



SBC-002-316-081

SNFA - Equipment Removal and Cable Mining M&P

Abstract

Presented in this document are guidelines and requirements for equipment removal and cable mining in an SBC premise under the SNFA Agreements between SBC and AT&T. This document applies to SNFA Agreements only and does not apply to Discontinuance of CLEC Equipment, Cable Facilities and OSS Assignments M&P SBC-002-316-015.

Audience: The primary audience for this document are **SBC** personnel in the following disciplines, Switch Capacity Planner/Engineer, Transport Equipment Engineer (TEE), Facility Equipment Engineer (FEE), Digital Transport Engineer (DTE), Maintenance Engineer, Space Planner, Frame Planner, Long Range Technical Planners, Outside Plant and Fundamental Network Planning, Corporate Real Estate (CRE) and Local Field Operations. This document is to be used internally within **SBC** and their Authorized Vendors and has a limited distribution subject to the header/footer information.

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1. Copyright Page

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2. Reasons for Issue/Reissue

Issue 2, Section 8, paragraph 8A; added reference to cable wedges.

Issue 2, Section 8, paragraph 8C; changed symbol from 400 FT² to 400 SQ. FT.

Issue 2, Section 8, paragraph 8H; added reference on dead cable protection.

Issue 2, Section 11, Heat Scanning; section deleted.

Issue 2, Sections 11-14; renumbered.

3. General

3A. Introduction

This document has been updated to reflect Network Planning & Engineering (Common Systems Standards) for the following Incumbent Local Exchange Carriers, henceforth referred to as **SBC**:

- SBC-Southern New England Telephone** (Connecticut)
- SBC-West** (California, Nevada)
- SBC-Southwest** (Missouri, Texas, Arkansas, Oklahoma, Kansas)
- SBC-Midwest** (Illinois, Wisconsin, Indiana, Ohio, Michigan)

3B. The SNFA Agreements

The Shared Network Facility Agreements (SNFA) dated January 1, 1984, was entered into by **SBC** Bell Operating Companies (BOCs, known today as Incumbent Local Exchange Carriers ILECs) and American Telephone and Telegraph Company (AT&T) at divestiture, which expires December 31, 2003. This only applies to the SNFA floor space lease Agreements and not to Condo Agreements where both parties have common area and joint ownership of the floors within an SBC building. The Agreements allowed **SBC** BOCs and AT&T to share multifunction facilities listed below through leasing arrangements.

- Switching facilities and equipment power
- Cable transmission facilities and structures
- Central Office circuit and carrier equipment and radio transmission equipment
- Operator services work centers, systems and services
- Land, buildings, self-supporting towers and distributing frames
- Operation Centers and Support Systems

3C. Scope of SNFA Agreements

The magnitude of cable mining and equipment removal by AT&T within **SBC** premises is expected to be minimal and assumed to be around one per Local Access Transport Area (LATA) or Metropolitan Serving Area (MSA).

This document provides the course of action for removal of cable transmission facilities and structures, Central Office circuit, carrier equipment, and radio transmission equipment within the SNFA Arrangements at **SBC** premises. This work must be completed by AT&T prior to **December 31, 2003**, unless a subsequent hold over agreement per site is made between **SBC** and AT&T.

4. Removal Requirements for AT&T SNFA Arrangements

This document provides guidelines and requirements to be followed before, during, and after equipment removals and cable mining projects. All work performed by AT&T will follow the Safety Standards TP76200MP, Equipment Removal and Cable Mining requirements within TP76300MP and Network Facilities Cable Mining Guidelines and Requirements BSP 800-003-200MP, Issue B, August 2002 or SBC-TP76305-000.

Any deviation from this M&P is strictly prohibited, unless written approval is provided by NP&E Common Systems.

