SBC-002-316-002
Collocation Provisioning Guidelines (CPG) Method & Procedures

Abstract

Presented in this document are the methods and procedures to implement ILEC/CLEC Collocation Equipment and Layouts within the Central Office for SBC-Southwestern Bell Telephone, SBC-Southern New England Telephone, SBC-Ameritech, SBC-Pacific Bell and SBC-Nevada Bell.

Audience: SBC Local Exchange Carrier personnel in the following disciplines, Transport Equipment Engineer (TEE) which includes the Facility Equipment Engineer (FEE) and Digital Transport Engineer (DTE), Space Planner, Frame Planner and Long Range Technical Planners. The secondary audience within the SBC Local Exchange Carriers is the Network Operations/Local Field Operations (LFO), Corporate Real Estate (CRE), Network Sales Support (NSS) and Collocation Services organizations. This document is to be used internally within **SBC-13STATE** and their Authorized Vendors and have a limited distribution subject to the header/footer information.
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Related Documents: See Reference Section of this document.
Canceled Doc: Supercedes all previous issues of the *Collocation Provisioning Guideline M&P*; also updates information for all SBC Interconnector's Collocation Services Handbooks for Physical & Virtual Collocation located on the external web site **https://clec.sbc.com**.
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1.REASONS FOR REISSUE

Issue 13, Section-All: Updated Web Site Address throughout this document.

Issue 13, Section 6, Paragraph B: Reference to Storage Cabinet is deleted.

Issue 13, Section 6, Paragraph J7: Virtual Storage Cabinet placement revised to reflect placement in Inactive "Other" Space only.

Issue 12, Section 2, Paragraph A: Adjacent Off-Site Collocation expanded to include Texas, Missouri, Kansas, Oklahoma, Michigan and Nevada.

Issue 12, Section 3, Paragraph A.3: New "Shortfall Process" Definition.

Issue 12, Section 3, Paragraph A.3: Revised Definition for "Adjacent Structure".

Issue 12, Section 3, Paragraph A.3: New "Thermal Management Space" Definition.

Issue 12, Section 3, Paragraph A.3: New "Caged Physical Collocation" Definition.

Issue 12, Section 3, Paragraph A.3: New "Cageless Physical Collocation" Definition.

Issue 12, Section 3, Paragraph A.3: New "Interconnector's Collocation Services Handbook" Definition.

Issue 12, Section 3, Paragraph A.3: New "Physical Collocation" Definition.

Issue 12, Section 3, Paragraph A.3: New "**SBC-13STATE** Approved Vendor" Definition.

Issue 12, Section 3, Paragraph A.3: New "Shared Physical Collocation Cage" Definition.

Issue 12, Section 3, Paragraph A.3: New "Subleased Shared Physical Collocation" Definition.

Issue 12, Section 3, Paragraph A.3: New "Virtual Collocation" Definition.

Issue 12, Section 3, Paragraph A.3: New "Caged Common Collocation" Definition.

Issue 12, Section 3, Paragraph A.3: New "Eligible Equipment for Collocation" Definition.

Issue 12, Section 3, Paragraph B.1 Virtual and Physical Collocation will be placed in the CLEC Area.

Issue 12, Section 3, Paragraph B.3: Exception of Power Panel is removed.

Issue 12, Section 3, Paragraph B.5: Active Space assignment updated to reflect CLEC Preference Requests.

Issue 12, Section 3, Paragraph B.10: CLEC cannot overburden the HVAC, see new BSP on Thermal Management.

Issue 12, Section 3, Paragraph B.10: CLEC may need to have additional bay spaces ordered to compensate for high heat dissipation equipment exceeding ILEC standards.

Issue 12, Section 4, Paragraph F: Augments on existing POT panels covered.

Issue 12, Section 4, Paragraph 4G: The statement permitting the ILEC to install AC within a Caged Collocation is removed.

Issue 12, Section 6, Paragraph B: Mixing of Standard and Large Bays is not permitted in the same lineup.

Issue 12, Section 6, Paragraph B: Aisle spacing cannot be modified unless the CLEC concurs in writing.

Issue 12, Section 6, Paragraph B: Bays, Equipment and Cabinets will not be placed next to a wall or building structure per BSP.

Issue 12, Section 6, Paragraph G.2: Removed CLEC placing racking between their cage and the POT in Texas only. Texas Tariff had this option removed.

Issue 12, Section 6, Paragraph H.1: New Section covering responsibilities of Fiber Raceway and Turndown Placements

Issue 12, Section 6, Paragraph I: The standard handoff for fiber optic facilities is the SC-UPC, SingleMode connector. Effective, August 20, 2001, SWBT services converted from the ST-UPC SingleMode to the Corporate SC standard for all CLEC requests on a going-forward basis only.

Issue 12, Section 6, Paragraph I: Demarcation Handoff Tagging requirement further defined.

Issue 12, Section 6, Paragraph I: DCS reference deleted.

Issue 12, Section 6, Paragraph J.2: Removal of 1-inch spacers on Large Cabinet Configuration.

Issue 12, Section 6, Paragraph J.4: New Section covering Heat Dissipation impacts on floor assignments

Issue 12, Section 6, Paragraph J4-J6: Renumbered to J5-J7.

Issue 12, Section 6, Paragraph J.5: Egress Aisle Spacing Updated.

Issue 12, Section 6, Paragraph J.7: The expected location of Virtual Storage Cabinets will be the Collocation Area.

Issue 12, Section 6, Paragraph J.7: Highlighted existing sentence that Virtual Storage Cabinets will not be placed next to a wall.

Issue 12, Section 6, Paragraph K: Motion Sensors are not standard and should not be used at this time.

Issue 12, Section 6, Paragraph L: Provide Collocation Areas in such a location as to eliminate the need for IORs.

Issue 12, Section 6, Paragraph L: Distance Limit changed for DSX1 24 gauge and new ranges for standard and long range DS3 patch cords.

Issue 12, Section 6, Paragraph M: Reference to AM-TR-11, Ameritech Installation Guide has been deleted. Replaced by TP 76300MP, SBC-13STATE Corporate Document.

Issue 12, Section 6, Paragraph Q: DSX-1 and DSX-3 Drawing Listing updated.

Issue 12, Section 7, Paragraph A: Adjacent Structure (On-Site) maximum DC power service changed from 400 to 800 AMPs.

Issue 12, Section 8, Paragraph A: The first choice for Virtual Equipment, bay and cabinet placements would be in the Collocation Area.

Issue 12, Section 9, Paragraph A: An Intermediate Frame will be provided when the Primary MDF is determined to exhaust 5-years without any ability to grow beyond current size.

Issue 12, Section 9, Paragraph A: Terminations of CLEC and tie cable blocks are covered.

Issue 12, Section 10: This Section has been revised in its entirety including mention of Raised Floor Systems.

Issue 12, Section 11: Power & Grounding Sections split into two separate Section. Both updated in their entirety.

Issue 12, Section 11, Paragraph A.5: Power Increments may be provided from a BDFB or a main Battery Control Board if the load is over 100 amps and the office does not have a secondary power source for available fusing.

Issue 12, Section 11, Paragraph A.8: CLECs are not allowed to collocate a BDFB as part of their equipment unless stipulated by their tariff or Interconnection Agreement.

Issue 12, Section 11, Paragraph D, Figure 1: Updated to show multiple 50-amp fusing. In addition, multiple circuit scenarios cannot be recombined at he CLEC equipment but must be used as individual 50-amp circuits.

Issue 12, Section 11, Paragraph H: Covered SBC policy on Installation and Interconnection to CIPP panels.

Issue 12, Section 12: New Grounding Section, all other Sections renumbered successively.

Issue 12, Section 13, Paragraph B: Addition to provide for HPFL over Centrex Services.

Issue 12, Section 13, Paragraph D: Addition of section on POTS-SPLITTER removals.

Issue 12, Section 14: Line Splitting revised in its entirety to reflect new SBC-002-316-012, *Line Splitting Deployment M&P*, Issue 1, dated October 2001.

Issue 12, Section 15: DS3 Interconnect Panel approved for use only in SBC-PB/SBC-NB to match the **SBC-13STATE** standard.

Issue 12, Section 15, Paragraph B: Covered Policy on Installation and Interconnection to POT Panels.

Issue 12, Section 16: This section has been updated in its entirety based on the new M&P issue.

Issue 12, Section 18: Synchronization/Timing Section updated in its entirety.

Issue 12, Section 19: Tab C, Addition of Black tape for SBC-Ameritech ONLY.

Issue 12, Section 20: Cable Placement & Removal Section updated in its entirety to match the new M&P issue, SBC-002-316-008.

Issue 12, Section 21: New Section on Shortfall Process

Issue 12, Section 22: Reference Section updated in its entirety.

Issue 12, Section 23: Contact Section updated in its entirety.

Collocation Provisioning Guidelines M&P

2.INTRODUCTION

2A. Overview of Collocation

The primary audience for this document is SBC Local Exchange Carrier personnel in the following disciplines; Transport Equipment Engineer (TEE), Space Planner, Frame Planner and Long Range Technical Planners. The secondary audience within the SBC Local Exchange Carriers is the Network Operations/Local Field Operations (LFO), Corporate Real Estate (CRE), Network Sales Support (NSS), Central Point of Contact (CPOC) and Collocation Services organizations. This document is to be used internally within **SBC-13STATE** and their authorized Cluster Vendors and have a limited distribution subject to the header/footer information. This M&P may be found on the Internal Web Site: **http://ebiz.sbc.com/commonsystems** or **http://apex.sbc.com**

The Collocation Area is a designated, conditioned area or floor located within the **SBC-13STATE** Central Office where the Competitive Local Exchange Carrier (CLEC) collocates. Collocation may also be provided in SBC owned, leased, or otherwise controlled property away from the Central Office, including in RTs (CEVs, huts and /Cabinets). In Texas, Missouri, Kansas, Oklahoma, Michigan and Nevada there is also a form of collocation called “Adjacent Off Site Collocation” in which the CLEC’s equipment resides on non-SBC property. The placement of CLEC equipment is not required to be in the same area or floor where Incumbent Local Exchange Carrier (ILEC) equipment is located, but placed in locations using the same guidelines with which SBC places SBC equipment. The CLEC requesting Virtual Collocation through the application process is not guaranteed or ensured the placement of CLEC bays in ILEC lineups. The SBC ILECs comply with all applicable Federal Communications Commission's Orders, including the Fourth Report and Order released on August 8, 2001. This Document will provide guidance in the Engineering of our Network to comply with the FCC's orders and the Court Opinion.

This document currently covers the following SBC Local Exchange Carriers, henceforth referred to as **SBC-13STATE**:

SBC-Southwestern Bell Telephone (SWBT) (Texas, Missouri, Kansas, Arkansas, Oklahoma)
SBC-Southern New England Telephone (SNET) (Connecticut)
SBC-Pacific Bell (PB) (California)
SBC-Nevada Bell (NB) (Nevada)
SBC-Ameritech (AIT) (Ohio, Wisconsin, Illinois, Michigan, Indiana)

In this document we will discuss the appropriate layout, priorities and the placement of infrastructure using the following fundamental service offerings:

Collocation Area
Cageless Collocation
Shared Cage
Caged Collocation
Special Interconnection Request (SIR)
Virtual Collocation
Line Sharing
Adjacent Structure (On-Site)
Adjacent Structure (Off-Site)

2B. "Shared Hotels" and Buildings located close to a Central Office
History:

Many independent enterprises and companies are currently purchasing or leasing structures in close proximity to an ILEC Central Office. These groups are refurbishing their new facility to minimal Telco standards and are offering immediate access for a communications provider to have a location that they can lease which provides for all of their needs, telecommunication, warehouse, administrative, etc. Some are portraying themselves as CLEC Hotels as an alternative to Physical or Virtual Collocation within the ILEC Central Office. These groups are contacting local Corporate Real Estate, Outside Plant and Equipment Engineer Organizations in an effort to secure "contracts" establishing relationships with the ILEC.

The **SBC-13STATE** Approach:

SBC will work with any building owner for the provisioning of services for their tenants within the structure or campus. The preferred SBC approach is to provide services directly to a single point of interface on the customer's premises or condo. SBC will abide by the building owners' request for the single point of interface, which is defined as a single point within the overall structure or campus. In this case, the SBC tariffed services stop at this common interface site, characteristically at a building entrance facility or room. What has been described here is the standard operation procedure for customers and building owners ordering standard tariffed services. It must be noted here that the customer may define themselves as a "CLEC", but this is not collocation and the provisions for collocation and tariffed offerings such as Unbundled Network Elements (UNE) do not apply.

Adjacent Off-Site Collocation:

Texas, Missouri, Kansas, Oklahoma, Michigan, and Nevada are the only states that can permit Off-Site Collocation to be extended to another property in close proximity to the ILEC Central Office under the following stipulations and limitations (see Section 7B):

A. All forms of Physical and Collocation within the serving Central Office are not available due to the lack of any technically feasible interior space for this purpose.

B. All Adjacent On-Site space within 50-ft. of the exterior perimeter wall of the ILEC owned Central Office Building Structure has been used and/or is not suitable for any further telecommunications placement.

C. Adjacent Off-Site Placement may be provisioned once conditions A and B directly above have been satisfied and to the extent technically feasible.

To date, there are no current eligible sites within Texas, Missouri, Kansas, Oklahoma, Michigan, and Nevada for a CLEC or communications provider to provision for Adjacent Off-Site arrangements with SBC. This means that any provider or building owner will be required to work with the ILEC using standard deployments and tariffs for interconnections. Only at such time that a SBC-SWBT (Texas, Missouri, Kansas or Oklahoma) or SBC-Ameritech (Michigan) Central Office begins officially using Adjacent Off-Site, will the Off-Site collocation-like provisions apply. **All other states (California, Connecticut, Arkansas, Illinois, Ohio, Indiana, Wisconsin) do not have Adjacent Off-Site provisioning options. Currently, all 13-states do not have any Adjacent Off-Site "CLEC Collocation Hotels," as collocation is legally defined, although many building owners may portray themselves as having that arrangement.**

In order for Adjacent Off-Site offerings to be made available in states other than Texas, Missouri, Kansas, Oklahoma and Nevada, all tariffs, interconnection agreements, cost studies and service offerings would need to be modified within each state.

3C. "Campus" Environments

SBC-13STATE definition: A Campus Environment is a location from which the SBC ILEC provides services solely to a geographic area that includes a single University, Hospital, Corporate or similar campus or complex, and no other customers. **Immediately upon receipt of a Collocation application for a Campus Environment, notify Legal, or ask NP&E, Network Regulatory, or Collocation Product staff to notify Legal. Ensure that advice has been obtained from Legal prior to approving or denying any such application.**

An example of a campus environment is as follows:

A regular DMS switch is placed by **SBC-13STATE** in a space that **SBC-13STATE** leased from the campus customer (e.g. a University, or corporate campus). This placement may be done to provide a Centrex service to the campus customer for its phones used by end users (e.g., students or corporate employees). Although a campus owner owns the building or the facility, such placement of the network equipment in a leased space by the **SBC-13STATE** is treated like a C.O., not like a Remote Terminal (RT).

For all space allocation purposes, a campus environment will be treated like SBC ILEC Central Offices currently without Collocation.

3.COLLOCATION AREA

3A. Description & Definitions

3A.1 "**Collocation Area**" is a space in a Central Office that allows Collocators to obtain space for the physical placement of equipment for interconnection or access to Unbundled Network Elements (UNEs). This Area is consistent with requirements in the FCC Fourth Report and Order Released 08-08-01. It is the part of the Eligible Structure within a Central Office where CLEC installation (both Physical & Virtual) is typically provisioned. The size and location of the collocation area will vary from central office to central office because of collocation forecasts, existing SBC equipment layouts and SBC forecasted equipment growth, IDF/MDF space availability, and cable routing availability. The Collocation Area will provide adequate security measures and provide sufficient space for ingress and egress for CLEC access.

The Physical Collocation Area is an interconnection architecture in which the collocated carrier (CLEC) extends network transmission facilities to a collocation space within the Central Office. The CLEC will have access available on a 7 day a week, 24 hours a day basis. This area is utilized by more than one CLEC in a common space environment that is similar to other ILEC Central Office equipment space layouts. Security within common space or the cageless collocation area is at the discretion of the individual CLEC. Security within each cage is the responsibility of the CLEC owning the cage. Security definitions are covered in detail in the *Interconnector's Collocation Services Handbook* for Pacific Bell/Nevada Bell*, Interconnector's Collocation Services* Handbook for SWBT-Texas*, Interconnector's Collocation Services Handbook* for SWBT-Missouri, Oklahoma, Kansas, Arkansas (MOKA)*,* the *Interconnector's Collocation Services Handbook* for Southern New England Telecommunications and *the Interconnector's Collocation Services Handbook* for Ameritech.

3A.2 The **SBC-13STATE** (SBC-Pacific Bell, SBC-Nevada Bell, SBC-Southwestern Bell Telephone, SBC-Southern New England Telecommunications, and SBC-Ameritech) Space Planner will designate the Collocation Area. Space for this application will be determined using the *Wire Center Planning Method & Procedure (M&P)*. The FCC's Fourth Report and Order requires a common Method and Procedure throughout all geographic areas within the SBC Local Exchange Carriers. All local interpretations and State procedures will be folded into these procedures for a standard application in all areas.

3A.3 Definitions for use with illustrations and drawings in this document:

"**Used Space**" is defined as space used for physically placed CLEC and ILEC equipment, Technically Infeasible areas, and ILEC forecasted equipment placements.

"Active Collocation Space", also known as "**Switchroom Area**" - Denotes the existing collocation space within an Eligible Structure that can be designated for physical collocation, which has sufficient telecommunications infrastructure systems. Also denotes central office space that may contain obsolete unused equipment. Space within CEVs, huts and vaults and similar Eligible Structures that can be designated for physical collocation is considered to be Active Collocation Space.

"**Adjacent Structure**" - "A Collocator-provided structure placed on SWBT property (Adjacent On-Site) or non-SWBT property (Adjacent Off-Site) adjacent to the Eligible Structure. This

arrangement is only permitted when space is legitimately exhausted inside the Eligible Structure and to the extent technically feasible. SWBT and CLEC will mutually agree on the location of the designated space on SWBT premises where the adjacent structure will be placed. SWBT will not withhold agreement as to the site desired by Collocator, subject only to reasonable safety and maintenance requirements."

"Adjacent Off-Site" - **Only offered in Texas, Missouri, Kansas, Oklahoma, Michigan and Nevada**
Where Physical Collocation space within a SWBT Eligible Structure is Legitimately Exhausted, and Collocator's Adjacent On-Site space is not within 50 feet of the Eligible Structure's outside perimeter wall, the Collocator has the option and SWBT shall permit an Adjacent Structure Off-Site Arrangement, to the extent technically feasible. Such collocation arrangement shall be used for interconnection and access to unbundled network elements. When a Collocator elects to collocate by Adjacent Off-Site Arrangement, the Collocator shall provide both the AC and DC power required to operate such facility. The Adjacent Off-Site Arrangement is available if the Collocator's site is located on a property that is contiguous to or within one standard city block of SBC's Central Office or Eligible Structure. The CLEC will be responsible for purchasing all regenerative needs for DS1 and DS3 services to an Adjacent Off-Site Arrangement.

"**Augment**" - A request from a CLEC to add equipment and/or cable to an existing physical or virtual collocation arrangement.

"**Decommissioning/Discontinuance/Cancellation"** – Denotes the total or partial removal of CLEC equipment and/or cages from the ILEC central office at the request of the CLEC. If the CLEC abandons their equipment, then the ILEC can choose to remove CLEC equipment.

"Dedicated Space" - Denotes the space dedicated for the Collocator's physical collocation arrangement located in a SWBT Eligible Structure.

"Caged Common Collocation" – SBC provides the Collocators with an enclosure (not including a top). This enclosure is be provided where space permits when five (5) or more Collocators have provided ILEC with their forecasted space requirements and funding. The common cage minimum is 550 square feet of space unless the Collocators' combined forecasted space needs for the initial year exceed 550 sq. ft., in which case, ILEC will construct the cage to the Collocators' combined forecasts for the initial year. Subsequent additions to the Caged Common Collocation area will be based on firm orders with the Collocator(s) requesting additional space bearing the costs for such expansion.
Currently only available in SBC-SWBT (Texas), SBC-SWBT (Missouri), SBC-SWBT (Oklahoma), SBC-SWBT (Kansas), SBC-NB (Nevada), and SBC-AIT (Michigan).

"Caged Physical Collocation" – A cage or similar structure (not including a top) enclosing Collocator's Physical Collocation Space in which a Collocator may install its telecommunications equipment.

"Cageless Physical Collocation" – A Collocation arrangement, provided in single bay increments, and does not require the construction of a cage or similar structure.

"Eligible Equipment for Collocation" – IAW FCC Fourth Report and Order, CC Docket No. 98-147 (Rel. August 8, 2001), Section 6, **SBC-13STATE** will permit the collocation and use of Equipment pursuant to the standards to technical feasibility, space availability, **SBC-13STATE**'s Equipment safety and engineering standards and other requirements set forth in the order.

"**Eligible Structure**" - Eligible Structure refers to **SBC-13STATE**'s central offices, as well as all buildings or similar structures owned or leased by SBC that house its network facilities, as well as, all structures that house SBC's facilities on public rights-of-way, including, but not limited to, vaults containing loop concentrators or similar structures. The term "eligible structure" is based on the FCC's definition of an ILEC "premises" that is subject to collocation. The FCC's definition is as follows: "*Premises* refers to an incumbent LEC's central offices and serving wire centers; all buildings or similar structures owned, leased, or otherwise controlled by an incumbent LEC that house its network facilities; all structures that house incumbent LEC facilities on public rights-of-way, including but not limited to vaults containing loop concentrators or similar structures; and all land owned, leased, or otherwise controlled by an incumbent LEC that is adjacent to these central offices, wire centers, buildings, and structures."

"Infrastructure systems" --Infrastructure systems include, but are not limited to, structural components such as floors (capable of supporting equipment loads), frames, heating, ventilating and air conditioning ("HVAC") systems, electrical systems (AC power), DC power equipment (including batteries and rectifiers), power distribution via frames or bays, high efficiency filtration systems, humidity controls, remote alarms, compartmentation, and smoke purge equipment.

"Interconnector's Collocation Services Handbook" – A publication provided to the Collocators, which provides information on how to order collocation arrangements and the processes and requirements for collocation in the SBC's, which is located on the SBC CLEC ONLINE Web Site (https://clec.sbc.com). This document is updated from the Collocation Provisioning Guidelines M&P.

"Physical Collocation" – Physical Collocation provides actual space (also referred to as dedicated space and/or collocation space) within a SBC premises. The Collocator(s) lease the dedicated space from SBC and install their own telecommunications equipment that is necessary for interconnection or access to unbundled network elements, except for equipment and their applications covered in FCC Fourth Report and Order, CC Docket No. 98-147, Section 6. The Collocator's **SBC-13STATE** Approved Vendor may be permitted access to the SBC Main Distribution Frame or its equivalent for installation and termination of CLEC owned interconnection cabling and the cabling arrangement to provide grounding for equipment.

"**Inactive Collocation Space (Other)**" - Denotes the space within the central office that can be designated for physical collocation where infrastructure systems do not currently exist and must be constructed. The designation of Other (Inactive) Collocation Space is applicable to space within central offices only; other Eligible Structures such as CEVs, Huts, and Vaults are considered Active Collocation Space for purposes of applicable Tariffs.

"SBC-13STATE Approved Vendor" – An SBC authorized and validated vendor approved to perform Category Level (Tier) I Installations in a SBC Central Office by SBC evaluations. This process involves certification through the issuance and measurement of SBC ILEC jobs within a Central Office. **The SBC-13STATE** Approved Vendor may perform work for either the ILEC or the CLEC at these sites.

"Shared Physical Collocation Cage" – A caged Physical Collocation Space that is shared by two or more Collocators within the SBC's Eligible Structure.

"Shortfall Process" - Process by which the Ready for Occupancy/Service due date is changed by the ILEC because of material or vendor labor shortages beyond the ILEC's control.

"Subleased Shared Physical Collocation" – a request by Collocator to enter into a sublease arrangement with another Resident Collocator(s) in Collocator's existing Physical Collocation.

"**Technically Feasible**" - Interconnection, access to unbundled network elements, collocation, and other methods of achieving interconnection or access to unbundled network elements at a point in the network shall be deemed technically feasible absent technical or operational concerns that prevent the fulfillment of a request by a telecommunications carrier for such interconnection, access, or methods. **A determination of technical feasibility does not include consideration of economic, accounting, billing, space, or site concerns**. **The fact that an incumbent LEC must modify its facilities or equipment to respond to such request does not determine whether satisfying such request is technically feasible.** "An ILEC that claims that it cannot satisfy such request because of adverse network reliability impacts must prove to the state commission by clear and convincing evidence that such interconnection, access, or methods would result in specific and significant adverse network reliability impacts." FCC Rule 51.5 (emphasis added) A requesting telecommunications carrier seeking a particular collocation arrangement, either physical or virtual, is entitled to a presumption that such arrangement is technically feasible if any ILEC has deployed such collocation arrangement in any incumbent LEC premises." FCC Rule 51.321(c). .

"**Technically Infeasible**" – Specific areas where neither ILEC nor CLEC may use the layout space within the ILEC premise because such use is not technically feasible.

"ICB" – Individual Case Basis, this is the one time cost basis and method used to manage, install and price the effort used to provision the individual CLEC site installation.

"NSCR" – Non-Standard Collocation Request, same as the "ICB" but is the term traditionally used within Ameritech.

"Thermal Management Space" – Floorspace provided adjacent to equipment framework to maintain heat density which becomes non-assignable or not available for installation of future equipment so long as the high heat equipment is in service.

"Virtual Collocation" – The Collocator is responsible for engineering and furnishing the virtually collocated equipment. Collocators use an **SBC-13STATE** Approved Vendor to perform the installation of CLEC equipment in the SBC Eligible Structure. The Collocator's **SBC-13STATE** Approved Vendor may be permitted access to the SBC Main Distribution Frame or its equivalent for installation and termination of CLEC owned interconnection cabling and the cabling arrangement to provide grounding for equipment.

3A.4 A Collocation Area will be implemented within an ILEC Central Office in advance where unused Caged Space is present and it makes economic sense to do so. The SBC Collocation Forecast, which contains CLEC provided information, can be used as a guide for the amount of space to precondition. This Collocation Area strategy, commonly known as "preconditioning" will permit the ILEC to have an area provisioned for rapid CLEC cageless collocation installations within the ILEC Central Office. This preconditioning will insure that all infrastructure systems are in place in order to meet the CLEC's needs within existing, tariff-driven, time intervals.

3B. Collocation Space Arrangements for Equipment, Bays, and Cages

3B.1 The Collocation Area provides the CLEC the option of placing, installing and maintaining their equipment in an ILEC provisioned space suitable for that purpose within the Central Office. The CLEC can also place their own cable as per SBC-002-316-008 (CLEC Cable Placement M & P) At the CLEC's discretion, their equipment may also be placed into a physically Caged Collocation area. The Collocation Area will provide for any of the current types of Collocation, both generically virtual and physical Caged and Cageless Collocation.

3B.2 The CLEC will not be caged unless there is a specific application request for that offering. Cage materials may be removed around common ingress/egress areas if it is not required to provide security for the ILEC equipment. Cage material may also be removed from an individual CLEC's existing caged area if the CLEC desires a cageless arrangement upon request by the CLEC, at their cost. The cageless arrangement made by the removal of caged fencing will not be permitted if collocation space adjacent to this removal site becomes unusable as a result of the removal of the cage wall because of incompatibility with existing infrastructure, or if SBC standard egress requirements cannot be met. The ILEC has the right in the FCC Fourth Report and Order to provide reasonable security of ILEC equipment, if desired.

The criteria used in the placement of Welded Wire Security Partitions (WWSP) shall utilize a reasonable balance of security, cost and reusability. SBC CRE will coordinate with the SBC Space Planner in order to synchronize the placement of caged and cageless areas.

