

OFFICIAL RECOGNITION LIST

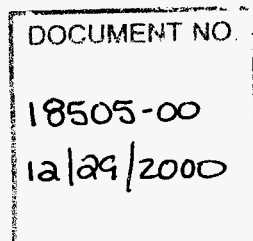
Dockets Nos. 990321-TP and 981834-TP

Florida Commission Orders

1. Florida Public Service Commission Order No. PSC-96-1579-FOF-TP, issued December 31, 1996, in Dockets Nos. 960833-TP, 960846-TP, and 960916-TP.
2. Florida Public Service Commission Order No. PSC-98-0604-TL, issued April 29, 1998, in Dockets Nos. 960833-TP, 960846-TP, and 960846-TP.
3. Florida Public Service Commission Order No. PSC-99-0060-FOF-TP, issued January 6, 1999, in Docket No. 980800-TP.
4. Florida Public Service Commission Order No. PSC-99-0582-FoF-TP, issued March 29, 1999, in Docket No. 980800-TP.
5. Florida Public Service Commission Order No. PSC-99-1744-PAA-TP, issued September 7, 1999, in Dockets Nos. 981834-TP and 990321-TP.
6. Florida Public Service Commission Order No. PSC-99-2393-FOF-TP, issued December 7, 1999, in Dockets Nos. 981834-TP and 990321-TP.

FCC Orders and Rules

7. FCC Order 99-48 (CC Docket 98-147) - Deployment of Wireline Services Offering Advanced Telecommunications Capability
8. FCC Order 96-325 (CC Docket 96-98) - First Report and Order
9. FCC Order 96-394 (CC Docket 96-98) - Order on Reconsideration
10. FCC Order 96-333 (CC Docket 96-98) - Second Report and Order
11. FCC Order 97-208 (CC Docket 93-162) - Second Report and Order/Expanded Interconnection
12. FCC Rules 47 C.F.R. Ch. 1, Part 51



1

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 981834-TP &
NO. 990321-TP EXHIBIT NO. 1 Composite
COMPANY/ PSC Staff + me
WITNESS: 1-12-2000
DATE: 1-12-2000

Dockets Nos. 981834-TP
and 990321-TP
Official Recognition List

Court Decisions

13. AT&T Corp. v. Iowa Utils. Bd., 525 U.S. 366 (1999).
14. Iowa Utils. Bd. v. FCC, 120 F.3d 753 (8th Cir. 1997).

Federal Act

15. The Telecommunications Act of 1996

MCI WORLDCOM
OFFICIAL RECOGNITION LIST
DOCKET NOS. 981834-TP & 990321-TP

1. Public Utility Commission of Texas, Investigation of SWBT's Entry into the Texas InterLATA Telecommunications Market, Project No. 16251, Order No. 52, including Collocation Tariffs Matrix.

2. Public Utility Commission of Texas, Investigation of SWBT's Entry into the Texas InterLATA Telecommunications Market, Project No. 16251, Order No. 54, including Supplemental Collocation Tariffs Matrix.

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service
Commission held in the City of
Albany on August 18, 1999

COMMISSIONERS PRESENT:

Maureen O. Helmer, Chairman
Thomas J. Dunleavy
James D. Bennett
Leonard A. Weiss
Neal N. Galvin

CASE 99-C-0715 - Ordinary Tariff Filing of New York Telephone Company to Provide for the introduction of Cageless Collocation Open Environment (CCOE); rates and regulations for Adjacent Structures; and, clarifications and modifications to existing collocation offerings.

CASE 95-C-0657 - Joint Complaint of AT&T Communications of New York, Inc., MCI Telecommunications Corporation, WorldCom, Inc. d/b/a LDDs WorldCom and the Empire Association of Long Distance Telephone Companies, Inc. Against New York Telephone Company Concerning Wholesale Provisioning of Local Exchange Service by New York Telephone Company and Sections of New York Telephone's Tariff No. 900.

ORDER DIRECTING TARIFF REVISIONS

(Issued and Effective August 31, 1999)

BY THE COMMISSION:

INTRODUCTION

On May 21, 1999, New York Telephone Company d/b/a Bell Atlantic-New York (BA-NY or the company) filed tariff revisions to PSC No. 914 in response to the March 31, 1999, "First Report and Order" issued In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, FCC 99-48 (the FCC Order) released by the Federal Communications Commission (FCC). The FCC Order imposed further national collocation rules that apply to all telecommunications services, including advanced

services and traditional voice services. The revisions introduced Cageless Collocation Open Environment (CCOE); rates and regulations for adjacent structures; and, clarified and modified existing collocation offerings. On June 28, 1999, the Commission issued an order^{1/} that approved the filing and requested comments from interested parties on whether the tariff comports with the FCC Order.

Comments were received from ACI Corporation (ACI), AT&T Communications Company of New York, Inc. (AT&T), Choice One Communications, Inc. (Choice One), Covad Communications Company (Covad), Network Access Solutions Corporation (Network Access), RCN Telecom Services of New York, Inc. (RCN) and Sprint Communications Company L.P. (Sprint), as well as the reply comments of BA-NY. The comments are discussed below.

Although the June 29, 1999 tariff filing substantially complies with the FCC Order, BA-NY will be directed to file a revised tariff to comport with the determinations hereinafter set forth.

BACKGROUND

The intent of the March 31, 1999, FCC Order was to promote innovation and investment by all participants in the telecommunications marketplace and to stimulate competition in the advanced services market.^{2/} To accomplish this, the FCC Order established additional requirements on the incumbent local exchange carriers (ILECs) for allowing interconnection and access to unbundled network elements and set standards for physical and virtual collocation. The FCC Order required that ILECs offer three additional forms of collocation: shared, cageless and adjacent. In addition, ILECs are to post information on the Internet when a central office is full; allow Competitive Local Exchange Carriers (CLECs) tours of

^{1/} Case Nos. 99-C-0715 and 95-C-0657, "Order Approving Tariff Filing on a Permanent Basis and Requesting Comments" (issued June 28, 1999).

^{2/} FCC Order, && 1 and 6.

central offices where they are denied space; not impose more stringent security on the CLECs than the company imposes on itself; remove obsolete equipment; and, establish procedures to use when an ILEC objects to the use of particular CLEC equipment.

BA-NY's tariff revisions, effective June 29, 1999, provided for: introduction of Cageless Collocation Open Environment (CCOE); introduction of rates and regulations for Adjacent Structures; clarifications and modifications to existing collocation offerings pursuant to the FCC Order, including the introduction of a Site Survey/Report Fee; and, minor textual and CLEC point of contact changes. In addition, approval was given for withdrawal of the company's Collocation Line of Sight Escort (CLOSE) service, because it no longer complied with the FCC Order and was being replaced by a cageless collocation offering.

COMMENTS

Space Restriction

BA-NY's tariff requires a CLEC to place its equipment in approved and designated conditioned space which is in a separate lineup, typically 10 feet from working BA-NY equipment, and not in space reserved by BA-NY.

AT&T, Choice One and RCN believe that the imposition of the 10 foot rule and separate lineup limits the amount of space available for cageless collocation, increases the cost and could force CLECs to collocate in a separate room. Rather, the commentators observe, if security were the driving force behind these requirements, cameras, monitoring and training would be sufficient forms of security.

BA-NY claims that the 10 foot separation is simply a guideline to protect its equipment and to provide a safe working environment for both BA-NY and the CLECs; it is not unused space. If a central office is near exhaustion, the company recognizes that it may be necessary to reduce the

amount of separation space. If space in a particular central office is exhausted, the CLEC may complain about the separation space during the exemption process. BA-NY reaffirms that the FCC Order states that it may take reasonable steps to protect its own equipment.

BA-NY claims that requiring CLEC equipment be placed in a separate lineup is consistent with the FCC Order. BA-NY contends that having CLEC equipment in the same lineup, would make it impossible for the company to secure its network and would undermine the protections it now employs for its own equipment. These protections include "safe time" procedures that limit non-critical access by its own employees to central office equipment that is in close proximity to operational equipment. If the separate lineup requirement is eliminated, CLECs could be working in close proximity to BA-NY's operational equipment. Although the FCC Order permits BA-NY to enclose its equipment in a cage, BA-NY maintains that if separate lineups are not allowed, it would not be able to enclose its equipment.

DISCUSSION

The FCC Order amended the Code of Federal Regulations to read, in part, "Incumbent LECs must allow competitors to collocate in any unused space in the incumbent LEC's premises..."^{1/} Cageless collocation is intended to provide relief for those CLECs that want to collocate in a particular office where physical collocation space may be exhausted. By imposing a 10 foot space requirement, the company effectively requires approximately 400 square feet of free space around its equipment in order to have cageless collocation. This clearly would be a prohibitive burden in those offices where space is already at a premium. The FCC Order does allow ILECs to establish reasonable security measures to protect their networks and equipment from harm,

^{1/} 47 C.F.R. 51.323(k)(2).

which may include enclosing their own equipment in cages. Other examples of security mentioned in the FCC Order include: security cameras, monitoring systems or badges worn by CLEC employees with computerized monitoring systems. The costs for these devices may be recovered from the collocating carriers.

These forms of security, rather than the 10 foot space requirement or separate lineups, would still provide the necessary security without the possibility of exhausting limited space, especially in central offices that are at, or near, exhaustion. Therefore, the 10 foot space requirement and separate lineup limitations must be removed from the tariff.

Tours by CLECs and Confidentiality Agreements

AT&T, Choice One and RCN believe that if BA-NY wants an exemption for physical collocation for a particular central office, all CLECs should have a right to tour the central office before the exemption is granted. Sprint requests that when a CLEC is denied space and is required to be given a tour by BA-NY, BA-NY should also provide floor plans of the central office within five days of denial so that the CLEC can ascertain if space is not available and can explore other possibilities.

Choice One, RCN and Sprint maintain that the FCC Order does not require the signing of confidentiality agreements. They claim that such agreements burden CLECs, and they should not be considered a condition for access. Choice One and RCN state that the requirement should be rejected until parties have an opportunity to evaluate and comment upon the actual agreement.

BA-NY states that its tariff is consistent with the FCC Order in that BA-NY will provide a CLEC with a central office tour within 10 days of denying a request for physical collocation from that CLEC. It will open tours to all interested CLECs provided such requests are coordinated by

Commission staff. If a central office has been declared space exempt, there is no further need for CLEC tours. BA-NY will inform the Commission of any affecting space changes and will provide a tour to the Commission upon request. If a CLEC wants to view floor plans of an office, such plans will be provided to it upon request at the time of the tour.

BA-NY further points out that the confidentiality requirement is reasonable and has been in place for years. When vendors enter into contracts with BA-NY, they must either sign a confidentiality agreement or one is included in the contract they have with BA-NY.

DISCUSSION

If a CLEC has been denied physical collocation space, that CLEC should be permitted to tour the central office in question. Because BA-NY is willing to provide tours to all interested CLECs, if the requests are coordinated by the Commission, that offer will be accepted.

Confidentiality agreements should only be required if such agreements are required from other non-BA-NY companies or vendors that have access to BA-NY's premises. Because BA-NY does require such agreements from its vendors, this is not an unreasonable requirement for CLECs. BA-NY's offer to provide a floor plan to CLECs at the time of the tour is a sufficient response to such demand.

Change from Virtual to Cageless

AT&T and Network Access believe that BA-NY's tariff should permit a CLEC that now has virtual collocation to switch to cageless collocation. AT&T believes this should be a seamless operation once the 10 foot buffer requirement is eliminated. Network Access sees no reason for the filing of an application to change from virtual to cageless or to pay \$5,000 in application and engineering fees.

BA-NY believes that the request to change virtual collocation to a cageless arrangement with no additional charges should be rejected. Existing virtual arrangements are placed in the same lineup as the company's equipment and sometimes throughout various locations in a central office. If a CLEC wants to convert its existing virtual arrangement into a cageless arrangement, the equipment would have to be moved so that it is not in a BA-NY lineup. Costs incurred for such a relocation, such as, costs to reconstruct the cables and power feeds, should be incurred by the CLECs.

DISCUSSION

The transfer from virtual to cageless will be permitted as long as the request is in writing (an expedited application would be acceptable) and any reasonable costs associated with the changeover are recovered from the CLEC. If these virtual collocation racks are interspersed among BA-NY racks and there are security concerns, additional security measures such as cameras, monitors or badges associated with monitoring equipment may be used. Spending time and effort to move a virtual arrangement from one area of a central office to another would be an unnecessary and time-consuming burden.

Cageless Security Rate and Non-Recurring Costs

ACI believes certain collocation rates should be set on a temporary basis, because they will be re-examined in Phase 4 of the Unbundled Network Elements (UNE) Proceeding (Elements 99 Proceeding). Choice One and RCN state that BA-NY's plan to submit a Cageless Security Rate at a later date is in violation of the FCC Order. Covad says that the FCC Order allowed the security card charge but that any additional charges would be unreasonable and disallowed by the FCC. Network Access believes that allowing unreasonable security will drive up the overall cost for cageless collocation so that rates will be the same as for physical collocation.

Sprint believes that the fees for site surveys, reports, applications and engineering are costly, and that, based on the information it has received, no cost justification or regulatory support exists for these excessive charges.

BA-NY states that the collocation rates should not be criticized, as the majority of the rates have been litigated and approved by the Commission. Any remaining rates will be litigated in the Elements 99 Proceeding.

DISCUSSION

Most of the rates questioned by the commentators were approved in Phase 3 of the UNE proceeding in Cases 95-C-0657, 94-C-0095, 91-C-1174 and 96-C-0036. The parties have not provided a basis for modifying the charges, and re-examination is not warranted at this time. The Cageless Security Rate and associated cost justification are to be presented in the Elements 99 Proceeding. This fact, in itself, does not justify temporary rates. Finally, BA-NY's imposition of security arrangements must be reasonable and may be reviewed upon CLEC complaint, or Staff may institute a review upon its own initiative.

Reserved Space

AT&T believes that there should be a limit on the amount of time BA-NY may reserve space but did not provide a suggested time-frame. Covad believes that if BA-NY has not used reserved space within a six-month period such space should be relinquished for CLECs to use for collocation.

According to BA-NY, space is reserved to accommodate three years growth. Prohibiting the company from reserving space could jeopardize service to end users. The company is also required to provide service upon reasonable request. To meet this obligation, BA-NY must plan expansions to meet expected growth several years in advance. The company has offered that if it denies collocation in a particular central

office, it will explain its future growth plans for that office during the exemption process, if requested by the Commission.

DISCUSSION

Currently, when BA-NY submits a construction budget, it forecasts when it estimates certain construction projects will be completed. These time frames have been acceptable in the past and appear to be reasonable for the future. BA-NY's proposal to supply future growth plans to the Commission when requesting an exemption is also reasonable; these plans should be provided by the company when requesting an exemption.

Installation Intervals

ACI, Choice One, Covad, Network Access and Sprint all maintain that the installation intervals of 76 days for secured locations and 105 days for unsecured locations are too long. They believe that the interval should be less than that for physical collocation, which requires more provisioning than cageless collocation does. The various time intervals suggested ranged from 30 days to 60 days, citing other states' experiences.

BA-NY states that the intervals for cageless collocation are reasonable and consistent with the Commission's prior rulings which approved a 76 day interval for physical collocation and a 105 day interval for virtual collocation. The amount of work to provide cageless collocation is essentially the same as for physical, that is, cabling, frame terminations and power feeds all have to be provided. The one difference is that a separate room does not have to be provisioned, but security measures may need to be implemented. In many respects, BA-NY states, installing security measures can be more time consuming than provisioning a separate room. According to BA-NY, the installation intervals for other ILECs are irrelevant, because New York

experiences a higher level of collocation demand than other regions.

DISCUSSION

The Commission has found reasonable the 76 business day interval for a physical collocation installation and 105 business days for the installation of virtual collocation.^{1/} No study has established the minimum time interval needed for the installation of cageless collocation. While there are similarities between virtual and cageless collocation -- both would be physically located in the same area of a central office -- the equipment on a virtual collocation rack is owned and maintained by BA-NY. In addition, this 105 day interval includes the testing of lines before actual start-up of the virtual collocation arrangement. The equipment associated with cageless collocation would be installed, owned and maintained by a CLEC. Therefore, BA-NY would require less time for the establishment of cageless collocation. The installation interval for cageless collocation will be the shorter of the two established intervals, 76 business days. BA-NY shall modify its tariff accordingly.

Escort Service, Security, and Security Training

ACI, Choice One, Covad and RCN all believe that the tariff requirements that an escort be used when other security measures are not in place or when a CLEC representative needs access to a manhole or vault goes beyond what is required in the FCC Order. ACI also comments, that while there will be no charge for an escort, the wait for an escort does cost ACI time and money, as it could delay clearing a repair problem and cause a financial burden, because ACI pays customers when they are out of service. Covad believes that BA-NY should not be able to restrict the availability of cageless collocation

^{1/} Case Nos. 95-C-0657, 94-C-0095, 91-C-1174 and 96-C-0036, "Order Directing Tariff Changes for Non-Price Terms and

based on security concerns, if a form of security is already in place in a particular central office. In addition, ACI believes that the FCC Order prohibits BA-NY from imposing any kind of training requirement on a CLEC as a security measure.

Several CLECs criticize the requirement that BA-NY be notified prior to dispatching a CLEC employee to a BA-NY central office. BA-NY states that the CLEC does have to call ahead but does not have to wait for the BA-NY employee to arrive before entering the central office. The company employee would be there to accompany and observe the CLEC technician. The company also claims it needs this advance warning so it knows who is in its central office. Thus, BA-NY maintains, this is a notification provision, not an escort provision. BA-NY claims that its security concerns are not just theoretical, as several security issues have arisen concerning physical collocation.

The CLECs also object to escorted access to a cageless area before security measures are fully installed. BA-NY contends that this escorted access will be free and will be done so CLECs can start installing their equipment (assuming the other network components are provisioned), even though full security measures are not in place.

Additionally, CLECs object to the escort requirement for areas outside a collocation area, such as a manhole or vault. BA-NY believes that the FCC Order allows CLECs to access their equipment 24 hours/day, seven days/week without a security escort, but the Order does not prohibit escorts to areas outside the collocation arrangement, such as a manhole or vault. BA-NY states that if it had to install security measures throughout an entire central office, it could be cost prohibitive.

BA-NY believes, that if it determines that one security measure fails to protect its network adequately, it may then install additional security measures. It believes that the security measures set forth in the FCC Order are not mutually exclusive. Also, the security training requirements that BA-NY is imposing upon the CLECs are the same security training requirements that it imposes upon itself. In addition, the CLECs have the option of providing their own training, if it is approved by BA-NY.

DISCUSSION

The determining factors here are whether BA-NY also requires vendors to be escorted into the company's locations and whether the vendors have to undergo security training before entering BA-NY's facilities. According to information provided by the company, in the first instance, vendors are escorted to the area within which they are to work, but an escort does not stay with them. For subsequent visits, vendors sign in to the floor they will be working on, but no escort accompanies them. These vendors do wear identification badges. On that basis, escorts may be required for initial CLEC visits, but not on subsequent visits, unless no form of security is reasonably available in the central office.

Notification to BA-NY that a CLEC employee has been dispatched to a BA-NY central office is reasonable. However, the CLEC technician may not be required to await the arrival of a BA-NY employee before entering the central office.

Security training will be offered by BA-NY or the company will advise CLECs what type of training should be provided. This is a reasonable requirement, as safety and security is a concern, and security training will assist CLEC personnel to be cognizant of proper safety procedures while in a BA-NY central office.

SCOPE Offering

ACI believes that BA-NY's offering Secured Collocation Open Physical Environment (SCOPE) does not comport with the FCC Order on physical collocation in that it requires a Shared Point of Termination (SPOT) Bay, which it claims needlessly adds to a CLEC's expenses. To ACI, a SPOT Bay is merely an intermediate point of interconnection between BA-NY and the CLEC in violation of the FCC Order. ACI believes that a direct connection to BA-NY's Main Distribution Frame (MDF) is technically feasible, rendering a SPOT Bay unnecessary.

BA-NY maintains that its SCOPE offering is entirely proper as is the requirement of SPOT or Point of Termination (POT) Bay. The company believes these are essential demarcation points between BA-NY's and the CLEC's equipment. Without these demarcation points, BA-NY and the CLEC will be unable to determine whether a problem lies on the BA-NY side or the CLEC side. SCOPE is one of several different types of collocation. If a CLEC wants to avoid a SPOT or POT Bay, BA-NY says it can utilize cageless collocation.

DISCUSSION

SCOPE allows CLECs to collocate in a secure, separate area of the central office and is offered as an option to physical, virtual, cageless or shared collocation arrangements. In provisioning the SCOPE area, BA-NY installs a SPOT bay to allow cabling from the MDF to terminate at a single location where BA-NY will install individual terminal blocks. This is a reasonable arrangement allowing the points of demarcation for the CLECs to be in one area and facilitating access by BA-NY for installation and test purposes. If a CLEC does not want to use a SPOT bay, a CLEC may choose a cageless or physical collocation arrangement and have its own point of termination within the CLEC equipment bay.

Technical Standards and Equipment Issues

According to Covad, the FCC states that if equipment does not satisfy NEBS standards but is used by ILECs, CLECs may use the same equipment as the ILEC. In addition, CLECs should have a right to a list of the equipment that ILECs have installed in their central offices. Finally, NEBS standards that relate to reliability may not be grounds to impose denial of collocation. Sprint states the tariff does not provide a notice interval for changes to the company's list of approved products. This lack of notification could put a CLEC in the position of installing equipment only to find that it must be removed, because it is not on a list of approved equipment. Sprint believes that BA-NY should provide 90 days notice when there are equipment changes.

Choice One and RCN believe that BA-NY should not be permitted to designate which cageless collocation space a CLEC should occupy claiming that the FCC Order permits CLECs to collocate in any unused space. Instead, Choice One and RCN prefer that the parties negotiate which space is to be used for cageless collocation and that, if necessary, the Commission be ready to mediate and arbitrate any unresolved disputes.

BA-NY states that it generally requires CLEC equipment to meet NEBS Level 1 safety standards, as well as a few additional safety requirements in NEBS - RNSA-NEB-95-0003.

The CLECs may also use the same equipment that BA-NY has used in its central offices for a period of five years or more. The company does not require a CLEC to meet reliability or performance standards. BA-NY is only required to provide a list of equipment after it rejects a CLEC's request to collocate equipment that does not meet NEBS safety requirements in a particular central office. If, however, the equipment had been previously approved and now becomes non-compliant, the company will provide CLECs 90 days notice, unless the change is due to an emergency which renders notice

impossible.

BA-NY believes that it is the only party in the position to make efficient decisions regarding where to place collocators. Negotiating with each CLEC regarding the location of equipment would require a massive coordinated effort of each CLEC regarding the location of equipment and would lead to disagreements among the CLECs. The FCC Order requires that CLECs be given the space they need, not that they be permitted to choose their own space. In BA-NY's view, the CLECs have not demonstrated what benefit they would obtain by choosing their own space, and they would pay the same rate regardless of where they were located.

DISCUSSION

BA-NY's filing comports with the FCC Order regarding equipment requirements and the provision of a list of equipment to affected CLECs. Moreover, the company's offer to provide 90 days' notice of non-compliant equipment is reasonable, responds to Sprint's concern and should be implemented. BA-NY's position on the location of cageless collocation is also reasonable. If, however, disagreements arise regarding where a CLEC may establish cageless collocation, the CLEC and/or BA-NY may request the Commission to mediate or arbitrate the issue.

Miscellaneous Issues-Comments and Discussion

Commentors raised various issues relating to pre-wired frames, changes to procedures and rules, obsolete equipment, product changes, vendor approval and adjacent collocation.

Sprint states that the requirement that a bona fide request be made for the installation of a pre-wired frame only increases the interval for interconnection and collocation and is contrary to the policies and objectives of the FCC Order. BA-NY claims that, to date, no CLEC has requested or expressed

an interest to install pre-wired frames. BA-NY believes that a bona fide request process is appropriate at this time. With the information presented, it is unclear that the requirement of a bona fide request before installing a pre-wired frame would increase the interval for interconnection and collocation and such requirement will not be disturbed at this time.

ACI objects to BA-NY's ability to make changes to its procedures and rules regarding collocation arrangements without consultation with the CLECs or review by the Commission. BA-NY states that it is in the best position to know when changes need to be made to protect its own facilities and equipment. The company further states that after a CLEC receives notice of a change, it can voice its dissatisfaction with the company or file a complaint with the Commission. The tariff language that is being questioned by ACI relates to rules of conduct that apply to telephone company personnel, vendors and CLECs. Written notice will be provided to the CLECs of such changes. If CLECs are dissatisfied, they can, as BA-NY stated, file a complaint with the Commission.

Covad believes that BA-NY should have a policy of removing obsolete equipment before a CLEC or the Commission institutes a request for its removal, so there is more room for cageless collocation. BA-NY has stated it will remove obsolete equipment when no space is available to accommodate a CLEC's request for collocation. BA-NY claims to remove obsolete equipment when conditions warrant. Removal of obsolete equipment when there are no space concerns in a particular central office is unnecessary. But, to avoid unnecessary delay, the company should initiate equipment removal when it becomes reasonably clear that a central office is nearing the point of space exhaustion.

Covad states that because BA-NY requires use of approved vendors, there should be a process in place to obtain

vendor approval. This is especially important to Covad, as the vendors it uses are not currently approved. BA-NY states that it already has a vendor approval process in place, with details of the process available upon request. In addition, the list of approved vendors currently appears in the CLEC handbook which is on the company's web page. According to the company, some of the CLECs have recommended additional vendors. Such vendors, if approved, should be added to the approved list. Details of the approval process should be added to the web site, so that information on the process is readily accessible to all interested parties.

ACI believes that BA-NY is in violation of the FCC Order when it allows adjacent collocation only when both physical and virtual collocation space are exhausted. According to ACI, adjacent collocation will never be available, because BA-NY has only rarely said that virtual collocation is unavailable. BA-NY states that the FCC Order only requires that adjacent collocation be available when no space is available in a central office. The FCC Order requires that an ILEC permit adjacent collocation when space is legitimately exhausted in an ILEC premise. Therefore, the company is correct.

CONCLUSION

BA-NY will be directed to refile its collocation tariffs, the details of which are discussed above and modified as described therein. The revised tariff filing must be made within 10 days of the issuance of this order. Newspaper publication under Section 92(2) of the Public Service Law is waived.

The Commission orders:

1. Within ten days of the issuance of this order, Bell Atlantic-New York shall file revised tariff schedules for PSC No. 914, so as to comply with the determinations set forth in this order.

CASES 99-C-0715 and 95-C-0657

2. The requirement of Section 92(2) of the Public Service Law as to newspaper publication is waived.

3. These proceedings are continued.

By the Commission,

(SIGNED)

DEBRA RENNER
Acting Secretary

EXHIBIT NO. _____

DOCKET NOS.: 981834-TP and 990321-TP

WITNESS: Stip - 1

PARTY: Sprint

DESCRIPTION:

1. Responses to Staff's 1st Set of Interrogatories,
Numbers 1-6.

PROFFERING PARTY: STAFF

I.D. # Stip-1

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET NO. 981834-TP ^{990321-TP} EXHIBIT NO. 2
COMPANY/ PSC Staff
WITNESS: 1-12-2000
DATE 1-12-2000

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Competitive)
Carriers for Commission action to)
support local competition in)
BellSouth Telecommunications,)
Inc.'s service territory)

Docket No. 981834-TP

In re: Petition of ACI Corp.)
d/b/a Accelerated Connections,)
Inc. for generic investigation to)
ensure that BellSouth)
Telecommunications, Inc., Sprint-)
Florida, Incorporated, and GTE)
Florida Incorporated comply with)
local exchange carriers with)
flexible, timely, and cost-)
efficient physical colocation.)

Docket No. 990321-TP

Filed: December 27, 1999

SPRINT'S ANSWERS TO STAFF'S FIRST SET OF INTERROGATORIES

Pursuant to Rule 28-106.206, Florida Administrative Code, and Rule 1.340, Florida Rules of Civil Procedure, Sprint-Florida, Incorporated hereby provides the following answers to Staff's First Set of Interrogatories.

REQUEST: For purposes of the following request, please refer to Sprint witness Hunsucker's direct testimony, page 16, lines 1-14.

- a) Please explain why a 12-month period of reserve is preferable over another period of time.

RESPONSE: The objective of a reservation time period is to allow all LECs the ability to reserve space for forecasted growth. Given the nascency of local competition (especially for residential customers) and the deployment of advanced services, it is very difficult to project growth/demand beyond a twelve-month window. While LECs certainly employ longer planning periods, that is exactly what that period of time is - a planning period. Generally, true funding commitments are not made for two to three year time periods and if they are, they are subject to change in the out-years as market plans change. Sprint believes that a twelve-month window is a much more certain period of time than twenty-four or thirty-six months as proposed by other parties. Floor space is a precious commodity that is a requirement for a facilities-based ALEC to enter the market and as such, a shorter period of time is preferable over longer periods of time.

INFORMATION PROVIDED BY: Michael R. Hunsucker
Director - Regulatory Policy
4220 Shawnee Mission Parkway
Fairway, Kansas 66205

REQUEST: b) Please define the phrase "appropriate collocation charges", and explain its relevance.

RESPONSE: Sprint has advocated a position that ALECs should not be required to pay any collocation charges for being allowed to reserve space in an ILEC premise. Sprint believes that the ILEC incurs no incremental costs by allowing an ALEC to reserve unused space, therefore, there is no cost basis for applying collocation charges. However, once all the unused space in an ILEC premise has been taken up through space reservation and another ALEC requires space to enter the market, Sprint believes that the ALECs currently reserving space should be required to make a financial commitment to their respective reserved space. The term "appropriate collocation charges" refers to the various elements of collocation that should be charged to the ALEC. Sprint believes that (at the appropriate time as discussed above), the ALEC should pay the application fee and the floor space charge for the amount of space reserved. Other collocation charges (e.g., cage construction, cross-connects, power, etc.) should not be charged until the actual work involved in the remaining elements are incurred by the ILEC.

