Technical Description

Office DEPOT®
Business Services Division

Billing And Usage Module
Associate Order Processing System
(AOPS)

DRAFT

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Billing And Usage Module
(For AOPS)

ABSTRACT

This document contains a technical description of the Billing And Usage Module of the Associate Order Processing System (AOPS). It has been developed to provide a high-level description for a testing environment. As such, it is intended for distribution to the Office Depot MIS personnel having the need to know and who are authorized by Office Depot MIS management.

CURRENT VERSION

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REVISION HISTORY

Revision	Date	Prepared By	Description
1	03-21-97	W. Whiteside	Initial Draft for Outline
2	04-15-97	W. Whiteside	First Draft — For First Technical Review
3			

SUPPLEMENTAL DOCUMENTS

TITLE	LOCATION	CONTACT
NONE		

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CONTENTS

FIGURES

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1. PURPOSE OF THIS DOCUMENT

The purpose of this document is to provide high-level technical aspects of the Billing And Usage Module of the Associate Order Processing System (AOPS). It is to be used primarily for a testing environment commencing on April 1, 1997. There are types of data provided herein:

- DATA FLOW (Page 2)
- FILE LAYOUTS (Page 22)
- PROGRAMMING RULES (Page 23)

2. AUDIENCE

The audience for this document consists of developers and testers involved in the ABS implementation.

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3. DATA FLOW

This section contains the data flow diagrams for the processes that are performed from within the Billing and Usage function. The purpose of each diagram is to provide a general understanding of the data flow within each process of the Billing And Usage function. The digrams are presented in three sections:

- General Overview (Section 3.1, page 2)
- Summary Billing Reports (Section 3.2, page 6)
- Customer Usage Reports (Section 3.3, page 10)

3.1. GENERAL OVERVIEW

This section contains data flow diagrams that provide a general overview of two AOPS functions or sub-systems. The two sub-systems comprise the Summary Billing Sub-System and the Customer Usage Sub-System. Detailed specifications of each sub-system are included in subsequent sections titled Summary Billing Reports on page 6 and Customer Usage Reports on page 10.

Figure 1 through *Figure 3* provide the general overview of the Billing and Usage Module.

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CUSTOMER REPORT SETUP (CBUO11P)

Figure 1. **General Overview — Customer Report Setup**
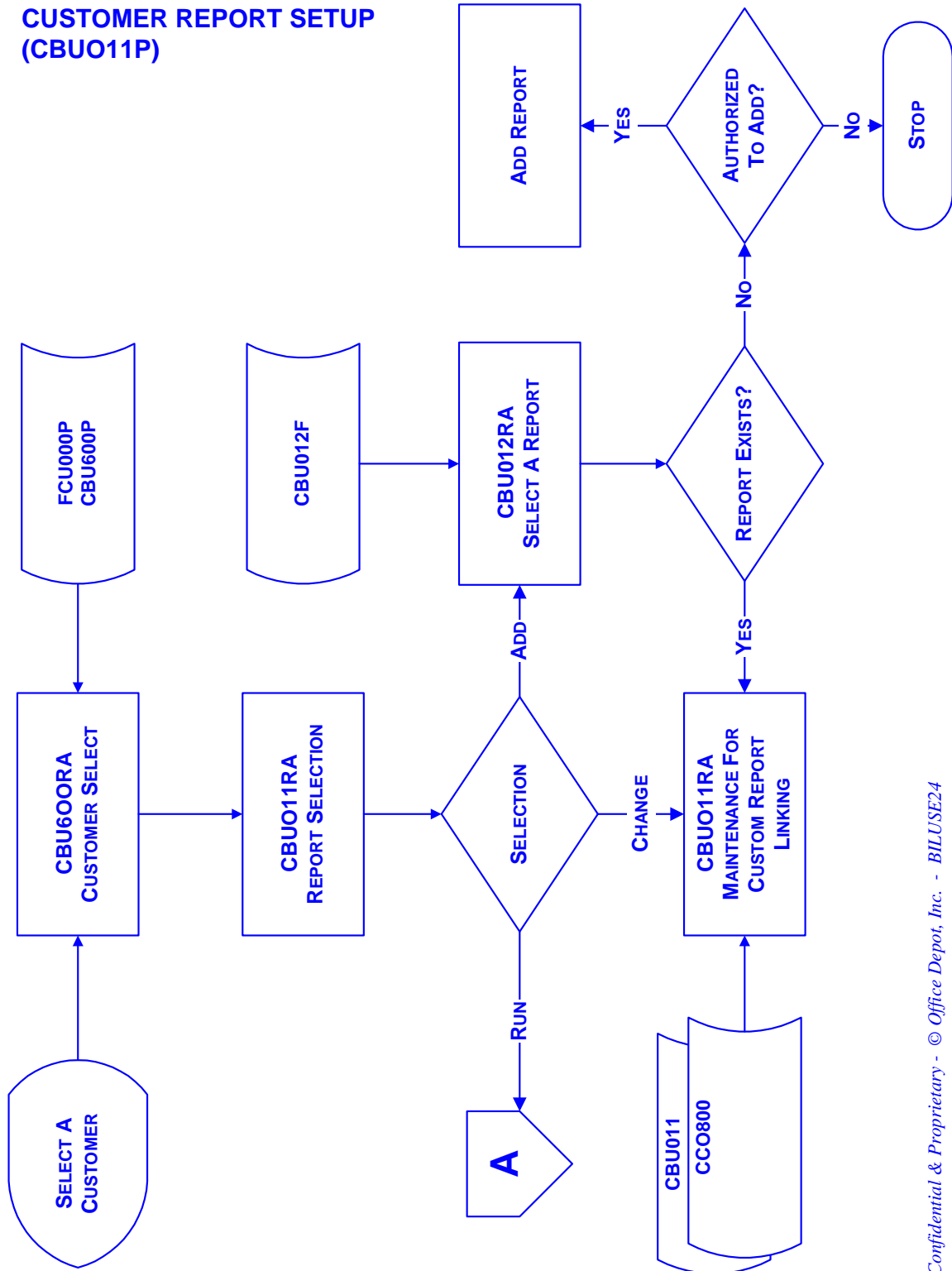
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**RUNNING REPORTS
ON DEMAND
(*Billing OR Usage*)**

