

**NO. 4 ELECTRONIC SWITCHING SYSTEM  
CIRCUIT ORDER ADMINISTRATION**

CONTENTS	PAGE	CONTENTS	PAGE
1. GENERAL . . . . .	2	ASSIGNMENT OF CIRCUIT ORDER RESPONSIBILITY . . . . .	32
2. CIRCUIT MAINTENANCE SYSTEM (CMS) NO. 1A PHASE 2 COS . . . . .	3	CIRCUIT ORDER COORDINATION . . . . .	33
3. COS COMMANDS . . . . .	5	TRUNK SUBGROUP TABLES . . . . .	36
GENERAL . . . . .	5	CAROT DATA UPDATE . . . . .	37
100 COMMANDS . . . . .	5	IN-EFFECT REPORTS . . . . .	38
200 COMMANDS—WORK LISTS . . . . .	5	CIRCUIT ORDER WORK UNITS/MONTHLY CONTROL OFFICE CHANGES FORM . . . . .	38
300 COMMANDS—CIRCUIT ORDER TICKET (COT) . . . . .	8	CIRCUIT INVENTORY . . . . .	38
400 COMMANDS—CIRCUIT DOCUMENTS . . . . .	9		
500 COMMANDS—IN-SERVICE DOCUMENTS . . . . .	14	TABLE	
600 COMMANDS—MANUAL ENTRY . . . . .	19	A. GLOSSARY OF ABBREVIATIONS . . . . .	4
700 COMMANDS—MISCELLANEOUS . . . . .	22	B. 351 ORDER STATUS CODES . . . . .	13
900 COMMANDS—ADMINISTRATIVE REPORTS . . . . .	25	C. CORRELATION OF TRAFFIC CLASSIFI- CATION OF TRAFFIC USE . . . . .	19
4. CIRCUIT ORDER FLOW . . . . .	27	D. TRUNK SCREENING TABLE—TRUNKS THAT CAN BE TESTED AUTOMATICALLY . . . . .	20
5. ADMINISTERING CIRCUIT ORDER PROCESS . . . . .	30	E. COMMON LANGUAGE ENTRIES . . . . .	37
GENERAL . . . . .	30	F. TRAFFIC-USE CODES OF CAROT-TESTABLE TRUNKS . . . . .	38
CIRCUIT ORDER SCHEDULING . . . . .	30		

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Figures	CONTENTS	PAGE	CONTENTS	PAGE	
1.	CMS No. 1A Phase 2 Circuit Order Subsystem . . . . .	6	22.	600 Commands—Circuit Order Manual Entry . . . . .	24
2.	Commands Available in Circuit Order Subsystem . . . . .	7	23.	700 Commands—Miscellaneous . . . . .	24
3.	Display 120—Example . . . . .	7	24.	960—Control Area Administrative Reports . . . . .	25
4.	200 Commands—Word Lists . . . . .	8	25.	961—New Circuit Order Listing . . . . .	27
5.	206 Commands—Circuit Order Work List . . . . .	9	26.	962—Cumulative Circuit Order Summary . . . . .	28
6.	207 Commands—Circuit Orders Cleared Today Work List . . . . .	10	27.	965—New Circuit Orders . . . . .	29
7.	250 Commands—Circuit Order Item List . . . . .	11	28.	966—In-Effect Reports Sent . . . . .	30
8.	300 Commands—350 Circuit Order Ticket . . . . .	12	29.	967—Completed Circuit Order Report . . . . .	31
9.	400 Commands—Circuit Order Documents . . . . .	14	30.	968—Delayed Status . . . . .	31
10.	401 Commands—Circuit Data . . . . .	15	31.	969—Total Circuit Orders . . . . .	32
11.	402 Commands—Equipment Data . . . . .	15	32.	Example of Monthly Central Office Changes Form . . . . .	33
12.	403 Commands—Test Data—Associated Display for 402 Equipment Data . . . . .	16	33.	Example of Monthly Circuit Inventory Form . . . . .	34
13.	404 Commands—Translation Data . . . . .	16	34.	Circuit Order Schedule—Work Sheet . . . . .	34
14.	Circuit Translation Information Codes . . . . .	17	35.	Example of Circuit Order Schedule—Work Sheet—Bar-Graph Display . . . . .	35
15.	405 Commands—Work Authorization and Log . . . . .	18	36.	Circuit Order Schedule—Test Data . . . . .	35
16.	406 Commands—CAROT Data Update . . . . .	18	37.	Example of Circuit Order Schedule—Test Data—Bar-Graph Display . . . . .	36
17.	500 Commands—In-Service Documents . . . . .	21	1.	GENERAL	
18.	Display 501—Example . . . . .	21	1.01	This section provides the Circuit Order Administrator (COAD) with information necessary to administer the message circuit order process in a No. 4 Electronic Switching System (ESS) machine.	
19.	Display 502—Example . . . . .	22	1.02	This Dial Facilities Management Practices (DFMP) section describes the tools available in the Circuit Order Subsystem (COS) and recommends	
20.	Display 503—Example . . . . .	23			
21.	Display 504—Example . . . . .	23			

procedures to administer the circuit order function. It is not intended to supersede existing instructions or Bell System Practices (BSP) sections related to the circuit order process.

**1.03** The circuit order job in a No. 4 ESS is closely related to other functions which are performed in the Machine Administration Center (MAC). For example, the recent change system used for routing changes and changes on trunk subgroups (TSG) will be coordinated from the MAC. Therefore, some efficiency should be gained by locating the Circuit Order Administration Areas (COAA) within the MAC.

**Note:** The machine administrator and COAD may be the same person.

**1.04** A maximum of two COAAs may exist within a No. 4 ESS environment. Each area will consist of from one to ten circuit order positions. Each circuit order position will be equipped with a cathode-ray tube (CRT) and an associated hard-copy device, the Model 40 teletypewriter (TTY).

**1.05** Due to the volume of circuit order work and other considerations unique to a particular No. 4 ESS location, the COAD may decide to have only one COAA. If the COAD finds this arrangement more efficient, then all Circuit Order Administration (COA) positions should be assigned to a single COAA.

**1.06** The administrative reports and circuit order records are stored by COAA within the COS. Therefore, only one report for each type available would be generated where both areas are combined into a single COAA. Whereas with two COAAs, each would receive a full complement of the available reports.

**1.07** The COAD is responsible for the following:

- (a) Scheduling circuit order work to meet required work, test, and due dates
- (b) Assigning circuit order responsibility to the COAA and to circuit order positions within areas
- (c) Overall circuit order coordination with the Machine Administration Center (MAC), the Terminal Equipment Center (TEC), and the Trunk Operations Center (TOC)

- (d) Providing the Circuit Maintenance System Maintenance Center (CMSMC) with data required for building TSG tables

- (e) Ensuring that the Centralized Automatic Reporting on Trunk (CAROT) data base is updated

- (f) Notifying the issuing Circuit Provision Bureau (CPB) of completion or delay of control circuit order items

- (g) Maintaining an accurate count of circuit order work units

- (h) Updating the circuit inventory.

**1.08** Table A is a glossary of the abbreviations used in this section.

**2. CIRCUIT MAINTENANCE SYSTEM (CMS) NO. 1A PHASE 2 COS (Fig. 1)**

**2.01** The CMS used for circuit order work is a dual-processor minicomputer system. CMS was designed primarily as a tool for trunk maintenance. The versatility of CMS, however, makes it possible to be used for other functions. Utilizing CMS for circuit order work provides mechanization of the recordkeeping process and circuit order coordination. The COS will generate various work lists, circuit documents, and administrative reports needed for the circuit order process.

**2.02** Circuit order entry to the COS may be accomplished by any of the following methods:

- (a) Direct input via data link from the CPB
- (b) Input from magnetic tape
- (c) Manual input from paper records.

**2.03** Access to circuit orders after they have entered the COS is accomplished by Model 40 TTYs. A series of 3-digit command codes are used to communicate with the COS. Keying the proper code will cause the CRT to display the document requested. When the desired data has been selected, operation of a print key will cause a hard copy of the display to be produced.

