

CHANGES

GENERAL INFORMATION

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1. GENERAL

1.1 Scope of Section

1.11 This section covers the classification of and memoranda used to apply changes to Western Electric Company products on open and closed orders.

2. CHANGES ON JOB AND STANDARD DRAWINGS

2.1 Changes on Job Drawings are either Class "A" or "D" (see Paragraphs 2.101 and 2.109). Changes on Standard Drawings have the same classification as the BTL drawing which caused them to be changed or they are classified in accordance with the following:

2.101 Class "A"

- (a) Class "A" changes are used to correct electrical or mechanical errors, or extremely unsatisfactory maintenance or operating conditions (e.g., safety hazards). Immediate action is taken on all jobs or products in the hands of the WECO or the customer to correct the condition causing the change. Change Notice action is instituted to inform

the installer of the change because of the possibility of installation dates being affected.

(b) Class "A" changes may also be used to:

- (1) effect design changes which can be included in the product after the initial issue of the WECO drawing without affecting production or installation schedules.
- (2) correct Circuit Drawings and other maintenance documents as a confirmation of changes which were made by the Shop.

2.102 Class "A1"

- (a) The WECO Class "A1" change is restricted to Framework and Piece Part Drawings. The change meets all of the requirements of a Class "A" except that it is not applied on products or parts being installed. Class "A1" changes may also be made to incorporate design changes during the production planning period.

2.103 Class "AC"

- (a) The WECO and BTL Class "AC" change is the same as the Class "A" except that the conditions requiring correction are caused by circuit combinations or options which exist only in certain offices.
- (b) The "AC" change is applied on an "A" basis for those orders so classified by the BTL or WECO when the above conditions apply. Immediate action is taken to correct the conditions of those effected jobs which are in the hands of the WECO or the customer. The application of these changes on all other jobs is made on a "B" or "D" basis as required.
- (c) Since the changes covered by an "AC" change are not applied in all offices, a record of features and options is maintained to indicate both the former and the new conditions.

2.104 Class "AD"

- (a) The WECO Class "AD" change is the same as a Class "A" except that notification (distribution of drawing change supplements) is limited to within the PECC. CN notification is not made.

2.105 Class "AR"

- (a) Class "AR", WECO and BTL changes are used to correct unsatisfactory electrical or mechanical conditions, or unsatisfactory maintenance or operational features which may be allowed to exist on a temporary basis.
- (b) Regardless of the condition, the use of the Class "AR" designation has the same impact as the Class "A" except that in some cases, jobs or products may be shipped without incorporating the change.
- (c) The Class "AR" change is made on all jobs in the hands of the WECO or the customer as soon as possible. Those jobs or products in the hands of the WECO have the change made before turnover or delivery to the customer, except where turnover or delivery to the customer would be delayed, in which case the change is applied as soon as possible after delivery.

NOTE: The term "turnover" is the date that the WECO Installation Engineering Organization issues the final Completion Notice to the customer.

2.106 Class "B"

- (a) The WECO and BTL Class "B" change is used to incorporate urgent improvements in design which will result in better operating, testing or maintenance conditions, longer life, important savings, or urgent new features, etc.
- (b) Class "B" changes are normally processed by the WECO without changing job drawings and specifications which have been issued.
- (c) A detailed record of figures and options (such as wiring and apparatus) previously shown on the drawing is maintained.

2.107 Class "BD"

- (a) A Class "B" change on an equipment manufacturing specification or non-piece-parted framework stock list drawing is designated as a Class "BD". Supplements are only distributed to organizations requiring them.

2.108 Class "BI"

- (a) The WECO Class "BI" change is the same as a Class "B" except that its use is restricted to Framework and Piece-Part Drawings. New parts are incorporated in the product regardless of the stock of old parts on hand. The suffix "C" may be added to this classification to include a variance in the basic application. The specific application will then be detailed on the change order.

2.109 Class "D"

- (a) The BTL and WECO Class "D" change is used to incorporate improvements in design, or to add new features not sufficiently urgent as to require a Class "B" designation. It is also used to facilitate manufacturing changes and effect cost reduction not sufficiently important to justify a Class "B" rating. This designation is also used to effect routine changes such as changes in rating, titles, classification of notes, etc.

- (b) The suffix "C" may be added to this classification to indicate a variance from the basic application. When this occurs, the application is detailed on the change order. When changes have been originated because of a cost reduction, the suffix "C" is added to the "D" designation preceded by 1 (e.g., D1C).
- (c) Class "D" changes are normally processed by the WECO without changing job specifications and drawings.
- (d) Except for Class "D-No Record" changes described below, a record of figures and options previously shown on the drawing is maintained. This type of change is originated by the BTL to bring corresponding WECO drawings into agreement.
- (e) Changes made on job drawings that affect new orders or correct office records are also classified as "D".

#### 2.110 Class "DD"

- (a) The Class "D" change on equipment manufacturing specifications or non-piece-parted framework stock list drawings is designated as Class "DD". This classification provides distribution of change supplements to organizations requiring them.

### 3. BELL TELEPHONE LABORATORIES CHANGES

#### 3.1 Laboratories Engineering Change Notice

- 3.11 An Engineering Change Notice (form letter) is issued by the BTL for transmitting new and changed System Circuit Schematic and Equipment Drawings to A.T.&T. and the WECO. It lists the drawings or specifications affected, the issue number of the drawings, the class of change and also a description of the change and the reason for making it. The Installer, however, does not receive this document.

#### 3.2 Laboratories Design Information (LDI)

- 3.21 The Laboratories Design Information (LDI) is issued by the BTL for transmitting new and changed design information covering apparatus, circuits, equipment and program information to the WECO. The LDI is the authorization to make changes on affected WECO drawings. It replaced Advance Information (ADI), BTL Change Records (CR), Engineering Information Release (EIR), System Design Changes (SDC), Labora-

tories Change Notice (LCN), Design Changes (DC) and is also used to transmit program information such as PG's for software. Additional information pertaining to the LDI is contained in Section 40F of this handbook.