A

Date And
Option Select

CBU011Q
On-Demand Report
Que

CBU011D3

SUBMIT REPORT
CBU500S

B

SAVE AD HOC
REPORT — YES → ADD REPORT TO LIST

NO

END
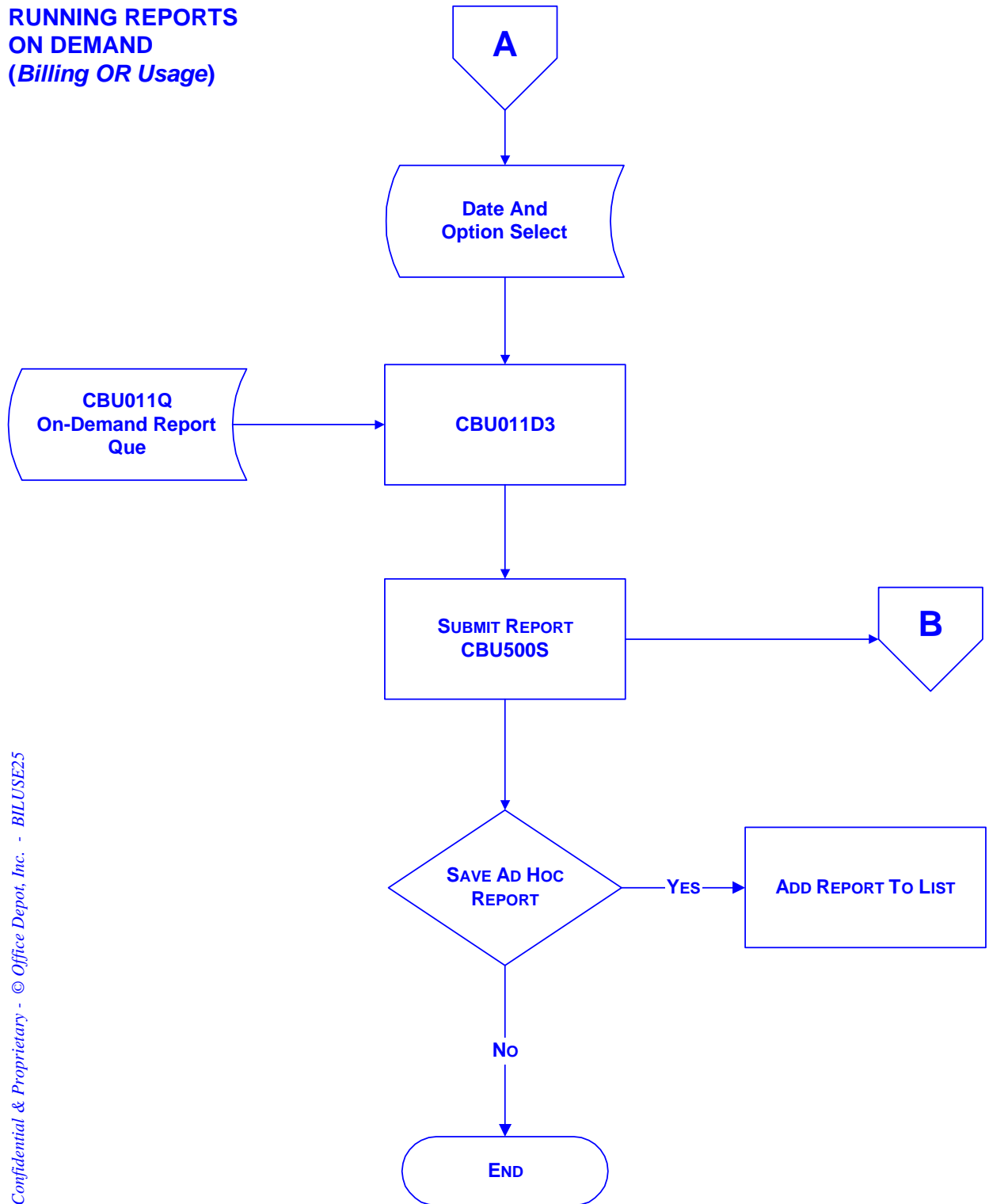
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Figure 2. **General Overview — Running Reports On Demand — Billing OR Usage**

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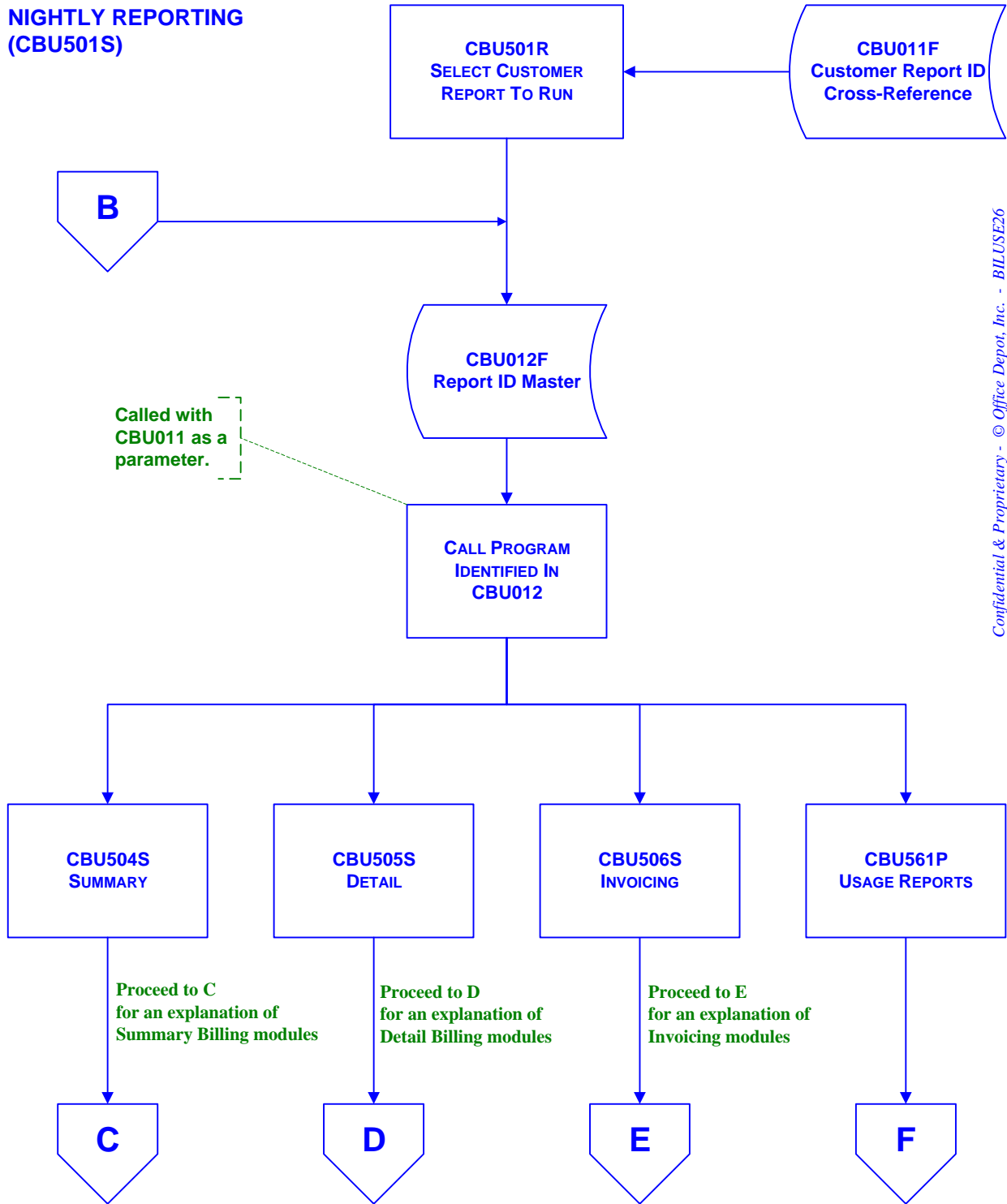
Figure 3. General Overview — Nightly Reporting