INFORMATION PROVIDED BY: Michael R. Hunsucker
Director – Regulatory Policy
4220 Shawnee Mission Parkway
Fairway, Kansas 66205

REQUEST: c) At lines 1-6, the witness indicates that ALECs should begin paying the appropriate collocation charges for reserved space when the demand for available collocation has exceeded a central office's capabilities. Please explain whether ILECs are required to pay for the space occupied by their own obsolete or not-in-use equipment in a central office that has no available collocation space. If not, why not?

RESPONSE: Typically, ILECs do not pay for the space occupied by obsolete or unused equipment but they do incur the costs associated with the space used to occupy obsolete or unused equipment. These are the same costs that should be included in the development of floor space charges to be assessed to ALECs. This places the ALEC at parity with the costs incurred by the ILEC.

INFORMATION PROVIDED BY: Michael R. Hunsucker
Director - Regulatory Policy
4220 Shawnee Mission Parkway
Fairway, Kansas 66205

REQUEST: d) At lines 7-14, the witness discusses the implementation of appropriate collocation charges for ALECs and the requirement for them to occupy the reserved space within six months. Please explain whether ILEC should be held to these same requirements. If not, why not?

RESPONSE: No, the intent of this provision in the proposed guidelines for space reservation is intended to prevent the warehousing of unused space by collocating telecommunications carriers consistent with FCC Rule 51.323(f)(6). The FCC rules explicitly limit the restriction on warehousing of unused space to collocating telecommunications carriers. Additionally, ILECs bear the obligation of carrier of last resort in the provision of universal services to end users. Affording ILECs an additional period of time is reasonable to ensure that universal service is provided by the ILEC.

INFORMATION PROVIDED BY: Michael R. Hunsucker
Director – Regulatory Policy
4220 Shawnee Mission Parkway
Fairway, Kansas 66205

REQUEST: 2. For purposes of the following request, please refer to Sprint witness Hunsucker's rebuttal testimony, page 12, lines 10-20. Please define the term "administrative (non-essential) employees."

RESPONSE: "Administrative (non-essential) employees" are those employees that are not essential to the central office functions (e.g., switching, transmission, power, etc.) being performed in the associated premise. This could include personnel performing such functions as marketing, sales, governmental affairs, etc. that are not required to be located in a premise to provide technical or operational functions associated with the central office.

INFORMATION PROVIDED BY: Michael R. Hunsucker
Director – Regulatory Policy
4220 Shawnee Mission Parkway
Fairway, Kansas 66205

REQUEST: 3. For purposes of the following request, please refer to Sprint witness Hunsucker's rebuttal testimony, page 12, at lines 16–20, where the witness stated, "Sprint has also proposed that ILECs should only be able to recover the costs of the relocation based on an apportionment of the relocation costs as a percentage of the total square footage relocation cost."

a) Please explain whether any other methods of cost recovery for collocation [were] considered.

RESPONSE: As it relates to the recovery of relocation costs, Sprint did not consider any other methods of cost recovery. Sprint believes that its method accomplishes two important goals associated with the relocation of administrative (non-essential) employees; 1) ILECs should be able to recover reasonable costs of relocating administrative (non-essential) employees and 2) there has to be a mechanism in place that limits the amount of discretionary and subsequent costs that ILECs have to place on ALECs entering the market.

INFORMATION PROVIDED BY: Michael R. Hunsucker
Director – Regulatory Policy
4220 Shawnee Mission Parkway
Fairway, Kansas 66205

Sprint - Florida, Incorporated
Docket No. 981 834-TP and 990321-TP
Staff's First Set of Interrogatories
December 27, 1999
Item No. 3 b

REQUEST: b) If the answer to (a) is affirmative, please identify and discuss the other methods of cost recovery considered by Sprint.

RESPONSE: See response to 3(a) above.

INFORMATION PROVIDED BY: Michael R. Hunsucker
Director - Regulatory Policy
4220 Shawnee Mission Parkway
Fairway, Kansas 66205

Sprint - Florida, Incorporated
Docket No. 981834-TP and 990321-TP
Staff's First Set of Interrogatories
December 27, 1999
Item No. 3 c

REQUEST: c) Explain why the methods discussed in (b) were not acceptable.

RESPONSE: See response to 3(a) above.

INFORMATION PROVIDED BY: Michael R. Hunsucker
Director - Regulatory Policy
4220 Shawnee Mission Parkway
Fairway, Kansas 66205

Sprint – Florida, Incorporated
Docket No. 981834-TP and 990321-TP
Staff's First Set of Interrogatories
December 27, 1999
Item No. 3 d

REQUEST: d) Please explain why using a square footage method is preferable over other methods that were considered.

RESPONSE: See response to 3(a) above.

INFORMATION PROVIDED BY: Michael R. Hunsucker
Director – Regulatory Policy
4220 Shawnee Mission Parkway
Fairway, Kansas 66205

REQUEST: 4. Once an ALEC has submitted a complete and accurate initial application for physical collocation, what specific information must the ILEC provide to the ALEC in order for the ALEC to submit a Firm Order for physical collocation?

RESPONSE: It is customary for the ILEC to provide information regarding availability of space, relevant engineering information and pricing before an ALEC submits a Firm Order. Sprint's current ILEC practice calls for this information to be provided within 30 calendar days of receipt of a complete and accurate initial application for physical collocation.

However, from an ILEC standpoint, if there is space available to accommodate the collocation requested, the information provided by the ALEC in its collocation application should be adequate for the ILEC to proceed with a Firm Order. Accordingly, the only information that the ILEC must provide to the ALEC in order for the ALEC to submit a Firm Order for physical collocation is information confirming the availability of the requested space.

If the ALEC submitted a Firm Order immediately following notification of space availability, detailed engineering work that is typically done in the 11-30 calendar days following receipt of an application would not yet be completed. Because this work is normally accomplished before the 60 or 90-day provisioning interval starts, applications requiring consideration of complex situations (e.g., a very full central office or special power requirements) may require that the provisioning interval be extended accordingly. Such circumstances should be discussed with the requesting ALEC such that appropriate intervals can be determined.

INFORMATION PROVIDED BY: Melissa L. Closz
Director – Local Market Development
555 Lake Border Drive
Apopka, Florida 32703

REQUEST: 5. Please explain, in detail, whether it is necessary for an ALEC to submit an application if the ALEC wishes to convert from virtual collocation to physical collocation.

RESPONSE: To further expand upon the direct testimony of Melissa Closz at page 10, lines 11 through 25 and page 11, lines 1 through 6, if an ALEC wishes to convert from virtual collocation to cageless physical collocation, and there are no changes requested to that virtual collocation arrangement, it is not necessary for the ALEC to submit an application to make this change. Sprint's current ILEC practice permits the ALEC to notify Sprint in writing of its desire to convert a virtual collocation arrangement to cageless physical collocation. Sprint's Field Service Manager responds with a letter detailing the time frame to complete the conversion, which mostly involves billing changes, and describes the changes that the customer will see in its billing. In this scenario, the application is not required because there are no physical changes to the collocation arrangement being requested.

If there are changes in the collocation arrangement requested when the ALEC requests a conversion from virtual collocation to cageless physical collocation, the ALEC should submit an application for cageless physical collocation. The ILEC's standard provisioning terms, conditions and intervals for cageless physical collocation would be followed because space and engineering review work comparable to that required for a new cageless physical collocation arrangement would be required.

Also, if the virtual collocation arrangement that has been requested to convert to cageless physical collocation comprises less than a full bay, the ILEC may choose to move the arrangement to another bay. If the ILEC elects to move the arrangement, the ALEC should submit an application for cageless physical collocation since there will be changes made to the collocation arrangement.

If an ALEC wishes to convert from virtual collocation to caged physical collocation, the ALEC must submit an application for caged physical collocation since a new space preparation work effort will be required.

INFORMATION PROVIDED BY: Melissa L. Closz
Director – Local Market Development
555 Lake Border Drive
Apopka, Florida 32703

REQUEST: 6. Please identify what potential problems, if any, could occur when any changes, including conversions from virtual to physical collocation, are made to existing collocation space. For each problem identified, please explain what effect, if any, the problem might have on the response and implementation intervals for the proposed changes.

RESPONSE: In general, changes to existing collocation arrangements are processed in the same fashion as the initial applications, so there are no unique problems that changes would pose that would foreseeably affect response and implementation intervals.

Problems that may potentially occur when making changes to existing collocation space, include but are not limited to, space exhaustion, power or HVAC infrastructure inadequacy and inadequate cabling.

In space exhaustion situations, the ILEC may not be able to accommodate the requested change in the existing arrangement due to inadequate space. In this scenario, the collocation arrangement may need to be moved to accommodate the request and the implementation interval would be set consistent with provisioning for "new" arrangements. If the central office space is entirely exhausted, the response interval should not be impacted, but no implementation interval may be set. An exception to this would be where there were efforts underway to relieve the space shortage such that an implementation interval could be set. Such an interval may be longer than normal and would need to be discussed with the requesting ALEC.

In situations where there are ILEC infrastructure improvements required, such as power or HVAC, implementation intervals may be impacted. Such requirements should be discussed with the requesting ALEC so that appropriate intervals may be established.

Inadequate cabling may require the addition of new cable and/or cable racking. This may or may not impact the implementation intervals depending upon the extent of the work required. Again, such requirements should be discussed with the requesting ALEC and be factored into the determination of the implementation interval.

The issues referenced above would also apply when converting from virtual to caged or cageless physical collocation.

INFORMATION PROVIDED BY: Melissa L. Closz
Director - Local Market Development
555 Lake Border Drive
Apopka, Florida 32703

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF SEMINOLE

BEFORE ME, the undersigned authority, personally appeared MELISSA CLOSZ, who
deposed and stated that she provided the answers to interrogatories 4, 5, + 6,
served on Sprint by the Staff of the Florida Public Service Commission on December 7,
1999 and that the responses are true and correct to the best of her information and belief.

DATED at Apopka, Florida, this 22 day

of December 1999

Melissa L. Closz

Sworn to and subscribed before me this 22 of December 1999.

Loretta Richards

NOTARY PUBLIC



State of FLORIDA at Large

My Commission Expires: 09/28/2002

AFFIDAVIT

STATE OF Missouri

COUNTY OF Jackson

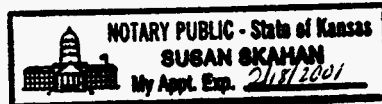
BEFORE ME, the undersigned authority, personally appeared Michael R. Hunsucker, who deposed and stated that he provided the answers to interrogatories 1 a through d, 2 and 3, served on Sprint by the Staff of the Florida Public Service Commission on December 7, 1999 and that the responses are true and correct to the best of his information and belief.

Sworn to and subscribed before me this 22nd day of December 1999.

Susan Skahan
NOTARY PUBLIC

State of Kansas at Large

My Commission Expires: 2/18/2001



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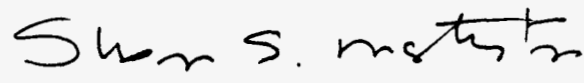
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Susan S. Masterton

CERTIFICATE OF SERVICE
DOCKET NOS. 981834-TP & 990321-TP

I HEREBY CERTIFY that a true and correct copy of the foregoing was served by U.S. Mail this 27th day of December, 1999 to the following:

Nancy B. White
C/o Nancy H. Sims
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Florida Cable Telecommunications
Association, Incorporated
Michael A. Gross
310 North Monroe Street
Tallahassee, Florida 32301

Accelerated Connections, Inc.
7337 South Revere Parkway
Englewood, CO 80112

GTE Florida Incorporated
Ms. Beverly Menard
C/o Margo B. Hammar
106 East College Avenue
Suite 810
Tallahassee, Florida 32301

Hopping Law Firm
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Intermedia Communications
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Annapolis Junction, MD 20701

EXHIBIT NO. _____

DOCKET NOS.: 981834-TP and 990321-TP

WITNESS: Stip - 2

PARTY: MGC Communications, Inc.

DESCRIPTION:

1. Responses to Staff's 1st Set of Interrogatories, Numbers 1-4.

PROFFERING PARTY: STAFF

I.D. # Stip-2

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET
NO. 981834 & 990321 ^{1-TP} EXHIBIT NO. 3
COMPANY/ PSC Staff
WITNESS: 1-12-2000
DATE: 1-12-2000

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Competitive Carriers for
Commission action to support local competition
in BellSouth Telecommunications, Inc.'s
service territory.

Docket No. 981834-TP

In re: Petition of ACI Corp. d/b/a Accelerated
Connections, Inc. for generic investigation to
ensure that BellSouth Telecommunications, Inc.,
Sprint-Florida, Incorporated, and GTE Florida
Incorporated comply with obligation to provide
alternative local exchange carriers with flexible,
timely, and cost-efficient physical collocation.

Docket No. 990321-TP

Order No. PSC-99-1991-PCO-TP

Issued: October 12, 1999

Filed: December 23, 1999

**ANSWERS OF MGC COMMUNICATIONS, INC.
TO FIRST SET OF INTERROGATORIES FROM STAFF (1-4)**

1. **For purposes of the following request, please refer to MGC Communication witness Levy's direct testimony, page 15, lines 23-28 and page 15, lines 1-3.**
 - a. **Please explain why neither ILECs nor ALECs should be allowed to reserve collocation space.**

Permitting the ILEC or ALECs to reserve collocation space results in complications and more delays in entering the market or expanding a company's presence. Collocation space is very valuable. Therefore, the ILEC and ALECs want to be able to reserve space for future need, fearing that when they actually want to utilize such space, it will no longer be available. However, reserving space results in more inefficient allocation of collocation space. Space should be granted only when it will be used by the ILEC or the ALEC within a specific narrow time frame for providing telecommunications services. This would prevent ALECs and the ILEC from slowing the entry into the market of new competitors.

- b. The witness indicates that if a collocation reservation policy is necessary, it should not favor an ILEC and it should be applied neutrally to all interested collocators. Please identify and explain how a neutral space reservation policy should be structured.**

A space reservation policy should not favor the ILEC or any particular ALEC. This can best be accomplished if all unused space in a central office, both space ready for telecommunications equipment and space that requires improvements in order to house telecommunications equipment, is allocated as potentially reservable by interested

parties. The parties can then make their requests to the ILEC for space in 100 square foot increments (or smaller). Under this scenario, the ILEC would also have to make a reservation of space. The reservation of space should last a certain amount of time, for example, 6 months. At that time, the reserving party would have the right to either commit itself to use of the space or lose that particular reserved space. To commit itself to use of the space, an ALEC would be required to submit monies and to install equipment for interconnection within a certain time frame after the space was prepared by the ILEC. For the ILEC, it would have to install its own equipment and put it in service within the same amount of time. The PSC could be the arbiter in the event that an ALEC chose to challenge any space decisions made by the ILEC.

2. For purposes of the following request, please refer to MGC Communication witness Levy's direct testimony, page 20, lines 18-28 and page 21, lines 1-3.

a. Please define and clarify the term "improvements."

"Improvements" refers to any work done to the building that is required in order to permit the space to be used for telecommunications equipment. Examples could include the installation of security cameras, the installation of a new power plant, the removal of asbestos in a collocation area, etc.

b. At lines 25 and 26, the witness stated, "These costs should be entirely paid for by the ILEC. These costs enable the ILEC to generate revenue from wholesale customers." Please explain how non-recurring costs would be recovered through recurring/non-recurring charges to ALECs.

Non-recurring charges should be used for improvements to a central office that are not usable after any particular collocater vacates the premises. Examples would include cabling connecting the ALEC's cage and the ILEC for interconnection. All improvements that could be used for the benefit of other ALECs or the ILEC should be charged as a recurring charge. Examples would include the installation of a new power plant, the installation of security cameras, etc.

3. Please explain, in detail, whether it is necessary for an ALEC to submit an application if the LEC wishes to convert from virtual collocation to physical collocation.

No, assuming we are referring to a conversion from virtual to cageless collocation, which is often grouped under the physical collocation label. The only difference between virtual and cageless collocations is that the ALEC has 24 x 7 access to its equipment in cageless, but no access in a virtual collocation. Therefore, an application does not appear necessary. However, it may be necessary to advise the ILEC of an intended conversion. For example, in BellSouth virtual collocations, the ALEC actually sells the equipment which is placed in the virtual collocation to BellSouth. In the event the ALEC would convert to physical collocation or cageless collocation, arrangements would need to be made for the re-purchase of this equipment by the ALEC.

- 4. Please identify what potential problems, if any, could occur when any changes, including conversions from virtual to physical collocation, are made to existing collocation space. For each problem identified, please explain what effect, if any, the problem might have on the response and implementation intervals for the proposed changes.**

There are three (3) types of changes to collocation space that typically are requested by MGC:

- (1) Notification/Request to install additional equipment;
- (2) Request for additional DC power;
- (3) Request for additional DS0, DS1 and/or DS3 tie downs (also referred to as cross-connects).

There are many "potential" problems that could occur as a result of requests such as the above. However, the "problems" are typically either non-existent, minor or are issues that can be resolved with minimal effort and planning on the part of the ILEC. For example, placing additional equipment in a collocation cage will result in more heat dissipation. However, this "problem" is usually very easy to solve. In BellSouth physical collocation arrangements, where there is actually a room instead of a cage, the solution has been to open the HVAC dampers to allow more AC into the room. This "problem" could be described as either minor or non-existent.

Requesting additional tie-downs (DS0s, DS1s and/or DS3s) may require the ILEC to purchase and install additional equipment, such as jack fields or MDF (main distribution frame) terminal blocks. However, this equipment is readily available and of modest expense (especially compared to the "intelligent" components used by communications companies.). Such a request should not cause a "problem."

Requesting additional DC power could result in a problem that could delay the implementation interval. However, such a problem typically would result from the ILEC not having done sufficient planning.

In all cases, the application response interval should not change.

Responses to the above questions were provided by:

Andrew Levy, Director of Network Services – East
MGC Communications, Inc.
3301 N. Buffalo Drive
Las Vegas, NV 89129

MGC Communications, Inc.
By: Marilyn H. Ash, Associate Legal Counsel
3301 N. Buffalo Drive
Las Vegas, NV 89129
Telephone: 702/310-8461; Fax: 702/310-5689
E-mail: mash@mgcicorp.com

VERIFICATION

STATE OF NEVADA)
)
COUNTY OF CLARK) ss.

Before me, the undersigned authority, personally appeared ANDREW LEVY, who deposed and stated that the answers to the First Set of Interrogatories (Nos. 1-4) served on MGC Communications by the Staff in Docket Nos. 981834-TP and 990321-TP (Collocation) were prepared by him or at his request and he is informed that the responses contained therein are true and correct to the best of his information and belief.


Andrew Levy

Subscribed and sworn to before me
this 29 day of December, 1999.


Notary Public

EXHIBIT NO. _____

DOCKET NO.: 981834-TP and 990321-TP

WITNESS: Stip - 3

PARTY: Intermedia Communications, Inc.

DESCRIPTION:

1. Responses to Staff's 1st Set of Interrogatories, Numbers 1-6.

PROFFERING PARTY: STAFF

I.D. # Stip-3

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET
NO. 981834-TP 990321-TP EXHIBIT NO. 4
COMPANY/ PSC Staff
WITNESS: 1-12-2000
DATE: 1-12-2000

**BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION**

In re: Petition of Competitive Carriers for Commission)	DOCKET NO. 981834-TP
Action to Support Local Competition in BellSouth)	
Telecommunications, Inc.'s Service Territory.)	

In re: Petition of ACI Corp. d/b/a Accelerated)	DOCKET NO. 990321-TP
Connections, Inc. for Generic Investigation to Ensure)	
that BellSouth Telecommunications, Inc., Sprint-Florida,)	
Incorporated, and GTE Florida Incorporated Comply with)	
Obligation to Provide Alternative Local Exchange)	
Carriers with Flexible, Timely, and Cost-Efficient)	
Physical Collocation.)	

**RESPONSE OF INTERMEDIA COMMUNICATIONS INC.
TO STAFF'S FIRST SET OF INTERROGATORIES**

INTERMEDIA COMMUNICATIONS INC. ("Intermedia"), through its undersigned counsel, hereby responds to the Staff of the Florida Public Service Commission's (the "Staff") first set of interrogatories.

RESPONSES TO INTERROGATORIES

1. For purposes of the following request, please refer to Intermedia witness Strow's direct testimony, page 10, lines 4-15.

(a) Please define the term "planning horizon."

RESPONSE:

The term “planning horizon” was used by Ms. Strow in her direct testimony to refer to a three-year timeframe for which Ms. Strow believes the ILECs, including BellSouth, GTE, and Sprint, should provide a forecast of all anticipated collocation requirements.

(b) Please explain why the incumbent local exchange carriers (ILECs) should follow a 3-year planning horizon.

RESPONSE:

Intermedia believes that a three-year “planning horizon” would allow the ILECs and collocators to, among other things, determine overall potential collocation requirements and problems reasonably in advance of an exhaust situation.

(c) What should be the minimum amount of space available for collocation at an ILEC central office?

RESPONSE:

As Ms. Strow mentioned in her direct testimony, there should be sufficient space for at least two collocators at any given time at an ILEC central office.

(d) Referring specifically to lines 10-12, please identify what should be included in the plans to expand a central office.

RESPONSE:

At a minimum, the plan should include, among other things, a full description of the steps that are being taken or planned to be taken by the ILECs to increase available collocation space, the amount of space that will potentially be made available, and the location of the space.

2. For purposes of the following request, please refer to Intermedia witness Strow’s direct testimony, page 16, lines 18-22:

- (a) Please define the phrase “pro-rated basis.”

RESPONSE:

The phrase “pro-rated basis” was used by Ms. Strow in her direct testimony to refer to an arrangement under which Intermedia will be billed by the ILECs only for those collocation costs that are directly and solely attributable and allocable to it.

- (b) Please identify specifically which FCC orders are referred to be the witness as the “Collocation Orders.”

RESPONSE:

Ms. Strow referred to “the FCC’s Collocation Order,” not “Collocation Orders.” The “Collocation Order” to which Ms. Strow referred was the FCC’s decision in *The Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Docket No. 98-147, FCC 99-48, First Report and Order and Further Notice of Proposed Rulemaking, 14 FCC Rcd 4761, 15 CR 553, 1999 FCC LEXIS 1327 (1999)

3. For purposes of the following request, please refer to Intermedia witness Strow’s rebuttal testimony, page 17, lines 3-11.

- (a) Please define the phrase “anticipated demand.”

RESPONSE:

“Anticipated demand” was used by Ms. Strow in her rebuttal testimony to refer to potential consumer demand for its services. In other words, the decision to deploy facilities, including the decision to collocate, necessarily involves determining whether existing and potential demand for the ALEC’s services is adequate to warrant investment costs.

- (b) Please explain, in detail, why Intermedia believes that it is appropriate to base a decision to reserve space upon factors such as anticipated demand, potential expansion, and

traffic patterns, but that reliance on these same factors is an insufficient basis to proceed with cage installation at the time space is reserved.

RESPONSE:

As Ms. Strow pointed out in her rebuttal testimony, the determination of how much space, if any, should be reserved for *future* use is not an exact science. In other words, business requirements do change inasmuch as consumer demand is fickle. Intermedia does not believe that it should be required to expend scarce resources on anticipated requirements (*i.e.*, collocation cages) that could change.

4. For purposes of the following request, please refer to Intermedia witness Strow's direct testimony, page 14, line 15. Does the word "days" refer to business days or calendar days?

RESPONSE:

Business days.

5. Please explain, in detail, whether it is necessary for an alternative local exchange carrier (ALEC) to submit an application if the ALEC wishes to convert from virtual collocation to physical collocation.

RESPONSE:

An ALEC wishing to convert from virtual collocation to physical collocation should not be required to file a *full-blown* collocation application with the ILECs. Rather, a streamlined notice requirement should suffice.

6. Please identify what potential problems, if any, could occur when any changes, including conversions from virtual to physical collocation, are made to existing collocation

space. For each problem identified, please explain what effect, if any, the problem might have on the response and implementation intervals for the proposed changes.

RESPONSE:

Intermedia does not foresee any potential problems arising from conversions from virtual to physical collocation. As Ms. Strow stated in her testimony, because ALEC and ILEC equipment can be commingled, there is no need to relocate virtually collocated ALEC equipment even if it is in the same lineup as the ILEC equipment. Consequently, potential problems that generally attend equipment relocation and removal need not arise. Likewise, virtual-to-physical collocation conversions need not have any negative impact on response and implementation intervals.

Respectfully submitted,

INTERMEDIA COMMUNICATIONS INC.

By:



for Scott A. Sapperstein
INTERMEDIA COMMUNICATIONS INC.
3625 Queen Palm Drive
Tampa, Florida 33619
(813) 829-4093
(813) 829-4923 (facsimile)

Its Attorney

Dated: December 29, 1999

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing was served via U.S.

Mail this 29th day of December, 1999 to the following:

BellSouth Telecommunications, Inc.
Ms. Nancy H. Sims
150 South Monroe St., Suite 400
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Charles J. Pellegrini

**BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION**

In re: Petition of Competitive Carriers for Commission) DOCKET NO. 981834-TP
Action to Support Local Competition in BellSouth)
Telecommunications, Inc.'s Service Territory.)

In re: Petition of ACI Corp. d/b/a Accelerated) DOCKET NO. 990321-TP
Connections, Inc. for Generic Investigation to Ensure)
that BellSouth Telecommunications, Inc., Sprint-Florida,)
Incorporated, and GTE Florida Incorporated Comply with)
Obligation to Provide Alternative Local Exchange)
Carriers with Flexible, Timely, and Cost-Efficient)
Physical Collocation.)

**REVISED RESPONSE OF INTERMEDIA COMMUNICATIONS INC.
TO STAFF'S FIRST SET OF INTERROGATORIES**

INTERMEDIA COMMUNICATIONS INC. ("Intermedia"), through its undersigned counsel, hereby responds to the Staff of the Florida Public Service Commission's (the "Staff") first set of interrogatories.

RESPONSES TO INTERROGATORIES

1. For purposes of the following request, please refer to Intermedia witness Strow's direct testimony, page 10, lines 4-15.

(a) Please define the term "planning horizon."

RESPONSE:

The term "planning horizon" was used by Ms. Strow in her direct testimony to refer to a three-year timeframe for which Ms. Strow believes the ILECs, including BellSouth, GTE, and Sprint, should provide a forecast of all anticipated collocation requirements.

(b) Please explain why the incumbent local exchange carriers (ILECs) should follow a 3-year planning horizon.

RESPONSE:

Intermedia believes that a three-year "planning horizon" would allow the ILECs and collocators to, among other things, determine overall potential collocation requirements and problems reasonably in advance of an exhaust situation.

(c) What should be the minimum amount of space available for collocation at an ILEC central office?

RESPONSE:

As Ms. Strow mentioned in her direct testimony, there should be sufficient space for at least two collocators at any given time at an ILEC central office.

(d) Referring specifically to lines 10-12, please identify what should be included in the plans to expand a central office.

RESPONSE:

At a minimum, the plan should include, among other things, a full description of the steps that are being taken or planned to be taken by the ILECs to increase available collocation space, the amount of space that will potentially be made available, and the location of the space.

2. For purposes of the following request, please refer to Intermedia witness Strow's direct testimony, page 16, lines 18-22.

(a) Please define the phrase “pro-rated basis.”

RESPONSE:

The phrase “pro-rated basis” was used by Ms. Strow in her direct testimony to refer to an arrangement under which Intermedia will be billed by the ILECs only for those collocation costs that are directly and solely attributable and allocable to it.

(b) Please identify specifically which FCC orders are referred to be the witness as the “Collocation Orders.”

RESPONSE:

Ms. Strow referred to “the FCC’s Collocation Order,” not “Collocation Orders.” The “Collocation Order” to which Ms. Strow referred was the FCC’s decision in *The Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Docket No. 98-147, FCC 99-48, First Report and Order and Further Notice of Proposed Rulemaking, 14 FCC Rcd 4761, 15 CR 553, 1999 FCC LEXIS 1327 (1999)

3. For purposes of the following request, please refer to Intermedia witness Strow’s rebuttal testimony, page 17, lines 3-11.

(a) Please define the phrase “anticipated demand.”

RESPONSE:

“Anticipated demand” was used by Ms. Strow in her rebuttal testimony to refer to potential consumer demand for its services. In other words, the decision to deploy facilities, including the decision to collocate, necessarily involves determining whether existing and potential demand for the ALEC’s services is adequate to warrant investment costs.

(b) Please explain, in detail, why Intermedia believes that it is appropriate to base a decision to reserve space upon factors such as anticipated demand, potential expansion, and

traffic patterns, but that reliance on these same factors is an insufficient basis to proceed with cage installation at the time space is reserved.

RESPONSE:

As Ms. Strow pointed out in her rebuttal testimony, the determination of how much space, if any, should be reserved for *future* use is not an exact science. In other words, business requirements do change inasmuch as consumer demand is fickle. Intermedia does not believe that it should be required to expend scarce resources on anticipated requirements (*i.e.*, collocation cages) that could change.

4. For purposes of the following request, please refer to Intermedia witness Strow's direct testimony, page 14, line 15. Does the word "days" refer to business days or calendar days?

RESPONSE:

Calendar days.

5. Please explain, in detail, whether it is necessary for an alternative local exchange carrier (ALEC) to submit an application if the ALEC wishes to convert from virtual collocation to physical collocation.

RESPONSE:

An ALEC wishing to convert from virtual collocation to physical collocation should not be required to file a *full-blown* collocation application with the ILECs. Rather, a streamlined notice requirement should suffice.

6. Please identify what potential problems, if any, could occur when any changes, including conversions from virtual to physical collocation, are made to existing collocation

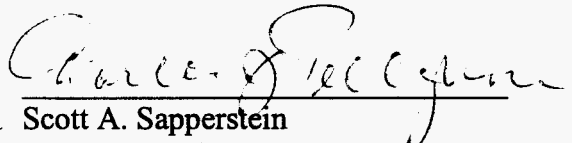
space. For each problem identified, please explain what effect, if any, the problem might have on the response and implementation intervals for the proposed changes.

