

DEFINITION OF TERMS SPECIFICATIONS

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1. GENERAL

1.1 Scope of Section

1.11 This section defines various engineering instructions (terms) for the Installer to perform work operations on equipment ordered in the "Summary of Material" section of the specification. These instructions may also direct work operations to be performed on existing central office equipment associated with material for which the job specification was written.

1.12 These terms may appear under "Work To Be Done By The Installer", "Work to Be Done By The Contractor" (011 Spec) or "Work To be Done By The Service Center" (010 Spec).

1.13 The Installer shall place either Western Electric or non-Western Electric Co. Manufactured shop wired equipments (those either completely or partially shop wired), install and connect the "outside of local cable" or "outside of unit or panel" wiring without specific instructions under the (WI) heading, the only instruction to the Installer to add a shop wired equipment is covered in the explanatory paragraph following the heading "Work To Be Done By The Installer."

1.131 Modification specifications, such as those arranging a switchboard position for DC-MF Key Pulsing and KS Apparatus such as resistors, condensers, switches, etc., do not fall in the category of equipments defined in Paragraph 1.14 and shall be covered in a work item.

1.132 Equipment Manufacturing Specifications (J, H, ED or KS) which are shown in the "B" Section, shall be considered as shop wired equipments and shall be treated as indicated in Paragraph 1.14 if the ordering information includes shop wiring. The relocation or removal of shop wired equipments does require a work item.

1.14 Non-Circuit Switchboard Apparatus such as ticket boxes, writing shelves, jack spacers, blank panels, etc., does not require a work item except for modifications, relocations, and removals as follows:

A. Relocate or Remove: A work item is required in all cases except when piece part non-circuit apparatus must be removed or relocated because of the application of another work item. If the application of another work item requires the removal or relocation of non-circuit apparatus covered by a standard equipment drawing, (i.e., writing shelves), then a separate work item is required.

B. Modification: Work item required in all cases.

1.141 Non-Circuit Power Apparatus: A work item shall be prepared in accordance with Paragraph 1.14 except when the summary of material orders individual apparatus items to be assembled into a complete entity by the Installer in accordance with job information.

1.142 Other Non-Circuit Apparatus: A work item should be used for add, extension, relocation removal, or modification of cable racks, auxiliary framing, frame and aisle lighting, Central Office protective grounds, appliance outlets, etc.

This section includes material from CI 97.100, Section 33 and CI 97.300 Section 36 Dated 8-1-80 and 11-24-36 Respectively.

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NOTICE - NOT FOR USE OR DISCLOSURE OUTSIDE THE BELL  
SYSTEM EXCEPT UNDER WRITTEN AGREEMENT

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1.15 Where new wiring lists and job equipment drawings are furnished, the Installer shall work entirely from these drawings. An exception is when equipment being furnished is to be modified by Installation. In this case, modifications shall be covered in the (WI) section of the specification.

1.16 No work item is required when Installation utilizes Manufacturing Notes on standard drawings.

1.17 Work Items are required to: Add, remove, relocate or modify wiring, cable, power feeders, or grounding between existing units, frames, cabinet, sections, positions, distributing frames or power supplies, also to extend power feeders, grounding or frame and aisle lighting appearance to new or existing equipment.

1.171 A work item is also required for a sublist that has been ordered from an equipment specification when it is not a shop wired unit.

1.18 The Installer shall place circuit apparatus and add Installer's wiring without specific "ADD" work items when the circuit apparatus is ordered other than per a list or group from an equipment manufacturing specification.