3.2. SUMMARY BILLING REPORTS

The flow charts provided in this section (*Figure 4*, *Figure 5*, and *Figure 6*) illustrate the data flow of the Summary Billing Sub-System. All three charts are continuations from *Figure 3*.
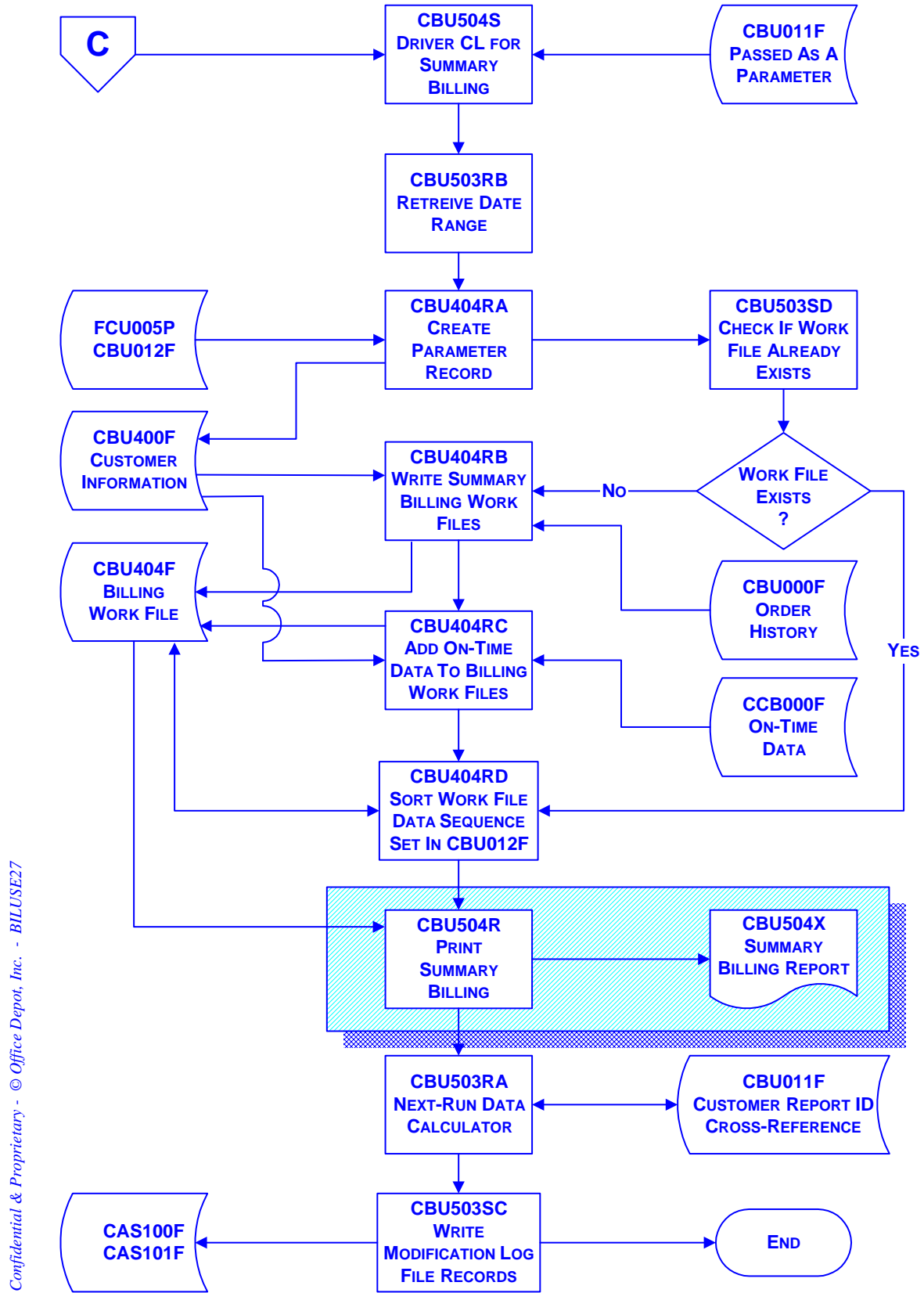
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Figure 4. Data Flow: Summary Billing (Continued from *Figure 3*)
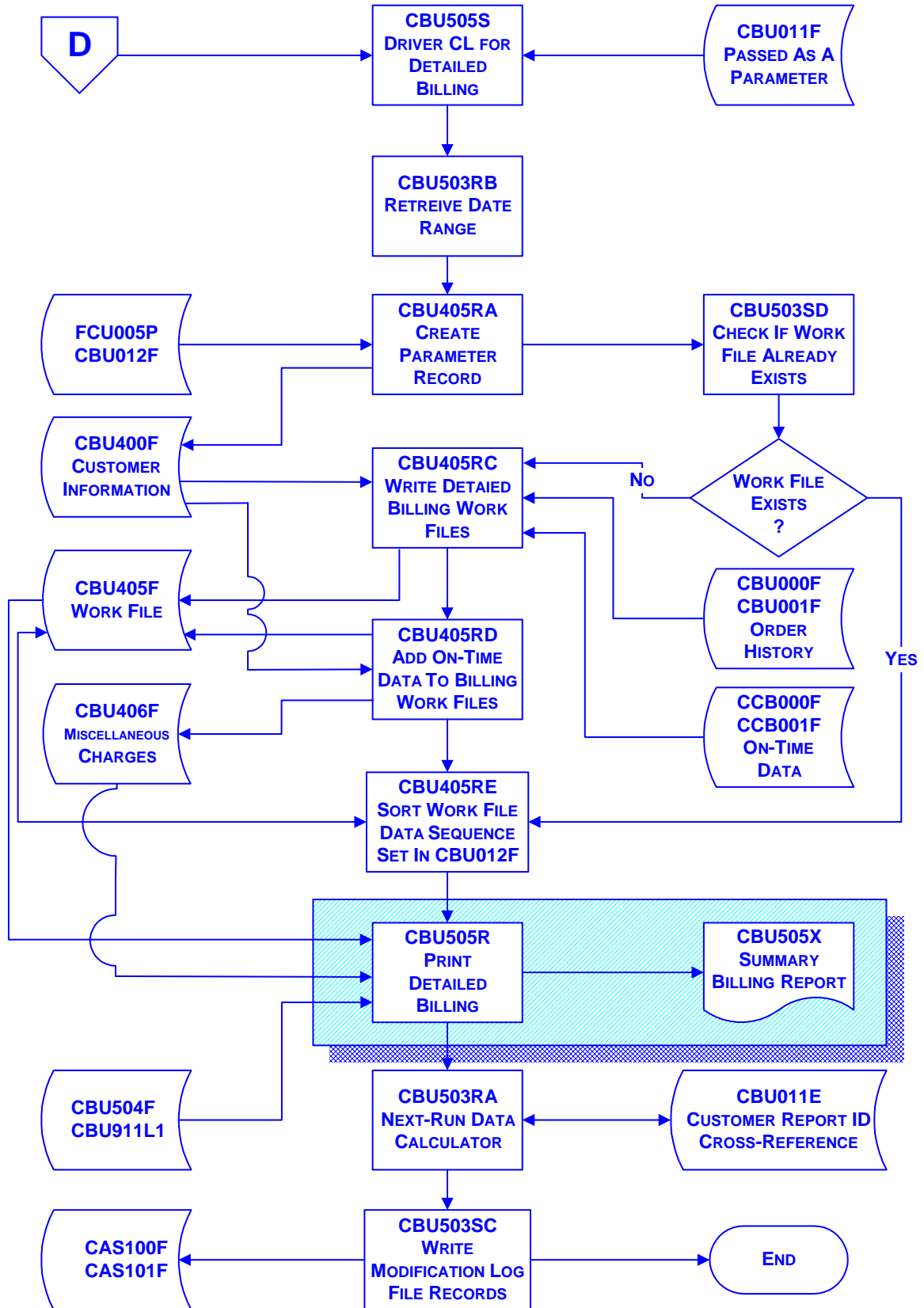
Figure 5. Data Flow: Detailed Summary Billing (*Continued from Figure 3*)
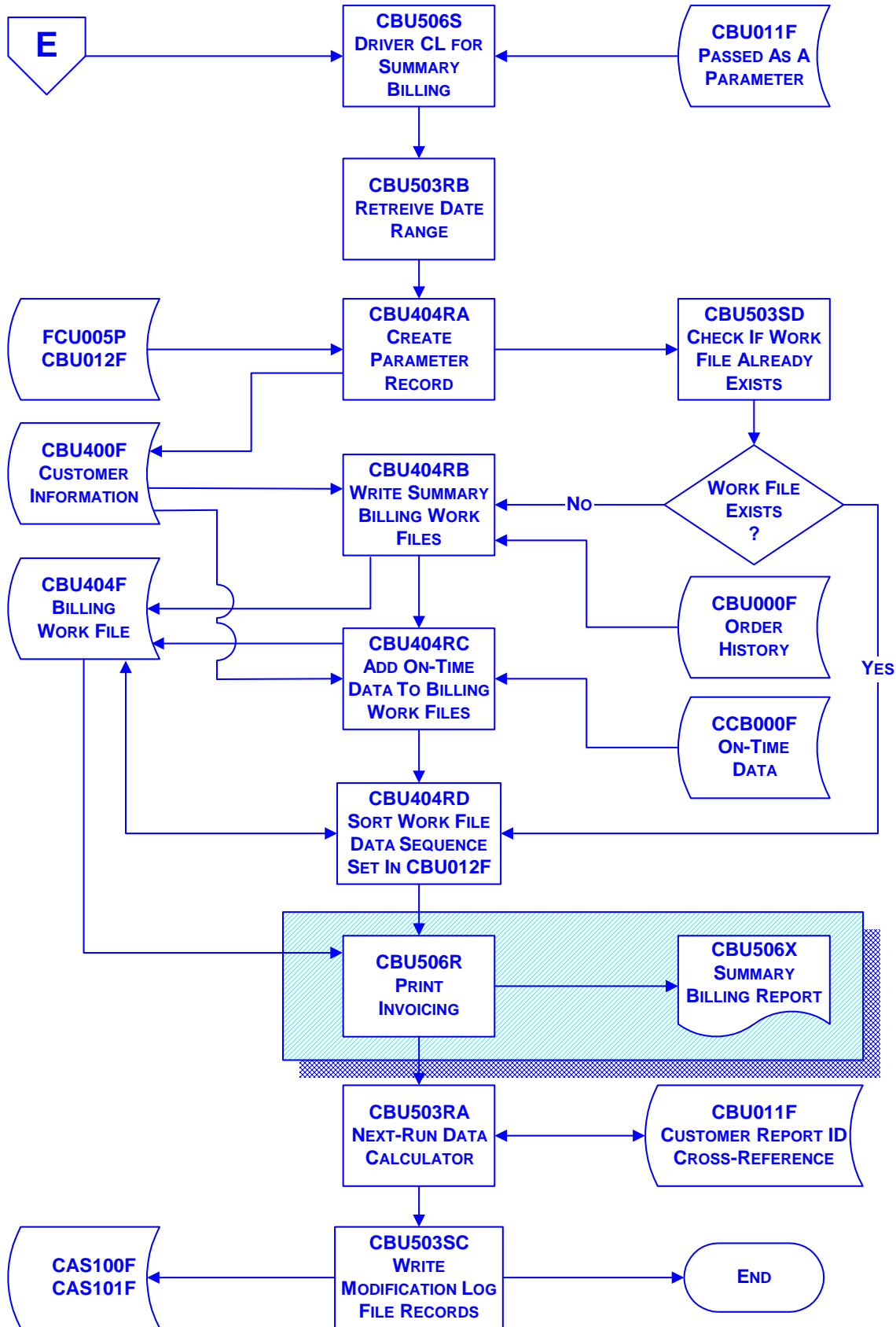
Figure 6. Data Flow: Invoicing (*Continued from Figure 3*)