(Contact: Stephen Campbell, 214-858-1354)

- System Cables - cables that are between equipment bays or power plants where both ends are owned by AT&T. System cables are generally the only cables on the rack and sometimes will go through horizontal and vertical penetrations. These cables should be completely mined out by AT&T. Unverified cabling may necessitate leaving partial cable racking, otherwise **all cable racking and framing will be removed by AT&T unless it can support future SBC requirements**. The penetrations should be fire stopped to meet the current standards provided in TP76300MP.
- Transport Cables - cables that are between AT&T and **SBC** equipment. These cables should be mined back to the 'meet point'. The 'meet point' is defined as where AT&T leased space ends and **SBC** floor space begins. **These cables should be capped and labeled to indicate their termination points by AT&T**. All transport cables remaining past the 'meet point' in an **SBC** premise will be mined at the discretion and expense of **SBC**.
- Cable mining by AT&T over **SBC** owned switch and administrative areas will be at the direction of **SBC**.
- AT&T will remove Digital Radio Coax cables, dishes, antennas, conduits and mountings when applicable.
- AT&T will remove all equipment panels, cabinets, bays and related systems.
- AT&T will remove any remote monitoring and/or control systems that are located outside of AT&T areas (I.E. Fiber Cable Monitor in Cable Vault).
- AT&T will remove the Outside Plant fiber cables back to the cable vault, tag, dress and coil the cable on the interior wall within the cable vault until further arrangements can be made to remove the Outside Plant fiber cables between the cable vault and the nearest manhole.
- AT&T will remove all general equipment such as desks, chairs, cabinets, tables, work stations, etc.

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- Cable rack and structural support - AT&T will remove auxiliary framing, equipment lighting and cables within the AT&T area. **The cable rack and structural support will be removed by AT&T unless it can support future SBC requirements.** The iron work will only be removed to the extent that it does not risk any of the iron work and cable rack that must be left in place to support cable that will not be mined by AT&T.
 - AC Commercial Service - The AC service feeding the power plants will be mined back to the nearest protected disconnect point by AT&T. A protected disconnect point is a circuit breaker, fused breaker, or disconnect switch.
 - Building Lighting - AC electrical service feeding equipment/aisle lighting will be mined back to the nearest circuit of fused breaker by AT&T. Where all lighting removed is solely associated with AT&T equipment and racking, one light fixture per building bay will be restored/installed. Minimum occupancy safety lighting of one-foot candle per square foot must be maintained.
 - HVAC Service – Air ducts attached to AT&T equipment and racking will be removed back to the nearest branch duct. Opening left in branch will be restored with diffusers or cover plates by AT&T. Coordination and receipt of plan approval with the local SBC Design & Construction and Property management managers is required prior to any work taking place.
 - Building Elements – All building elements (building lighting, electrical panels, HVAC air ducts, environmental controls, ground bars, etc.) will remain in place.
 - Bay/Cabinet Removals - All floor anchors will be cut off flush with the floor and filled with epoxy or other suitable filler per TP76300MP, unless otherwise directed by **SBC**.
 - Raised Floor Areas - AT&T will remove all cables under the floor and fire stop any required penetrations. AT&T will leave existing walls, doors and raised floor intact.

5. Associated Work Prior to Cable Mining

5A. The following activities shall be completed by AT&T prior to the start of any cable mining activity in an **SBC** premise and in accordance with TP76200MP:

5A.1 The appropriate Site Manager, Switching Control Center (SCC) and T-Carrier Restoration Control Center (TRCC) shall be notified of the project. The operational condition of the office alarm and smoke detection systems shall be verified. Any defects in the smoke detection and fire alarm reporting equipment shall be corrected prior to the actual start of cable mining by AT&T.

5A.2 On site emergency response equipment such as portable fire extinguishers, fire shutters, fire doors, and exhaust fans shall be inspected and determined to be in sufficient quantity and in good working order.

5A.3 In the areas where cable mining will occur, unique identifiers shall be affixed to all building columns and cable holes not having them. This will facilitate referencing building locations during the course of the cable mining job. The unique identifiers used shall be those appearing on the office floor plan drawing.

5A.4 A complete set of full size office floor and cable plan drawings shall be provided to the cable mining contractor so the contractor can develop a job Method Of Procedure (MOP) and track job progress.

