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TABLE Z-1 – SUMMARY OF CHANGES IN SECTION Z

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1. INTRODUCTION

1.1 General

1.1.1 The installation supplier (All listed parties responsible for installation activities defined in section (A 1. 3) shall ensure as part of the evaluation of the installation that all work has been completed in accordance with the detailed specifications or approved changes to the detailed specification.

1.1.2 This section provides the complete applicable installation TP76300 exceptions for the AT&T Outside Plant Environment (OSP).

1.1.3 AT&T assumes no responsibility for any costs incurred by a given manufacturer or supplier in conforming to the requirements listed in TP 76300 section Z. Further, conformance to all requirements delineated in this document does not constitute a guarantee acceptance of a given supplier product/service for use in the AT&T OSP environment.

1.1.4 AT&T reserves the right, without prior notice, to revise ATT-TP-76300 section Z for any reason.

1.1.5 AT&T reserves the right to audit installation supplier for compliance to ATT-TP-76300 section Z.

1.2 Scope

1.2.1 Section Z establishes all installation TP76300 exceptions for the AT&T OSP.

1.2.2 The requirements contained in Section Z apply to installations in the AT&T OSP environment, which is defined as space outside the four walls of the Central Office either in stand-alone buildings (CEVs and HUTs), Cabinets, or space within shared-use buildings and customer premises.

1.2.3 The intent of ATT-TP-76300 section Z is to familiarize the installation supplier with AT&T OSP environment installation procedural requirements by:

   a) Covering the precautions to be taken to protect personnel and to prevent service interruptions and degradation during the installation activity.

   b) Outlining the basic standards to which the installation supplier performance will be expected to conform for job acceptance purposes.

   c) Defining the necessary documentation used to detail the installation activity.

   d) Defining installation start, job completion and job acceptance procedures.

   e) Identifying AT&T OSP involvement during the various aspects of the installation operation.

1.3 General Requirements

1.3.1 All applicable requirements in other ATT-TP-76300 sections apply to installations in The OSP Environment unless exceptions (clarifications, deletions, revisions or additions) are expressly stated in Section Z.

1.4 Definitions clarification on ATT-TP-76300 Section Z
1.4.1 In ATT-TP76300 Section Z all references to BDFB should be considered main power distribution panel of the power plant.

1.4.2 In ATT-TP76300 Section Z all references to SPDB should be considered subtending fuse panels served by the power plant main distribution panel.

1.5 Comments on ATT-TP-76300 Section Z

1.5.1 Questions or Comments to ATT-TP-76300 Section Z can be submitted to:

Thomas Rozanski   Alan Bradbury
Senior Network Support   Senior Network Support
tr2793@att.com    ab2348@att.com

2. GENERAL INSTALLATION REQUIREMENTS

2.1 General

2.1.1 Standards in this section relating to AT&T buildings and Central Offices shall be applicable to customer premise locations.

2.1.2 The installation supplier shall sign the AT&T or property owner’s building register, where required upon entering or exiting the facility (Section B).

2.1.3 The installation supplier shall not install ceiling inserts unless provided with a written authorization by the building owner and approved by AT&T representatives (Section B).

2.1.4 Before drilling into any basement floor, basement wall work, or any power related work, the installation supplier shall determine from the building owner and the AT&T representative whether waterproofing has been provided along with any special requirements for anchoring equipment (Section B).

2.1.5 There are no additional exceptions to the general installation requirement specific to the OSP environment for TP76300, (Section B).

3. INSTALLER SKILL LEVEL

3.1 General

3.1.1 There are no exceptions to the general installation requirement specific to the AT&T OSP environment for TP76300, Section C.

4. NETWORK RELIABILITY AND METHOD OF PROCEDURE

4.1 General

4.1.1 No Critical Power work activity shall begin until a detailed MOP is submitted and accepted by the OSP Equipment Engineer (Section D).

a) Critical Power may include but is not limited to the following: All activities on live power equipment that includes the addition, rearrangement or removal of power equipment, cable or terminations.
4.1.2 There are no additional exceptions to the general installation requirement specific to the AT&T OSP environment for TP76300, Section D.

5. JOB DOCUMENTATION

5.1 General

5.1.1 All Cable penetration requirements at customer or leased locations will adhere to local building laws and customer requirements (Section E).

5.1.2 The installation supplier shall complete the Cable Penetration Reporting Log (Figure E-2) to document the cable penetration activity.