RESPONSE:

Intermedia does not foresee any potential problems arising from conversions from virtual to physical collocation. As Ms. Strow stated in her testimony, because ALEC and ILEC equipment can be commingled, there is no need to relocate virtually collocated ALEC equipment even if it is in the same lineup as the ILEC equipment. Consequently, potential problems that generally attend equipment relocation and removal need not arise. Likewise, virtual-to-physical collocation conversions need not have any negative impact on response and implementation intervals.

Respectfully submitted,

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Its Attorney

Dated: January 13, 2000

EXHIBIT NO. _____

DOCKET NO.: 981834-TP and 990321-TP

WITNESS: Stip - 4

PARTY: MCI WorldCom

DESCRIPTION:

1. Responses to Staff's 1st Set of Interrogatories, Numbers 1-3.

PROFFERING PARTY: STAFF

I.D. # Stip-4

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET
NO. 981834 & 990321-TP EXHIBIT NO. 5
COMPANY/
WITNESS: PSC Staff
DATE 1-12-2000

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Competitive)
Carriers for Commission action)
to support local competition in) Docket No. 981834-TP
BellSouth Telecommunications,)
Inc.'s service territory)
_____)

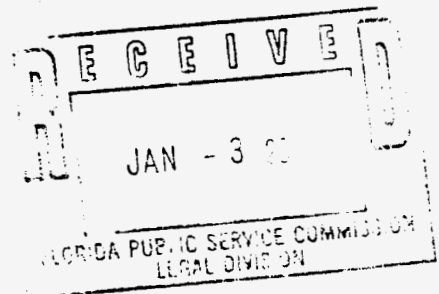
In re: Petition of ACI Corp.)
d/b/a Accelerated Connections,)
Inc. for generic investigation)
to ensure that BellSouth) Docket No. 990321-TP
Telecommunications, Inc.,)
Sprint-Florida, Incorporated,)
and GTE Florida Incorporated)
comply with obligation to)
provide alternative local) Filed: January 3, 2000
exchange carriers with flexible,)
timely, and cost-efficient)
physical collocation)
_____)

MCI WORLDCom'S RESPONSE TO
STAFF'S FIRST SET OF INTERROGATORIES (Nos. 1-3)

MCI WorldCom, Inc. hereby responds to the Staff's
First Set of Interrogatories.

The responses to these interrogatories were provided
by:

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RESPONSES

1. For purposes of the following request, please refer to MCI WorldCom witness Martinez' direct testimony, page 14, lines 16-24.

(a) Please explain why 2 years should be the maximum time frame for reserving central office space.

Response: "Current year plus 1," is a widely accepted norm for forecasting and planned servicing. The Accredited Standards Committee "T1 - Telecommunications" standard, as submitted to ANSI in section 1.3.2, states that "planned servicing" is the process of adding and removing circuits to meet the forecasted requirements of the future design period while "forecasting" is the process of estimating circuit requirements for the future design period (year). This industry standard is reflected in the forecasting information that MCI WorldCom (Long Distance) provides to BellSouth which is current year plus 1.

Moreover, Attachment IV of the MCI Metro interconnection agreement with BellSouth requires the companies to provide yearly forecasted trunk quantities for current year plus one. Also, the direct testimony of the BellSouth witnesses in the collocation waiver dockets states that BellSouth uses current year plus one in determining space requirements. (See the testimony of Bolden, Perez, and Forness, filed on April 9, 1999, in Dockets Nos. 980946-TL, 980947-TL, 981011-TL, 981012-TL and 981250-TL)

(b) Please define and explain the phrase "building relief date."

Response: "Building relief date" is a forecasted date by which, if current forecasted growth continues, the building space will be completely used and additional equipment can not be added. Typically, the building relief date is a date by which the total usable space will be exhausted, after accounting for the removal of obsolete or unused equipment and non-essential personnel. As such, it represents the date by which an addition must

be made to the building or the date by which a new building must be built and the switching functions transferred to this building in order to serve the area.

2. Please explain, in detail, whether it is necessary for an ALEC to submit an application if the ALEC wishes to convert from virtual collocation to physical collocation.

Response: Yes. First, it is necessary for an ALEC to submit an application when converting from a virtual collocation space to a caged physical collocation space. Virtual collocation is, by design, equipment installed by the incumbent in equipment line-ups of similarly situated equipment. From a power and HVAC perspective, the requirements for this equipment are integrated into existing infrastructure. In addition, the application for physical collocation requires a forecast of the total power and HVAC requirements to accommodate future growth. This must be designed and built at the new location.

There are, however, two scenarios associated with moving from virtual collocation to caged physical collocation. In the first scenario, the ALEC originally had requested caged physical but space was not available. In the second scenario, the ALEC originally had requested virtual but now requires caged physical. Both scenarios would require a new application if the ALEC wants to convert virtual to physical; however, the cost of the application would be different for each. In the first scenario, the ILEC already has received the request but was not able to accommodate the ALEC. This application is merely a confirmation that the ALEC still requires the space and, since nothing has changed, the preliminary configurations have already been evaluated. In the second scenario, the incumbent has not had the opportunity to evaluate and cost the requirements needed by the ALEC.

Second, it is conceivable that an ALEC would convert from virtual to physical collocation but the equipment would remain where it is. In this case an application is still required, but only to convey the change of relationship to the incumbent, specifically with respect to the maintenance of the equipment. A different rate for this type of application would be applicable.

Accordingly, an ALEC would always be required to submit an application if it wanted to convert from virtual collocation to physical collocation. At a minimum, the application would represent the transfer of ownership and maintenance from the incumbent to the ALEC and would signal the start date for the new physical collocation rates to begin.

3. Please identify what potential problems, if any, could occur when any changes, including conversions from virtual to physical collocation, are made to existing collocation space. For each problem identified, please explain what effect, if any, the problem might have on the response and implementation intervals for the proposed changes.

Response: There are three types of changes that could occur to existing physical collocation space.

- Changes which require expansion of the original space. In this case, the forms and fees for "subsequent requests" should apply, and the application should be subject to standard collocation intervals.
- Changes within the original space which increase the power or HVAC requirements above the ALEC's original collocation application. In this case, the forms and fees for "subsequent requests" should apply, and the application should be subject to standard collocation intervals.
- Changes within the original space which do not increase the power or HVAC requirements above the ALEC's original collocation application. In this case, only an informational notification to the LEC should be required, and no intervals should apply because no work must be performed by the LEC.

In the first two cases, the only potential problems that could arise would be if major upgrades to power or HVAC are required. These are exactly the same problems that could occur with an original application for collocation. In these cases, the intervals could be changed by an agreement of the parties, or by a motion to the Commission if the parties could not agree. In the third case, there are no problems which should affect the

ALEC's ability to proceed with its work as soon as the ILEC has been notified.

The potential problems with conversion from virtual to physical collocation depend on whether the ALEC requests conversion "in-place," or whether it requests a move to a caged space.

- If ALEC requests an "in-place" conversion, a very short interval should apply for the ILEC to transfer ownership of, and maintenance responsibility for, the collocated equipment. There are no apparent problems which could affect the interval for this type of conversion.
- If the ALEC requests a move to a caged space, standard intervals should apply. In this case, the only potential problems that could arise would be if major upgrades to power or HVAC are required. In this case, the normal procedures for obtaining either an agreed extension, or a Commission-approved extension, should apply.

* * * * *

RESPECTFULLY SUBMITTED this 3rd day of January, 2000.

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing was furnished to the following parties by U.S. Mail or Hand Delivery (*) this 3rd day of January, 2000.

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Attorney

EXHIBIT NO. _____

DOCKET NO.: 981834-TP and 990321-TP

WITNESS: Stip - 5

PARTY: Florida Competitive Carrier's Association

DESCRIPTION:

1. Responses to Staff's First Set of Interrogatories, Numbers 1-3.

PROFFERING PARTY: STAFF

I.D. # Stip-5

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET
NO. 981834+990321-TP EXHIBIT NO. 6
COMPANY/ PSC Staff
WITNESS: Staff
DATE 1-12-2006

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Competitive Carriers
for Commission action to support local
competition in BellSouth Telecommunications,
Inc.'s service territory.

DOCKET No. 981834-TP

In re: Petition of ACI Corp. d/b/a Accelerated
Connections, Inc. for generic investigation to
ensure that BellSouth Telecommunications,
Inc., Sprint-Florida Incorporated and GTE Florida
comply with obligation to provide alternative local
exchange carriers with flexible, timely, and
cost efficient physical collocation.

DOCKET No. 990321-TP

**The Florida Competitive Carriers Association's Responses to
Staff's First Set of Interrogatories (Nos. 1-3)**

The Florida Competitive Carriers Association (FCCA), through its undersigned counsel,
hereby responds to the Staff of the Florida Public Service Commission's (the Staff) First Set of
Interrogatories (Nos. 1-3).

RESPONSES TO INTERROGATORIES

1. For purposes of the following request, please refer to FCCA witness Gillan's direct testimony,
page 12, lines 18-22 and page 13, lines 1-12.

- (a) Please define the phrase "appropriate treatment."

Response:

The term "appropriate treatment" in the cited context refers to the method used to
recover such costs through a statewide tariff. In this particular sentence, the term

does not recommend a *specific* treatment, it only recommends that a statewide rate be developed that would recover these costs, particularly for the basic commodity of cageless collocation (rack space).

- (b) Please identify and explain what factors should be taken into account in developing a statewide collocation rate.

Response:

Although FCCA recommends that the details of cost-recovery be addressed in a subsequent tariff filing (see Gillan Rebuttal, pages 15 and 16), the general principle is that security, space preparation and other reporting costs benefit *all* users of collocation space, including the incumbent LEC. As a result, FCCA recommends that these costs generally be incorporated into an overall “rate per equipment bay” whose denominator (i.e., all available bays) include space used by the incumbent. While there may be additional direct costs associated with establishing specific collocation requests that are unique (such as, for instance, a carrier that *requests* segregated space), it is FCCA’s position that the standard unit of cageless collocation (rack space) is sufficiently common that averaged rates can be developed.

- (c) If a statewide collocation rate was developed, please explain, in detail, how this would benefit each of the following parties: ILECs, ALECs and consumers.

Response:

The fundamental beneficiary of a standardized collocation rate would be consumers — after all, the sole purpose of collocation is to enable entrants to offer services to their customers. Anything that makes collocation simpler, more rapid, and more affordable will ultimately provide consumers with more choices, faster innovation and cheaper prices.

ALECs would benefit in three ways. First, the availability of standardized collocation and rates known in advance will greatly reduce the uncertainty surrounding collocation and its cost. Business plans can be more easily developed and implemented more rapidly. Second, with standardization, provisioning can become routine and space can be prepared in advance. Faster provisioning reduces time to market, allowing for innovative services to reach consumers more quickly. Third, eliminating the “one-of-a-kind” design steps that currently characterize the collocation process should reduce overall costs as the ILECs incorporate “collocation demand” into their overall (and ongoing) CO space preparation procedures.

Admittedly, the ILEC is less likely to benefit from standardizing collocation because it will make it that much simpler and less costly for its competitors to offer service. While the ILEC should see a cost reduction from standardization, such cost reduction should be passed on to the ALEC and, even if it were not, these lower costs would not likely offset its strategic incentive to maintain more cumbersome procedures for

its rivals. As a result, standardizing collocation likely requires regulatory direction.

2. Please explain, in detail, whether it is necessary for an ALEC to submit an application if the ALEC wishes to convert from virtual collocation to physical collocation.

Response:

The term “application” carries a connotation of a special request that requires considerable effort to effect. To avoid semantic argument, FCCA understands this question to address what procedures (and charges) are appropriate to convert a virtual arrangement to a physical arrangement, irrespective of what such procedures may be labeled.

The critical issue concerns whether equipment must be moved from its “virtual” location to a different location in the central office. FCCA’s view is that, with one exception, virtually located equipment should be able to be converted to physical cageless collocation “in place.” That is, the equipment should not be disrupted, and the only relevant fee would be the administrative fees to revert ownership to the ALEC and begin billing under the cageless arrangement. Whether the charge for this conversion is labeled an “application” or “service order” fee is irrelevant, what is important is its magnitude and the avoidance of any unnecessary activity. The sole exception to this policy would be where the virtually collocated equipment is located in the same vertical space (i.e., shares the same bay with ILEC equipment that is located above or below it). In this instance, it may be reasonable to move the equipment or determine some other security measure that would provide the entrant

the ongoing access that distinguishes cageless collocation from virtual collocation. FCCA is not aware of any collocation arrangements, however, that would fall within this exception.

Finally, if an ALEC wishes to transition from virtual collocation to a caged collocation arrangement, a different application/provisioning process would be needed because the virtually collocated equipment would need to be physically moved to the caged collocation space.

3. Please identify what potential problems, if any, could occur when any changes, including conversions from virtual to physical collocation, are made to existing collocation space. For each problem identified, please explain what effect, if any, the problem might have on the response and implementation intervals for the proposed changes.

Response:

Any time equipment is being disrupted, there will be a corresponding disruption in a customers' service (with outage) and the risk that service will not be reestablished correctly. As a general rule, interconnected and functioning equipment is not moved without good cause. As such, the standard practice for "in place" equipment should be for the equipment to remain "in place," even if the contractual basis for the collocation arrangement (i.e., virtual or cageless physical) changes.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of FCCA's Responses to Staff's First Set of Interrogatories (Nos. 1-3) has been furnished by (*) hand delivery and U. S. Mail this 3rd day of January, 2000 to the following:

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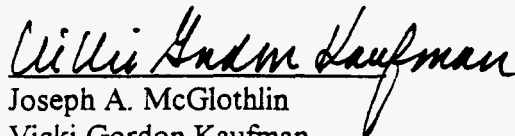
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Attorney for the Florida Competitive
Carriers Association

EXHIBIT NO. _____

DOCKET NO.: 981834-TP and 990321-TP

WITNESS: Stip - 6

PARTY: BellSouth

DESCRIPTION:

- 1. Responses to Staff's First Set of Interrogatories,
Numbers 1-4**

PROFFERING PARTY: STAFF

I.D. # Stip-6

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 981834-TP
NO. 990321-TP EXHIBIT NO. 1
COMPANY/ PSC Staff
WITNESS: PSC Staff
DATE 1-12-2000

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December 27, 1999

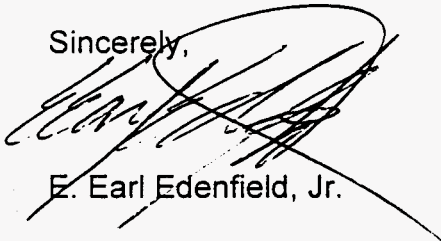
Beth Keating
Staff Counsel
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Docket No. 981834-TP/990321-TP

Dear Ms. Keating:

Enclosed are BellSouth Telecommunications, Inc.'s Responses to Staff's First Set of Interrogatories, Nos. 1-4.

Sincerely,



E. Earl Edenfield, Jr.

cc: All Parties of Record
Marshall M. Criser III
R. Douglas Lackey
Nancy B. White

REQUEST: For purposes of the following request, please refer to BellSouth witness Milner's rebuttal testimony, page 24, lines 2-24.

- (a) In lines 5-6, the witness states, "One excellent example of the use of administrative space in a central office building is space that is used for training." Please explain why training is being done in each and every central office.
- (b) Please define the phrase "quiet area," and explain its purpose.
- (c) Please describe whether BellSouth has considered consolidating training facilities to create more floor space for collocation, what consolidation options BellSouth has considered, and whether any of these options have been implemented.

RESPONSE: (a) As discussed in Mr. Milner's direct and rebuttal testimony, administrative space inside the central office is any space not directly supporting the installation or repair of both telephone equipment and customer service. In Mr. Milner's rebuttal testimony, training was cited as merely one example of the appropriate use of administrative space in central offices for the indirect support required for the installation and repair activities. The use of training as an example of the possible use of such space was not intended to imply that such space exists in each and every central office. Nor was it meant to imply that training would necessarily occur in a particular office even if administrative space exists in that office.

- (b) "Quiet area" as used in this docket denotes a room or similar space that reduces or eliminates the normal central office noise sources discussed in lines 12-18 on page 24 of my rebuttal testimony. It denotes a room where the employee can get away from the equipment noise, telephones, speakers, and audible alarms.

RESPONSE: (Continued)

Such areas may also be used for training, group meetings, personnel discussions, and similar purposes where typical central office noise sources would be distracting. The human needs of central office personnel must be appropriately considered along with the planning for the equipment they install, maintain, and operate.

- (c) For its Florida employees, BellSouth has established centralized training facilities in Atlanta and Miami that are fully utilized for those kinds of training which can best be accomplished in such a facility. However, some training is best accomplished at the employee's work place. Technological advances in self-paced, computer-directed training allows BellSouth to deliver much training directly to the employee's personal computer, work station, or shared training workstation at the employee's work location. This technological revolution allows training tailored to both employee needs and the type of training required. Also, on occasion, the employee is required to visit the actual equipment in the office as a part of the training. On-site training reduces the need for travel to remote locations, reduces time away from the job, reduces the amount of materials and space necessary to accomplish training, and leaves the employee available for emergencies. This mix of training mediums allows BellSouth to keep its employees trained to meet today's changing service needs at the most appropriate cost levels. Therefore, BellSouth does not believe that the elimination of training in its central offices is inappropriate.

RESPONSE PROVIDED BY: Keith Milner
Senior Director
675 West Peachtree Street
Atlanta, GA 30375

REQUEST: Once an ALEC has submitted a complete and accurate initial application for physical collocation, what specific information must the BellSouth provide to the ALEC in order for the ALEC to submit a Firm Order for physical collocation?

RESPONSE: BellSouth provides a written response incorporating the following information to ALECs, which enables the ALECs to submit a Firm Order for physical collocation:

- Space availability, including the amount of physical construction required
- Estimated implementation intervals
- Estimated costs
- Technical information, such as cable support requirements, power systems requirements, entrance facility capacity, and demarcation points.

Each of BellSouth's central offices is unique in its design and equipment layout, so BellSouth utilizes an interdepartmental review team to best determine the location of an ALECs physical collocation arrangement within 30 calendar days. To provide more than an estimated cost and an estimated implementation interval would cause a delay in responding to the application. BellSouth would need to detail engineer the job to provide more than an estimate. Detailed equipment drawings, which will be needed at a minimum, are not provided by the ALEC until the ALEC submits it Firm Order request.

RESPONSE PROVIDED BY: Jerry Hendrix
• Senior Director – Interconnection Services Pricing
675 West Peachtree Street
Atlanta, Georgia

REQUEST: Please explain, in detail, whether it is necessary for an ALEC to submit an application if the ALEC wishes to convert from virtual collocation to physical collocation.

RESPONSE: BellSouth is obligated by the Telecommunications Act to treat requesting collocators in a non-discriminatory manner. Virtual collocation and physical collocation are two different service offerings. As such, each request for a physical collocation arrangement must be handled in the same non-discriminatory manner, whether it is a physical collocation request or a request for conversion from virtual to physical collocation. The terms and conditions that should apply for converting virtual to physical collocation would need to be consistent with the terms and conditions of the assessment and provisioning of physical collocation space. Requests for conversion should be evaluated on an individual case basis and a set of criteria used to ensure consistency in the evaluation. For example, if an ALEC is converting from a virtual to a physical collocation arrangement requiring the relocation of the equipment, the ALEC must be placed on any waiting list that may exist for that central office on a first come, first served basis. Each request for a conversion would be evaluated to determine whether there were extenuating circumstances, such as when the central office is in an exhaust situation, or technical reasons, such as electrical grounding requirements, that would cause the arrangement to become a safety hazard within the premises or otherwise conflict with the terms and conditions of the ALEC's collocation agreement.

RESPONSE PROVIDED BY: Jerry Hendrix
Senior Director – Interconnection Services Pricing
675 West Peachtree Street
Atlanta, Georgia

REQUEST: Please identify what potential problems, if any, could occur when any changes, including conversions from virtual to physical collocation, are made to existing collocation space. For each problem identified, please explain what effect, if any, the problem might have on the response and implementation intervals for the proposed changes.

RESPONSE: There are many potential problems or extraordinary conditions that could occur when changes are made to existing collocation space. The response interval should be the same regardless of the potential problems or extraordinary conditions. The implementation interval, however, would likely be impacted. For example, there could be delays receiving vendor equipment, which would likely delay implementation by the same amount of time. This is totally out of the control of the ILEC and the ALEC. If upgrades or additions to the existing HVAC or power equipment is required, there could be potential delays due to the need for building permits, potential changes to the amount of required additions, contractor's workload, and the availability of space. Of course, if a central office is in an exhaust situation, a building addition could be required which will lead to the associated implementation delays. If the size and type of equipment is changed by the ALEC, the amount and location of the space may need to change. Building renovations may be needed and grounding concerns may need to be resolved. If the floor load is increased by the change to existing collocation space, the floor load bearing capacity will need to be increased. If equipment family groupings are changed, problems with cabling and grounding could occur as described in Mr. Milner's direct testimony on pages 7 and 8. Grouping like equipment together will reduce resultant re-routing of cables and make it easier to ensure proper grounding is available for each type of equipment. Building code restrictions may be a problem. As stated by Mr. Milner in his direct testimony on page 37, BellSouth cannot commence certain construction work that modifies mechanical, electrical, architectural or safety factors within its central offices without first acquiring the necessary permits. The time required to receive the permits is outside of BellSouth's control. For conversions from virtual to physical collocation, where an ALEC wants to add more equipment, there may not be space available for the additional equipment or for growth.

BellSouth Telecommunications, Inc.
FPSC Dkt Nos. 981834-TP
and 990321-TP
Staff's 1st Set of Interrogatories
December 7, 1999
Item No. 4
Page 2 of 2

RESPONSE: (Cont.)

The implementation interval for a request for changes to an ALEC's existing collocation space, under normal conditions, should not exceed 60 calendar days. However, the implementation interval under abnormal conditions should be the same as new requests, 90 calendar days. The actual request dictates the work required and the actual implementation interval that is needed. Obviously, the more problems and the more serious the problems, the longer the implementation interval will be. BellSouth must assess the requirements on a case-by-case basis.

RESPONSE PROVIDED BY: Jerry Hendrix
Senior Director – Interconnection Services Pricing
675 West Peachtree Street
Atlanta, Georgia

STATE OF GEORGIA

COUNTY OF FULTON

BEFORE ME, the undersigned authority, personally appeared
Lynne G. Brewer, who being first duly sworn deposes and says:

That she occupies the position of Manager, Headquarters
Regulatory and is the person who has furnished answers to these
interrogatories No. 1 through No. 4 and further says that
said answers are true and correct to the best of her knowledge and
belief.

WITNESS my hand and seal this 23rd day of December, 1999.

Signature

Lynne G. Brewer

Micheale F. Holcomb

Notary Public

State of Georgia

My Commission Expires:

MICHEALE F. HOLCOMB

Notary Public, Douglas County, Georgia

My Commission Expires November 3, 2001

CERTIFICATE OF SERVICE
Docket No. 981834-TP and 990321-TP

I HEREBY CERTIFY that a true and correct copy of the foregoing was served via
U. S. Mail this 27th day of December, 1999 to the following:

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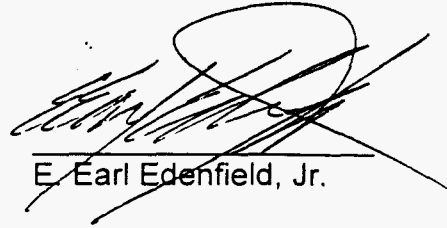
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EXHIBIT NO. _____

DOCKET NOS.: 981834-TP and 990321-TP

WITNESS: Stip - 7

PARTY: GTE Florida, Incorporated

DESCRIPTION:

1. Responses to Staff's 1st Set of Interrogatories, Numbers 1-5.

PROFFERING PARTY: STAFF

I.D. # Stip-7

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 981834-TP
NO. 990321-TP EXHIBIT NO. 8
COMPANY/ BC Staff
WITNESS: BC Staff
DATE: 1-12-2000

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Competitive)
Carriers for Commission action)
to support local competition in)
BellSouth Telecommunications,)
Inc.'s service territory.)
_____)

DOCKET NO. 981834-TP

In re: Petition of ACI Corp.)
d/b/a Accelerated Connections,)
Inc. for generic investigation)
to ensure that BellSouth)
Telecommunications, Inc.,)
Sprint-Florida, Incorporated,)
and GTE Florida Incorporated)
comply with obligation to)
provide alternative local)
exchange carriers with flexible,)
timely, and cost-efficient)
physical collocation.)
_____)

DOCKET NO. 990321-TP

Filed: December 29, 1999

**GTE FLORIDA, INCORPORATED'S RESPONSES TO STAFF'S FIRST SET OF
INTERROGATORIES (NOS. 1-5)**

1. For purposes of the following request, please refer to GTEFL witness Ries' direct testimony, page 13, lines 15-25.

(a) Please describe what constitutes a "documented, funded business plan."

Response:

GTE will update its forecasted growth each quarter. Based on the forecast, a Demand and Facility chart is prepared to determine when network additions are required. GTE will also identify budget requirements for projects identified within the document. This constitutes a "documented, funded business plan" from a GTE perspective.

- (b) At lines 9-12, the witness indicates that, "Additionally, ALECs reserving space should be charged for the floor space reserved, just as GTE is required to pay for utilities, taxes and maintenance on any vacant space currently in its central offices." Please describe how the charges to ALECs should be determined for utilities, taxes and maintenance.

Response:

If an ALEC desires to reserve space specific to their future needs, they must purchase that square footage amount. If it is caged collocation, the cage should be constructed to include their future amount or if it is cageless collocation, equipment racks need to be placed in the area requested to designate future requirements. In both cases, the additional floor space will be charged to the ALEC on a monthly basis. The tariffed floor space charge recovers the ILEC expense of utilities, taxes, maintenance, and overall cost of providing the square footage.

- (c) If an ALEC is allowed to reserve, for an unlimited amount of time, the amount of space it can support based on a documented, funded business plan, please explain how GTEFL will address ALEC requests for collocation in situations where available space for collocation has been depleted, but reserved space remains unfilled.

Response:

If all available floor space for collocation has been depleted but there remains vacant floor space that is currently being reserved, the party reserving said space must document a need for the floor space and a specific timeframe for utilization. Documentation should include the following types of information:

1. A list of equipment in place with the number of lines equipped for service and the capacity of each system.
2. A list of the equipment to be placed into the reserved space, capacity of each system, footprint required for each system.
3. A demand and facility forecast that provides historical data with supportable growth projections.
4. Business plan to support the funding of growth requirements.
5. Any other relevant information to support future plans.

2. Please explain, in detail, whether it is necessary for an ALEC to submit an application if the ALEC wishes to convert from virtual collocation to physical collocation.

Response:

Conversion from virtual collocation to physical collocation will require an application from the ALEC. Virtual collocation equipment is installed, monitored and maintained by the ILEC; in some cases, it is commingled with other ILEC equipment. If the ALEC is requesting caged collocation, the equipment will probably need to be physically moved in order to construct a cage around the equipment. If the ALEC is requesting cageless collocation, the equipment may or may not have to be moved in order for the ILEC to properly secure the ILEC network. The lineup bay for cageless collocation may not be the same lineup that is used for ILEC equipment. Each virtual conversion request will have to be evaluated separately. An application is required because the ALEC must designate the type of equipment and the configuration of the physical request (additional equipment is often included in the configuration to support monitoring, maintenance, and/or growth). The application will also signify that the ILEC must make a determination on whether space is available to support the conversion request.

3. Please identify what potential problems, if any, could occur when any changes, including conversions from virtual to physical collocation, are made to existing collocation space. For each problem identified, please explain what effect, if any, the problem might have on the response and implementation intervals for the proposed changes.

Response:

If the virtual equipment is commingled with GTE equipment in the same bay, the equipment must be relocated into a bay solely leased by the collocator. GTE's graphic bay layouts are displayed utilizing data within the property records database. GTE does not have the means to presently distinguish individual shelves within the bay. Commingled equipment would increase the chances that the ALEC or GTE would mistakenly think that the entire equipment within the bay is theirs. Either party could inadvertently affect the other party's equipment. The FCC Order allows collocators to lease cageless space in single bay increments. The FCC Order also allows the ILEC to take reasonable steps to protect its own equipment. GTE requires cageless collocation bays to be separated from GTE's in order to

provide protection to its network. Non-GTE personnel performing work in an adjacent bay can cause interference to GTE's equipment. At a minimum, the cageless bays must be at least a one-bay increment from GTE's network. GTE takes great care in providing a secure network.

The physical provisioning interval for a virtual to cageless conversion is the same as that for processing a new cageless request. In both cases, power must be provided to the equipment bay, facilities must be terminated onto the equipment bay, and HVAC must be provided. From a records standpoint, additional work is required when a virtual to cageless conversion is requested. Because GTE monitors and maintains the virtual equipment, alarm circuits must be disengaged and transferred to the ALEC network. Circuit assignments from the virtual terminals must be removed from GTE's system. The response interval for this transference is dependent on the size of the terminal (OC12 vs. OC48) and the type of cross-connections in place (DS3 vs. DS1). If the existing virtual equipment is currently placed in an isolated equipment bay, then the conversion to physical should not require the equipment to be moved. However, the transfer of circuit assignments and alarm monitoring would still be required. Coordination between the ALEC and GTE is critical to ensure a smooth transition.

4. For purposes of the following request, please refer to GTEFL witness Ries direct testimony, page 16, line 11. Does the word "days" refer to business days or calendar days?

Response:

The word "days" was meant as calendar days. However, since GTE is now proposing to tariff the collocation charges in lieu of a case by case price quote, the 30-calendar day period would be moot unless the collocation request sought a configuration outside the tariff structure.

5. Once an ALEC has submitted a complete and accurate initial application for physical collocation, what specific information must GTEFL provide to the ALEC in order for the ALEC to submit a Firm Order for physical collocation?