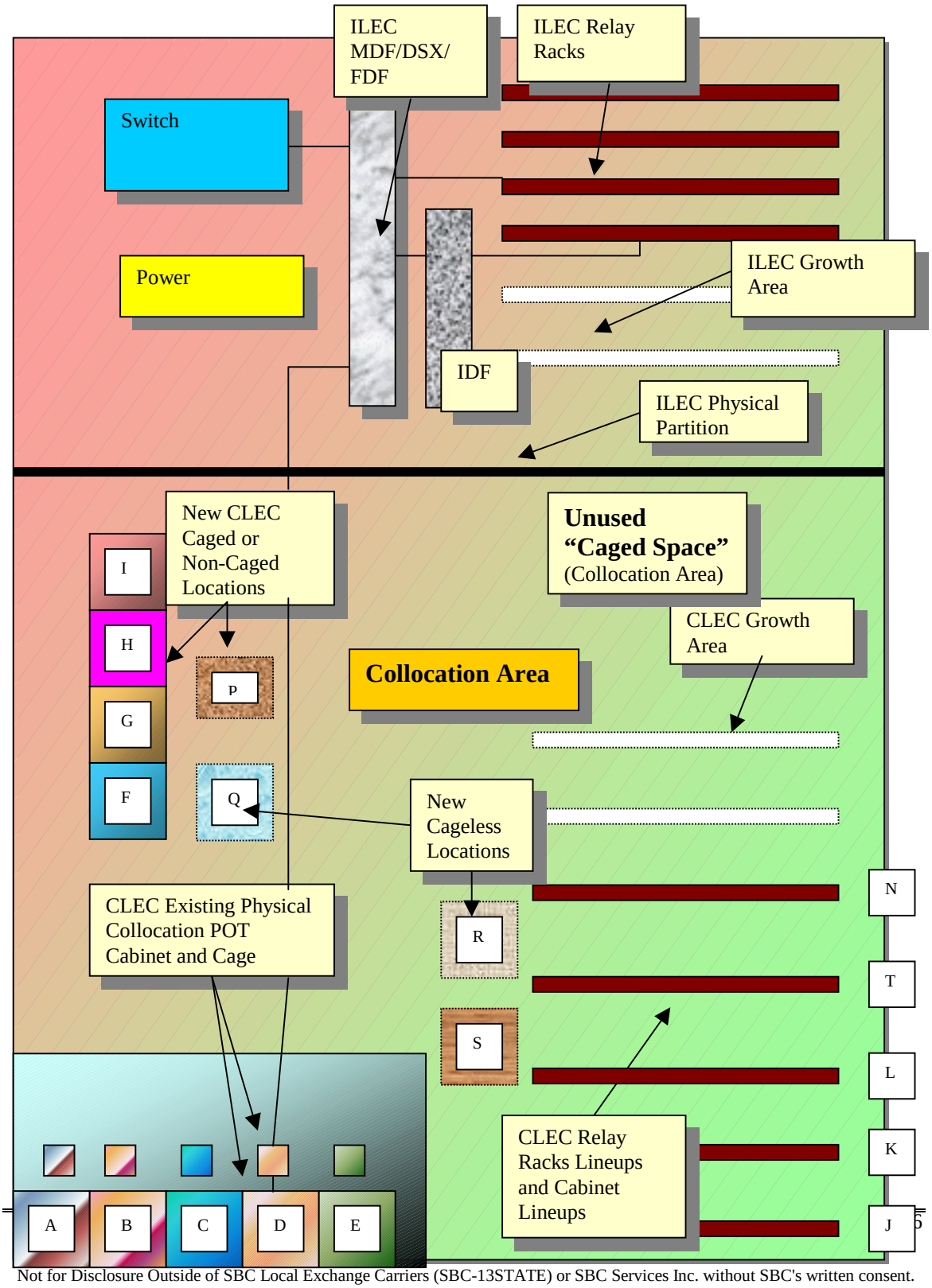
3B.3 On a going forward basis, **SBC-13STATE** will not provide Point of Termination Panels or POT Bays/Cabinets unless specifically requested in the application request by the CLEC. The POT panels are now OPTIONAL items and not available in SBC-Ameritech. The ILEC may provision and terminate all cabling in infrastructure at the request of the CLEC. (The ILEC will provide all Timing Cabling.) The ILEC will hand-off the cabling to the CLEC equipment for the CLEC to terminate on their equipment when ILEC cabling is requested by the CLEC. ILEC testing and access points will be at the ILEC termination point located within the ILEC area. The responsibility for ILEC testing is from the end of the CLEC cable back to the ILEC equipment/frames; if the ILEC provides the optional POT panel, the ILEC will test from the POT panel back to the ILEC equipment/frames on a one time basis at time of installation. The ILEC will not test from the termination of the ILEC cable on the CLEC equipment. The end of the cable reflects the ILEC demarc whether the POT panel is provided by the ILEC or by the Collocator. The ILEC places the POT panels only in ILEC provided bays; these bays may have mixed CLEC and POT use for Line Sharing purposes. The CLEC may elect to test the ILEC or CLEC placed cabling using an **SBC-13STATE** Approved Vendor, per recent accessible letters.

3B.4 The Collocation Area is designated for the placement of CLEC equipment and/or enclosed CLEC cabinets. The demarcation point for all facilities when the ILEC places cable for each CLEC, will be the hand-off cable designated for each CLEC. The demarcation point for all facilities when the CLEC places their own cable using a **SBC-13STATE** Approved Vendor, will be the IDF/MDF for POTS or DSL cable, FOT for fiber cable, DSX1 or DCS1 panel for shielded

cable, and the DSX3 or DCS3 panel for coax. Each CLEC will provide their equipment for installation within the CLEC's caged, cageless, or virtual assigned space within the Collocation Area

3B.5 The recommended Conditioning standard is to develop spaces in 1000 square foot area increments where there is space to do so, and both the CLEC and SBC's growth forecasts allow it. In large Central Offices, a multiple of this size may be warranted. The **SBC-13STATE** Collocation Forecast can be used as a guide for amount of square footage to be conditioned. The Space Planner shall designate the space to be used and coordinate with the local Real Estate, Network Operations (LFO) and Engineering organizations to coordinate any conditioning efforts. Under normal circumstances it is expected that the Space Planner will identify a justifiable amount of square footage that the Real Estate personnel will need to condition by adding HVAC, stumble lighting, perimeter security partitions, and cable holes.

Pictorial View for the Central Office in the new Collocation Environment



The use of Active Collocation Space will be the first choice. Active Collocation Space is determined to be Switchroom Areas that are currently configured for collocation. The Collocation Area is designated based upon the availability of power, cable racking and overhead support systems and with the consideration that the Corporate Real Estate (CRE) floor conversions to a switchroom area are designated as complete. The assignment responsibility for these CLEC spaces is the Space Planner; it is not another internal or external company party. The CLEC Collocator may request a preference for assignment on the Collocation Application. This preference will be honored in the respective Collocation Area, if available by space requested (Caged, Cageless Standard or Large Bay Configuration). If this space is not available, the Space Planner will assign space in accordance with SBC-002-316-101, Wire Center Planning M&P and document the assignment choice.

3B.6 If no Active Space exists, the use and conversion of "Inactive Space" may be warranted. This may mean the displacement of administrative workgroups that currently occupy convertible switchroom space if there is an internal business decision required based upon sound economic and technical specifications.

3B.7 Once the Real Estate personnel have preconditioned the areas specified, it is recommended the Space Planner have the Engineering organization condition the overhead structure for all fixed standard bays of equipment lineups. When the first request for a cabinet or cage lineup is received, the Engineering organization should condition the entire lineup for that application**. Even though the CLEC may choose to place standard bays in place of cabinets within their assigned space, the space planner should post the floor plans as if the cabinets were installed. DO NOT MIX STANDARD BAY/LARGE BAY-CABINET/CAGES SIZES IN THE SAME LINEUP.**

3B.8 Network Planning & Engineering FLASH No. 00-030R2 dated November 2, 2000 covers deviations from SBC BSP standards due to placement of CLEC or ILEC oversized equipment, bays or cabling in a wire center. CLECs must conform within the dimensions of height, width and depth for all equipment, bay and associated cabling for the use of a standard bay space. If any portion of the equipment exceeds the parameters of a standard bay space, the ILEC or CLEC shall use the spacing (and associated pricing) of a large bay configuration. This is important for the CLEC to understand these standards during the application process because certain cabling restrictions between CLEC bays will be violated due to over-sized equipment being relocated to cabinet only lineups. An accessible letter to the CLECs was issued 02-09-01 as FLASH Coll No 2001-001.

3B.9 All installed equipment, regardless of manufacturer or owner must be certified as meeting standards for safety comparable to the NEBS Level 1 Safety Requirements. **SBC-13STATE** Approved Vendors shall follow the following technical publications for CLEC's **SBC-13STATE** Approved Vendors as minimum requirements for installation:

Telcordia NEBS, Level 1
***SBC-13STATE** Document: TP 76200MP – SBC-Network Equipment – Building Systems (NEBS)*
***SBC-13STATE** Document: TP 76300MP – SBC-Installation Guide within the Central Office*
***SBC-13STATE** Document: TP 76400MP – SBC-Detail Engineer Requirements for the C.O.*
***SBC-13STATE** Document: TP 76900MP - SBC Installation Testing Requirements*

3B.10 All installed equipment, regardless of manufacturer or owner must be placed within the CLEC assigned space without exceeding the maximum number of watts per bay as outlined in BSP 800-003-101 (Current Version) for Thermal Management Requirements. The CLEC will be required to give NSS and the TEE the heat dissipation for **all** equipment to be placed within the CLEC's space, either physical or virtual. Per the FCC Fourth Report and Order, CLECs cannot overburden the **SBC-13STATE**'s HVAC systems through the placement of high heat producing equipment. CLEC may need to have additional bay spaces ordered to compensate for high heat dissipation equipment exceeding **SBC-13STATE** standards.

3B.11 The CLEC's Cageless application should state the number of bays/cabinets, heat dissipation **and** the size of spacers to be placed for each bay. The SBC Space Planner is responsible for reserving the bay/cabinet space **and** the spacers. **The CLEC will not be allowed to purchase bay/cabinets with spacers, and then not use the spacers or the assigned space for the spacers and place additional bays within the assigned spacer space.**

4.STANDARD CAGE

4A. The Standard Cage will be provisioned in a similar manner throughout the **SBC-13STATE** regions. The Caged Collocation option will be considered as an **optional and embedded product**. The Caged arrangement will continue to use the principles of a caged area in the Collocation Area which either the ILEC or the CLEC may provide the cage structure walls. The Cageless Standard or Large Bay configuration is the going-forward standard and is the preferred choice for the CLECs.

4B. The Cage arrangement will have a standard configuration for all ILEC locations without the use of any backboards or special modifications for Power or other connections.

4C. Unless specifically specified with the application request, the CLEC will not receive any Point of Termination panels for DS0, DS1, DS3 or Fiber facilities to interconnect to the ILEC. The ILEC will provide tagged cables with cabled ends to the CLEC's cage location when the ILEC places the cable.

4D. The DC Power requests will either be provided as tagged base-end cables coiled in the cable rack over the Cage when the ILEC places the CLEC's cable, or terminated in a CLEC bay through the use of a CIPP (Collocation Interconnect Power Panel) as an optional item. The CLEC's **SBC-13STATE** Approved Vendor can also place and terminate power cable and terminate power cable to the BDFB. They can place primary power cable but not terminate or fuse the Primary Power Board.

4E. The standard last test point for ILEC personnel will be the interconnection point within the ILEC equipment, or the MDF-IDF/DSX/FDF frame terminations of the CLEC-placed cable. The ILEC will not test from the CLEC equipment.

4F. If the CLEC requests Point of Terminations (POT) for their equipment, no matter whether it is Caged or Cageless, the POT equipment panels will be terminated in the next assigned standard bay assignment in the Collocation Area, typically in a Physical Cageless Lineup. The only exception to this rule is if the CLEC places the POT in their caged collocation space. This POT placement will be dictated by the size of the bay requested for termination (Standard Bay verses Large Cabinet). The placement of POT bays/cabinets within Common Space is prohibited in order to maintain egress/ingress for all CLECs. The ILEC will place the standard POT panels in the CLEC bay within the Cage at the CLEC's request on the initial installation when provided by SBC. On Augment Requests, the CLEC has the option to purchase the POT panel from SBC but will not be installed or terminated by SBC. Additional terminations to an existing SBC provided POT panel beyond the initial installation date will be terminated by the CLEC and their **SBC-13STATE** Authorized Vendor only.

4G. The ILEC will provide a breaker box for AC power for the geographic portion of the ILEC Building Structure. The CLEC may place AC power for lights and duplex outlet kick panels in the bottom of the bays. The vendor performing the work will be required to provide conduit into the cage structure area from the breaker box. When Cageless lineups are present, the first service provider in that lineup (ILEC or CLEC) will be required to bring conduit and AC cabling from the AC Junction Box to that bay. Subsequent bays provided by either the CLEC or ILEC will connect to the previous AC outlet arrangements on the preceding bay. It is the **SBC-13STATE** Approved Vendor's responsibility to place the proper material to safely by-pass assigned, future bay spaces within a lineup as directed on the floor plan in order to place AC to their assigned bays.

4H. The CLEC may order "Caged Space" that they may elect to enclose or request **SBC-13STATE** to provide at their request. The CLEC will be required to place yellow 2-inch demarcation tape around their area in this event, and the ILEC space planner must indicate ownership and dimensions on the floor plans. The CLEC must use this "Caged Space" within either 18 months or within timetables set up by State PUCs, or such space reverts back to unused Switchroom space.

4I. The CLEC may either provide their cabling through the provisioned racking system to another CLEC or have the ILEC perform the cable placement. The CLEC will not be permitted to interconnect via direct cabling to another CLEC through ILEC services interconnection or through ILEC equipment.

4J. The buildout of Caged lower level frame racking and cable racks between the 7-foot high CLEC bays and the 7'6"-foot height is performed by the CLEC in the Caged Area, including bay lighting. (The ILEC will provide middle and upper level frame and racking.) The CLEC will be required to provision all AC Power through their equipment and request their external communications access. The ILEC will provide all overhead superstructure and racking for physical and virtual collocation areas.

4K. The ILEC will honor any requests for CLEC buildout work or terminations to their equipment from the Point of Termination (POT) to the Caged area. These arrangements will not be tied to the ILEC completion performance schedule for the original Caged or Cageless access availability timeline.

4L. Effective in **SBC-13STATE**, Physical Cages may be requested in increments of 50 square feet (or less) per the series of Accessible Letters provided to the CLECs on February 2000. In addition, the Illinois and Connecticut Tariffs support this position. Excerpt:
"SBC offers Caged and Shared Cage Collocation arrangements with a standard minimum size of 50 square feet. Collocators may also request a smaller Caged or Shared Cage Collocation arrangement (less than 50 square feet) by submitting an Application for Physical Collocation and selecting the "Caged" or "Shared Cage" option. The desired cage or shared cage size is required in section 5 (of the Collocation Application).

SBC will advise the requesting Collocator of the availability of space and the technical feasibility of providing the request within 10 calendar days.

Collocators requiring Caged or Shared Cage Collocation arrangements smaller than 50 square feet are encouraged to make this request through their SBC Account Manager or through their SBC Collocation Service contacts."

4M. Physical Cage Sizes shall be arranged to minimize the amount of lost egress space leading from the assigned CLEC cage space and the entrance facility. Under collaboration with the Corporate Real Estate (CRE) and NP&E, the recommended layout for all cages is to have the side (non-door) to be 10 feet in length. The door will be required to be on the front center of the cage opening outwards from the cage. A 50-square foot cage would then be 5 feet across the front, 10 feet long from front to back. Specially constructed doors will have to be constructed for spacing less than 50-square feet. The placement of 10-feet deep sides conforms to the SBC Cost Study Model and matches up with an adjacent 100-square foot cage having 10 by 10 walls. Modifications to this layout should only be contemplated at such time that the Central Office is near closure in accordance with theSBC-002-316-101, *Wire Center Planning M&P*, Issue 8, dated Aug 2001.

4N. Some states allow the CLEC to place their own cage walls; check with your local tariff for applicability. This will be coordinated by SBC's CRE. The CLEC shall hire an **SBC-13STATE** Approved Vendor to place the cage walls. Cage lighting, cage ground, and AC outlets can also be placed by the CLEC as long as the CLEC uses a **SBC-13STATE** Approved Vendor.

5.SHARED CAGE

5A. The Shared Cage will be considered to have all the same features and capabilities as the Standard Cage Area, with the additional capability for two or more CLEC's to make a joint application at the same time for a combined occupancy. Refer to the Section 4, Standard Cage, for more information.

5B. The occupancy spacing will require a minimum of 10 square feet for each standard bay for safety and egress.

5C. Both CLEC's will provide a drawing to provide the layout of the two (or more) CLEC areas within the standard cage for reference as a common agreement point.

5D. Shared Cages may be requested in increments of 50 (or less) square feet per the series of Accessible Letters provided to the CLECs on February 2000.

CLECs requiring Caged or Shared Cage Collocation arrangements smaller than 50 square feet are encouraged to make this request through their SBC Account Manager or through their SBC Collocation Service contacts."

6.CAGELESS COLLOCATION

6A. General

The ILEC will provide the infrastructure of channel framing, cable racks and lighting to support bay or cabinet layout architecture. This method of provisioning allows for a more compact placement of telecommunications equipment but requires a significant increase in supporting infrastructure in terms of cost and layout as compared to a caged environment where the CLEC provided the overhead structure.

6B. Layout of Bays/Cabinets

The Cageless offering will be laid out to accommodate two generic sizes as described later in this document. It is a requirement that the CLEC provide the size of equipment to be used and the ultimate types and number of interconnection needs when the application request is submitted. Network Planning & Engineering efforts will be geared to maximize the available space at the least cost by placing and assigning like-sized equipment needs in the same lineup. The typical bay type will be the 15-inch deep standard bay that is 7 feet high. Due to egress needs, the minimum size of space to purchase is 10 square feet for one standard bay. **The SBC-13STATE standard will provision the 15-inch deep bay for Cageless Collocation.** The Cabinet size will require a 36-inch deep layout and with swinging doors will require a minimum of 18 square feet. Bays and Cabinets should be placed in a single linear lineup with the front edge at or near the front line edge marking for the equipment placement**.**

The CLEC may not place multiple lineups of equipment within a specified Bay (10 sq. ft) or Cabinet (18 sq. ft) space assignment. In any event, the SBC-13STATE standard for spacing is 3 feet in the front and 2 feet in the rear of the standard bay arrangement, and equipment placement shall not extend into the egress area of the CLEC space, reference SBC BSP 800-003-100MP, January, 2000. Do not mix standard and large bay layouts in the same lineup. Insure that the aisle spacing for Standard and Large Bay configurations are rigidly adhered to as shown in this document. If aisle spacing is limited and cannot be supported, the ILEC must have the concurrence from the CLEC in writing in advance to use this reduced space and still pay for the expected aisle spacing.

SBC-Ameritech (excluding Michigan) does not provide Large Bay/Cabinets for Physical Collocation Tariffs at this time. Requests for bay space that exceeds the standard sized bay will need to be processed as a Non-Standard Collocation Request (NSCR). The 18-square foot area will be assigned for the large bay configuration in this instance as a NSCR. CLEC equipment that exceeds the dimensions supported by a standard bay must also be handled through the NSCR process. The latest Generic Interconnection Agreement (ICA) provides for this option.

When requested by the CLEC as a value added function via a Collocation Application, the ILEC will provide a standard Network or Unequal Flange Bay, which is 7-feet tall, 26-inches wide, 15-inches deep, and capable of handling equipment 19 inch (with CLEC provided extension brackets) or 23 inches wide. The standard within SBC Local Exchange Carriers on hole placement is to use what is known in the industry as "2-inch mounting spaces" which matches the EIA standards for the future and is a world recognized electronic manufacturer's standard. This means that a physical equipment-mounting hole is drilled every inch.

The 19-inch wide frames are not in general use in the industry today. Most, if not all, manufacturer's equipment now comes equipped with adjustable mounting brackets, which permit the mounting of the shelf in either 23 x 2 or 19 x 1-3/4 interior dimension bays. However, be aware that most equipment shelves today are 23-inches wide for mounting in the standard 26-inch wide bay, and will not fit in a 19-inch wide bay.

6C.Cageless in our own Lineups (Not Virtual)

There will be instances where it is determined by the SBC Space Planner to assign a CLEC within the ILEC existing lineups. CLEC bay assignments may only be made to lineups that have similar size and spacing requirements. For instance, a large cabinet sized bay will not be placed in a standard depth bay lineup if it exceeds the 15-inch maximum depth for the aisle spacing**. (For existing 12-inch Ameritech lineups, the maximum depth is 12-inches for that lineup. If a CLEC desires to use a 15-inch deep bay or equipment, a new lineup must be established for that purpose because of front and rear aisle requirements.)** That large bay would need to be placed in a lineup that would support its large space requirements.

In addition, the Space Planner working with the TEE would need to evaluate any increased need for infrastructure racking placements. If an existing lineup consists of only D4 banks with only standard cable and power racking to support the lineup, then a request to place a bay that requires fiber optic cable or fiber ductwork in the lineup to support it would not be cost effective or efficient for either the CLEC or ILEC. The placement of additional racking in existing lineups is exceptionally costly and may require inefficient work-arounds. Care and due diligence must be exercised to place the new bay, whether ILEC or CLEC, in the most compatible supporting infrastructure. CLEC assignments should only be made in ILEC lineups when current Cageless Collocation sites within the central office are exhausted. The Space Planner, not the CLEC will make the assignment for the CLEC bay. POT panels and bays should not to be placed in ILEC equipment lineups when space is at a premium in the Central Office. In a central office close to floor space exhaust, the POT bays may utilize other location sites or CLEC bays where POT

terminations will not potentially displace other service equipment requirements by the ILEC or CLEC.

6D. POTS Panels

The existing standards for Point of Termination (POT) panels may be requested by the CLEC for installation to include the termination of the cabling from the ILEC as a value added service at additional cost separate from the Collocation preparation timeline. Requests for different panels than the approved POT panel for that geographic area will not be provided by the ILEC, but the CLEC's **SBC-13STATE** Approved Vendor may provide their own type as long as it meets minimum safety requirements such as the TP76200MP (NEBS) Level 1 standards. If the ILEC installs the panels for the CLEC, the option to terminate the cabling to the panel exists. The ILEC will not order or terminate on a panel other than SBC approved POT panels.

6E. Bays/Spacers and Cabinets

When the ILEC provides the bay, the ILEC will provision the AC outlets on both front and rear kickplates of that bay and meet grounding requirements. The CLEC's **SBC-13STATE** Approved Vendor may purchase their own bays and install them using the minimum safety requirements such as found in the TP76200MP (NEBS) Level 1 and Telco industry standard installation practices.

The standard 36-inch wide/deep cabinet with interior 26-inch relay rack rails may be purchased and installed by the SBC Local Exchange Carrier as a value added service in their assigned collocation area. When the cabinet is provided, the ILEC will provision the AC outlet centered above each cabinet attached to the aux framing at the 7-8 foot level. The ILEC will also meet grounding requirements by insuring that adequate ground connection points are provisioned for the CLEC whether they have the ILEC or a **SBC-13STATE** Approved Vendor install their bays and cabinets. Grounding methods must follow SBC BSP 802-001-180MP*, Grounding and Bonding Requirements*, dated January 2001 by installing a ground access for bays in each lineup. The CLEC's **SBC-13STATE** Approved Vendor may purchase their own bays and install them in accordance with TP76200MP (NEBS) Level 1 and standard installation practices. The Collocator is responsible for connecting their bay to the lineup ground using the correct cable and type connection to properly ground the bay.

When the ILEC installs the standard bays, spacers will be installed between each of the bays in the request. **(SBC-13STATE Collocation lineups on a going-forward basis will follow the standard spacers shown in this document).** The ILEC will not install the End Guard unless the CLEC desires to purchase that item separately outside of the tariff using NSCR pricing.

6F. Alternating Current Power Provisioning for Bays/Cabinets

In a lineup where the ILEC is providing the first bay, the ILEC shall provide the duplex outlets (front and rear) in each bay installed. Local LPO should be consulted on sourcing of AC appliance kits. Future bay additions to the lineup, whether added by the ILEC or CLEC, will add that new bay to the existing lineup with the last electrical outlet being used as the source for the new bays up to a total of 25 bays.

In a first application in a lineup, the first CLEC will be required to obtain the AC power from the assigned AC junction box near the lineup. In a lineup where the CLEC is placing the successive

bays in the lineup, the CLEC will access the circuit in the floor wiremold and add the AC appliance outlets in their bay. **Future extensions/additions of bays will be sourced from the last existing outlet, whether the CLEC or ILEC provides it. A second AC source shall be placed into a lineup after 25 bays have been placed.**

A lineup of cabinets will be handled slightly differently from bay installations and will require additional cabling and racking. Standard Bays and Large Cabinets cannot be mixed in the same lineups. A duplex outlet should be centered above each planned cabinet, attached to the aux framing, at the 7-8 foot level. The above listed activities are performed by the Network Engineering organization.

In a Caged arrangement, the CLEC will be responsible for the AC outlet and cable over to the AC junction box when they install the Cage. The ILEC will install one duplex outlet within the cage area when the ILEC is requested to provide the cage for the CLEC. SBC's CRE group will place outlets associated with any cage installation.

*****CAUTION***** Alternating Current is provided for standard AC outlet access. Requests for converting the AC to DC for the powering of collocation equipment within the Central Office will be denied. Not only does a converter have associated power issues, but also the potential bypass of tariffed DC power options is possible when the Collocator uses zero costed AC services.

6G. Conduit/Cable Racking Placement within the Central Office

6G.1 CONDUIT PLACEMENT

The SBC Local Exchange Carriers will provide interconnection cabling for the CLEC in the same manner that it performs for itself. Conduit placement on a going forward basis will not be provided unless one of the following stipulations are met:

- The local municipality requires conduit placement in the Central Office for all service providers.
- The CLEC specifically requests conduit to be placed for interconnection between two CLEC physical caged collocation sites in the same Central Office. (*)

(*) Conduit will not be placed in a Cageless Collocation Area due to Technical Infeasibility and congestion issues.

All cable installed within a SBC Local Exchange Carrier Central Office must have a fire retardant sheath rated suitable for use in central offices. The use of conduit in lieu of this rating is not acceptable. All existing conduit placements not dedicated to existing CLEC cages will be treated as Common Use for all providers in a similar purpose and manner as cable racks.

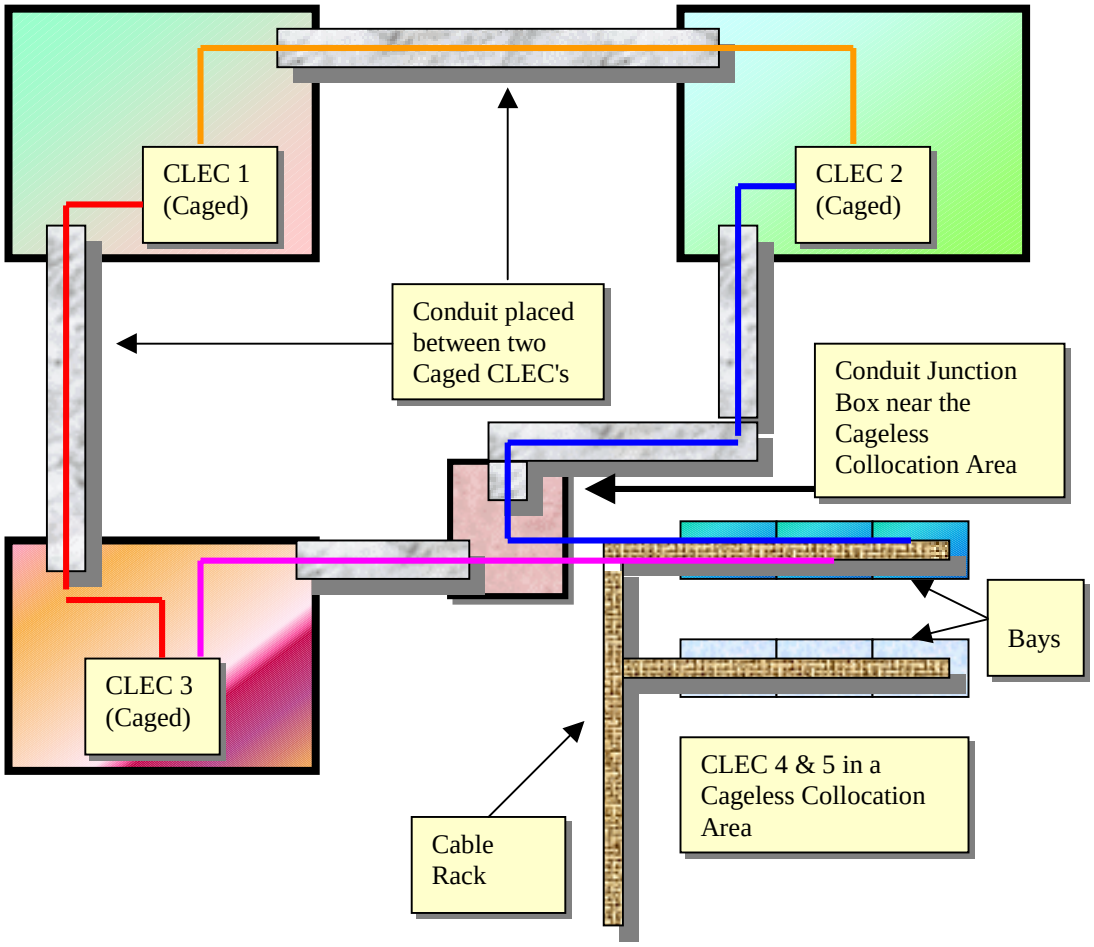
Conduit requests may be made either via Tariff or (ICB/NSCR) depending on the regulatory environment. In any case, when a request is made from one CLEC cage to another cage, the conduit will be placed between the two except where congestion makes the request infeasible. Requests for Conduit placement in a redundant or secondary route to the same location within the wire center will also be handled on an ICB/NSCR basis.