TABLE A  
GLOSSARY OF ABBREVIATIONS

ABBREVIATION	DEFINITION
ANI	Automatic Number Identification
BSP	Bell System Practices
BTFN	Base Traffic Number
CAMA	Centralized Automatic Message Accounting
CAROT	Centralized Automatic Reporting on Trunks
CIN	Circuit Identification Name
CLCID	Common Language Circuit Identification
CLRC	Circuit Layout Record Card
CMP	Complete
CMS	Circuit Maintenance System
CMSMC	Circuit Maintenance System Maintenance Center
COA	Circuit Order Administration
COAA	Circuit Order Administration Area
COAD	Circuit Order Administrator
CON	Circuit Order Number
COS	Circuit Order Subsystem
COT	Circuit Order Ticket
CPB	Circuit Provision Bureau
CRT	Cathode Ray Tube
CU	Control Unit
DFMP	Dial Facilities Management Practices
EML	Expected Measured Loss
ESS	Electronic Switching System
LTF	Lower Test Frequency
MAC	Machine Administration Center
PND	Pending
RCDM	Recent Change Data Message
RFS	Ready for Service
ROTL	Ready for Plant Test

TABLE A (Cont)

GLOSSARY OF ABBREVIATIONS

ABBREVIATION	DEFINITION
TAN	Trunk Appearance Number
TEC	Terminal Equipment Center
TOC	Trunk Operation Center
TSG	Trunk Subgroup
TSGTBL	Trunk Subgroup Table
TST	Test
TTY	Teletypewriter
UTF	Upper Test Frequency
VIU	Voiceband Interface Unit
XCN	Cross-Connect

**3. COS COMMANDS**

**GENERAL**

**3.01** The commands available and their associated functions and displays will be discussed in this section. BSP Section 103-270-103 provides detailed information concerning the displays and may be used in conjunction with this DFMP section.

**100 COMMANDS**

**3.02** The 100 commands will present a display that appears as an index. In addition to listing the 100 subcommands, this display will also list other commands available in the COS (Fig. 2).

**120 Commands**

**3.03** These commands (Fig. 3) are used to activate the circuit order, ie, they will make the order active in the COS. This allows the operator to communicate with COS to obtain data and take actions on a particular order. All communications with the COS are affected by using the circuit order number (CON). The CON is a 3-digit number assigned automatically as the order enters the COS.

**3.04** The 120 commands offer a variety of ways to activate an order ranging from the order number in general to the specific item and member.

**3.05** The item number is a 3-character field. The first two characters are digits indicating items 1 through 99. The third character indicates which supplement, if any, affects the item. A blank in the third character means no supplement has been issued affecting the item.

**3.06** The member is a 2-digit number identifying a single circuit within an item. If an item involves a digital group, the member number can range from 1 through 24. For a modular analog group, the number can range from 1 through 12. The member positions for a single circuit item will be left blank.

**130 Commands**

**3.07** Keying in code 130 releases the specified CON, item, and member from the activated state.

**200 COMMANDS—WORK LISTS**

**3.08** The work lists (Fig. 4) for COA are subdivided by COAA. This allows all positions within

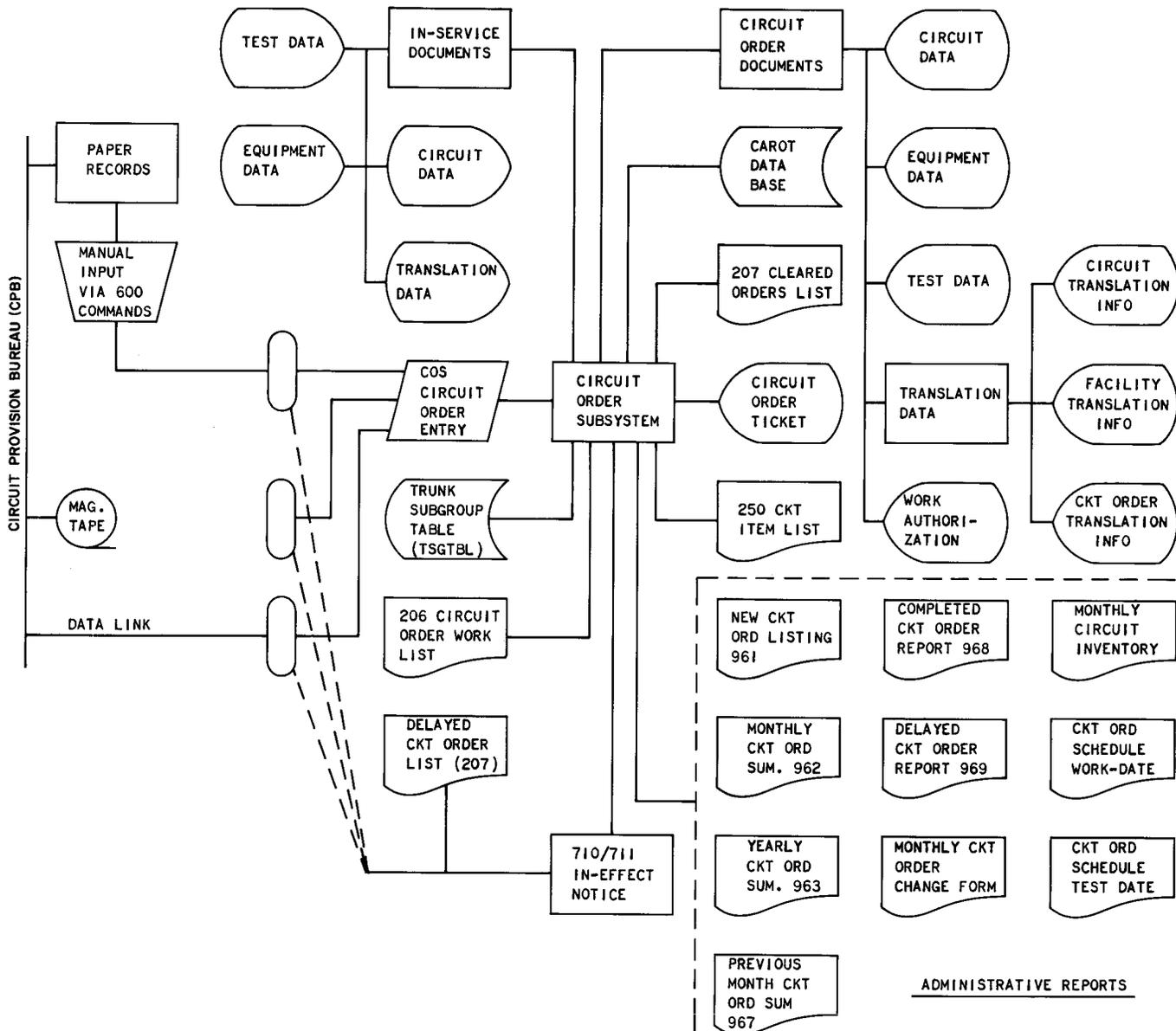


Fig. 1—CMS No. 1A Phase 2 Circuit Order Subsystem

a COAA to have access to all orders assigned to that area. If two COAAs are established (see 1.04), each area must have their respective circuit order responsibilities clearly defined.

**3.09** The COS is structured to easily allow a division of circuit order responsibility by issuing company. For example, all Long Lines issued circuit orders could be assigned to one COAA, and all circuit orders issued by the associated company could be assigned to the other COAA.

This particular division of responsibility is facilitated by the method of circuit order entry to the COS. Long Lines will have direct input via a data link from the CPB to the COS. Other companies may have direct input via a separate interface to COS, by manual input from paper records, or by magnetic tape.

**3.10** Assignment of positions to a COAA by the CMSMC can be adjusted to meet the requirements of that COAA circuit order load.



MESSAGES :  
 CON/ITEM/MEMBER: \*\*\*/\*\*\*)\*\*\*\*\* STATUS: \*\*\*/\*\*\*/\*\*\*

200 WORK LISTS

206 CIRCUIT ORDERS

207 CLEARED ORDERS

208 ITEM COUNT BY WORK DATE

250 CIRCUIT ORDER ITEM LIST

Fig. 4—200 Commands—Work Lists

**206—Circuit Orders**

**3.11** The 206 circuit order work list (Fig. 5) lists all pending circuit orders for a COAA. This listing will be by earliest item due date, ie, the order having an item with the earliest due date will be listed first. Each display page can have a maximum of eight entries. Keying in code 206 a second time brings on the second page of the display, ie, the next eight orders in sequence. The file will be treated as a circular file and may be accessed repeatedly until it presents the last page, after which it will again display the first page. Keying in code 2061 PAGE brings up the specified page of the circuit order list. If the page requested is greater than the last page number, then the last page is brought up.

**3.12** New orders entering the COS during a work day will be put at the bottom of the list. During the night, the 206 list will be reordered chronologically by earliest item due date. This reordering will take place during the administrative report-generating process.

**207—Circuit Orders Cleared Today**

**3.13** The 207 circuit orders cleared today (Fig. 6) is a list of all circuit orders cleared on the current day by a COAA. Entries appear on this list in the order of occurrence, ie, the order in which they are cleared. During the administrative report-generating process all entries are cleared from the 207 list. At 8 AM each day the list will automatically be cleared by the program and will remain empty until an order is cleared from the

circuit order state. An order appearing on this list cannot be made active from the MAC position.