Response:

If the initial application is complete and accurate, the only information needed for the ALEC to submit a firm order is confirmation from GTE that their requested amount of space is available and the amount of tariff charges, both non-recurring and recurring, that apply to the arrangement. The firm order will be a 50% payment of the non-recurring fee. If there is information missing from the initial application that did not affect the space, power and HVAC evaluation performed by GTE, but is required for implementation (i.e. vendor selection information), GTE will advise the ALEC that this information needs to be submitted with the 50% payment.

VERIFICATION

STATE OF FLORIDA)
) ss.
COUNTY OF HILLSBOROUGH)

BEFORE ME, the undersigned authority, personally appeared Beverly Y. Menard, who deposed and stated that the answers to the First Set of Interrogatories (Nos. 1-5) served on GTE Florida Incorporated by the Staff in Docket Nos. 981834-TP and 990321-TP were prepared at her request and she is informed that the responses contained therein are true and correct to the best of her information and belief.

DATED at Tampa, Florida, this 22nd day of December, 1999.

Beverly Y. Menard
Beverly Y. Menard

Sworn to and subscribed before me this 22d day of December, 1999.

Catherine M. Duran
Notary Public
State of Florida

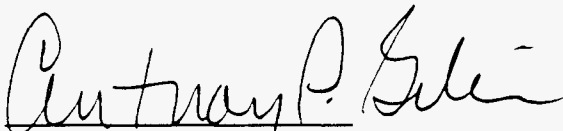


Catherine M. Duran
Name Typed or Printed/Commission No.

My Commission Expires: September 10, 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that copies of GTE Florida Incorporated's Notice of Service and Responses to Staff's First Set of Interrogatories (Nos. 1-5) in Docket Nos. 981834-TP and 990321-TP were sent via U. S. mail on December 29, 1999 to the parties on the attached list.


for Kimberly Caswell

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EXHIBIT NO. _____

DOCKET NOS.: 981834-TP and 990321-TP

WITNESS: Stip - 8

PARTY: Supra Telecommunications & Information Systems, Inc.

DESCRIPTION:

1. Responses to Staff's 1st Set of Interrogatories, Numbers 1-3.

PROFFERING PARTY: STAFF

I.D. # Stip-8

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 981834-TP
NO. 990321-TP EXHIBIT NO. 9
COMPANY/ PSC Staff
WITNESS: 1-12-2000
DATE: 1-12-2000

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

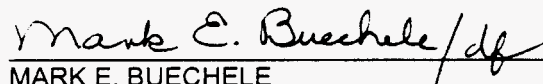
In re: Petition of Competitive)
Carriers for Commission action) DOCKET NO. 981834-TP
to support local competition in)
BellSouth Telecommunications,)
Inc.'s service territory.)

In re: Petition of ACI Corp. d/b/a)
Accelerated Connections, Inc. for) DOCKET NO. 990321-TP
Generic investigation to ensure that)
BellSouth Telecommunications, Inc.,)
Sprint-Florida, Incorporated, and GTE)
Florida Incorporated comply with)
obligation to provide alternative local)
exchange carriers with flexible,)
physical collocation.) FILED: January 7, 2000

**ANSWERS OF SUPRA TELECOMMUNICATIONS & INFORMATION
SYSTEMS, INC. TO STAFF'S FIRST SET OF INTERROGATORIES (NOS. 1-3)**

Pursuant to Rule 1.340, Florida Rules of Civil Procedure, Supra Telecommunications & Information Systems, Inc. ("Supra"), by and through its undersigned attorney, hereby serves its Answers to Staff's First Set of Interrogatories (Nos. 1 through 3) to the Staff of the Florida Public Service Commission.

RESPECTFULLY SUBMITTED,



MARK E. BUECHELE
FLORIDA BAR NO. 906700
Supra Telecommunications & Information Systems, Inc.
2620 SW 27th Avenue
Miami, Florida 33133
(305) 476-4230

INTERROGATORY 1:

Referring to Supra witness Nilson's direct testimony, page 13, line 7, and page 14, line 7, please clarify when Supra believes an ILEC should be required to respond to an ALEC's initial application for collocation space. In your response, please explain why the response time identified is appropriate.

ANSWER:

Re. Page 13, Line 7. The most appropriate time for an ILEC to deliver a detailed price quotation of collocation costs is the during the response interval ending thirty days after the application. This would demonstrate to the ALEC that the quoted dollars represent specific construction activity, which can be identified and checked for errors or other unnecessary work. If an error occurs in the understanding of the collocation application, the ALEC, prior to making a Firm Order Commitment (FOC), has at this point a last chance to catch the error before Space Acceptance occurs some 90+ days later and after both companies have spent considerable monies. Catching problems before they occur is good business because it lowers costs, and eliminates customer dissatisfaction, which is what we all strive for. The detailed information provided should be the basis for, and should otherwise be used to calculate the total price quotation. The detailed information should be delivered to the ALEC along with the total cost.

Asking an ILEC to provide this information within thirty days is not unreasonable because other ILECs already engage in this practice. For example Southwestern Bell submits to an ALEC, at the time of collocation acceptance, a one-page collocation costs summary containing thirty line-item details with their non-recurring and monthly recurring costs. Backing this up is an eight-page detailed document listing over 183 line-item details, followed by individual lines for each ICB amount charged. The prices are pre-printed on the form.

In contrast, BellSouth only provides an ALEC three line items of detail upon collocation acceptance and there is no official mechanism for obtaining a more detailed breakdown of charges that often exceed a staggering one-quarter of a million dollars. This practice is wrong

because it causes distrust of competitive providers, while increasing mistakes and raising costs which must ultimately be passed on to consumers.

It has been Supra's experience on recent quotes that BellSouth's quotations have been found to contain overcharges, unnecessary charges, double charges and inaccurate calculations of the final amount. Requiring the ILEC to present all this information up-front within the thirty-day response interval will allow the ALEC to catch these problems. Moreover, any quote provided needs to be based in fact and not in speculation. If a quote is already being provided within thirty days, in theory the detailed breakdown comprising that quote must already exist. If a detailed breakdown does not exist, then the quote is not real and the ILEC has not taken the time to prepare a real quote as otherwise required.

There are numerous points in the pricing of a collocation application where miscommunication can lead to a costly error. Examples of this can be the provisioning of circuits, equipment or infrastructure not requested by the ALEC, non-recurring charges quoted that are not applicable by the ALEC's interconnection agreement or by a Public Service Commission order. The detailed price quotation is no different than an equipment invoice or a cash register receipt. Each shows cost per line-item rather than a total dollar amount.

The detailed quotation should be incorporated in the quotation estimating process and supplied to the ALEC during the thirty-day application response interval. This is consistent with both Southwestern Bell and Sprint-Florida. It is reasonable to expect this from all ILECs.

Re. Page 14, Line 7. If the ALEC desires to subcontract portions of the collocation space construction, per ILEC specifications and drawings, then the ILEC actually has less work to do. The quotation and vendor selection for portions of the job are no longer a requirement to approve the collocation application and prepare a price quote. The ALEC has assumed responsibility for this portion of the job.

However, to eliminate disputes over the correct response interval for various combinations, the response interval should be maintained at the current thirty calendar days. There is, of course, no reason for the ILEC not to notify the ALEC sooner if the work is completed in a shorter period of time.

INTERROGATORY 2:

Please explain, in detail, whether it is necessary for an ALEC to submit an application if the ALEC wishes to convert from virtual collocation to physical collocation.

ANSWER:

There are really two parts to this question: (a) is it necessary for an ALEC to submit a new application, and (b) is it allowable for the ILEC to charge an additional \$3,850 application fee to make that change.

In its simplest case, a conversion from virtual to cageless physical collocation, both companies have to make record changes and assign or remove responsibility for the affected equipment. In this case it makes sense to have a simplified form, rather than a full application, for the ALEC to request the change and to document all information required for a smooth transition of responsibility. The current application fee is not required or justified in this case because no real work is being provided by the ILEC.

We endorse the concept used by Sprint-Florida in this respect. Their position is that virtual and cageless physical collocation are the same, have the same provisioning intervals, and same collocation charges. They differ only in who maintains the equipment.

Conversely, a large-scale conversion, which involves the moving of equipment and the creation of new caged or walled space, should be processed with a new application and therefore may warrant an accompanying fee.

INTERROGATORY 3:

Please identify what potential problems, if any, could occur when any changes, including conversions from virtual to physical collocation, are made to existing collocation space. For each problem identified, please explain what effect, if any, the problem might have on the response and implementation intervals for the proposed changes.

ANSWER:

Converting virtual collocation to cageless physical collocation includes the potential that human beings, shifting responsibility for maintenance of a piece of equipment from one company to another, could fail to properly do that job. This would most likely be due to incorrect instructions having been issued. The Network Operations Center would likely have issued the maintenance request to the non-responding department, and any problems that occur should have high visibility and be capable of being escalated.

For example, with electronic card readers, rather than key access to the central office, an ALEC may find itself in a situation where the ILEC is no longer maintaining the ALEC equipment, but the ALEC does not have security access to the building. A change from virtual to cageless physical collocation should have a limited effect and, therefore, should qualify for a reduced response and implementation interval.

For more large scale conversions, conversions that involve moving or temporarily disconnecting equipment, the potential for problems is more well known. It would make sense that this scenario more nearly emulates the potential risk in "cutting-over" customers from an old switch to a newer one. The moving of in-service, virtually collocated equipment to a caged or walled physical collocation should be approached from an add-disconnect-remove approach rather than moving in-service equipment. This is a service model that all ILECs are very familiar with as they have upgraded to modern digital switches. This type of conversion should have response and implementation intervals consistent with caged or walled physical collocation, although the process must be modified after the new collocation space is operational to remove the old equipment.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that the original and one copy of the Notice of Service and Answers of Supra Telecommunications & Information Systems, Inc.'s ("Supra") to Staff's First Set of Interrogatories (Nos. 1 through 3) have been served by hand delivery upon Ms. Beth Keating, Staff Counsel, Gerald L. Gunter Building, 2540 Shumard Oak Boulevard, Tallahassee, Fl., 32399-0850, on behalf of the Florida Public Service Commission; and that a true and correct copy thereof has been furnished by U.S. Mail, this 7th day of January, 2000, to the following parties of record:

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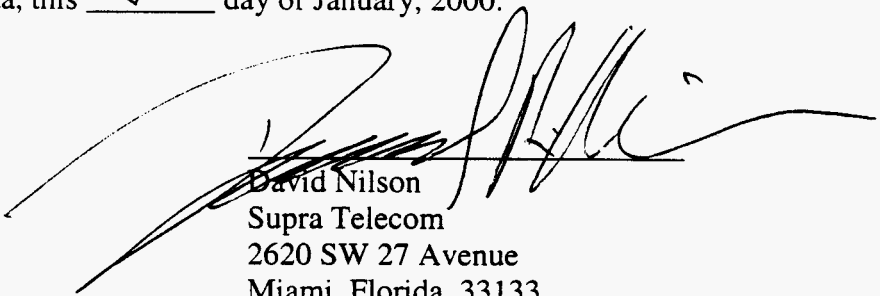
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STATE OF FLORIDA :

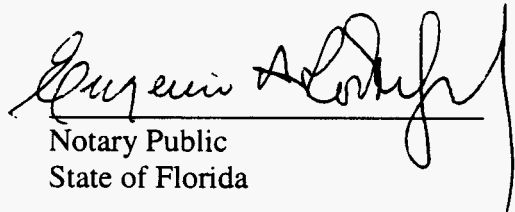
COUNTY OF DATE :

BEFORE ME, the undersigned authority, personally appeared DAVID NILSON, the Chief Technology Officer for Supra Telecom, who deposed and stated that the answers to the First Set of Interrogatories (Nos. 1-3), served on Supra Telecom by the Florida PSC Staff in Docket No. 981834-TP, were prepared by him and that the responses contained therein are true and correct to the best of his knowledge and belief.

DATED at Miami, Florida, this ✓ 1 day of January, 2000.


David Nilson
Supra Telecom
2620 SW 27 Avenue
Miami, Florida 33133
305-443-3710

Sworn to and subscribed before me this ✓ 1 day of January, 2000.


Notary Public
State of Florida

My Commission Expires:

OFFICIAL NOTARY SEAL
EUGENIO A RODRIGUEZ
NOTARY PUBLIC STATE OF FLORIDA
COMMISSION NO. CC864967
MY COMMISSION EXP. SEPT 17 2003

EXHIBIT NO. _____

DOCKET NO.: 981834-TP and 990321-TP

WITNESS: Stip - 9

PARTY: Covad Communications Company.

DESCRIPTION:

1. Responses to Staff's 1st Set of Interrogatories, Numbers 1-3.

PROFFERING PARTY: STAFF

I.D. # Stip-9

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 981834-TP
NO. 990321-TP EXHIBIT NO. 10
COMPANY/ Psc Staff
WITNESS: 1-12-2000
DATE: 1-12-2000

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Competitive Carriers for	§	Docket Nos. 981834-TP and 990321-TL
Commission Action to support local	§	(Consolidated)
competition in BellSouth	§	
Telecommunications, Inc.'s territory	§	
	§	
In re: Petition of Rhythms Links, Inc. for	§	
generic investigation to ensure that	§	
BellSouth Telecommunications, Inc.,	§	
Sprint-Florida, Inc., and GTE Florida Inc.,	§	
comply with obligation to provide	§	
alternative local exchange carriers with	§	
flexible, timely, and cost-efficient	§	
collocation	§	Filed: January 7, 2000

**OBJECTIONS AND RESPONSES OF COVAD COMMUNICATIONS
COMPANY TO STAFF'S FIRST SET OF INTERROGATORIES**

Pursuant to Rule 28-106.206 of the Florida Administrative Code, and Rule 1.340 of the Florida Rules of Civil Procedure, Covad Communications Company ("Covad") serves its objections and responses to Staff's First Set of Interrogatories ("First Set").

General Objections

1. Covad objects to these interrogatories to the extent they seek to impose obligations other than those imposed by the Florida Administrative Code or the Florida Rules of Civil Procedures.
2. Covad objects to these interrogatories to the extent they seek trade secrets and/or confidential proprietary information, or information that is protected from disclosure by privilege or immunity, including but not limited to, the attorney-client privilege and work product doctrine.
3. Covad objects to these interrogatories to the extent they seek information from any entity other than Covad Communications Company or information that is publicly available.

4. Covad's investigation of this matter is continuing. Covad, therefore, reserves the right to supplement its responses and to assert additional objections to these interrogatories, if necessary.

5. Covad incorporates each of these General Objections into its responses to individual interrogatories provided below.

Responses to Individual Interrogatories

INTERROGATORY NO. 1: For purposes of the following interrogatories, please refer to Covad witness Moscaritolo's direct testimony, page 12, lines 16-25.

a. Please define and explain the phrase "wrongfully denying."

RESPONSE: Subject to and without waiver of its General Objections, Covad responds as follows:

The phrase "wrongfully denying" as used in the referenced testimony includes, but is not limited to, situations in which an ILEC's reservation of space for future growth prevents collocation as requested by a ALEC and the ILEC's reservation of space (1) violates 47 C.F.R. § 51.323(f)(4), (2) is unnecessary because of the ILEC's projected expansion of the central office or other structure, (3) is made after a ALEC is notified of space availability, or (4) is made in bad faith.

b. At lines 20 – 22, the witness stated, "Presently, no mechanism exists for an ALEC to verify an ILEC's claim that collocation space is unavailable because of space reservations for future ILEC growth." Please explain, in detail, what type of method(s) or procedures should be developed to identify available collocation space.

RESPONSE: Subject to and without waiver of its General Objections, Covad responds as follows:

Several procedures may be adopted to verify an ILEC's claim that collocation space is unavailable because of an ILEC's reservation of space for future growth.

Overall, an ILEC's request to reserve space for future growth should be governed by the "first-come, first-served" rules applicable to ALEC requests for collocation. Thus, an ILEC should be required to publicly notify ALECs of its plans to reserve space for future growth as soon as such plans are available. If a ALEC has submitted a request for collocation in a particular central office before an ILEC notifies ALECs of its plans for space reservation, the ALEC's application for collocation space must be honored over the ILEC's plans for future growth. This would prevent an ILEC from rejecting a ALEC's request for space after the ILEC has accepted a ALEC's application. This procedure also would reduce bad faith claims of future growth by ILECs.

In addition, if the parties cannot agree about the ILEC's reservation of space, the ILEC should be required to seek a waiver of its collocation requirements under the guidelines promulgated by this Commission. In such a proceeding, the ILEC should have the burden to prove (1) that it properly notified ALECs of its plans for reservation of space, (2) that it has allowed ALECs to reserve space under the same terms and conditions that apply to the ILEC, (3) that its estimations of future growth and the space needed to accommodate such future growth are reasonable, (4) and that no alternative methods for accommodating the ILEC's reasonable estimation of future growth (*i.e.*, methods that would not result in denial of collocation space to ALECs, such as the building of additions to the central office, etc.) are available.

RESPONSE PROVIDED BY: Michael Moscaritolo
Expert Witness for Covad Communications Company

INTERROGATORY NO. 2: Please explain, in detail, whether it is necessary for an ALEC to submit an application if the ALEC wishes to convert from virtual to physical collocation.

RESPONSE: Subject to and without waiver of its General Objections, Covad responds as follows:

An ALEC may need to submit a written request, as opposed to a formal application, for the conversion of a virtual collocation arrangement to a cageless collocation arrangement. This conversion request, however, would only need to inform the ILEC of the ALEC's desire to convert the space and, therefore, would require very little effort on the part of the ILEC to process. As stated in my testimony, if an ALEC already has obtained a virtual collocation arrangement, the issues of space availability, location of equipment, installation of equipment, and necessary ventilation and power requirements, among others, have already been determined.

Essentially, the conversion request would need to provide the ILEC with only the ALEC's desire to convert virtual collocation to cageless. No other information should be necessary. Thus, no additional fee should be required.

RESPONSE PROVIDED BY: Michael Moscaritolo
Expert Witness for Covad Communications Company

INTERROGATORY NO. 3: Please identify what potential problems, if any, could occur when any changes, including conversions from virtual to physical collocation, are made to existing collocation space. For each problem identified, please explain what effect, if any, the problem might have on the response and implementation intervals for the proposed changes.

RESPONSE: Subject to and without waiver of its General Objections, Covad responds as follows:

Of course, the potential problems arising from changes to collocation space would depend upon the nature of the change requested. Generally, however, significant technical and administrative problems should not arise from requests for conversion of virtual collocation to cageless collocation, assuming that the ILEC and its contractors employ reasonably capable technicians and staff. As stated in response to Interrogatory No. 2, if a virtual collocation arrangement already exists, the primary issues requiring time and effort have already been resolved. To complete the conversion, an ILEC merely

needs to allow a ALEC to have access to the collocation space so the ALEC can maintain its own equipment. No other physical work is required. Billing and other administrative adjustments can be made in parallel to avoid any unnecessary delay. Accordingly, in almost all circumstances, an ILEC should be able to complete a request for conversion of virtual collocation to cageless collocation within a maximum of ten (10) calendar days.

As stated above, the potential problems that may arise with other types of changes to collocation space will depend upon the nature of the requested change. It is difficult to address the issues and corresponding intervals arising from such changes in the abstract. However, the Texas Public Utility Commission has approved a collocation tariff specifying reasonable intervals for different types of augment requests. Under this tariff, the following augment intervals apply:

15 Calendar Days

- Up to 28 DS1s (cabling only; panels, relay racks and overhead racking exist)
- Up to 3 DS3s (cabling only; panels, relay racks and overhead racking exist)
- Up to 100 copper (shielded or non-shielded) cable pairs (blocks and cabling only; panels, relay racks and overhead racking exist)
- Duplex AC convenience outlets and/or
- Additional overhead lighting and/or
- Cage to cage interconnection conduit within the same collocation area
- Cable pull within the same collocation area
- DC Power requirements when only a fuse change is required

30 Calendar Days

- Up to 84 DS1s (one interconnect panel) and/or
- Up to 48 DS3s (interconnect panel) and/or
- Up to 200 copper (shielded or non-shielded) cable pairs (2 blocks) up to 400 feet
- Ground cable changes within the DC Power arrangement
- Arrange/install fiber cable through innerduct up to 400 feet
- Arrange/install timing leads up to 400 feet
- Arrange/install fiber interconnections up to 12 fiber pairs up to 400 feet

60 Calendar Days

- Up to 168 DS1s (one interconnect panel) and/or
- Up to 48 DS3s (interconnect panel) and/or
- Up to 400 copper (shielded or non-shielded) cable pairs (2 blocks) up to 400 feet
- Power cables added to accommodate greater DC amperage requests within existing power panels
- ILEC will perform a cage expansion of 300 square feet or less immediately adjacent to a collocator's existing cage within the collocation area as long as the collocation area does not have to be reconfigured and does not involve HVAC work
- Arrange/install bay lighting front and back up to three (3) bays
- Arrange and install fiber interconnection up to 12 fiber pairs up to 400 feet.

Not to exceed 90 Calendar Days

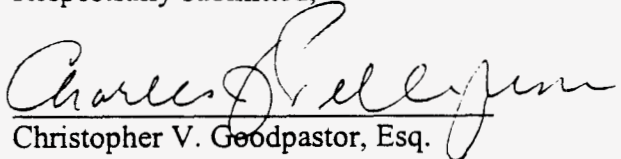
- All other augments.

Local Access Service Tariff for Texas, Southwestern Bell Telephone Company (Effective Oct. 29, 1999).

RESPONSE PROVIDED BY: Michael Moscaritolo
Expert Witness for Covad Communications Company

Dated: January 7, 2000

Respectfully submitted,


for Christopher V. Goodpastor, Esq.
Regional Counsel

Covad Communications Company
9600 Great Hills Trail, Suite 150W
Austin, Texas 78759
Tel: (512) 502-1713
Fax: (419) 818-5568

QUALIFIED REPRESENTATIVE
OF COVAD COMMUNICATIONS
COMPANY

CERTIFICATE OF SERVICE

I **HEREBY CERTIFY** that a true and correct copy of the foregoing was served via facsimile/U.S. Mail this 7th day of January, 2000 to the following:

BellSouth Telecommunications, Inc.
Ms. Nancy H. Sims
150 South Monroe St., Suite 400
Tallahassee, FL 32301-1556
Phone: (850) 224-7798
Fax: (850) 222-8640

AT&T Communications of the
Southern States, Inc.
Ms. Rhonda P. Merritt
101 North Monroe St., Suite 700
Tallahassee, FL 32301-1549
Phone: (805) 425-6342
Fax: (805) 425-6361

ACI Corp.
7337 S. Revere Parkway
Englewood, CO 80112
Phone: (303) 476-4200

Accelerated Connections, Inc.
7337 South Revere Parkway
Englewood, CO 33414
Phone: (303) 476-4200

BellSouth Telecommunications, Inc. (Mia)
Nancy B. White
150 West Flagler St., Suite 1910
Miami, FL 33130
Phone: (305) 347-5558
Fax: (305) 577-4061

BellSouth Telecommunications, Inc.
(Atl)
E. Earl Edenfield, Jr.
675 W. Peachtree St., #4300
Atlanta, GA 30375
Phone: (404) 335-0763
Fax: (404) 614-4054

Blumenfeld & Cohen
Elise Kiely/Jeffrey Blumenfeld
1625 Massachusetts Ave. NW
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WorldCom Technologies, Inc.
Donna McNulty, Esq.
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Fax: (850) 422-2586

e.spire Communications, Inc.
James Falvey
133 National Business Parkway
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Annapolis Junction, MD 20701
Phone: (301) 361-4298
Fax: (301) 361-4277

Florida Cable Telecommunications
Assoc., Inc.
Michael A. Gross
310 N. Monroe St.
Tallahassee, FL 32301
Phone: (850) 681-1990
Fax: (850) 681-9676

Florida Competitive Carriers Assoc.
c/o McWhirter Law Firm
Vicki Kaufman
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Phone: (850) 222-2525
Fax: (850) 222-5606

Florida Public Telecommunications
Assoc.
Angela Green, General Counsel
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Fax: (850) 222-1355

GTE Florida Incorporated
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Fax: (813) 223-4888

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GTE Florida Incorporated
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c/o Ms. Margo B. Hammar
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Intermedia Communications, Inc.
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Fax: (813) 829-4923

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Anita L. Fourcard
Communications Industry Services
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Washington, DC 20005
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Fax: (202) 408-5922

MCImetro Access Transmission
Services LLC
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325 John Knox Road, Suite 105
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MediaOne Florida Telecommunications,
Inc.
c/o Laura L. Gallagher
101 E. College Ave., Suite 302
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Floyd Self/Norman Horton
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MGC Communications, Inc.
Susan Huther
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Las Vegas, NV 89129
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Pennington Law Firm
Peter Dunbar/Barbara Auger/Marc Dunbar
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Fax: (850) 222-2126

Sprint Communications Company
Limited Partnership
Susan Masterton/Charles Rehwinkel
P.O. Box 2214
MC: FLTLHO0107
Tallahassee, FL 32316-2214
Phone: (850) 847-0244
Fax: (850) 878-0777

Sprint-Florida, Incorporated
Mr. F. B. (Ben) Poag
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Tallahassee, FL 32316-2214
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Supra Telecommunications &
Information Systems, Inc.
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Fax: (305) 476-4282

TCG South Florida
c/o Rutledge Law Firm
Kenneth Hoffman
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Tallahassee, FL 32302-0551
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Telecommunications Resellers Assoc.
Andrew Isar
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Gig Harbor, WA 98335
Phone: (253) 851-6700
Fax: (253) 851-6474

Time Warner Telecom
Ms. Carloyn Marek
233 Bramerton Court
Franklin, TN 37069
Phone: (615) 376-6404
Fax: (615) 376-6405

Time Warner Telecom
2301 Lucien Way, Suite 300
Maitland, FL 32751


Charles J. Pellegrini

Collocation Agreement

By and Between

BellSouth Telecommunications, Inc.

and

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET

NO. 981834+990321-TP EXHIBIT NO. 11

COMPANY/

WITNESS: Dundrick

DATE: 1-12-2000

BELLSOUTH PHYSICAL COLLOCATION MASTER AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 19____, by and between BellSouth Telecommunications, Inc., ("BellSouth") a corporation organized and existing under the laws of the State of Georgia, and _____, ("CLEC-1") a (corporation) organized and existing under the laws of _____;

W I T N E S S E T H

WHEREAS, CLEC-1 is a telecommunications carrier and wishes to occupy BellSouth Central Office Collocation Space as defined herein for the purpose of interconnection to BellSouth's facilities;

WHEREAS, BellSouth has space available in its Central Office(s) which CLEC-1 desires to utilize; and

WHEREAS, BellSouth is willing to make such space available to CLEC-1 within its Central Office(s) subject to all terms and conditions of this Agreement;

NOW THEREFORE, in consideration of the mutual agreements and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto agree as follows:

1. SCOPE OF AGREEMENT

1.1 Scope of Agreement. The rates, terms, and conditions contained within this Agreement shall only apply when CLEC-1 is occupying the collocation space as a sole occupant or as a Host pursuant to Section 4.

1.2 Right to occupy. Subject to Section 4 of this Agreement, BellSouth hereby grants to CLEC-1 a right to occupy that certain area designated by BellSouth within a BellSouth central office premises, of a size which is specified by CLEC-1 and agreed to by BellSouth (hereinafter "Collocation Space"). Notwithstanding the foregoing, BellSouth shall consider in its designation for cageless collocation any unused space within the BellSouth central office premises. The size specified by CLEC-1 may contemplate a request for space sufficient to accommodate CLEC-1's growth within a two year period unless otherwise agreed to by the Parties.

1.2.1 Space Reclamation. In the event of space exhaust within a central office premises, CLEC-1 may be required to release space to BellSouth to be allocated to other physical collocation applicants when a minimum of fifty percent of the total amount of space in CLEC-1's collocation arrangement is not being utilized within the first year of operation, or 100% of the total amount of space by the end of the second year of operation.

1.3 Use of Space. CLEC-1 shall use the Collocation Space for the purposes of installing, maintaining and operating CLEC-1's equipment (to include testing and monitoring equipment) used or useful primarily to interconnect with BellSouth services and facilities, including access to unbundled network elements, for the provision of telecommunications

services. Pursuant to Section 5 following, CLEC-1 may at its option, place CLEC-1-owned fiber entrance facilities to the Collocation Space. In addition to, and not in lieu of, interconnection to BellSouth services and facilities, CLEC-1 may connect to other interconnectors within the designated BellSouth Central Office (including to its other virtual or physical collocated arrangements) through co-carrier cross connect facilities designated by CLEC-1 pursuant to section 5.6 following. The Collocation Space may be used for no other purposes except as specifically described herein or authorized in writing by BellSouth.

1.4 Rates and charges. CLEC-1 agrees to pay the rates and charges identified at Exhibit A attached hereto.

1.5 Term. The term of this Agreement shall be for an initial period of two (2) years, beginning on the Agreement date stated above and ending two (2) years later on the month and day corresponding to such date.

2. SPACE NOTIFICATION

2.1 Availability of Space. Upon submission of an application pursuant to Section 6, BellSouth will permit CLEC-1 to physically collocate, pursuant to the terms of this Agreement, at any BellSouth central office premises, unless BellSouth has determined that there is no space available due to space limitations or no space available due to technical infeasibility. BellSouth will respond to an application within ten (10) business days as to whether space is available or not available within a BellSouth central office premises.

2.2 Reporting. Upon request from CLEC-1, BellSouth will provide a written report specifying the amount of collocation space available at the central office premises requested, the number of collocators present at the central office premises, any modifications in the use of the space since the last report or the central office premises requested and the measures BellSouth is taking to make additional space available for collocation arrangements.

2.2.1 The request from CLEC-1 must be written and must include the central office premises and Common Language Location Identification (CLLI) code of the central office premises. Such information regarding central office premises and CLLI code is located in the National Exchange Carriers Association (NECA) Tariff FCC No. 4.

2.2.2 BellSouth will respond to a request for a particular Central Office location within ten (10) business days of receipt of such request. BellSouth will make best efforts to respond in ten (10) business days to such a request when the request includes up to and including five (5) Central Office locations within the same state. The response time for requests of more than five (5) shall be negotiated between the Parties. If BellSouth cannot meet the ten business day response time, BellSouth shall notify CLEC-1 and inform CLEC-1 of the time frame under which it can respond.