5A.5 A walk-through of the office shall be conducted to determine if there are any matters that need to be taken care of before cable mining begins. This walk-through shall include the building site manager, and representatives of AT&T associated with the project. Particular attention shall be given to the following:

5A.5a Dust, sound, or work barrier requirements. It shall be determined in advance where protective barriers and Air filtration (to prevent equipment problems) will be required, and who will provide them. Barriers shall be constructed using fire retardant materials, or materials treated with a fire retardant agent.

5A.5b Identifying cable that is connected to out-of-service equipment and apparatus (such as distributing frame terminal blocks) that will be a part of the cable mining project. Such equipment or apparatus and cabling to be removed shall be conspicuously identified with colored labels or tape.

5A.5c The need for a single line diagram of the office DC power distribution system if one is not currently available and posted. These diagrams (one for each floor on which cable mining will occur) will be used to identify power fuse and load locations should an arcing fault or cable rack fire occur during the course of the cable mining job. Office single line diagrams may be created in draft form using the office record drawings obtained for the cable mining vendor, and converted to official office records at the completion of the cable mining project.

5A.5d The logistics for managing removed cable during the cable mining project.

5A.5e Any office conditions that may influence job sequencing such as areas that must or should be mined first, and any time-of-day working restrictions.

5A.5f Emergency response procedures shall be reviewed, and rehearsed if appropriate, with cable mining vendor employees and with **SBC** employees that may be asked to assist should an emergency arise. This review shall cover in detail the responsibilities and expectations of the cable mining vendor should an emergency condition arise. The review will include emergency fuse removal procedures, equipment restorations, and the emergency phone numbers of the local fire department, Local Field Operations (LFO), Central Office Equipment Engineer, Maintenance Engineer, Power Maintenance Supervisor, and the Network Operation Center (NOC).

5A.5g An office cable rack survey shall be performed to eliminate as many potentially hazardous cable conditions as possible.

5A.5h The NOC shall be notified at job start and instructed to summons the fire department if any fire or smoke alarms are received after that date.

5A.6 **SBC** agrees that they are responsible for asbestos found in **SBC** premises. **SBC** will have the AT&T areas tested for asbestos; **SBC** will provide AT&T a copy of the test results for the AT&T areas. If the tests are positive, the AT&T removal vendor will be notified to use extreme care during the removal. If any floor tiles are damaged during equipment removal, the removal vendor is to notify **SBC** for evaluation and containment. AT&T will have all hazardous materials that reside within their equipment removed, per AT&T Environmental Health and Safety requirements.

6. Cable Mining Requirements



6A. The AT&T cable mining vendor shall immediately bring the following conditions to the attention of SBC for mitigation during the course of cable mining:

6A.1 Observation of sparks, ashes or other signs of arcing

6A.2 Encounters with cables that are warm to the touch

6A.3 Subsequent discoveries of AC distribution cable on cable racks with other cable

6B. An integral part of the cable mining operation is the redressing and protection of in-service cable and wire on office cable racks after dead cables have been capped or removed. All cables that are disturbed during the cable mining process shall be redressed to office cable racks and protected from subsequent abrasion in accordance with TP76300MP. All damaged cables encountered during cable mining shall be repaired prior to restoration to office cable racks.

6C. The physical relationship of power cables to one another shall be maintained during the cable mining process so that the pairing of battery and battery returns is not compromised.

6D. Interim cable staging areas shall be established and appropriately identified for scrap cable collection containers. Cable staging areas shall be as remote as possible from equipment and overhead power cable racks. Cable collection containers shall not be placed in building egress passageways. Staged cable shall be removed from the office at the end of the day a cable collection container becomes full. AT&T cannot stage removed equipment/material in Common areas, Freight areas or Loading Dock. AT&T will ensure that the equipment egress routes are protected during equipment removal.

6E. AT&T will fire stop cable holes in accordance with TP76300MP. The required type and amount of cable hole fire stopping materials shall be on site before mining cable from holes in building floors or fire rated walls.