SBC CRE group is responsible for the placement of all conduits for CLEC cable. Depending on the length and routing of the conduit, the proper number and type of pull boxes will also be placed with the conduit. The routing of this conduit will be designed in cooperation with the SBC Space Planner and TEE in order to assure proper planning of the route. Pull tape will also be installed within each conduit by CRE's vendor.

Conduit requests between one caged CLEC to a cageless CLEC or a cageless to cageless will be handled differently. Conduit will only be placed upon CLEC request from the Caged CLEC to a common junction box near the cageless collocation area. At this point the cable will be pulled through the junction box to the existing cable rack that has been placed for that purpose. The conduit will not be extended into the Cageless Collocation Area or to the CLEC bay/cabinet. (See the attached drawing)

The standard method of cabling will be through the use of ILEC established and maintained Cable Racks. The Cable Racks will be provided above the equipment in established ILEC Central Office Areas.

Conduit CLEC Requests



6G.2 CABLE PLACEMENT

All standard cable routing will utilize existing or newly placed cable racking. **SBC-13STATE** will provide all cable racking in the Central Office **except** for the following situation:

(**SBC-13STATE**) First level racking (below 7-foot, 6-inches) which interconnects adjacent bays within a caged or cageless areas).

All cable racking will be placed in accordance with guidelines found in BSP 800-006-151MP and TP76300MP and TP76400MP.

When the CLEC chooses to place their own cable, consult SBC 002-316-008*, CLEC Cable Placement & Removal M & P*, for details on cable placement procedures.

6H. FiberOptic Entrance Placement

An essential part of the CLEC's request is the usage of entrance facilities in the Central Office. The CLEC will provide enough cable length to run from the first manhole through the cable vault using cable racking to reach the CLEC's assigned space. The **SBC-13STATE** is responsible to pick up the coiled length of cable at the first safe manhole to the CLEC Collocation Area. The entire fiber entrance cable will, in all cases, be owned and provided by the CLEC. The dielectric SingleMode fiber optic cable will be fire retardant rated throughout all areas of the Central Office without splices into the CLEC Collocation Area.

If a splice is required that connects the outside fiber cable with the Central Office fire retardant portion, it will be performed outside of the Central Office at or beyond the first safe manhole. The **SBC-13STATE** OSP Contact provides the required cable length to the Collocator so he may provide entrance fiber cable that can be extended from the designated manhole to the Collocator's Physical Collocation space (without a splice). The ILEC will provide the minimum cable length (CLEC location to the vault fiber cable entrance point in the entrance manhole) to the CLEC. It is the CLEC's responsibility to provide sufficient additional cable length to accommodate splicing/terminating requirements at or beyond the first safe manhole.

When the CLEC is ready to have their fiber cable placed to their leased space; they will place a call to the CLEC Account Manager to arrange placement by the TEEs designated vendor within 5 business days. This portion of the process is described to the CLEC both at space turnover, the walk-through meeting and at the M.O.P. meeting, as applicable. The ILEC's vendor places the CLEC's fiber cable to the specified Collocation Area Space and coils any leftover cable at that location.

The ILEC will place the fiber cable in a similar manner that it performs for its own fiber facilities through the use of cable racks. The placement of Conduit for the fiber cable placement will follow the standards listed above at the CLEC's request and only through to caged locations. CLEC locations in Cageless areas will have the fiber cable pulled to a Junction Box in close proximity to the Cageless Collocation Area at which point it will be placed in existing cable racks to the CLEC lease site. CRE will be responsible for the placement of the conduit (which will include the pull tape).

*****Essential Requirement*****
Do not place FiberOptic cable within or attached to Fiber Raceway or Yellow Ductwork. This special racking material is designed for FiberOptic cross-connect jumpers ONLY. FiberOptic cable must be placed in either established Fiber cable racks designed for that purpose or existing common interconnection cable racks. FiberOptic provisioning within the Central Office is SingleMode only, not MultiMode.

6H.1. Raceways & Turndown Provisioning

When building out the Cageless Geographic Footprint, The FiberOptic Raceway/Ductwork may be placed either prior to or at a later time when CLEC requests for Fiber jumper interconnection are made. This option should be evaluated based upon the availability, clearance space, timing and cost with regard to the CLEC Collocation Augmentation Requests. **This change does not relieve SBC of the obligation to provide FiberOptic troughs at any time to any CLEC bay requested. Fiber troughs have been cost justified to any CLEC bay. Fiber downspouts will be placed only to the specified bay when a CLEC orders fiber interconnection with the SBC-13STATE network at a bay location.**

Turndowns used on the existing FiberOptic Raceways (FiberGuide) will use Snap-On "Express Exit Unit" 2"x2" waterfall parts shown below:

ADC Manufacturer Part Number	SBC-Region	PID	Price	Supporting Drawing Documents
FGS-MEXP-A/B/F	SBC-SWBT/AIT/PB/NB	301041026	$66.75	SBC-C-500001-E-00
FGS-MEXP-A/B/F	SBC-SNET	003582533	$66.75	SBC-C-500001-E-00

Interbay Fiber Raceways are the responsibility of the ILEC for all Central Office EF&I provisioning and management. The Raceways will be placed above the between 7'6" and 8'6" above CLEC assigned spaces. The CLEC at their discretion, may place their own Fiber Raceways between adjacent bays in the same lineup only as long as the placement is within the equipment footprint of the assigned spaces and does not encroach on the 7'6" ceiling for CLEC equipment. The CLEC cannot place fiber raceways or any equipment or racking above the 7'6" environment.

The responsibility for placement of turndowns is covered in the following chart:

Ordering Situation	Technical Situation	Responsible Party to purchase and Install the Turndown
CLEC orders Fiber to a specific bay	Raceway not in Place. ILEC provides Cable handoff	ILEC provides Raceway over all bays in the request and provides a Turndown to specific bay only
CLEC orders Fiber to a specific bay and then wants it placed to another bay in addition	Raceway not in Place, ILEC provides Cable Handoff	ILEC provides Raceway over all bays in the request and provides a Turndown to only that specific bay in the request, additional bays will be the responsibility of the CLEC
CLEC orders Fiber to a Specific Bay	Raceway not in Place, CLEC provides Cable Handoff	ILEC provides Raceway over all bays in the request. CLEC provides all Turndowns.
CLEC orders Fiber to a specific bay and then wants it placed to another bay in addition	Raceway not in Place, CLEC Provides Cable Handoff	ILEC provides Raceway over all bays in the request. CLEC provides all Turndowns.
CLEC orders Fiber to a specific bay	Raceway In Place, ILEC provides Cable Handoff	ILEC provides Turndown to that specific bay only
CLEC orders Fiber to a specific bay and then wants it placed to another bay in addition	Raceway In Place, ILEC provides Cable Handoff	ILEC provides Turndown to only that specific bay in request, additional bays will be the responsibility of the CLEC
CLEC orders Fiber to a Specific Bay, CLEC Places cable	Raceway In Place, CLEC provides Cable Handoff	CLEC provides Turndown
CLEC orders Fiber to a specific bay and then wants it placed to another bay in addition	Raceway In Place, CLEC provides Cable Handoff	CLEC provides all Turndowns
CLEC wants to install direct cabling between two CLECs	Raceway in Place, CLEC provides the Cable Handoff	CLEC provides all Turndowns
CLEC wants to install direct cabling between two CLECs	Raceway in Place, ILEC provides the Cable Handoff	ILEC provides all Turndowns

6I. The Demarcation Point, Testing and Tags

In the new Caged and Cageless Collocation Areas, the demarcation point for our services has changed from the Point of Termination (POT) Panel drop jack going toward the CLEC to the end of the cable handed off to the POT panel. The actual handoff of services terminates at the end of the connector or equivalent following the table below:

Service Type	Cable Type	Termination/Demarcation
DSO/VF	Copper 50/100 pairs	Tagged Only
DSL	Copper 50/100 pairs	Tagged Only
DS1	Copper 8-144pairs	Tagged Only
DS3/STS1	Coax (preferred 734C)	BNC Connector
Single Mode Fiber optic (All Others)	Single Mode Fiber Cable or Fiber Jumper	SC-UPC Connector[1]

The ILEC is responsible for thorough benchmark testing of all cabling and connectors from the CLEC Collocation Area back to the block/panel on the ILEC provided Frame. The Test and Acceptance testing should be recorded for subsequent benchmark comparisons with verifications of termination locations on the SBC equipment side of the cable. Copies of the fiber acceptance test shall be retained by **SBC-13STATE** and a copy given to the CLEC. If the CLEC provides and installs the cable, no testing will be performed by **SBC-13STATE**.

The handoff point of cabling and connectors must be suitably labeled to facilitate the rapid installation of services by the CLEC. Copper cable should be tagged by sheath typically in 50/100 pair complements. Coax cables should be tagged with transmit and receive leads individually tagged and the circuit pairs subsequently tagged together. Fiber optic cable and/or jumpers will be tagged in sequential order by the termination count on the SBC equipment panel count (e.g. 1-72 for a 72 port panel). Cable tags, with far-end termination details (e.g., shelf/bay/distribution frame block, circuit number, Transmit/Receive, etc.) shall be placed on the unterminated end of cables reserved for future us (by the Telco) or for collocation interconnection (by the CLEC). Note: If the cable is DSO cable for a CLEC, the cable tag needs to include what is stenciled at the MDF /IDF block. This tag will also include the CLEC cable name and line splitter (if splitter is involved) such as: XXX01 (Cable Name), 1-100, 101-200, etc. (Cable Pairs), OE001.01 (Bay), 01 (Shelf)-001-100 (Ports), CP001.02 (Bay), 01 (Shelf)-001-100 (Ports).

After CLEC acceptance of services, the standard ILEC test point for these new caged and cageless locations will be the last test point within the SBC Equipment Area (e.g. MDF/IDF, DSX-1, DSX-3, FDF). Embedded services and pre-June 1999 Caged Collocation services will be handled in the previous test manner in their respective carrier areas.

[1] The standard handoff for fiber optic facilities is the SC-UPC, SingleMode connector. Effective, August 20, 2001, SWBT services converted from the ST-UPC SingleMode to the Corporate SC standard for all CLEC requests on a going-forward basis only.

For the DC power cabling, the demarcation point is either the CIPP (Collocation Interconnect Power Panel, if installed) or the coiled bare-ended cables. The ILEC Installation Vendor is obligated, by SBC Installation Guidelines (TP 76300MP), to properly label (tag) and run the power cable from the source (either a BDFB or the power plant) to the agreed (assigned) location. Prior to job completion, continuity checks insure the cable is properly installed. Labeling at the source should identify the feeds as Collocation service, the engineered fuse size, and the exact location of the load (relay rack identification or Collocation cage number). When bare-ended cables are provided to the CLEC, the cables shall be coiled, properly secured and tagged in the cable rack directly over or adjacent to the CLEC's assigned space. Because the **SBC-13STATE** Installation Vendor generally completes the power installation prior to CLEC turnover, the ILEC Vendor shall label the cables with the CLEC ACNA (or CLEC name), Order Number, Feed Designation, Polarity and Number if necessary (i.e., Battery A1, Return A1, Battery A2, Return A2). The lettering shall be large and dark enough and arranged on the rack in such a way as to be visible from the floor. This allows the CLEC and SBC LEC Account Representative to clearly identify the provisioned power feeds at the time of Collocation space acceptance and turnover. No joint test & acceptance (between the CLEC and SBC LEC Power Installation Vendor) is necessary for job completion/space turnover. Any errors in labeling or other improper installation activities shall be corrected by the SBC LEC Power Installation Vendor prior to CLEC cage/space turnover.

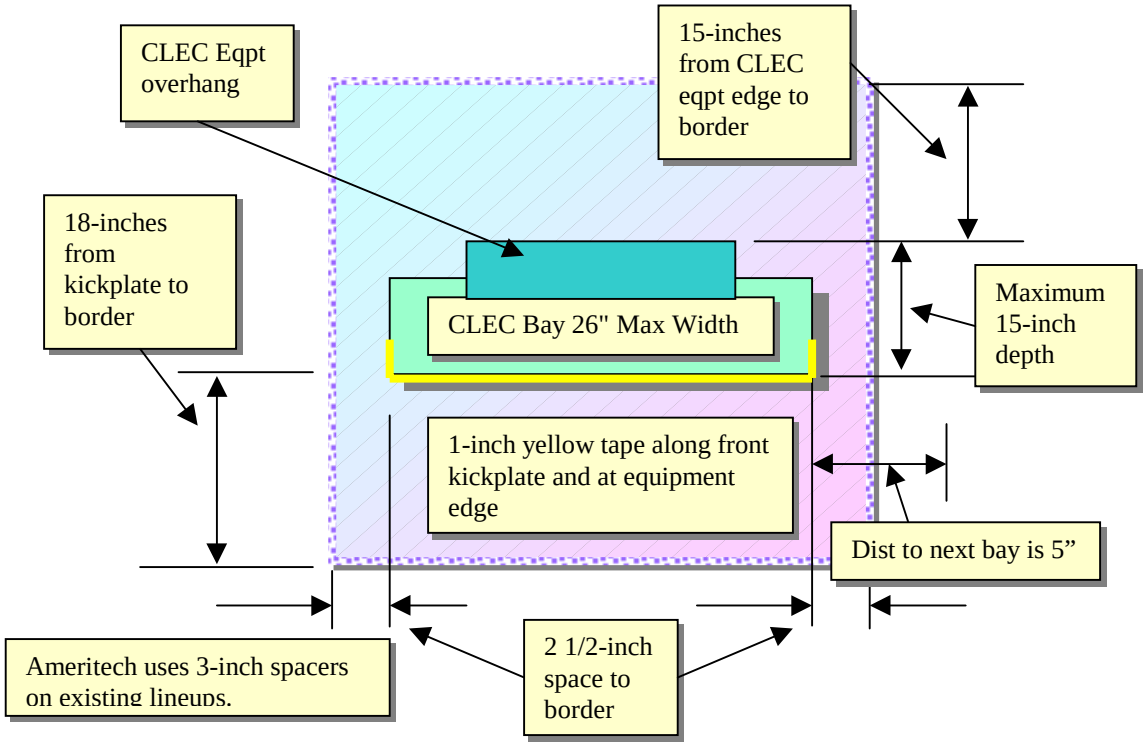
6J. Bay/Cabinet Placement and Egress within the Cageless Collocation Area

6J.1 Detailed Bay Placements

As discussed earlier, the standard bay takes 10 square feet (with spacers) and the cabinet takes 18 square feet. It is expected that the CLEC will place the bay, equipment and associated cabling within the space allocated. The space has equipment and egress areas within the space assignment. The equipment housed within the CLEC bay must not extend beyond the farthest point of the front kickplate. ILEC Personnel will use 1-inch yellow tape specified in Tab 15 for the border marking for CLEC bay placement. Personnel may consist of one of the following groups; ILEC Space Planner, Resident Engineer, Cluster Vendor Engineer, Transport Equipment Engineer (TEE), and/or their designated representative in SBC. See drawing for tape placement. Only one lineup of equipment is allowed in this area. When only one bay space is requested, the bay of standard size, must fit within the following parameters shown in the following drawing:

Standard Bay in the Cageless Collocation Area

10 square feet of area



Overall Dimensions:
31-inches wide
48-inches deep
10 square feet

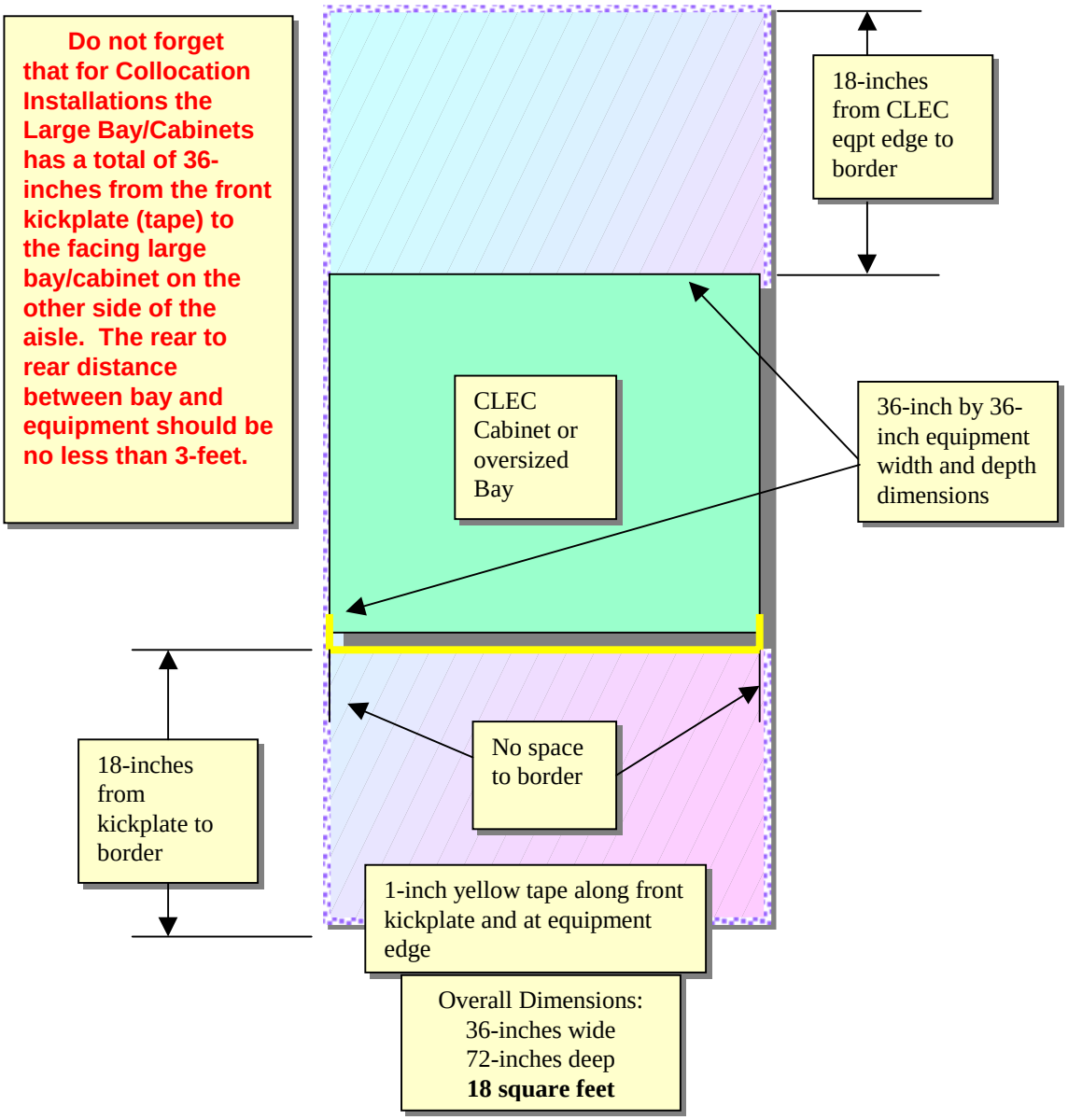
Do not forget that for Collocation Installations the Standard Bay has a total of 36-inches from the front kickplate (tape) to the facing bay on the other side of the aisle. The rear to rear distance between bay and equipment should be no less than 2-ft 6-in.

6J.2 Detailed Cabinet Placements

The Cabinet size has very tight dimensions for the 18 square feet area and is based on a 36-inch by 36-inch equipment footprint. ILEC Personnel will use 1-inch yellow tape specified in Tab 15 for the border marking for CLEC bay placement. Personnel may consist of one of the following groups; ILEC Space Planner, Resident Engineer, Cluster Vendor Engineer, Transport Equipment Engineer (TEE) and/or their designated representative in SBC. See drawing for tape placement. Only one lineup of equipment is allowed in this area.

Cabinet in the Cageless Collocation Area

18 square feet of area



6J.3 Floor Marking

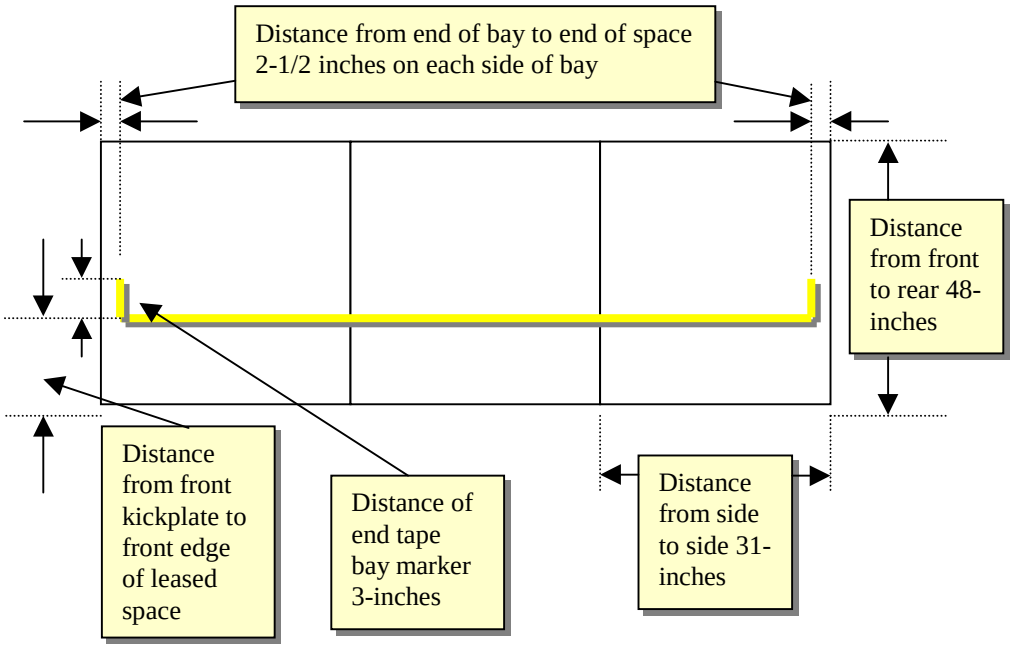
When a multiple bay lineup is requested by the CLEC, the CLEC may elect to place all the bays in their respective "squares" or place the bays adjacent to one another. The Space Planner will determine the assignments to accommodate the front and rear cabinet/bay access spacing. In either case, the CLEC will be leasing the full space amount for the total spacing necessary for the number of bays. If there is a gap between one CLEC's bay and the next in the same lineup, the electrical cabling for AC Outlets will become exposed on the floor between the bays.

It is the responsibility of the CLEC or ILEC installing bays to insure that all safety trip hazards are mitigated in their work areas. The placement of a 3/4-inch high tapered rubber molding should be placed on the electrical cable.

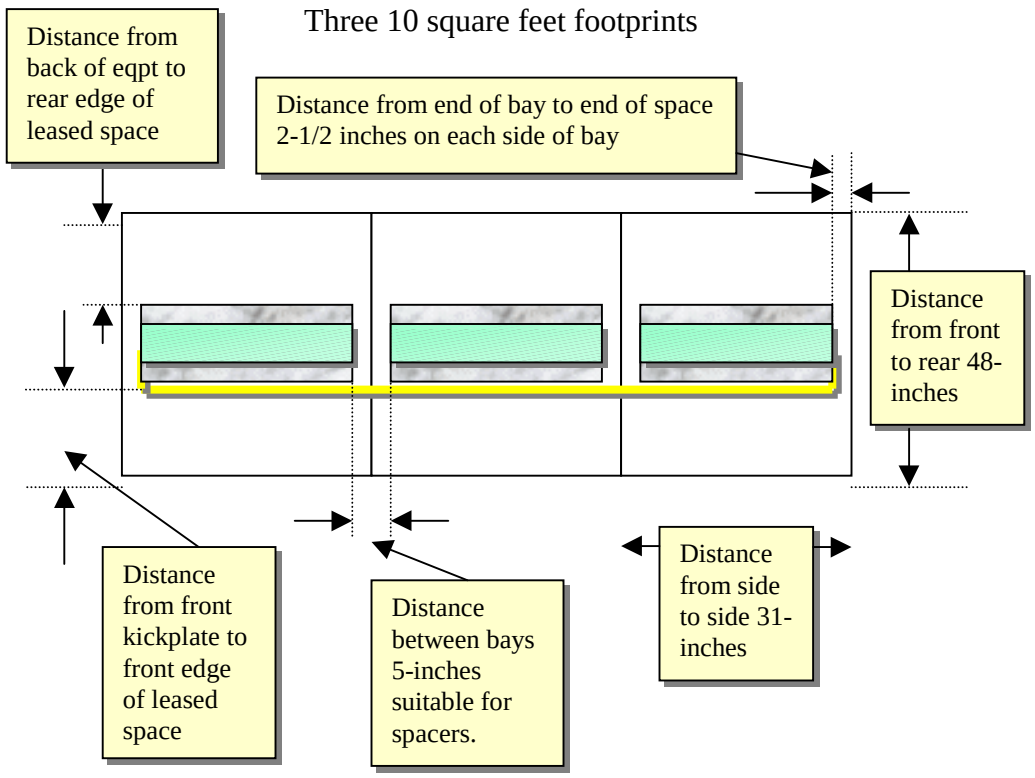
Yellow Bay marking tape needs to be placed along the front edge of the kickplate for the bay lineup and the side edge which the end bay must not encroach at the end of the CLEC leased space. (See drawings below)

Standard Bays (3) footprint and floor marking before bay placement

Three 10 square feet footprints

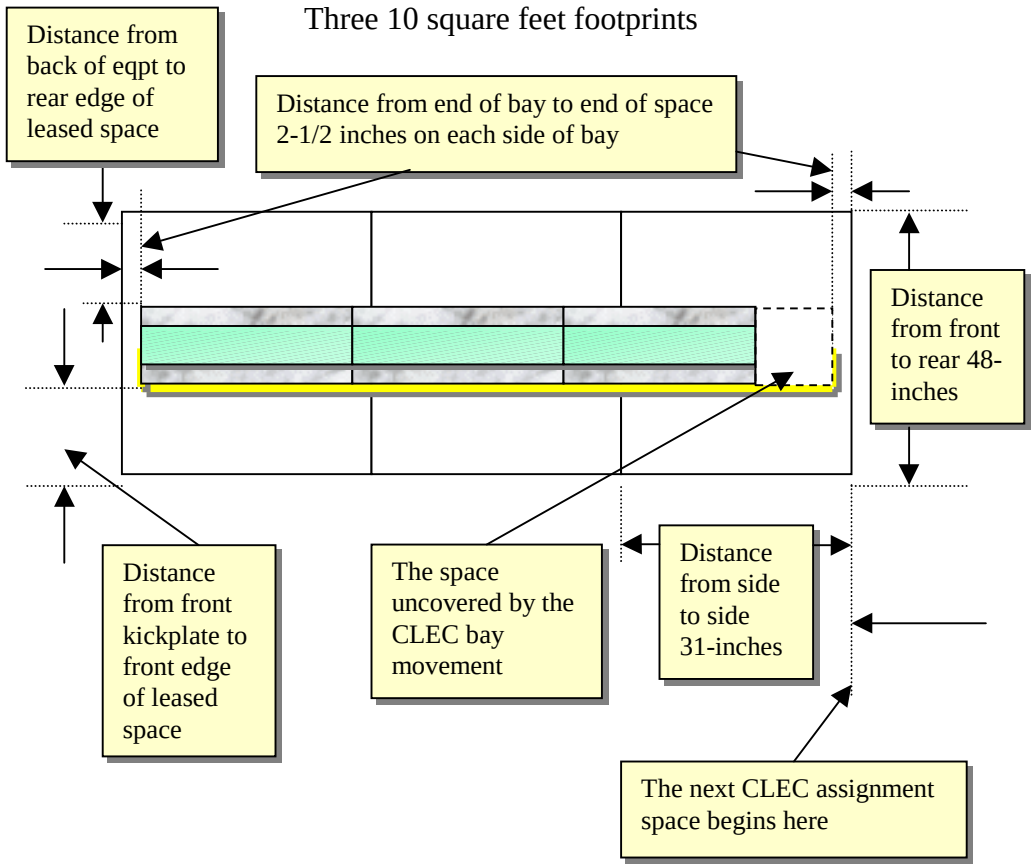


Standard Bays footprint and floor marking with standard bay placement within each assigned area



The CLEC may elect to place the bays adjacent to one another without spacing. The bay placement location must still be marked for the front and end areas for bay placements. It must be noted here that the space leased will continue to be leased to the CLEC and NOT trued up for space inappropriately used by the **SBC-13STATE** Authorized Vendor or the Space Planner. The vacant space on the end of the square footage must be marked in order to insure that the next CLEC is not assigned on top of the first CLEC's space.