2.3 Denial of Application. After notifying CLEC-1 that BellSouth has no available space in the requested Central Office ("Denial of Application"), BellSouth will allow CLEC-1, upon request, to tour the entire Central Office within ten (10) business days of such Denial of Application. In order to schedule said tour within ten (10) business days, the request for a tour of the Central Office must be received by BellSouth within five (5) business days of the Denial of Application.

2.4 Filing of Petition for Waiver. Upon Denial of Application BellSouth will timely file a petition with the Commission pursuant to 47 U.S.C. § 251(c)(6).

2.5 Waiting List. On a first come first served basis, BellSouth will maintain a waiting list of requesting carriers who have either received a Denial of Application or, where it is publicly known that the central office premises is out of space, have submitted a Letter of Intent to collocate. BellSouth will notify the telecommunications carriers on the waiting list when space becomes available according to how much space becomes available and the position of telecommunications carrier on said waiting list. Upon request BellSouth will advise CLEC-1 as to its position on the list.

2.6 Public Notification. BellSouth will maintain on its Interconnection Services website a notification document that will indicate all central office premises that are without available space. BellSouth shall update such document within ten (10) business days of the Denial of Application date. BellSouth will also post a document on its Interconnection Services website that contains a general notice where space has become available in a Central Office previously on the space exhaust list. BellSouth shall allocate said available space pursuant to the waiting list referenced in Section 2.5.

2.7 State Agency Procedures. Notwithstanding the foregoing, should any state regulatory agency impose a procedure different than procedures set forth in this section, that procedure shall supersede the requirements set forth herein.

3. COLLOCATION OPTIONS

3.1 Cageless. Except where local building code does not allow cageless collocation, BellSouth shall allow CLEC-1 to collocate CLEC-1's equipment and facilities without requiring the construction of a cage or similar structure and without requiring the creation of a separate entrance to the Collocation Space. BellSouth shall allow CLEC-1 to have direct access to its equipment and facilities but may require CLEC-1 to use a central entrance to the BellSouth Central Office. BellSouth shall make cageless collocation available in single bay increments pursuant to Section 7-. Except where CLEC-1's equipment requires special technical considerations (e.g., special cable racking, isolated ground plane), BellSouth shall assign cageless Collocation Space in conventional equipment rack lineups where feasible. For equipment requiring special technical considerations, CLEC-1 must provide the equipment layout, including spatial dimensions for such equipment pursuant to generic requirements contained in BellCore (Telcordia) GR-63-Core and shall be responsible for constructing all special technical requirements associated with such equipment pursuant to Section 6.5 following.

3.2 Cages and Adjacent Arrangement Enclosures. BellSouth shall authorize the enclosure of CLEC-1's equipment and facilities at CLEC-1's option or if required by local building code. CLEC-1 must arrange with a BellSouth certified contractor to construct a collocation arrangement enclosure in accordance with BellSouth's guidelines and specifications and at its sole expense. BellSouth will provide guidelines and specifications upon request. Where local building codes require enclosure specifications more stringent than BellSouth's standard enclosure specification, CLEC-1 and CLEC-1's BellSouth certified contractor must comply with local building code requirements. CLEC-1's BellSouth certified contractor shall be

responsible for filing and receiving any and all necessary permits and/or licenses for such construction. The Certified Vendor shall bill CLEC-1 directly for all work performed for CLEC-1 pursuant to this Agreement and BellSouth shall have no liability for nor responsibility to pay such charges imposed by the Certified Vendor. CLEC-1 must provide the local BellSouth building contact with two Access Keys used to enter the locked enclosure. Except in case of emergency, BellSouth will not access CLEC-1's locked enclosure prior to notifying CLEC-1.

3.2.1 BellSouth has the right to review CLEC-1's plans and specifications prior to allowing construction to start. BellSouth has the right to inspect the enclosure after construction to make sure it is designed and constructed according to BellSouth's guidelines and specifications and to require CLEC-1 to remove or correct at CLEC-1's cost any structure that does not meet these standards.

3.3 Shared (Subleased) Caged Collocation. CLEC-1 may allow other telecommunications carriers to share CLEC-1's caged collocation arrangement pursuant to terms and conditions agreed to by CLEC-1 ("Host") and other telecommunications carriers ("Guests") and pursuant to this section with the following exceptions: (1) where local building code does not allow Shared (Subleased) Caged Collocation and (2) where the BellSouth central office premises is located within a leased space and BellSouth is prohibited by said lease from offering such an option. The terms and conditions of the agreement between the Host and its Guests shall be written and a copy provided to the BellSouth contact specified in Section 15 within ten (10) business days of its execution and prior to any Firm Order. Further, said agreement shall incorporate by reference the rates, terms, and conditions of this Agreement between BellSouth and CLEC-1.

3.3.1 CLEC-1 shall be the sole interface and responsible party to BellSouth for the purpose of submitting applications for initial and additional equipment placements of Guest; for assessment of rates and charges contained within this Agreement; and for the purposes of ensuring that the safety and security requirements of this Agreement are fully complied with by the Guest, its employees and agents. The initial Guest application shall require the assessment of an Application Fee, as set forth in Exhibit A. Notwithstanding the foregoing, Guest may arrange directly with BellSouth for the provision of the interconnecting facilities between BellSouth and Guest and for the provisions of the services and access to unbundled network elements.

3.3.2 CLEC-1 shall indemnify and hold harmless BellSouth from any and all claims, actions, causes of action, of whatever kind or nature arising out of the presence of CLEC-1's Guests in the Collocation Space.

3.4 Adjacent Collocation. BellSouth will provide adjacent collocation arrangements ("Adjacent Arrangement") where space within the Central Office is legitimately exhausted, subject to technical feasibility, where the Adjacent Arrangement does not interfere with access to existing or planned structures or facilities on the Central Office property and where permitted by zoning and other applicable state and local regulations. The Adjacent Arrangement shall be constructed or procured by CLEC-1 and in conformance with BellSouth's design and construction specifications. Further, CLEC-1 shall construct, procure, maintain and operate said Adjacent Arrangement(s) pursuant to all of the terms and conditions set forth in this Agreement. Rates shall be negotiated at the time of the request for Adjacent Collocation.

3.4.1 Should CLEC-1 elect such option, CLEC-1 must arrange with a BellSouth certified contractor to construct an Adjacent Arrangement structure in accordance with BellSouth's guidelines and specifications. BellSouth will provide guidelines and specifications upon request. Where local building codes require enclosure specifications more stringent than BellSouth's standard specification, CLEC-1 and CLEC-1's contractor must comply with local building code requirements. CLEC-1's contractor shall be responsible for filing and receiving any and all necessary zoning, permits and/or licenses for such construction. CLEC-1's BellSouth Certified Vendor shall bill CLEC-1 directly for all work performed for CLEC-1 pursuant to this Agreement and BellSouth shall have no liability for nor responsibility to pay such charges imposed by the Certified Vendor. CLEC-1 must provide the local BellSouth building contact with two cards, keys or other access device used to enter the locked enclosure. Except in cases of emergency, BellSouth shall not access CLEC-1's locked enclosure prior to notifying CLEC-1.

3.4.2 BellSouth maintains the right to review CLEC-1's plans and specifications prior to construction of an Adjacent Arrangement(s). BellSouth may inspect the Adjacent Arrangement(s) following construction and prior to commencement, as defined in Section 4.1 following, to ensure the design and construction comply with BellSouth's guidelines and specifications. BellSouth may require CLEC-1, at CLEC-1's sole cost, to correct any deviations from BellSouth's guidelines and specifications found during such inspection(s), up to and including removal of the Adjacent Arrangement, within five (5) business days of BellSouth's inspection, unless the Parties mutually agree to an alternative time frame.

3.4.3 CLEC-1 shall provide a concrete pad, the structure housing the arrangement, HVAC, lighting, and all facilities that connect the structure (i.e. racking, conduits, etc.) to the BellSouth point of interconnection. At CLEC-1's option, BellSouth shall provide an AC power source and access to physical collocation services and facilities subject to the same nondiscriminatory requirements as applicable to any other physical collocation arrangement.

3.4.4 BellSouth shall allow Shared (Subleased) Caged Collocation within an Adjacent Arrangement pursuant to the terms and conditions set forth in Section 3.3 preceeding.

4. OCCUPANCY

4.1 Commencement Date. The "Commencement Date" shall be the day CLEC-1's equipment becomes operational as described in Article 4.2, following.

4.2 Occupancy. BellSouth will notify CLEC-1 in writing that the Collocation Space is ready for occupancy. CLEC-1 must place operational telecommunications equipment in the Collocation Space and connect with BellSouth's network within one hundred eighty (180) days after receipt of such notice. CLEC-1 must notify BellSouth in writing that collocation equipment installation is complete and is operational with BellSouth's network. BellSouth may, at its option, not accept orders for interconnected service until receipt of such notice. If CLEC-1 fails to place operational telecommunications equipment in the Collocation Space within 180 calendar days and such failure continues for a period of thirty (30) days after receipt of written notice from BellSouth, then and in that event CLEC-1's right to occupy the Collocation Space terminates and BellSouth shall have no further obligations to CLEC-1 with respect to said Collocation Space. Termination of CLEC-1's rights to the Collocation Space pursuant to this

paragraph shall not operate to release CLEC-1 from its obligation to reimburse BellSouth for all costs reasonably incurred by BellSouth in preparing the Collocation Space, but rather such obligation shall survive this Agreement. For purposes of this paragraph, CLEC-1's telecommunications equipment will be deemed operational when cross-connected to BellSouth's network for the purpose of service provision.

4.3 Termination. Except where otherwise agreed to by the Parties, CLEC-1 may terminate occupancy in a particular Collocation Space upon thirty (30) days prior written notice to BellSouth. Upon termination of such occupancy, CLEC-1 at its expense shall remove its equipment and other property from the Collocation Space. CLEC-1 shall have thirty (30) days from the termination date to complete such removal, including the removal of all equipment and facilities of CLEC-1's Guests; provided, however, that CLEC-1 shall continue payment of monthly fees to BellSouth until such date as CLEC-1 has fully vacated the Collocation Space. Should CLEC-1 fail to vacate the Collocation Space within thirty (30) days from the termination date, BellSouth shall have the right to remove the equipment and other property of CLEC-1 at CLEC-1's expense and with no liability for damage or injury to CLEC-1's property unless caused by the gross negligence or intentional misconduct of BellSouth. Upon expiration of this Agreement, CLEC-1 shall surrender the Collocation Space to BellSouth in the same condition as when first occupied by the CLEC-1 except for ordinary wear and tear. CLEC-1 shall be responsible for the cost of removing any enclosure, together with all support structures (e.g., racking, conduits), of an Adjacent Collocation arrangement at the termination of occupancy and restoring the grounds to their original condition.

5. USE OF COLLOCATION SPACE

5.1 Equipment Type. BellSouth permits the collocation of any type of equipment used or useful for interconnection to BellSouth's network or for access to unbundled network elements in the provision of telecommunications services. Such equipment used or useful for interconnection and access to unbundled network elements includes, but is not limited to transmission equipment including, but not limited to, optical terminating equipment and multiplexers, and digital subscriber line access multiplexers, routers, asynchronous transfer mode multiplexers, and remote switching modules. Nothing in this section requires BellSouth to permit collocation of equipment used solely to provide enhanced services; provided, however, that BellSouth may not place any limitations on the ability of requesting carriers to use all the features, functions, and capabilities of equipment collocated pursuant to this section.

5.1.1 Such equipment must at a minimum meet the following BellCore (Telcordia) Network Equipment Building Systems (NEBS) General Equipment Requirements: Criteria Level 1 requirements as outlined in the BellCore (Telcordia) Special Report SR-3580, Issue 1; equipment design spatial requirements per GR-63-CORE, Section 2; thermal heat dissipation per GR-063-CORE, Section 4, Criteria 77-79; acoustic noise per GR-063-CORE, Section 4, Criterion 128, and National Electric Code standards.

5.1.2 CLEC-1 shall not use the Collocation Space for marketing purposes nor shall it place any identifying signs or markings in the area surrounding the Collocation Space or on the grounds of the central office premises.

5.1.3 CLEC-1 shall place a plaque or other identification affixed to CLEC-1's equipment necessary to identify CLEC-1's equipment, including a list of emergency contacts with telephone numbers.

5.2 Entrance Facilities. CLEC-1 may elect to place CLEC-1-owned or CLEC-1-leased fiber entrance facilities into the Collocation Space. BellSouth will designate the point of interconnection in close proximity to the Central Office building housing the Collocation Space, such as an entrance manhole or a cable vault which are physically accessible by both parties. CLEC-1 will provide and place fiber cable at the point of interconnection of sufficient length to be pulled through conduit and into the splice location. CLEC-1 will provide and install a sufficient length of fire retardant riser cable, to which the entrance cable will be spliced, which will extend from the splice location to the CLEC-1's equipment in the Collocation Space. In the event CLEC-1 utilizes a non-metallic, riser-type entrance facility, a splice will not be required. CLEC-1 must contact BellSouth for instructions prior to placing the entrance facility cable in the manhole. CLEC-1 is responsible for maintenance of the entrance facilities. At CLEC-1's option BellSouth will accommodate where technically feasible a microwave entrance facility pursuant to separately negotiated terms and conditions.

5.2.1 Dual Entrance. BellSouth will provide at least two interconnection points at each central office premises where there are at least two such interconnection points available and where capacity exists. Upon receipt of a request for physical collocation under this Agreement, BellSouth shall provide CLEC-1 with information regarding BellSouth's capacity to accommodate dual entrance facilities. If conduit in the serving manhole(s) is available and is not reserved for another purpose for utilization within 12 months of the receipt of an application for collocation, BellSouth will make the requested conduit space available for installing a second entrance facility to CLEC-1's arrangement. The location of the serving manhole(s) will be determined at the sole discretion of BellSouth. Where dual entrance is not available due to lack of capacity, BellSouth will so state in the Application Response.

5.2.2 Shared Use. CLEC-1 may utilize spare capacity on an existing Interconnector entrance facility for the purpose of providing an entrance facility to another CLEC-1 collocation arrangement within the same BellSouth Central Office. CLEC-1 must arrange with BellSouth for BellSouth to splice the utilized entrance facility capacity to CLEC-1-provided riser cable.

5.3 Splicing in the Entrance Manhole. Although not generally permitted, should CLEC-1 request a splice to occur in the entrance manhole(s), BellSouth, at its sole discretion, may grant such a request, provided that BellSouth will not unreasonably withhold approval of requests to make such a splice. When the request for a splice is granted to CLEC-1 by BellSouth, CLEC-1 shall ensure its employees or agents entering and/or performing work in the entrance manhole(s) are trained and comply with BellSouth procedures and OSHA requirements regarding access to manholes and that BellSouth personnel are notified and present for all entrances and work performed in the entrance manhole(s). Manhole covers shall be properly closed and secured at the conclusion of entry and/or work. Advance notification to BellSouth shall occur at a minimum of 48 hours prior to desired entry for normal work activities and at a minimum of 2 hours prior to desired entry in an out of service condition.

5.4 Demarcation Point. BellSouth will designate the point(s) of interconnection between CLEC-1's equipment and/or network and BellSouth's network. Each party will be responsible for maintenance and operation of all equipment/facilities on its side of the

demarcation point. For 2-wire and 4-wire connections to BellSouth's network, the demarcation point shall be a common block on the BellSouth designated conventional distributing frame. CLEC-1 shall be responsible for providing, and CLEC-1's BellSouth Certified Vendor shall be responsible for installing and properly labeling/stenciling, the common block, and necessary cabling pursuant to Section 6.4. For all other terminations BellSouth shall designate a demarcation point on a per arrangement basis. CLEC-1 or its agent must perform all required maintenance to equipment/facilities on its side of the demarcation point, pursuant to subsection 5.5, following, and may self-provision cross-connects that may be required within the collocation space to activate service requests. At CLEC-1's option, a Point of Termination (POT) bay or frame may be placed in the Collocation Space.

5.5 CLEC-1's Equipment and Facilities. CLEC-1, or if required by this Agreement, CLEC-1's BellSouth certified vendor, is solely responsible for the design, engineering, installation, testing, provisioning, performance, monitoring, maintenance and repair of the equipment and facilities used by CLEC-1. Such equipment and facilities may include but are not limited to cable(s); equipment; and point of termination connections.

5.6 Co-Carrier Cross-connect. In addition to, and not in lieu of, obtaining interconnection with, or access to, BellSouth telecommunications services, unbundled network elements, and facilities, CLEC-1 may directly connect to other Interconnectors within the designated BellSouth Central Office (including to its other virtual or physical collocated arrangements) through facilities owned by CLEC-1 or through BellSouth facilities designated by CLEC-1, at CLEC-1's option. Such connections to other carriers may be made using either optical or electrical facilities. CLEC-1 may deploy such optical or electrical connections directly between its own facilities and the facilities of other Interconnector(s) without being routed through BellSouth equipment.

5.6.1 If CLEC-1 requests a co-Carrier cross-connect after the initial installation, CLEC-1 must submit an application with a Subsequent Application Fee. CLEC-1 must use a Certified Vendor to place the co-Carrier cross connect, except in cases where the CLEC-1 equipment and the equipment of the other Interconnector are located within contiguous collocation spaces. In cases where CLEC-1's equipment and the equipment of the other Interconnector are located in contiguous collocation spaces, CLEC-1 will have the option to deploy the co-Carrier cross connects between the sets of equipment. Where cable support structure exists for such connection there will be a recurring charge per linear foot of support structure used. When cable support structures do not exist and must be constructed a non-recurring charge for the individual case will be assessed.

5.7 Easement Space. From time to time BellSouth may require access to the Collocation Space. BellSouth retains the right to access such space for the purpose of making BellSouth equipment and building modifications (e.g., running, altering or removing racking, ducts, electrical wiring, HVAC, and cables). BellSouth will give reasonable notice to CLEC-1 when access to the Collocation Space is required. CLEC-1 may elect to be present whenever BellSouth performs work in the Collocation Space. The Parties agree that CLEC-1 will not bear any of the expense associated with this work.

5.8 Access. Pursuant to Section 11, CLEC-1 shall have access to the Collocation Space twenty-four (24) hours a day, seven (7) days a week. CLEC-1 agrees to provide the name, social security number, and date of birth of each employee, contractor, or agents provided with Access Keys or cards ("Access Keys") prior to the issuance of said Access Keys.

Access Keys shall not be duplicated under any circumstances. CLEC-1 agrees to be responsible for all Access Keys and for the return of all said Access Keys in the possession of CLEC-1 employees, contractors, Guests, or agents after termination of the employment relationship, contractual obligation with CLEC-1 or upon the termination of this Agreement or the termination of occupancy of an individual collocation arrangement.

5.8.1 Lost or Stolen Access Keys. CLEC-1 shall notify BellSouth in writing immediately in the case of lost or stolen Access Keys. CLEC-1 will pay BellSouth \$250.00 per Access Key(s) lost or stolen. Should it become necessary for BellSouth to re-key buildings as a result of a lost Access Key(s) or for failure to return an Access Key(s), CLEC-1 shall pay for all reasonable costs associated with the re-keying.

5.9 Interference or Impairment. Notwithstanding any other provisions of this Agreement, equipment and facilities placed in the Collocation Space shall not interfere with or impair service provided by BellSouth or by any other Interconnector located in the Central Office; shall not endanger or damage the facilities of BellSouth or of any other Interconnector, the Collocation Space, or the Central Office; shall not compromise the privacy of any communications carried in, from, or through the Central Office; and shall not create an unreasonable risk of injury or death to any individual or to the public. If BellSouth reasonably determines that any equipment or facilities of CLEC-1 violates the provisions of this paragraph, BellSouth shall give written notice to CLEC-1, which notice shall direct CLEC-1 to cure the violation within forty-eight (48) hours of CLEC-1's actual receipt of written notice or, at a minimum, to commence curative measures within 24 hours and to exercise reasonable diligence to complete such measures as soon as possible thereafter. After receipt of the notice, the parties agree to consult immediately and, if necessary, to inspect the arrangement. If CLEC-1 fails to take curative action within 48 hours or if the violation is of a character which poses an immediate and substantial threat of damage to property, injury or death to any person, or interference/impairment of the services provided by BellSouth or any other interconnector, then and only in that event BellSouth may take such action as it deems appropriate to correct the violation, including without limitation the interruption of electrical power to CLEC-1's equipment. BellSouth will endeavor, but is not required, to provide notice to CLEC-1 prior to taking such action and shall have no liability to CLEC-1 for any damages arising from such action, except to the extent that such action by BellSouth constitutes willful misconduct.

5.10 Personalty and its Removal. Subject to requirements of this Agreement, CLEC-1 may place or install in or on the Collocation Space such facilities and equipment, including storage for and spare equipment, as it deems desirable for the conduct of business; Provided that such equipment is telecommunications equipment, does not violate floor loading requirements, imposes or could impose or contains or could contain environmental conditions or hazards. Personal property, facilities and equipment placed by CLEC-1 in the Collocation Space shall not become a part of the Collocation Space, even if nailed, screwed or otherwise fastened to the Collocation Space, but shall retain their status as personalty and may be removed by CLEC-1 at any time. Any damage caused to the Collocation Space by CLEC-1's employees, agents or representatives during the removal of such property shall be promptly repaired by CLEC-1 at its expense.

5.11 Alterations. In no case shall CLEC-1 or any person acting on behalf of CLEC-1 make any rearrangement, modification, improvement, addition, repair, or other alteration to the Collocation Space or the BellSouth Central Office without the written consent of BellSouth,

which consent shall not be unreasonably withheld. The cost of any such specialized alterations shall be paid by CLEC-1.

5.12 Janitorial Service. CLEC-1 shall be responsible for the general upkeep and cleaning of the Caged Collocation Space and shall arrange directly with a BellSouth certified contractor for janitorial services. BellSouth shall provide a list of such contractors on a site-specific basis upon request.

6. ORDERING AND PREPARATION OF COLLOCATION SPACE

6.1 Application for Space. CLEC-1 shall submit an application document when CLEC-1 or CLEC-1's Guest(s), as defined in Section 3.3, desires to request or modify the use of the Collocation Space.

6.1.1 Initial Application. For CLEC-1 or CLEC-1's Guest(s) initial equipment placement, CLEC-1 shall submit to BellSouth a complete and accurate Application and Inquiry document (Bona Fide Application), together with payment of the Application Fee as stated in Exhibit A. The Bona Fide Application shall contain a detailed description and schematic drawing of the equipment to be placed in CLEC-1's Collocation Space(s) and an estimate of the amount of square footage required.

6.1.2 Subsequent Application Fee. In the event CLEC-1 or CLEC-1's Guest(s) desire to modify the use of the Collocation Space, CLEC-1 shall complete an Application document detailing all information regarding the modification to the Collocation Space together with payment of the minimum Subsequent Application Fee as stated in Exhibit A. Said minimum Subsequent Application Fee shall be considered a partial payment of the applicable Subsequent Application Fee which shall be calculated as set forth below. BellSouth shall determine what modifications, if any, to the Central Office premises are required to accommodate the change requested by CLEC-1 in the Application. Such necessary modifications to the Central Office premises may include but are not limited to, floor loading changes, changes necessary to meet HVAC requirements, changes to power plant requirements, and equipment additions. The fee paid by CLEC-1 for its request to modify the use of the Collocation Space shall be dependent upon the modification requested. Where the subsequent application does not require provisioning or construction work by BellSouth, no Subsequent Application Fee will be required and the pre-paid fee shall be refunded to CLEC-1. The fee for an application where the modification requested has limited effect (e.g., does not require capital expenditure by BellSouth) shall be the Subsequent Application Fee as set forth in Exhibit A. All other modifications shall require a Subsequent Application Fee assessed at the applicable application fee. In the event such modifications require the assessment of a full Application Fee as set forth in Exhibit A, the outstanding balance shall be due by CLEC-1 within 30 calendar days following CLEC-1's receipt of a bill or invoice from BellSouth.

6.2 Application Response. In addition to the notice of space availability pursuant to Section 2.1, BellSouth will respond within ten (10) business days of receipt of an Application whether the Application is Bona Fide, and if it is not Bona Fide, the items necessary to cause the Application to become Bona Fide. When space has been determined to be available, BellSouth will provide a comprehensive written response within thirty (30) business days of receipt of a complete application. When multiple applications are submitted within a fifteen

business day window, BellSouth will respond to the applications as soon as possible, but no later than the following: within thirty (30) business days for applications 1-5; within thirty-six (36) business days for applications 6-10; within forty-two (42) business days for applications 11-15. Response intervals for multiple applications submitted within the same timeframe for the same state in excess of 15 must be negotiated. All negotiations shall consider the total volume from all requests from telecommunications companies for collocation. The Application Response will detail whether the amount of space requested is available or if the amount of space requested is not available, the amount of space that is available. The response will also include the configuration of the space. When BellSouth's response includes an amount of space less than that requested by CLEC-1 or differently configured, CLEC-1 must amend its application to reflect the actual space available prior to submitting a Bona Fide Firm Order.

6.3 Bona Fide Firm Order. CLEC-1 shall indicate its intent to proceed with equipment installation in a BellSouth Central Office by submitting a Bona Fide Firm Order to BellSouth. A Bona Fide Firm Order requires CLEC-1 to complete the Application/Inquiry process described in Subsection 6.1, preceding, and submit the Expanded Interconnection Bona Fide Firm Order document (BSTEI-1P-F) indicating acceptance of the written application response provided by BellSouth ("Bona Fide Firm Order") and all appropriate fees. The Bona Fide Firm Order must be received by BellSouth no later than thirty (30) calendar days after BellSouth's response to CLEC-1's Application/Inquiry. If CLEC-1 makes changes to its application in light of BellSouth's written Application Response, BellSouth will be required to re-evaluate and respond to the change(s). In this event, BellSouth's provisioning interval will not start until the re-evaluation and response to the change(s) is complete and the Bona Fide Firm Order is received by BellSouth and all appropriate fees and duties have been executed. If BellSouth needs to reevaluate CLEC-1's application as a result of changes requested by CLEC-1 to CLEC-1's original application, then BellSouth will charge CLEC-1 a fee based upon the additional engineering hours required to do the reassessment. Major changes such as requesting additional space or adding additional equipment may require CLEC-1 to resubmit the application with an application fee.

6.3.1 BellSouth will establish a firm order date, per request, based upon the date BellSouth is in receipt of a Bona Fide Firm Order. BellSouth will acknowledge the receipt of CLEC-1's Bona Fide Firm Order within five (5) business days of receipt indicating that the Bona Fide Firm Order has been received. A BellSouth response to a Bona Fide Firm Order will include a Firm Order Confirmation containing the firm order date.

6.3.2 BellSouth will permit one accompanied site visit to CLEC-1's designated collocation arrangement location after receipt of the Bona Fide Firm Order without charge to CLEC-1.

6.3.3 Space preparation for the Collocation Space will not begin until BellSouth receives the Bona Fide Firm Order and all applicable fees.

6.3.4 CLEC-1 must submit to BellSouth the completed Access Control Request Form (RF-2906-C) for all employees or agents requiring access to the BellSouth Central Office a minimum of 30 calendar days prior to the date CLEC-1 desires access to the Collocation Space.

6.4 Construction and Provisioning Interval. BellSouth will negotiate construction and provisioning intervals per request on an individual case basis. Excluding the time interval

required to secure the appropriate government licenses and permits, BellSouth will use best efforts to complete construction for collocation arrangements under ordinary conditions as soon as possible and within a maximum of 90 business days from receipt of a complete and accurate Bona Fide Firm Order. Ordinary conditions are defined as space available with only minor changes to support systems required, such as but not limited to, HVAC, cabling and the power plant(s). Excluding the time interval required to secure the appropriate government licenses and permits, BellSouth will use best efforts to complete construction of all other collocation space ("extraordinary conditions") within 130 business days of the receipt of a complete and accurate Bona Fide Firm Order. Extraordinary conditions are defined to include but are not limited to major BellSouth equipment rearrangement or addition; power plant addition or upgrade; major mechanical addition or upgrade; major upgrade for ADA compliance; environmental hazard or hazardous materials abatement.

6.4.1 Joint Planning Meeting. Unless otherwise agreed to by the Parties, a joint planning meeting or other method of joint planning between BellSouth and CLEC-1 will commence within a maximum of 15 business days from BellSouth's receipt of a Bona Fide Firm Order and the payment of agreed upon fees. At such meeting, the Parties will agree to the preliminary design of the Collocation Space and the equipment configuration requirements as reflected in the Application and affirmed in the Bona Fide Firm Order. The Collocation Space Completion time period will be provided to CLEC-1 during the joint planning meeting or as soon as possible thereafter. BellSouth will complete all design work following the joint planning meeting.

6.4.2 Permits. Each Party or its agents will diligently pursue filing for the permits required for the scope of work to be performed by that Party or its agents within 7 business days of the completion of finalized construction designs and specifications.

6.4.3 Acceptance Walk Through. CLEC-1 and BellSouth will complete an acceptance walk through of each Collocation Space requested from BellSouth by CLEC-1. BellSouth will correct any deviations to CLEC-1's original or jointly amended requirements within five (5) business days after the walk through, unless the Parties jointly agree upon a different time frame.

6.5 Use of Certified Vendor. CLEC-1 shall select a vendor which has been approved as a BellSouth Certified Vendor to perform all engineering and installation work required in the Collocation Space. In some cases, CLEC-1 must select separate BellSouth Certified Vendors for transmission equipment, switching equipment and power equipment. BellSouth shall provide CLEC-1 with a list of Certified Vendors upon request. The Certified Vendor(s) shall be responsible for installing CLEC-1's equipment and components, installing co-carrier cross connects, extending power cabling to the BellSouth power distribution frame, performing operational tests after installation is complete, and notifying BellSouth's equipment engineers and CLEC-1 upon successful completion of installation. The Certified Vendor shall bill CLEC-1 directly for all work performed for CLEC-1 pursuant to this Agreement and BellSouth shall have no liability for nor responsibility to pay such charges imposed by the Certified Vendor. BellSouth shall consider certifying CLEC-1 or any vendor proposed by CLEC-1.