5.1.3 The Cable Penetration Reporting Log shall be placed in the job folder at the completion of the job.

5.1.4 The Installation supplier is not required to provide a backup power plant configuration unless requested by the OSP Equipment Engineer (Section E).

5.1.5 The Installation supplier shall use the CEEOT Vendor Message Log to provide notification of additional information or for record purposes (Section E).

5.1.6 CEEOT Vendor Message Log shall be used for formal communications to the OSP Equipment Engineer. These communications may include but are not limited to the following (Section E)

a) Additional material

b) Additional engineering

c) A change in the TEO

d) Additional Installation supplier effort

e) Request for disposition of material

f) Document the agreement

5.1.7 The If SRV-SITESURVEY functional Driver is awarded on the project, the installation supplier shall:

a) Update scope of work in CEEOT with detailed information, grounding details, size, termination points, power details, breaker size, cable length, cable gauge and any additional job required details

b) Complete C&E Loop Electronics Power Calculator Worksheet on all bulk power projects and place completed form in Electronic Job Folder (EJF)

c) Provide type(s) and quantity of removed cables in CEEOT Scope of Work

5.1.8 The C&E OTV Task Verification Form is an alternative method to confirm the completion of required quality assurance documentation or tasks. This document does not supersede the engineering and installation requirements found in AT&T Technical Publications but does provide an acceptable alternative for the C&E TP required documentation. This form is
approved for Outside Plant C&E projects. The Task Verification Form can substitute for Test Records, Fuse Verification and Vendor Internal Audit.

5.1.9 The C&E installation supplier shall complete the Defect Correction Form (DCF) if any defects are assessed and correction is required. The DCF is required to be placed into Electronic Job Folder the business day following the defect correction due date.

5.1.10 There are no additional exceptions to the general installation requirement specific to the AT&T OSP environment for TP76300, Section E.

6. FIRE STOPPING

6.1 General

6.1.1 All fire stopping at customer or leased locations must adhere to all state regulations, local building codes and customer requirements (Section F).

6.1.2 There are no additional exceptions to the general installation requirement specific to the AT&T OSP environment for TP76300, Section F.

7. FLOOR DRILLING

7.1 General

7.1.1 The Installation supplier shall notify the Equipment Engineer when there is asbestos containing material that needs to be addressed by the customer (Section G).

7.1.2 There are no additional exceptions to the general installation requirement specific to the OSP environment for TP76300, Section G.

8. BONDING AND GROUNDING

8.1 General

8.1.1 Radio site equipment installed in AT&T OSP cabinets shall not require an Interior Ring Ground System.

8.1.2 There are no additional exceptions to the general installation requirement specific to the AT&T OSP environment for TP76300, Section H.

9. IRONWORK

9.1 General

9.1.1 Frames taller than 7’0” shall not be used in AT&T OSP (2.5).

9.1.2 Floor Plans are not required in AT&T OSP. However, when they are provided all bays and cabinets to be installed shall be measured from reference points as identified on the floor plan (Section I).

9.1.3 All end guard and end panel requirements shall only be applicable when requested by the AT&T OSP EE (Section I).

9.1.4 Rolling Ladders and Ladder tracks shall not be used in AT&T OSP facilities (Section I).
9.1.5 Hanger rods shall not be installed through ventilating ducts in the AT&T OSP environment (Section I).

9.1.6 There are no additional exceptions to the general installation requirement specific to the AT&T OSP environment for TP76300, Section I.

10. CABLING

10.1 General

10.1.1 The use of untinned copper cable can be installed in all AT&T OSP environments and applications (Section J).

10.1.2 Switchboard and power cables installations on vertical cable racks shall be limited. If cable rests against cable hole sides, it shall be protected from damage by formed fiber or two layers of sheet fiber. (Section J).

10.1.3 The installation supplier shall secure cables to the cable securing brackets, if provided, at the rear of the shelf every two inches. This is required for cables traversing across the back of the shelf (Section J).

10.1.4 CO distribution frames are not utilized in the AT&T OSP environment making these requirements non-applicable (Section J).

10.1.5 Nylon cable ties may be used for securing power, grounding and switch board cables in AT&T OSP cabinets (Section J).

10.1.6 When connecting battery return cables to the return bus bar in BDFBs/SPDUs, Power Boards (rectifier shelves, etc.), the installation supplier shall terminate the cables in such a manner as to allow future access for cable connections to the bus bar (Section J).

10.1.7 When connecting to BDFD/SPDU (rectifier shelves, etc.), fuse position studs, the installation supplier shall arrange cables in such a manner so as to not block access of future terminations (Section J).

