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# CENTRAL OFFICE AND SWITCHING CONTROL CENTER OPERATIONAL REVIEWS—GENERAL NETWORK OPERATIONS METHODS

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**1.04** Recommendations for changes, additions, or deletions to this section should be made according to Section 000-010-015.

**Review Guidelines**

**1.05** This section, combined with the sections described in Part 2, replaces the Management Quality Control Plan for Switching Systems.

**1.06** To ensure the maximum benefit from an operational review, it is essential that the review be considered as a constructive exercise by everyone involved. The reviewer should not limit the review to negative comments only but should also mention items that are maintained in an exemplary fashion. In particular, the reviewer should point out and note any unique office (Switching Control Center [SCC]) procedures or local innovations that may be beneficial on a company- or system-wide basis. Results of a review are intended to be used primarily as an impetus to improve central office (SCC) operations. Under no circumstances should review results be used as the sole means to evaluate or appraise personnel.

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**1. GENERAL**

**1.01** This section is one of a series of practices referred to as the Network Maintenance Management Plan (NMMP). It specifies the general procedures to be used for performing central office operational reviews. The provisions of this section are applicable to the review of all types of central offices, switching control centers, main distributing frames, or central office power equipment.

**1.02** Whenever this section is reissued, the reason for reissue will be stated in this paragraph.

**1.03** The title for each figure includes a number(s) in parentheses which identifies the paragraph(s) in which the figure is referenced.

**1.07** The supervisor (manager) of the office (SCC) being reviewed should accompany the reviewer during the entire exercise. Advance arrangements should be made to relieve the supervisor (manager) from other duties and provide for assistance from the central office (SCC) force, if required. The reviewer should work closely with the supervisor (manager) and notify him at once of any deficiencies that are potentially service-affecting. Deficiencies that are found should be noted by the office supervisor (SCC manager) and corrected after the review. This will allow the review to flow smoothly and to be completed in a timely manner.

**1.08** Applicable operational review Bell System Practices should be available to all central

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office (SCC) supervisors and managers in order that they will be familiar with the items to be covered during a review. Local management may also use these sections on a continuing basis to ensure adherence to standard procedures and practices.

#### Purpose

**1.09** The operational review provides a means to ensure that established practices and procedures are being followed and that central office (SCC) maintenance policies are uniform throughout the Bell System. Results of the operational review may also be used to:

- Identify developing problems and needs
- Evaluate the effectiveness of office maintenance
- Help identify causes of poor service and expense results
- Point out and help resolve existing roadblocks and interdepartmental problems
- Inform upper levels of management as to the administrative and technical status of central offices.

#### Time Requirements

**1.10** The time allotted for a review should be sufficient to conduct a thorough evaluation of office maintenance or SCC operation. This time will vary according to the size and condition of the office or SCC and the operational review sections which are used. The following list is provided as a general guide for establishing the time required for a review.

NO. HOURS	TYPE REVIEW
6-7	Administration (local-controlled office)
16 (per office)	Technical
24-32	Switching Control Center (SCC) (See Note)
6	Power
8-12	Frame

In general, a complete review of central office maintenance in an average size, non-SCC controlled office (15-20,000 main stations) will require about 4 days. In all cases, an additional half-day should be scheduled for a post review feedback meeting (see paragraph 5.01).

**Note:** When reviewing an SCC, it is not necessary to apply (review) each review item to each central office. A large enough sample should be studied to determine if the SCC is following the recommended procedures covered by the review item.

#### Frequency

**1.11** Central office operational reviews should be scheduled on a regular basis. Consideration should be given to the size and type of office, the present service and productivity results, and the office maintenance environment (local-controlled or SCC controlled). Full or partial reviews may be made by local managers at any time, and regular reviews of this type are highly recommended. The area staff should review an office in each first-level supervisor area of responsibility not less than once every 18 months. In companies that do not have area staffs, the review(s) should be conducted by local staff personnel. If a company does not have staff personnel below a corporate level, the corporate staff should conduct all operational reviews according to area staff guidelines and responsibilities. The corporate staff should conduct reviews in each second-level manager area at least once every 3 years. These recommended frequencies may be shortened any time a change in conditions or results indicates that a review would be beneficial.

**1.12** Corporate staff reviews should be evenly distributed throughout the company and used as a cross-check on local reviews. Results of the reviews conducted by the corporate staff should be closely compared with area review results to ensure that uniform standards are maintained between areas.