### 4. WESTERN ELECTRIC COMPANY CHANGES

#### 4.01 TWX Notification of Changes

- 4.011 Within one day after receiving BTL information on Class "A", "AC" or "AR" changes, a TWX is originated by PECC Standards Engineering and is sent to all Regional Installation Engineering Departments and to all Technical Coordinators describing the difficulty. This TWX is illustrated in Figure 1.

- 4.012 When an "emergency" situation develops on TSPS or ETS equipment and information must be made available to the installer immediately, notification is made by TWX to the job site. This TWX will provide:

- (a) Sufficient information for on site changes.
- (b) CN Number.
- (c) Explanation of change.
- (d) Promise date for CN package.
- (e) List of affected order numbers.
- (f) Requisition number for tapes.

- 4.013 The Broadcast Warning TWX (BWT) contains overwrite information to correct service affecting or potentially service affecting software problems in No. 1 ESS, No. 2 ESS, No. 2A ESS, ETS and TSPS No. 1 offices. All BWT CN information inserted by the installer should be given to the telephone company at turnover time. It is the responsibility of the telephone company to maintain records of all BWT overwrite information inserted into the system including the BWT information inserted by the installer.

#### 4.02 Engineering Change Notice (ECN)

- 4.021 A Western Electric Company Engineering Change Notice is issued for new and changed dual rated specification drawings (see Section 1 of this handbook for an explanation of dual rated drawings) bearing the rating

- "standard" or "A&M" in the "ED" and "J" Series for changes that emanate from the BTL. A WECO ECN is also issued for "H" drawings bearing the "A.T.&T. Co. Approved" rating. In general, the principle content of the WECO ECN is obtained from the associated BTL LDI.
- 4.022 The Engineering Change Notice is also issued in those cases where the BTL does not prepare a LDI for minor changes on the SD drawing such as relay code changes or any minor SD design changes which cause wiring option lists to be added to the WECO specification drawing.
- 4.023 When there is WECO changes on a specification drawing which affects the ordering of equipment such as the addition of lettered list, an ECN is also issued.
- 4.024 When a system drawing such as J12345A-1 is replaced by -2, then an ECN is issued against the -1 drawing to specify that the drawing has been replaced by -2. The ECN for the -1 drawing will show A.T.&T. Co. rating "MD". The ECN for the -2 drawing will show the same rating as is shown on the associated equipment LDI and also the appropriate WECO rating.
- 4.025 In addition to the foregoing, ECN's are also issued to cover changes on WECO nonstandard development drawing (NS, NT, NJ) which are rated "WECO Approved". ECN's will not, however, be issued for drawings in those categories rated "WECO Special".
- 4.026 When a Laboratories change affects several dash numbers of a given WECO J specification, the ECN is written only for the highest dash number except as specified in Paragraph 4.24.
- 4.027 Individual WECO ECN's are issued for each component J code listed on the LDI of the major J drawing.
- 4.028 The ECN Form is shown in Figure 2 of this section.
- 4.03 Change Notices (CN's and XCN's) and the CN Package
- 4.031 General Information on Change Notices
- 4.0311 A CN number is assigned and Change Notice Form (EFG-114) is issued by PECC Standards for each Class "A", "AC" or "AR" change requiring regional CN action. Form (EFG-114) is illustrated in Figure 3.
- 4.0312 In those cases where no material or work is required by installation and office records are not affected and the only regional CN action required is a distribution of documents covering the change, an "X" is shown after the CN number (ex. CN1234XCG).
- 4.0313 Within three days of receipt of completed BTL information on Class "A" or "AC" changes and five days on "AR" changes, the following documents (commonly referred to as a CN package) are sent by PECC Standards to the Region:
- (a) Change Notice Form EFG-114.
  - (b) A copy of the associated Change Supplements. Schematic Drawings (SD's) and Circuit Descriptions (CD's) will be listed on the supplements or when a Schematic Drawing is not available, a legible reproducible of the LDI (see Paragraph 3.2) will be attached. An explanation of change supplements is contained in Paragraph 6.2 of this section.
  - (c) A copy of the BTL CN (see Paragraph 3.1) or equipment LDI (see Paragraph 3.2) when the change is billable or partially billable Class "AC".
  - (d) Installation Information furnished by PECC Installation Engineering Organizations such as Engineering Change Procedures, reference to Handbooks, Special Methods, etc. (see 50 series of sections in this handbook for an explanation of these documents).
  - (e) Reference to EL's, EIM's, etc., which involve application of the change or billing of the change.
- 4.0314 If any of the above documents are not available for inclusion in the original package, their omission is so noted on the EFG-114 Form and a promised date given. When these documents are finally distributed, they are accompanied by a point CN.
- 4.032 Class A Apparatus Changes
- 4.0321 Change Notice (CN action may also be applied to apparatus Class A changes when such apparatus is used on equipment coded products.)