Standard Bay footprint and floor marking with adjacent bay placement



6J.4. Thermal Management Requirements

Per BSP 800-003-101MP, *Thermal Management Requirements High Heat Equipment In The Central Office*, Issue A, dated June 2001, any equipment placed into the Central Office must adhere to this document to reduce risks of exceeding building cooling capacity that may lead to failure of equipment in the Central Office. All high heat equipment shall be provided floor space for heat release of that equipment to stay within the 100 Watts/sq ft as long as average heat density of all frames of the system is within heat density limits.

When additional "thermal management" floor space requirements are necessary, the drawings of installation of the high heat area shall show space designated for thermal management purposes and no future equipment shall be placed in those spaces so long as high heat equipment is in service. The drawing must clearly label floor space as "thermal management" space.

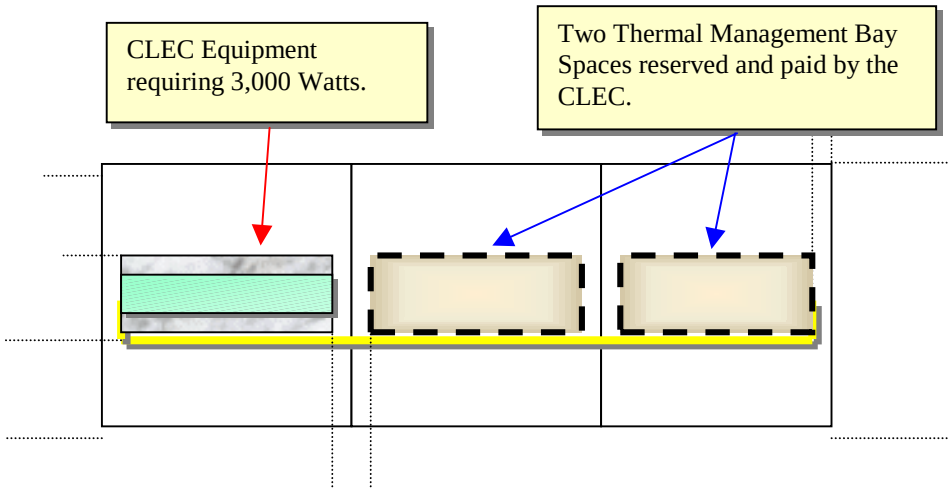
The CLEC that requested to install high heat equipment will need to pay for not only the equipment bay assignment, but also the adjacent "thermal Management" spaces to compensate for this heat dissipation. Whether the ILEC or the CLEC provides these thermal space bays, the provider must show these as working bays and provide the necessary identification stenciling.

The TEE will be notified through the NSS group resulting from the Collocation Application Form that the CLEC will be providing high heat equipment into the Central Office. Assignments will be made accordingly and the high heat square footage will be forwarded back to the NSS and CLEC contact groups for billing.

In the Example, the CLEC has a high heat equipment bay of 3,000 Watts. In the 10 Square Ft area this would represent a total of three thermal spaces being required. As a result, the CLEC would pay for three bay assignments, locate their equipment in the first assignment and have the adjacent two bays shown as "Thermal Management" spaces paid by the CLEC. Empty framework or cable extenders installed adjacent to high heat equipment framework physically reserves "thermal management" space from inadvertent utilization of the area. Empty framework shall be installed with blank plates or passive equipment to avoid future installation of active equipment.

Standard Bay footprint and floor marking with standard bay placement within each assigned area with Thermal Management Space(s)

Three 10 square ft footprints



6J.5. Ingress/Egress Aisle Spacing

Per the SBC 002-316-101, *Wire Center Planning M&P* and SBC BSP 800-003-100MP, *Space Planning Standards for Network Equipment Environments,* the following egress routing standards are highlighted:

Ingress/Egress Aisle Spacing Standards

	Minimum	Standard/Collocation Standard[2]	Maximum
Front of Standard Equipment Aisle	2'6" wide	**3'0" wide**	4'0" wide
Rear of Standard Equipment Aisle	2'0" wide	**2'6" wide**	3'0" wide
Between equipment and any wall [3]	2'6" wide	**3'6" wide**	---
Front of Large Bay/Cabinet Aisle	3'0" wide	**3'0" wide**	4'0" wide
Rear of Large Bay/Cabinet Aisle	3'0" wide	**3"0" wide**	4'0" wide

[2] The Standard Aisle spacing for Collocation will not change from the standard unless the CLEC agrees in writing to a smaller aisle spacing for each instance and will be obligated to pay for the full area (10 or 18 sq. ft respectively) when that spacing may not fully be there.
[3] This includes any pillar embedded in a wall. The closest point from the wall/pillar plane drawn parallel to the equipment lineup.

CLEC equipment (includes any cabling or other devices that may protrude from the front or rear of the equipment) must fit within the spacing of the standard bay or large bay (cabinet) size ordered. The Collocator is obligated to order the correct size bay and advise the ILEC of the equipment and its dimensions in order to keep their equipment/bay and cabling from protruding into aisles and walkways. The Standard shown above is the standard for collocation installations. When a violation is discovered, "CAUTION" tape needs to be placed across the aisleways at waist level on both front and rear aisles to prevent any possible injuries and restrict egress through that area. Refer to the Common Systems FLASH 00-030, *Improper Placement/Assignment of Collocation Equipment placed within the Cageless Environment*, dated Aug 2000. The CLEC Account Manager needs to be notified as soon as possible by NSS for coordination and resolution of the situation. The CAUTION Tape must remain in place until such time that the hazard situation has been corrected. Ordering information may be found in the Materials Section of this document.

6J.6.Bay and Lineup Numbering

Follow TP 76400MP for the appropriate bay and lineup numbering within the Wire Center. **Do not** establish a special unique numbering scheme for CLEC bays and equipment.

6J.7.Storage Cabinet Space Offering (Virtual)

SBC-13STATE will provide upon request the floor space for the "occupancy" of a dedicated Collocator provided storage cabinet for **Virtual** Collocator -owned circuit packs, unique tools, and test equipment. The Collocation of Storage Cabinets is only permitted in Virtual, not Physical, Collocation. The CLEC is responsible for requesting the proper floorspace required for their storage cabinet and will be responsible for the installation and the monitoring of capacity by an **SBC-13STATE** Approved Vendor. The Virtual Storage Cabinet placed within an equipment lineup will be required to fit inside the 10 or 18 square foot standard dimensions.

Virtual Storage Cabinets should continue to be assigned and placed in Inactive "Other" Space outside of the Active "Switchroom" Space. Refer to Section 3A.3 for definitions of these terms. Virtual Storage Cabinets may be placed amongst Telco Cabinets against the wall or similar areas in the Inactive "Other" Space. Virtual Storage cabinets will not be placed in equipment line-ups or in Active "Switchroom" Space reserved for equipment deployment.

It must be emphasized that the floor space assignment selection for the placement of these Dedicated CLEC storage cabinets is the responsibility of the ILEC (Space Planner/TEE) should coordinate with the ILEC Local Field Operations (LFO) group for assignment and placement locations.

6K. Electrical Light Switch and the Motion Sensor placements

Network Planning & Engineering (ILEC) is responsible for the placement of front and rear aisle lighting throughout the Cageless Collocation Area lineups. The placement of a traditional light switch in the end caps of each end of the lineup comes into question when the CLEC may not have provided this piece of equipment with their installation. It is recommended that the light switch for a Collocation Area lineup be placed on an adjacent wall or nearby pillar or building support structure. This will eliminate the need for the ILEC to provide the end cap to the lineup.

The use of Motion Sensors for Light Fixtures is not rated as standard. These are being evaluated by NP&E (Common Systems) but may not be approved at this time. Do not deploy Motion Sensors unless an approved PAN is provided from this department.

6L. Interoffice/Intraoffice Repeaters (IOR)

Interoffice repeaters may become necessary for use when providing for Unbundled Network Elements (UNE), Adjacent On-Site and Adjacent Off-Site (Texas, Missouri, Kansas, Oklahoma, Michigan and Nevada ONLY). The key services that may be impacted are DS1 and DS3 due to electrical loss limitations and cable distance issues.

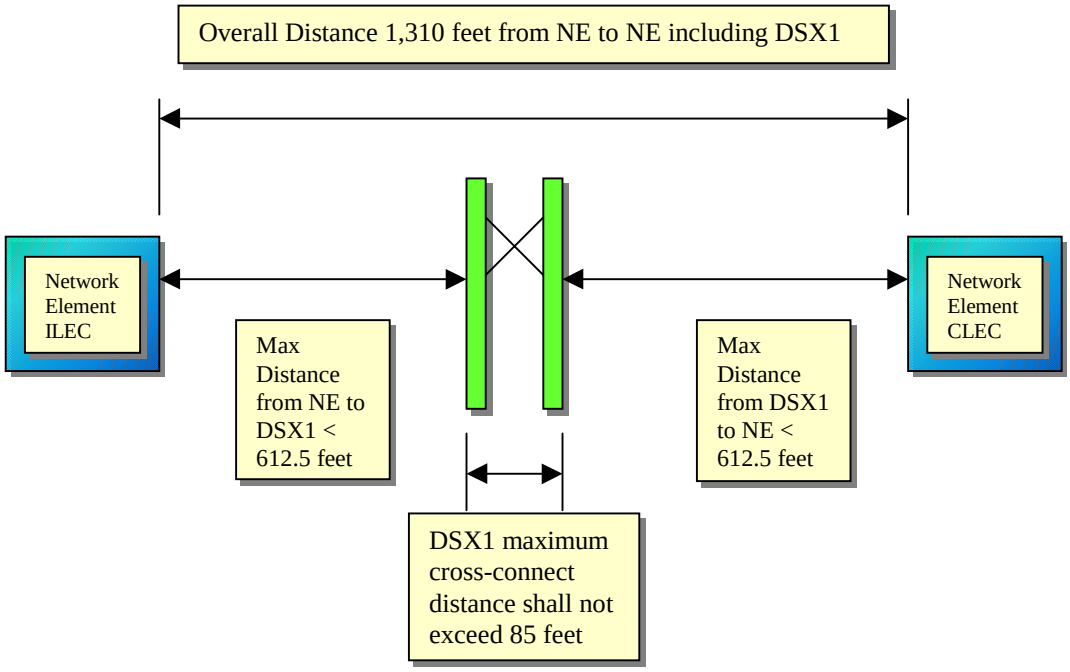
One of the concerns when engineering the cabling between the Interconnector equipment and ILEC's digital cross connect frame is cable distance and signal degradation. The following table provides the maximum cabling distance limitations for DS1 and DS3 circuits (without regeneration devices) using the ideal cable facilities. Be careful to provision collocation services in a Collocation Area that does not require IORs to interconnect with ILEC equipment and frames.

Type of Connection /Cable Used	Distance Limit (Network Element {NE}) - DSX1/DSX3)	Distance Limit Cross-Connect at DSX1/DSX3	Maximum Overall Distance Limit (NE-NE)*
DS1 22 gauge wire	612.5 feet	85 feet	1,310 feet
DS1 24 gauge wire	507.5 feet	85 feet	1,100 feet
DS1 26 gauge wire	407.5 feet	85 feet	900 feet
DS3 734C coax	427.5 feet	45 feet (standard cord)	900 feet
DS3 734C coax	427.5 feet	88 feet (extended reach cord)	943 feet
DS3 735C coax	227.5 feet	45 feet (standard cord)	500 feet
DS3 735C coax	227.5 feet	88 feet (extended reach cord)	543 feet

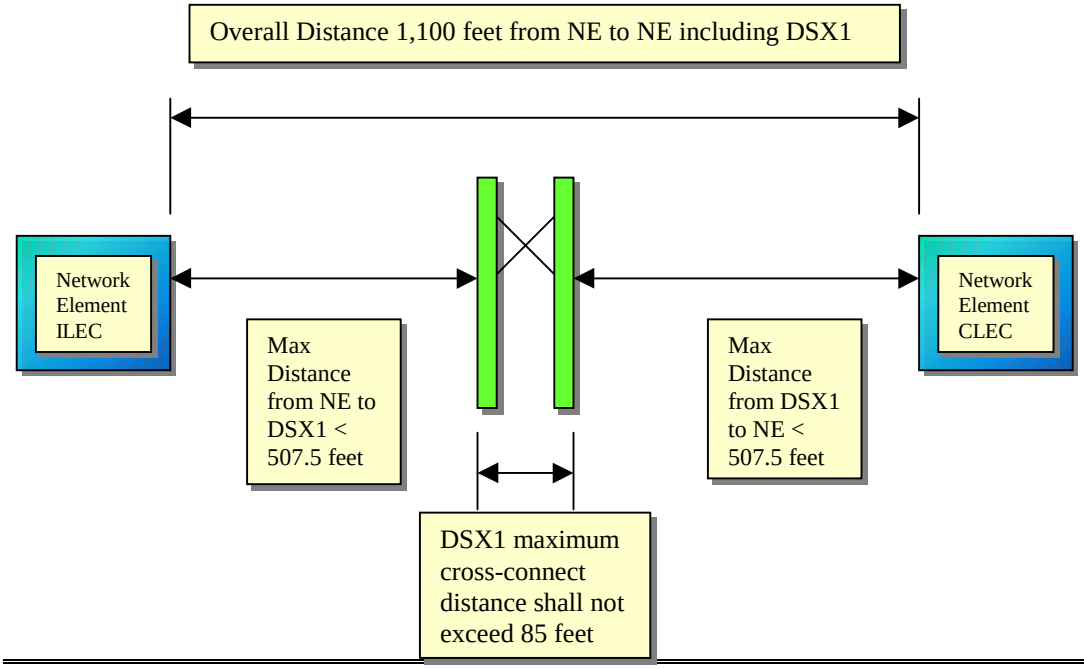
* Notice that if a DS1/DS3 signal has portions of both types of cabling, the finer gauge value will need to be used.

The overall distance from one Network Element to another Network Element (such as a DCS) is shown in the drawing below:

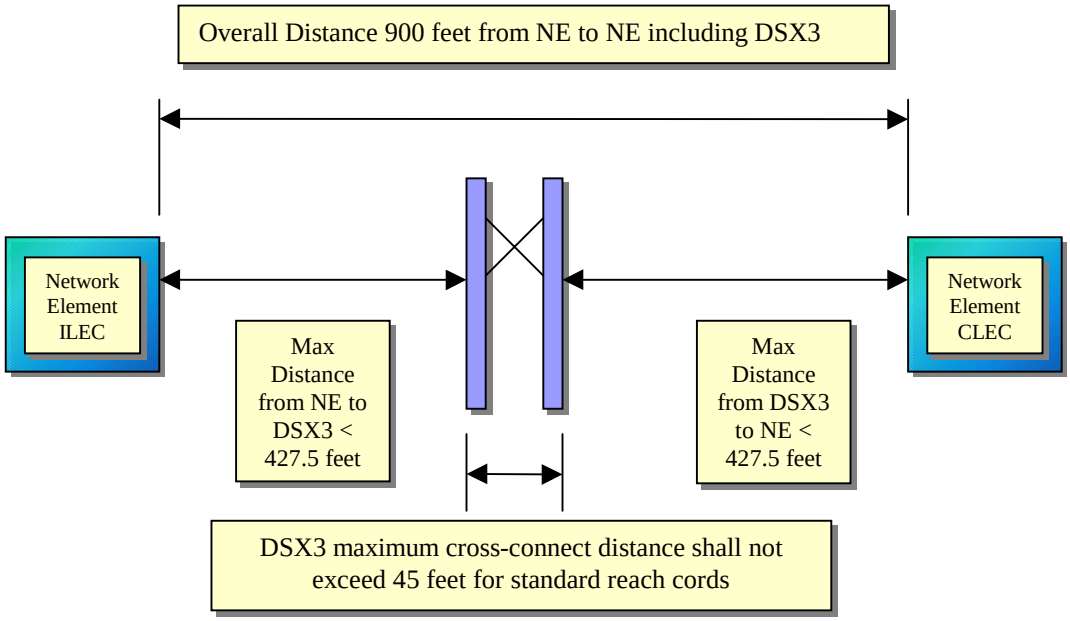
DS1/T1 using 22 gauge twisted pair cable



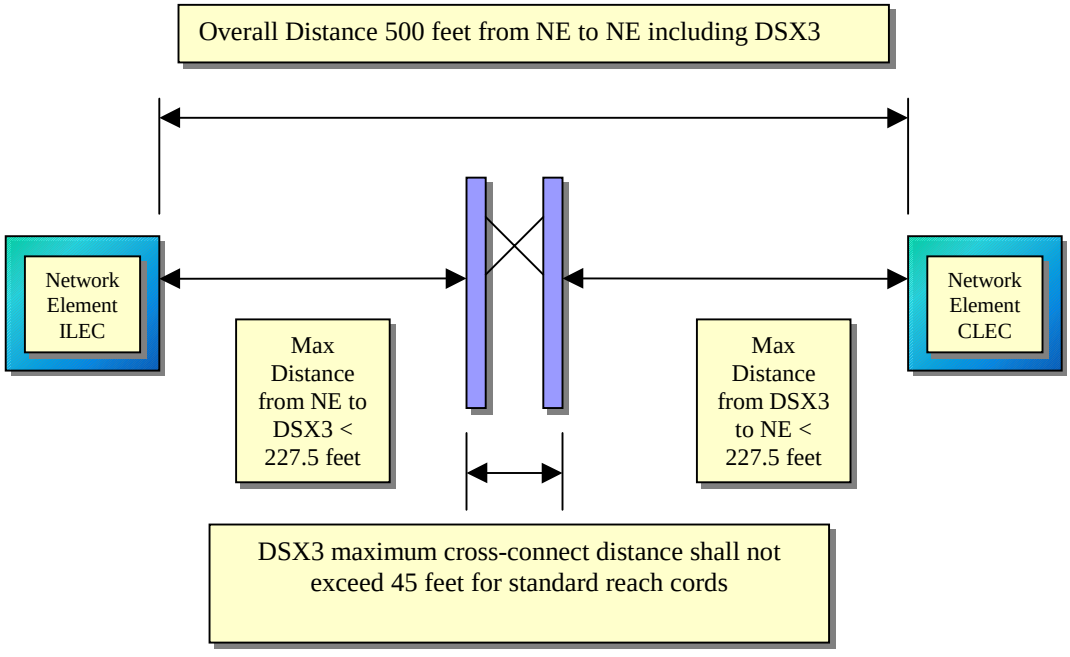
DS1/T1 using 24 gauge twisted pair cable



DS3 using 734C-type coax



DS3 using 735C-type coax



In cases where this distance limit cannot be met to the CLEC from ILEC equipment, intraoffice repeaters may be used to regenerate the signal to meet service parameters for the circuit. If the transmission level meets the standards of service for the Interconnection DS1 or DS3 Handoff Point, but an intraoffice repeater is requested, it may be placed on the Collocator's side of the POT or may be installed at any point within the CLEC's equipment. This will be done at additional cost for the CLEC **only when requested by the CLEC**.

Every effort should be made to insure that DS3 and DS1 services will be installed in a similar manner that the ILEC would for their own services at a customers premises using the correct transmission characteristics for that service. Distance separations must be carefully analyzed to insure consistent applications for services. Cable racking should be analyzed for alternate, shorter routes. Additional cable holes and racking should be discussed between the TEE, Space Planner, and CRE. Every effort should be made to keep cabling distances under the maximum cable running distances in the chart above.

Requests for DS1 or DS3 services to be served to a CLEC in either an Adjacent On-Site or Adjacent Off-Site (Texas, Missouri, Kansas, Oklahoma, Michigan, and Nevada Only) will not normally be provided via a multiplexed trunking mode such as an Optical Carrier unless specifically specified and purchased under applicable ASR/LSR process through interconnection agreements. The need for regenerative devices such as the IOR will be a billable Custom Work Order item for requests that exceed the DSX-NE and/or Overall Distances. IOR placements will not be included in the established initial or augment timelines set forth for other equipment in any tariff or document unless it is specifically requested as a part of the initial Collocation Service request.

The ideal placement of IOR's will be within 100 feet of the existing DSX using the DSX as the midpoint of the overall cable lengths.

6M. Securing Cable in Cable Rack

All cable placed by either a CLEC or an ILEC must conform to the rules covered in the Technical Publication for Installation, TP 76300MP, Section 2, Cabling.

6N. Highlight the Applicability for Single or Double Sided Distributing Frames

Central Office Distributing Frames primary use is to interconnect SBC equipment, services, Unbundled Network Elements, and outside plant facilities. These items are owned, managed and provisioned only for the SBC Local Exchange Carrier. The CLEC may request space to place their own Distributing Frame by requesting the space necessary to provision both the equipment frame and adequate egress space on all five sides, front, rear, both sides and above to the 7-foot level. **SBC-13STATE will not** provide Engineering, Installation or Furnished Equipment for any collocation request for Distributing Frames. Frames have extreme cost, space and timeline variability that cannot be supported in the constraints of CLEC requests. This offering is no longer available coupled with the fact that any new requests are requesting "Frames" for different applications than what was originally offered or intended. There are two generic types of frames neither one of which will be built on a CLEC request:

- Frames that fit within existing standard bay lineups using standard bay spacing and size limitations.

- Egress requirements dictate a 4-foot spacing on all four sides of the MDF. The typical double-sided MDF is 6-feet deep.

6O. POT Cabinet

REFERENCE: PAN #19995307, Electron Metals Corporation.

Effective on February 15, 2000, this product line may supplant the existing POT Cabinet that is currently being ordered on a grandfathered basis only. This is not to be used for virtual storage cabinets. Virtual Storage Cabinets are to be provided by the CLEC only. **Ameritech does not offer the POT Cabinet at this time.** If the CLEC does not want the standard type of cabinet provided by the ILEC, they may purchase their own as long as it meets TP76200MP NEBS Level 1 similar standards. The ILEC will not deviate from the standard POT cabinet by type or manufacturer without specific one-time-approval.

6P. Connection between DSX and Interconnection Panels

DSX-1, DSX-3 and Interconnection Panels used in the Network are cabled similarly using some basic rules:

- The Transmit facility coming toward you is cabled to your “Out” Jack of your DSX panel.

- The Cabling and Cross-Connects are place on an OUT to IN, IN to OUT basis when the panel is wired straight inside.

- Interconnect Panels used for Point of Termination Panels have an internal cross inside and shall be treated as two DSX panels back-to-back.

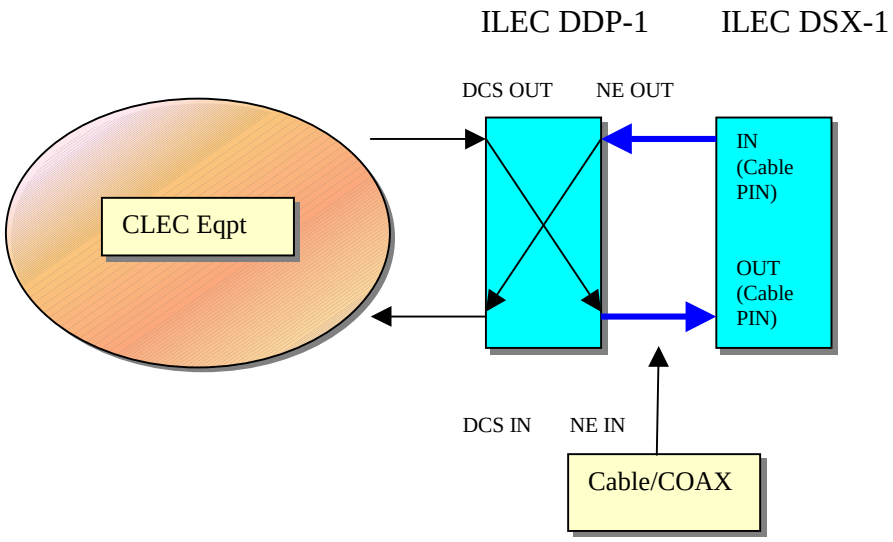
- Labeling on panels may be misleading. Use the OUT and IN principle.