6.6 Alarm and Monitoring. BellSouth shall place environmental alarms in the Central Office for the protection of BellSouth equipment and facilities. CLEC-1 shall be responsible for placement, monitoring and removal of environmental and equipment alarms used to service

CLEC-1's Collocation Space. Upon request, BellSouth will provide CLEC-1 with applicable tariffed service(s) to facilitate remote monitoring of collocated equipment by CLEC-1. Both parties shall use best efforts to notify the other of any verified environmental hazard known to that party. The parties agree to utilize and adhere to the Environmental Hazard Guidelines identified as Exhibit B attached hereto.

6.7 Basic Telephone Service. Upon request of CLEC-1, BellSouth will provide basic telephone service to the Collocation Space under the rates, terms and conditions of the current tariff offering for the service requested.

6.8 Space Preparation. BellSouth shall pro rate the costs of any renovation or upgrade to Central Office space or support mechanisms which is required to accommodate physical collocation. CLEC-1's pro rated share will be calculated by multiplying such cost by a percentage equal to the amount of square footage occupied by CLEC-1 divided by the total Central Office square footage receiving renovation or upgrade. For this section, support mechanisms provided by BellSouth may include, but not be limited to heating/ventilation/air conditioning (HVAC) equipment, HVAC duct work, cable support structure, fire wall(s), mechanical upgrade, asbestos abatement, or ground plane addition. Such renovation or upgrade will be evaluated and the charges assessed on a per Central Office basis. BellSouth will reimburse CLEC-1 in an amount equal to CLEC-1 reasonable, demonstrative and mitigated expenditures incurred as a direct result of delays to the completion and turnover dates caused by BellSouth.

6.9 Virtual Collocation Transition. BellSouth offers Virtual Collocation pursuant to the rates, terms and conditions set forth in its F.C.C. Tariff No. 1. For the interconnection to BellSouth's network and access to BellSouth unbundled network elements, CLEC-1 may purchase 2-wire and 4-wire Cross-Connects as set forth in Exhibit A, and CLEC-1 may place within its Virtual Collocation arrangements the telecommunications equipment set forth in Section 5.1. In the event physical collocation space was previously denied at a location due to technical reasons or space limitations, and that physical collocation space has subsequently become available, CLEC-1 may transition its virtual collocation arrangements to physical collocation arrangements and pay the appropriate non-recurring fees for physical collocation and for the rearrangement or reconfiguration of services terminated in the virtual collocation arrangement. In the event that BellSouth knows when additional space for physical collocation may become available at the location requested by CLEC-1, such information will be provided to CLEC-1 in BellSouth's written denial of physical collocation. To the extent that (i) physical collocation space becomes available to CLEC-1 within 180 days of BellSouth's written denial of CLEC-1's request for physical collocation, and (ii) CLEC-1 was not informed in the written denial that physical collocation space would become available within such 180 days, then CLEC-1 may transition its virtual collocation arrangement to a physical collocation arrangement and will receive a credit for any nonrecurring charges previously paid for such virtual collocation credit for any CLEC-1 must arrange with a BellSouth certified vendor for the relocation of equipment from its virtual collocation space to its physical collocation space and will bear the cost of such relocation.

6.10 Cancellation. If, at anytime, CLEC-1 cancels its order for the Collocation Space(s), CLEC-1 will reimburse BellSouth for any expenses incurred up to the date that written notice of the cancellation is received. In no event will the level of reimbursement under this paragraph exceed the maximum amount CLEC-1 would have otherwise paid for work undertaken by BellSouth if no cancellation of the order had occurred.

6.11 Licenses. CLEC-1, at its own expense, will be solely responsible for obtaining from governmental authorities, and any other appropriate agency, entity, or person, all rights, privileges, and licenses necessary or required to operate as a provider of telecommunications services to the public or to occupy the Collocation Space.

7. RATES AND CHARGES

7.1 Non-recurring Fees. In addition to the Application Fee referenced in Section 6, preceding, CLEC-1 shall remit payment of a Cable Installation Fee and one-half (1/2) of the estimated Space Preparation Fee, as applicable, coincident with submission of a Bona Fide Firm Order. The outstanding balance of the actual Space Preparation Fee shall be due thirty (30) calendar days following CLEC-1's receipt of a bill or invoice from BellSouth. Once the installation of the initial equipment arrangement is complete, a subsequent application fee may apply (as described in Subsection 7.4, when CLEC-1 requests a modification to the arrangement.

7.2 Documentation. BellSouth shall provide documentation to establish the actual Space Preparation Fee. The Space Preparation Fee will be pro rated as prescribed in Section 6, preceding.

7.3 Cable Installation. Cable Installation Fee(s) are assessed per entrance fiber placed.

7.4 Floor Space. The floor space charge includes reasonable charges for lighting, heat, air conditioning, ventilation and other allocated expenses associated with maintenance of the Central Office but does not include amperage necessary to power CLEC-1's equipment. When the Collocation Space is enclosed, CLEC-1 shall pay floor space charges based upon the number of square feet so enclosed. When the Collocation Space is not enclosed, CLEC-1 shall pay floor space charges based upon the following floor space calculation: [(depth of the equipment lineup in which the rack is placed) + (0.5 x maintenance aisle depth) + (0.5 x wiring aisle depth)] X (width of rack and spacers). For purposes of this calculation, the depth of the equipment lineup shall consider the footprint of equipment racks plus any equipment overhang. BellSouth will assign unenclosed Collocation Space in conventional equipment rack lineups where feasible. In the event CLEC-1's collocated equipment requires special cable racking, isolated grounding or other treatment which prevents placement within conventional equipment rack lineups, CLEC-1 shall be required to request an amount of floor space sufficient to accommodate the total equipment arrangement. Floor space charges are due beginning with the date on which BellSouth releases the Collocation Space for occupancy or on the date CLEC-1 first occupies the Collocation Space, whichever is sooner.

7.5 Power. BellSouth shall supply -48 Volt (-48V) DC power for CLEC-1's Collocation Space within the central office premises and shall make available AC power at CLEC-1's option for Adjacent Arrangement collocation.

7.5.1 Charges for -48V DC power will be assessed per ampere per month based upon the certified vendor engineered and installed power feed fused ampere capacity. Rates include redundant feeder fuse positions (A&B) and cable rack to CLEC-1's equipment or space enclosure. When obtaining power from a BellSouth Battery Distribution Fuse Bay, fuses

and power cables (A&B) must be engineered (sized), and installed by CLEC-1's certified vendor. When obtaining power from a BellSouth Power Board, power cables (A&B) must be engineered (sized), and installed by CLEC-1's certified power vendor. CLEC-1's certified vendor must also provide a copy of the engineering power specification prior to the Commencement Date. In the event BellSouth shall be required to construct additional DC power plant or upgrade the existing DC power plant in a Central Office as a result of CLEC-1's request to collocate in that Central Office ("Power Plant Construction"), CLEC-1 shall pay its pro-rata share of costs associated with the Power Plant Construction. The determination of whether Power Plant Construction is necessary shall be within BellSouth's sole, but reasonable, discretion. BellSouth shall comply with all BellCore (Telcordia) and ANSI Standards regarding power cabling, including BellCore (Telcordia) Network Equipment Building System (NEBS) Standard GR-63-CORE. BellSouth will notify CLEC-1 of the need for the Power Plant Construction and will estimate the costs associated with the Power Plant Construction if BellSouth were to perform the Power Plant Construction. The costs of power plant construction shall be pro-rated and shared among all who benefit from that construction. CLEC-1 shall pay BellSouth one-half of its prorata share of the estimated Power Plant Construction costs prior to commencement of the work. CLEC-1 shall pay BellSouth the balance due (actual cost less one-half of the estimated cost) within thirty (30) days of completion of the Power Plant Construction. CLEC-1 has the option to perform the Power Plant Construction itself; provided, however, that such work shall be performed by a BellSouth certified contractor and such contractor shall comply with BellSouth's guidelines and specifications. Where the Power Plant Construction results in construction of a new power plant room, upon termination of this Agreement CLEC-1 shall have the right to remove its equipment from the power plant room, but shall otherwise leave the room intact. Where the Power Plant Construction results in an upgrade to BellSouth's existing power plant, upon termination of this Agreement, such upgrades shall become the property of BellSouth.

7.5.2 Charges for AC power will be assessed per breaker ampere per month based upon the certified vendor engineered and installed power feed fused ampere capacity. Rates include the provision of commercial and standby AC power. When obtaining power from a BellSouth Service Panel, fuses and power cables must be engineered (sized), and installed by CLEC-1's certified vendor. CLEC-1's certified vendor must also provide a copy of the engineering power specification prior to the Commencement Date. Charges for AC power shall be assessed pursuant to the rates specified in Exhibit A. AC power voltage and phase ratings shall be determined on a per location basis.

7.6 Security Escort. A security escort will be required whenever CLEC-1 or its approved agent desires access to the entrance manhole or must have access to the Central Office Premises after the one accompanied site visit allowed pursuant to subsection 6.3.2 prior to completing BellSouth's Security Training requirements and/or prior to Space Acceptance. Rates for a security escort are assessed in one-half (1/2) hour increments according to the schedule appended hereto as Exhibit A.

7.7 Rate "True-Up." The Parties agree that the prices reflected as interim herein shall be "trued-up" (up or down) based on final prices either determined by further agreement or by final order, including any appeals, in a proceeding involving BellSouth before the regulatory authority for the state in which the services are being performed or any other body having jurisdiction over this agreement (hereinafter "Commission"). Under the "true-up" process, the interim price for each service shall be multiplied by the volume of that service purchased to arrive at the total interim amount paid for that service ("Total Interim Price"). The final price for

that service shall be multiplied by the volume purchased to arrive at the total final amount due ("Total Final Price"). The Total Interim Price shall be compared with the Total Final Price. If the Total Final Price is more than the Total Interim Price, CLEC-1 shall pay the difference to BellSouth. If the Total Final Price is less than the Total Interim Price, BellSouth shall pay the difference to CLEC-1. Each party shall keep its own records upon which a "true-up" can be based and any final payment from one party to the other shall be in an amount agreed upon by the Parties based on such records. In the event of any disagreement as between the records or the Parties regarding the amount of such "true-up," the Parties agree that the Commission shall be called upon to resolve such differences.

7.8 Other. If no rate is identified in the contract, the rate for the specific service or function will be negotiated by the parties upon request by either party. Payment of all other charges under this Agreement shall be due thirty (30) days after receipt of the bill (payment due date). CLEC-1 will pay a late payment charge of one and one-half percent (1-1/2%) assessed monthly on any balance which remains unpaid after the payment due date.

8. INSURANCE

8.1 CLEC-1 shall, at its sole cost and expense, procure, maintain, and keep in force insurance as specified in this Article VI and underwritten by insurance companies licensed to do business in the states applicable under this Agreement and having a BEST Insurance Rating of B ++ X (B ++ ten).

8.2 CLEC-1 shall maintain the following specific coverage:

8.2.1 Commercial General Liability coverage in the amount of ten million dollars (\$10,000,000.00) or a combination of Commercial General Liability and Excess/Umbrella coverage totaling not less than ten million dollars (\$10,000,000.00). BellSouth shall be named as an ADDITIONAL INSURED on ALL applicable policies as specified herein.

8.2.2 Statutory Workers Compensation coverage and Employers Liability coverage in the amount of one hundred thousand dollars (\$100,000.00) each accident, one hundred thousand dollars (\$100,000.00) each employee by disease, and five hundred thousand dollars (\$500,000.00) policy limit by disease.

8.2.3 CLEC-1 may elect to purchase business interruption and contingent business interruption insurance, having been advised that BellSouth assumes no liability for loss of profit or revenues should an interruption of service occur.

8.3 The limits set forth in Subsection 8.2 above may be increased by BellSouth from time to time during the term of this Agreement upon thirty (30) days notice to CLEC-1 to at least such minimum limits as shall then be customary with respect to comparable occupancy of BellSouth structures.

8.4 All policies purchased by CLEC-1 shall be deemed to be primary and not contributing to or in excess of any similar coverage purchased by BellSouth. All insurance must be in effect on or before the date equipment is delivered to BellSouth's Central Office and shall remain in effect for the term of this Agreement or until all CLEC-1's property has been removed from BellSouth's Central Office, whichever period is longer. If CLEC-1 fails to maintain required

coverage, BellSouth may pay the premiums thereon and seek reimbursement of same from CLEC-1.

8.5 CLEC-1 shall submit certificates of insurance reflecting the coverage required pursuant to this Section a minimum of ten (10) days prior to the commencement of any work in the Collocation Space. Failure to meet this interval may result in construction and equipment installation delays. CLEC-1 shall arrange for BellSouth to receive thirty (30) days advance notice of cancellation from CLEC-1's insurance company. CLEC-1 shall forward a certificate of insurance and notice of cancellation to BellSouth at the following address:

BellSouth Telecommunications, Inc.
Attn.: Risk Management Coordinator
600 N. 19th Street, 18B3
Birmingham, Alabama 35203

8.6 CLEC-1 must conform to recommendations made by BellSouth's fire insurance company to the extent BellSouth has agreed to, or shall hereafter agree to, such recommendations.

8.7 Failure to comply with the provisions of this Section will be deemed a material breach of this Agreement.

9. MECHANICS LIENS

9.1 If any mechanics lien or other liens shall be filed against property of either party (BellSouth or CLEC-1), or any improvement thereon by reason of or arising out of any labor or materials furnished or alleged to have been furnished or to be furnished to or for the other party or by reason of any changes, or additions to said property made at the request or under the direction of the other party, the other party directing or requesting those changes shall, within thirty (30) days after receipt of written notice from the party against whose property said lien has been filed, either pay such lien or cause the same to be bonded off the affected property in the manner provided by law. The party causing said lien to be placed against the property of the other shall also defend, at its sole cost and expense, on behalf of the other, any action, suit or proceeding which may be brought for the enforcement of such liens and shall pay any damage and discharge any judgment entered thereon.

10. INSPECTIONS

10.1 BellSouth shall conduct an inspection of CLEC-1's equipment and facilities in the Collocation Space(s) prior to the activation of facilities between CLEC-1's equipment and equipment of BellSouth. BellSouth may conduct an inspection if CLEC-1 adds equipment and may otherwise conduct routine inspections at reasonable intervals mutually agreed upon by the Parties. BellSouth shall provide CLEC-1 with a minimum of forty-eight (48) hours or two (2) business days, whichever is greater, advance notice of all such inspections. All costs of such inspection shall be borne by BellSouth.

11. SECURITY AND SAFETY REQUIREMENTS

11.1 Only BellSouth employees, BellSouth certified vendors and authorized employees, authorized Guests, pursuant to Section 3.3, preceding, or authorized agents of CLEC-1 will be permitted in the BellSouth Central Office. CLEC-1 shall provide its employees and agents with picture identification which must be worn and visible at all times while in the Collocation Space or other areas in or around the Central Office. The photo Identification card shall bear, at a minimum, the employee's name and photo, and the CLEC-1 name. BellSouth reserves the right to remove from its premises any employee of CLEC-1 not possessing identification issued by CLEC-1. CLEC-1 shall hold BellSouth harmless for any damages resulting from such removal of its personnel from BellSouth premises. CLEC-1 shall be solely responsible for ensuring that any Guest of CLEC-1 is in compliance with all subsections of this Section 11.

11.1.1 CLEC-1 will be required, at its own expense, to conduct a statewide investigation of criminal history records for each CLEC-1 employee being considered for work on the BellSouth Central Office, for the states/counties where the CLEC-1 employee has worked and lived for the past five years. Where state law does not permit statewide collection or reporting, an investigation of the applicable counties is acceptable.

11.1.2 CLEC-1 will be required to administer to their personnel assigned to the BellSouth Central Office security training either provided by BellSouth, or meeting criteria defined by BellSouth.

11.1.3 CLEC-1 shall not assign to the BellSouth Central Office any personnel with records of felony criminal convictions. CLEC-1 shall not assign to the BellSouth Central Office any personnel with records of misdemeanor convictions, without advising BellSouth of the nature and gravity of the offense(s). BellSouth reserves the right to refuse building access to any CLEC-1 personnel who have been identified to have misdemeanor criminal convictions.

11.1.4 For each CLEC-1 employee requiring access to a BellSouth Central Office pursuant to this agreement, CLEC-1 shall furnish BellSouth, prior to an employee gaining such access, a notarized affidavit certifying that the aforementioned background check and security training were completed. The affidavit will contain a statement certifying no felony convictions were found and certifying that the security training was completed by the employee. If the employee's criminal history includes misdemeanor convictions, CLEC-1 will disclose the nature of the convictions to BellSouth at that time.

11.1.5 At BellSouth's request, CLEC-1 shall promptly remove from the BellSouth's premises any employee of CLEC-1 BellSouth does not wish to grant access to its premises pursuant to any investigation conducted by BellSouth.

11.2 Notification to BellSouth. BST reserves the right to interview CLEC-1's employees, agents, or contractors. CLEC-1 and its contractors shall cooperate fully with BellSouth's investigation into allegations of wrongdoing or criminal conduct committed by or involving CLEC-1's employees, agents, or contractors. Additionally, BellSouth reserves the right to bill CLEC-1 for all costs associated with investigations involving its employees, agents, or contractors if it can be reasonably established that CLEC-1's employees, agents, or contractors are responsible for the alleged act. BellSouth shall bill CLEC-1 for BellSouth property which is stolen or damaged where an investigation determines the culpability of CLEC-1's employees, agents, or contractors. CLEC-1 shall notify BellSouth in writing immediately in

the event that the CLEC discovers one of its employees already working on the BellSouth premises is a possible security risk. BellSouth reserves the right to permanently remove from its premises any employee of CLEC-1 identified as posing a security risk to BellSouth or any other CLEC, or having violated BellSouth policies set forth in the BellSouth CLEC Security Training. CLEC-1 shall hold BellSouth harmless for any damages resulting from such removal of its personnel from BellSouth premises.

11.3 Use of BellSouth Supplies by CLEC-1 Employees. Use of any BellSouth supplies by a CLEC-1 employee, whether or not used routinely to provide telephone service (e.g. plug-in cards,) will be considered theft and will be handled accordingly. Costs associated with such unauthorized use of BellSouth property may be charged to CLEC-1 as may be all associated investigative costs. At BellSouth's request, CLEC-1 shall promptly and permanently remove from BellSouth's Central Office any employee of CLEC-1 found to be in violation of this rule.

11.4 Use of Official Lines by CLEC-1 Employees. Except for local calls necessary in the performance of their work, CLEC-1 employees shall not use the telephones on BellSouth Central Office. Charges for unauthorized telephone calls made by a CLEC-1's employees may be charged to CLEC-1 as may be all associated investigative costs. At BellSouth's request, CLEC-1 shall promptly and permanently remove from BellSouth's premises any employee of CLEC-1 found to be in violation of this rule.

11.5 Accountability. Full compliance with the Security requirements of this section shall in no way limit the accountability of any CLEC for the improper actions of its employees.

12. DESTRUCTION OF COLLOCATION SPACE

12.1 In the event a Collocation Space is wholly or partially damaged by fire, windstorm, tornado, flood or by similar causes to such an extent as to be rendered wholly unsuitable for CLEC-1's permitted use hereunder, then either party may elect within ten (10) days after such damage, to terminate this Agreement, and if either party shall so elect, by giving the other written notice of termination, both parties shall stand released of and from further liability under the terms hereof. If the Collocation Space shall suffer only minor damage and shall not be rendered wholly unsuitable for CLEC-1's permitted use, or is damaged and the option to terminate is not exercised by either party, BellSouth covenants and agrees to proceed promptly without expense to CLEC-1, except for improvements not the property of BellSouth, to repair the damage. BellSouth shall have a reasonable time within which to rebuild or make any repairs, and such rebuilding and repairing shall be subject to delays caused by storms, shortages of labor and materials, government regulations, strikes, walkouts, and causes beyond the control of BellSouth, which causes shall not be construed as limiting factors, but as exemplary only. CLEC-1 may, at its own expense, accelerate the rebuild of its collocated space and equipment provided however that a certified vendor is used and the necessary space preparation has been completed. Rebuild of equipment must be performed by a BellSouth Certified Vendor. If CLEC-1's acceleration of the project increases the cost of the project, then those additional charges will be incurred by CLEC-1. Where allowed and where practical, CLEC-1 may erect a temporary facility while BellSouth rebuilds or makes repairs. In all cases where the Collocation Space shall be rebuilt or repaired, CLEC-1 shall be entitled to an equitable abatement of rent and other charges, depending upon the unsuitability of the Collocation Space for CLEC-1's permitted use, until such Collocation Space is fully repaired

and restored and CLEC-1's equipment installed therein (but in no event later than thirty (30) days after the Collocation Space is fully repaired and restored). Where CLEC-1 has placed an Adjacent Arrangement pursuant to section 3.4, CLEC-1 shall have the sole responsibility to repair or replace said Adjacent Arrangement provided herein. Pursuant to this section, BellSouth will restore the associated services to the Adjacent Arrangement.

13. EMINENT DOMAIN

13.1 If the whole of a Collocation Space or Adjacent Arrangement shall be taken by any public authority under the power of eminent domain, then this Agreement shall terminate as of the day possession shall be taken by such public authority and rent and other charges for the Collocation Space or Adjacent Arrangement shall be paid up to that day with proportionate refund by BellSouth of such rent and charges as may have been paid in advance for a period subsequent to the date of the taking. If any part of the Collocation Space or Adjacent Arrangement shall be taken under eminent domain, BellSouth and CLEC-1 shall each have the right to terminate this Agreement and declare the same null and void, by written notice of such intention to the other party within ten (10) days after such taking.

14. NONEXCLUSIVITY

12.1 CLEC-1 understands that this Agreement is not exclusive and that BellSouth may enter into similar agreements with other parties. Assignment of space pursuant to all such agreements shall be determined by space availability and made on a first come, first served basis.

15. NOTICES

15.1 Except as otherwise provided herein, any notices or demands that are required by law or under the terms of this Agreement shall be given or made by CLEC-1 or BellSouth in writing and shall be given by hand delivery, or by certified or registered mail, and addressed to the parties as follows:

To BellSouth:

600 N. 19th Street

9th Floor

Birmingham, AL 35240

ATTN: CLEC Account Team

To CLEC-1:

ATTN: _____

15.2 Such notices shall be deemed to have been given in the case of certified or registered mail when deposited in the United States mail with postage prepaid.

16. INDEMNITY / LIMITATION OF LIABILITY

16.1 CLEC-1 shall be liable for any damage to property, equipment or facilities or injury to person caused by the activities of CLEC-1, its agents or employees pursuant to, or in furtherance of, rights granted under this Agreement. CLEC-1 shall indemnify and hold BellSouth harmless from and against any judgments, fees, costs or other expenses resulting or claimed to result from such activities by CLEC-1, its agents or employees.

16.2 BellSouth shall not be liable to CLEC-1 for any interruption of CLEC-1's service or for interference with the operation of CLEC-1's communications facilities, or for any special, indirect, incidental or consequential damages arising in any manner, including BellSouth's negligence, out of the use of the Collocation Space(s) and CLEC-1 shall indemnify, defend and hold BellSouth harmless from and against any and all claims, demands, causes of action, costs and reasonable attorneys' fees with respect to such special, indirect, incidental or consequential damages.

17. PUBLICITY

17.1 CLEC-1 agrees to submit to BellSouth all advertising, sales promotion, press releases, and other publicity matters relating to this Agreement or mentioning or implying the tradenames, logos, trademarks or service marks (hereinafter "Marks") of BellSouth Corporation and/or any of its affiliated companies or language from which the connection of said Marks therewith may be inferred or implied, or mentioning or implying the names of any personnel of BellSouth Corporation and/or any of its affiliated companies, and CLEC-1 further agrees not to publish or use such advertising, sales promotions, press releases, or publicity matters without BellSouth's prior written consent.

18. FORCE MAJEURE

18.1 Neither party shall be in default by reason of any failure in performance of this Agreement, in accordance with its terms and conditions, if such failure arises out of causes beyond the control of the nonperforming party including, but not restricted to, acts of God, acts of government, insurrections, fires, floods, accidents, epidemics, quarantines, restrictions, strikes, freight embargoes, inability to secure raw materials or transportation facilities, acts or omissions of carriers or any and all other causes beyond the party's control.

19. YEAR 2000 COMPLIANCE

19.1 Each party warrants that it has implemented a program the goal of which is to ensure that all collocated equipment, software, hardware and related materials (collectively called "Systems") delivered, connected with BellSouth or supplied in the furtherance of the terms and conditions specified in this Agreement: (i) will record, store, process and display calendar dates falling on or after January 1, 2000, in the same manner, and with the same functionality as such software records, stores, processes and calendar dates falling on or before December 31, 1999; and (ii) shall include without limitation date data century recognition, calculations that accommodate same century and multicentury formulas and date values, and date data interface values that reflect the century.

20. ASSIGNMENT

20.1 CLEC-1 acknowledges that this Agreement does not convey any right, title or interest in the Central Office to CLEC-1. This Agreement is not assignable by either party without the prior written consent of the other party, and any attempt to assign any of the rights, duties or obligations of this Agreement without such consent is void. Notwithstanding the foregoing, either party may assign any rights, duties or obligations of this Agreement to a parent, subsidiary or affiliate without the consent of the other party.

21. NO IMPLIED WAIVER

21.1 No consent or waiver by either party to or of any breach of any covenant, term, condition, provision or duty of the other party under this Agreement shall be construed as a consent to or waiver of any other breach of the same or any other covenant, term, condition, provision or duty. No such consent or waiver shall be valid unless in writing and signed by the party granting such consent or waiver.

22. RESOLUTION OF DISPUTES

22.1 Except as otherwise stated in this Agreement, the Parties agree that if any dispute arises as to the interpretation of any provision of this Agreement or as to the proper implementation of this Agreement, the parties will petition the Commission in the state where the services are provided pursuant to this Agreement for a resolution of the dispute. However, each party reserves any rights it may have to seek judicial review of any ruling made by the Public Service Commission concerning this Agreement.

23. SECTION HEADINGS

23.1 The section headings used herein are for convenience only, and shall not be deemed to constitute integral provisions of this Agreement.

24. AUTHORITY

24.1 Each of the parties hereto warrants to the other that the person or persons executing this Agreement on behalf of such party has the full right, power and authority to enter into and execute this Agreement on such party's behalf and that no consent from any other person or entity is required as a condition precedent to the legal effect of this Agreement.

25. REVIEW OF AGREEMENT

25.1 The parties acknowledge that each has had an opportunity to review and negotiate this Agreement and has executed this Agreement only after such review and negotiation. The Parties further agree that this Agreement shall be deemed to have been drafted by both BellSouth and CLEC-1 and the terms and conditions contained herein shall not be construed any more strictly against one party or the other.

26. FILING OF AGREEMENT

26.1 Upon execution of this Agreement it shall be filed with the appropriate state regulatory agency pursuant to the requirements of section 252 of the Act. If the regulatory agency imposes any filing or public interest notice fees regarding the filing or approval of the Agreement, said costs shall be borne by CLEC-1.

27. ENTIRE AGREEMENT

27.1 This Agreement contains the full understanding of the Parties (superseding all prior or contemporaneous correspondence between the Parties) and shall constitute the entire agreement between BellSouth and CLEC-1 and may not be modified or amended other than by a written instrument signed by both parties. If any conflict arises between the terms and conditions contained in this Agreement and those contained in a filed tariff, the terms and conditions of this Agreement shall control.

IN WITNESS WHEREOF, the Parties have executed this Agreement by their duly authorized representatives in one or more counterparts, each of which shall constitute an original, on the day and year first above written.

BELLSOUTH TELECOMMUNICATIONS,
INC.

(CLEC-1's Full Company Name)

Authorized Signature

Authorized Signature

Jerry Hendrix

Print or Type Name

Print or Type Name

Senior Director

Title

Title

Date

Date

**EXHIBIT A: BELLSOUTH/CLEC-1 RATES - FLORIDA
PHYSICAL COLLOCATION**

Rates marked with an asterisk (*) are interim and are subject to true-up

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1BA	Application Fee	Per Request	\$15.53	\$3,248.00
PE1CA	Subsequent Application Fee (Note 1)	Per Request	NA	\$1600.00 Minimum
PE1BB	Space Preparation Fee (Note 2)			
	Mechanical / HVAC*	Per ton (one ton minimum)		\$2,400.00
	Ground Bar*	Per Connection		\$720.00
	Project Management*	Per arrangement		\$1675.00
	Cable Racking / Fiber Duct	Per arrangement, square foot		ICB
	Frame / Aisle Lighting	Per arrangement, square foot		ICB
	Framework Ground Conductors	Per arrangement		ICB
	Extraordinary Modifications	Per arrangement		ICB
	Space Enclosure (Note 3) <i>Requested Prior to 6/1/99</i>			
PE1BW	Wire Cage	Per first 100 sq. Ft.	\$41.99	NA
PE1BC	Gypsum Board Cage	Per first 100 sq. Ft.	\$84.10	NA
PE1BF	Fire Rated Cage	Per first 100 sq. Ft.	\$99.73	NA
PE1CW	Wire Cage	Per add'l 50 sq. Ft.	\$4.14	NA
PE1CC	Gypsum Board Cage	Per add'l 50 sq. Ft.	\$9.35	NA
PE1CF	Fire Rated Cage	Per add'l 50 sq. Ft.	\$11.30	NA
PE1PJ	Floor Space	Per sq. Ft.	\$4.25	NA
PE1BD	Cable Installation	Per Cable	\$2.77	\$1,056.00
PE1PM	Cable Support Structure		\$22.94	NA

EXHIBIT A: BELLSOUTH/CLEC-1 RATES - FLORIDA
PHYSICAL COLLOCATION (cont.)