- 4.0322 This type of change action is similar to that applied to equipment. There will be certain instances in which the region will be unable to determine the specific quantity of units requiring changes. When this condition occurs they will then contact the installer and request that a physical check be made. This request may be verbal or in writing. In either case the region will issue a confirming job memoranda (SD-3-850). The job memoranda mentioned above will serve as authority for making the check. After the installer has completed his check and informed the region, Change Notice action will then proceed in the normal manner. The explanation of job memoranda is included in Paragraph 6.3.
- 4.033 Change Notices Action on KS Power Equipment
- 4.0331 Change Notice action on KS Power Equipment is no different than the Change Notice action taken on other equipment (see Paragraph 4.031) except that Source Inspection and Product Engineering (SIPE) is the issuing organization.
- 4.04 Customers Premise Change Notices (CPCN)
- 4.041 The CPCN is a vehicle intended to expedite notification to the Operating Companies of Class "A", "AR" and "AC" changes and provides detailed engineering and installation information on all customer premise equipment. Additional information concerning CPCN's is contained in Section 40E of this handbook.
- 4.05 Detailed Change Sheets (DCS)
- 4.051 Detailed Change Sheets provide the detailed instructions to the installer on adding, removing and reconnecting wiring and apparatus on existing circuits provided in accordance with one issue of a schematic to make the circuit agree with the subsequent issue of the same schematic. Additional information on Detailed Change Sheets is contained in Section 40A of this handbook.
- 4.06 Circuit Revision Instructions (CRI)
- 4.061 Circuit Revision Instructions perform the same function as the Detailed Change Sheet, but are the result of a computed output whereas the Detailed Change Sheet is manually prepared. Circuit Revision Instructions are described in Section 40B of this handbook.
- 4.07 Job Changes
- 4.071 All WECO Engineering errors and omissions required to make equipment operate properly are made on the order furnishing the equipment until the job has been accepted by the Telephone Company. This applies even though a job has been completed and submitted to the Telephone Company for acceptance. All changes required on an order after turnover to the customer are made on a -96 order. Additional information on -96 orders is contained in Section 21 of this handbook.
- 4.08 Technical Information Tags
- 4.081 The "technical information tags" is a vehicle used by the PECC Locations to inform the Field of the "SD" issue to which a frame or unit has been manufactured. It also identifies any change on the frame or unit completed by the Shop resulting from Change Notices (CN's) or Laboratory Design Information (LDI).
- 4.082 Each tag will consist of an envelope stamped "technical information tag and installation information". This envelope will be attached by the Shop to apparatus or framework details on the front of the unit. Contained within this envelope will be a Test Information Guide Sheet which will reflect any CN's which were included by the Shop at the time of manufacture. By applying a CN package and this sheet, the installer will then be able to determine which changes have been made and which he is responsible for making, if any.
- 4.083 Handbook 3 Section 1K provides a check list of products to which Technical Information tagging has been applied.
- 4.09 Class "A" Job Application Trials
- 4.091 Class "A" Job Application trials may be called by the PECC for verifying Standards and Installation Engineering Information on CN changes. When it is determined that a trial is necessary, arrangements for the trial location and date are made between the PECC Engineering Manager and the Regional Engineering Manager of the region where the trial is to be held. Job Application trials may be held for any of the following conditions:

- (a) Cost Considerations - When the estimated cost of the change exceeds \$100,000.
- (b) Technical Considerations - Verification of drawing compatibility (BTL/WECO) on significant changes; verification of extensive or involved Installation information (ECP's Test info. DCS); verification of extensive Software/Hardware coordination; verification of the impact of the change on other working circuits or existing equipment.
- (c) Safety Considerations - If the change is potentially dangerous to the installer.
- 4.092 Class "A" Job Application trials may also be called by the Regions when it is believed verification of engineering information would be beneficial.
- 4.10 Running "96" Orders
- 4.101 Running "96" orders are five digit switchboard orders not requiring a job specification and on which complete engineering, manufacturing and/or installing information is shown on a combined order sheet and summary basis and intended to cover miscellaneous modifications or additions to existing equipment, where a minimum amount of manufacturing work is involved and the majority of the work is performed in the field. These orders are edited to show complete manufacturing and installing information together with a list of drawings required and their issues. The reason for making the change is briefly shown.
5. CUSTOMERS CHANGES (CC's AND SA's)
- 5.1 A Customers Change (including Supplementary Authorization) is the request by the Telephone Company to add to, delete from, or modify an active Telephone Equipment Order.
- 5.2 Customer changes desired for "Operative" conditions are scheduled by the Customer Service Divisions with the aid of the Systems Equipment Engineers and Installation Organization. Additional material required for these changes after the correspondence date will be ordered as Code 8A material on an installer's requisition.
- 5.21 Operative conditions will include the following:
- (a) Additional material required to meet traffic conditions not necessary for the desired operation, as stated in the T.E.O.
- (b) Mounting or support materials when reasonable temporary arrangements can be made. Exceptions would be items such as major cable racks, runs or relay rack frameworks.
- (c) Safety, protective or maintenance equipment.
- 5.3 Customer changes desired for "Inoperative" conditions will be made on the open order without regard to installation schedule. Additional material required for these changes after the correspondence date will be ordered as Code 8B material on an installer's requisition.
- 5.31 A customer's change will be considered "Inoperative" if it specifies material and/or installation effort to obtain the service conditions requested in the Telephone Equipment Order (T.E.O.) on which the change is requested.
6. ADDITIONAL PAPERS ASSOCIATED WITH CHANGES
- 6.1 Report of Latest Information Papers
- 6.11 Purpose and When Issued
- 6.111 The report of latest information papers (EFG-30G) is numbered consecutively from one (1) up and is furnished as a check list of the latest information that should be on the job. The initial report should reach the job no later than the Friday immediately preceding the scheduled "start date" and subsequent reports will be received monthly. The final report should reach the job two weeks prior to the scheduled "completion date".
- 6.112 CN numbers and Class "A" job drawing changes (job drawing numbers and issues) are shown on this report on a cumulative basis. The number of (Class "X", "A" and "B" only) appendices will be reported under their respective headings. The highest letter appendices will be shown under "alpha" and those consisting of both "A" and "B" sections will not be separately identified.