**1.13** Switching control centers generally control many similar offices and utilize several technical and administrative arrangements that are unique to centralized maintenance. Any change in SCC procedures can possibly affect a number of offices simultaneously and have a significant impact on area service results. Conversely, the SCC provides a unique opportunity to review the

administration of many offices from one location, which will result in a considerable time savings. For these reasons, SCCs should be reviewed by the area staff at least once a year and by corporate staff at least once every two years.

#### Coordinated Interdepartmental Reviews

1.14 Because the most difficult problems to define and correct are those crossing departmental and work group boundaries, coordinated joint operational reviews are recommended whenever possible. In addition to joint central office (SCC) reviews, simultaneous reviews would be advantageous for dial administration groups, service order bureaus, central office engineering groups, and repair desks. These reviews should be conducted independently with separate post review feedback meetings; however, close cooperation between the reviewers will allow interdepartmental problems to be properly identified and located.

## 2. REVIEW OUTLINE

2.01 This section contains the overall guidelines to be followed when performing central office or SCC operational reviews. Other sections contain the specific review packages. For example, Section 190-130-144 contains the operational review package for the SPCS-SCC; Section 190-130-145 contains the review package for the EM-SCC; and Section 231-001-020 contains the review package for the No. 1/1A ESS. Some of the review packages are divided into administrative and technical segments which are rated separately and may be used independently if desired. The contents of these review segments and the SCC sections are defined as follows.

(a) **Administrative Segment:** Reviews the degree of implementation and the overall effectiveness of standard system maintenance plans. Items normally maintained at the SCC will be clearly marked on this checklist and will be reviewed only if the office is not in an SCC environment.

(b) **Technical Segment:** Reviews condition of equipment, effective use of test frames and test equipment, use of engineering complaints and operational trouble reports, stocking and storage of spare parts, coin service, traffic registers, office status on SCANS, and emergency procedures. For ESS offices, power equipment

should be reviewed as a part of the ESS operational review only if the office has its own dedicated power supply. In multientity buildings (power is shared with other equipment areas), the power equipment should be reviewed as a part of the power equipment operational review.

(c) **SCC Sections:** Reviews the administrative and management functions normally assumed by the SCC, including an evaluation of the effective use of equipment unique to the SCC (E2A telemetry, minicomputer, work stations, etc).

2.02 Each type of switching system is treated in a similar fashion with independent administrative and technical review sections. A separate operational review section is to be used for the Electromechanical Switching Control Center (EM-SCC), Section 190-130-145.

2.03 There are separate operational review sections on each of the following systems.

SECTION OR AVAILABILITY DATE	SYSTEM
190-130-144	SPCS-SCC
231-001-020	No. 1/1A ESS
Available 1980	No. 2 ESS
Available 1980	No. 3 ESS
Available 1980	TSPS
190-130-145	EM-SCC
Available 1980	Step-by-Step
Available 1980	No. 1 Crossbar
Available 1980	No. 5 Crossbar
Available 1980	Tandem
Available 1980	Power (See note)
201-200-015	Main Distributing Frame (See note)

**Note:** These operational review sections are common/applicable to all switching systems.

**2.04** All operational review sections can be reproduced locally as desired and may be used individually or jointly, as circumstances dictate. For a complete review of the central office, all applicable sections will be used.

**2.05** Each section consists of a brief introduction and associated instructions, a rating sheet, and a checklist (Fig. 1) of questions pertinent to the subject. The questions are grouped into several major categories with most of the questions being referenced to Bell System Practices, sound maintenance procedures, or similar standard system documentation. ***Questions with no specific references are recommended maintenance procedures that should be followed and are subject to review.*** Each question has provisions for checking off either satisfactory, exception, or NA (not applicable) and space is provided for comments. Items that are not in full compliance with the cited reference material will be checked as an exception. The reviewer will make written comments on any question checked as an exception and may comment on satisfactory items that require elaboration. Sufficient detail regarding discrepancies must be recorded so that responsible management personnel can effect corrective measures.