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1PL	Power -48V DC Power 120V AC Power single phase * 240V AC Power single phase* 120V AC Power three phase* 277V AC Power three phase*	Per amp Per breaker amp Per breaker amp Per breaker amp Per breaker amp	\$7.14 \$5.50 \$11.00 \$16.50 \$38.20	ICB ICB ICB ICB ICB
PE1P2 PE1P4	Cross Connects (Note 4) 2-wire 4-wire	Per Cross Connect	\$0.0524 \$0.0524	\$11.57 \$11.57
PE11S PE11X	DS-1/DCS DS-1/DSX		\$8.085 \$4.110	\$69.64 \$69.64
PE13S PE13X	DS-3/DCS DS-3/DSX		\$56.97 \$10.06	\$528.00 \$528.00
PE1F2	Optical Cross Connects		\$6.46	\$2,431.00
PE1ES PE1DS (TBD)	Co-Carrier Cross-Connect (Note 5) Fiber Cable Support Structure, existing Copper or Coaxial Cable Support Structure, existing Cable Support Structure Construction, new	Per linear foot Per linear foot Per new construction	\$0.06 \$0.03 NA	NA NA ICB
PE1A2	Security Access System Security System* New Access Card Activation* Administrative change, existing card* Replace lost or stolen card*	Per Central Office Per request-5 cards Per Card Per Card	\$95.00 NA	\$85.12 \$35.00 \$250.00
	Space Availability Report *	Per Central Office Requested		\$550.00
	POT Bay (Note 6)		NA	NA

**EXHIBIT A: BELLSOUTH/CLEC-1 RATES - FLORIDA
PHYSICAL COLLOCATION (cont.)**

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
AEH	Additional Engineering Fee (Note 7)	Per request, First half hour/Add'l half hour		First /Add'l Basic Time - \$31.00/\$22.00 Overtime - \$37.00/\$26.00
	Security Escort			
	Basic Time	Per ¼ hour	NA	\$10.89
	Overtime	Per ¼ hour	NA	\$13.64
	Premium Time	Per ¼ hour	NA	\$16.40

Note(s):

N/A refers to rate elements which do not have a negotiated rate.

- (1) **Subsequent Application Fee:** BellSouth requires the submission of an Application Fee for modifications to an existing arrangement. However, when the modifications do not require BellSouth to expend capital, BellSouth will assess the Subsequent Application Fee in lieu of the Application Fee. Proposed modifications that could result in assessment of a Subsequent Application Fee would cause BellSouth to analyze the following but are not limited to: floor loading changes, changes to HVAC requirements, power requirement changes which may result in a power plant upgrade, environmental or safety requirements, or equipment relocation. Should the Subsequent Application Fee not be included as part of this Agreement, CLEC-1 will be assessed the full Application Fee for all subsequent activity for completed arrangements.
- (2) **Space Preparation Fee:** The Space Preparation Fee is a one-time fee, assessed per arrangement, per location. It recovers costs associated with the shared physical collocation area within a Central Office, which include survey, engineering, design and modification costs for network, building and support systems. BellSouth will pro rate the total shared space preparation costs among the collocators at each location based on the amount of square footage occupied by each collocator. This charge may vary depending on the location and type of arrangement requested.
- (3) **Space Enclosure Fee:** For cages requested prior to June 1, 1999, the Space Enclosure Construction Fee is a monthly recurring fee, assessed per enclosure, per location with a one-hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, materials, and installation costs. The cost for additional square feet is applicable only when ordered with the first 100 square feet and must be requested in fifty (50) square foot increments. CLEC-1 may, at its option, arrange with a BellSouth certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In this event, the contractor shall directly bill CLEC-1 for the space enclosure, and this fee shall not be applicable.
- (4) **Cross Connects:** Rates shown are the equivalent per cross connect rates based on the Florida PSC Ordered rates as follows:

<u>Cross Connects</u>	<u>Per Cross Connect</u>	<u>RC</u>	<u>NRC</u>
2-wire	Per 100 X-Connects	\$5.24	\$1,157.00
4-wire	Per 100 X-Connects	\$5.24	\$1,157.00
DS-1/DCS	Per 28 X-Connects	\$226.39	\$1,950.00
DS-1/DSX	Per 28 X-Connects	\$11.51	\$1,950.00
DS-3/DCS	Per Cross Connect	\$56.97	\$ 528.00
DS-3/DSX	Per Cross Connect	\$10.06	\$528.00
Optical Cross Connects	Per Cross Connect	\$6.46	\$2,431.00

EXHIBIT A: BELLSOUTH/CLEC-1 RATES - FLORIDA
PHYSICAL COLLOCATION (cont.)

- (5) **Co-Carrier Cross-Connect.** As stated in Section 5 of the Collocation Agreement, CLEC-1 may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the direct connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the direct connection requested, the recurring charges as stated in this Exhibit A shall apply.
- (6) **POT Bays:** BellSouth's Florida specific rates were established in the Florida Public Service Commission Docket No. 960833. The Commission did not set permanent rates for POT Bays, given the assumption by the parties to the Proceeding that they will always provide their own POT Bays. It will be necessary for CLEC-1 to provide its own POT Bays per BellSouth specifications and provide the necessary information from which BellSouth can inventory.
- (7) **Additional Engineering Fee:** BellSouth's additional engineering, and other labor costs associated with handling CLEC-1-requested modifications to requests in progress or augmentations to existing arrangements shall be recovered as Additional Engineering charges, under provisions in BellSouth's F.C.C. Number 1 Tariff, Sections 13.1 and 13.2. Should Additional Engineering rates not be included, CLEC-1 agrees not to make changes to collocation arrangement after a Bona Fide Firm Order is submitted.

ENVIRONMENTAL AND SAFETY PRINCIPLES

The following principles provide basic guidance on environmental and safety issues when applying for and establishing Physical Collocation arrangements.

1. GENERAL PRINCIPLES

1.1 Compliance with Applicable Law. BellSouth and CLEC-1 agree to comply with applicable federal, state, and local environmental and safety laws and regulations including U.S. Environmental Protection Agency (USEPA) regulations issued under the Clean Air Act (CAA), Clean Water Act (CWA), Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Superfund Amendments and Reauthorization Act (SARA), the Toxic Substances Control Act (TSCA), and OSHA regulations issued under the Occupational Safety and Health Act of 1970, as amended and NFPA and National Electrical Codes (NEC) and the NESC ("Applicable Laws"). Each party shall notify the other if compliance inspections are conducted by regulatory agencies and/or citations are issued that relate to any aspect of this Agreement.

1.2 Notice. BellSouth and CLEC-1 shall provide notice to the other, including Material Safety Data Sheets (MSDSs), of known and recognized physical hazards or Hazardous Chemicals existing on site or brought on site. Each party is required to provide specific notice for known potential Imminent Danger conditions. CLEC-1 should contact 1-800-743-6737 for BellSouth MSDS sheets.

1.3 Practices/Procedures. BellSouth may make available additional environmental control procedures for CLEC-1 to follow when working at a BellSouth Central Office (See Section 2, below). These practices/procedures will represent the regular work practices required to be followed by the employees and contractors of BellSouth for environmental protection. CLEC-1 will require its contractors, agents and others accessing the BellSouth Central Office to comply with these practices. Section 2 lists the Environmental categories where BST practices should be followed by CLEC when operating in the BellSouth Central Office.

1.4 Environmental and Safety Inspections. BellSouth reserves the right to inspect the CLEC-1 space with proper notification. BellSouth reserves the right to stop any CLEC-1 work operation that imposes Imminent Danger to the environment, employees or other persons in the area or Facility.

1.5 Hazardous Materials Brought On Site. Any hazardous materials brought into, used, stored or abandoned at the BellSouth Central Office by CLEC-1 are owned by CLEC-1. CLEC-1 will indemnify BellSouth for claims, lawsuits or damages to persons or property caused by these materials. Without prior written BellSouth approval, no substantial new safety or environmental hazards can be created by CLEC-1 or different hazardous materials used by CLEC-1 at BellSouth Facility. CLEC-1 must demonstrate adequate emergency response

capabilities for its materials used or remaining at the BellSouth Facility.

1.6 Spills and Releases. When contamination is discovered at a BellSouth Central Office, the party discovering the condition must notify BellSouth. All Spills or Releases of regulated materials will immediately be reported by CLEC-1 to BellSouth.

1.7 Coordinated Environmental Plans and Permits. BellSouth and CLEC-1 will coordinate plans, permits or information required to be submitted to government agencies, such as emergency response plans, spill prevention control and countermeasures (SPCC) plans and community reporting. If fees are associated with filing, BellSouth and CLEC-1 will develop a cost sharing procedure. If BellSouth's permit or EPA identification number must be used, CLEC-1 must comply with all of BellSouth's permit conditions and environmental processes, including environmental "best management practices (BMP)" (see Section 2, below) and/or selection of BST disposition vendors and disposal sites.

1.8 Environmental and Safety Indemnification. BellSouth and CLEC-1 shall indemnify, defend and hold harmless the other party from and against any claims (including, without limitation, third-party claims for personal injury or death or real or personal property damage), judgments, damages, (including direct and indirect damages, and punitive damages), penalties, fines, forfeitures, costs, liabilities, interest and losses arising in connection with the violation or alleged violation of any Applicable Law or contractual obligation or the presence or alleged presence of contamination arising out of the acts or omissions of the indemnifying party, its agents, contractors, or employees concerning its operations at the Facility.

2. CATEGORIES FOR CONSIDERATION OF ENVIRONMENTAL ISSUES

When performing functions that fall under the following Environmental categories on BellSouth's Central Office, CLEC-1 agrees to comply with the applicable sections of the current issue of BellSouth's Environmental and Safety Methods and Procedures (M&Ps), incorporated herein by this reference. CLEC-1 further agrees to cooperate with BellSouth to ensure that CLEC-1's employees, agents, and/or subcontractors are knowledgeable of and satisfy those provisions of BellSouth's Environmental M&Ps which apply to the specific Environmental function being performed by CLEC-1, its employees, agents and/or subcontractors.

The most current version of reference documentation must be requested from BellSouth.

2. Categories for Consideration of Environmental Issues (cont.)

ENVIRONMENTAL CATEGORIES	ENVIRONMENTAL ISSUES	ADDRESSED BY THE FOLLOWING DOCUMENTATION
Disposal of hazardous material or other regulated material (e.g., batteries, fluorescent tubes, solvents & cleaning materials)	Pollution liability insurance EVET approval of contractor	Std T&C 450 GU-BTEN-001BT, Chapter 4 Std T&C 660-3 GU-BTEN-001BT, Chapter 10
Emergency response	Hazmat/waste release/spill firesafety emergency	GU-BTEN-001BT, Chapter Building Emergency Operations Plan (EOP) (specific to Central Office)
Contract labor/outsourcing for services with environmental implications to be performed on BellSouth Central Office (e.g., disposition of hazardous material/waste; maintenance of storage tanks)	Performance of services in accordance with BST's environmental M&Ps Insurance	Std T&C 450 Std T&C 450-B (Contact E/S or your DEC/LDEC for copy of appropriate E/S M&Ps.) Std T&C 660
Transportation of hazardous material	Pollution liability insurance EVET approval of contractor	Std T&C 450 GU-BTEN-001BT, Chapter 4 Std T&C 660-3 GU-BTEN-001BT, Chapter 10
Maintenance/operations work which may produce a waste Other maintenance work	Protection of BST employees and equipment	Std T&C 450 GU-BTEN-001BT, Chapter 10 29CFR 1910.147 29CFR 1910 Subpart O
Janitorial services	All waste removal and disposal must conform to all applicable federal, state and local regulations All HazMat & Waste Asbestos notification protection of BST employees and equipment	P&SM Manager - Procurement GU-BTEN-001BT, Chapter 4, GU-BTEN-001BT, Chapter 3 BSP 010-170-001BS (Hazcom)
Manhole cleaning	Pollution liability insurance Manhole entry requirements EVET approval of contractor	Std T&C 450 Std T&C 660-3 BSP 620-145-011PR Issue A, August 1996 GU-BTEN-001BT, Chapter 10 RL9706008BT
Removing or disturbing building materials that may contain asbestos	Asbestos work practices	GU-BTEN-001BT, Chapter 3

3. DEFINITIONS

Generator. Under RCRA, the person whose act produces a Hazardous Waste, as defined in 40 CFR 261, or whose act first causes a Hazardous Waste to become subject to regulation. The Generator is legally responsible for the proper management and disposal of Hazardous Wastes in accordance with regulations.

Hazardous Chemical. As defined in the U.S. Occupational Safety and Health (OSHA) hazard communication standard (29 CFR 1910.1200), any chemical which is a health hazard or physical hazard.

Hazardous Waste. As defined in section 1004 of RCRA.

Imminent Danger. Any conditions or practices at a facility which are such that a danger exists which could reasonably be expected to cause immediate death or serious harm to people or immediate significant damage to the environment or natural resources.

Spill or Release. As defined in Section 101 of CERCLA.

4. ACRONYMS

DEC/LDEC - Department Environmental Coordinator/Local Department Environmental Coordinator

GU-BTEN-001BT - BellSouth Environmental Methods and Procedures

EVET - Environmental Vendor Evaluation Team

P&SM - Property & Services Management

Std. T&C - Standard Terms & Conditions

NESC - National Electrical Safety Codes

**PHYSICAL EXPANDED INTERCONNECTION
APPLICATION DOCUMENT**BSTEI-1P-A
Page 1 of 13
9/16/99

Important! Instructions for completion of this physical collocation application are provided in a separate document, the BSTEI-1P-A Ins. Please comply with the criteria contained in the instructions for completion of each item in this application document. For inquiry revisions, please post an asterisk * or the letter "C" in the margin by the item number and by the item that is being changed.

1. CUSTOMER INFORMATION

Company Name _____ ACNA _____

Company Address _____ City/State/Zip _____

COLLOCATION PROJECT COORDINATOR

Name _____ E-mail/Internet Address _____

Mailing Address _____ City/State/Zip _____

Telephone # _____ Pager # _____ Facsimile # _____

2. REQUESTED LOCATION

Wire Center Name _____ CLLI Code _____

Street Address _____ City/State/Zip _____

3. TYPE OF INTERCONNECTION ACTIVITY

_____ Initial arrangement installation

_____ Existing arrangement augmentation, equipment change, wiring, entrance, riser changes

_____ Existing arrangement augmentation, partial equipment disconnect and removal

_____ Existing arrangement, complete equipment disconnect and removal

_____ Conversion of existing virtual arrangement to a physical arrangement.

_____ Direct connection between collocation arrangements within this location

- 4. SPACE REQUIREMENTS** – Chose option A or B. C is not available as an option except under certain circumstances. Please read the instructions carefully to determine when C may be selected. See next page for description of each type of space.

Important! BellSouth will evaluate, reserve space and respond to only one option per application.

	No	Yes	New / Add'l Sq Ft	+ Existing Sq Ft	= Total Sq Ft
4A. Equipment Cage					
4B. Cageless – Conventional	No	Yes	Complete Section 6.		
4C. Cageless - Non-conventional	No	Yes	New /Add'l Sq Ft	+ Existing Sq Ft	= Total Sq Ft

**PHYSICAL EXPANDED INTERCONNECTION
APPLICATION DOCUMENT**BSTEI-1P-A
Page 2 of 13
9/16/99**4A. Equipment Cage**

Provide via attachment a proposed equipment floor plan layout, which will aid BellSouth's understanding of the space requirements for the equipment to be placed in the cage. Per FCC 99-48 inclusive contracts, the collocater is responsible for cage construction and securing all applicable construction permits. BellSouth will provide cage specifications. For pre FCC 99-48 inclusive contracts, BellSouth may construct the cage.

4B. Cageless – Conventional - Conventional lineup rack space requirements. Complete Section 5.

When this option is selected, BellSouth assigns floor space in conventional equipment rack lineups. If available, contiguous space will be assigned for racks of equal depth. When racks of various depths are collocated, BellSouth may assign space in multiple lineups to accommodate rack depth. Any technical requirements for adjacent placement of racks must be described below or in an attachment. Provide rack numbers and explanation of technical requirements.

4C. Cageless - Non-conventional - Non-conventional floor space requirements

4C is not available as an option except under certain circumstances. Please read the BSTEI-1P-A Instructions carefully to determine when 4C may be selected. The instructions provide a detailed description for cageless – non-conventional lineup space. If the equipment to be collocated cannot be placed in conventional rack lineups as described in 4B above, and cageless space is desired, this option may be requested. It is the responsibility of the collocater to determine and explain, via an attachment, the total floor space requirements (square feet) for the equipment arrangement. Floor space requirements should include equipment and aisles. The collocater is responsible for all cable rack, frame and aisle lighting and other support structure within the perimeter of the cageless floor space assigned for such an arrangement.

Provide via attachment a proposed equipment floor plan layout, which will aid BellSouth's understanding of the space requirements for the equipment. An explanation must be provided which describes the necessity for requiring a cageless non-conventional arrangement.

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9/16/99**5. CAGELESS REQUIREMENTS** continued from page 3.

- 5B. Changes in use of existing space:** Complete this table to reflect changes in the use of space previously assigned. Please group racks by depth. Use this table to reflect the installation of equipment in space previously reserved, replacement of existing equipment, or removal of equipment from space that is to be reserved for future use. Duplicate this table as required.

1	2	3	4	5	6A	6B	6C	7
Rack # (from Sec. 6)	Rack Depth Inches	Rack Width Inches	Spacer Width Inches	Rack + Spacer Width Col. 3 + Col. 4 Inches	Check (✓) Column 6A, 6B, or 6C			Relay Rack Location
					Add rack to reserved space	Replace existing equipment	Remove rack & retain space	

- 5C. Space to be vacated:** Use this table to reflect all cageless space to be released either by removal of existing equipment, or by releasing space previously reserved for future use. Duplicate this table as required.

1	2	3	4
Current use of Space check (✓) Col. 1 or 2		Rack # (from Sec. 6 if currently equipped with rack)	Relay Rack Location
Equipped with Rack (✓)	Reserved for future use (✓)		Provide relay rack location of space to be vacated

Section 5 Notes:

1. A maximum of two year's growth space may be reserved.
2. No part of any apparatus attached to the rack shall extend horizontally beyond the front or rear edges of the front and rear base or guardrail of the rack. Guardrail extenders should be provided if required. Rack depth is measured between the leading edges of the front and rear base or guardrails. In table 5A, please subtotal rack and spacer lineup requirements for groups of equal depth racks.
3. Specify actual width of rack, not the mounting plate width.

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6. EQUIPMENT TO BE INSTALLED OR REMOVED

Complete columns 1 through 11 for all equipment to be installed or removed. Duplicate this table as required.

[illegible]

- A: Show rack number on the attached floor plan layout. To reserve rack space list rack number(s) and write "Reserved" in the Description column.
- B: Does this equipment meet the following Bell Communications Research Network Equipment-Building Systems (NEBS) requirements?
- Criteria Level 1 requirements as outlined in the Bellcore (Telcordia) Special Report SR-3580, Issue 1.
 - Equipment design spatial requirements per GR-63-CORE, Section 2.
 - Thermal heat dissipation per GR-063-CORE, Section 4, Criteria 77-79.
 - Acoustic noise per GR-063-CORE, Section 4, Criterion 128.
 - Applicable National Electric Code requirements.
- Enter a YES or NO. If NO, attach a separate document listing specific explanations for each equipment type and reasons for NEBS and/or National Electric Code noncompliance.

**PHYSICAL EXPANDED INTERCONNECTION
APPLICATION DOCUMENT**
7. -48V POWER AND GROUNDING

Indicate which of the following apply:

- ☐ Power requirements for initial installation.
☐ Additional power requirements for an existing arrangement augmentation.
☐ Arrangement augmentation, no additional power required.

Completion of this section is required if -48V telecommunications equipment power is to be provided by BST. Refer to BSTEI-1P-A Instructions for a complete description of available power options and responsibilities.

- 7A. Does any of this equipment require an isolated ground plane and associated power supply grounding as described in Bellcore (Telcordia) Technical Reference TR-NWT-000295 (a.k.a. TR-295) and BellSouth Engineering and Installation Standards for Central Office Equipment TR-73503?

7A1. Yes _____ No _____ If yes, complete section 7B.

Will any of this equipment be installed (and grounded) as part of the building integrated ground plane (i.e. not part of an isolated ground plane)?

7A2. Yes _____ No _____ If yes, complete section 7C.

7B. -48V DC Power for Equipment Installed as Part of an Isolated Ground Plane

Specify the quantity of BST provided isolated ground -48V DC breakers. BST will always provide redundant "A" and "B" breaker pairs. Order in multiples of two, i.e., for each "A" and "B" breaker pair order two breakers. All breakers are rated at 225 amps.

Existing	Additional	Total	Terminating BDFB/PDF Rack No. per collocator provided equipment layout

7C. -48V DC Power for Equipment installed as Part of the Building Integrated Ground Plane

Collocator may provide or request BST to provide Battery Distribution Fuse Bay, Power Distribution Frame, or similar power distribution equipment for distributing power to integrated ground equipment.

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7. **-48V POWER AND GROUNDING** continued from page 6.

7C1. **Collocator Provided BDFB/PDF**

If collocator will provide BDFB/PDF, specify the quantity of the BST provided integrated ground – 48V DC breakers. BST will always provide redundant “A” and “B” breaker pairs. Order in multiples of two, i.e., for each “A” and “B” breaker pair order two breakers. All breakers are rated at 225 amps.

Existing	Additional	Total	Terminating BDFB/PDF Rack No. per collocator provided equipment layout

7C2. **BellSouth Provided BDFB or Miscellaneous Power Board Fuse Positions**

Complete the following table for all fuse positions to be provided by BST.

Note: Fuses must be engineered, reserved and provided by the Collocator’s certified vendor.

BST Provided BDFB Fuse Position Quantity						Protection Device Rating (amperes)
Existing		Additional		Total		
A Load	B Load	A Load	B Load	A Load	B Load	
						(Max 60 amps)

7D. **Framework Ground**

BST will provide an interconnection point (ground bar or ground cable extension) for connecting the Collocator provided equipment framework ground to the building principal ground. Refer to BSTEI-1P-A for details. The Collocator will be responsible for extending a single framework ground connection from the Caged or Non-conventional cageless arrangement to the BellSouth provided bar. In cageless arrangements the Collocator will be responsible for connecting framework ground conductors to the lineup grounding conductor. Specific grounding arrangements should be clarified during the BellSouth-Collocator coordination meetings.

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9/16/99**8. DIRECT CONNECTION – CO-CARRIER CROSS CONNECTS**

If covered in the collocation agreement, collocation arrangements may be directly interconnected without using BST cross connect facilities.

Do you request a direct connection between non-contiguous collocation arrangement(s) in this location? Yes _____ No _____

If yes, for each direct connection provide the following information:

- Identity of ownership of the equipment at each end of the connection
- Equipment rack locations at each end of the connection
- Type of service (DS0, DS1, DS3, Fiber)
- Copper or fiber cable and number of conductors
- If fiber, specify fiber building cable or patchcord.

Direct Connection – Co-Carrier Cross Connects				
Ownership	Collocator A – Name, ACNA		Collocator B – Name, ACNA	
Equipment Rack Location				
Type of Service	DS0	DS1	DS3	Fiber
Check all that apply				
Type of Cable	Building or Patchcord?	Outside Diameter	Number of Pairs/Fibers	Weight
Fiber				
Copper				

9. CABLE FACILITIES

Indicate the quantity for each type of cable to be installed.

Type of Cable	Number of Cables	Note
Fiber Entrance		Complete 10A
Fiber Riser		Complete 10B
Microwave Radio - Coax		Complete 10C
Microwave Radio - Waveguide		Complete 10D

For Microwave Radio entrance facilities, indicate the type of contract applicable for your microwave antenna.

☐ Crown Antenna Mount Program
☐ Microwave Collocation
☐ Other (Check "Other" if your microwave antenna will not be located on BellSouth property.)

**PHYSICAL EXPANDED INTERCONNECTION
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10. CABLE INFORMATION – FIBER

 Collocator provided & owned fiber entrance facilities
 Multiple entry points requested

 Yes _____ No _____
 Yes _____ Number _____ No _____

10A. Complete the table below for each fiber entrance cable to be installed or removed.

- _____ Add fiber entrance cable(s) for initial installation.
 _____ Add fiber entrance cable(s) to existing arrangement.
 _____ Fiber entrance cable not required for this application.
 _____ Fiber entrance cable to be removed.

Cable Description	Outside Diameter (in.)	Number of Fibers	Weight (lb/kft)	Sheath Type Metallic/Dielectric	Cable Tensile Load (lb/f)

Note 1: Outside plant cable must meet the requirements in Bellcore GR-20-CORE or TR-NWT-000020.

Note 2: If multiple entry is requested, please show each cable on the fiber entrance cable table. Multiple entry availability will be provided in response to an application.

10B. Complete the table below for each fiber riser cable to be installed or removed.

- _____ Add fiber riser cable(s) for initial installation.
 _____ Add fiber riser cable(s) to existing arrangement.
 _____ Fiber riser cable not required for this application.
 _____ Fiber riser cable to be removed.

Cable Description	Outside Diameter (in.)	Number of Fibers	Weight (lb/kft)	Sheath Type	Cable Tensile Load (lb/f)
				Dielectric	
				Dielectric	
				Dielectric	

Note 1: Dielectric, fire retardant riser rated cable should be provided. Riser cable must meet the requirements in Bellcore (Telcordia) GR-409-CORE.

Note 2: If multiple entry is requested, please show each cable on the riser cable table. Multiple entry availability will be provided in response to an application.

Note 3: Abandoned/disconnected fiber riser cable must be removed by the collocator's certified vendor at the time the associated equipment is removed.

Note 4: If this application is for a subsequent collocation arrangement in a central office, additional riser cables may be required if the placement of the equipment for the subsequent order is not contiguous with the existing arrangements. BellSouth will notify the collocator on the inquiry response if additional riser cables are required.

**PHYSICAL EXPANDED INTERCONNECTION
APPLICATION DOCUMENT****10. CABLE INFORMATION – MICROWAVE RADIO**

Collocator provided and owned microwave entrance facilities Yes _____ No _____

10C. Complete the table below for microwave coax cable to be installed or removed.

- _____ Add coax cable(s) for initial installation.
_____ Add coax cable(s) to existing arrangement.
_____ Coax cable not required for this application.
_____ Coax cable to be removed.

Cable Description	Outside Diameter (in.)	Weight (lb/kft)	Sheath Type	Cable Tensile Load (lb/f)
			Metallic	

10D. Complete the table below for microwave waveguide cable to be installed or removed.

- _____ Add waveguide cable(s) for initial installation.
_____ Add waveguide cable(s) to existing arrangement.
_____ Waveguide cable not required for this application.
_____ Waveguide cable to be removed.

Waveguide Description	Dimensions	Shape	Weight (lb/kft)	Waveguide Tensile Load

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11. **SHARED SPACE – Caged physical collocation only.** This is available via FCC 99-48 inclusive contracts only.

Provide the name and ACNA for any telecommunications provider to be sharing the enclosure.

Guest Company Name _____ ACNA _____

Guest Company Name _____ ACNA _____

12. **EQUIPMENT WIRING REQUIREMENTS**

_____ Initial installation for Collocator (Host)
 _____ Equipment addition for Collocator (Host)
 _____ Equipment addition for Collocator Guest _____ Guest ACNA
 _____ Wiring Change for Collocator (Host)
 _____ Wiring Change for Collocator Guest _____ Guest ACNA

Complete the table below for additions and removals. Duplicate table if necessary.

- 12A. **Additions:** Enter the number of DS0 2 wire, DS1, DS3, and/or fiber lowspeed equipment ports that will be wired to a POT bay or directly to the BST DSX, LGX or frame.

- 12B. **Removals:** Indicate the type and quantity of the circuits to be disconnected. For all removals, attach a cable and pair and/or T1TIE/T3TIE/fiber inventory identifying the specific connections to be disconnected.

* POT Connections			DSX, LGX and/or Frame Connections		
A. Additions	Collocator	Guest	A. Additions	Collocator	Guest
	Quantity of:	Quantity of:		Quantity of:	Quantity of:
DS0 2 wire			DS0 2 wire		
DS1			DS1		
DS3			DS3		
Fiber			Fiber		
B. Removals	Collocator	Guest	B. Removals	Collocator	Guest
	Quantity of:	Quantity of:		Quantity of:	Quantity of:
DS0 2 wire			DS0 2 wire		
DS1			DS1		
DS3			DS3		
Fiber			Fiber		

* POT refers to the BellSouth or Collocator provided Point of Termination, which were provisioned prior to 6/1/99. Future POT bay installations by BellSouth will be governed by the Collocation Agreement. When POT bays are not provided BellSouth will allow direct cabling of collocated equipment to the BellSouth DSX, LGX and DF.

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13. CONTACT INFORMATION

	Name	Telephone Number	Facsimile Number	Pager Number	Email/Internet Address
Equipment Wiring					
Technical					
Local Coordinator					
Building Access					

14. BILLING INFORMATION

BAN (Billing Account Number - Provided by BellSouth)

Billing Name _____
(Indicate the legal business name as it should appear on the monthly billing statement.)

Bill Department/Title _____

Bill Address _____ City/State/Zip _____

Billing Contact Name _____

Address _____

Telephone Number _____ Facsimile Number _____

List Billing Account Number(s) for other BellSouth communication service(s)

- 15. ATTACHMENTS** List attachments and the number of pages for each attachment. For (4A) equipment cage, a floor plan indicating rack layout within the cage should be provided. For (4B) cageless-conventional and (4C) cageless non-conventional arrangements, collocator must provide preferred rack equipment drawings for the floor plan layout.

Attachment 1: _____

Attachment 2: _____

Attachment 3: _____

Attachment 4: _____

Remarks: _____

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9/16/99**16. TECHNICAL COMPLIANCE**

Applicant certifies that equipment is in compliance with the following industry standards:

- Criteria Level 1 requirements as outlined in the Bellcore (Telcordia) Special Report SR-3580 Issue 1.
- Equipment design spatial requirements per GR-63-CORE, Section 2.
- Thermal heat dissipation per GR-63-CORE, Section 4, Criteria 77 - 79.
- Acoustic noise per GR-63-CORE, Section 4, Criterion 128.
- Applicable National Electric Code requirements.