- 6.2 Change Supplements - Standard Drawings (EFG 368 and EFG 369)
- 6.21 Change supplements (EFG-368 and 369) illustrated in Figures 4 and 5, respectively are issued by the PECC Standards engineer to make changes on standard drawings. On jobs on which work has been started this supplements the specification and acts as a notification of change to the Installer.
- 6.22 Change Supplement Headings: The following is a list of the headings which appear on the change supplements and brief descriptions thereof:
- (a) Application: Application information will be in the form of a reference to "T" drawing figures, options and associated "J" drawing lists.
  - (b) Reason or Reasons for the Change: A brief description of the change, what it is to accomplish and its extent.
  - (c) Required Coordination: All coordination information such as associated changes which must be made in connecting circuits.
  - (d) Office Record Changes: This information is for Regional Engineering use only.
  - (e) Job Specifications Change Requirements: This information is also for Regional Engineering use only.
  - (f) Extent of Wire Requirements: Provides an estimate of length, color and type of wire required on a per circuit basis.
  - (g) Switchboard Cable Requirements: The supplement associated with the controlling end of the cable lists on a per circuit basis, additions or changes in cable runs including additional cable codes (or types) required and when possible apparatus termination at both ends of the cable.
  - (h) Additional Material Required: Provides quantities of all apparatus, piece parts, mounting details, etc., required to make the change.
  - (i) Change in the Stock List: Details stock list changes in the same manner that they appear or will appear in the stock list of the specifications drawing.
- (j) Details of Change Involved: Provides complete details of the change so that the change can be made from information on the supplement without referring to any other documents. A sketch of added or removed apparatus is also included. Wiring changes refer to apparatus functional designations rather than arbitrary locations on "T" drawings.
- 6.23 Supplementary Attachment (SATT)
- 6.231 The SATT is a computer output document which contains complete information for making physical changes on circuit wiring to bring wired equipment into agreement with the reissued circuit drawing. The SATT is attached to the change supplement originated for the associated "T" drawing.
- 6.232 The format of the SATT is similar to the circuit revision instruction (see Section 40B in this handbook) except that it is in terms of figures and options, whereas the circuit revision instruction is in terms of features.
- 6.233 A SATT is provided for all Class "A" changes affecting wiring or "Pigtail" components.
- 6.234 The application of the changes detailed on the SATT will be specified on the drawing supplement. When optional conditions are recorded on the SATT, complete reference to their application appears in the supplement.
- 6.235 The SATT does not replace the CRI nor makes its origination unnecessary. When the change is made as the result of a schematic reissue. The SATT is in effect the equivalent of a "CN - Use Only" detailed change sheet which may affect CRI's for other schematic issues.
- 6.236 When a SATT is issued and it affects a CRI, the CRI will be reissued at the same time.
- 6.24 Changes on Laboratories Drawings - Point Supplements
- 6.241 The Western Electric Company issues supplements against Bell Laboratories drawings to provide for the distribution of information on changes in schematic drawing transmission test requirements and circuit requirement

- tables and on changes on Laboratories "ED" drawings (-80 and -90 Series) where an equivalent Western Electric drawing is not prepared. This distribution is effected as follows:
- 6.2411 Where the change in the transmission test requirement table or circuit requirements table of the Laboratories schematic is combined with other changes affecting an associated Western Electric wired diagram and the change schematic drawing is available, a supplement is used against the wiring diagram.
- 6.2412 Where the change in the Laboratories schematic drawing affects only the circuit requirements table or the transmission test requirements table and the changed schematic drawing is available, a supplement is used against the Laboratories drawing as indicated in the paragraph.
- (a) If a Class "A", "AC", or "AR" change on a Laboratories schematic drawing affects only the circuit requirements table or the transmission test requirement table, a supplement is issued for distribution only on the schematic drawing listing, the schematic drawing number and issue. Also, the associated circuit description is listed with its issue and appendix numbers in the drawing and issue spaces.
- 6.2413 Where information on a change in a Laboratories schematic drawing circuit requirements table or transmission test requirements table is furnished to all active jobs in the process of installation before the changed schematic drawing is received from the Laboratories, an advance supplement is issued against the Laboratories drawing completely detailing the changed information on the supplement.
- 6.2414 When the revised schematic drawing is received from the Laboratories, a combining supplement is originated against the schematic drawing for the distribution of the drawing to the affected shops. It will list the schematic drawing number and issue together with the associated circuit distribution with its issue and appendix numbers in the drawing and issue basis. The body of the supplement will indicate the advance supplement issue numbers combined by the issue.
- 6.2415 If a change is made in the Laboratories "ED" drawing and an equivalent Western Electric drawing is not prepared, a Class "A", "AC", "AR" or "B" supplement is issued against the drawing. The supplement shows detailed information for the changes being made in a manner similar to supplements affecting Western Electric drawings.
- 6.3 Job Memoranda (SD-3-850)
- 6.31 Definition
- 6.311 The Job Memorandum is a multi-purpose form designed for use in answering the Job Information Memoranda (JIM) Form SD-4-1007 and for other correspondence between the installer and the engineer on open orders.
- 6.3111 The engineer may reply to urgent questions by telephone or TWX, however, all telephone calls will be confirmed by him in a Job Memorandum.
- 6.32 Preparations
- (a) The Job Memoranda is prepared by Engineering in accordance with Figure 6 for changes resulting from CN's and in accordance with Figure 7 for all other types of changes.
- 6.321 The Job Memoranda prepared for CN's together with the papers listed thereon is commonly referred to as a CN package.
- 6.3211 A Job Memoranda is not prepared for Western Electric Company or Telephone Company changes affecting jobs before the correspondence date but is prepared for supplementary authorizations (SA) and for exception items from the Job Proposal.
- 6.33 Only one Job Memorandum per change or supplementary authorization will be issued. This is done by Engineering in order to furnish the installer with complete information on one sheet of paper. The memorandum will list thereon all appendices and drawings involved in the change regardless of the number of job specifications affected by the change.

6.34 Application

6.4 Installer's Requisitions Issued by Engineering

6.341 Job Memoranda

6.41 The equipment engineer will order material by requisition for active orders that have been released for shipment on which the schedule will not permit furnishing the material in the usual manner. A confirming appendix will also be issued on billable and costly items. Installer's Requisitions are illustrated in CI (CJ) 42.305-23.

(a) Job Memoranda on billable changes are to allow the installer to plan his work in anticipation of the change. They are not an authorization to the installer to make the change. The changes are authorized by means of supplements, drawings, appendices, and requisitions involved which are furnished through regular channels.

6.342 Job Memoranda issued in answer to a JIM or in connection with a Class A type change on standard drawings authorize the installer to make the changes shown thereon.

6.5 Drafting Authorization - Job Drawings

6.51 A drafting authorization - Job drawings (SD-97-18B) illustrated in Figure 8 is an order issued by Equipment Engineering to make changes on job drawings.