DS1 Interconnection with CLECs in a SBC Central Office

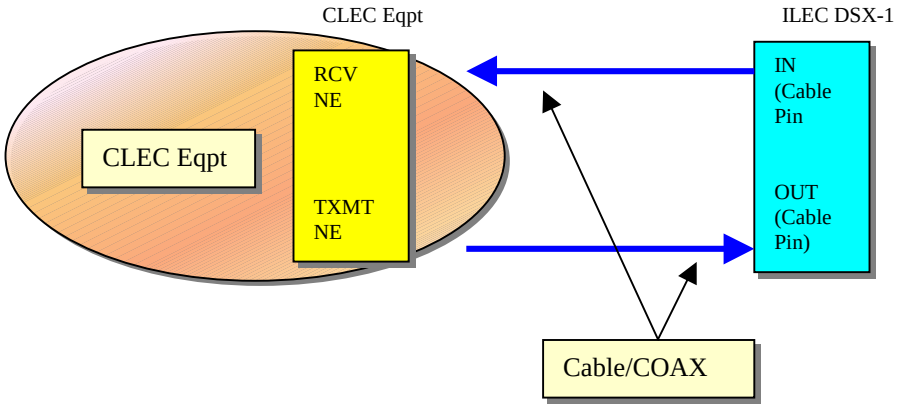
Bold is hardwired

Blue represents ILEC provided cable and panels

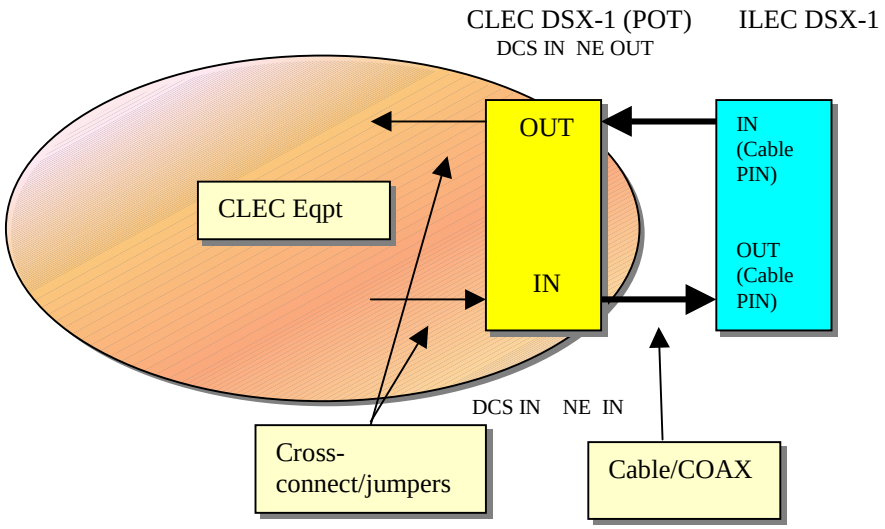
A. ILEC Handoff to CLEC with ILEC Provided POT



B. ILEC Handoff to CLEC using CLEC direct connect to ILEC, no POT.

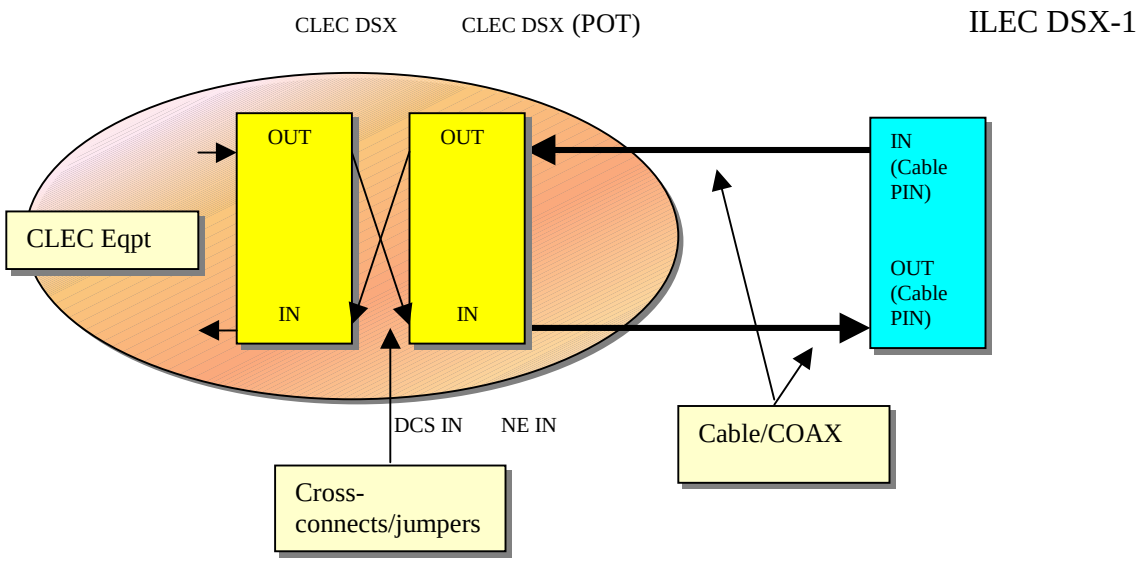


C. ILEC Handoff to CLEC with CLEC Provided POT using one DSX



The CLEC needs to terminate their TMXT on the Cable PIN IN jack to the ILEC cable (to the ILEC OUT jack) and the Cable PIN OUT jack to the ILEC cable (to the ILEC IN jack). If the CLEC terminates in error to the cross-connect pins on their panel, they will have to change their cabling to match the ILEC or they will have to connect the services in a cross-connect manner (double cross) to compensate for the error. (The CLEC may be using a DDP with an internal reverse cross.)

D. ILEC Handoff to CLEC with CLEC POT using Two DSX panels



All Installation & Engineering workforces shall adhere to the following drawings for the correct termination of DDP (interconnect panels) with DSX panels in all Collocation activities**. Do not field modify these arrangements locally.**

PBSD-ID-1891 SBC Interconnect Drawings, *SWBT/NB Collocation*
PBSD-ED-1891 SBC Equipment Drawings, *SWBT/NB Collocation*
PBSD-ED-1175 SBC Equipment Drawings, *DSX-1 Rear SWBT/PB/NB Standards*
PBSD-ID-1075 SBC Interconnection Drawings, *DSX-1 (Accessories) SWBT/PB/NB Stds*
PBSD-ED-1117 SBC Equipment Drawings, *DSX-3 Rear SWBT/PB/NB Standards*
PBSD-ID-1117 SBC Interconnection Drawings, *DSX-3 Rear SWBT/PB/NB Standards*
PBSD-ED-1115 SBC Equipment Drawings, *DSX-3 Front SWBT/PB/NB Standards*
PBSD-ID-1115 SBC Interconnection Drawings, *DSX-3 Front SWBT/PB/NB Standards*
PBSD-ID-1890 SBC Interconnect Drawings, *Physical Collocation Pacific Bell Only*
PBSD-ED-1890 SBC Equipment Drawings, *Physical Collocation Pacific Bell Only*
*AM-E-01436 Ameritech Equipment Drawings, *DSX-1 Standards*
*AM-W-01436 Ameritech Interconnect Drawings, *DSX-1 Standards*
*AM-E-01447 Ameritech Equipment Drawings, *DSX-3 Standards*
*AM-W-01447 Ameritech Interconnect Drawings, *DSX-3 Standards*
+SNE J95197-71 SNET Equipment Drawings, *DSX-1 Standards*
+SNE T95197-31 SNET Interconnect Drawings, *DSX-1 Standards*
+SNE J95213-71 SNET Equipment Drawings, *DSX-3 Standards*
+SNE T95213-31 SNET Interconnect Drawings, *DSX-3 Standards*

* The AM Drawings will fold to the respective PBSD drawings in the 4th QTR, 2001.
+ SNE Drawings will fold to the respective PBSD drawings in the 2nd QTR 2002. In the 3rd QTR 2002, PBSD documents will be renumbered to the new **SBC-13STATE** drawing series.

***Warning*: Do not use ADC Telecommunications documentation for cabling or cross-connect information. Material has been identified that is misleading and confusing and may lead to incorrect wiring of panels.**

6Q. Placement of Bays in areas higher than 7-feet areas.

Where SBC has virtual collocation in an existing lineup area that uses bays taller than 7-foot high (9-ft or 11-ft, 6-in), the CLEC may use a matching height bay that will fit the existing lineup or may place a 7-foot high bay. **Do not provide higher level bays for any type of Caged or Cageless Physical Collocation.** Each high level area will be denoted on a lineup by lineup basis with the expectation that new adjacent lineups will conform to the 7-foot layout as the Central Office even if they are adjacent to higher level bays in lineups. **The CLEC will be responsible for provisioning all extender brackets, attachments and grounding material to attach to the existing infrastructure for bay rigidity and attachment to the aisle ground, as necessary.** If

the CLEC asks for SBC to install the higher bay, SBC will provide all extender and proper attachments on an ICB/NSCR. If another service provider installs the higher bay, SBC will not provide any extender attachments or ground extensions.

All Collocation Areas and new areas for mixed ILEC and CLEC use will be processed in a 7-foot environment. It is recommended that the higher bay lineups not be used for any kind of collocation due to the increased material and labor costs, coordination efforts, and increased congestion on very limited high level cable racking space.

6R. Cable Slack at a CLEC site

When the ILEC provides cabling to a CLEC site, the following excess slack rules will be applied for handoff to the CLEC. It is recommended that excess slack not be placed in existing ILEC cable racks.

- Physical Cageless/Virtual Collocation: Place only sufficient slack to reach the bottom opposite side of the bay termination requested. Place slack in a coiled manner adjacent to the bay.

- Caged Collocation: Place sufficient slack to reach any place within the bay where a bay might be placed. Place slack in a coiled manner inside the caged area.

7.ADJACENT STRUCTURE

7A. Adjacent Structure (On-Site)

The Adjacent Structure (On-Site) is an offering provided to a CLEC only at such time that the Central Office is legitimately exhausted. This offering would be made at the time of building exhaust. When space is legitimately exhausted inside a SBC Local Exchange Carrier Eligible Structure, the ILEC will permit Collocators to physically collocate in adjacent controlled environmental vaults or similar structures to the extent technically feasible. The ILEC will permit Collocators to construct or otherwise procure such adjacent structure, subject only to reasonable safety and maintenance requirements, and zoning and other state and local regulations. The ILEC will permit the requesting carrier to place its own equipment subject to the same requirements and restrictions as physical collocation in the eligible structure. The ILEC will provide inter-connection arrangements to the adjacent structure subject to the same requirements as other physical collocation arrangements. At the CLEC's request, the ILEC will provide DC power to such adjacent structures as long as the distance from the SBC Power Board to the CLEC's power distribution panel within the adjacent structure is less than 200 feet. The Power provisioning to the CLEC Adjacent Structure will be provided in the following two Options where technically feasible:

Option 1: Up to 100 AMP of AC Services and 800 AMP DC service to the adjacent on-site structure from the Central Office up to 200 feet from the Power Source will be provisioned from the Central Office.

Option 2: For distances greater than listed in Option 1 above, the CLEC will be given free egress from the property line to their Adjacent Structure to request power services from the local electric power utility.

The ILEC will install the needed conduit for the forecasted power and facility provisioning based upon the CLEC forecast.

The ILEC will provide the cabling and regeneration requirements necessary between the CLEC Adjacent Structure and the Central Office for transmission facilities at the CLEC's expense.

See Section 11.7 for Detailed Power Descriptions of Adjacent On-Site Powering.

Interconnection & External Cabling for CLECs are terminated to locations within the SBC-13STATE Central Offices in the following manner based on the type of Collocation:

Type of Collocation	CLEC Location	Interconnection C.O. Termination Point
Physical Caged	In the Central Office	Handoff to the CLEC Collocation Site
Physical Cageless	In the Central Office	Handoff to the CLEC Collocation Site
Virtual Cageless	In the Central Office	Handoff to the CLEC Collocation Site
Adjacent On-Site	**Outside of the Central Office on SBC property**	**Handoff to the SBC designated Frame termination point**
Adjacent Off-Site	Outside of the Central Office not on SBC property	Handoff to the SBC designated Frame termination point

8.VIRTUAL COLLOCATION

8A. Introduction

1. Virtual Collocation is separate and distinct from the Physical Collocation. Virtually collocated equipment may or may not be owned by the ILEC depending upon the regulatory environment. In addition, the initial Engineering (E), Installation (I) and Facilities (F) when the equipment is first placed may be provided all or in part by either of the CLEC or ILEC providers. The virtual arrangement dictates that the ILEC will be the primary maintenance provider of this equipment.

The ILEC Space Planner will choose the virtual equipment location. The first choice placement of Virtual Collocation equipment, bays and cabinets will be the Collocation Area. Parity of provisioning between any provider must be observed and practiced. Bay assignments may only be made to lineups that can support the size and spacing requirements. For instance, a large cabinet sized bay will not be placed in a standard depth bay lineup if it exceeds the 15-inch maximum depth (this depth dimension includes any cabling or other devices that may protrude from the front or rear of the equipment) for the aisle spacing. That large bay would need to be placed in a lineup that would support its large space requirements.

In addition, the Space Planner working with the TEE would need to evaluate any increased need for infrastructure racking placements. If a existing lineup consists of only D4 banks with only standard cable and power racking to support the lineup, a request to place a bay that requires fiber optic cable or fiber ductwork would not be cost effective or efficient for either the CLEC or ILEC. The placement of additional racking in existing lineups is exceptionally costly.. Care and due diligence must be exercised to place any new bay, whether ILEC or CLEC, within the most compatible supporting infrastructure. CLEC assignments should only be made in ILEC lineups when current Cageless Collocation sites within the central office are exhausted or the buildout of additional areas for collocation sites will create a CLEC hardship, increased costs or delays when compared to the ILEC installation sites. **The CLEC requesting Virtual Collocation through the application process is not guaranteed or ensured the placement of CLEC bays in ILEC lineups.**

2. Requests to convert from Virtual to Physical Collocation will require a redesign of the services and retermination of existing CLEC facilities to a physical collocation arrangement as specified in the applicable tariff.

3. Virtual Collocation may be requested at any time regardless whether there is space available for Physical Collocation. The Virtual Collocation option is available as a last option of choice by the CLEC for placement in the Central Office when the CO is closed to Physical Collocation. Space is not reserved for Virtual Collocation by the space planner, so if the central office is closed to physical collocation, then space within the ILEC line ups will be given out on a "first come, first served" basis for either forecasted ILEC bay growth or CLEC demand.

4. Virtual applications should be considered for a first choice assignment in the Collocation or the Unused Caged Space Area. The placement at this point utilizes existing physical collocation security measures and mitigates increased costs for provisioning for both the ILEC and CLEC. Placement of virtual collocation equipment in existing ILEC lineups should be considered as a last resort in accordance with the Network Operations Procedures (NOP). **In any case, the overall placement locations of CLEC bays must not impede, delay or cost more than the cost and timelines of lineups used by the ILEC.**

5. On Virtual Collocation requests, the CLEC may ask for storage cabinet floorspace for Collocation material, equipment and test device storage but it will be provisioned only by the CLEC. The space requirements are covered in Section 6. The **SBC-13STATE** will make available switchroom space available for the placement of a storage cabinet as long as it fits within the space requirements and it meets TP76200MP NEBS Level 1 similar requirements using the Collocation Area as the first choice. Storage Cabinets should be assigned by the ILEC Space Planner and placed at a point of least equipment space blockage, even if this means that the cabinet may be assigned to another location within the Eligible Structure from the CLEC Collocation bays (Virtual Only).

All Collocation Areas and new areas for mixed ILEC and CLEC use will be processed in a 7-foot environment. It is recommended that the higher bay lineups not be used for any kind of collocation due to the increased costs and coordination efforts involved.

9.FRAME UTILIZATION IN THE COLLOCATION ENVIRONMENT

9A.The Main Distributing Frame (MDF)

The MDF supports the interconnection needs for twisted pair interconnection needs for Central Office to Cable Pairs or Derived Cable Pairs to the outside plant. The MDF may be provided in two forms, either the Conventional MDF or the Universal Modular Distributing Frame (characteristically known as a COSMIC I/II ® type manufactured by Avaya. The primary frame that supports the Cable Pairs, OE/LEN equipment and Tie Pairs is known as the Subscriber Main Distributing Frame (SMDF). A Central Office may use one of the following configurations:

One MDF (Conventional) Only

This layout utilizes a single conventional frame for the termination of all SBC ILEC terminations including Special Circuits based upon a Frame Forecast. This system should not extend beyond 300 verticals in a Central Office. If the forecast period for the ILEC growth does not exceed the existing capacity on the Conventional MDF, other services such as CLEC and Special Interconnection Arrangements for outside terminations other than SBC may be placed. If the existing Conventional Frame space would be exhausted with both ILEC and CLEC growth requirements, then it is recommended that the SMDF be limited to key essential services such as the OE, Cable Pairs and Tie Pairs of the ILEC. Consideration must then be given to the placement of either a growth frame or a second conventional frame, choosing the least cost solution for CLEC or Special Circuit applications. In order to maximize the life of the conventional SMDF; do not block the footprint growth layout of the frame with other equipment and bays. The blockage of a frame can be an immediate trigger a Central Office growth or establish the requirement for a new wire center. The frame is considered as an indigenous part of the wire center structure.

Universal Modular DF and Conventional MDF

The Universal Modular DF is designed to be the SMDF for the Central Office and is intended for terminations of only indigenous OE/LEN, Cable Pairs and Tie Pairs for the SBC services within that Central Office. The Universal Modular DF is always accompanied by a Conventional MDF which will handle the other services such as Special Circuits, CLEC's and high overflows of low-density subscriber line carrier terminations. The Universal Modular DF were originally designed for a 20-year lifecycle in the mid-1970's and have frequently achieved their planned growth expectations. These frames are very complex and costly from both an Expense and Capital Cost Standpoint to grow beyond their current size.

Terminations of Special Circuits, DSLAMs, POTS-SPLITTERS or CLEC interconnections were not designed nor planned for use on Universal Modular Frames. This is supported in both SBC and the manufacturer specifications and documentation. The ready availability and capability of the adjacent <u>conventional MDF</u> coupled with its low growth costs makes it the preferred termination point for these additional services. It is recommended that the MDF be grown to accommodate the addition of future CLEC facilities as the least cost solution and the UMDF grown for only OE/CP/TPs for the SBC CO.

Two Conventional MDF's

One of the two Conventional MDFs will serve as the SMDF primary frame for the Central Office. Using the Frame Forecast M&P, when the forecasted sizing of the SMDF is less than the actual size of the frame, other services may be considered for termination on that same frame, such as Special Circuits, DSLAMs and CLEC interconnections. It must be emphasized, however, that it is not desirable to then have the SMDF exhaust due to inaccurate planning and then require OE/LEN and cable terminations to be placed on the both conventional frames. Do not have two frames both used as the SMDF. If growth is necessary for the SMDF, grow the established SMDF frame. When excess frame capacity is available on the second conventional frame that will never be used, consider the removal of that portion for reuse on other Central Office frames that may be at or near exhaust.

Multi-Stage Frames (three or more frames)

This arrangement uses a frame for OE/LEN, another for Special Circuits/DSLAMs, CLECs and other with Cable Pairs is highly undesirable from an operations and maintenance standpoint and should be mitigated whenever possible. Transitions to a SMDF topology should be evaluated as service additions are forecasted.

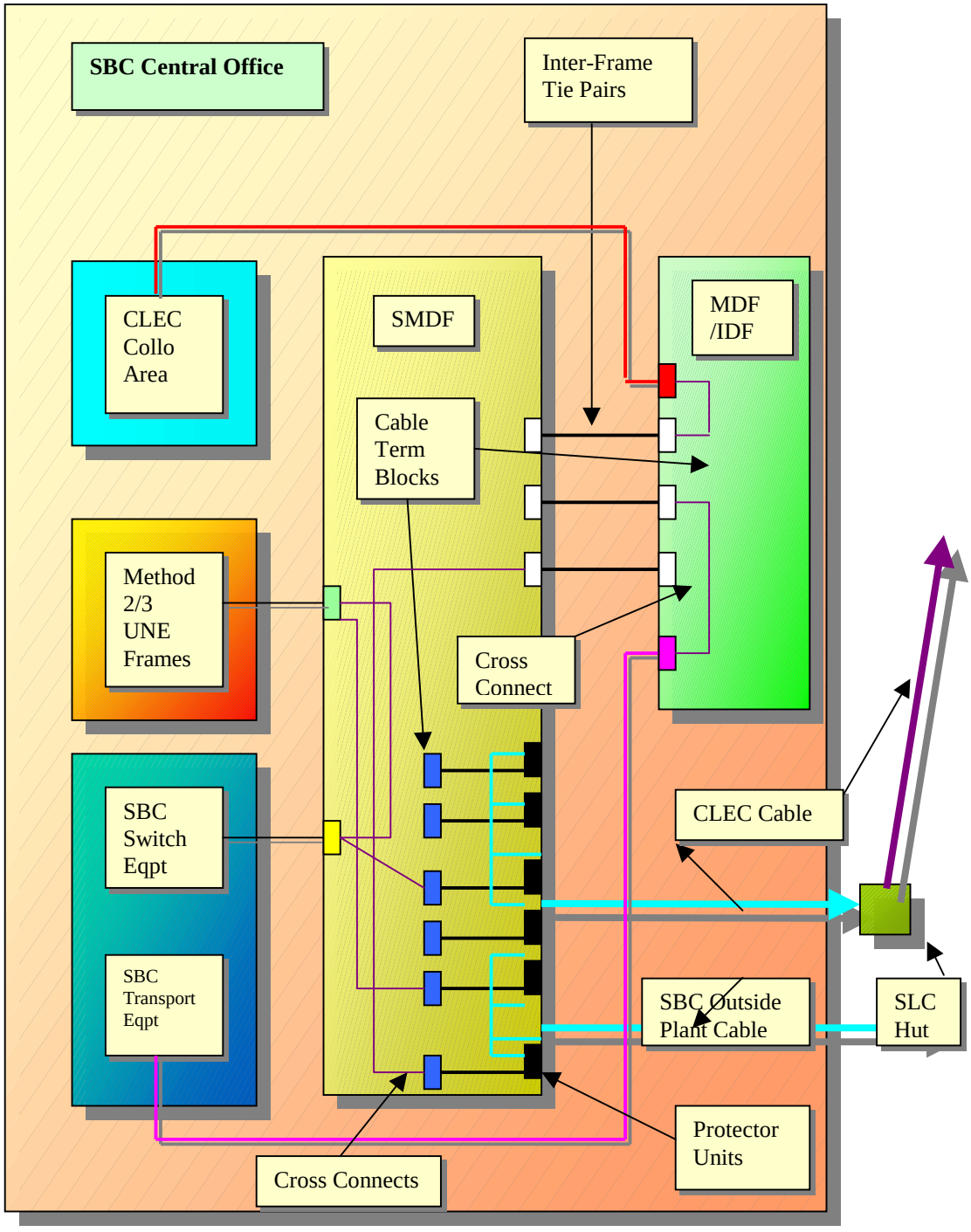
Terminations

CLEC Block terminations are placed on the Conventional IDF (non-SMDF) Frame on the horizontal side. Tie cables are intended to be terminated on the vertical side of the Conventional IDF Frame to the horizontal side of the SMDF. Tie cables are not to be terminated on the vertical side of the SMDF, this area is dedicated to cable pair terminations. The vertical side of the Conventional IDF (non-SMDF) Frame is dedicated to tie cabling.

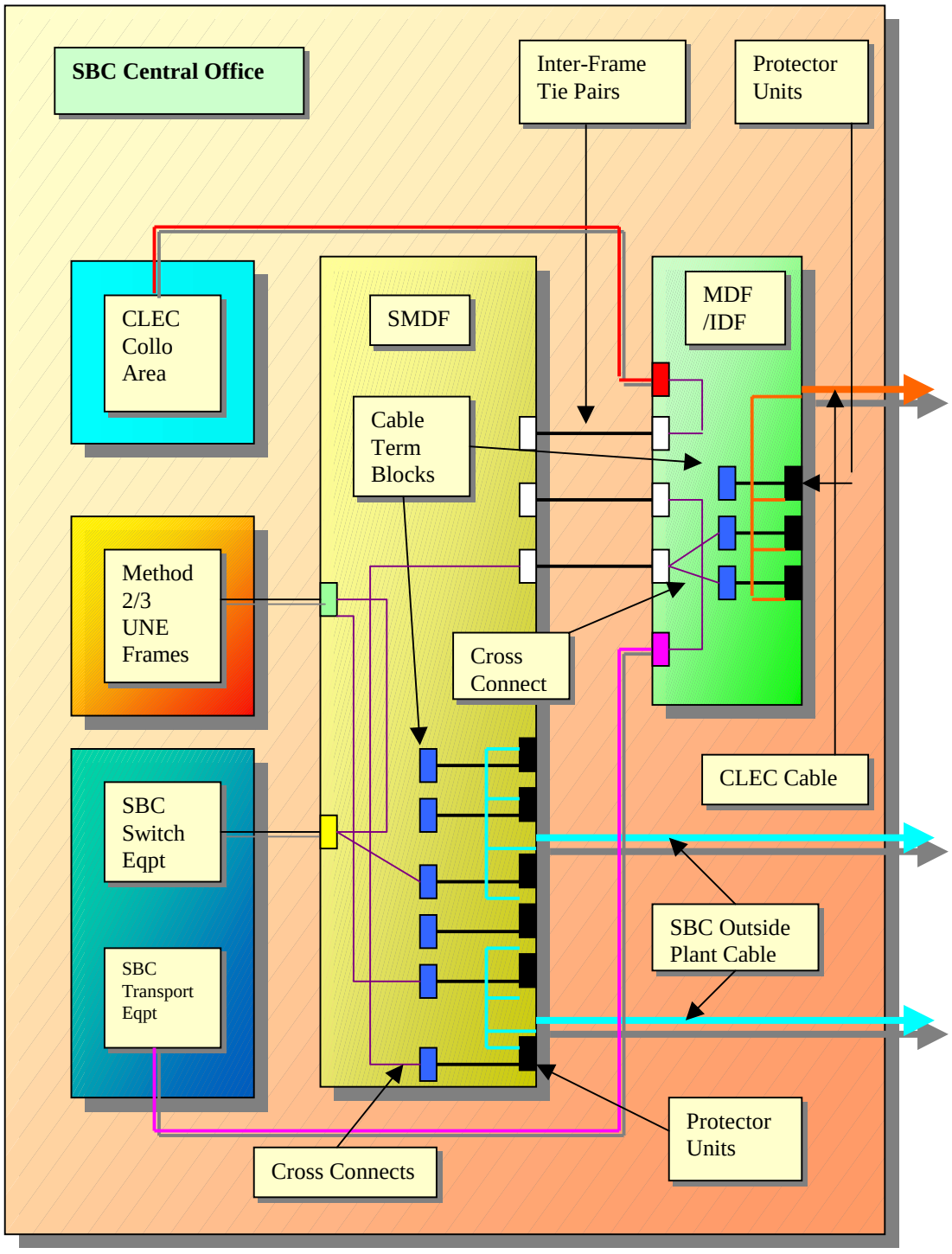
9B. Growth Requirements and New Frames

Refer to SBC-002-316-003, *Frame Forecast Method and Procedures* for more information.

The illustration below provides a pictorial layout of a SBC Exchange Carrier cable and a CLEC cable: Multiple Frame Central Office with a Universal Modular Distributing Frame



The illustration below provides a pictorial layout of a SBC Exchange Carrier cable and a CLEC cable Multiple Frame Central Office with a Universal Modular Distributing Frame



10.COLLOCATION AREA SITE CONDITIONING

10A. Overview of the Collocation Area

This Section provides a visual overview for the provisioning of a 1000 square foot area for all superstructure and cable racks within this location. It is intended for use by **SBC-13STATE** Cluster Vendor, and the Transport Equipment Engineer (TEE).

The integration and interconnection of existing plant into this area are not included in this series of arrangements.

The 1,000 square foot model will be designed to accommodate the placement of Framing Channel, Bracing and Cable Racks for all facility types and power, and lighting for the placement of Relay Racks Bays of Telecommunications/Transmission equipment. This arrangement will permit the application of standard sized Bays (10 square feet), large size cabinets (18 square feet) and footprint (caged) spaces in 100 square foot increments. The Standard and Large Bay layouts are laid out in 2 ½ Building Bay arrangements with the physical external dimensions of 50' x 20'. The Caged or footprint spaces are also using the equivalent of 1,000 sq. ft. but use the external dimensions of 70' x 14'. This difference is due to egress and access issues and provides the maximum amount of 100 sq. ft. cages in the available space.

The following drawings are provided as an overview for equipment placement assignments within the 1,000 sq. ft. arrangement. Ironwork layouts will be provided in the future through the **SBC-13STATE** Building Block Process. The following Drawings illustrate the standard layouts for **SBC-13STATE** both the Seismic and Non-Seismic overhead drawings. (Future drawings will reflect the below floor system layouts as well.)

Note: Collocation Floorplan layouts placed used to support the Collocation Area will be provided with absolute economy in mind to reduce costs. These AutoCAD drawings show combined common racking and may differ from the more extensive standard ironwork that SBC-13STATE provides for their own ILEC arrangements. All drawings will meet the installation and engineering standards set forth by SBC Services Inc, Network Planning & Engineering (Common Systems) and set forth in TP76200MP, TP 76300MP and TP76400MP.