10.1.8 When a cable access hole reaches capacity no more cable(s) shall be run through the cable access hole. The AT&T OSP Engineer shall be notified utilizing CEEOT Web vendor message log of the blocked condition (Section J).

10.1.9 The installation supplier shall report a blocked cable hole to the AT&T OSP Engineer utilizing CEEOT Web vendor message log with the details of the blocked condition (Section J).

10.1.10 All cable pileup conditions shall be reported to the AT&T OSP Engineer utilizing CEEOT Web vendor message log for resolution (Section J).

10.1.11 When metal clamps are used to support or secure grounding conductors, the clamps shall not completely encircle the conductor. The metallic continuity shall be interrupted by non-metallic hardware, a cable tie or 9-ply waxed polyester twine. The phrase completely encircle applies primarily to ferrous metal cable clamps. It does not apply to an opening or “ring” formed by a combination of interconnected metallic objects such as cable racks, auxiliary framing, threaded rods, etc., unless the length (l) of this opening is more than 3 times its diameter (Section J).
10.1.12 There are no additional exceptions to the general installation requirement specific to the AT&T OSP environment for TP76300, Section J.

11. WIRING AND CONNECTING

11.1 General

11.1.1 Solder connections shall not be used in the OSP environment or applications (Section K).

11.1.2 Equipment being installed with multiple loads (i.e. “A”, “B”, “C”, etc.) (K.4.8.1):
   a) Shall be installed to different load supplies on the Power shelf. If there is only a two loads available, the loads shall be split with at least one on each load supply keeping the power plant load distribution balanced as close as possible.
   b) Shall maintain separate primary protection device integrity throughout the circuit unless an AT&T technical drawing supersedes this requirement.

11.1.3 There are no additional exceptions to the general installation requirement specific to the OSP environment for TP76300, Section K

12. EQUIPMENT DESIGNATIONS

12.1 General

12.1.1 Designation terminology for power panels may differ in the OSP environment however the intent of the standards for this section remain (Section L).

12.1.2 In the OSP environment AC building loads may be commingled on distribution panels with other loads in conjunction with all local and state regulations or codes (Section L).

12.1.3 The Protected Power Service Cabinets PPSC are not utilized in the AT&T OSP environment making these requirements non-applicable (Section L).

12.1.4 Fuse and Circuit breakers shall be designated on the appropriate Label panel (Section L).

12.1.5 Fuse record Books are not utilized in the AT&T OSP environment making these requirements non-applicable (Section L).

12.1.6 Alarm fuses in BDFBs/SPDUs not mounted adjacent to the discharge fuse are not utilized in AT&T OSP environment making these requirements non-applicable (Section L).

12.1.7 AT&T OSP battery racks shall be designated with (Section L).
   a) Polarity, Voltage
   b) Battery Installed Date
   c) AT&T Job number
   d) Battery String ID (TP76301-038.).

12.1.8 The installation supplier shall designate the AT&T OSP grounding system or isolated bonding network with the functional designation of the bar in ¾ inch high lettering (Section L).

12.1.9 Cable holes shall not be designated in the AT&T OSP Environment.
12.1.10 There are no additional exceptions to the general installation requirement specific to the AT&T OSP environment for TP76300, Section L.

13. **POWER**

13.1 **General**

13.1.1 Load demand worksheets are not utilized in the AT&T OSP environment. The installation supplier should adhere to the requirements detailed on the Engineering Work Order (M1.3.9).

13.1.2 All DC Bus Bar requirements shall be exempt for installations within AT&T OSP cabinets (M2).

13.1.3 Flooded Lead Acid Batteries are not approved for use in the OSP environment and all associated requirements will be exempt (Section M).

13.1.4 Battery racks in the AT&T OSP environment shall be installed per the manufacturer documented requirements (Section M).

13.1.5 Batteries in the AT&T OSP environment shall be installed per the manufacturers documented requirements (Section M).

13.1.6 Flooded Lead Acid Batteries are not approved for use in the AT&T OSP environment and all associated requirements will be exempt (Section M).

13.1.7 Pilot Cells are not designated in the AT&T OSP environment and all associated requirements will be exempt (Section M).

13.1.8 Thermometers are not utilized in the AT&T OSP environment and all associated requirements will be exempt (Section M).

13.1.9 In the AT&T OSP environment AC power cabinets are not differentiated by PSC, PPSC, PDSC and all associated requirements will be exempt (Section M).