**250—Circuit Order Item List**

**3.14** A 250 circuit order item list (Fig. 7) is generated for each circuit order as it enters the COS. This list has an entry for each item on the order. Items can easily be added to, or removed from, the list as supplements to the circuit order are received. Should an order be received with items missing, the COS will automatically provide an entry for the missing item.

**3.15** Access to the 250 item list is provided only when a position has an active order. The list is arranged numerically by item number. Each page of the 250 item list may have a maximum of eight entries. This list, like the 206 and 207 lists, is treated as a circular file (see 3.11 and 3.12).

**300 COMMANDS—CIRCUIT ORDER TICKET (COT)**

**3.16** A 350 COT (Fig. 8) for each order is generated when the circuit order enters the COS. The COT provides more information about the order than the 206 circuit order list and the 250 item list. It also provides a means for changing *order* status, clearing the order, and adding position responsibilities in addition to that provided automatically by the COS. Several lines are provided on the COT for use by the operator. These are free lines (ie, they are not restricted except for a limit of 73 total characters per line) and may be used as required for passing information between the work centers.

MESSAGES:

CON/ITEM/MEMBER: \*\*\*/\*\*\* )\*\*\*\*\* STATUS: \*\*\*/\*\*\*/\*\*\*

206 CIRCUIT ORDERS

CON ORDER NUMBER	ITEMS	STATUS MAC/TEC/TOC	EARLIEST ITEM DUE DATE
*** )*****	**	***/***/***	**/**/**
*** )*****	**	***/***/***	**/**/**
*** )*****	**	***/***/***	**/**/**
*** )*****	**	***/***/***	**/**/**
*** )*****	**	***/***/***	**/**/**
*** )*****	**	***/***/***	**/**/**
*** )*****	**	***/***/***	**/**/**
*** )*****	**	***/***/***	**/**/**

Fig. 5—206 Commands—Circuit Order Work List

351—Order Status

3.17 This command allows the COA craft personnel to change the *order* status. The order status is initially set to "pending" in each location (MAC/TEC/TOC). The codes used for indicating status have very few edits. The code is limited to three characters for each location. An asterisk in the first position of a status code (---/\*--/\*--) will automatically cause a message to be sent to the responsible TEC and TOC positions. This message will alert those positions of a status change on their work lists.

3.18 The status codes and their associated conditions and definitions listed in Table B are recommended.

352—Cleared From MAC

3.19 This command will remove the circuit order from the COS. A series of checks will be made on the order and on all items within the order. For example, if this office is control, a check will be made to ensure that a satisfactory CAROT test was made. The COS will also ensure

that an in-effect notice has been implemented if this office is control. The COAD should verify that documents are transferred from the circuit order state to the in-service state (704 command). After all requirements are met, the order will be removed from the 206 circuit order work list and added to the 207 cleared orders work list.

400 COMMANDS—CIRCUIT DOCUMENTS

3.20 Circuit documents can reside in the CMS file in one of two states, the "circuit order state" and the "in-service state." The circuit order state includes the documents being stored for circuit order work. In this state, the documents are referred to as "Circuit Order Documents," and the following components are stored:

- Circuit data
- Equipment data
- Test data
- CMS translation data

MESSAGES:  
 CON/ITEM/MEMBER: \*\*\*/\*\*\*)\*\*\*\*\* STATUS: \*\*\*/\*\*\*/\*\*

207 CIRCUIT ORDERS CLEARED TODAY

CON	ORDER NUMBER	ITEMS	EARLIEST ITEM DUE DATE
***)	*****	**	**/**/**
***)	*****	**	**/**/**
***)	*****	**	**/**/**
***)	*****	**	**/**/**
***)	*****	**	**/**/**
***)	*****	**	**/**/**
***)	*****	**	**/**/**
***)	*****	**	**/**/**

Fig. 6—207 Commands—Circuit Orders Cleared Today Work List

- Work authorization and log
- CAROT translation data.

display and presents all the information provided by the Circuit Layout Record Card (CLRC).

Access to these documents is provided by the 400 commands (Fig. 9).

**400—Circuit Order Documents**

**3.21** The 400 circuit order document display (Fig. 9) provides an index of the circuit order documents available in the COS. Access and modifications to the circuit order documents are provided by these commands.

**401—Circuit Data**

**3.22** The 401 circuit data command (Fig. 10) provides access to the circuit order circuit data component. Information provided on this display is taken from the circuit order document as provided by the CPB. This is a multipage

**402—Equipment Data**

**3.23** The 402 command (Fig. 11) and its associated display page provides access to the circuit order equipment data component. This component is a single display page and lists by name and location the circuit equipment from the voiceband interface unit (VIU), or its equivalent, to the distribution frame. The equipment data is associated with the circuit order when the trunk appearance number (TAN) is entered in the translation data. A portion of the data is fixed and cannot be modified. Those parts that can be modified are modified by a 450 command. The equipment data will contain specific equipment location, ie, floor, aisle, bay, and number. This data will be taken from the equipment file provided by Western Electric Company.



```

MESSAGES:
CON/ITEM/MEMBER:  ***/**/***  )*****
STATUS:  ***/**/***

35Ø  CIRCUIT ORDER TICKET

CON ***  ORDER NUMBER *****
EARLIEST ITEM DUE DATE **/**/**  NUMBER OF ITEMS **
ISSUING COMPANY *****

351  ORDER STATUS  MAC/TEC/TOC
                        **/**/**
                        WHEN
352  CLEARED FROM MAC  ****  ****

WORK DESCRIPTION AND COMMENTS
353  *****
354  *****
355  *****
356  *****
357  *****
358  *****
359  *****
36Ø  *****
    
```

Fig. 8—300 Commands—Circuit Order Ticket

entered during the circuit order entry process. If this information is not available at that time, the COAD will assign circuit order responsibility in the TSG table (TSGTBL). Circuit order responsibility must be provided before changing the status of an order from "Pending" (PND).

**Facility Translation Information**

**3.28** The outgoing facility and weak-link facility are stored as translation information. The weak-link facility is defined as the facility with the shortest noise measurement interval of all facilities assigned to that circuit. The weak-link facility is indicated by one or two characters taken from the facility designation, eg, N, ON, L, etc. This information is required for CAROT test scheduling.

**Circuit Order Translation Information**

**3.29** This information includes the order number, the work, test, and due dates, and the circuit order responsibility. (See 3.26 and 3.27.) The work and test dates must be assigned by the COAD during the circuit order entry scheduling. (See

5.03 through 5.06.) The due date will be entered during the circuit order process and may only be changed by a reschedule circuit order.

**405—Work Authorization and Log**

**3.30** The 405 work authorization and log data (Fig. 15) is stored only for circuits in the circuit order state. Notes passed by the CPB will appear on this display. The free format region of this display may also be used by circuit order personnel to pass information relating to the order. This document is the equivalent of the circuit order.

**406—CAROT Data Update**

**3.31** The 406 CAROT translation display (Fig. 16) is only available for those circuits that are CAROT testable. (See 5.26 through 5.32 and Tables C and D). When the COA craft personnel attempts to call up the 406 CAROT display page, it may be denied because the circuit is legitimately non-CAROT testable, or certain data may not have been entered. For example, all Long Lines circuits

TABLE B  
351 ORDER STATUS CODES

STATUS CODE	DEFINITION	CONDITIONS
PND (Pending)	The initial status provided by the COS to indicate the order is pending.	The circuit order has been inputted to the COS.
XCN (Cross-connect)	This status, in the TEC status positions, tells TEC to perform their cross-connect work.	The COA craft personnel has received confirmation that all recent changes required by MAC are complete, trunk subgroup tables have been updated (if necessary), and an ESS TAN assignment has been entered.  <i>Note:</i> Before any status can be changed from PND, the circuit order position responsibilities must be assigned.
TST (Test)	This status alerts the TOC position to test the circuit.	The COA craft personnel has received confirmation that TEC has completed all cross-connect work. Where applicable, the CAROT data base has been updated.
CMP (Complete)	This status indicates that all work required by the work center (MAC, TEC, or TOC) has been completed.	Various checks will be made to ensure that the circuit order work is complete.
RPT (Ready for Plant Test)	This status indicates that the circuit is complete in all work centers and is now awaiting plant test dates.	All locations, MAC/TEC/TOC, must have completed their work.
RFS (Ready for Service)	The circuit has met all test requirements including overall plant tests and is ready to be placed in service.	Before MAC can clear this circuit order, TOC will have to place each item in the in-service state.

will be classed as non-CAROT testable until the traffic-use code has been entered on the 404 display.