For a more detailed discussion and drawing sets, refer to SBC-002-316-039*, Collocation Provisioning Drawings*, Issue 1, Pending release on December 2001 or view the separate drawings at the internal SBC Local Exchange Carrier Web site: **http://ebiz.sbc.com/commonsystems.**

10B. Standard Building Bay Ironwork Configuration

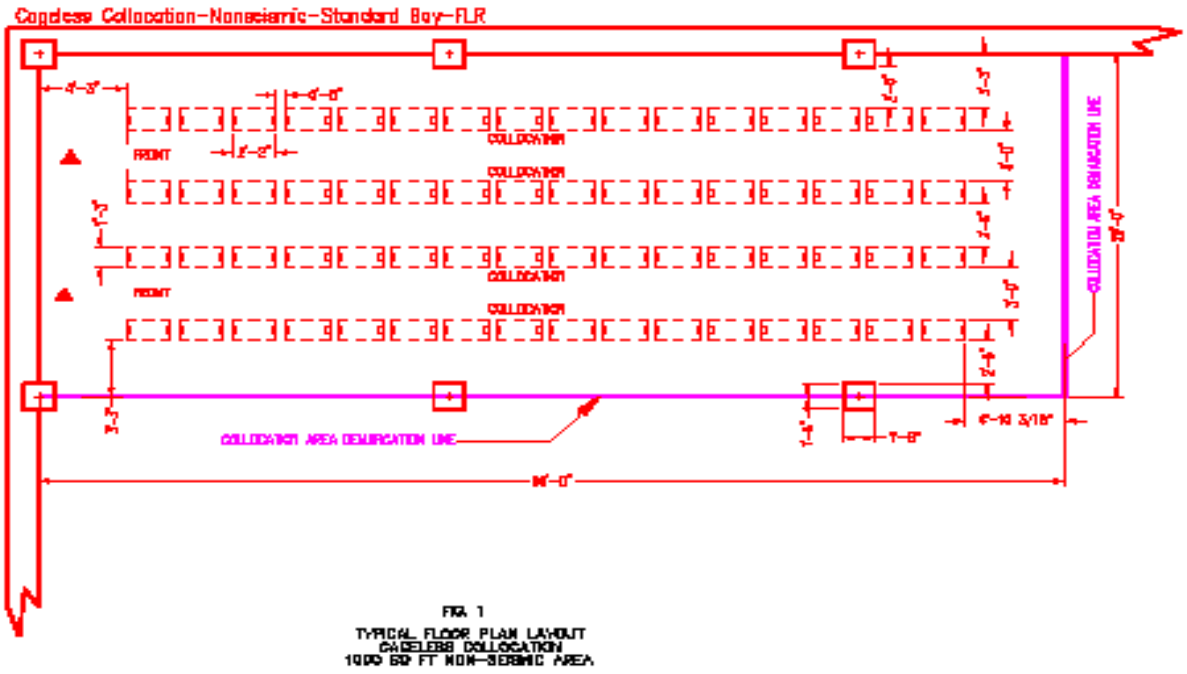
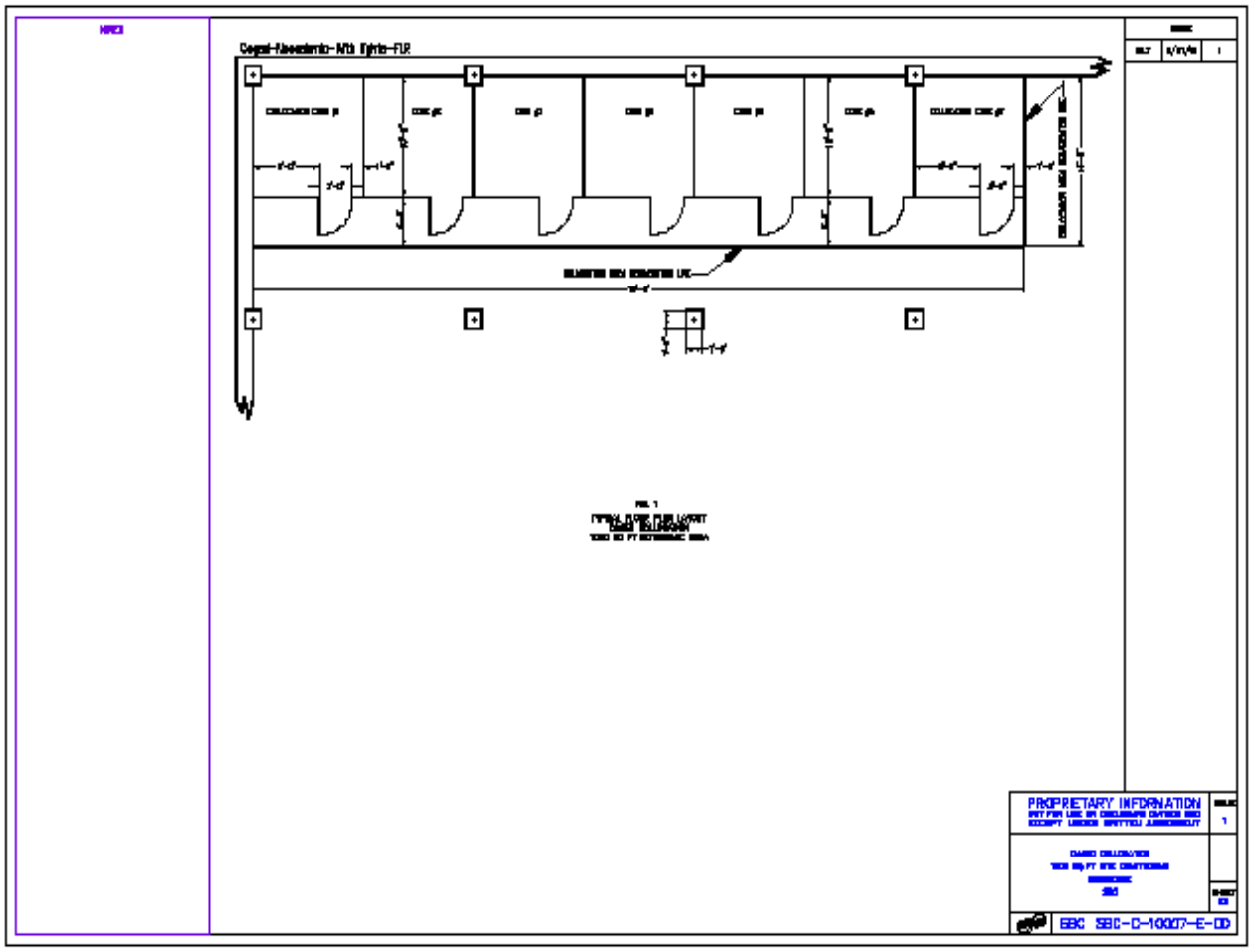


FIG. 1
TYPICAL FLOOR PLAN LAYOUT
CAGELESS COLLOCATION
1000 SQ FT NON-SEISMIC AREA

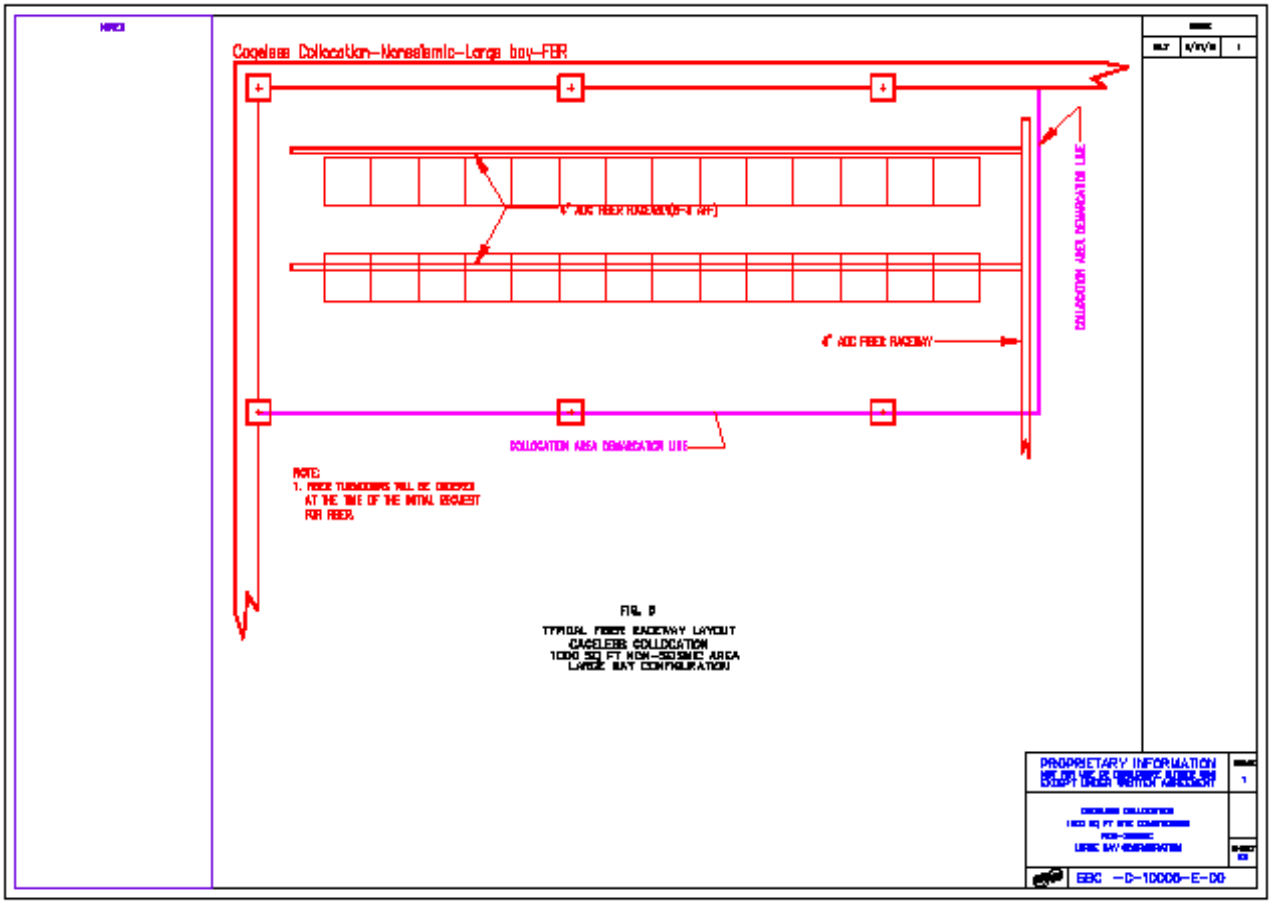
Refer to SBC Drawings SBC-C-10004-E-00-ALL, Seismic, Standard Bay Configuration and SBC-C-10003-E-00-ALL, Non-Seismic, Standard Bay Configuration for more information.

10C. Caged Drawings Layouts



Refer to SBC Drawings SBC-C-10008-E-00-ALL, Seismic, Caged and SBC-C-10007-E-00-ALL, Non-Seismic, Caged for more information.

10D. Large Bay Drawing Layouts



Refer to SBC Drawings SBC-C-10006-E-00-ALL, Seismic, Large Bay Configuration and SBC-C-10005-E-00-ALL, Non-Seismic, Large Bay Configuration for more information.

10E. Raised Floor Configurations

Based upon the following documentation dated 9/2001, raised floor architecture should be the first choice for new COs and building additions.

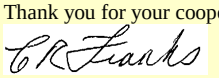
Subject: Raised Floors

GMs - NP&E:
Directors - CRE:

Common Systems Standards completed our return visit to Mr. Rice's staff meeting to present our M&P and recommendations concerning thermal management. This work is the result of many years of analysis, interacting both internally and externally with Real Estate, Telcordia, Consultants, other RBOCs, and manufacturers across the country to find the best solutions to our problems with high heat equipment in our central offices. One of our key recommendations was that all new COs and building additions should be designed and built with the raised floor architecture. Mr. Rice concurred with this recommendation and communicated that the raised floor architecture should be the first choice for New COs and building additions. Each of Mr. Rice's Vice Presidents were in attendance, as well as Mark Schleyer from Real Estate.

Please communicate to your Integrated Planners, Space Planners, D&C Managers, Building Architects, and those key stakeholders involved in designing and deciding building growth that **the raised floor architecture should be the first choice for new COs and building additions.**

Thank you for your cooperation and please call me with any questions.



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Key Points:

- Insure that all equipment and bay framing used in this raised floor environment must be provisioned for cable bottom fed capabilities.
- Future SBC Drawings will provide for Physical and Virtual Collocation including Caged, Cageless and Common Area Collocation.
- Placement and adherence to the front edge of bays and equipment will be absolutely critical for this arrangement.

BSP 800-000-103MP, *SBC Technical Requirements for Raised Floor Systems-Network Equipment Applications*, Issue A, dated Nov 1999 and BSP 800-000-000MP, *SBC Bracing Requirements for Network and Data Equipment on Raised Floor Systems*, Issue A, dated Jun 1998. A multi-departmental Raised Floor Transition Team has been called in 2001 to address the issues and provide additional support and documentation.

11.DC POWER COMPONENT PLACEMENT

11A. DC Power

11A.1 Under various Federal Communication Commission (FCC) and Public Utility Commission orders, Competitive Local Exchange Carriers (CLEC) are allowed to place telecommunications equipment in central offices and remote terminals. The arrangements are provided either as Physical Collocation, where space is leased for placing equipment and self-maintenance by the CLEC, or as Virtual Collocation, where the equipment is placed directly in to existing equipment line ups and may be maintained by **SBC-13STATE**.

11A.2. With either physical or virtual collocation in **SBC-13STATE** facilities, the SBC ILEC as a matter of company policy provides power. This is primarily a fire, personnel safety and network security issue.

11A.3. With virtual collocation, power distribution is provided just as if the equipment were our own (**SBC-13STATE**).

11A.4. With physical collocation, -48 Volt DC power is the standard nominal voltage and polarity provided to the CLEC. It's provided in increments defined per state tariffs where they exist, or in increments described as "standard power arrangements" in the Technical Publication for Physical Collocation. While the increments may vary from state to state, all are characterized as redundant (load A and load B) arrangements of specific amperage.

11A.5. The power increments defined in the various Collocation Applications may be provided from a BDFB or directly from the main Battery Control Board, if the load requested is over 50 AMPS or the office does not have a secondary power source with available fusing.

11A.6. BDFB capacity management for all users shall follow the same capacity guidelines as defined in Section 4.2 of the SBC Document BSP 790-100-656MP.

11A.7. Current guidelines provide for redundant feeds for all collocation requests; however Single feeds are being offered in the future. With that said, a Collocator requesting 40-amp service should not exceed 20 amps (actual DC current) per feed. In the event of an A or B feed failure, the Collocator may utilize the full capability of the single feed until the failed feed is restored. This full utilization of the tariffed rate purchased would not exceed any **SBC-13STATE** circuit design limitations as long as the Collocator has not exceeded their purchased limitation.

11A.8. If a Collocator requires a "non-standard" power arrangement, such as a large power feed or isolated ground, the request shall be considered on an "ICB/NSCR".[1] CLECs are not allowed to collocate a BDFB as part of their equipment unless stipulated by their tariff or Interconnection Agreement (ICA).

11A.9. In caged, shared and cageless applications, the Collocator is responsible for notifying Collocation Services when the power is terminated and that it is ready to be "powered up". In SNET, the Collocator is told to contact the power group at (860) 344-5271 for DC power turn-up.

[1] Refer to the Collocation Application as to standard/non-standard power increment sizing as negotiated per each regulatory entity.

11A.10. Discontinuance of CLEC Equipment. At present, removal activities will be restricted to those activities that after review of ICA's and Tariffs by SBC-Legal on a case by case basis that are considered billable or those activities that will be undertaken at the ILEC's expense to insure the safety of personnel and property. For power this includes the removal of the fuse by the LFO (or their approved representative). The power cable will be removed from the source so as not to block the future use of the protection device for either the ILEC or the CLEC. When added to the tariffs, the power cable will be totally removed to keep cable congestion to a minimum. An **SBC-13STATE** Tier 1 Approved Power Vendor will perform this work. Exiting CLEC activities for all users shall follow the guidelines as defined in SBC-002-316-015, *Cable Facilities and OSS Assignments M&P*, Issue 3, dated October 2001.

11A.11. Current guidelines provide for redundant feeds for all collocation requests. **SBC-13STATE** is currently looking at offering single feed power because of the large amount of requests from the SBC-AIT region. If a Collocator requires a "non-standard" power arrangement, such as a single power feed, the request shall be considered on an "ICB/NSCR" until the study is completed and rates are added to the local tariffs.[13] When future guidelines provide for single feeds for collocation requests, the size or load amperage of the feed will be determined by the local tariff. The Collocator may utilize the full capability of the single feed as by definition there is no backup when the source for this lead or the lead itself fails. This adds a new risk element to the power feed the ILEC to this date has not been willing to take. **SBC-13STATE** wants to be sure the CLEC understands that he takes full responsibility for this additional risk.

11A.12. Change Requests to existing CLEC Power Arrangements
Requests made by the CLEC to reduce or modify their Power Provisioning will require the use of another document, SBC-002-316-015, *Discontinuance of CLEC Power, Cabling and OSS Assignments*, Issue 3, dated October 2001.

11B. DC POWER ENGINEERED PROVISIONS

11B.1. Loads specified by the Collocator represent the peak current that will be imposed on a power feeder at any voltage within the emergency operating limits of the equipment and any normal operating condition (i.e. not a short circuit or other malfunction). Even though circuit design is based on peak current, DC power plant design sizing by all **SBC-13STATE** is based on demand management.

11B.2. The design criteria of the DC power reserve is based on a normal operating voltage of approximately 50 to 56 VDC, with a minimum operating voltage (LV) of 42.64 VDC at the last point of ILEC responsibility. This may be either the CIPP panel or the raw ended cables turned over to the CLEC at completion of their order.

11B.3. To provide the Collocator with individual loads of 20, 40, 50, 100, or 200[2] amps, the SBC LEC will install power cables from an ILEC DC distribution bay to the CLEC demarcation point defined in Section 11.2.7 below. In situations requiring the CIPP[3] panel, the Collocator will obtain its DC power by cabling to the rear (distribution) side of the panel. Where bare ended cables are

[13] Refer to the Collocation Application as to standard/non-standard power increment sizing as negotiated per each regulatory entity.
[2] Refer to the Collocation Application as to standard/non-standard power increment sizing as negotiated per each regulatory entity.
[3] The use of a CIPP panel is further defined in Section 11.3

supplied by SBC, the Collocator has the responsibility to make the appropriate type termination. This termination product will be dependent on the amperage requests, cable sizes, and distances traveled.

11B.4. Where power is provided via bare-ended cables, the cable lengths shall be adequate to reach the intended equipment supported. They shall be coiled and secured in the cable racks directly above the Cage or frame location (depending on the type of Collocation service) and marked with the CLEC ACNA, Order Number, feed designation, polarity and (if necessary) cable number.

11B.5. Cable design sizing for CLEC services will mirror existing SBC engineering guidelines[4]. With that said, CLEC purchased amperes are considered the equivalent of what is commonly referred to by the ILEC as List 2 drain.

11B.6. The demarcation (or first CLEC termination) for power will be the CIPP panel or the raw cable ends, depending on the application. The Collocator is responsible for distribution power to equipment located in their equipment bays. Cable sizes, terminations and engineering criteria beyond the last **SBC-13STATE** (ILEC) connection as previously defined are considered the responsibility of the CLEC. These conditions may alter the calculated battery reserve beyond that last point of termination[5].

11B.7. Essential (protected) AC power (created by converting DC power and supported by batteries or generators) will be provided by **SBC-13STATE** as an ICB/NSCR request.

11B.8. TP76200MP DC Powering of Equipment; the source of DC power provided to the Collocator may be shared with **SBC-13STATE** and other Collocator's. A Collocator's equipment shall be capable of operating in the power systems environment described in the current issue of the TP76200MP.

11C. COLLOCATION INTERCONNECT POWER PANELS (CIPP)

11C.1. The use of the 50-amp panel by the CLEC is considered optional.

11C.2. Where the 50 amp CIPP panel is supplied by **SBC-13STATE**, the panel will be equipped with two fuse blocks in the 3 amp to 60 amp range with three fuses (includes one (1) spare) of appropriate size and type, shunts, volt and amp meter and alarm relay. The panel will be located in a bay of choice determined by the Collocator. The panel will be equipped with space for eight (8) two-hole connections. [Note: Power and battery return connections must be made with a two-hole compression connector.] Further detailed information may be found in PECO II product documentation 6170021P.

11C.3. The primary distribution circuits will originate at a BDFB or a power plant and terminate at a secondary distribution point (CIPP where applicable). The **SBC-13STATE** Equipment Engineer will determine the power distribution arrangements. The first choice will usually be to provide the primary distribution circuits from a BDFB (equipped with a minimum of two (2) separate loads) or singular DC power plant. The grounding of these arrangements will be that of a Common Bonding Network (CBN). Protective devices will be sized for the List 2 or purchased load[6]. If the

[4] BSP 790-100-656MP DC Distribution
[5] This applies to physical arrangements only
[6] Consult BSP790-100-656 DC Distribution to determine the appropriate fuse size.

BDFB is the primary distribution source, a 60-amp fuse is sufficient to protect a 50-amp load. The secondary distribution panel will be arranged for a maximum of two (2) fifty (50) amp circuits.

11C.4. In situations where a CIPP panel is not requested or required, bare ended cables will be supplied at the bay of choice determined by the Collocator. In these situations fuse sizing will be based on column A and C in Figure 1 in Section 11.B.

11C.5. For all power feeds coming off a BDFB, the CLEC has the option of purchasing our CIPP panel, providing their own (Telcordia NEBS Level 1 compliant and similar operating characteristics), or not using an interconnect power panel at all (as in California).

11C.6. Where the 50 amp CIPP panel is supplied by **SBC-13STATE**, the panel will be equipped with two fuse blocks in the 3 amp to 60 amp range with three fuses (includes one (1) spare) of appropriate size and type, shunts, volt and amp meter, alarm relay, and a small block of six to ten (6-10) GMT fuses for -48v power[7]. The panel will be located in a bay of choice determined by the Collocator.

> 11C.6.1. Due to unique office applications, requested service sizes and the CLEC's physical location within the eligible structure, only the responsible equipment engineer can determine whether a particular CLEC will be served from a BDFB or DC Power Board. To retain a consistent level of reliability, network safety and security, the 50 amp panel shall be used where DC services are originating from the (-)48 volt Power Board. Because the 50-amp CIPP panel is being deployed as our choice of primary distribution, from the power board, the Collocator shall not incur the expense of the panel. Furthermore, the placement of the panel should not overly augment the intended cable route established to the Collocator's equipment area. In this type application, the panel will reside in the ILEC equipment bays, preferably closer to the CLEC equipment than the ILEC equipment on the same floor as CLEC equipment. Where the ILEC has elected to provide the CIPP panel, proper fuse alarming for the panel is required. In these cases the designed voltage drop of a 2-volt loop (or 42.64 VDC) shall encompass the entire circuit all the way to the raw ended cables that are provided to the CLEC.

11C.7. If the CLEC application includes a CIPP panel, an **SBC-13STATE** provided primary CIPP panel would not be required.

11C.8. Any collocation services currently available today that originates directly from a DC power board (primary distribution) must continue to be supplied with a CIPP panel (**SBC-13STATE** or CLEC provided). This includes service requests for all levels of DC amperage. Both shared power plants as well as any power plants that have been specifically placed solely for the purpose of collocation shall include a panel.

11C.9. The 100/200 amp CIPP panel is a required element of the CLEC application.

> 11C.9.1 The panel will be equipped with two fuse blocks in 61 to 251 amp range with three fuses (including one (1) spare) of appropriate size and type, shunts, volt and amp meter and alarm relay. The two sets of output termination landings located in the rear of

[7] The GMT fuses, originally designed to power LED indicators on the ILEC provided DSX. Regulatory changes no longer require the ILEC to provide this panel. The CIPP panel retains these GMT positions, but does not recommend their use for anything other than miscellaneous services as they are not separated by an A or B bus, nor do they register as consumed DC on the meter.

the panel are drilled for two hole connectors based on one inch centers. [Note: Power and battery return connections must be made with a two-hole compression connector.] The panel will be located in a bay of choice determined by the Collocator. Due to the panel size and cable entry requirements, the panel is not designed for cabinet mounted applications. Further detailed information may be found in PECO II product documentation 6170085P

11C.10. The CLEC application will determine which (if any) panel is requested depending on the size of the amperage request. Single or multiple panels will be placed in the bay(s) designated by the CLEC. The **SBC-13STATE** Equipment Engineer will be responsible for panel installation in a timely manner, if requested. Depending on the size of the amperage requested. Single or multiple panels will be placed in the bay location as defined by the CLEC.

11D. Protector Sizing Guidelines

Whether in a Caged or Cageless application, the following criteria shall be followed to insure maximum reliability:

Figure 1

Amperage Request	Fuse Size per position at CIPP	Fuse Size at Power Source	Panel Size	Number of Panels
A	**B**	**C**	**D**	**E**
20	25	30	50	1
40	50	60	50	1
50	60	70	50	1
100(2-50)	60	70	50	2
150(3-50)	60	70	50	3
200(4-50)	60	70	50	4
100	125	150	200	1
200	250	300	200	1
400	500	600	400	1

In applications where the BDFB is the first fuse position from the Collocator and no CIPP panel is used, column B should be used as the fusing guideline. This supports our current fuse sizing guideline (as detailed in BSP 790-100-656 DC Fusing) of 125% of the request. The power source (column C) would not apply.

If the power board is utilized as the direct source for power (and **SBC-13STATE** supplies the CIPP panel), the table should be used as stated. In situations where a 70-amp fuse is unavailable, for a 50-amp request, a 60/60 amp fuse matching is allowed in this scenario. The multiple circuit scenarios in lines 4-6 cannot be recombined at the CLEC equipment but must be used as individual 50 amp circuits.

11D.1. Distribution circuits that include Circuit Breakers; BSP 790-100-656MP recognizes the use of circuit breakers within the DC power system. Where applicable, when using circuit breakers, the breaker sizing guideline as outlined in BSP 790-100-656MP paragraph 5.3 may be followed. However, fuse coordination (paragraph 5.3) is still relevant and adherence to that policy is still recommended.

11D.2. When the application requests a CIPP panel, all power cabling to the panel and installation of the CIPP in the designated CLEC bay is the responsibility of the ILEC. Power cable termination beyond the CIPP is the responsibility of the CLEC.

11D.3. All power cabling will be placed within provisioned Power Cable Racks or equivalent.

11D.4. This document supersedes the previous Common Systems Flash #99-002, dated 02/22/99.

Additional References:
TP76400MP, *SBC Engineering Guidelines*, TP76300MP *SBC Installation Guidelines*, TP76400MP *SBC Engineering Guidelines*, SBC-002-316-002*, Collocation Provisioning Guidelines M&P* (this document), SBC Power Flash 99-002 "Use of PECO 200-amp CLEC Demarcation Panel, and any and all documentation provided to the CLEC during the contracting/provisioning process. (See **http://ebiz.sbc.com/commonsystems**)

11E. Protected AC Power

11E.1. CLECs placing equipment requiring protected AC power (as opposed to DC power) for operating power shall submit an ICB or NSCR request. The request must contain the operating (nominal) voltage and maximum equipment kVA load in addition to the current (amperage) requirement in order to properly engineer and provide the circuit.

11E.2. The CLEC may not place any type of power-conversion unit in their footprint to generate their own power.

11F. Power Rearrangements Subsequent to Initial Power-Up

11F.1. Any work on existing (operating) powered circuits requires an augment application on the part of the CLEC. This is necessary because the augment application is a trigger for **the SBC-13STATE** Equipment Engineers, Operations Technicians, and contracted Vendors to write and

charge time to clearly identified job activities. Without the augment application, the work required of the ILEC and support requested by the CLEC may not be clearly identified and coordination may cause outages or injury to equipment and personnel.

11F.2. The request for something as simple as temporarily powering down a circuit for equipment maintenance or repair is actually an extensive coordinated effort to insure safe and proper work processes. Routing and reviewing MOPs (Methods of Procedure), hiring external vendors, even internal time charges all require a "trigger" to properly respond to CLEC requests. It all depends on the scope and type of CLEC activities as to what's required on the part of the ILEC. All possible work activities can't be covered in one comprehensive document. The **SBC-13STATE** Collocation Account representative will direct every CLEC request to the proper SBC personnel for responses and/or implementation.

11G. Adjacent On-Site Structure DC Power Requirements

11G.1. **SBC-13STATE** will be responsible for providing power to an adjacent structure (Hut, CEV or cabinet). To meet the intent of that order, DC power provisioning is based on the following model:

(SBC-Texas, Missouri, Kansas, Oklahoma, Michigan & Nevada))
The CLEC has the ability to request the same level of service available in the adjacent structure as currently available in the eligible structure. The same rules for applying the use of the CIPP panel in the eligible structure should be used.

Because the rate of service is established on the application, the TEE will negotiate with the CRE representative on placement and sizing of the required conduits to provide DC power service.

(SBC-PB, SBC-NB, SBC-SNET and SBC-SWBT MOKA)
200-amp redundant power services from the existing DC power plant, no more than 200 cable feet from the power plant is still considered the acceptable arrangement in these territories. The service shall terminate on a CIPP in a customer provided equipment bay in the adjacent structure. A looped voltage drop of 1.5 was used in this model.