**2.06** The rating sheet lists all of the categories included in the checklist. At the conclusion of the review, the reviewer will rate each category (see paragraph 4.02) and distribute these sheets at the post-review feedback meeting. Certain major items on the checklist (Fig. 1) will be indicated by a pound (#) sign. These items are so designated due to their importance to proper system operation. When an exception is indicated against any of these items, the rating for the category, including that item, will not be higher than band "U" (ie, category rating will not be more than 69 percent of the total point value allotted to that category). Ratings are grouped into 4 bands, as explained in Part 4.

**2.07** The contents of each review section is limited to those policies and procedures that are standard throughout the Bell System. Space has been provided on the checklist for the addition of questions reflecting local policies or practices. Items added to the checklist should be referenced to standard system documentation, company practices, or company bulletins whenever possible. Central office and SCC supervisors must be kept informed

of any additional items that will be subject to review.

**2.08** Wherever possible, the checklists have been designed to be concise and specific in order to minimize the necessity of subjective opinions by the reviewer. Each review category is comprised of a given number of questions (which vary in the degree of their category importance) and a maximum number of points attainable for the category. Due to the variance in each question's importance, objectivity by the reviewer in deducting points from the total number of attainable points cannot always be maintained. For example, examining the maintenance of records is easily done on an objective basis; however, measuring the use made of these records, the effectiveness of the various maintenance plans, or any circumstances unique to a particular office or SCC is immune to objective measurement. Points must be deducted from the maximum number of attainable category points based upon the relative importance of the item(s) found to be an exception and the opinion of the reviewer must be relied upon in these cases. For this reason, official operational reviews should only be made by personnel thoroughly experienced and familiar with central office maintenance or SCC operational procedures and the type of equipment being reviewed.

### **3. PRELIMINARY PROCEDURES**

**3.01** Several weeks prior to the start of the operational review, the reviewer should obtain the following data for the office to be reviewed (for each office controlled by the SCC if an SCC operational review is to be performed):

- (a) Office index
- (b) Trunk Service Results Plan (TSRP) results
- (c) Trunk Transmission Maintenance Index (TTMI) results
- (d) Customer Trouble Report Summary (CTRAP), Form E-2700
- (e) General Plant Cost Results Summary, Form E-5300, plus local productivity and overtime records
- (f) Principal traffic service indicators (dial tone speed, incoming matching loss, sender delay, etc)

(g) Central Office Maintenance Management System (COMMS) status, if applicable.

(h) Office profile and status from SCANS.

Data should be collected for the 12 months immediately preceding the review.

**3.02** The reviewer should study the data listed above in advance of his visit to the central office or SCC and attempt to identify any weak spots or negative trends that may exist. The results of this study may suggest areas requiring detailed review or indicate the desirability of conducting a joint interdepartmental review.

**3.03** At least two weeks before the start of the review, the district manager should be informed of the office or SCC and subjects to be reviewed, the name of the reviewer, and the time period proposed for the review. Form No. 1 (Fig. 2) should be completed by the reviewer and used for this purpose.

**3.04** The reviewer should schedule operational reviews in such a way as to avoid conflicts with unusual office maintenance activity, cutovers, vacation schedules, etc.

#### 4. RATINGS

**4.01** Ratings will be given for each category plus an overall rating for the entire review. These ratings should be considered as a general indicator of the condition of the central office or SCC. A detailed analysis of individual discrepancies and review comments is required to provide a comprehensive view of the maintenance activity in the central office or SCC.

**4.02** Ratings for individual categories and for the entire review will be expressed in one of the four bands indicated below.

- Band H—High
- Band O—Objective
- Band L—Low
- Band U—Unsatisfactory

As an aid to the reviewer in determining the relative importance of different categories and

establishing the overall (band) rating, a point system has been developed. These point values and scores are primarily for reviewer use and will not be included in the official review report. The maximum point total is 100. Each category of the review has been assigned a specific point value determined by the relative importance of the category and the potential impact of discrepancies in that category on overall system operation. Individual questions are not assigned point values; however, certain key questions will be indicated by a pound sign (#) as described in paragraph 2.06. Exceptions to any items designated by a pound sign (#) will result in a rating not higher than Band "U" for that category.

**4.03** For each category reviewed, the reviewer will allow some portion of the points allotted to that category, depending upon the significance of the discrepancies found (point versus band relationship for each category and for the overall review are shown in tables appended to each operational review practice). The overall band rating for the review will be determined by the point total of the individual category scores. The total point score for the review will be included by the reviewer in his oral report at the post review feedback meeting so that local management will be aware of its relative position within the overall band rating. The official written report of the review results will contain only band ratings and deficiencies—*not point ratings*.