6F. All office cable racks that are empty at the end of the cable mining job shall be removed by AT&T cable mining vendor as part of the cable mining project **unless it can support future SBC requirements.**

7. Emergency Response

7A. An **SBC** inspector or employee familiar with emergency response procedures should be on site during all phases of cable mining activity.

7B. The AT&T Supervisor of the cable mining contractor shall become familiar with the single line diagram of the office DC power system(s) prior to engaging into the mining job.

7C. The loads and sources of any in-service power cable that is intermixed with cable to be mined shall be identified to the extent possible.

8. Cable Removal



8A. All tools and physical activities shall be in compliance with TP76300MP. Cable wedges shall be made of non-conductive materials, and shall be free from sharp edges. Tools shall never be left or stored in the office overhead superstructure.

8B. Transport cables shall be cut and capped as close as possible to the **'meet point'** and mined towards its other end. Switch cables should be completely mined out by AT&T cable mining vendor.

8C. Cable mining shall be performed on a building-bay by building-bay basis to the extent possible and practicable. A building bay is an approximate 400 SQ. FT. area bordered by building columns and/or walls. Cable mining shall begin at low cable pile-up areas and proceed towards heavy pile-up areas.

8D. Cable mining shall begin with switchboard and other miscellaneous cable racks. Cable racks containing only power cable shall be mined last unless otherwise instructed by **SBC**. For multistory buildings, cable racks containing only power cable shall be the last types of cable rack to be mined on a given floor. AT&T will remove all power cables from the power plants to the AT&T equipment areas. AT&T will remove all power equipment and batteries from their power plant and remove auxiliary framing, aisle lighting and cable racking in the power area **unless it can support future SBC requirements**.

8E. Cable mining in multistory buildings should begin on the upper most floors and proceed towards office power plants. Cable shall be mined from all horizontal cable racks before it is mined from vertical racks leading to another floor.

8F. Before mining cable from between building floors, all cable hole fire stopping material shall be removed from cable holes. Cable holes shall be vacuumed free of dust and debris before the their bottom cover plate is removed.

8G. Mining vertical cable between floors shall be accomplished incrementally to avoid entire runs of cable being unsupported simultaneously. To accomplish this, no more than one-half of the supports for vertical cable runs between floors shall be removed at a time. Accordingly, the top portion of a cable rack shall be mined and remaining working cables (if applicable) redressed to the cable rack before the lower portion of the cable rack is mined.

8H. The ends of all dead cable that will remain on office cable racks shall be sufficiently covered with tape or heat shrink tape wrap to protect people and other cables from abrasion.

9. Temporary Cable Supports

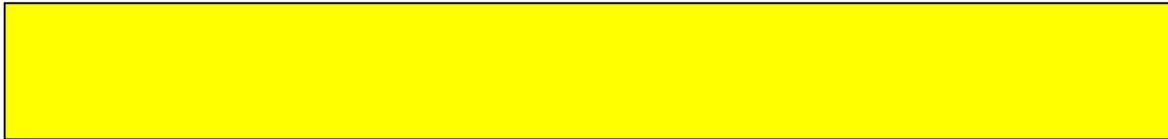
9A. All in-service cable shall be adequately supported during the cable mining process. To minimize the introduction of stress to the conductors of working cable, horizontal cable runs shall not be allowed to sag more than 4" between cable supports.

9B. The below cable strap sizes and maximum cable pileup requirements shall be followed when supporting in service cable to or from cable support structures.

Minimum Strap Width	Bundled Cable Diameter	Layered Or Secured Cable		
		Power Cable	<1'-8" Racks	>1'-8" Racks
1"	<3"	-	-	-
2"	3" to <6"	-	-	-
3"	6" to <10"	-	-	-
4"	≥ 10"	2 Layers Or 2-1/2" Pile-Up	3" Pile-Up	2" Pile-Up

Note: 2" and 3" strap widths may be a combination of adjacent 1" wide straps. 4" strap widths may be a combination of adjacent 2" wide straps. Rope and lacing cord shall not be used as a temporary cable support.

10. Elevating Cable



10A. All cable hoisting/ elevating activity shall be accomplished according to the cable support requirements specified in Section 9 above. Cable shall never be elevated more than is necessary to access the cable to be removed.