Corporate Real Estate (CRE) will provide a total of three 4-inch conduits specifically for DC power cables. Per the NEC, conduits are sized to accommodate the requirements of a maximum of two 200 amp CIPP panels (three 750 MCM's per conduit). Each 200 amp fuse position will require 2 750 MCM cables. Coordination with CRE on the location of this conduit run will be required.

11G.2. Adjacent Off-Site Structure DC Power Requirements {SBC-SWBT (Texas, Missouri, Kansas, Oklahoma), SBC-AIT (Michigan) & SBC-NB (Nevada) ONLY}.

The ILEC will not be responsible for any requirements or provisions related to power.

11H. Installation and Augment Policy on CIPP Panels

Function	Application Type	Action
SBC Providing CIPP Panels	New CLEC Application	SBC Provides upon request by the CLEC
SBC Providing CIPP Panels	Augment CLEC Application	SBC Provides upon request by the CLEC
SBC Installation of CIPP Panels	New CLEC Application	SBC Provides upon request by the CLEC
SBC Installation of CIPP Panels	Augment CLEC Application	SBC does not provide – Not Applicable
SBC Termination of Power Cables on **SBC** provided CIPP Panels	New CLEC Application	SBC Provides termination on the SBC provided CIPP Panel
SBC Termination of Power Cables on **SBC** provided CIPP Panels	Augment CLEC Application	SBC does not provide or terminate power cables
SBC Termination of Power Cables on **CLEC** provided CIPP Panels	New CLEC Application	SBC does not terminate to CLEC provided CIPP panel. Tag and handoff to bay requested only
SBC Termination of Power Cables on **CLEC** provided CIPP Panels	Augment CLEC Application	SBC does not terminate to CLEC provided CIPP panel. Tag and handoff to bay requested only

12. GROUNDING COMPONENT PROVISIONING

12A. General

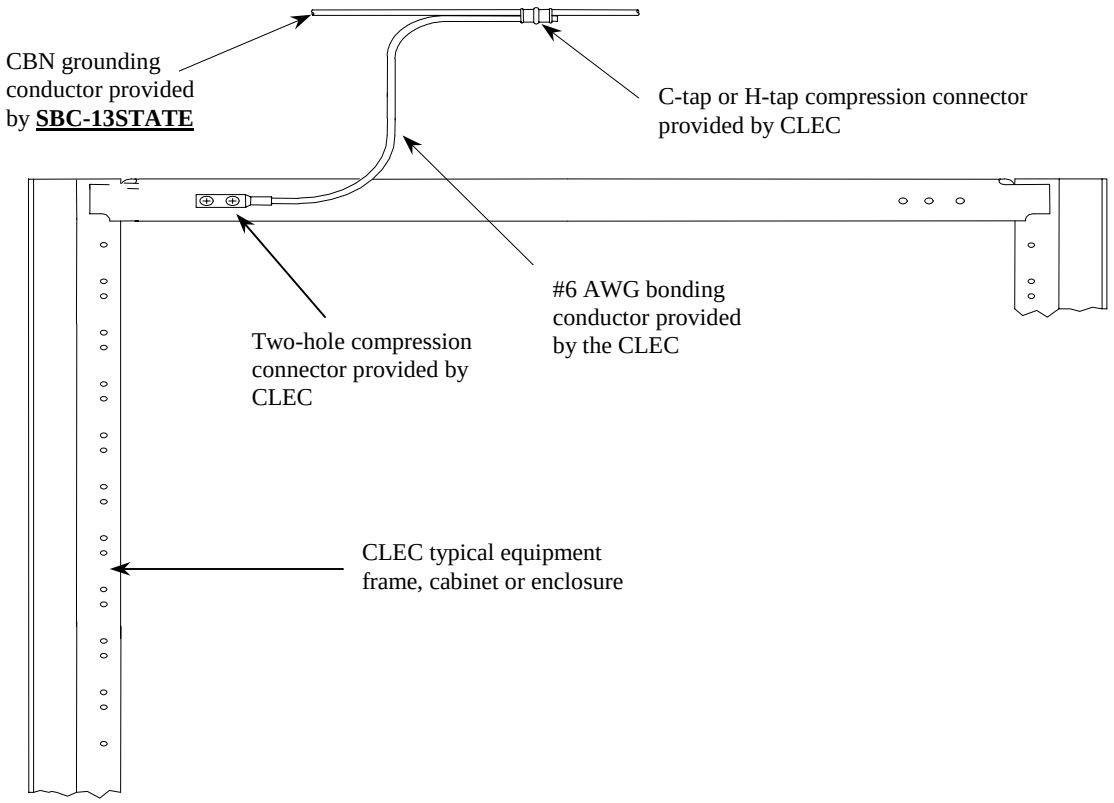
12A.1. Unless special arrangements are made, all equipment, conductors, connectors, frames, cabinets and other metallic objects installed by the CLEC shall be connected to the Common Bonding Network (CBN). The requirements in this section are either taken explicitly from our grounding and bonding practice (BSP 802-001-180MP) or are derived from the same principles as the requirements in the practice. Also refer to TP76300 (Installation Requirements).

12A.2. **SBC-13STATE** will provide a #6AWG or larger grounding conductor for use by the CLEC. In a cageless environment, the conductor will be extended over the total length of the equipment line up that has been reserved for use by the CLEC. In a caged environment, the conductor will be extended into the caged area and a coiled length will be left for use by the CLEC. This length of coiled conductor shall be suitable for extending over the proposed equipment space reserved for use by the CLEC. In a caged environment, the SBC ILEC will also bond the grounding conductor to the metallic cage.

12A.3. For both the cageless and caged environment, **SBC-13STATE** will label the grounding conductor "CBN Grounding Conductor" along with the CLEC ACNA and Order Number.

12A.4. All equipment frames, cabinets, enclosures and other conductive apparatus installed by the CLEC shall be bonded to the grounding conductor provided by **SBC-13STATE**. The bonding conductor shall be a #6AWG copper conductor. The connection to the **SBC-13STATE** provided grounding conductor shall be with a C-tap or H-tap compression connector. The connection to the equipment frame, cabinet or enclosure shall be with a two hole, copper compression connector. See Figure 2:

Figure 2 - Bonding Connections



12B. Central Office Collocation

12B.1. A minimum #1/0 AWG collocation structure main grounding conductor shall be extended from the Central Office ground (CO GRD) system to the collocation structure. This conductor shall terminate on the Main Structure Bus Bar described below.

12B.2 The main grounding conductor shall originate on a point on the CO GRD system nearest the point where the conductor exits the central office building. The point shall be a CO GRD or an OPGP bus bar or a CO GRD conductor sized the same as or larger than the collocation structure main grounding conductor.

12B.3. If metallic conduit, raceway or cable rack is used between the Central Office building and the collocation structure, each must be bonded on both ends to the #1/0 AWG main grounding conductor with a #1/0 AWG bonding jumper. A single bonding jumper may be used to bond all conduits, raceways, etc.

12B.4. The collocation structure shall be equipped with a minimum 1/4" thick copper bus bar sized at 4" x 12" minimum.

12B.5. The bus bar shall be placed between 4 and 6 feet from the floor of the structure in a location that will remain accessible.

12B.6. If a metallic collocation structure is used, the structure shall be bonded to the bus bar with a minimum #2 AWG conductor. As an alternative, the structure may be bonded to the bus bar using the bus bar mounting hardware as long as the hardware consists of at least 2 studs, bolts, etc. that have a minimum 3/8" diameter or equivalent cross-sectional area.

12B.7. Whether or not the collocation structure is metallic, the bus bar shall be mounted with hardware located at each end of the bus bar that allows a minimum working clearance of 2" between the bus bar and the surface to which it is mounted.

12B.8. The bus bar shall be stenciled or permanently labeled:

"Main Structure Ground".

12B.9. The bus bar shall be viewed as and used in the same manner as a CO GRD bus bar in a central office when applying grounding and bonding requirements to the contents of the collocation structure.

12B.10. If AC power circuits are extended to the collocation structure, any increase in the phase or neutral conductor size to account for voltage drop shall be applied to the AC equipment grounding conductor required for each AC conduit, raceway, etc.

12B.11.All equipment in the collocation structure shall be grounded per the applicable requirements in BSP 802-001-180MP.

12C. Adjacent On-Site Structure Grounding

The requirements are based on the following conditions:

1. The structures will be huts, trailers or similar structures.
2. The structures will not contain their own AC power service.
3. The structures will not contain engine alternators.
4. The structures will not be equipped with their own earth electrode system.

13.LINE SHARING

13A. Overview

FCC Report and Order 99-355 instructed the Incumbent Local Exchange Carriers that the local loop to the end user customer will become unbundled in a Line Sharing Arrangement. The frequency spectrum of the cable pair will be divided into two distinct uses. The order does not specify specific frequency ranges and a particular division point has not been specified. Ultimately when standards are ascertained, this would permit one company to provide the narrow band (dial tone) and another could provide the broadband technology (DSL) over the same pair. This arrangement is only available when **SBC-13STATE** is providing the voice/narrow band service. If this is not the case, the Competitive Local Exchange Carrier (CLEC) is required to purchase a separate Unbundled Network Element (UNE). The FCC recognizes that SDSL can not be line shared and requires a separate UNE. Other xDSL services are candidates and the burden of proof of any claims of incompatibility or interference with POTS services rests with the incumbent ILEC.

Line Sharing is being offered within SBC under the Product Name – High Frequency Portion of the Loop" (HFPL).

13B. High Frequency Portion of The Centrex Loop (HPFCL)

Per MSD, *HFPL using Centrex*, version 2.1, dated March 2001 and Technical Reference Document, *High Frequency Portion of the Centrex Loop (HFPCL)*, version 2.0, dated August 2001, DSL over Centrex/Plexar will be provided in addition to the POTS services for Line Sharing, effective September 2001. This is the same technology offering as analog circuit switched voice DSL today over regular POTS lines. While the service will primarily be targeted toward the CLEC with integrated POTS-SPLITTERS, such as ASI, there may be a need to place Non-Integrated POTS-SPLITTERS for other CLECs.

13C. Cabling Differences between ILEC & CLEC provided POTS-SPLITTERS

The deployment of Line Sharing with the SBC Local Exchange Carriers has been evolving this year to a considerable degree. Material concerning this topic can be found under the Line Sharing Method and Procedures and can be found on the SBC Web Site:
http://ebiz.sbc.com/commonsystems or **http://apex.sbc.com**

*****CAUTION*** Do not use any connecting blocks for collocation other than 100-pair units on any ILEC IDF/MDF frames. The SWITCH system cannot handle above 128 pair blocks at this time. In addition, the Central Office Operations Staff specifically has requested not to use any block larger than 128 (OE terminations are the only blocks that use the 128 variety, all others use the 100 pair count).**

13D. POTS-SPLITTER Removals

SBC-13STATE (ILEC) provided POTS-SPLITTERS have been installed based upon regulatory action and CLEC requests for that product in the SBC Central Offices. POTS-SPLITTERS will not be removed from Central Offices unless all of the following conditions are present:

1. The Central Office has been identified as a Pending Office Closure (within two years) and the bay that the POTS-SPLITTER must be removed to preclude the ability to assign space to a ILEC or CLEC.

2. All CLECs have vacated and removed all their equipment within the Central Office. This has been verified through NSS.

3. Approval through SBC Services NP&E Staff. This dictates concurrence with Network Regulatory and Product Management on a office by office basis. The Central Office must be removed from the CLEC Availability List for **SBC-13STATE** (ILEC) POTS-SPLITTER assignments.

4. This only applies to Line Sharing. Line Splitting does not have this option.

As a result, before any Transport Equipment Engineer initiated removal activity, they must forward the request to Steve Weinert, Associate Director-Network Planning & Engineering (Common Systems) for evaluation and approval. See the Contact Section for contact details.

14.LINE SPLITTING

14A. Overview

The FCC and some State Public Utility Commissions have reinterpreted the FCC order to permit another Telco other than the ILEC to provide the dial tone, or order the voice service through an Unbundled Network Element (UNE) from the ILEC for the CLECs use. **SBC-13STATE** is currently involved in arbitration proceedings in many of the **SBC-13STATE** states that include Line Splitting. Line Splitting is the shared use of an Unbundled Loop for the provision of voice and data services to the customers premises. This technically operates similarly to Line Sharing but uses Unbundled Network Elements (UNE's) instead of Retail Dial Tone Services. As the Commission found in the Texas 271 Order, CLECs have the ability to engage in Line Splitting today under **SBC-13STATE's** current offerings. **SBC-13STATE** supports Line Splitting where a CLEC purchases separate UNE elements and combines them with their own (or a partner CLEC's) splitter in a collocation arrangement.

Specifically, the Line Sharing Order requires **SBC-13STATE** to provide unbundled access to the High Frequency Portion of the Loop (HPFL) only to carriers seeking to provide xDSL based service that meets one of the Commission's criteria regarding the presumption of acceptability for deployment on the same loop as the incumbent LEC's analog service. Whereas Line Sharing is only available between SBC's ILEC and a data CLEC, Line Splitting arrangements allow one CLEC to provide the voice (instead of the SBC's ILEC) while the other CLEC to provide the data. Currently, ADSL is the most widely deployed line sharing technology meeting the presumption of acceptability for deployment on the same loop as the ILEC's analog voice service. As additional xDSL based technologies that can co-exist on the same loop as the analog service are

demonstrated to meet the presumption of acceptability, incumbents must permit requesting carriers to deploy those technologies as well.

Line Splitting takes two scenarios:

- Phase I: The CLEC will always provide the POTS-SPLITTER functionality within their Collocation Space and interconnects the voice and data (DSL) services from either itself or any combination if other CLECs or the ILEC as a UNE service. This is called an Integrated Arrangement.

- Phase II: The ILEC may be required to provide the POTS-SPLITTER within the network for interconnection of any combination noted in Phase II. SBC is not in favor of this arrangement due to administrative and mechanization cost issues.

SBC 002-316-012, *Line Splitting M&P* will cover this material in more depth and is currently in draft form. It will be issued in October 2001.

14B. Anticipated Provisioning w/ CLEC Provided POTS-SPLITTER

Phase I is expected to be handled in the overall TIRKS® Operational Support System flow. The documentation is covered specifically in SBC-002-316-012, *Line Splitting Deployment M&P*, Issue 1, dated October 2001.

This process will use specific terminations assigned by TIRKS® (and SWITCH® in SBC-Pacific Bell) sequential assignments. Carrier Facility Assignments (CFA) will be used for all UNE interconnections to the SBC Network for cable pair (and Wholesale UNE OE requests as needed). All block terminations begin with the sequential count of one to the last pair in the group. If there were 40 blocks of 100 pair each, the count would be 1-4000. Pair 201 would be the first pair on the second block.

14C. Anticipated Provisioning w/ ILEC Provided POTS-SPLITTER

This process mirrors the Line Sharing provisioning arrangement as covered in SBC-002-316-006, *Line Sharing Deployment M&P*, Issue 9, dated October 2001. The documentation is covered specifically in SBC-002-316-012, *Line Splitting Deployment M&P*, Issue 1, dated October 2001.

This process is being processed in the SWITCH® Operating Support System and will use specific terminations in Miscellaneous Equipment Assignments using 1-96 (100 pair increments). The MEDT is the termination point for the Data input to the ILEC POTS-SPLITTER. MEOE is the Dial Tone input connection to the ILEC POTS-SPLITTER. MECP is the HPFL (Data) over Dial Tone (Voice) output from the ILEC POTS-SPLITTER. The MEDD is the CLEC termination block from the CLEC equipment for the Data output that is connected to the MEDT of the ILEC POTS-SPLITTER.

All block terminations begin with the numerical count of one to 96 with the last four pairs not being used. Successive blocks will restart the count. Ex: Block One 1-100, Block Two 1-100, Block Three 1-100.

15.POINT OF TERMINATION (POT) EQUIPMENT

15.A. POT Equipment Standards

Point of Termination equipment is handled as a Grandfathered Option for the ILEC to provide at the request of the CLEC. This section is provided to specify the equipment to be used and not substituted in SNET, SWBT, NB and PB. These products were being used at the issuance of the Cageless Collocation Mandate (FCC 99-48). **Ameritech was not using a POT during this period and as a consequence does not have a grandfathered option that is provided to the CLEC.** Refer to SBC Network Planning & Engineering (Common Systems) FLASH 98-011, dated August 7, 1998. Listed below is the equipment to be used:
SBC-SNET/SBC-NB/SBC-PB/SBC-SWBT: DO NOT DEVIATE FROM THIS EQUIPMENT UNLESS SPECIFICALLY APPROVED AS A SPECIFIC EXCEPTION TO POLICY THROUGH NETWORK PLANNING & ENGINEERING – COMMON SYSTEMS).

Voice Grade Facilities and xDSL:

Manufactured by ADC; use the SBC authorized distributor for this manufacturer.

QCP-W10X20-5 Size: 6” x 23” x 4” panel Provides for 500 cable pairs
Standard Equipment.
SSI: 300027349

QCP-W-C Size: 6” x 23” x 4” panel Provides for placement empty chassis
SSI: 300027364

QCP-W10X20-1
Provides one snap in 100 pair module to be placed in QCP-W-C. 5 modules will fit the QCP-W-C.
SSI: 300027356

DS1 Interconnect:

Manufactured by ADC; use the SBC authorized distributor for this manufacturer.

DD1-311150 DDP-1 for 56 DS1 Size: 4” x 23” x 5” panel
SSI: 300027018

DD1-351151 DDP-1 for 84 DS1 Size: 7” x 23” x 5” panel
SSI: 3000270026

DD1-100005 Jack Access Card
SSI: 300026960

DS3/STS1 Interconnect[10]

Manufactured by ADC; use the SBC authorized distributor for this manufacturer.
D3C-234001 DS3/STS1 24 port panel using BNC connectors. Size: 4" x 23" x 3"
SSI: 300027232

D3M-BM2001 DS3/STS1 Module, BNC Access for IN, OUT, CLEC in, CLEC OUT with dual monitor
Size: 4" x ½" x 3"
SSI: 300027240

Fiber optic Splitter Terminations

Manufactured by Corning Cable Systems (previously Siecor), the distributor is listed below the product:

SBC Current Standard and Pacific Bell/Nevada Bell (On a Going Forward Basis Effective Jan/2000) and SWBT (On a going Forward Basis Effective July, 2001):
(This would be the Ameritech version if POT was authorized or as Tariffs authorize this availability.

MODEL PART	ACCOUNT COST	CLEI/PID/ SNET PID	DESCRIPTION MANUFACTURER ID
Module, 1x2 90/10 2 Splitters SC-UPC	357C $378.03	300025467/ 9506543	LDC-21B-B-58-SB LDC (Vertical) Coupler Module/Dual - SC
Terminator, Fiberoptic SC-UPC	357M $62.32	300029758/ 9506360	ATN-58-TM Fiberoptic SC Ultra PC Terminator
FDF Splitter Housing, 12 Slots	357C $223.04	LGCXYPA2RA 300029766/ 9506568	LDC-CMH-072 LDC (Vertical) Optical Splitter Housing; Rack Mount

[10] Effective September 2001, the standard DS3 POT panel is this panel type in SBC-Pacific Bell/SBC-Nevada Bell. The previous $H DSX panel will be discontinued for this application in those regions. This matches the corporation and provides an **SBC-13STATE** standard.

15.B. Installation and Augment Policy on Interconnect POT Panels

Function	Application Type	Action
SBC Providing Interconnect Panels	New CLEC Application	SBC Provides - Only if applicable in State Tariff & requested by the CLEC
SBC Providing Interconnect Panels	Augment CLEC Application	SBC does not provide – Not Applicable
SBC Installation of Interconnection Panels	New CLEC Application	SBC Provides - Only if applicable in State Tariff & requested by the CLEC
SBC Installation of Interconnection Panels	Augment CLEC Application	SBC does not provide – Not Applicable
SBC Termination of Interconnection Cables on **SBC** provided POT Panels	New CLEC Application	SBC Provides termination to SBC provided panel – Only applicable in State Tariff & requested by the CLEC
SBC Termination of Interconnection Cables on **SBC** provided POT Panels	Augment CLEC Application	SBC does not provide – Not Applicable
SBC Termination of Interconnection Cables on **CLEC** provided POT Panels	New CLEC Application	SBC does not terminate to CLEC provided panel. Tag and handoff to bay requested only
SBC Termination of Interconnection Cables on **CLEC** provided POT Panels	Augment CLEC Application	SBC does not terminate to CLEC provided panel. Tag and handoff to bay requested only

16.DISCONTINUANCE/CANCELLATION OF CLEC EQUIPMENT/WIRING

This section reflects SBC's policy on how to handle CLECs who request to terminate their collocation service after SBC has turned the space over to the CLEC. This information is further covered in the document SBC-002-316-015, *SBC Discontinuance of CLEC Equipment/Wiring and OSS Assignments M&P*, Issue 3, with Appendix 1, Issued October 2001.

The key factors are as follows:

- CLEC's can request removal of a portion of their termination facilities or request a removal of power. This is called a Discontinuance, and the CSC will coordinate with the proper representatives in order to comply with the CLEC's request.

- The SBC-Legal department will initiate full Discontinuance of a CLEC. Extreme care should be taken by the CSC to secure the correct legal status of the CLEC (either bankruptcy or litigation) prior to any removal action in order that **SBC-13STATE** can recover all pre-petition charges to the CLEC. The SBC-Legal department will approve any course of action by the CSC prior of removal of any CLEC's equipment.

- Once legal approval has been secured, SBC through the use of a **SBC-13STATE** Approved Vendor will be responsible for removing the interconnection cabling, power cabling, and fencing (for caged arrangements). It is critical that all material and labor (both SBC and vendor) should be well documented in order to support SBC's cost recovery. Note: the average removal rate accounts for the following elements:

    a) time to remove (mine) the cable (both power and interconnection)

    b) time to remove the fencing minus net salvageable cost of fencing

    c) time to fill the holes left by cage and bay/equipment removal

    d) disposal of the cable and fencing

    e) Restenciling of shelves and bays of equipment.

    f) Reassignment of facilities.

    g) Removals of shelves and bays.

17.MICROWAVE (RADIO) PROVISIONING

Upon request by a CLEC, **SBC-13STATE** will provision for Microwave (Radio) Services entrance facilities and routing of CLEC owned cable to the CLEC's physical or virtual collocation space within the central office for the purposes of interconnection and/or access to UNEs. The ILEC will not provide Microwave equipment or facilities, but will permit the use of existing roof space and/or tower access owned by the ILEC, if available. Microwave (Radio) Transmissions are an older infrequently used technology that has been largely abandoned in favor of more reliable, in-ground Fiber-optic transmissions. The vast majority of **SBC-13STATE** Central Offices are not equipped, cabled, or grounded in such a way to support the presence of Microwave Transmissions at these sites. **Within SBC, Microwave transmission facilities have been handled as an Individual Cost Basis (ICB/NSCR) even for our own facilities due to the unique nature of each manufacturer's product, spectrum containment issues and interconnection limitations.** In addition, this product line has become a niche market with only a limited number of Engineering and Installation firms willing to perform the work, generally not the normal EF&I vendors used for the majority of work in the Central Office. The California and Texas Public Utility Commissions are requesting that this service be tariffed, in either case, the ILEC will use certain assumptions in the deployment:

17.1 Requirements for Provisioning:

1. Use ICB/NSCR costing where tariff pricing is not in effect by state.

2. Currently the CLEC will provide the cable facilities and the ILEC will place. The ILEC will not provide the cable due to the peculiarities associated with each Microwave Product Line. (There are no furnished cost efficiencies for **SBC-13STATE** to provide cable since it is on an ICB/NSCR basis.)

3. These facilities will require a stand-alone ILEC placed cable rack for this transmission and will not be intermixed in existing cable racking.

4. A CLEC may request an easement for the construction of CLEC's antenna structure adjacent to an **SBC-13STATE** Central Office. A CLEC may request space on an SBC Central Office for the construction of CLEC's antenna structure. A CLEC may also request that their antenna(s) be mounted on an existing microwave tower if the tower is an **SBC-13STATE** Eligible Structure.

5. To the extent that there is land, roof or tower space available which is capable of supporting an antenna structure or additional antenna(s); **SBC-13STATE** will allow the CLEC to place, entirely at their cost, such antenna structure or antenna(s) subject to the following conditions.

    - The CLEC or their **SBC-13STATE** approved contractor(s) will research and assure that the direction of transmission and the frequencies transmitted will NOT interfere with the spectrum of frequencies currently being transmitted or licensed to be transmitted from that location.

- The CLEC is entirely responsible for assuring acceptable "line of sight" capabilities and all other matters involving performance of the microwave path.

- The CLEC must obtain all applicable licenses, clearances, antenna structure registrations, zoning, easements and construction permits before beginning construction. The CLEC can hire the ILEC to help with these permits at cost.

- If the **SBC-13STATE** Central Office is not currently equipped with the "radio structure grounding" used to protect against building and equipment damage due to lightening strikes; the CLEC will bear the responsibility and costs related to that structure grounding. This includes but is not limited to the placement of adequate external ground wiring, placement of acceptable ground rods and proper grounding of the antenna structure(s).

- All construction plans must be approved by SBC or an **SBC-13STATE** designated contractor before beginning construction and all costs incurred for such approval will be recovered by SBC.

- A licensed, **SBC-13STATE** approved, radio/tower contractor(s) must be used for all construction and all costs will be the sole responsibility of the CLEC.

- Waveguide or coaxial cable installed inside the **SBC-13STATE** Central Office requires a fire retardant jacket with a MPR (i.e. Riser) rating.

- **SBC-13STATE** will provide and recover costs for a weatherproof roof or building entrance, all support structure (conduit or cable racking) used to deliver the waveguide or coaxial cable to the CLEC's Physical or Virtual Collocation area and the placement of the waveguide or coax to the collocation area. The CLEC contractor will leave a coil of waveguide or coaxial cable sufficient to reach the CLEC's collocation area, allowing adequate length for connection to equipment, adjacent to the weatherproof entrance and **SBC-13STATE** will arrange for the placement within the structure. If the **SBC-13STATE** Central Office is in a multi-tenant building (Condo or SBC leased space), **SBC-13STATE** will arrange for the placement of the support structure and waveguide or coax with the other tenants, as required.

- Roof space will be relinquished by the CLEC and returned to original condition at CLEC's expense for building expansion if such expansion is elected by the building owner.

1. All equipment placed within the CLEC collocation area must be necessary for interconnection the **SBC-13STATE's** network or for access to unbundled network elements (UNEs) and shall be subject to all terms and conditions related to the specific type of collocation arrangement.

18.SYNCHRONIZATION/TIMING

18A. Provisioning Standards

This Section covers the Timing Requirements specified in the SBC-002-316-022, *Synchronization & Timing M&P*, Issue 1, dated October 2001. This document consolidates and standardizes all Collocation Synchronization polices within **SBC-13STATE**. The CLEC may derive their timing from one of two sources:

1. Plesiochronous Timing – This means that the CLEC provides their own timing and must compensate for the synchronization of transmission systems to the interact with the **SBC-13STATE** Primary Reference Source. The Plesiochronous interface affords for customized redundancy and emergency restoration not available in the Non-Service Guaranteed synchronous interface option. (PREMIER OPTION)

2. Obtain Timing from the **SBC-13STATE** PRS using a Bridging Office Repeater. (NO SERVICE GUARANTEES OPTION)

If the **SBC-13STATE** Timing option is selected, the synchronous interconnection requires joint administration such that synchronization rules of hierarchical distributions are not violated. The joint administration requires, as a minimum, that **SBC-13STATE** provide a DS1 interface equal to the embedded stratum level of the BITS/TSG in the office providing timing. The burden of ensuring internetworking compatibility with the **SBC-13STATE** BITS defaults to the CLEC receiving the timing leads. The CLEC will be responsible for compliant cable terminations within their Dedicated Space. Timing provided by **SBC-13STATE** shall be properly terminated observing the DS1 template mask and distance constraints. When **SBC-13STATE** provides the timing, the following provisions will be followed:

1. All CLEC Timing Assignments shall be assigned to one dedicated BITS output card throughout the card's exhaust.

2. The BITS/TSG clock connections are the LAST terminations to be made for any timing circuit.

3. BITS DS1 outputs MUST see a 100-Ohm resistive balanced termination to prevent the card and shelf alarms and potential service interruptions.