3.3. **CUSTOMER USAGE REPORTS**

There are three methods of generating Customer Usage Reports. They are:

- Auto Scheduled Reports (Section 3.3.1)

- On-Request Reports (Pre-Defined) (Section 3.3.2)

- On-Request Reports (Ad Hoc) (Section 3.3.3)

3.3.1. Auto Scheduled Reports

Auto Scheduled Reports are pre-defined reports that are printed on a regular frequency. The frequency is determined and scheduled during the Customer Account Setup process.

The flow charts provided in this section illustrate the data flow of the Auto Scheduled Reports sub-system. These data flow charts are illustrated in *Figure 7* through *Figure 10*.

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USAGE REPORT DATA FLOW

CBU011L1
CBU012F

CBU501R -
PPROCESS
AUTOMATIC REPORT
REQUESTS

THE CBU011F RECORD AND THE DATE
ARE PASSED TO THIS PROGRAM AS
PARAMETERS

THE CBU011F RECORD AND THE DATE
ARE PASSED TO THIS PROGRAM AS
PARAMETERS

CBU561P
CL TO ADD MEMBERS TO
WORK FILES

CCB460F
CCB469F

CCB567R - GETS DATE
PARAMETERS

CBU564R
CREATE REPORT
CRITERIA RECORD

FCU005P
CCU007F

THIS PROGRAM WILL FIRST CALL
CBU503SD TO DETERMINE IF WORK
FILE MAMBERS EXIST.
IT WILL THEN CLEAR OR ADD MEMBERS
BEFORE CONTINUING.

CBU560S
CALL CUSTOMER
USAGE REPORTS

CCB461F
CCB462F
CCB463F
CIS400F

CBU503SD
DETERMINE IF
CCB461F MEMBER
EXISTS

CCB569R
RPG PROGRAM RECEIVES
PARAMETER REGARDING WORK FILE
EXISTENCE. IT THEN CALLS
CBU570P OPTIONALLY, THEN
CCB580P, AND CCB590P.

CBU570P

CCB580P

CCB590P

A

B

C

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***Figure 7.* Data Flow: Customer Usage Report / Auto**

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A

CWS000F
FCU001P
CCU001L1
FCO001P
FCU005L1
FCO030P

FCO100L7
CCO100F
FCO101P
FCO103P
FCO106P

CCB570R - WRITE
CCB461F WORK FILE

CCB001F
CCB469F
CCB461F

FCO108P
CCO805F
CCU007F
CBS202L1
CCB000F

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Figure 8. **Data Flow: Usage Report / Auto (*Continued from Figure 7*)**

B

FCU001P
CCB465F
CCO009F
CIC102F
CIC103F

CIC104F
FCO030F
CCU018F
CBS001F

CCB580R - WRITE
CCB461F WORK FILE

CCB461F
CCB463F
CCB469F
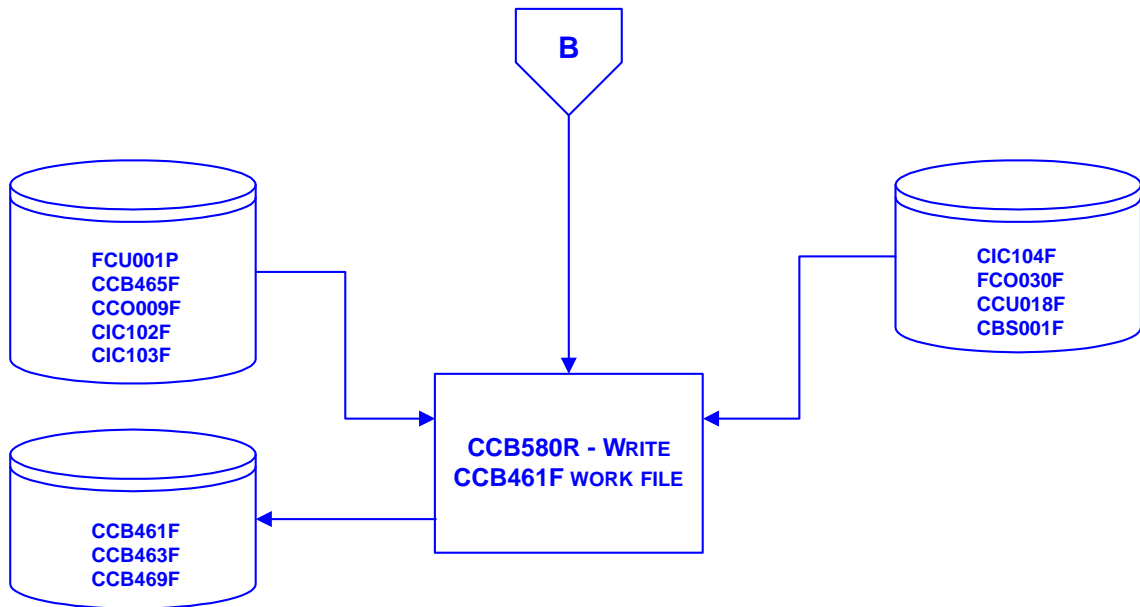
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Figure 9. **Data Flow: Usage Report / Auto (*Continued from Figure 7*)**

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Figure 10. Data Flow: Usage Report / Auto (*Continued from Figure 7*)