13.1.10 There are no additional exceptions to the general installation requirement specific to the OSP environment for TP76300, Section M.

14. **ELETROSTATIC DISCHARGE**

14.1 **General**

14.1.1 There are no exceptions to the general installation requirement specific to the OSP environment for TP76300, Section N.

15. **FIBER OPTICS**

15.1 **General**

15.1.1 The installation supplier is permitted to install polyethylene sheathed fiber optic cable with innerduct in AT&T OSP equipment areas (Section O).

15.1.2 When the fiber optic cable is direct buried and does not enter the AT&T Equipment areas in conduit and, it cannot be pulled back into the first manhole, slack loops can be stored in the OSP environment with approval from the AT&T OSP Equipment Engineer (Section O).
15.1.3 There are no additional exceptions to the general installation requirement specific to the AT&T OSP environment for TP76300, Section O.

16. CABLE VAULT & CABLE ENTRANCE FACILITY

16.1 General

16.1.1 Cable Vaults are a structural feature used in the AT&T OSP environment and entrance facilities should be managed per the AT&T OSP Facilities guidelines ATT-002-201-713. This exempts TP76300, Section P.

17. EQUIPMENT REMOVAL AND CABLE MINING

17.1 General

17.1.1 Cable removal in AT&T OSP cabinets may require cable to be cut on the rack due to the congested environment of the cabinet (Section Q).

17.1.2 If the floor fastener is removed, the hole shall be filled. AT&T OSP Engineer must approve any exceptions, and the record of approval shall be placed in CEEOT Web vendor message log (Section Q).

17.1.3 The installation supplier shall verify that all cross connects have been removed prior to the start of all removal activities. If cross connects have been left in place, the installation supplier shall STOP all removal activities and contact the AT&T OSP Engineer responsible for the job for resolution (Section Q).

17.1.4 All identified cables to be removed shall be disconnected at both ends, have the ends protected prior to any cutting and mining activities in the AT&T OSP environment (Section Q).

17.1.5 The 24hr wait period is exempt in the AT&T OSP environment (Section Q).

17.1.6 The installation supplier shall remove cables by hand. Excessive force shall not be used (Section Q).

17.1.7 There are no additional exceptions to the general installation requirement specific to the AT&T OSP environment for TP76300, Section Q.

18. PRODUCT CHANGE NOTICES AND MISCELLANEOUS

18.1 General

18.1.1 There are no exceptions to the general installation requirement specific to the AT&T OSP environment for TP76300, Section R.

19. MARKED DRAWING REQUIREMENTS

19.1 General

19.1.1 There are no Marked Drawing requirements in the AT&T OSP environment. The installation supplier is exempt from TP76300, Section S.

20. SYNCHRONIZATION
20.1 General
20.1.1 The installation supplier shall verify all input/output timing leads before they are disconnected as follows:
   1. First, installation supplier shall make sure that a MOP was approved prior to any cable removal
   2. Second, verify and confirm the presence of a far end ground on the un-terminated shield/drain wire at the network element
20.1.2 There are no additional exceptions to the general installation requirement specific to the AT&T OSP environment for TP76300, Section T.

21. STANDBY ENGINE/ ALTERNATOR SETS
21.1 General
21.1.1 The generator installation requirements published in APEX ATT-TELCO-002-600-344 & ATT-TELCO-002-600-341 are the governing document for AT&T OSP cabinet sites with generators less than 50 KW.
21.1.2 There are no additional exceptions for to the general installation requirement specific to the AT&T OSP environment for TP76300, Section U on generators exceeding 50 KW.

22. HAZARDOUS WASTE MANAGEMENT
22.1 General
22.1.1 This section is applicable to all AT&T hazardous waste. It is the building owner’s responsibility to mitigate their hazardous waste which impact installation activities prior to the commencement of installation activities.
22.1.2 The installation supplier shall notify the AT&T OSP Engineer with concerns of Hazardous Materials, Hazardous Waste, Universal Waste, Electronic Waste, and other Regulated Wastes that pose a risk to the project.
22.1.3 There are no exceptions to the general installation requirement specific to the AT&T OSP environment for TP76300, Section V.
22.1.4 There are no additional exceptions to the general installation requirement TP76300, Section V for AT&T property in the OSP environment.

23. AT&T GDIC ENVIRONMENTS
23.1 General
23.1.1 TP76300, Section W is exempt from the AT&T OSP environment.

[END OF SECTION]