4. Cabling distances will not exceed 655 linear cable feet.

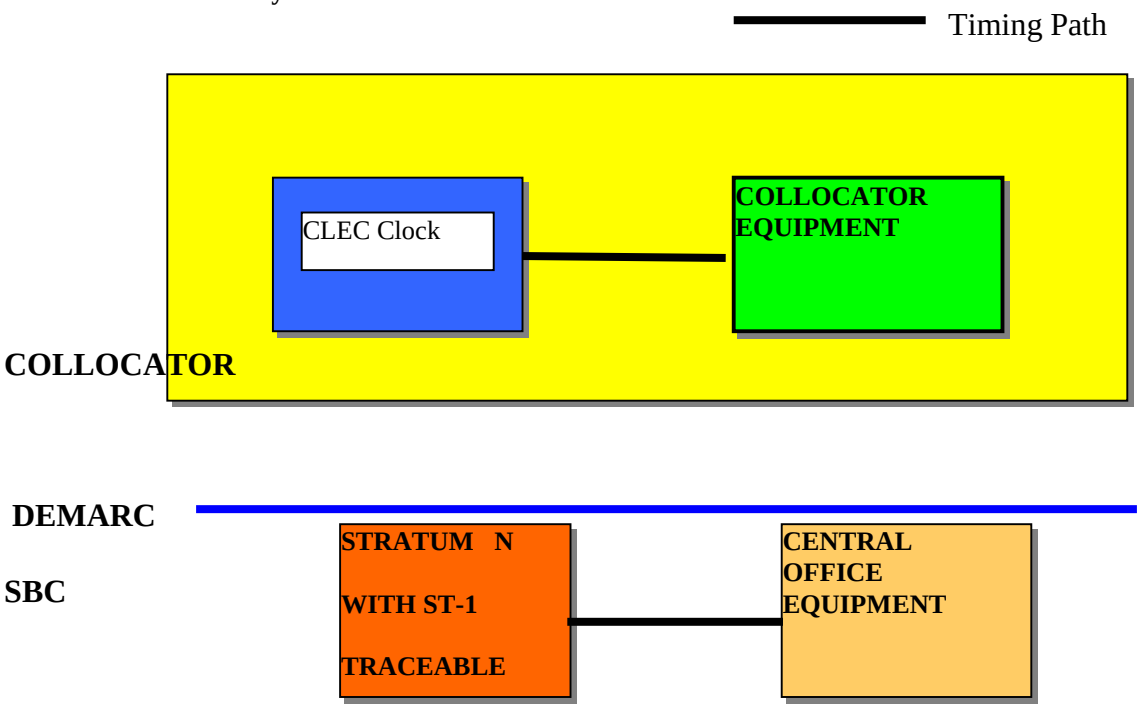
5. Bridging Office Repeaters (BOR) panel will be installed for any **SBC-13STATE** provided timing services. Reference PAN products ADC TBK-23R-28PNL is the recommended panel. Small Office Applications may use the M1544-340. Drawings ADCP-81-107, ADCP-80-358 and ADCP-61-143 from ADC Telecommunications are available for use.

6. The **SBC-13STATE** provided BOR panel should be placed at a common distribution point located on a going-forward basis in a similar location to footprint location for fiber or power feeds for that geographic portion of the building structure.

7. The standard cable used for BITS Timing is as follows: 1175A Bits Timing Wire (Red Jacket), 22 AWG, Manufactured by Avaya (formerly Lucent) PID Number: 301002648 (for SBC-SWBT, SBC-AIT, SBC-PB, SBC-NB). PID Number 3580360 (for SBC-SNET only).

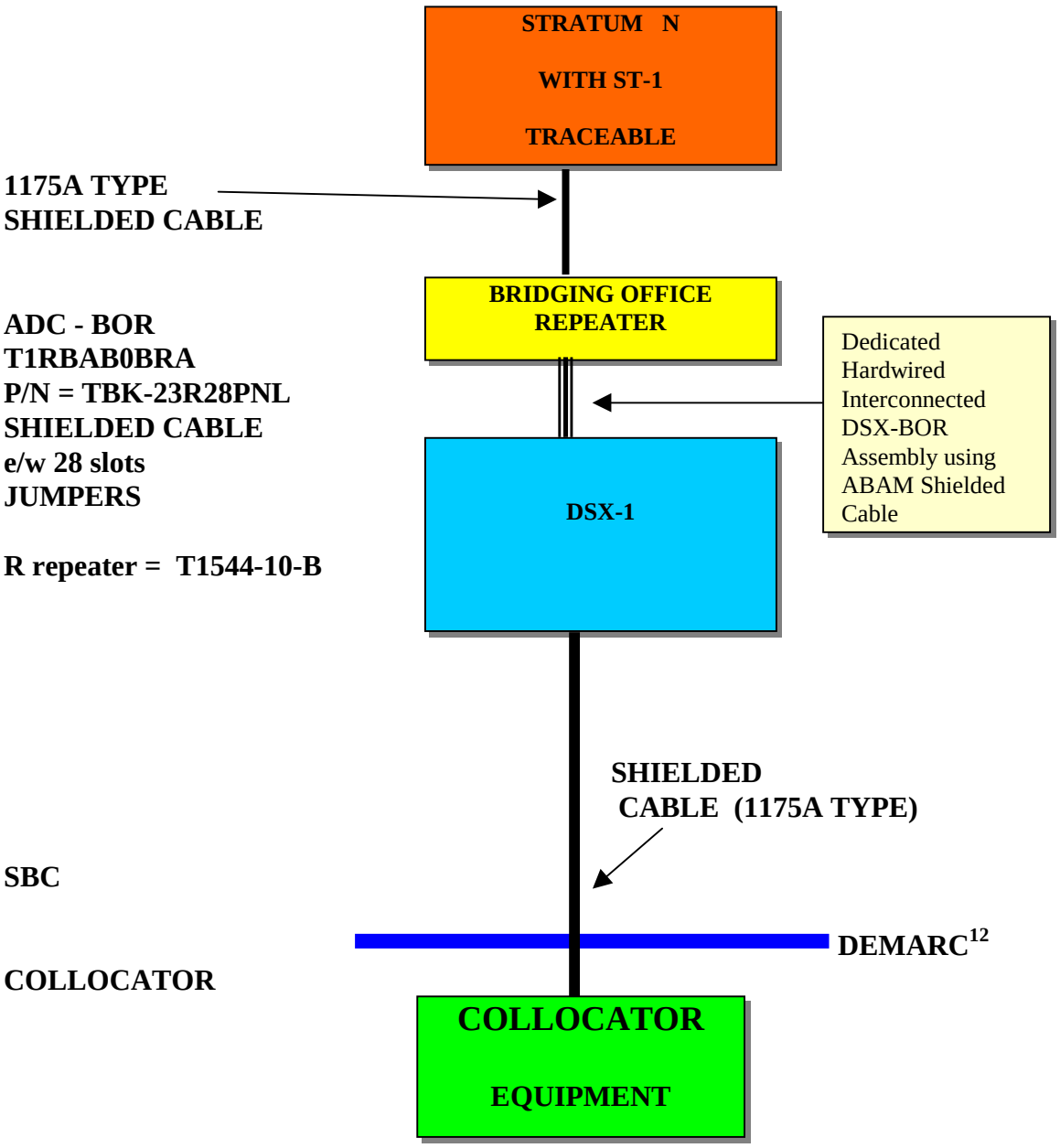
See Section T (Synchronization) of the TP76300 for more details on the installation of timing circuits.

18B. Plesiochronous Layout



18C. SBC Provisioned Timing using the BOR
Refer to SBC-13STATE Documentation in PBSD-ED-1891, Note 4B (Timing-TBOR).

SBC



[12] The Demarcation point will be the timing cable placed to the CLEC's Collocation Area assignment. **SBC-13STATE** ILEC will be responsible for all timing cable and equipment placement to the CLEC location. The BOR/DSX panel will be hardwired together and ultimately will be integrated at a future date.

18D. DS1 Interface Specification

Table 9-12. DS1 Interface Specification

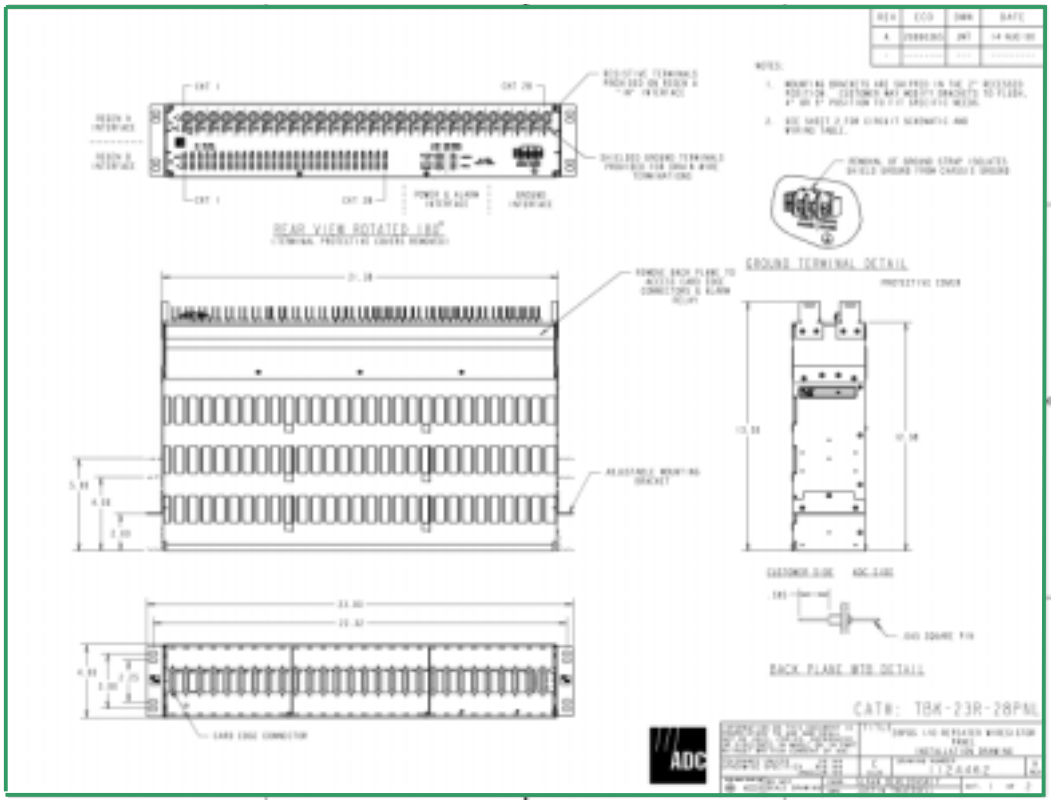
Parameter	Specification
Nominal line rate	1.544 Mb/s
Line-rate accuracy	In a mode without any synchronization to a network clock (e.g., self-timed, free-running), the line-rate accuracy shall be ±50 b/s (±32 ppm) or better. During synchronized operation, the line-rate accuracy shall be as specified in T1.101 for the appropriate stratum level.
Line code	Either (1) AMI with no more than 15 consecutive zeros, and at least N ones in each and every time window of 8(N + 1) digit time slots (where N can range from 1 to 23), or (2) B8ZS.
Frame structure	No frame structure is required for DS1 transmission or higher level multiplexing to higher DS*N* signals or to SONET payloads.[1]
Medium	One balanced twisted pair shall be used for each direction of transmission.
Test load impedance	A resistive test load of 100 Ω (±5%) shall be used at the interface for the evaluation of pulse shape and the electrical parameters specified below.
Pulse amplitude	The amplitude[2] of an isolated pulse shall be between 2.4 V and 3.6 V.
Pulse shape	The shape of every pulse that approximates an isolated pulse (is preceded by four zeros and followed by one or more zeros) shall fit within the mask shown in Figure 9-5. See text for conformance checking procedures.
Power level	For an all-ones signal, the power in a 3-kHz (±1 kHz) band centered at 772 kHz shall be between 12.6 and 17.9 dBm. The power in a 3-kHz (±1 kHz) band centered at 1544 kHz shall be at least 29 dB below that at 772 kHz.
Pulse imbalance	In any window of 17 consecutive bits, the maximum variation in pulse amplitudes shall be less than 200 mV, and the maximum variation in pulse widths (half amplitude) shall be less than 20 ns.
DC power	There shall be no dc power applied to the interface.
Jitter	The maximum jitter at the DS1 interface shall not exceed the values Section 7 specifies.
Verification access	Access to the signal at the interface shall be provided for verification of these signal specifications.

Notes:

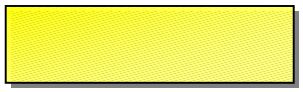
1 Section 10.2 specifies standardized DS1 frame structures.

2 While both voltage and power requirements are given to assist in qualification of signals at the interface, the values are not equivalent. Voltage specifications are given for isolated pulses (or valid approximations), while power levels are specified for an all-ones signal.

18E. BOR Drawing



19.TAPE MATERIALS ORDERING



PRIMARY USE PRODUCT

A. Tape, 2-Inch Adhesive Vinyl Marking Tape to designate Collocation Areas: Placed on floors within Central Offices to denote the common walkway routes for both CLEC and ILEC.
PRODUCT IDENTIFICATION CODE (PID): **300058955** for CAPRI/NOVA/APROMS.
Cost: $4.85/roll, Each roll is 2” x 108”. Minimum Order Quantity (MOQ) = 4 rolls.

Availability is required on a 24-hour turnaround throughout the 13-states. This product will be distributed by Brenton & Safety for use by **SBC-13STATE**.

PRIMARY USE PRODUCT

B. Tape, 1-Inch Yellow Adhesive Vinyl to designate Collocation Areas: Placed on floors within the Central Office to denote the CLEC leased areas and to identify the bay/cabinet placement areas.
SBC STANDARD.

PRODUCT IDENTIFICATION CODE (PID): **300059078**

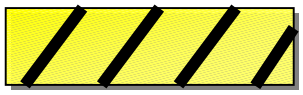
Cost: $3.10/roll, Each roll is 1" x 108". Minimum Order Quantity (MOQ) = 4 rolls.

ALTERNATE TO B. for SBC-AMERITECH ONLY

C. Tape, 1-Inch Black Adhesive Vinyl to designate Collocation Areas: Placed on floors within the Central Office to denote the CLEC leased areas and to identify the bay/cabinet placement areas.
FOR USE BY SBC-AMERITECH ONLY IN LIEU OF B LISTED ABOVE.

PRODUCT IDENTIFICATION CODE (PID): APROMS: 301041133 SNET 3582546

Cost: $3.10/roll, Each roll 1’ x 36 yards. Minimum Order Quantity (MOQ) = 4 rolls.



EXCEPTION USE ONLY

D. Tape, 2-Inch Yellow/Black Adhesive Vinyl to designate Collocation Areas: Used on an exception basis for Central Office locations that require a yellow variant to the standard 2-inch yellow type due to municipality code uses. Placed on floors within Central Offices to denote the common walkway routes for both CLEC and ILEC.

PRODUCT IDENTIFICATION CODE (PID): **300059094** for CAPRI/NOVA

Cost: $5.90/roll, Each roll is 2" x 216". Minimum Order Quantity (MOQ) = 4 rolls

CAUTION **PRIMARY USE PRODUCT**

E. Tape, 3-Inch x 1000 yds Vinyl, "CAUTION" tape. Used to identify and rope off areas where equipment protrudes into a aisle in an unsafe manner. Restrict egress only to personnel working on specific equipment in question. Attached to the Bay framework around hazard situations with Central Offices. Availability is required on a 24-hour turnaround throughout **SBC-13STATE**. This product will be distributed by Pro Line Safety Products (630) 876-1050 for use by **SBC-13STATE**.

PRODUCT IDENTIFICATION CODE (PID): **260395686** for CAPRI/NOVA/AIT-APROMS
Cost: 5.95/roll, Each roll is 3" x 1000 yards. Minimum Order Quantity (MOQ) = 1 roll

20.CLEC Cable Placement & Removal

This offering will be an elective offering to the CLEC who will specify their request to perform this function on their Collocation Application. It must be noted that although SBC has made this offering available, no State Regulatory Agency other than in Ameritech has adopted CLEC-cabling either as a requirement or as an option. This offering coupled with other cable testing is provided for continuity testing in accordance with TP 76900MP – *Installation Testing Requirements for the Central Office*. Additional testing using continuity, streaking or high stress testing **through CLEC equipment** is not provided for under cooperative testing or this practice. Special requests for ILEC vendor testing through CLEC equipment will be handled as a billable activity regardless of the timeframe from the date of installation.

See SBC-002-316-008, *CLEC Cable Placement & Removal M&P*, Issue 6, dated October 2001 for full details on cable placement.
http://ebiz.sbc.com/commonsystems

21.SHORTFALL PROCESS

The Shortfall Process is described in the Procurement Material Management Process Diagnostic Job Aid. A copy of this document may be obtained from David Tevlin, Material Manager, (925) 823-7670, E-Mail: dt3275@msg.pacbell.com. This procedure is used by the Procurement Department during periods of severe material shortages. This process permits Procurement to direct material resources to preventative proactive measures. In other words, they redirect Furnished (F) material shipments to highest priority orders to meet critical due date intervals.

The Shortfall Process with respect to processing documentation and flows will be developed in the NP&E Transport Process District.

22.REFERENCES

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

Document	Description	Issue & Date
SBC-002-203-001, Section 4	Transport-Infrastructure Deployment Guidelines (IDG) for Fiber Distributing Frames	Issue 1, Aug 2001
SBC-002-203-001, Section 12	Transport-Infrastructure Deployment Guidelines (IDG) for Fiber Optic Splitters	Issue 1, Aug 2001
SBC-002-203-001, Section 13	Transport-Infrastructure Deployment Guidelines (IDG) for Wavelength Division Multiplexing (WDM)	Issue 1, Aug 2001
SBC-002-203-001, Section 16	Transport-Infrastructure Deployment Guidelines (IDG) for Digital Cross-Connect Frames (DSX1/3)	Issue 1, Aug 2001
SBC-002-203-001, Section 18	Transport-Infrastructure Deployment Guidelines (IDG) for POTS-SPLITTERS	Issue 1, Aug 2001
SBC-002-216-025, Section 11	Switch-Infrastructure Deployment Guidelines (IDG) Main Distributing Frames	Issue 1, Aug 2001
SBC-002-316-001	UNE Deployment in the Central Office	Issue 2.1, Jan 2001
SBC-002-316-002	Collocation Provisioning Guidelines (CPG) M&P	Issue 13, Dec 2001
SBC-002-316-003	Frame Forecast M&P	Issue 8, Jul 2001
SBC-002-316-004	Tie Pair Management on MDF/IDF Frames	Issue 1, Jan 2001
SBC-002-316-005	POTS-SPLITTER Management M&P	Issue 1, Nov 2001
SBC-002-316-006	Line Sharing Deployment M&P	Issue 9, Nov 2001
SBC-002-316-007	Special Interconnection Arrangement (SIA-BFR)	Issue 4.1, Jan 2001
SBC-002-316-008	CLEC Cable Placement & Removal M&P	Issue 6, Sep 2001
SBC-002-316-009	ADSL for the Central Office M&P	Issue 12.1, Jan 2001
SBC-002-316-010	CLEC Line Sharing (CLEC Version)	Issue 7.0, Nov 2000
SBC-002-316-011	SingleMode Fiberoptic Optical Splitters M&P	Issue 3, Apr 2001
SBC-002-316-012	Line Splitting M&P	Issue 2, Nov 2001
SBC-002-316-015	Discontinuance of CLEC Equipment/Wiring M&P	Issue 3, Oct 2001
Appendix 1, SBC-002-316-015	Discontinuance Cost Worksheet	Issue 3.1, Nov 2001
SBC-022-316-022	Synchronization & Timing M&P	Issue 1, Dec 2001 (Pending)
SBC-002-316-023	Collocation Database NSS M&P	Issue 1, Mar 2001
SBC-002-316-024	CRE-Total Decommissioning M&P	Issue 1, Oct 2001 (Pending)
SBC-002-316-026	WDM M&P	Issue 3, Nov 2001
SBC-002-316-039	Collocation Provisioning Drawings	Issue 1, Dec 2001 (Pending)
SBC-002-316-041	DSX-1 Frame Deployment M&P	Issue 3, Dec 2001
SBC-002-316-042	DSX-3 Frame Deployment M&P	Issue 3, Dec 2001
SBC-002-316-043	FDF Frame Deployment M&P	Issue 3, Dec 2001
SBC-002-316-047	NP&E Finance Cost M&P	Issue 1, Jul 2001
SBC-002-316-048	CRE Space Decommissioning M&P	Issue 1, Oct 2001 (Pending)
SBC-002-316-050	CRE Collocation Provisioning Guidelines	Issue 1, Oct 2001 (Pending)
SBC-002-316-053	Fiber Protection System M&P	Issue 2, Nov 2001
SBC-002-316-056	OSP Collocation M&P	Issue 3, Sep 2000
TP 76200MP	SBC-Network Equipment – Building Systems	Issued 2001
TP 76300MP	SBC-Installation Guide within the Central Office	Issued 2001
TP 76400MP	SBC-Detail Engineer Requirements for the C.O.	Issued 2001
TP76900MP	SBC-Installation Testing Requirements	Issued 2001
SBC-002-316-101	Wire Center Planning M&P, Space Planning for the C.O.	Issue 8, Nov 2001

SBC-002-316-102	CLEC Equipment Review M&P	Issue 1, Jun 2001
SBC-002-316-103	CLEC Equipment Review M&P Flow Chart	Issue 1, Jun 2001
BSP 800-003-100MP	Standards for Network Equipment Eng & Space Planning	Issue A, Nov 1999
BSP 636-299-900MP	SBC – Fiber Distributing Frames	Issue A, Jan 2000
BSP 790-100-652MP	SBC – Power Plant Planning	Issue A, 1999
BSP 790-100-654MP	SBC – DC Plants	Issue A, 1999
BSP 790-100-656MP	SBC – DC Distribution	Issue A, 1999
BSP 790-100-655MP	SBC - Batteries	Issue A, 1999
BSP 790-100-659MP	SBC – AC Plants	Issue A, 1999
BSP 800-000-100MP	SBC – Common Systems – Hardware Products	Issue A, 1998
BSP 800-000-101MP	SBC – Network Equipment Anchoring Requirements	Issue A, 1998
BSP 800-000-102MP	SBC – Central Office Equip. Framework Design Req.	Issue A, 1998
BSP 800-000-104MP	SBC – Bracing Requirements for Equip. on Raised Floor	Issue A, 1998
BSP 800-000-150MP	SBC – CO Cable & Wire Inst Req. Racks and Raceways	Issue A, 1998
BSP 800-003-100MP	SBC – Space Planning Stds for Network Equip. Environ.	Issue A, 1998
BSP 800-003-101MP	SBC – Thermal Management Requirements	Issue A, 2001
BSP 800-006-150MP	SBC – Common Systems Net. Fac. Aux Frame & Bracing	Issue A, 1998
BSP 800-006-151MP	SBC – Network Facility Cable Rack Requirements	Issue A, 1998
BSP 800-006-152MP	SBC – Floor Stanchion Supported Cable Rack Req.	Issue A, 1998
BSP 800-068-150MP	SBC – Central Office Equip. Framework Support Req.	Issue A, 1998
BSP 800-003-200MP	SBC – Network Facilities Cable Mining	Issue A, 2000
BSP 802-001-180MP	SBC – Grounding and Bonding Requirements	Issue A, 1998
PBSD ID-1891	SBC Interconnection Drawings for SWBT/PB/NB	Current
PBSD ED-1891	SBC Engineer Drawings for SWBT/PB/NB	Current
AM-E-01578-10	SBC Design Equipment Drawings for Ameritech	Current
AM-W-01578-11	SBC Design Wiring Drawings for Ameritech	Current
SNE J95215-71	SBC Line Sharing Equipment for SNET	Current
SNE T95215-31	SBC Line Sharing Wiring for SNET	Current
SNE J99121-71	SBC Physical Collocation Equipment for SNET	Current
SNE T99121-31	SBC Physical Collocation Wiring for SNET	Current
SNE J95215-71	SBC Engineer Drawings for SNET	Current
PBSD-ED-1175	SBC Equipment Drawing DSX-1 for PB/SWBT	Current
PBSD-ID-1075	SBC Interconnect Drawing DSX-1 for PB/SWBT	Current
SNE J95197-71	SBC Equipment Drawing DSX-1 for SNET	Current
SNE T95197-31	SBC Interconnect Drawing DSX-1 for SNET	Current
SNE SD95197-01	SBC Schematic Drawing DSX-1 for SNET	Current
AM-E-01436-10	SBC Equipment Drawing DSX-1 for AIT	Current
AM-W-01436-11	SBC Interconnect Drawing DSX-1 for AIT	Current
PBSD-ED-1115	SBC Equipment Drawing DSX-3 for PB	Current
PBSD-ID-1115	SBC Interconnect Drawing DSX-3 for PB	Current
PBSD-ED-1117	SBC Equipment Drawing DSX-3 for SWBT/PB/NB	Current
PBSD-ID-1117	SBC Interconnect Drawing DSX-3 for SWBT/PB/NB	Current
SNE J95213-71	SBC Equipment Drawing DSX-3 for SNET	Current
SNE T95213-31	SBC Interconnect Drawing DSX-3 for SNET	Current
AM-E-01447-10	SBC Equipment Drawing DSX-3 for AIT	Current
AM-W-01447-11	SBC Interconnect Drawing DSX-3 for AIT	Current
PBSD-ED-1140	SBC Equipment Drawing FDF for PB/SWBT	Current
PBSD-ID-1140	SBC Interconnect Drawing FDF for PB/SWBT	Current
SNE J95145-71	SBC Equipment Drawing FDF 12” for SNET	Current
SNE T95145-31	SBC Interconnect Drawing FDF 12” for SNET	Current
SNE J95218-71	SBC Equipment Drawing FDF 15” for SNET	Current
SNE T95218-31	SBC Interconnect Drawing FDF 15” for SNET	Current
AM-E-01582-10	SBC Interconnect Drawing FDF for AIT	Current
PBSD-ED-1891	SBC Timing Drawing (Note 4 B)	Current
SBC-C-10005-E-00	SBC Drawing – Cageless 1000 sf Non Seismic Large Bay	Issue 1, 2001
SBC-C-10006-E-00	SBC Drawing – Cageless 1000 sf Seismic Large Bay	Issue 1, 2001
SBC-C-10007-E-00	SBC Drawing – Caged 1000 sf Non Seismic Standard Bay	Issue 1, 2001

SBC-C-10008-E-00	SBC Drawing – Caged 1000 sf Seismic Standard	Issue 1, 2001
SBC-C-50001-E-00	SBC Drawing - Fiber Raceway Materials	Issue 1, 2001
SBC-C-30001-E-00	SBC Drawing – Cageless 400 sf Seismic	Issue 1, 2001
SBC-C-30002-E-00	SBC Drawing – Cageless 400 sf Non-Seismic	Issue 1, 2001
PAN 20001017	96-port POTS-SPLITTER Approval for Use	May 2000
PAN 2000737	128-port POTS-SPLITTER Approval for Use	Aug 2000
PAN 20001000	Main Distributing Frames Approval for Use	Jan 2000
PAN 19995316	Connector Blocks Approval for Use	Jan 2000
PAN 19985029	Covers for Unit Protector and Cross-Connect fields for ADSL/xDSL Approval for Use	1999
PAN 19985018	Tight Twist Wire for 1.544 Mb/s/T1 Approval for Use	1998
PAN 19985037	Cover for Unit Protectors & Cross-Connect Fields for T1/1.544 Mb/s Approval for Use	1998
PAN 19985036	Cover for Unit Protector & Cross-Connect Fields for High Voltage Approval for Use	1998
MMP 98-06-001	Broadband Twisted Pair Wiring for Distribution and Protector Frames	Issue 2, Jan 2000
SIP 10-4500-025	Line Sharing-Non-Digital Loop Electronics ADSL for Network Services and LFO Operations	Issue 3, Jul 2000
SBC-FLASH 00-030R2	SBC Equipment Deviation for oversized Equipment	Issue 2, Nov 2000
SBC-FLASH-000-000-035	SBC IDF Installation Standard	Issue 1, Jan 2001
GR-449-CORE	Telcordia Technologies – TSGR Common Requirements Signal Interfaces	Issue 2, Dec 1998

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2 Immediate Backup for Document Lead

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