**3.32** All one-way incoming circuits will be classed as non-CAROT testable until the 406 display data, lines 443 and 444, are complete.

**3.33** The TOC supervisor will be responsible for furnishing data required to complete lines 440, 441, and 442.

**3.34** Lines 443 and 444 need only be completed on one-way incoming groups where CAROT testability exists and the No. 4 ESS office has

decided to perform CAROT tests. The trunk priming information (line 443) is the TAN of the circuit. This information will either be available from the TSGTBL or must be assigned on the translation data display (404).

**3.35** The far-end switching systems information is available on the CLRC and must be entered on line 444.

**3.36** After all lines have been entered, the COA craft personnel will send a 445 "CAROT data complete" command.





MESSAGES:
CON/ITEM/MEMBER: \*\*\*/\*\*\*)\*\*\*\*\* STATUS: \*\*\*/\*\*\*/\*\*

403 TEST DATA

CLCID \*\*\*\*\*
410 EML DEV 1000HZ LTF 400Hz UTF 2800HZ ICL
A: \*\*\* \*\*
Z: \*\*\* \*\*
411 NOISE MEAS SP ERL SWSYS SWA
A: \*\*\*\* \*\*
Z: \*\*\*\* \*\*
412 \*\*\*\*\*
413 \*\*\*\*\*
414 \*\*\*\*\*
415 \*\*\*\*\*
416 \*\*\*\*\*
417 \*\*\*\*\*
418 \*\*\*\*\*
419 \*\*\*\*\*

Fig. 12—403 Commands—Test Data—Associated Display for 402 Equipment Test

MESSAGES:
CON/ITEM/MEMBER: \*\*\*/\*\*\*)\*\*\*\*\* STATUS: \*\*\*/\*\*\*/\*\*

404 TRANSLATION DATA

CIRCUIT
CLCID/\*\*\*\*\*
CIN /\*\*\*\*\*
CONTROL/\*
OWNERSHIP/\*\*
431 ESS TAN /\*\*\*\*\*
432 CMS CONFIGURATION CODE/\*\*\*\*\*\_\*\*\*\*\*
FACILITY
433 OUTGOING FAX/\*\*\*\*\*
CIRCUIT ORDER
435 WORK DATE/\*\*/\*\* TEST DATE/\*\*/\*\* DUE DATE/\*\*/\*\*

Fig. 13—404 Commands—Translation Data

<u>Channel Type</u>	<u>CMS Channel Type Code</u>
A Channel Bank	A
N Channel Bank	N
D Channel Bank	D
Digital Terminal	DT
Group Terminal	GT
Metallic*	Mxx*

Metallic Type Codes

\*First Character is M

Second Character is 2 for 2-Wire Circuit  
4 for 4-Wire Circuit

Example: 4-Wire Metallic: M4

Examples:

<u>OFFICE A</u>	<u>OFFICE Z</u>	<u>CMS CONFIGURATION CODE</u>
A Ch Bnk SMAS ESS	A Ch Bnk	SA*-A
Group Terminal ESS	A Ch Bnk SMAS	GT*-SA
Metallic 4-Wire  ESS	Metallic 4-Wire	MA*-M4

Note: The codes used to denote a particular configuration will be associated with a circuit sketch. These circuit sketches can be called up on the CRT display by using the proper test command.

**Fig. 14—Circuit Translation Information Codes**

MESSAGES:

CON/ITEM/MEMBER: \*\*\*/\*\*\*)\*\*\*\*\* STATUS: \*\*\*/\*\*\*/\*\*\*

405 WORK AUTHORIZATION AND LOG

CLCID \*\*\*\*\*
ORDER NO. \*\*\*\*\* ITEM NO. \*\*\* SERVICE DATE \*\*\*\*\*
ISSUING CO.: \*\*\*\*\* ACTION: \*\*\*\*\* ASSUMED IE: \*\*\*\*\*
WORK DATE: \*\*/\*\* TEST DATE: \*\*/\*\*

INSTALL CROSS-CONNECT

425\*\*\*\*\*
426\*\*\*\*\*
427\*\*\*\*\*
428\*\*\*\*\*
429\*\*\*\*\*

Fig. 15—405 Commands—Work Authorization and Log

MESSAGE·
CIRCUIT:

406 CAROT TRANSLATION DATA
CLCID \*\*\*\*\*

TEST CODES

440 SCHEDULE CODE/\*
441 LOSS DEVIATION/\*.\*
OPTIONAL ENTRY
442 BIMODAL TRUNK (Y OR N)/\*
443 FAR-END TRUNK PRIMING/\*\*\*\*\*
444 FAR-END SWITCHING SYSTEM/\*\*\*

445 CAROT DATA COMPLETE NEAR-FAR FAR-NEAR
CAROT-TESTABILITY \*\*\* \*\*\*

Table with 3 columns: SCHEDULE CODES, INDEX CODES, COMBINATION CODES. Includes items like DAILY, WEEKLY, SEMIMONTHLY, MONTHLY, QUARTERLY, E REP (NO HYB), E REP+HYB, NON GAIN(NO HYB), NON GAIN+HYB, REP (OTHER THAN E), CARRIER, S SINGLE LINK, M MULTIPLE LINK.

Fig. 16—406 Commands—CAROT Data Update

TABLE C  
CORRELATION OF TRAFFIC CLASSIFICATION OF TRAFFIC USE

TRAFFIC USE		TRAFFIC CLASSIFICATIONS							
CATEGORY	CODE	AF	CF	DF	FG	HU	IF	MI	TR
Intertoll Primary  Secondary	IT		X		X	X	X		X
	LW			X					
	OA			X		X			
	OJ			X		X			
	TT			X		X			
Toll Connecting	GA			X					
	DD	X		X		X	X		
	MN			X					
	OO			X					
	RC			X					
	SP			X					
	TC			X		X			
	TM			X		X			
	TS			X		X			
Interlocal Direct  Tandem	IA	X		X		X			
	IE			X		X			
	IM	X		X		X			
	MT	X		X		X	X		
	TG			X		X			
	TO	X		X		X	X		
Centrex	AD			X					
	DE			X					
	DO			X					
TWX Switching Plan	TW		X		X	X	X		
Miscellaneous	ALL							X	

no codes are available for modifications to the display.

**600 COMMANDS—MANUAL ENTRY**

**3.43** This display (Fig. 22) provides an index of the commands needed to enter circuit order data manually. Certain information must be entered by the COAD before circuit documents and associated reports will be available in the COS.

**601—Start Manual Entry**

**3.44** This command will be used to *start* the manual entry process and begins with the assignment of issuing company.

**630-635—Translation Data**

**3.45** The 630 command will be used to start input of translation data. Entry of this data may be facilitated by using the 695 command to call up an existing page. For example, 695

TABLE D  
TRUNK SCREENING TABLE —  
TRUNKS THAT CAN BE TESTED AUTOMATICALLY

TRAFFIC USE*		TRAFFIC CLASS*						
CATEGORY	CODE	FINAL		NON-ALT. ROUTE			HIGH USAGE	OTHER
		AF†	CF†	IF	DF‡	FG	HU	TR
Intertoll	IT		X	X		X	X	X
Toll Connecting	CA				X‡			
	DD	X§		X	X		X	
	OO				X¶			
	TC				X		X	
	TM				X		X	
Interlocal	IA	X			X		X	
Direct	IE				X		X	
	IM	X			X		X	
Tandem	MT§	X		X	X		X	
	TG**				X		X	
	TO§	X		X	X		X	
Centrex	DI				X††			
	DO				X‡‡			

**Notes:**

- \*See BSP Section 005-200-100 for definitions of traffic class and traffic use.
- †If No. 5 Crossbar originated, may require route-advance information.
- ‡If automatic number identification (ANI) equipped.
- §Some limitations on terminating ability; may require dummy test codes.
- ¶If machine-accessible via auxiliary trunk circuits.
- \*\*Must have access to tandem end of trunk.
- ††If control unit (CU) centrex equipped with test lines.
- ‡‡If centrex has testing ability.

and an existing circuit translation data page could be specified. This would cause that page to be displayed and the changes could then be entered. Considerable time should be saved by using this procedure. After all translation data has been entered, command 635 will be sent to complete the entry.