10B. Elevated cable shall be returned to the cable rack immediately after cable is mined and during prolonged periods of work stoppage such as during weekends. For this reason, cable mining involving elevated cable should be planned and accomplished by a single and continuous work effort.

10C. Depending on the methods used, hoisting or elevating cable from their cable racks may introduce undesirable horizontal stress to the office auxiliary framing arrangement. For this reason temporary grids of auxiliary framing or other structurally appropriate apparatus should be temporarily installed for hoisting or elevating cable.

10D. When office auxiliary framing will be used for hoisting or elevating cable runs, it shall be stiffened by the addition of temporary structural members so that it does not deflect inwards towards the cable load. Hoisting apparatus shall never be attached to office cable racks.

10E. Attachment of hoisting apparatus to auxiliary framing support rods shall be avoided whenever possible. When necessary, attachment of hoisting apparatus to hanger rods shall only be done at the rod's point of attachment to the ceiling or auxiliary framing. Auxiliary framing

support rods shall not be used for the temporary support of cable bundles larger than 9", or layered type power cable runs.

10F. Vertical to horizontal cable rack fabrications at the underside of cable holes in building floors shall be temporarily supported by auxiliary framing or other structurally appropriate apparatus when cable mining will occur on the vertical rack on the floor above. These cable rack supports shall be in place before cable supports (stitching and/or clips) are removed from vertical racks on the floor above.

11. Job Methods of Procedures

11A. A detailed MOP shall be prepared by AT&T's cable mining contractor in accordance with TP76300MP. The MOP shall include:

11A.1 The working hours the AT&T cable mining contractor will normally be in the office.

11A.2 A description of work barriers the AT&T cable mining contractor is responsible for providing.

11A.3 A general description of how the cable mining project will be sequenced, including specific requests or restrictions imposed by **SBC**.

11A.4 An expected schedule of when and where work activity will occur throughout the SBC premise.

11A.5 A description of methods to be used to provide temporary cable support structures.

11A.6 A description of the methods to be used to hoist or elevate working cable.

11A.7 A daily log shall be kept tracking by building-bay where cable mining has been performed. This log shall be kept with the approved job MOP. **SBC** shall be immediately notified of any damage to working cable and of its method of repair. This information will be used to mitigate alarm reporting and equipment malfunction incidents.

11A.8 AT&T cable mining contractor and their personnel will be required to sign-in and out everyday at **SBC** premises.

12. Engineering Checklist

Check the Following		YES	NO
Cable Racking and Framing Removal	Does it meet future SBC requirements?		
Cable Removal	Were all Cables between AT&T equipment mined?		
Cable Removal	Were all Cables between AT&T and SBC equipment capped and labeled with termination points?		
Digital Radio Equipment and Cable Removal	Were all Coax cables, dishes, antennas, conduits and mountings removed?		
Equipment Removal	Were all equipment panels, cabinets, bays, and related items removed?		
Bay/Cabinet Removal	Were all floor anchors cut in accordance with TP76300MP?		
Monitoring Equipment outside AT&T area	Were control systems and remote monitoring systems removed? (I.E. Fiber Cable Monitor in Cable Vault)		

General Equipment	Were desks, chairs, cabinets, tables, workstations, etc. removed?		
Outside Plant Fiber Cables	Were Fiber Cables tagged, dressed, and coiled in the cable vault?		
Raised Floor Area	Were all cables removed under the floor?		
Building Lighting	Were lights left in place as specified in Section 4?		

13. References

For further information or electronic copies of this document and related information, visit the internal **SBC** Web site: <http://ebiz.sbc.com/commonsystems> or <http://apex.sbc.com>.

Document	Description	Issue & Date
TP 76200MP-000	SBC-Network Equipment – Building Systems (NEBS)	Current Issue
TP 76300MP-000	SBC-Installation Guide within the Central Office	Current Issue
BSP 800-003-200MP	Network Facilities Cable Mining Guidelines and Requirements	Current Issue

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