21,1)
	KEY(D,C,58,7,2)
	RECORD(I,U,470)
	END
42	SORT(1,2,470,1,2)
	FILE(TAPE31,S,D,,S,N)
	FILE(TAPE32,O,D,,R,N)
	KEY(A,C,21,21,1)
	KEY(A,C,58,7,2)
	RECORD(I,U,470)
	END
44	SORT(1,1,40,1,2)
	FILE(TAPE63,S,D,,S,N)

Exhibit 7-5 Continued

Item No.	Sortmerge Control Cards
44 (contd)	FILE(TAPE65,O,D,,R,N)
	KEY(A,C,2,21)
	RECORD(I,U,40)
	END
50	SORT(1,1,40,1,2)
	FILE(TAPE66,S,D,,S,N)
	FILE(TAPE67,O,D,,R,N)
	KEY(A,C,2,21)
	RECORD(I,U,40)
	END
56	SORT(1,2,470,1,2)
	FILE(TAPE34,S,D,,S,N)
	FILE(TAPE35,O,D,,R,N)
	KEY(D,C,21,21,1)
	KEY(D,C,58,7,2)
	RECORD(I,U,470)
	END
58	SORT(1,1,100,1,2)
	FILE(TAPE68,S,D,,S,N)
	FILE(TAPE69,O,D,,R,N)
	KEY(D,C,2,21)
	RECORD(I,U,100)
	END
64	SORT(1,2,470,1,2)
	FILE(TAPE36,S,D,,S,N)
	FILE(TAPE37,O,D,,R,N)
	KEY(A,C,21,21,1)
	KEY(A,C,58,7,2)
	RECORD(I,U,470)
	END

REPORT GENERATION

The report generation program provides a formatted listing of each record on the augmented master data file. This program may be removed at the user's option.

The control cards necessary are:

1. JIM(CM60000,T100,IØ2000,MT1,P6)
2. REQUEST,TAPE37,HI. (PArrrr/N RING)
   "rrrr" is the magnetic tape number of the augmented master data file.
3. MAP(OFF)
4. REDUCE.
5. INPUT.
6. RFL(10000)
7. UNLOAD(TAPE37)
8. $7/8/9$
9. Program LIST relocatables.
10. $6/7/8/9$

To eliminate this program, delete the following:

65. RFL(60000)
66. REDUCE.
67. INPUT.
120. $7/8/9$
121. Program LIST relocatables

ADDITIONAL REPORTS (OPTIONAL)

Programs PRINT1, PRINT2 and PRINT3 provide, respectively, the following outputs:

1. For each six digit agency by department level code requested by the user, the cascaded total dollar cost for each four digit process address starting with 1000, incrementing by 100, and terminating with 9900 is output. If a given four digit process address has a zero cost associated with it, the printed output for that address is suppressed.

2. For each six digit agency by department level code requested by the user, the following cascaded dollar costs associated with a given process address are output:

   Direct, Overhead, G&A, Support, Non-Labor, Total and Overhead Rate.

   A direct charge to a criminal justice process may be either labor or non-labor. If labor, then this charge is broken down into its four components: direct, overhead, G&A, support. If non-labor, then this charge is shown under the non-labor column. The overhead rate is defined to be equal to total overhead divided by the sum of direct and support.

   The four digit process addresses start with 1000, increment by 10, and terminate with 2990. All dollar costs associated with other process addresses are shown under the heading OTHER.

3. For each six digit agency by department level code requested by the user, the following dollar costs are output:

   Direct, Overhead, G&A, Support, Non-Labor, Total and Overhead Rate.

   The overhead rate is defined to be equal to total overhead divided by the sum of direct and support.

The control card sequence is as follows:

1. JIM(CM70000,T60,IØ300,MT1,P6)
   If the direct charge billing file contains more than ten thousand records, it may be advisable to go through an analysis to determine the amount of core required by programs PRINT1, PRINT2, PRINT3 for an internal sort of the direct charge billing file records.

2. REQUEST,TAPE69,HI. (PArrrr/NORING)
   "rrrr" is the magnetic tape number of the direct charge billing file.

3. MAP(OFF)

4. INPUT.

5. INPUT.

6. INPUT.

7. RFL(10000)

8. UNLOAD(TAPE69)

9. 7/8/9

10. Program PRINT1 relocatables.

11. 7/8/9

12. Data cards for program PRINT1.

13. 7/8/9 15

14. Program PRINT2 relocatables.

15. 7/8/9

16. Data cards for program PRINT2.

17. 7/8/9

18. Program PRINT3 relocatables.

19. 7/8/9

20. Data cards for program PRINT3.

21. 6/7/8/9

Each program requires its own set of data cards. Each data card contains a six digit agency by department level code. This six digit code must appear in columns 1 through 6.

Each program is self-contained and independent. To eliminate a program, please delete the following:

one of the INPUT cards, i.e. 4, 5 or 6

the following set of cards:

7/8/9 15 (or 7/8/9 in the case of program PRINT1)

Program { PRINT1, PRINT2, PRINT3 } relocatables

7/8/9

Data cards for program { PRINT1, PRINT2, PRINT3 }

To eliminate two programs, please repeat the above procedure. For example, to eliminate program PRINT2 delete 4, 13, 14, 15 and 16.

END