2. DEFINITION OF TERMS

2.1 Valid Work Items

<u>TERM</u>	<u>DEFINITION</u>
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Activate (NOTES 1, 2)	Required when spare units, shelves, positions, frames, etc. are to be placed in service. Special steps such as removal of blocks from relays, ground from a particular lead, or connection of an external cable, loose wire, etc. are to be covered in an Installer's note.
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Add (NOTES 3, 4, 5)	Required when new or additional material is to be furnished and it is either non-circuit apparatus (however ordered) or circuit apparatus ordered per a list or group from an equipment manufacturing specification.
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Assemble	Required when individual components are to be fitted together to form a complete unit. Detailed assembly operations may be covered in an Installer's note.
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Assemble and Erect	(Turnkey Order) When individual components of a tower, wood pole structure, etc., are to be fitted together and raised into place as a complete unit.
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Assign NOTES 6, 7)	When added equipment is associated with spare terminals on banks, switches, keys, jack, lamps, etc., an Installer's Note is required to indicate that cabling is in place.
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Connect	Required when existing wiring is to be connected to apparatus in place and no additional wiring or apparatus is being furnished. The wiring diagram, figure, circuit numbering, and location shall be specified.
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Disconnect	Required when wiring is to be disconnected from apparatus and both left in place. The wiring diagram, figure, apparatus and wiring options, if any, and circuit numbering and location shall be specified.
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Equip (NOTE 8)	Required when apparatus is to be added and connected to existing wiring, to equip individual circuits. The wiring diagram, figure, wiring and apparatus if any, circuit numbering and location shall be specified. When equipping circuits on a partially equipped unit, the code of the wired unit should be included.
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Extend (NOTES 9, 10)	Required when existing circuits, framework or power are to be extended into locations where they did not previously appear. The wiring diagram, figure, options if any, circuit numbering and location the circuits are being extended into shall be specified.
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Furnish & Install	(Turnkey) When new or additional circuits or non-circuit apparatus is to be furnished and the contractor will furnish the required materials.
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Install	(Turnkey) Use when new or additional circuits or non-circuit apparatus is to be furnished.
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Load & Verify (NOTES 11, 12)	Required when software program cards magnetized by COPUS or a similar magnetization procedures are to be loaded into an ESS machine.	Modify to Remove and/or to Add (NOTE 16)	Required when modification involves the straight removal, and/or addition of figures, and/or option, or non-circuit apparatus. On a "Modify to Remove" item, the figure or option to be removed need not be listed in the modify portion of the item.
Magnetize (NOTE 11)	Required to provide software program magnetic data for an initial installation, or to provide changes in the magnetic data that exists on the magnetic storage devices of a system.	Rearrange (NOTE 17)	Required when the cross-connection arrangement on a present junctor grouping frame or other Central Office Equipment is to be changed by reassignment, removal, and/or addition of cross-connection jumpers, including jumpers to serve new equipment. The wiring diagram, figure, and location shall be listed.
Make Spare (NOTE 13)	Required when units, shelves, positions, frames, etc., are to be removed from service. Special steps as directed by the Operating Company, such as blocking of relays operated or non-operated, placing of a ground on a particular lead, disconnection of an external cable or wiring shall be covered in the work item installers note and entered in the wiring list along with the "spare" condition. The title, circuit number and location shall be shown.	Reassign (NOTE 18)	Required when an existing working circuit is to be disassociated from one circuit and reassociated with another circuit. Both the present assignment or termination and the new should be shown on the wiring list.
Modify (NOTES 14A-14G)	When apparatus, wiring or both of existing or new circuits are to be changed to provide new or changed circuit conditions, and all or part of the present wiring is being reused, or when non-circuit apparatus is to be changed. Only the group, list, figure, feature and wiring options that are directly involved in the modification are listed.	Recable	Required when either or both ends of switchboard or power cable is being reterminated. This may involve the replacement of an existing cable with a new cable. The wiring diagram, figure, location and circuit numbering, present and new termination shall be listed.
Modify	(Turnkey Only) When apparatus is to be changed and all or part of the existing apparatus is to be reused.	Relocate (NOTES 19,20,21)	When apparatus, wiring, or both of one or more circuits, or when non-circuit apparatus or equipment is to be changed from one location to another.
Modify to agree with (NOTES 15A-15D)	Required when a wiring diagram, figure, wiring or apparatus option(s) or non-circuit apparatus is being replaced by a new condition. Only the modified information is listed.	Relocate	(Turnkey) *When apparatus is to be moved from one location to another.
		Remove (NOTES 22,23, 24A-24G, & 25-28)	Required when the apparatus, wiring or both of one or more circuits is to be removed, or when non-circuit apparatus or equipment is to be removed. This (WI) should be qualified with a statement "apparatus only" or "wiring only" when

it applies to the circuit being removed. The main lists or groups of the manufacturing specification that orders the local cable or wiring and unit framework should be shown. These lists or groups may be omitted if they were not shown on the job record drawings.

**Renumber  
(NOTE 29)**

When office numbering of present positions, relay racks, bays, frames, circuits, etc., is to be changed. This term shall be used when no other "Work Item" changes are involved. (A list of the old numbering and new numbering of the affected equipment or circuit should be shown.)

**Reopen &  
Close  
(NOTE 30)**

Work items for cable holes in the floor, wall and/or partition and cable sleeves are generated in the "C" section of the cabling specification. "A" section work items are only generated for:

- a) Power cable or wire associated with a power cable running list drawing.
- b) Manual specs such as ESO.
- c) Cable slots in floor such as under the MDF.