7. DISTRIBUTION OF PAPERS ASSOCIATED WITH CLASS "A", "AC", AND "AR" CHANGES TO INSTALLATION

7.1 The distribution of papers associated with Class "A", "AC", and "AR" changes to the installer is made in accordance with the following:

	Shop (Note 1) Changed Orders		Installer Changed Orders	
	Sup	Print	Sup	Print
Bell Lab Papers SD's, CD's, LDI's & Etc.	Yes	Yes	Yes	Yes
Specification Drawings	(Note 2)	No	Yes	No
Combined Specification & Circuit Drawings (Note 1)	No	Yes	Yes	Yes ←
Framework, Assembly & Equipment Drawings	(Note 2)	No	Yes	No
Circuit & Other Maintenance Drawings	No	Yes	Yes	Yes ←
Installer's Equipment Drawings	No	No	Yes	(Note 3)

NOTES:

- (1) "Shop Changed" orders requiring some work to be done by the installer are considered as "installer changed" orders.
- (2) Distribution of supplements is not required when changes are limited to these drawings. A complete supplement package will however be distributed if some supplements require distribution.
- (3) These prints are included with the SD-3-850 Job Memorandum or are listed in the 096 specification.

→ Indicates new or changed information.

Assistant Manager  
Common Installation Engineering

ATTACHMENT

Figures 1 to 8 on Pages 10 to 24.

Reason for Reissue:

- 1) To add Paragraph 4.013.
- 2) To change Figures 4 and 5 and Associated Notes.





NOTES ASSOCIATED WITH FIGURE 2

The note numbers listed below correspond to the numbered locations shown on the typical Engineering Change Notice form shown.

- (1) PECC originating the Engineering Change Notice.
- (2) This date is the date the Standards Engineer signed the tracing.
- (3) The title shown here is the same as that in the title box of the drawing.
- (4) The number of the drawing being changed will appear here.
- (5) The issue of the changed drawing and the A.T.&T. Co. Class of Change is shown here except when the change is WECO originated. When this is the case only the issue is shown.
- (6) The A.T.&T. Co. rating is shown here except when the drawing is an A-1 being superseded by an A-2 in which case the word "NONE" is specified.
- (7) The WECO rating is specified here.
- (8) The system to which the specification belongs is shown here (e.g., common, power, toll).
- (9) If the specification drawing is changed as a result of schematic drawing changes the number of the schematic will appear here. If not, "NONE" is shown.
- (10) If the schematic mentioned in Note 9 is changed its issue is shown here.
- (11) The reason for the change is shown here.
- (12) This is used internally by the PECC and is not pertinent to the installer.
- (13) The controlling Standards Engineers name appears here.
- (14) The controlling Standards Department is shown here.
- (15) The name of the Standards Assistant Manager is shown here.



NOTES ASSOCIATED WITH FIGURE 3

The numbered notes listed below correspond to the numbered locations shown on the typical Change Notice Form.

- (1) An "X" is shown after the CN number (e.g., CN 1234.5XCG) when the CN only involves the distribution of documents, that is, when no additional material or work is required by installation and office records are not affected.

Examples:

- (a) Distribution of SD's and CD's confirming previously issued LDI's.
  - (b) Class "A", "AC" and "AR" changes on wiring diagrams (T Dwgs. and J, ED combined ckt. and specification Dwgs.) where job records are not affected and all changes have been completed in the shop.
- (2) Any associated Bell Telephone Laboratories drawings are listed here with their issue and class.
  - (3) The manufacturing drawings being changed appear here with their issue and class of change.  
  
Each changed, added or deleted list, group, figure or option is shown in a separate column starting at the left for each drawing.  
  
Lists, groups, figures and options are designated with L, G, F and O, respectively, as L-14, G-7, F-9 and O-X.
  - (4) J, H and ED drawings with the lists and groups that are not changed but are related directly to changed component specifications ordered in lists, wiring diagrams, schematics, apparatus, KS specifications or piece parts are listed here.
  - (5) Project name or number appears here.
  - (6) A brief description of the difficulty is provided here. This may be in an attachment such as the BTL ECN form letter or a CD that provides the required information.
  - (7) A brief description of the change in term of apparatus added and removed per circuit, unit, frame, etc., is provided here.
  - (8) CN's will positively state if new or changed installation information is or is not required and whether it is attached. Any new or changed installation documents which are not attached will be listed with a promise date of availability. When the documents are not attached, a point CN will be issued to make distribution of the installation documents when they become available. Should the new or changed installation information consist only of a statement, it will show in this area of the Change Notice form.
  - (9) If a job application trial is scheduled for the change, show the location of the trial and the date the trial is to begin, will appear here. If no trial is scheduled, the word "NONE" will appear here.

CHANGE SUPPLEMENT FORM EFG-368 FOR NON-DISTRIBUTED TYPE CHANGES  
ON STANDARD DRAWINGS

EFG-368(03)  
WESTERN ELECTRIC CO., INC.  
SYSTEMS EQUIPMENT ENGINEERING

CHANGE SUPPLEMENT  
(NON-DISTRIBUTED TYPE CHANGES)

\_\_\_\_ SHEETS  
SHEET NO. \_\_\_\_

19 NDD DATE 2#		CON 33 LOC 35		37 NDD NUMBER 51		DUE VAULT 56 DATE 63		7# DCP												
2		4		5		11		11												
PRE 1	FIX 4	DRAWING NUMBER BASE		SUB 12	SUF 14	15	17	SIZE 26	ISSUE 28	29	31	M.- 52	CLASS 54	55	DWG TYR 62	63	ENGINEERING AIDS AFFECTED			
																		ADDITIONS	FIGURE OR OPTION	7
		1						11	3			11	6		11			CHANGES OR DELETIONS	ORDERING INFORMATION	7
																		RATING CHANGE		7
																		ENGINEERING NOTE CHANGE		7
																		STORED PROGRAM SOFTWARE CHANGE		7
ASSOC LOC CA, FACTORY CA, & SHOP ASSIST DWGS AFF.				VAULT LIST SYMBOLS				TEL SEL DIST CODE	DRAFTING COMPL DATE	DRAFTING ORG	DRAFTSMAN TIME CHG TO									
11				11				11	11	11	11									
				AT&T CLASS SYSTEM & EQPT AFFECTED				DWG CROSS REF CHANGE												
				11				11		11										
								YES <input type="checkbox"/> NO <input type="checkbox"/>												
MAKE CHANGE PER:			AS DETAILED BELOW			ENGR MARKED PRINT														
8			<input type="checkbox"/>			<input type="checkbox"/>														
ORIGINATED BY (USE FULL NAME)			DEPARTMENT			LOCATION			EXTENSION			DATE			APPROVALS					
9			9			9			9			10			11					