3.3.2. On-Request Reports (Pre-Defined)

On Request Reports (Pre-Defined) are pre-defined reports that are printed only **on request**. The frequency is determined and scheduled via requests from users in the field.
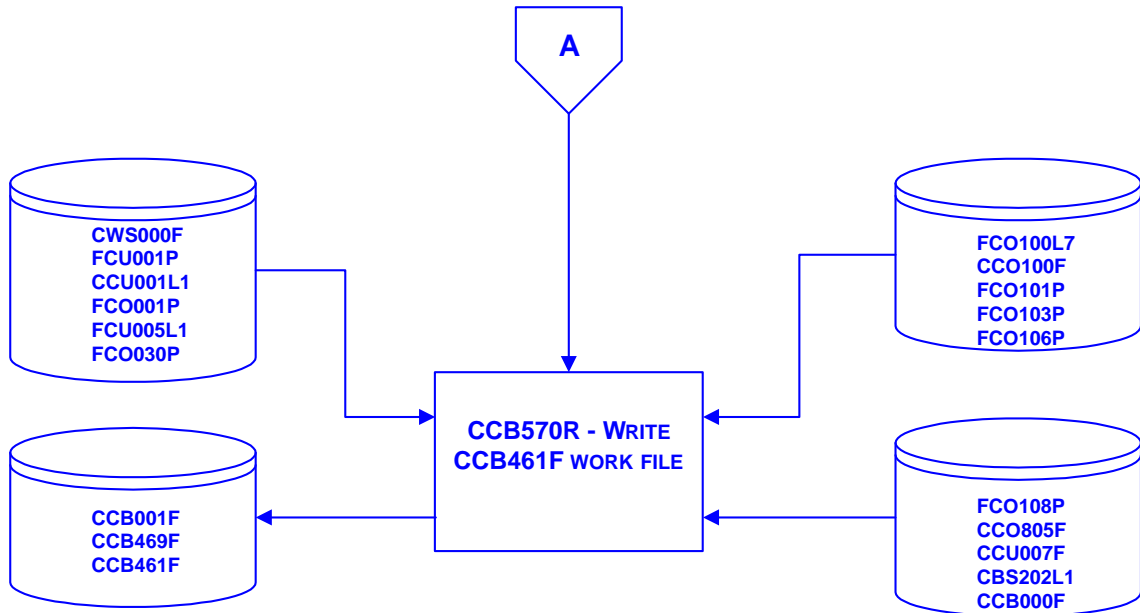
The flow charts provided in this section illustrate the data flow of the On Request Reports (Pre-Defined) sub-system. These data flow charts are illustrated in *Figure 11* through *Figure 14*.

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Figure 11. **Data Flow: Usage Report / Pre-Defined**

**CWS000F
FCU001P
CCU001L1
FCO001P
FCU005L1
FCO030P**

A

**FCO108P
CCO805F
CCU007F
CBS202L1
CCB000F**

**CCB570R
WRITE CCB461F
WORK FILE**

**FCO100L7
CCO100F
FCO101P
FCO103P
FCO106P**

**CCB001F
CCB469F
CCB461F**

Figure 12. Data Flow: Usage Report / Pre-Defined (*Continued from Figure 11*)

**FCU001P
CCB465F
CCO009F
CIC102F
CIC103F**

B

**CCB461F
CCB463F
CCB469F**

**CCB580R
WRITE CCB461F
WORK FILE**

**CIC104F
FCO030F
CCU018F
CBS001F**

Figure 13. Data Flow: Usage Report / Pre-Defined (*Continued from Figure 11*)

Figure 14. Data Flow: Usage Report / Pre-Defined (*Continued from Figure 11*)

3.3.3. On-Request Reports (Ad Hoc)

On Request Reports (Ad Hoc) are reports that are printed only **on request**, and defined at the time the request is submitted. The frequency is determined and scheduled via requests from users in the field.

The flow charts provided in this section illustrate the data flow of the On Request Reports (Ad Hoc) sub-system. These data flow charts are illustrated in *Figure 15* through *Figure 18*.

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```
                                    ┌──────────────────────┐
                                    │      CCB565P         │
                                    │   CL TO PROCESS      │
                                    │  ON REQUEST USAGE    │
                                    │      REPORTS         │
                                    └──────────────────────┘

    ╭──────────────────╮                                         ╔══════════════════╗
    │     CCB565D      │                                         ║     CCU018F      ║
    │  ENTER SELECTION │                                         ║     FCU005P      ║
    │    PARAMETERS    │                                         ║     CCU007F      ║
    ╰──────────────────╯                                         ║     CCB465F      ║
                                    ┌──────────────────────┐     ╚══════════════════╝
                                    │      CCB565R         │
                                    │    RPG SCREEN        │
                                    │    PROCESSOR         │
                                    └──────────────────────┘
    ┌──────────────────┐                                         ╔══════════════════╗
    │     CCB567R      │                                         ║     CCB460F      ║
    │   GETS DATE      │                                         ║     CCB469F      ║
    │   PARAMETERS     │                                         ╚══════════════════╝
    └──────────────────┘
                                    ┌──────────────────────┐
                                    │      CCB566P         │
                                    │ SUBMIT CALL COMMAND  │
                                    │  EITHER TO LOCAL OR  │
                                    │    REMOTE SYSTEM     │
                                    └──────────────────────┘
```

The program first retrieves member information for file CCB460F. Then it adds members to work files CCB461F, CCB462F, CCB463F, and CIS400F. CCB460F is copied to QTEMP, and an OPNQRYF is run to sequence the file. Then the output from OPNQRYF is copied back to the original CCB460F.

```
                                    ┌──────────────────────┐
                                    │      CCB560S         │
                                    │   CALL CUSTOMER      │
                                    │   USAGE REPORTS      │
                                    └──────────────────────┘

                                    ┌──────────────────────┐
                                    │      CCB569R         │
                                    │  RPG PROGRAM TO SET THE │
                                    │  PROCESSING FLAGS WITHIN│
                                    │  CCB460F AND CALL PROGRAMS│
                                    │  CCB570P, CCB580P, AND │
                                    │      CCB590P         │
                                    └──────────────────────┘

      ┌──────────────┐          ┌──────────────┐          ┌──────────────┐
      │   CCB570P    │          │   CCB580P    │          │   CCB590P    │
      └──────────────┘          └──────────────┘          └──────────────┘