**Retire in  
Place  
NOTES 31-  
36)**

Required when equipment is to be retired and left in place. (This term shall only be used when specifically authorized by the Bell Operating Company (BOC) in as much as the price of the equipment so designated is removed from the (BOC's) capital account. The specification or equipment drawing and list or group, title, office circuit numbering and location shall be listed. Also, list the far end terminations when they are to be removed. The far end terminations may be included in the 069/070 Specification under "General Notes for the Installer" by use of an Installer's note in the removal specification.

**Retire for  
Removal  
(NOTES 37-  
39)**

Required when equipment is to be retired in preparation for the removal of equipment as scrap. This work item shall only be used on a "conditioning" order associated with a major equipment removal contract proposal. It allows Installation to retire equipment by removing fuses and tagging equipment, and also allows Engineering to void or change the associated office drawing to indicate the equipment as being removed. The equipment drawing or the narrative, title, office numbering, voided wiring list or R-Drawing shall be listed.

**Rewire  
(NOTE 40)**

Required when wiring of existing circuits is to be changed to provide new or changed circuit conditions and none of the present wiring is to be reused, and either a new or supplementary cable is being furnished for the new circuit arrangement. The wiring diagram, figure, options, circuit number and location shall be listed.

**Rewire to  
Agree with**

The same requirements as "rewire" except the new condition should be reflected.

**Rewire and  
Equip to  
Agree with**

To be used when wired only circuits are to be both rewired and equipped

**Transport**

(Turnkey) When equipment being furnished must be brought to the job site and the items being transported would appreciably affect a contractor's bid and as deemed applicable by the Engineer.

NOTES:

- 1) To activate spare equipment, the title, circuit number and location shall be listed.
- 2) The addition of cross-connections are not covered in the "activate" (WI) or associated Installer's note.
- 3) "Circuits" includes wiring and apparatus unless otherwise qualified. "Wiring" includes installing and connecting the local cable wiring or surface wiring and all of the outside wiring.

- 4) The addition of a local cable associated with a work item shall be covered by an Installer's note.
- 5) When the outside of unit wiring is in place, this information should be included in an Installer's note specifying the far end terminations.
- 6) The addition of cabling or cross-connections are not included in "assign" work items or the Installer's note.
- 7) To assign equipment such as signal distributor points, master scanners, central pulse distributors and similar equipment. The wiring diagram, figure, job assignment drawing and quantity of circuits should be listed.
- 8) When the "Equip" item was to be used for the purpose of introducing a particular new feature into the office, consideration should have been given to making it a "Modify to add" item to allow for overall testing of the new feature.
- 9) To extend framework, the equipment drawing, figure, group and title (or narrative information) and the location the framework is being extended into should be listed.
- 10) The "extend" work item related to circuits is primarily intended for emergency alarms, miscellaneous multiple and bus leads.
- 11) Use narrative information specifying the total number of mods to be loaded or magnetize. (In No. 1 ESS Generic Feature Loaded Program, specify one set of mods for generic program.) Software program name, tape number and issue number used to magnetize the mods, the actual test program to be magnetized from the master tape, and the magnetization process to be used.
- 12) Include information (Installer's note) as to the purpose of the new generic program for retrofit with program change sheets used, or for restart, as well as the disposition of the replaced cards and IOA shipping cases.
- 13) The removal of cross-connections is not covered in "make spare" items or associated Installer's note.
- 14) To modify:
  - a) A Circuit - list the wiring diagram, figure, wiring and apparatus options, circuit number and location.
  - b) A Non-Circuit Apparatus - list the drawing, list or group if any, or narrative information and location.
  - c) A Combined Specification, Circuit Drawing - list the drawing and group or list, circuit numbering and location.
  - d) Per DCS or CRI - list the equipment title, and/or circuit numbering and location.
  - e) Per Job DCS or Job CRI - list the wiring diagram, figure, wiring and apparatus options, circuit numbering and location.
  - f) Per DCT - list the equipment title, circuit number and location.
  - g) A (CLEO) Circuit - when common language equipment order circuits are involved, an Installer's note should instruct restamping of equipment - both old and new code listed.
- 15) To Modify:
  - a) A Wiring Diagram - list the T-drawing, figure or options.
  - b) A Combined Specification Circuit, Drawing, or Non-Circuit Apparatus - list the J, H, ED, P or narrative and/or list or group.
  - c) Per DCS, CRI or DCT - list the DCS, CRI or DCT and features.
  - d) Per Job DCS - list the T-drawing, figure or option, the DCS should be listed in an Installer's note.
- 16) To modify non-circuit apparatus or equipment use narrative information or list drawing, list or group and location.