**4.04** Figure 3, Operational Review Deficiency Summary, may be used by the reviewer, if desired, to summarize or detail the entire review or to elaborate on specific areas of the operational review.

#### 5. POST REVIEW FEEDBACK MEETING

**5.01** A post review feedback meeting will be held as soon as possible upon completion of the review and should be attended by first-, second-, and third-level supervisors of the office or SCC that was reviewed. Attendance at the meeting of the fourth-level supervisor is recommended whenever possible.

**5.02** The feedback meeting will include a detailed oral report, by the reviewer, of the review findings along with the overall point score and band rating of the facility reviewed. A written, narrative report of the review results and a rating

sheet, including a separate band rating for each category, will be forwarded to the responsible third-level supervisor within two weeks of review completion.

**5.03** The third-level supervisor of the office or SCC being reviewed is responsible for establishing a program to correct any deficiencies uncovered by the review. This corrective program and a schedule for correcting noted discrepancies should be agreed to by the fourth-level supervisor and returned to the reviewing organization within 30 days of the feedback meeting. Normally, all corrective action should be scheduled for completion within 60 days of the feedback meeting. At the

end of the 60-day period, the third-level supervisor must submit a written report to the reviewing organization indicating the status of each item. Status of items not corrected during this period (equipment additions, modifications, engineering items, etc) should be reported to the reviewing organization, in writing, as corrections are completed.

**5.04** The reviewer will indicate during the post review meeting and the written narrative reports if a re-review of the location is required. A re-review requirement will depend upon the volume and/or significance of the discrepancies noted during the initial review. Re-reviews are to be conducted within 90 days of the initial review.

OPERATIONAL REVIEW CHECKLIST

ITEM NO.	ITEM	SAT.	EX.	COMMENTS

Fig. 1—Operational Review Checklist (2.05, 2.06)

**CENTRAL OFFICE/SWITCHING CONTROL CENTER  
OPERATIONAL REVIEW NOTIFICATION**

		SCC or Office Type	
Building Location _____	EM-SCC	<input type="radio"/>	ESS-SCC <input type="radio"/>
Area _____ Division _____ District _____	SXS	<input type="radio"/>	No. 1 ESS <input type="radio"/>
Office Supervisor/SCC Manager _____ Tel No. _____	No. 1XB	<input type="radio"/>	No. 2 ESS <input type="radio"/>
Supervisor/Manager Location _____	No. 5XB	<input type="radio"/>	No. 3 ESS <input type="radio"/>
Office Code _____ Main Stations _____ Total Stations _____	Tandem	<input type="radio"/>	TSP5 <input type="radio"/>

An operational review of the above office has been scheduled for the period from \_\_\_\_\_ to \_\_\_\_\_. The review will be conducted according to provisions of BSP \_\_\_\_\_ and the General Operational Review Procedures in Section 201-020-511. The review will include those subjects indicated below.

- Administration (Local controlled office)
- Administration (SCC controlled office)
- Technical (Local controlled office)
- Technical (SCC controlled office)
- Switching Control Center (SCC)
- Power
- Main Distributing Frame (Local controlled)
- Main Distributing Frame (FCC controlled)

It will be necessary for the responsible office supervisor (manager) to accompany the reviewer during the evaluation. Please plan to attend or send a representative to the post review feedback meeting which will be held as soon as possible after completion of the review. The location of the post review feedback meeting can be selected by the third level supervisors with mutual agreement by the reviewer.

Reviewer \_\_\_\_\_ Tel No. \_\_\_\_\_

Fig. 2—Central Office/Switching Control Center Operational Review Notification (3.03)

OPERATIONAL REVIEW  
DEFICIENCY SUMMARY

*District File Copy*

ITEM	
	<p>SUBJECT/DEVIATION: BSP REFERENCE:</p> <p style="text-align: right;">SUPV. RESPONSIBLE:</p>
	<p>SUBJECT/DEVIATION: BSP REFERENCE:</p> <p style="text-align: right;">SUPV. RESPONSIBLE:</p>
	<p>SUBJECT/DEVIATION: BSP REFERENCE:</p> <p style="text-align: right;">SUPV. RESPONSIBLE:</p>

Fig. 3—Operational Review Deficiency Summary Form (4.04)