           ⬡ A                       ⬡ B                       ⬡ C
```

***Figure* 15. Data Flow: Usage Report / Ad Hoc**

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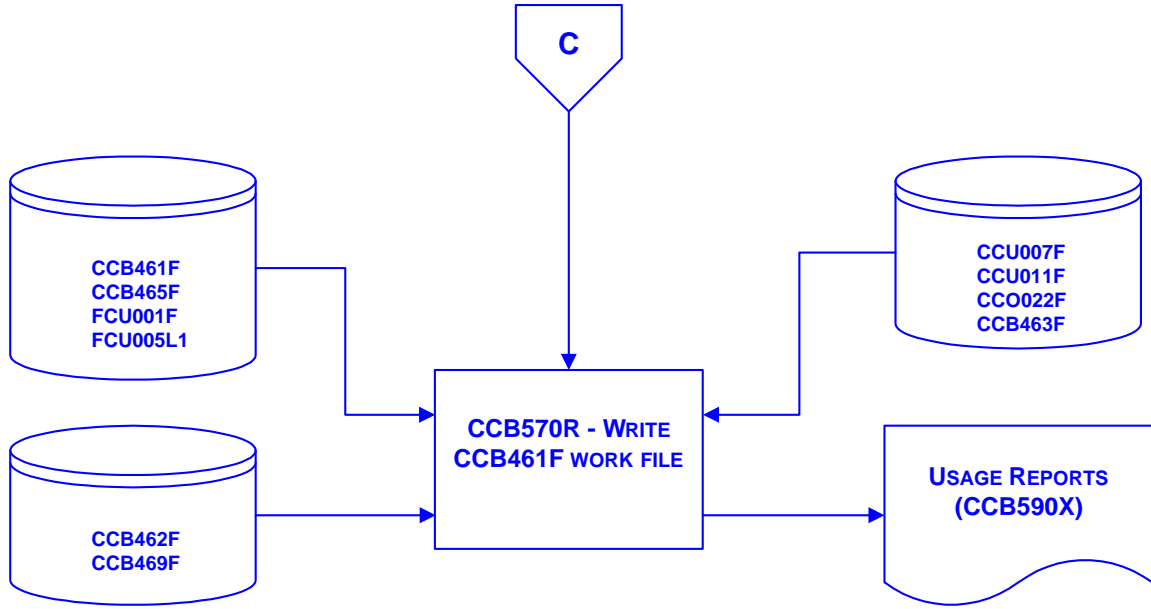*Confidential & Proprietary - © Office Depot, Inc. - BILUSE21*

Figure 16. Data Flow: Usage Report / Ad Hoc (*Continued from* Figure 15)