- 17) To rearrange circuits the wiring diagram, figure and location should be listed. The "N" drawing showing the present arrangement should be listed in an Installer's note.
- 18) "Reassign and Recable" should be used when recabling is necessary to accomplish the reassignment.
- 19) To relocate complete equipment such as positions, sections, relay racks, bays, frames, shelves, banks, switches, test sets, units, panels, etc. The specification or equipment drawing, title, office circuit numbering, present and new locations should be listed. If recabling is required, list the wiring diagram and figure covering the outside of unit cabling.
- 20) When individual circuits are relocated, the wiring diagram, figure and/or options, office circuit numbering, present and new locations should be listed.
- 21) When equipment is relocated due to the application of another work item, relocation should be done per an Installer's note or work item. The title, equipment drawing, figure and/or options should be listed.
- 22) External terminations are to be located for removed circuits unless the far end equipment is being removed on the same or associated order. These terminations may be included in the 069/070 or 005 Specification. Under "general notes for the Installer" by use of an Installer's note in the removal specification far end terminations shall consist of at least, frame designation, frame number and equipment location.
- 23) When far end terminations cannot be determined from the office records and there is reason to believe the Telephone Company contributed to the inaccuracy, negotiations between engineering and the Telephone Company for the establishment of installation's effort in searching out

the terminations for identification of the cabling associated with the removal, should be included in an associated Installer's Note acknowledging such agreement. When the inaccurate records are solely the responsibility of Western Electric Company Engineering, an Installer's Note should state that the far end terminations could not be located by engineering.

- 24) A "Remove" work item should inform Installation of:
  - a) Removed equipment covered by a specification or equipment drawing. The drawing, lists or groups, title, circuit numbering when applicable, and location should be listed. The wiring list information should be copied in detail or a wiring list "R" drawing should be listed. A list of far end terminations should also be shown.
  - b) To remove individual circuits, the wiring diagram, figures and/or options, circuit numbering, location and far end terminations should be listed.
  - c) To remove non-circuit apparatus, the equipment drawing, group, and location when this information is part of the office records, should be listed. On miscellaneous framework items, group information may be omitted or equipment drawing information replaced by a narrative description.
  - d) When there is no wiring list drawing available to the Engineer for the wired equipment being removed, he will list only the "outside" of unit wiring which should be available in the original specification.
  - e) When a wiring list has been voided due to a removal, the voided wiring list should be shown in place of the "R" drawing.
  - f) Abbreviated work items may be used for partial removals when the removed equipment is to be scrapped and the removal has not been covered by a firm contract for a major equipment removal. To remove equipped relay

racks, desks, switchboard positions, etc., the equipment drawing or narrative, title, office numbering, voided wiring list or "R" drawing should be listed. A list of the far end terminations should be in an Installer's note only when they are located on equipment not being removed.

- g) When the Telephone Company provides disposition of removed equipment it should be shown in an Installer's note. It should also show whether equipment is to be reused or junked.
- 25) Major Central Office Equipment Removals (Firm Contract): This type of removal is based on the dismantling of obsolete central offices in which all removed equipment is junked. Salvage of valuable scrap material is part of this operation. A firm contract proposal is prepared for the Telephone Company for the complete removal only. Salvage credit is included in this proposal. Removal of the equivalent of 25 frames or more is the size considered economically feasible under this service offering. Smaller equipment groups may be accepted if the costs of estimating and order processing are given due consideration or if the job is to the mutual advantage of all organizations involved.
- 26) Two-order concept: An EF&I order is desirable to "condition" the office for the equipment removal, whether only part of the office is removed or the complete office is dismantled. It is necessary to retire the equipment, as well as to void (or R-drawing) the affected office drawings, in preparation for the major equipment removal as defined by the firm contract proposal. (This retirement may be done either by WE, using the Retire - For - Removal work items or by the TELCO, in which case no work items are to be written by the Line function.) The conditioning order will include any relocations, removals for reuse, modifications, recabling, etc., to keep the remaining equipment in service after the major equipment removal. Schedule the ship date of the conditioning order 7 weeks prior to start of the equipment removal (see Supplement H in Section 41).
- When an EF&I order is received by the Line Function that requests the removal, retire in place or the retire for removal of more than 25 Frames, the Line Function shall consult with the Regional Account Management Function to determine if a Two-Order Concept shall apply (Conditioning Order by Line and a Major Equipment Removal Order by Account Management). Once it is known if the Two-Order concept applies, then the work items shall be applied as required and with TELCO acknowledgement to meet the job condition.
- 27) Major Equipment Removal Order: No specification is scheduled on the removal order. Engineering involvement is confined to assisting in the preparation of the firm contract proposal when the "Transmittal Letter to Western Electric," requesting the removal service, is received. Upon request of the Contract Coordinator, the Line Engineer shall participate in the on-site inspection of the office, verify the extent of the equipment to be removed, and assist in preparing a work plan if engineering assistance is needed. Also, the Line Engineer shall review the office records to determine the number of job drawings which are to be voided or changed due to the removal and submit this information to the Engineering Contract Organization within 5 days of the on-site visit. Engineering effort to void or change the drawings may be included in the firm contract price for the removal order if there is no conditioning order or TCE order to handle this operation.
- 28) The Conditioning Order: This order requires advance information from the Telephone Company on the frames or equipment to be specified for removal by the associated major equipment removal proposal, and also the desired start date of the removal. Authorization for an office inspection should be obtained to verify the equipment to be retired for removal as well as any previously retired-in-place equipment now due for removal. Possible additional work which may be necessary to "condition" the office for the removal should be determined at this time. Office drawings for all equipment to be removed as part of the major equipment removal shall be voided (R-drawing) on this order.