**640-645—Circuit Data**

**3.46** These commands are used to input the circuit data. Command 640 is sent at the start of the information, and 645 is sent when circuit data is complete. Again, calling up an existing page

```

MESSAGES:
CON/ITEM/MEMBER:  ***/*** )***** STATUS:  ***/***/***

5ØØ  CIRCUIT DATA - IN SERVICE
5Ø1  CIRCUIT DATA
502  EQUIPMENT DATA          NOTE:  ENTER 5ØX/CIN OR 5ØX
5Ø3  TEST DATA
5Ø4  CMS TRANSLATION DATA
    
```

Fig. 17—500 Commands—In-Service Documents

```

MESSAGES:
CON/ITEM/MEMBER:  ***/**/ )***** STATUS:

6Ø1  CIRCUIT DATA

      CKT/
      CONTROL/*****

LOCA      EQPT AND FAC      MISCELLANEOUS
*****/*****/*****TLP*****/*****
*****/*****/*****/*****
*****/*****/*****/*****
*****/*****/*****/*****
*****/*****/*****/*****
    
```

Fig. 18—Display 501—Example

via the 695 command will save time entering the data.

**650-655—Equipment Data**

**3.47** The equipment data entry cannot be entered until an ESS TAN assignment is made. After the TAN is assigned, command 650 will be used at the start of the entry and command 655 will be used when the equipment data entry is complete. The 695 command may be used to call up an equipment data page.

**660-665—Test Data**

**3.48** Command 660 is used at the start of the test data input and command 665 is sent when the test data entry is complete. The 695 command may be used to call up a test data page.

**670-675—Work Authorization**

**3.49** Command 670 is used to begin the work authorization data. After the work authorization has been entered, command 675 will be used to signify the completion.

MESSAGES:  
CON/ITEM/MEMBER: \*\*\*/\*\*/ )\*\*\*\*\*

STATUS:

502 EQUIPMENT DATA

CLCID: \*\*\*\*\*

TAN: \*\*\*\*\*

ORDER CODE: \*\*\*\*\*

UNIT  
\*\*\*\*\*

LOCATION  
\*\*\*\*\*

ADDITIONAL INFORMATION  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

LOCAL EQUIPMENT INFORMATION OR COMMENTS

FACILITY: \*\*\*\*\*

Fig. 19—Display 502—Example

682 Complete Order

3.50 Command 682 indicates to the COS that all components for *all* items on this order are complete. At this time a CON would be assigned, and this order would be added to the 206 circuit order work list.

687—Abort Order

3.51 This command allows the COAD to cancel the order before the manual entry has been completed.

695—Get Existing Component Page

3.52 The 695/CIN, 695/CON/ITEM NO./PAGE NO., 690/FORM NO./PAGE NO. commands may be used by the COAD to facilitate the entry of component data. For example, 695/CIN would display the appropriate component (translation data, circuit data, etc) of the CIN specified. In some

cases, only a few changes would then be required to complete the component display for the item being entered. The necessary changes may be inputted on the CRT display and then transferred to the COS.

602—End Manual Entry

3.53 This command informs the COS that manual entry is complete.

3.54 BSP Section 103-270-103 describes these displays in detail.

700 COMMANDS—MISCELLANEOUS (Fig. 23)

701 Command—Status

3.55 The 701 command displays the item status in the MAC/TEL/TOC for the order specified.



MESSAGES ORDER	ITEM	STATUS
600	CIRCUIT ORDER - MANUAL ENTRY	
601	START MANUAL ENTRY - ENTER: 601/ISSUING COMPANY	
602	END MANUAL ENTRY	
	START	ENTER COMPONENT
	630	635 TRANSLATION DATA
6*0	640	645 CIRCUIT DATA
6*5	650	655 EQUIPMENT DATA
	660	665 TEST DATA
	670	675 WORK AUTHORIZATION
682	COMPLETE ORDER	
687	ABORT ORDER - ENTER: 675/ORDER NO.	
695	GET EXISTING COMPONENT PAGE - ENTER: 695/CIN, 695/CON/ITEM NO./PAGE NO. 690/FORM NO./PAGE NO.	

Fig. 22—600 Commands—Circuit Order Manual Entry

MESSAGES:  
 CON/ITEM/MEMBER:   \*\*\*/\*\*\*)\*\*\*\*\*   STATUS:   \*\*\*/\*\*\*/\*\*

700 MISCELLANEOUS

701 ITEM STATUS                   (MAC/TEC/TOC)

703 EQUIPMENT DATA FOR TAN - ENTER 703/TAN

704 UP-DATE ITEM DOCUMENTATION

710 SEND IN-EFFECT NOTICE - ENTER 710/COMMENTS

711 SEND DELAY NOTICE - ENTER 711/DELAY CODE/COMMENTS

720 REQUEST LOCAL FORM

725 DISPLAY LOCAL FORM

760 TRUNK SUBGROUP UPDATE

Fig. 23—700 Commands—Miscellaneous

**703 Command**

**3.56** This command allows the COAD to call up a particular TAN. (The equipment card is not associated with a circuit order until an ESS TAN is assigned to that circuit.) This command is valid even though the TAN requested may be assigned to a circuit not in the circuit administration state.

**704 Command**

**3.57** This command allows the COAD to transfer documents from the circuit order state to the in-service state. Before this command can be implemented, various checks will be made by the COS.

**710 and 711 Commands**

**3.58** These commands are used to generate an in-effect notice to the CPB. The 710 command implements the in-effect notice; however, before it is sent, checks are made by the COS to see that CMS is updated and that the circuit (in case of add or change) is turned up for service in the No. 4 ESS. Provision is also available to send comments along with the in-effect notice. The 711 command is used to send a delay status to the CPB.

**900 COMMANDS—ADMINISTRATIVE REPORTS**

**3.59** The 960 series of codes (Fig. 24) is used to access the MAC administrative reports. Reports 966 through 969 are not available on command but are produced automatically between midnight and 8 AM. The CMSMC, however, can request these reports if, for some reason, they are not available by the automatic process.

**3.60** The following reports are available in the MAC:

- 961—Total Circuit Orders Report
- 962—Yearly Circuit Order Summary
- 965—New Circuit Orders Listing
- 966—In-Effect Reports Sent Listing
- 967—Completed Circuit Orders Listing
- 968—Delayed Status Listing
- 969—End of Month Total Circuit Orders Listing
- Monthly Central Office Changes Form
- Monthly Circuit Inventory

MESSAGES :  
CON/ITEM/MEMBER :

STATUS :

960 CONTROL AREA ADMINISTRATIVE REPORTS (MAC)

DEMAND REPORTS

- 961 TOTAL CIRCUIT ORDERS REPORT
- 962 YEARLY CIRCUIT ORDER SUMMARY

AUTOMATICALLY GENERATED REPORTS

- 965 NEW CIRCUIT ORDERS LISTING
- 966 IN-EFFECT REPORTS SENT LISTING
- 967 COMPLETED CIRCUIT ORDERS LISTING
- 968 DELAYED STATUS LISTING
- 969 END OF MONTH TOTAL CIRCUIT ORDERS LISTING

**Fig. 24—960—Control Area Administration Reports**

- Circuit Order Schedule—Work Sheet
- Circuit Order Schedule—Test Data.

### 960—Control Area Administrative Reports

**3.61** This display (Fig. 24) acts as an index for the reports available to the MAC. These reports provide a record of circuit order work that has occurred in the MAC.

### 961—Total Circuit Orders Report

**3.62** This report (Fig. 25) provides each control area with a list of the current month's cumulative number of circuit order items received, completed, or delayed. This report is available on command only at the COAA or the CMSMC.

### 962—Yearly Circuit Order Summary

**3.63** This report (Fig. 26) provides the COAA with a summary of the number of circuit order items received in the control area, completed by the control area, or delayed in the control area for each month of the year covered by the report.

### 965—New Circuit Orders Listing

**3.64** This report (Fig. 27) provides a list of circuit orders that have been assigned to the control area for the date at the top of the report. This report is automatically generated in the control area.

### 966—In-Effect Reports Sent Listing

**3.65** This report (Fig. 28) is a listing of the in-effect reports sent to the operating companies to notify them that an item has been turned up for service. The date and time of the report are given at the top of the report. This report is automatically generated in the control area.

### 967—Completed Circuit Orders Listing

**3.66** The completed circuit orders display (Fig. 29) is a daily listing of circuit orders completed in the control area. The report is divided into two sections for control areas responsible for more than one operating company. This report is automatically generated in the control area.

### 968—Delayed Status Listing

**3.67** This report (Fig. 30) provides each control area with a list of delayed circuit orders in the area at the time the report is printed. This report is automatically generated in the control area.

### 969—End of Month Total Circuit Orders Listing

**3.68** This report (Fig. 31) is similar to report 961—the difference being that report 961 is a demand report and report 969 is automatically printed in the control area.