FIGURE 4  
(PAR. 6.21)

NOTES ASSOCIATED WITH FIGURE 4

Unless otherwise indicated, the note numbers will correspond to the number of locations shown on the typical supplement.

- (1) Drawing number of the drawing or drawings being changed.
- (2) Availability date of equipment added per NDD.
- (3) Issue assigned to the particular change.
- (4) Control location.
- (5) New Development Description (NDD) number, when applicable.
- (6) Class "B", "D", "AD", "BD" or "DD" depending on the change supplement application.
- (7) Serves as an aid in identifying the kind of change being made.
- (8) Informs the installer if the changes are completely detailed on supplement.
- (9) Originator's full name, department, location and telephone extension.
- (10) Date the supplement was released.
- (11) Not pertinent to installation.

CHANGE SUPPLEMENT FORM EFG-369 FOR DISTRIBUTED TYPE CHANGES  
ON STANDARD DRAWINGS

EFG-369 (03)  
WESTERN ELECTRIC COMPANY, INC.  
SYSTEMS EQUIPMENT ENGINEERING  
INSERT A  
INSERT B

CHANGE SUPPLEMENT  
(DISTRIBUTED TYPE CHANGES)

\_\_\_\_ SHEETS  
SHEET NO. \_\_\_\_

19 MDD DATE 24 2		CON 33 35 16		37 MDD NUMBER 51 4		DUE VAULT 56 DATE 61 16		64 CN NUMBER 73 6		DCP 74 16	
PRE 1 FIX 5	DRAWING NUMBER BASE		SUB 12 SUF 13 14 15 17		SIZE 26 28 29	ISSUE 31	M. - 52	CLASS 54 55	DWG TYP 62 63	SHEETS TO BE ADDED OR CHANGED	
	1				16	3	16	5	16	7	
ASSOC LOC CA, FACTORY CA & SHOP ASST DWGS AFF.			VAULT LIST SYMBOLS			TEL SEL DIST CODE	DRAFTING COMPL DATE	DRAFTING ORG	DRAFTSMAN'S TIME CHG TO:		
13			16			16	16	16	16		
EQPT MFG SPEC OR ORDER NO AND SPEC			AT&T CLASS	COMPLAINT NO.	CONFIRMING INFO TO DEPT	DELIVER CPY SUPPL TO	DWG CLASS REF CHG	SEND PRINT TO INST	SHOP REPORT REQ		
16			16	16	16	16	YES <input type="checkbox"/> 16 NO <input type="checkbox"/>	YES <input type="checkbox"/> 8 NO <input type="checkbox"/>	YES <input type="checkbox"/> 16 NO <input type="checkbox"/>		
			SYS AND EQPT AFFECTED		JOB ENGR AFFECTED	ADDITIONS CHANGES OR DELETIONS	STOCKLIST DRAWINGS	TABLE A LIST OR GROUP	10		
			16		YES <input type="checkbox"/> 16 NO <input type="checkbox"/>	WIRING DIAGRAMS	FIGURE OR OPTION	10			
MAKE CHG PER; 9			AS DETAILED BELOW <input type="checkbox"/>			ENGR MARKED PRINT <input type="checkbox"/>			DRAWING OR LIST RATING CHANGE 10		
									ENGINEERING NOTE CHANGE 10		
									STORED PROGRAM SOFTWARE CHANGE 10		
									BILLABLE 16		
									BTL CHG 11		
									WE CHG 11		
									THIS SUPPLEMENT AFFECTS		
									MATR IN SL 16		
									WOODWORK 16		
									IRONWORK 16		
									SHEET MET 16		
									LOC CA FORM 16		
									WIR ASSEM 16		
									FUSE BD 16		
									PWR BD 16		
									PORT LIST SE OR PLUG-IN U 16		
									AMPLAS 16		
									PRINTED WRE BD 16		
									FACTORY CA 16		
									INSTALL 12		
ORIGINATED BY(USE FULL NAME)			DEPARTMENT	LOCATION	EXTENSION	DATE	APPROVALS				
14			14	14	14	15	16				

FIGURE 5  
(PAR. 6.21)

NOTES ASSOCIATED WITH FIGURE 5

Unless otherwise indicated, the note numbers correspond to the numbered locations shown on the typical change supplement.

- (1) Drawing number of the drawing or drawings being changed.
- (2) Availability date of equipment added per NDD.
- (3) Issue assigned to particular change.
- (4) New Development Description (NDD) number when applicable.
- (5) Class "A", "AC" and "AR" depending on the change supplement applicable.
- (6) CN number will be shown when applicable.
- (7) Sheet numbers of only those sheets being added or changed.
- (8) If "Yes" is checked, distribution of prints to Installation and Telephone Company Wire Chief's file will be made.
- (9) Informs the installer if changes are completely detailed on supplement.
- (10) Serves as an aid in identifying the kind of change being made.
- (11) "BTL CHG" will be checked when change is initiated by or is due to a similar change on a BTL drawing. "WE CHG" will be checked when change is initiated by some organization of the W. E. Company.
- (12) Will be checked for changes which affect Installation only.
- (13) Associated local cable, switchboard cable form, cable assembly, installers running list, and shop assist drawings that are affected will be listed.
- (14) Originator's full name, department, location and telephone extension.
- (15) Date the supplement was released.
- (16) Not pertinent to Installation.