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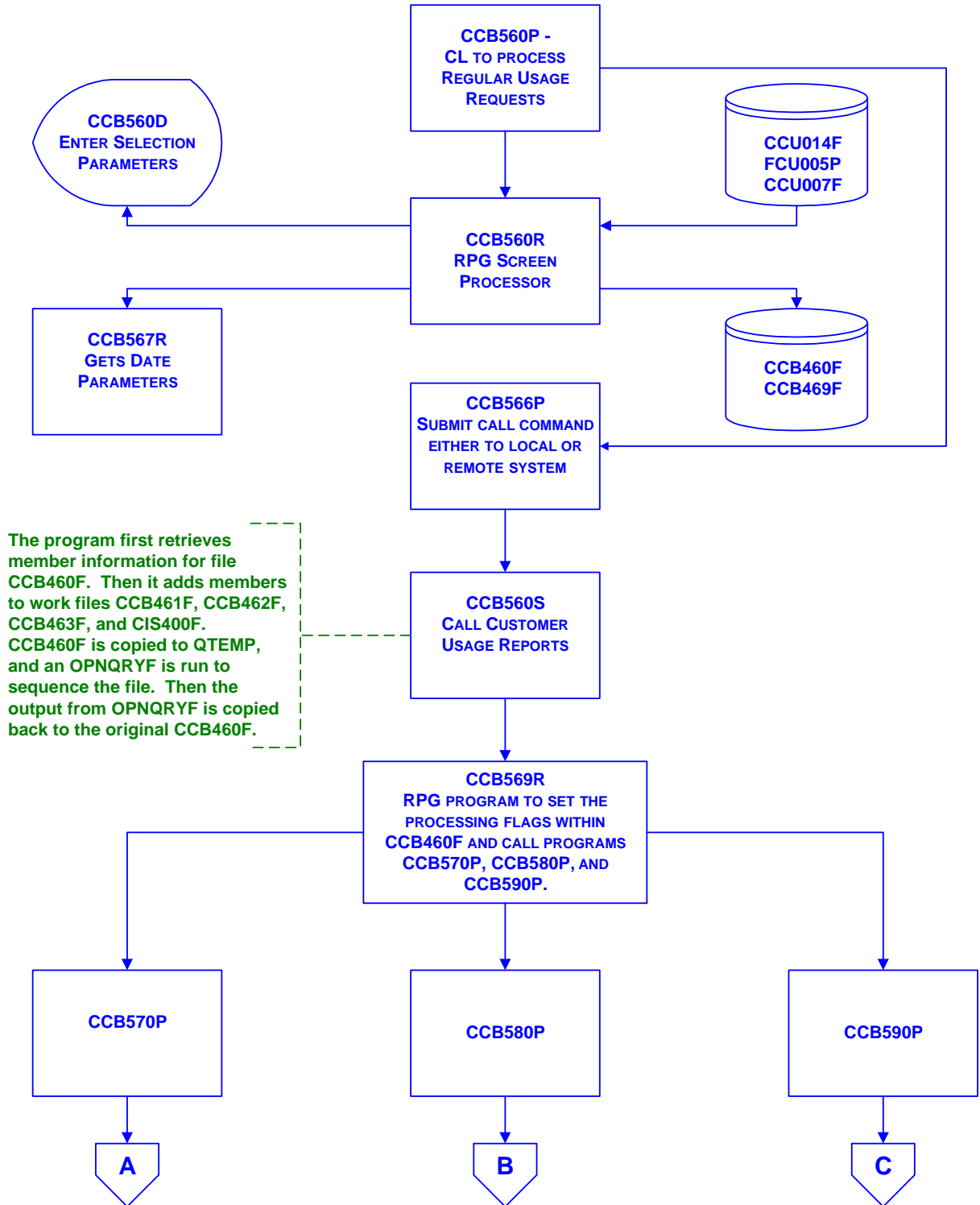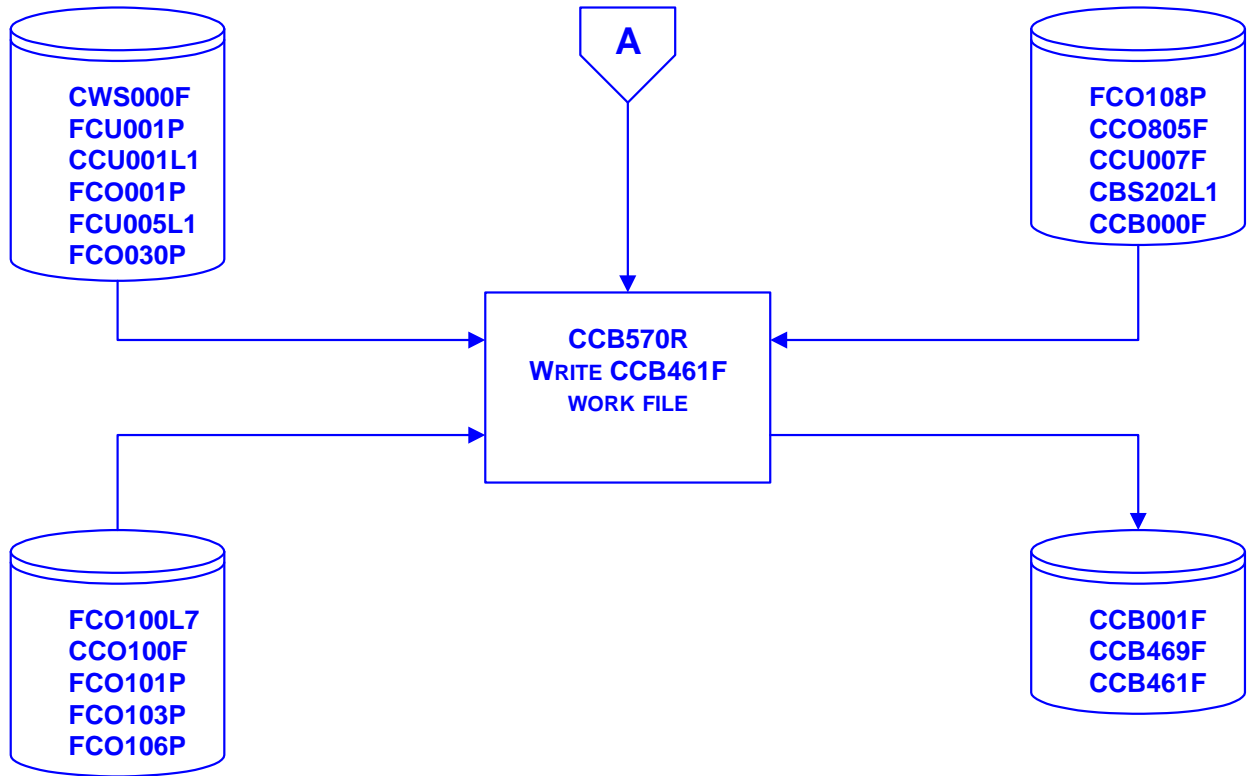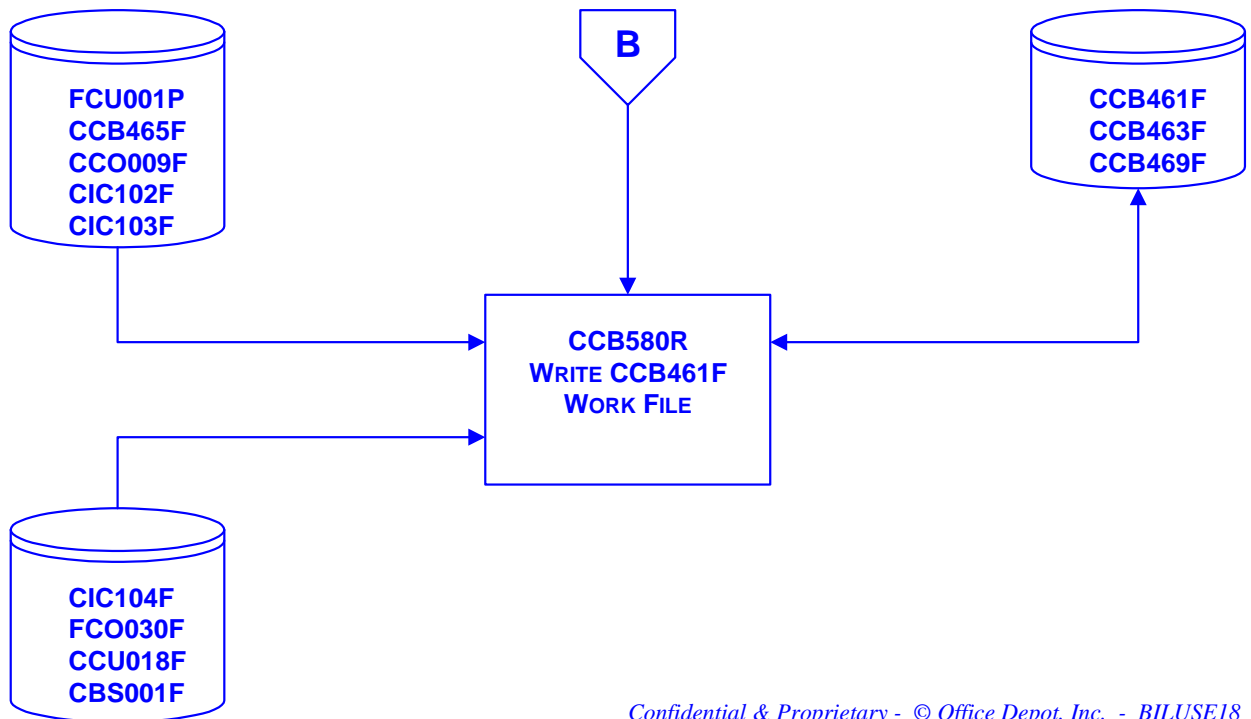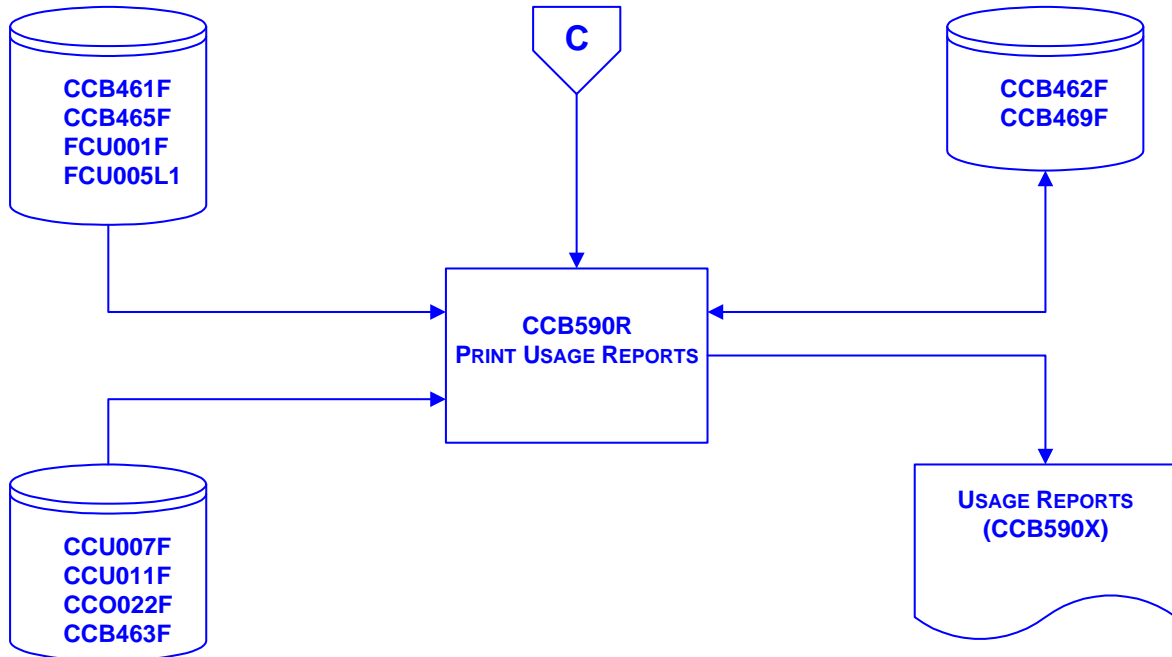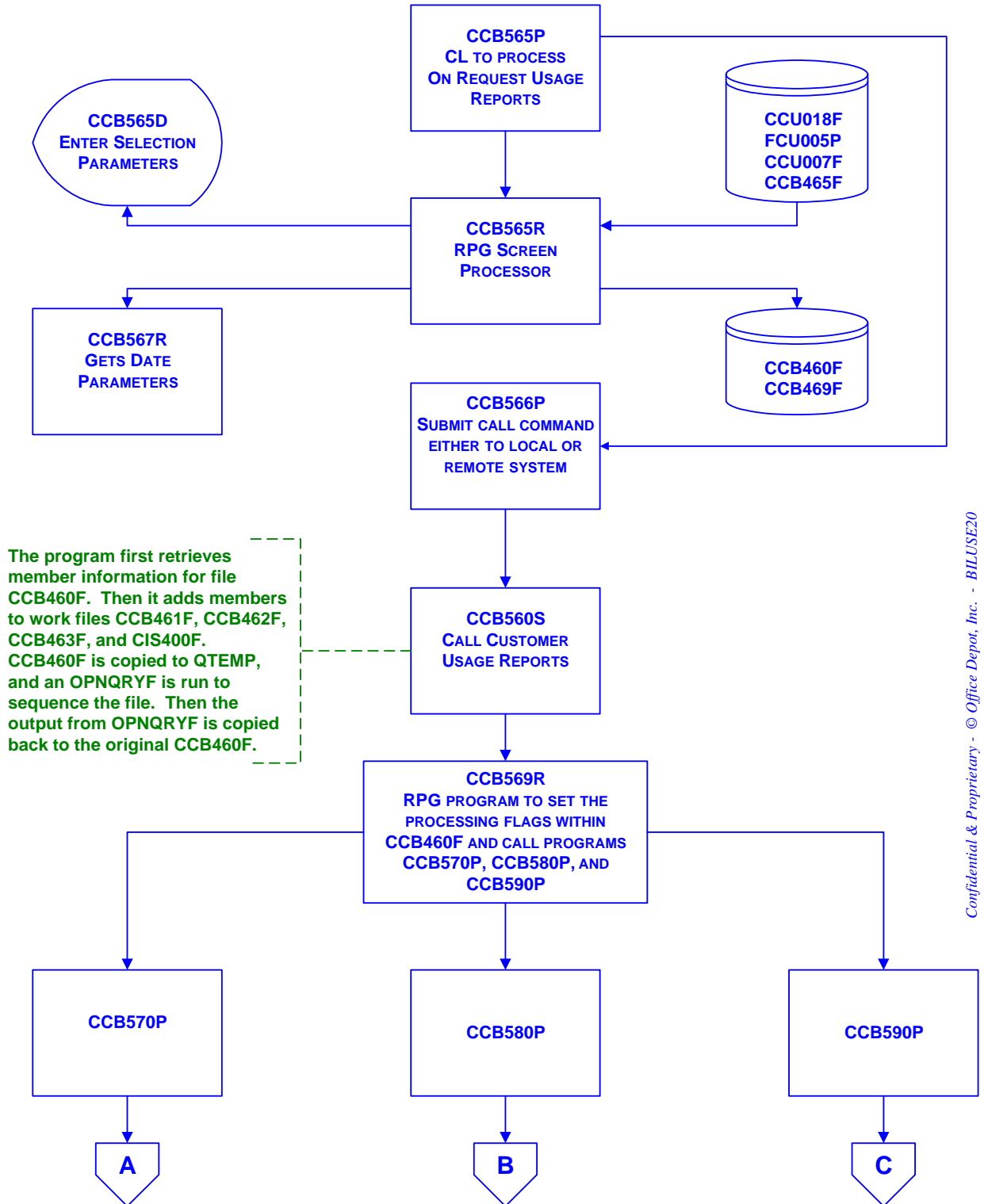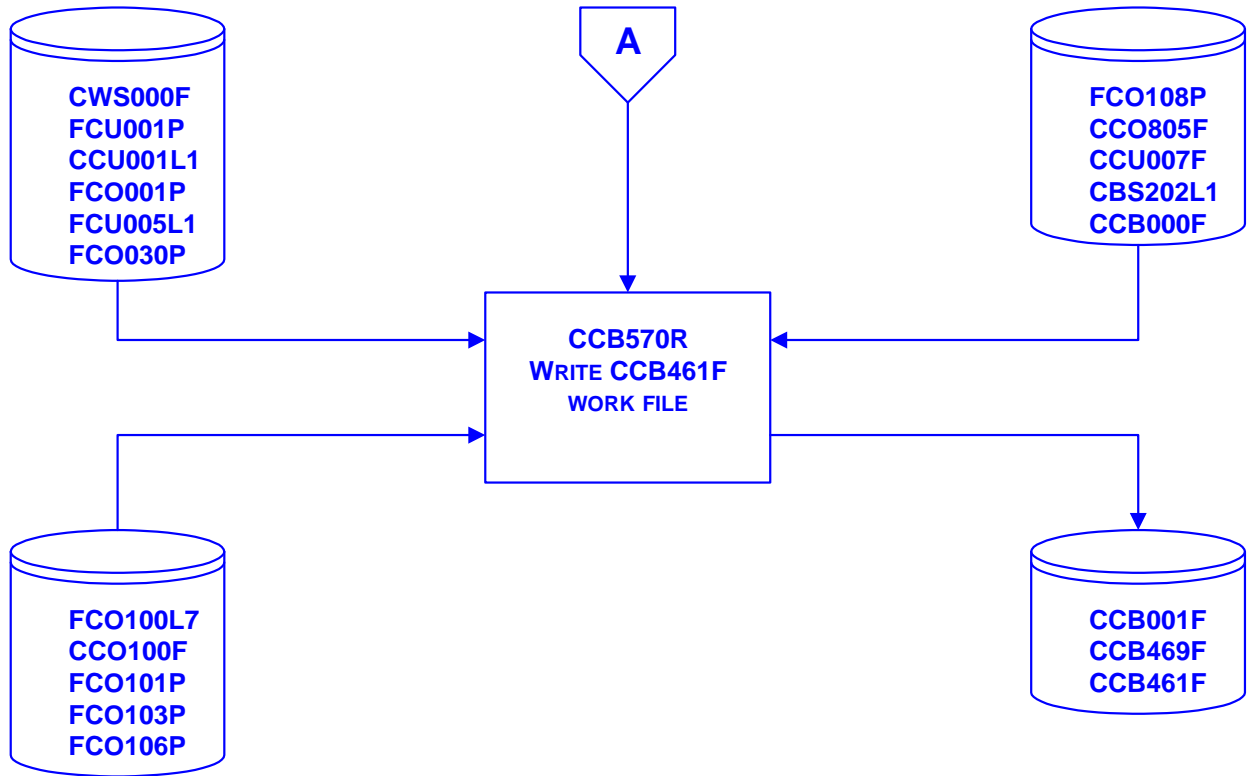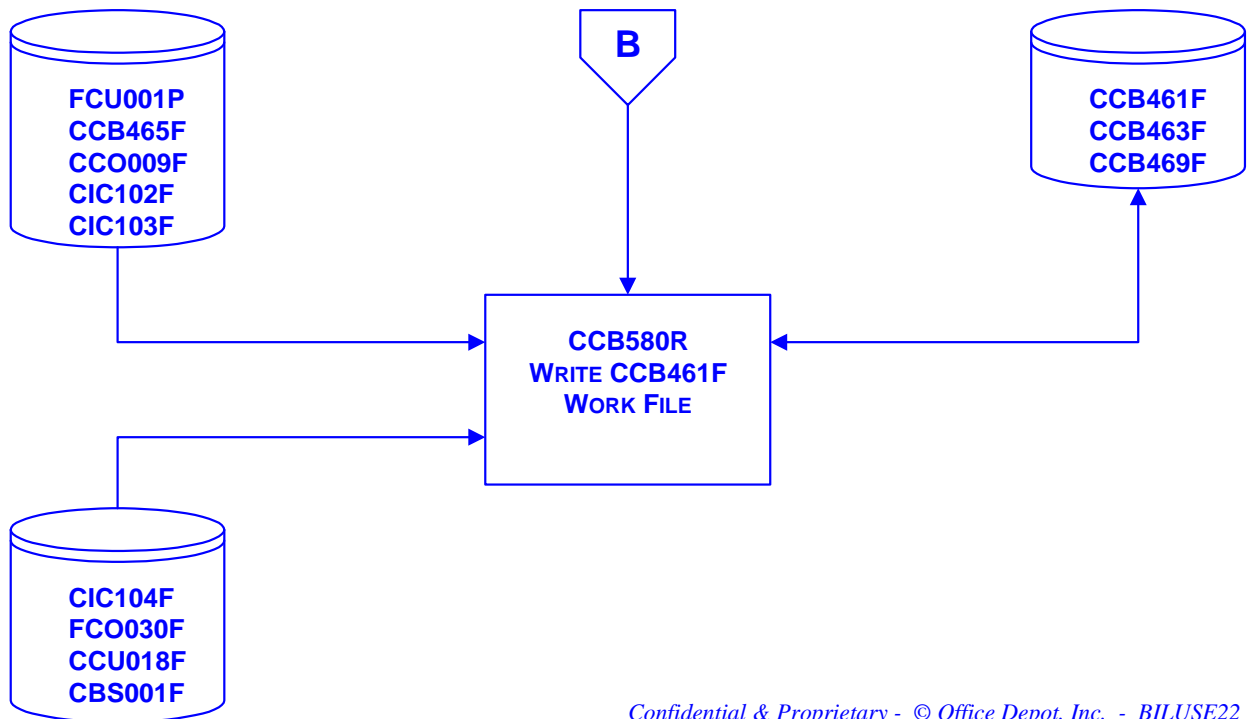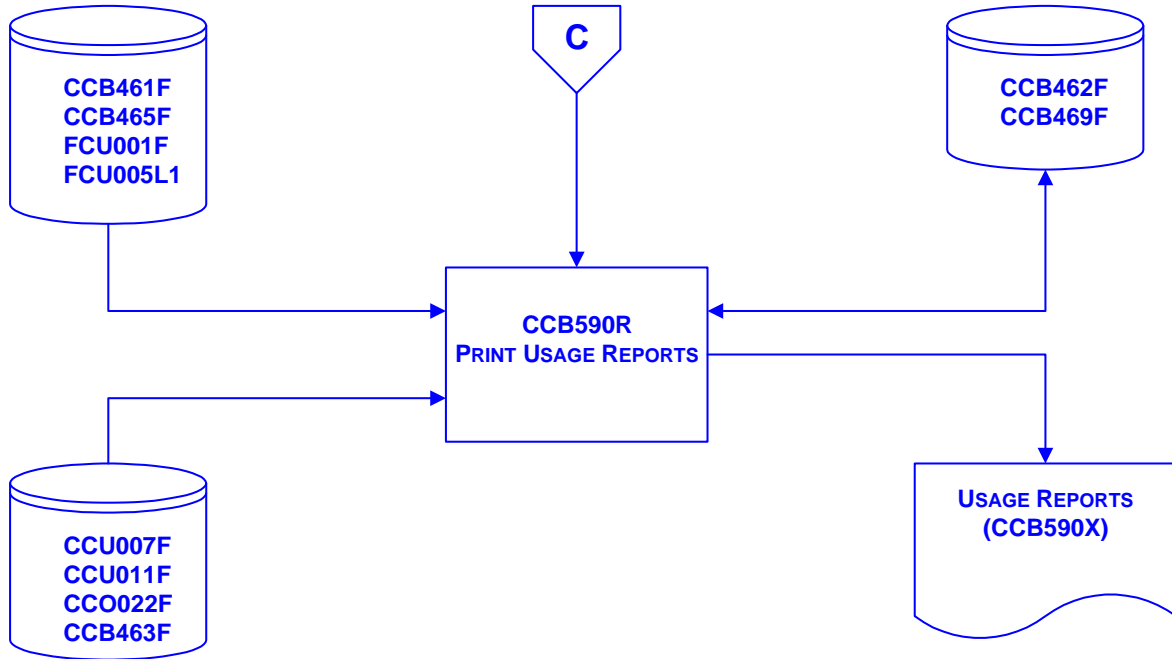**Figure 17.** Data Flow: Usage Report / Ad Hoc (*Continued from* Figure 15)

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Figure 18. **Data Flow: Usage Report / Ad Hoc (*Continued from* Figure 15)**

4.   FILE LAYOUTS

Diane Barrameo will provide
on 04-29-97

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5.   PROGRAMMING RULES

Will evolve during testing.

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