### Monthly Central Office Changes Form

**3.69** This form provides the COAA with a CRT display format for entering central office circuit changes. The example in Fig. 32 identifies the control area and present date. Space is provided for entering the number of private lines, toll terminal miscellaneous, and service circuit changes by company. Long Lines could easily adapt the format of the E5214, "Order Completion Log," and use this report in maintaining a record of circuit changes.

### Monthly Circuit Inventory Form

**3.70** The monthly circuit inventory form (Fig. 33) provides the control area with a CRT display format for maintaining a circuit inventory. This format must be determined locally and will then be input via the CMSMC. This form is updated manually.

### Circuit Order Schedule—Work Sheet

**3.71** This report is provided daily to the COAD. (See Fig. 34.) The report lists all CON/Items having a *work* date schedule for the current date. Circuit order responsibility, if available, is shown on this report for the MAC/TEC/TOC. In addition to the daily listing, the COAD may request this schedule for some future time period which will be presented in a bar-graph display (Fig. 35).

### Circuit Order Schedule—Test Data

**3.72** This report is identical to the work sheet schedule (3.71) except that the report is a listing by schedule *test* dates. Refer to Fig. 36 and 37.

961 TOTAL CIRCUIT ORDERS MN DA TO MN DA - CONTROL AREA X

ACTION	# ITEMS RECEIVED		# ITEMS COMPLETED		# ITEMS DELAYED	
	(CO.A)	(CO.B)	(CO.A)	(CO.B)	(CO.A)	(CO.B)
ADDS	***	***	***	***	***	***
DISCONTINUES	***	***	***	***	***	***
CHANGES	***	***	***	***	***	***
CANCELS (K)	***	***	***	***	***	***
TURN DOWNS	***	***	***	***	***	***
TURN UPS (U)	***	***	***	***	***	***
RESCHEDULES	***	***	***	***	***	***
MODIFY	***	***	***	***	***	***
TOTAL	***	***	***	***	***	***

Fig. 25—961—New Circuit Order Listing

4. CIRCUIT ORDER FLOW

4.01 The following paragraph describes events as they occur during the circuit order process. Exceptions to this flow may vary on orders with differing action codes or by differences in administrative procedures. The basic concept, however, should be applicable.

4.02 As an order enters the COS, the following data will be produced or modified:

- (1) The COS will assign a 3-digit CON to the order.
- (2) The order will be added to the 206 circuit order work list.

- (3) A circuit order item list (250) will be generated for the order listing each item.
- (4) The COS will set both the *order* and *item* status to pending (PND).
- (5) A circuit order ticket (350) will be created.
- (6) The COS will search the files for information needed to complete the 250 item list and the 350 COT data. If the information exists in the TSGTBLs, the data will be entered.
- (7) If this order establishes a new TSG, the TSGTBL must be updated.
- (8) The MAC will submit a recent change data message (RCDM) establishing the TSG. After

962 YEARLY CIRCUIT ORDER SUMMARY - CONTROL AREA X

MN/YR

COMPANY	#ITEMS (CO.A)	RECEIVED (CO.B)	#ITEMS (CO.A)	COMPLETED (CO.B)	#ITEMS (CO.A)	DELAYED (CO.B)
MONTH YEAR						
JAN 1974	****	****	****	****	****	****
FEB 1974	****	****	****	****	****	****
MAR 1974	****	****	****	****	****	****
APR 1974	****	****	****	****	****	****
MAY 1974						
JUN 1974						
JUL 1974						
AUG 1974						
SEP 1974						
OCT 1974						
NOV 1974						
DEC 1974						

Fig. 26—962—Cumulative Circuit Order Summary

the TSG is established, an RCDM will be entered to assign trunks to the TSG. The COAD will then be able to complete the translation data.

(9) The base traffic number (BTFN) will be entered on the 404 display along with the traffic-use code. (Long Lines CLRC will not list traffic-use codes.)

(10) The ESS TAN assignment made by the MAC must also be entered on the 404 display.

(11) After the TAN assignment is entered, circuit order and maintenance responsibility should automatically be listed on the COT.

(12) The specific equipment information will be automatically entered on the equipment data display.

(13) The TOC supervisor will determine if the circuits being added are to be tested by CAROT, and will notify the COAD.

(14) If the circuits are to be tested by CAROT, the CAROT translation data (406) should be entered. (See 3.32 through 3.37.)

(15) At this point in the process, the COAD should verify that all data is entered and that the data entered is correct.

(16) The COAD should schedule work and test dates if required. (See 5.03 through 5.06.)

(17) If work is required in the TEC, the order must be referred there.

(18) The TEC will be responsible for inserting the necessary plug-in units, completion, or obtaining a completion of any associated facility orders, providing the equipment options, and making cross-connections.

(19) When the TEC responsibility is complete, the order may be referred to the TOC for testing. The initial test should verify that the TEC completed the work correctly.

965 NEW CIRCUIT ORDERS - CONTROL AREA X

DATE XX/XX/XX

(COMPANY A):

EARLIEST ITEM - DUE DATE	CON ORDER NUMBER	A	D	C	K	T	U	R	M
**/**/**	*** ) *****	XX							
**/**/**	*** ) *****								
**/**/**	*** ) *****								
**/**/**	*** ) *****								
**/**/**	*** ) *****								
**/**/**	*** ) *****								
**/**/**	*** ) *****								
**/**/**	*** ) *****								

(COMPANY B):

X Number of Items by Type

- A - ADD
- D - DISCONTINUE
- C - CHANGE
- K - CANCEL
- T - TURN DOWN
- U - TURN UP
- R - RESCHEDULE
- M - MODIFY

Fig. 27—965—New Circuit Orders

- (20) The order may be scheduled for overall plant test at some later time. The TOC will perform the "Testboard-Testboard" and/or "Switchboard-Switchboard" tests when scheduled.
- (21) On the due date, the TOC will ensure that each circuit is in the in-service state.
- (22) The COAD will transfer the circuit order documents to in-service documents.
- (23) The COAD will implement the in-effect report if the circuits are controlled by this office.
- (24) Circuit orders must be cleared from the MAC.
- (25) The order will be transferred automatically from the 206 circuit order work list to the 207 cleared order work list.

966 IN-EFFECT REPORTS SENT		DATE	TIME	
		**/**/**	****	
CON ORDER NUMBER	ITEM	ACT	CIN	DUE DATE
*** } *****	**	*	*****	**/**/**
*** } *****	**	*	*****	**/**/**
*** } *****	**	*	*****	**/**/**
*** } *****	**	*	*****	**/**/**
*** } *****	**	*	*****	**/**/**
*** } *****	**	*	*****	**/**/**
*** } *****	**	*	*****	**/**/**
*** } *****	**	*	*****	**/**/**

Fig. 28—966—In-Effect Reports Sent

(26) The administrative reports will be updated to reflect this action.

(d) Ensure that the appropriate CPB receives timely notification of completion or delayed status on all circuit order items

**5. ADMINISTERING CIRCUIT ORDER PROCESS**

(e) Provide the CMSMC with data required for building TSGTBLs

**GENERAL**

(f) Ensure that the CAROT data base is updated

**5.01** As mentioned earlier, circuit orders may be inputted to the COS by one of three methods: automatic via data link, manual entry from paper records, or by magnetic tape. After the orders have been inputted to the COS, various documents and reports are automatically updated. The guidelines in 5.02 through 5.41 are provided to assist the COAD in using the COS data to process orders.

(g) Maintain accurate records of work units for circuit order work performed

**5.02** The COAD is responsible for overall coordination of the circuit order process. In order to accomplish this job, the COAD must:

(h) Update circuit inventories to reflect changes due to circuit order work.

(a) Schedule circuit order work well in advance to meet all test and due dates required for each order

**CIRCUIT ORDER SCHEDULING**

(b) Assign, or administer the assignment of, circuit order work to the appropriate COA positions.

**5.03** The COAD must analyze the circuit order workload and schedule work to meet required dates. Several tools are available in the COS to assist in performing this function.