SD-3-850 (7 - 67)



**Western Electric**  
MANUFACTURING AND SUPPLY UNIT OF THE BELL SYSTEM

(FOR ADDITIONAL PAGES  
BLANK SHEETS MAY BE  
USED)

**JOB MEMORANDUM**

SHEET 1 OF     

SUBJECT <b>3</b>			DATE <b>2</b>				
TOWN & STATE <b>5</b>		OFFICE <b>5</b>		ORDER NO. <b>4</b>			
ADDRESS <b>7</b>			REFER TO YOUR		DATED	RECEIVED	
			<b>6</b>	J. I. M. NO. <b>6</b>	ISSUE <b>6</b>	<b>6</b>	<b>6</b>
			<b>6</b>	TELEG.	SERIAL NO.	<b>6</b>	<b>6</b>
			<b>6</b>	LETTER		<b>6</b>	<b>6</b>
			<b>6</b>	TELEPHONE CALL		<del>6</del>	<b>6</b>
PROMISE OR SHPG. INFO. WILL APPEAR ON THE NEXT SHORTAGE REPORT			MATERIAL ORDERED ON REQ. <b>8</b>		DATED <b>8</b>		
* SHIPMENT PROMISED <b>7</b>							
SHOP CHANGE <input type="checkbox"/> <b>9</b>	INSTALLER'S CHANGE <input type="checkbox"/>	INSTALLATION APPLICATION CLASS <b>10</b> A <input type="checkbox"/>		OR <b>11</b> AR <input type="checkbox"/>			
REMARKS, REASON FOR, AND DESCRIPTION OF CHANGE							
<b>12</b>							
<b>13</b>							
INFO. COMPLETE <b>14</b>	INFO. INCOMPLETE <b>14</b>	PROMISE DATE <b>14</b>	<del>    </del>				
INFORMATION			AFFECTED DRAWINGS, CD'S, SPECS., APPENDICES, DET. CHG. SHEETS, APP. DESIG. CHARTS, ETC.				
RESPONSIBILITY (FOR ENGR. USE ONLY) <b>18</b>			NUMBER <b>15</b>		NUMBER		
REG SEE	ENGRG.						
	W. E. RCRDS.						
STDS	DATA CTR						
	CB	NK					
	CG						
	IH						
MV							
BELL TEL. LABS.							
INSTALLATION							
SHOP							
SUPPLIER			JOB DRAWINGS NOT AFFECTED <input type="checkbox"/>				
TEL. CO.			AUTHORITY FOR CHANGE <b>17</b>	CN. NO. <b>16</b>	SA. NO. <b>14</b>		

**19**

EQUIPMENT ENGINEER AND DEPARTMENT

**7**

FIELD SERVICE DEPARTMENT

\* TO BE COMPLETED BY FIELD SERVICE DEPARTMENT.

FIGURE 6  
JOB MEMORANDUM FORM FROM THE CN ENGINEER  
(PAR. 6.32)

NOTES ASSOCIATED WITH FIGURE 6

Unless otherwise indicated, the note numbers correspond to the numbered locations shown on the typical change supplement.

- (1) Indicates the sheet number and the number of sheets involved, if more than one sheet is provided the identifying information on the supplementary sheets is limited to that specified in this and Notes 2, 3, 4 and 16.
- (2) Date issued.
- (3) Brief description of the Job Memorandum contents.
- (4) Job order number on which the changes are to be made is shown.
- (5) The town, state, and office name where changes are to be made.
- (6) Used when the job memorandum has been originated by the "CN" Engineer in answer to a JIM.
- (7) The "Shipment Promised Date" and "Field Service Department" and address will have been completed by the Field Service Organization.
- (8) When additional material is ordered on requisition, the associated requisition number and date is shown.
- (9) Shop change or installer's change is checked.
- (10) "A" installation application for a Class "A" or "AC" change is checked for an inoperative condition on an order.
- (11) "AR" installation application is checked for Class "AR" changes or Class "A" changes which are not an inoperative conditions on an order.
- (12) If the Laboratories information indicates the changes are billable or partially billable, this information will be shown on the first line in this space. Unless otherwise indicated this change should be considered as nonbillable.
- (13) (A) A brief outline of the quantity and office numbering of the circuits affected and the particular sections, frames, desks, etc., on which they are located will be shown at the top of this space.  
  
(B) Below the above information a brief reason for and description of the change will be provided. This information will be covered entirely in the terms of the schematic drawings such as will be found in the Laboratories ECN form letter and "CD" sheets and will also include a list of the apparatus added and removed. When no schematic drawing is involved this information will be in terms of the systems "J" or "ED" drawing. If more than one change is involved each will be listed as a separate item from one up.
- (14) Complete or incomplete will be checked. If incomplete, the date the complete information will be furnished will be shown.
- (15) Under this heading the Standard and job drawings, CD Specifications, Appendices, Detailed Change Sheets, apparatus designation cards, etc., involved in the change will be listed.
- (16) The CN number assigned to the change will appear here.
- (17) The Laboratories drawing and issue number covering the change will appear here. When there are no Laboratory drawings involved, the systems "J" or "ED" drawing is listed. When the change is billable, the authority for the change such as reference to the Telephone Company letter or TWX and date, which approved the change or the Western Electric Company letter to the Telephone Company requesting approval is mentioned.
- (18) The name of the organization responsible for the change is indicated.
- (19) The originator of the job memorandum shows his full name in this space.



## NOTES ASSOCIATED WITH FIGURE 7

Unless otherwise indicated, the note numbers will correspond to the number of locations shown on the typical supplement.