- 29) If the "renumber" work item involves changing office records for "far end" circuit terminations, those terminations shall be identified in the work item or referenced in an Installer's note.
- 30) When routing switchboard and power cable or wire through an existing cable hole, slot or sleeve (ferrule) located in the floor, wall partition, roof or end panel of a CTS, switchboard or desk, an "A" section work item is required as follows:
- a) To reopen and close existing cable hole, list the cable hole number, floor and location.
  - b) To reopen and close existing cable sleeves, list the size of the sleeve, floor and location.
- 31) All switchboard cable originating from and terminating on the frame, unit or position being retired in place is to be disconnected (at far end only) i.e., Distributing Frame, fuse boards, other frames, units or positions, etc. When switchboard cabling is covered on a separate wiring diagram figure or option, the figure should be left on the wiring list drawing. A note should be referenced to it stating what disconnections have been made at the far end. If the equipments "far-end" circuit terminations are removed or retired in place, a work item does not have to be included with these terminations.
- a) Outside of local cable wiring of these circuits shall be removed by a separate work item or they shall be included in this work item and edited similar to the "remove" work item.
- 32) Fuses are to be removed from the fuse bay, PRTD, etc. and fuse bays corrected to remove job information.
- 33) Terminal strips should be removed at the DF's (when other cable terminations are not involved) and equipment drawings corrected to remove job information for DF's that serves only Cross-Bar 5 equipment, the terminal strips need not be removed.
- 34) The floor plan, relay rack equipment drawings, wiring list drawings, etc., shall be corrected to indicate the equipment "retired in place". A note on the wiring list shall be referenced against the retired-in-place equipment. A note shall indicate the circuits being retired in place and any deviations from normal.
- 35) Equipment so specified shall be identified by a "RIP" Label (SD 44-1) to be placed by the Installer in the most noticeable and conventional place available on the equipment. The label shall be removed if the equipment is reactivated and put back into service.
- 36) If (RIP) equipment is to be reinstated, it should be ordered in the (SM) section as a Telephone Company furnished item to reinstate it on Telephone Company's Capitol Account. If the equipment is added to the same office or another office in the same building, and the original location is maintained, an Installer's note in the specification or a note in the (SM) section should show that the equipment presently exists and the location specified.
- 37) When far end terminations are located on equipment or frames that are not being removed on an associated major equipment removal proposal, the locations of these terminations shall be provided in an Installer's note crossreferenced to the work item. These terminations, i.e., remove power fuses or other auxiliary supplies, terminal strips on DF's (Telephone Company removes cross-connections) etc., shall be listed with a note instructing them to be removed on the conditioning order.

38) Voided or "R" drawings shall be issued for all equipment being retired for removal. These drawings should also be issued on a conditioning order for previous (RIP) equipment when it is now also scheduled for removal on the Associated Remove Contract.

39) An Installer's note should be used for listing far end terminations, or the reference to the work item note that a "general note for the Installer" is in the 069/070 Specification.

No arrows due to extensive revisions.

40) An Installer's note should be added and crossreferenced to the "rewire" item indicating that a new or supplementary local cable is being furnished when one is required. This item should list the wiring diagram, figure options, circuit numbering and location

Engineering Planning Manager  
(Installation)

**Reason for Reissue:**

Some new valid work items were added and most others revised to correspond to "CI" Engineering Instructions.