**Circuit Order Schedule—Work Dates**

(c) Coordinate circuit order activity with associated work required in the MAC, TEC, and TOC

**5.04** This report is designed to provide the COAD with information necessary to plan the work schedule. The work dates assigned by the COAD should allow sufficient time to complete all cross-connections and testing needed to condition the circuit for plant test dates. The COAD should determine a certain time span within which the

967 COMPLETED CIRCUIT ORDERS - CONTROL AREA X

COMPLETED DATE XX/XX/XX

(COMPANY A)

ACTION	CON ORDER NUMBER	ITEM NOS.
ADD	*** ) ***** *** ) *****	** ** ** ** **
DISCONTINUE	*** ) *****	**
CHANGE	NONE	
CANCEL (K)	NONE	
TURN DOWN	*** ) ***** *** ) ***** *** ) *****	** **
TURN UP (U)	*** ) *****	**
RESCHEDULE	NONE	
MODIFY	NONE	

(COMPANY B)

•  
•  
•

Fig. 29—967—Completed Circuit Order Report

968 DELAYED STATUS - CONTROL AREA X

DATE XX/XX/XX

CON ORDER NUMBER	ITEM	ACT	CIN	DUE DATE	DELAY CODES
*** ) *****	**	*	*****	**/**/**	****
*** ) *****	**	*	*****	**/**/**	****
*** ) *****	**	*	*****	**/**/**	****
*** ) *****	**	*	*****	**/**/**	****
*** ) *****	**	*	*****	**/**/**	****
*** ) *****	**	*	*****	**/**/**	****
*** ) *****	**	*	*****	**/**/**	****
*** ) *****	**	*	*****	**/**/**	****

Fig. 30—968—Delayed Status

969 TOTAL CIRCUIT ORDERS MN DA TO MN DA - CONTROL AREA X

ACTION	# ITEMS RECEIVED		# ITEMS COMPLETED		# ITEMS DELAYED	
	(CO.A)	(CO.B)	(CO.A)	(CO.B)	(CO.A)	(CO.B)
ADDS	***	***	***	***	***	***
DISCONTINUES	***	***	***	***	***	***
CHANGES	***	***	***	***	***	***
CANCELS (K)	***	***	***	***	***	***
TURN DOWNS	***	***	***	***	***	***
TURN UPS (U)	***	***	***	***	***	***
RESCHEDULES	***	***	***	***	***	***
MODIFY	***	***	***	***	***	***
TOTAL	***	***	***	***	***	***

Fig. 31—969—Total Circuit Orders

work date should fall. A specific date may then be determined by analyzing the circuit order work already scheduled to that timeframe, ie, analyzing circuit order work/test schedules for the period in question. After the work date has been determined, it can be inputted to the COS by using the 435 command.

**Circuit Order Schedule—Test Dates**

**5.05** The COAD may receive orders that require more than one test date. For example, adding a trunk group to a new office will usually require "Testboard-Testboard" and "Switchboard-Switchboard" tests. Since only one test date is provided on the COS documents, the COAD will assign the earliest test date to that field. After

this date is met, the second test date may be entered.

**5.06** For those instances where the No. 4 ESS location is noncontrol, or where the distant end has the cutover chairperson, the COAD may have limited control in establishing test dates. Where possible, however, the COAD should make full use of the tools available (circuit order work/test schedules) in determining test dates.

**ASSIGNMENT OF CIRCUIT ORDER RESPONSIBILITY**

**5.07** As indicated in 1.04, the COS can have a maximum of two COAAs. Should the COAD determine that one area is more feasible, then all circuit orders will be processed by that COAA. However, if the COAD assigns two COAAs, it

FORM \*\*\* MONTHLY OFFICE CHANGES - CONTROL AREA \*

\*\*/\*\*/\*\*

CIRCUIT TYPE	PRIVATE LINE		TOLL TERMINAL		MISC & SERVICE	
	A	B	A	B	A	B
COMPANY						
TYPE CHANGE						
ADDS	*****	*****	*****	*****	*****	*****
DISCONTINUES	*****	*****	*****	*****	*****	*****
CHANGES	*****	*****	*****	*****	*****	*****
MISC.	*****	*****	*****	*****	*****	*****
SUBTOTAL	*****	*****	*****	*****	*****	*****

Fig. 32—Example of Monthly Central Office Changes Form

must be ensured that each area is assigned a sufficient number of COA positions. COA positions can be added to, or removed from, a COAA by the CMSMC as directed by the COAD.

**5.08** Assignment of circuit order responsibility to a COA position must be administered by the COAD. As an order is inputted to the COS, it will access the TSGTBL and automatically enter circuit order responsibility if the information exists. If the TSGTBL does not contain circuit order responsibility, it will remain blank to be entered later in the process.

**5.09** The circuit order work/test schedules will list the COA position (MAC) responsibilities if previously assigned. While establishing work and test dates from these documents, the COAD will also be able to assign circuit order responsibility

for those orders where TSGTBL information is lacking.

**5.10** The COAD should periodically evaluate the circuit order responsibility assignment information contained in the TSGTBL. Based on this evaluation, changes may be made to obtain a balance of circuit order work by positions.

**CIRCUIT ORDER COORDINATION**

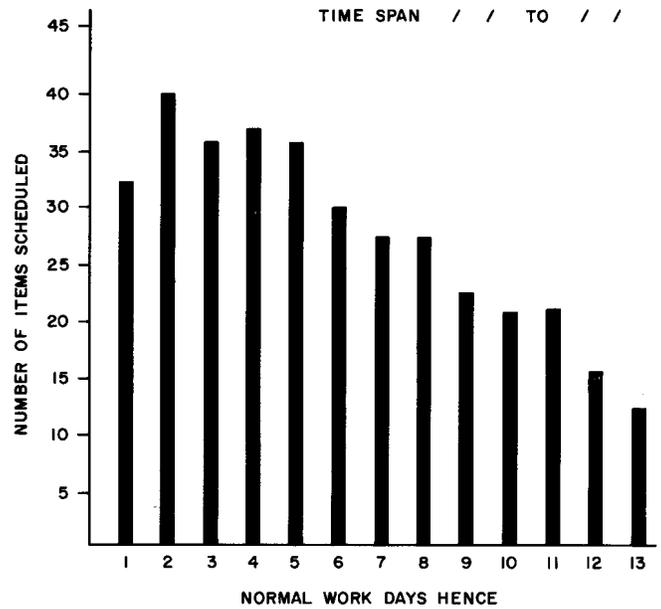
**5.11** The COAD is responsible for overall coordination of the circuit order process within the No. 4 ESS. Although the COAD has overall responsibility, other supervisory groups (MAC/TEC/TOC) must be relied upon to perform the circuit order work required at their locations. This responsibility requires the establishment of procedures and controls necessary to perform the circuit order function.



**Circuit Order Coordination With MAC**

**5.12** The COAD must coordinate circuit order work with associated recent changes performed by the MAC. To ensure that circuit order work is correctly entered in the No. 4 ESS, the MAC must have sufficient information. For example, in assigning trunks to a particular TSG, the MAC needs to know certain characteristics of the trunks involved, ie, type of pulsing, echo suppressor requirements, etc. This information is readily available on the circuit data displays.

**5.13** The COAD should furnish hard copies of the circuit data to the MAC. A control log should be established to ensure that *all* orders involving the MAC have been forwarded. The work date assigned by the COAD could be used to reflect the data that orders are passed to the MAC. Notes should also be entered on the COT to reflect this action.



**Fig. 35—Example of Circuit Order Schedule Work Sheet—Bar-Graph Display**

CIRCUIT ORDER SCHEDULE - TEST DATA

DATE \*\*/\*\*/\*\*

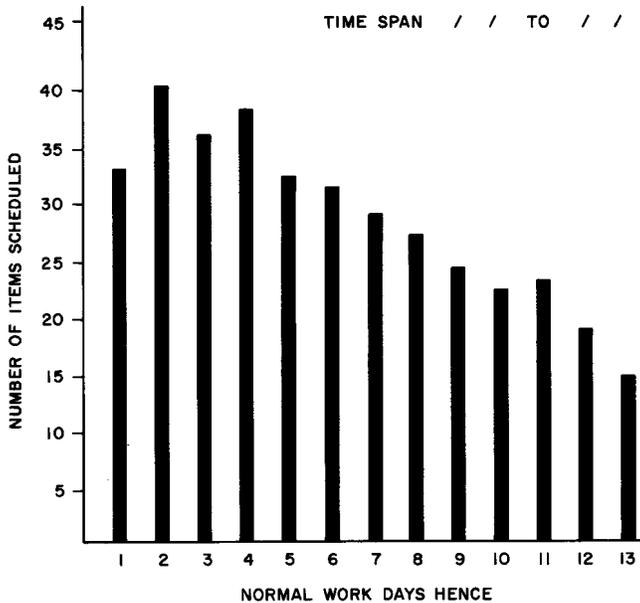
CON)	ORDER NUMBER	ITEM	ACT	RESP MAC/TEC/TOC	STATUS MAC/TEC/TOC	WORK DATE	DUE DATE
***	*****	***	*	***/**/**	***/**/**	**/**	**/**
***	*****	***	*	***/**/**	***/**/**	**/**	**/**
***	*****	***	*	***/**/**	***/**/**	**/**	**/**
***	*****	***	*	***/**/**	***/**/**	**/**	**/**
***	*****	***	*	***/**/**	***/**/**	**/**	**/**
***	*****	***	*	***/**/**	***/**/**	**/**	**/**
***	*****	***	*	***/**/**	***/**/**	**/**	**/**
***	*****	***	*	***/**/**	***/**/**	**/**	**/**
***	*****	***	*	***/**/**	***/**/**	**/**	**/**
***	*****	***	*	***/**/**	***/**/**	**/**	**/**

**Fig. 36—Circuit Order Schedule—Test Data**

**5.14** After recent changes have been entered and verified, the MAC should notify the COAD. This notification could be a copy of the recent changes submitted or by the circuit data pages being returned with ESS TAN assignments indicated. The control log should then be marked to reflect MAC completion.