- (1) Sheet number and number of sheets involved. If more than 1 sheet is provided, the identifying information on the supplementary sheets is limited to that specified in this and Notes 2, 3, 4 and 17.
- (2) Date issued.
- (3) Brief description of the job memorandum contents.
- (4) Job order number of the job on which the changes are to be made.
- (5) Town, state and office name where changes are to be made.
- (6) Type and date of correspondence from the installer on the same subject is indicated. When the memorandum is in answer to a JIM or telegram, the JIM number and issue or telegraph serial number and date will also be shown.
- (7) The date correspondence mentioned in Note 6 was received in the Job Engineering Department.
- (8) The "ship promise date" and Field Service Department and address are completed by the Field Service Organization.
- (9) When additional material is ordered on a requisition, the associated requisition number and date is shown.
- (10) (A) When the job memorandum has been issued in reply to an Installer's JIM or to other correspondence from the Installer, the information in this space will indicate the action to be taken by the Installer.  
  
(B) When the job memorandum has been issued to advise the Installer of Western's change originated by the job engineer or of supplementary authorizations (SA), the particular sections, frames, desks, etc., on which the effected circuits are located and quantity and office numbering of these circuits will appear here. Below this information a brief reason for and description of the change will also appear.
- (11) Complete or incomplete will be checked. If incomplete, the date the incomplete information will be furnished will be shown.
- (12) (A) This space will not be completed when the memorandum is issued in reply to an Installer's JIM or other correspondence with Installer.  
  
(B) When a memorandum is issued to advise an installer of Western's changes originated by a job engineer or job supplementary authorization (SA), all appendices and job drawings involved in the change will be listed here. The appendices will contain a cross-reference to the date of the job memorandum.
- (13) The supplementary authorization (SA) number assigned to billable customer changes will appear here.
- (14) Only used when the job memorandum is originated by the job engineer.
- (15) On changes which are billable, the complete authority for the change will be shown, such as, a reference to Western's letter or telegram and date approved or Western's letter to the Telephone Company requesting approval.
- (16) The organization responsible for the change will appear here in all cases.
- (17) The originator of the job memorandum's full name will appear in this space.

DRAFTING AUTHORIZATION SD-97-18B FOR JOB CHANGES

SD-97-18B(1-73)



RCS INPUT-JOB DRAWING AUTHORIZATION - CHANGE EXISTING DRAWING (S)

SYSTEMS EQUIPMENT ENGINEERING

CHANGE EXISTING Dwg		MESSAGE ID		DUE REPRO DATE		DRFTG/DC DEPT		SPECIAL ROUTINES				DATE AUTH ORIGINATED							
12		BBB		12		12		VOID	N-W-R	RE-NBR	REINSTATE	12							
DRAWING NUMBER				ALPHA		N-CR		MISC DIST CODE		RD EXTRA DISTRIB		WECO ORDER		SPEC NO OR NO		CLASS OF CHANGE			
PFX	BASE	SCB CODE	DASH	ALPHA	EXP DASH	R	ISS	SHOW	INSTR	MICRO	PRINT	PFX	NUMBER	SFX	LTR	SERIAL	NO		
		1					2		3		12		4				12	5	
NAME			ORIGINATOR'S DEPT			TEL EXT		LOC		COPY OF AUTH TO		CONFIRM INFO TO DEPT		COMPLAINT NO		ACCT CODE		JIM NO.	
6			6			6		6		12		12		12		12		7	
STATE		TOWN			TELCO NAME				BLDG IDENT		OFFICE NAME								
		12			12				12		12								
OP CODE	DOC TYPE CODE	EQUIPMENT DESCRIPTION												TELCO SPEC					
12	C	12												8					
BAY OR FRAME LOCATION								OWNERSHIP		DATE 12 ASSGNT FORM REQD AT DATA CENTER				TELCO ORDER NO					
12								12		12				9					
LINE OR ROW NUMBER								FLOOR NUMBER				THIS AUTH WILL BE USED TO RECORD A SPL PRT-OUT				TELCO LTR DATE			
12								12				12				12			
AUTOMATIC DISTRIBUTION CODES														DWG INFO MK PRINT		PROJ OR CONT NO			
CODE M P														12		12			
ASSOCIATED WIRING LIST DRAWINGS														MK PRINT FORWARDED TO DEPT		CHG NOTICE NO			
SC DASH EX														12		10			
SERIAL NUMBERS														DATE MK PRINT AVAIL TO DRFTG		ISS NOTE DATA			
12														12		12			
VOID STATEMENT										EFFECTIVE VOID DATE				APPROVED BY		DATE			
12										12				12		12			

FIGURE 8 (PAR. 6.51)

NOTES ASSOCIATED WITH FIGURE 8

Unless otherwise indicated, the note numbers correspond to the numbered location shown on the typical change supplement.

- (1) Job drawing number of the drawing or drawings being changed.
- (2) Shows the issue number assigned to the change.
- (3) (A) When reference has been made in the equipment ordering portion of job specifications and this drawing is required by the shop or by the installer, "S" or "P", respectively, will be shown.  
  
(B) Will be checked on all Class "A" changes which do not show complete information in the body of the authorization will also be checked on all Class "A" changes if the drawing is listed under "Circuit and Other Maintenance Drawings" in the job specification regardless of whether or not complete information is shown in body of authorization.  
  
(C) Will be checked on Class "D" changes if a drawing has previously been listed under "Circuit and Other Maintenance Drawings" of job specifications.
- (4) On orders requiring prefixes such as Running Orders (prefixed RO), Engineering Complaint Orders (prefixed EC), etc., the prefixes will appear in the column entitled "PFX". The five digit order number will appear in the column entitled "Number" and the order suffix will appear in the column "SFX".
- (5) The class of change "A" or "D" will be shown in this column.
- (6) Originator's name, department number, telephone extension and location.
- (7) The JIM number appears here when the change is being made as a result of a JIM including Installer's marked prints.
- (8) Telephone Company specification number will be shown for Southwestern Bell Telco, Northwestern Bell Telco and A.T.&T. Co. White Plains.
- (9) Telephone Company order number.
- (10) Change Notice (CN) number when the authorization is a result of a CN.
- (11) This blank area may be used for a variety of purposes including detailed job drawing changes or overflow information of specific entries of the form.
- (12) Not pertinent to installation.