**Circuit Order Coordination With TEC**

**5.15** After ESS TAN assignments and circuit order responsibilities are entered in the COS, the order can be referred to the TEC. TEC personnel will then perform all cross-connections, option equipment, and install plug-in units as



**Fig. 37—Example of Circuit Order Schedule—Test Data—Bar-Graph Display**

required. The equipment data (automatically available when the ESS TAN is entered in the COS) and the CMS configuration codes (Fig. 12) will provide TEC personnel with information necessary to perform their work. Additional information is available, however, by submitting the appropriate commands.

**5.16** Facility information is provided in the facility translation display. This display will list the outgoing and weak-link facility. If additional facility information is required (eg, intermediate link or facility at distant end), the circuit data pages may be accessed.

**5.17** In some locations, the terminal equipment information and the facility information will be provided via the same CRT. If a separate CRT port is provided for the facility group, the circuit order responsibility can be entered in the COS. This will allow the facility group direct access to test data, facility translation data, etc.

**5.18** Any associated carrier circuit order work (eg, one establishing the facility on which circuits are assigned by an add order) must be completed before the TEC can send a completion on the message circuit order.

**5.19** COA and TEC personnel may use status codes described in 3.17 and Table B to indicate referral and completion of circuit order work.

**Circuit Order Coordination With TOC**

**5.20** TOC personnel are responsible for circuit order testing. After the COA position has entered the required data and a completion notice has been received from the TEC, the order may be referred to the TOC. TOC personnel will then perform all tests required. Test results will be entered on the test data display. This entry will either be performed manually by the TOC or automatically by CAROT.

**5.21** If the No. 4 ESS location is control on the order, satisfactory completion of a CAROT test is required. The order cannot be reported in-effect until this requirement is met. After the test requirements are met, TOC personnel will be ready to place circuits in the in-service state. They should receive notification from the COAD, however, before circuits are placed in this state. Testing may be complete but the required service date could be at some future date. To prematurely place circuits in the in-service state could result in erroneous outage reports.

**5.22** The COAD must follow up on delayed circuit orders. Report 968, Delayed Status—Control Area, will be available to the COAD at 8 AM each day. The COAD must determine where the delay occurred and take appropriate action to clear the problem.

**5.23** The COAD should furnish the TEC and TOC supervisors with a copy of the daily work/test schedules. This will provide those supervisors with a tool for planning their work as well as a means to ensure that circuit order work is completed on schedule.

**TRUNK SUBGROUP TABLES**

**5.24** The COAD is responsible for updating the TSGTBL. The following information is required:

- Circuit order responsibility for the MAC/TEC/TOC

- Maintenance responsibility for the TEC and TOC.

When an order establishes a new TSG, the 45-character common language circuit identification, including the BTFN, will be entered. The BTFN may be obtained from the MAC.

**5.25** The input data must be entered at the CMSMC. The information must be furnished to the CMSMC by the COAD.

**CAROT DATA UPDATE**

**5.26** As trunks are added, removed, or changed in the No. 4 ESS, corresponding changes must be made in the CAROT data base. A CMS/CAROT interface has been designed to automatically perform this function where possible.

**5.27** Before a trunk group is added to the data base, a determination of CAROT testability is made. CAROT testability is a function of the manner in which a trunk is seized, trunk use, and the availability of far-end test line equipment.

**Trunk Seizure**

**5.28** Two-way trunks are CAROT-testable from either end while one-way outgoing trunks are CAROT-testable from the originating end only. One-way incoming trunks are CAROT-testable if a

remote office test line (ROTL) exists to the distant office and lines 443 (trunk priming information) and 444 (far-end switching system type) are completed on the 406 display.

**5.29** The CMS/CAROT interface will ascertain one-way or 2-way trunks by A and Z office codes and the pulsing information. Table E shows the pulsing types allowed for CAROT testability.

**Traffic Use**

**5.30** The traffic-use data is used to further define the CAROT testability. This information is available in positions 10 and 11 in the CLCID. Long Lines, however, does not enter this data on the CLRC at this time. To determine CAROT testability from traffic-use codes, refer to Tables C and D. The T306 will list the traffic use on Long Lines orders. After the traffic-use code has been determined, the COAD must enter the proper code in the CLCID on the 404 translation display.

**5.31** The codes shown in Table F for traffic use indicate trunks which can be tested by CAROT.

**Far-End Test Lines**

**5.32** CAROT has this and related information stored in a disk file, "The Office Test Line Directory." This file will be created and maintained

TABLE E

COMMON LANGUAGE ENTRIES

ALLOWABLE		NONALLOWABLE	
CODE	DESCRIPTION	CODE	DESCRIPTION
D	Dial	A	Automatic
F	Frequency Shift	R	Ringdown
M	Multifrequency	S	Straightforward
P*	Panel Call Indicator	—	No Operator
V*	Revertive		

\*Not applicable for No. 4 ESS

TABLE F  
TRAFFIC-USE CODES  
OF CAROT-TESTABLE TRUNKS

TRAFFIC-USE CODE		CATEGORY
IT	Intertoll Primary	Intertoll
CA*	CAMA	Toll connecting
DD†	DDD access	
TG	Toll completing	
TM	Toll Completing and toll switch combined	
IA	Intraoffice	Interlocal
IE	Interoffice	
IM	Intermarker Group	
MT†	Multitandem or Intertandem	
TC‡	Tandem Completing	
TO†	Tandem Originating	

**Notes:**

\*All ANI-equipped CAMA trunks can be tested by CAROT from the office where the trunk originates. All non-ANI CAMA trunks terminating on a No. 4 ESS can be CAROT-tested from the originating office.

†Requires dummy test codes for testing trunks from a No. 5 crossbar into a tandem office.

‡This type of trunk is always one-way; therefore, it can only be tested in the end office where it is outgoing.

independently of the CMS/CAROT interface. The COAD may be responsible for maintaining this file.

**5.33** The 406 display, CAROT translation data, shows the information required to complete the CAROT data. (Refer to 3.32 through 3.37.)

**IN-EFFECT REPORTS**

**5.34** The COAD is responsible for notifying the issuing CPB of completion or delay of circuit order items.

**5.35** Before an in-effect notice can be implemented, the COS will automatically perform various checks. For example, if the order is adding circuits, the COS will ensure that each circuit is in the in-service state. The COS will also check that the CAROT test (if required) has been satisfactorily completed. When all requirements are met, the in-effect notice can be implemented automatically.

**5.36** If the order is not complete or cannot be completed as scheduled, the COAD must notify the issuing CPB. The COS has provision for sending a delayed status. The COAD should follow existing instructions in reporting delays.

**CIRCUIT ORDER WORK UNITS/MONTHLY CONTROL OFFICE CHANGES FORM**

**5.37** The COS provides the ability to store data in a particular format. The format may be entered by the CMSMC and then updated manually as changes occur. The example in Fig. 32 is presented to show how this could be done. For Long Lines use, it may be elected to format a page similar to Form E5214, "Order Completion Log," per BSP Section 002-340-421, LL, and use this in determining work units for circuit changes.

**5.38** Since the data provided by this display is dependent on manual entry, the COAD must establish administrative controls to ensure accuracy of the data.

**CIRCUIT INVENTORY**

**5.39** The circuit inventory (Fig. 33) is a useful tool for various groups. For example, the

COAD may refer to this list for updating TSGTBLs. The machine administrator may find the inventory useful to make comparisons with Lists A and B, "Trunk Forecasts."

**5.40** The circuit inventory, like the monthly central office changes form, are created locally. Fig. 27 is offered only as an example. The format

must be determined locally and then inputted via the CMSMC. The updating entries will be done manually to reflect changes as they occur through the circuit order process.

**5.41** Since this form is updated manually, the COAD must establish administrative controls to ensure that the data is accurate.