I hereby certify that the equipment listed on page 5 in this document meet the industry standards for safety and compatibility. For equipment which is noncompliant, attached is documentation describing the equipment, including exceptions or deviations from the above standards.

Signature _____ Date _____

Print Name _____

Title _____

Company _____

Use of Space in Central Offices

From time to time BellSouth may require access to space occupied by collocator. BellSouth retains the right to access such space for the purpose of making equipment and building modifications, e.g., running, altering or removing racking; ducts; electrical wiring; HVAC; and cables. BellSouth will give reasonable notice to collocator when access to collocation space is required and collocator may elect to be present whenever BellSouth performs work in the collocation space. It is agreed that collocator will not bear any of the expense associated with this work.

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Please comply with the criteria contained in the instructions for completion of each item in the application document.

For inquiry revisions, please post an asterisk * or the letter "C" in the margin by the item number and by item that is being changed.

The Application Document (BSTEI-1P-A), appropriate fee(s), and required technical documentation should be mailed to:

**BellSouth Telecommunications, Inc.
Collocation Coordinator**

(Contact your BellSouth Account Executive for the name and address for your company's Collocation Coordinator.)

Make checks payable to: BellSouth

BellSouth Reference Number - This reference number is provided by BellSouth to the collocator on the inquiry response, and must be included in future references to this Physical Expanded Interconnection arrangement project.

Inquiry Receipt Date - BellSouth enters the date when the application fee, and a bona fide BSTEI-1P-A are received.

Inquiry Issue Number - The initial inquiry will be numbered issue 1. The first revision will be numbered issue 2. Subsequent revisions will be sequentially numbered. All changes to Issue 1 of a collocation inquiry must be documented on a revised BSTEI-1P-A and re-submitted to BellSouth. The inquiry response interval will apply to each revision submitted. (See Section 6.2 of the Physical Collocation contract for interval information.) All changes submitted must be clearly marked on the application document either by indicating an asterisk * or the letter "C" in the margin by the item number and by item that is being changed.

1. CUSTOMER INFORMATION

Enter the legal business name and address of your company. Enter the Bellcore-assigned Access Customer Name Abbreviation (ACNA). (Contact your BellSouth Account Team for assistance.)
COLLOCATION PROJECT COORDINATOR: Enter the name, e-mail/Internet address, mailing address, telephone number, pager number and facsimile number of the person who will be the primary coordinator for this collocation arrangement project.

2. REQUESTED LOCATION

Enter the requested location by wire center name, the first eight characters of the Common Language Location Identification Code (CLLI), street address, city, state, and zip code. (Refer to NECA Tariff FCC No. 4.)

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3. TYPE OF INTERCONNECTION ACTIVITY

Indicate the type of interconnection activity being ordered on this application.

Initial arrangement installation: This is the initial arrangement installation at this location. A fee must be submitted.

Existing arrangement augmentation, equipment change, wiring, entrance, riser changes: Your company has an existing EIS arrangement in this location and desires to add, replace or remove equipment, and/or modify wiring and or add, replace or remove entrance or riser cable. A fee must be submitted.

Existing arrangement augmentation, partial equipment disconnect and removal: Your company has an existing EIS arrangement in this location and desires to disconnect and remove some equipment and/or cable (owned by your company.)

Existing arrangement, complete equipment disconnect and removal: Your company has an existing EIS arrangement in this location and desires to disconnect and remove all equipment and cable (owned by your company.)

Conversion of existing virtual arrangement to a physical arrangement: Your company has an existing virtual collocation arrangement in this location that you want to convert to a physical collocation arrangement. Note: Relocation of virtually collocated equipment will be evaluated on a case by case basis. A fee must be submitted.

Direct connection of collocation arrangements within this location: This applies to the interconnection of two collocation arrangements occupying non-contiguous space. If covered in the collocation agreement, collocation arrangements may be directly interconnected without using BST cross connect facilities. Complete item 8. A fee must be submitted.

4. SPACE REQUIREMENTS

Chose option A or B. C is not available as an option except under certain circumstances. Please read the instructions carefully to determine when C may be selected. See below for a description of each type of space.

Important! BellSouth will evaluate, reserve space and respond to only one option per application.

4A. Equipment Cage

Complete the table. Indicate "Yes" if you have an existing cage or enclosure, or if you request construction of a new cage. Provide the "New Square Feet" if you plan construction of a new cage. Provide the additional square footage if you would like to add to an existing cage or establish another caged arrangement at this location. Provide the existing square footage if you have an existing cage. Cage expansions will be limited to locations where space adjacent to the existing cage is available. Add the new/additional square feet plus the existing square feet to determine the "Total Square feet" for the contiguous cage space requested.

4A. Equipment Cage continued from page 2.

Per FCC 99-48 inclusive contracts, the collocater is responsible for cage construction and securing all applicable permits for construction. In response to an Inquiry, BellSouth will provide cage specifications and a list of BellSouth certified contractors for cage construction. For pre FCC 99-48 inclusive contracts, BellSouth may construct the cage. Provide via attachment a proposed equipment floor plan

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layout, which will aid BellSouth's understanding of the space requirements for the equipment to be placed in the cage. The collocater is responsible for all cable support structure and equipment lighting within the cage.

4B. Cageless - Conventional - Conventional lineup rack space requirements.

Complete the table. Indicate "Yes" if you have an existing cageless arrangement, or if you are requesting a new cageless arrangement. Complete Section 5.

When this option is selected BellSouth will assign floor space in conventional equipment rack lineups. If available, contiguous space will be assigned for racks of equal depth. When racks of various depths are collocated BellSouth may assign space in multiple lineups to accommodate rack depth. BellSouth will precondition such space with bar or ladder type lineup cable rack, via or feeder cable rack as required, equipment lighting and overhead framework ground conductors. This space will be configured to support equipment racks that can be grounded through the building integrated ground plane.

The collocater is responsible for the installation of the collocated equipment and all associated transmission and power cabling.

Technical requirements for adjacent placement of racks must be described. Provide rack numbers and explanation of technical requirements for adjacent placement.

4C. Cageless - Non-conventional – Non-conventional floor space requirements.

4C is not available as an option except under certain circumstances. If the equipment to be collocated **cannot** be placed in Cageless - Conventional rack lineups as described in 4B above, and cageless space is desired, this option may be requested. Requirements that may prevent the placement of equipment in Cageless- Conventional lineups may include special cable racking or isolated grounding, as required with many switching systems.

Complete the table. Indicate "Yes" if you have an existing non-conventional arrangement, or if you are requesting a new non-conventional arrangement. Provide the "New Square Feet" if this is the initial request for non-conventional space in this central office. Provide the additional square footage if you would like to add to an existing non-conventional arrangement or establish another non-conventional arrangement at this location. Provide the existing square feet if you have an existing non-conventional arrangement in this central office. Expansion of existing non-conventional space will be limited to locations where space adjacent to the existing arrangement is available. Add the new/additional square feet plus the existing square feet to determine the "Total Square feet" for the non-conventional space requested. Provide an explanation of special support structure requirements.

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4C. Cageless - Non-conventional – continued from page 3.

It is the responsibility of the Collocator to determine and explain the total floor space requirements (square feet) for the equipment arrangement (including equipment and aisles). The Collocator is responsible for all cable rack, frame and aisle lighting and other support structure within the perimeter of the floor space assigned for such arrangements. Provide via attachment a proposed equipment floor plan layout, which will aid BellSouth's understanding of the space requirements for the equipment. An explanation must be included which describes the necessity for this option.

5. CAGELESS – CONVENTIONAL LINEUP REQUIREMENTS

Standard Rack height for cageless arrangements is 7'0". BellSouth may assign space in equipment areas configured for 9'0" or 11'6" relay racks. If space is assigned in such areas the collocator must install matching height racks or rack extenders for use with 7'0" racks. To avoid requirements for ladder access, the maximum working equipment height in these areas is 7'0".

The following sub-sections must be completed to summarize the requirements for a cageless – conventional lineup collocation arrangement.

5A. Complete this section when requesting space for new equipment or when reserving space for future equipment. Space requested in this table will be used to establish billable floor space assigned for collocation use.

1	2	3	4	5	6	7
Complete Col. 1 or 2		Rack Depth	Rack Width	Spacer Width	Rack + Spacer Width (Col. 4 + Col. 5)	Lineup Space Subtotal Col. 6 for all racks of equal depth
Rack # (from Sec. 6)	Future Space (✓)	Inches	Inches	Inches	Inches	ft./ in

Rack # – Provide the Rack Number from the Section 6 Equipment Table for all racks being installed or removed.

Future Space - Check this column when reserving rack space for future growth. Space for a maximum of two year's growth may be reserved

Rack Depth - No part of any apparatus attached to the rack shall extend horizontally beyond the front or rear edges of the front and rear base or guardrail of the rack. Guardrail extenders should be provided if required. Rack depth is measured between the leading edges of the front and rear guardrails. Please subtotal rack and spacer lineup requirements for groups of equal depth racks.

Rack Width - Specify actual width of rack, not the mounting plate width.

Spacer Width - Specify width of any spacers to be installed.

Rack + Spacer width - Sum requirements for each rack.

Lineup Space - Subtotal rack and spacer widths for all racks of equal depth.

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5. CAGELESS – CONVENTIONAL LINEUP REQUIREMENTS continued from page 4.

- 5B. Complete this table to reflect changes in the use of floor space previously assigned to a collocator. Complete 5B when installing equipment in space previously reserved, when replacing existing equipment, or when removing equipment from space that is to be reserved by the collocator for future use. Equipment additions reflected in this section will not affect billable floor space.

1	2	3	4	5	6A	6B	6C	7
Rack # (from Sec. 6)	Rack Depth Inches	Rack Width Inches	Space r Width Inches	Rack + Spacer Width Col. 3 + Col. 4 Inches	Check (√) Column 6A, 6B, or 6C			Relay Rack Location
					Add rack to reserved space	Replace existing equipment	Remove rack & retain space	

Rack # – Provide the Rack Number from the Section 6 Equipment Table for all racks being installed or removed.

Rack Depth - No part of any apparatus attached to the rack shall extend horizontally beyond the front or rear edges of the front and rear base or guardrail of the rack. Guardrail extenders should be provided if required. Rack depth is measured between the leading edges of the front and rear guardrails. Please subtotal rack and spacer lineup requirements for groups of equal depth racks.

Rack Width - Specify actual width of rack, not the mounting plate width.

Spacer Width - Specify width of any spacers to be installed.

Rack + Spacer width - Sum requirements for each rack.

Relay Rack Location - Provide relay rack location.

- 5C. Complete this section when space is being released either by removal of existing equipment, or by releasing space previously reserved for future use. The amount of billable floor space assigned for collocation use will be reduced based upon information provided in this section. Complete this table for either total or partial space release.

1	2	3	4
Current use of Space check (√) Col. 1 or 2		Rack # (from Sec. 6 if currently equipped with rack)	Relay Rack Location
Equipped with Rack (√)	Reserved for future use (√)		Provide relay rack location of space to be vacated

Rack # – Provide the Rack Number from the Section 6 Equipment Table for all racks being installed or removed.

Relay Rack Location - Provide relay rack location.

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6. EQUIPMENT TO BE INSTALLED OR REMOVED

Complete columns 1 through 11. Include all equipment to be installed or removed. Duplicate this table as required. Include all equipment that is required to support multiple fiber cable entrances, as applicable. The equipment listed must be shown on an attached rack layout.

1. **Rack No.** - Enter the rack number as shown on an attached proposed floor plan layout.
2. **Vendor/Manufacturer & Contact Number** - Enter the vendor's name and telephone number.
3. **Model Number** - Enter the model number of the equipment.
4. **Description** - Enter the functional description of the equipment.
5. **Existing Quantity** - Enter the quantity of the equipment currently installed.
6. **Add (+)** - Enter the quantity to be installed. **Remove (-)** - Enter the quantity to be removed.
7. **Total Quantity** - Enter the total quantity remaining after the addition/removal.
8. **Heat Dissipation (Watts)** - Enter the heat dissipation in watts per unit and for the total quantity of units. The sum of the "Total" column should reflect the total heat release for all collocated equipment.
9. **List 1 (Nominal) -48 V DC Power Requirements (AMPS)** - Enter in AMPS the -48V List 1 power requirements per unit and for the total quantity of units. The sum of the "Total" column should reflect the total List 1 power requirements of all collocated equipment.
10. **List 2 (Worst Case) -48 V DC Power Requirements (AMPS)** - Enter in AMPS the -48V List 2 power requirements per unit and for the total quantity of units. The sum of the "Total" column should reflect the total List 2 power requirements of all collocated equipment.
11. **NEBS Yes/No** - Does this equipment meet the following Bell Communications Research Network Equipment-Building Systems (NEBS) requirements?
 - Criteria Level 1 requirements as outlined in the Bellcore (Telcordia) Special Report SR-3580, Issue 1.
 - Equipment design spatial requirements per GR-63-CORE, Section 2.
 - Thermal heat dissipation per GR-063-CORE, Section 4, Criteria 77-79.
 - Acoustic noise per GR-063-CORE, Section 4, Criterion 128.
 - Applicable National Electric Code requirements.

Enter a YES or NO. If NO, attach a separate document listing specific explanations for each equipment type and reasons for NEBS and/or National Electric Code noncompliance.

Page Sub-total - Provide the page total heat dissipation, List 1 and List 2 -48V DC power requirements.

Total Installed Eqpt - Provide the total heat dissipation, List 1 and List 2 -48V DC power requirements for all collocated equipment. This total may be listed on the last page of a multi-page equipment list.

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7. -48V POWER AND GROUNDING

Indicate by a √ which of the following apply:

Power requirements for initial installation.

Additional power requirements for an existing arrangement augmentation.

Arrangement augmentation, no additional power required.

Completion of this section is required if -48V telecommunications equipment power is to be provided by BST. Power plant construction requirements and costs will be based upon the information provided. BellSouth can provide -48V DC power configured to serve equipment installed as part an isolated single point ground or as part of the building integrated ground plane. Isolated ground power options are addressed in section 7B. Integrated ground power options are addressed in section 7C.

It is recommended that all collocated equipment arrangements be configured with a power disconnect capability, either internal to the equipment frame or via a collocator provided fuse panel. If no power disconnect is provided, a request will have to be submitted to BellSouth to disconnect power at the BellSouth provided fuse or circuit breaker whenever power must be removed from the equipment.

BellSouth and Collocator responsibilities are outlined in the following sub-sections.

- 7A. Completion of this section is required to identify whether the collocated equipment will require an isolated ground plane and associated power supply grounding as described in Bellcore (Telcordia) Technical Reference TR-NWT-000295 (a.k.a. TR-295) and BellSouth Engineering and Installation Standards for Central Office Equipment TR-73503. The answer to both 7A1 and 7A2 cannot be "No". Any equipment not part of an isolated ground plane is by default part of the integrated ground plane.

7B. -48V DC Power for Equipment Installed as Part of an Isolated Ground Plane

If equipment requires a TR-00295 compliant isolated ground plane, the collocator **must** provide Battery Distribution Fuse Bay, Power Distribution Frame, or similar power distribution equipment for distributing power to the equipment to be installed on the isolated ground plane. This BDFB/PDF must be dedicated to the isolated ground equipment only. If integrated ground equipment is also installed it must utilize one of the power options described in section 7C.

Specify the quantity of BST provided isolated ground -48V DC circuit breakers. BST will always provide redundant "A" and "B" circuit breaker pairs. Order in multiples of two, i.e., for each "A" and "B" breaker pair order two circuit breakers. All circuit breakers are rated at 225 amps.

BellSouth responsibilities:

- ground window
- power feeder cable support structure between the BellSouth power board and the collocated equipment or equipment cage (i.e. cable rack that will be shared by multiple parties).
- circuit breaker protection device(s)

7. -48V POWER AND GROUNDING continued from page 7.**7B. Collocator responsibilities:**

- Power cable support structure within a collocation equipment cage or collocator requested non-conventional cageless collocation area (refer to Sections 4 for a description of non-conventional collocation space.)
- Terminating power feeder cables at collocator provided BDFB/PDF

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BellSouth or Collocator Responsibilities as determined by current Collocation Agreement or local negotiation:

- Furnish, engineer and install power cable feeders

Note: A certified power vendor must be used to engineer and install power feeder cable from a BST power board to a collocator provided BDFB/PDF. Specific Installation activities restricted to a certified power vendor includes placement of the cable in the cable support structure and termination of the cable at the BST power board. The certified power vendor must follow all applicable BST engineering and installation standards, including use of detail MOPs for power work and fuse / circuit breaker assignments. Connections to the ground window must follow TR-295.

7C. **-48V DC Power for Equipment installed as Part of the Building Integrated Ground Plane**

Collocator may provide or request BellSouth to provide Battery Distribution Fuse Bay, Power Distribution Frame, or similar power distribution equipment for distributing power to integrated ground equipment.

7C1. **Collocator Provided BDFB/PDF**

If collocator will provide BDFB/PDF, specify the quantity of the BST provided integrated ground -48V DC circuit breakers. BST will always provide redundant "A" and "B" breaker pairs. Order in multiples of two, i.e., for each "A" and "B" circuit breaker pair order two circuit breakers. All circuit breakers are rated at 225 amps.

BellSouth responsibilities:

- power feeder cable support structure between the BST power board and the collocated equipment or equipment cage (i.e. cable rack that will be shared by multiple parties).
- circuit breaker protection device(s)

Collocator responsibilities:

- power cable support structure within a collocation equipment cage or collocator requested non-conventional collocation area (refer to Sections 5 and 6 for a description of non-conventional collocation space).
- terminating power feeder cables at collocator provided BDFB/PDF

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7C1. Collocator Provided BDFB/PDF continued from page 8.

BellSouth or Collocator Responsibilities as determined by current Collocation Agreement or local negotiation:

- Furnish, engineer and install power cable feeders

Note: A certified power vendor must be used to engineer and install power feeder cable from a BST power board to a collocator provided BDFB/PDF. Specific Installation activities restricted to a certified power vendor include placement of the cable in the cable support structure and termination of the cable at the BST power board. The certified power vendor must follow all applicable BST engineering and installation standards, including use of detail MOPs for power work and fuse / circuit breaker assignments. Connections to the ground window must follow TR-295.

7C2. BellSouth Provided BDFB or Miscellaneous Power Board Fuse Positions

BellSouth will provide fuse positions as requested.

BellSouth responsibilities:

- BDFB or miscellaneous Power Board fuse positions
- Power distribution cable support structure between the BellSouth BDFB/power board and the collocated equipment or equipment cage (i.e. cable rack that will be shared by multiple parties).

Collocator responsibilities: (to be engineered and installed by BellSouth certified vendor)

- Power cable support structure within a collocation equipment cage or collocator requested non-conventional collocation area (refer to Sections 4 and 5 for a description of non-conventional collocation space).
- Appropriately sized and rated protection devices (fuses) per TR-73503
- Appropriately sized power distribution cables per TR-73503
- Terminating the distribution cable at both ends (the collocated equipment and the BellSouth BDFB).

Note: Any certified vendor may be used to terminate distribution cable on a BellSouth BDFB. The certified vendor must follow all applicable BellSouth engineering and installation standards, including use of detail MOPs (Method of Procedures) for power work and fuse assignments.

The maximum rating for a protection device to be placed in a BellSouth provided BDFB or power board miscellaneous fuse position is 60 amps. Typical sizes are 10, 15, 30, 45 and 60 amps. Protection devices should be sized at 1.5 times the maximum load. Quantities should be specified in multiples of 2 for 1 "A" and 1 "B" fuse position. Whenever possible, TPS type fuses should be provided.

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7D. Framework Ground

BellSouth will provide an interconnection point (ground bar or ground cable extension) for connecting the collocator provided equipment framework ground to the building principal ground. The collocator will be responsible for extending a single framework ground connection from the Caged or Non-conventional cageless arrangement to the BellSouth provided bar or cable extension. In cageless arrangements the collocator will be responsible for connecting framework ground conductors to the lineup grounding conductor.

If a collocator requests an isolated ground plane, the collocator's certified vendor will be responsible for engineering and installing framework grounds from the equipment to the BellSouth provided ground window. The isolated ground plane must be established and all connections to the ground window must be compliant with TR-295.

Specific grounding arrangements should be clarified during the BellSouth-collocator coordination meetings.

8. DIRECT CONNECTION – CO-CARRIER CROSS CONNECTS

If covered in the collocation agreement, collocation arrangements may be directly interconnected without using BST cross connect facilities. Indicate if you plan to directly connect between non-contiguous collocation arrangement(s) in this location

If yes, for each direct connection provide the following information on the table:

- Identify the ownership of the equipment at each end of the connection
- Equipment rack locations at each end of the connection
- Type of service (DS0, DS1, DS3, Fiber)
- Copper or fiber cable and number of conductors
- If fiber, specify fiber building cable or patchcord.

Direct Connection – Co-Carrier Cross Connects				
Ownership	Collocator A – Name, ACNA		Collocator B – Name, ACNA	
Equipment Rack Location				
Type of Service	DS0	DS1	DS3	Fiber
Check all that apply				
Type of Cable	Building or Patchcord?	Outside Diameter	Number of Pairs/Fibers	Weight
Fiber				
Copper				

BellSouth will provide cable support structure, if feasible, for the interconnection of two collocation arrangements occupying non-contiguous space. Direct connections and the required support structure between collocation arrangements occupying contiguous space are the responsibility of the Collocators occupying the space,

9. CABLE FACILITIES

Indicate the quantity for each type of cable to be installed.

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Type of Cable	Number of Cables	Note
Fiber Entrance		Complete 10A
Fiber Riser		Complete 10B
Microwave Radio - Coax		Complete 10C
Microwave Radio - Waveguide		Complete 10D

For Microwave Radio entrance facilities, indicate the type of contract applicable for your microwave antenna: Crown Antenna Mount Program or Microwave Collocation. A Microwave collocation application must accompany your request for physical collocation if Microwave Collocation is your choice for provisioning of outside microwave facilities.

Check "Other" if your microwave antenna will not be located on BellSouth property.

10. CABLE INFORMATION - FIBER

Indicate if you plan to provide and own fiber entrance facilities or if you plan to use BellSouth's fiber entrance facilities. **Expanded interconnection** allows for private fiber entrance facilities and equipment that are owned by third parties to be placed in the location and interconnected to BellSouth's tariffed services via cross-connects. **Service Interconnection** allows equipment owned by third parties to be placed in the location and interconnected to BellSouth tariff services without the use of private fiber entrance facilities. Indicate if you are interested in multiple entry points. If yes, indicate the number of entry points being requested.

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10. CABLE INFORMATION – FIBER continued from page 11.**10A.** Complete the table for each fiber entrance cable to be installed or removed. An example is provided.

Check "Fiber entrance cable(s) for initial installation" if this is the initial application for this location. Check "Add fiber entrance cable(s) to existing arrangement" if you have an existing EIS arrangement in this location and you are adding additional fiber entrance cable(s) on this application. For "Add fiber entrance cable", show only the new fiber entrance cable(s) to be added on the table below. Check "Fiber entrance cable(s) not required for this application" if fiber entrance cable(s) are not required. Check "Fiber entrance cable to be removed" if the cable is being abandoned or disconnected.

Cable description - Enter the alphanumeric description.**Outside diameter** - Enter the outside diameter of the cable measured in inches.**Number of fibers** - Enter the number of fibers contained in the cable.**Weight (lb/kft)** - Enter the weight in pounds per kilofeet of the cable.**Sheath Type** - Enter the sheath type for each cable.**Cable Tensile Load** - Enter the Cable Tensile Load.

Cable Description	Outside diameter (in.)	Number of Fibers	Weight (lb/kft)	Sheath Type Metallic/Dielectric	Cable Tensile Load (lb/f)
AT34Q2MT-024	0.7	24 pair	400	Dielectric	600

Note 1: Outside plant cable must meet the requirements in Bellcore (Telcordia) GR-20-CORE or TR-NWT-000020.

Note 2: If multiple entry is requested, please show each cable on the fiber entrance cable table. Multiple entry availability will be provided in response to an application.

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9/16/9910. **CABLE INFORMATION - FIBER** continued from page 12.

10B. Complete the table for each fiber riser cable to be installed or removed. An example is provided.

Check "Fiber riser cable(s) for initial installation" if this is the initial application for this location. Check "Add fiber riser cable(s) to existing arrangement" if you have an existing EIS arrangement in this location and you are adding additional fiber riser cable(s) on this application. (See note 3 below.) For "Add fiber riser cable", show only the new fiber riser cable(s) to be added on the table below. Check "Fiber riser cable not required for this application" if fiber riser cable(s) are not required. Check "Fiber riser cable to be removed" if the riser cable is being abandoned or disconnected.

Cable description - Enter the alphanumeric description.**Outside diameter** - Enter the outside diameter of the cable measured in inches.**Number of fibers** - Enter the number of fibers contained in the cable.**Weight (lb/kft)** - Enter the weight in pounds per kilofeet of the cable.**Sheath Type** - Riser cable must be dielectric.**Cable Tensile Load** - Enter the Cable Tensile Load.

Cable Description	Outside diameter (in.)	Number of Fibers	Weight (lb/kft)	Sheath Type	Cable Tensile Load (lb/f)
AT34Q2MT-024	0.7	24 pair	400	Dielectric	600

BellSouth will provide the cable rack and/or duct to support the riser cable between the entrance vault or facility and the collocated equipment. Collocator shall provide the riser cable.

Either BellSouth or the collocator, as determined by the current Collocation Agreement or local negotiation, shall contract with a BellSouth certified vendor to install the riser cable.

Note 1: Dielectric, fire retardant riser rated cable must be used. Riser cable must meet the requirements in Bellcore (Telcordia) GR-409-CORE.

Note 2: If multiple entry is requested, please show each cable on the riser cable table. Multiple entry availability will be provided in response to an application.

Note 3: Abandoned/disconnected fiber riser cable must be removed by the collocator's certified vendor at the time the associated equipment is removed.

Note 4: If this application is for a subsequent collocation arrangement in a central office, additional riser cables may be required if the placement of the equipment for the subsequent order is not contiguous with the existing arrangements. BellSouth will notify the collocator on the inquiry response if additional riser cables are required.

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10. CABLE INFORMATION – MICROWAVE RADIO

10C. Complete the table for microwave coax cable to be installed or removed.

Check "Add coax cable for initial installation" if this is the initial application for this location. Check "coax cable to existing arrangement" if you have an existing EIS arrangement in this location and you are adding a coax cable on this application. Check "Coax entrance cable not required for this application" if coax is not required. Check "Coax cable to be removed" if the coax is being abandoned or disconnected. An example is provided.

Cable Description – Enter a brief description of the coax

Outside diameter - Enter the outside diameter of the coax measured in inches.

Weight (lb/kft) - Enter the weight in pounds per kilofeet of the cable.

Sheath Type - Enter the sheath type for each cable.

Cable Tensile Load - Enter the Cable Tensile Load.

Cable Description	Outside Diameter (in.)	Weight (lb/kft)	Sheath Type	Cable Tensile Load (lb/f)
Andrew EFX2-50	3/8"	.09	Metallic	175

10D. Complete the table below for microwave waveguide cable to be installed or removed.

Check "Add waveguide for initial installation" if this is the initial application for this location. Check "Add waveguide(s) to existing arrangement" if you have an existing EIS arrangement in this location and you are adding additional waveguide on this application. Check "Waveguide not required" if waveguide is not required. Check "Waveguide to be removed" if the waveguide is being abandoned or disconnected. An example is provided.

Waveguide Description – Enter a brief description of the waveguide.

Dimensions - Enter the waveguide dimensions measured in inches.

Shape – Enter the cross sectional shape of the waveguide.

Weight (lb/kft) - Enter the weight in pounds per kilofeet of the cable.

Waveguide Tensile Load - Enter the Cable Tensile Load for flexible waveguide.

Waveguide Description	Dimensions	Shape	Weight (lb/kft)	WaveguideT ensile Load
Andrew EW20	5.02 X 2.83'	Elliptical	1.85	N/A

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11. **SHARED SPACE – Caged physical collocation only .**

Shared space is available via FCC –99-48 inclusive contracts only.

Provide the Guest Company name and ACNA for the telecommunications provider(s) to be sharing the enclosure.

A collocator may allow other telecommunications carriers to share the collocator's caged collocation arrangement pursuant to terms and conditions agreed to by the collocator ("Host") and other telecommunications carrier(s) ("Guests") and pursuant to the terms and conditions provided in the BellSouth Collocation Handbook.

The Host will be the sole interface and responsible party to BellSouth for the purpose of submitting applications for initial and additional equipment placements of Guest; for payment of rates and charges contained within its Agreement with BellSouth; and for purposes of ensuring that the safety and security requirements of its Agreement with BellSouth are fully complied with by the Guest, its employees and agents. All applications and augmentations require a fee submitted by the Host. In addition, Guest(s) may arrange directly with BellSouth for the provision of the interconnecting facilities between BellSouth and the Guest and for the provisions of the services and access to unbundled network elements

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9/16/99**12. EQUIPMENT WIRING REQUIREMENTS**

Indicate if this is the initial installation, an equipment addition to an existing arrangement, or if this request is for wiring changes only. Indicate if the additions or changes are for the Host or Guest collocator. Duplicate the table if necessary.

Section A – Additions - Indicate the quantity of DS0 2 wire, DS1, DS3 and/or fiber lowspeed equipment ports that will be wired to a POT (Point of Termination) bay. Indicate the quantity of DS0 2 wire, DS1, DS3 and/or fiber lowspeed equipment ports that will be wired to the BellSouth DSX, LGX or frame. It is recommended that all lowspeed ports not used for connection to other equipment be wired to the POT, DSX, LGX or frame.

Section B – Removals - Indicate the type and quantity of the circuits to be disconnected from the POT, DSX, LGX or frame. For all removals, attach a cable and pair and/or T1TIE/T3TIE/fiber inventory identifying the specific connections to be disconnected. The collocator's certified vendor must remove all abandoned/unused cable connections to the POT, DSX, LGX or frame when the associated equipment is removed.

* POT Connections			DSX, LGX and/or Frame Connections		
A. Additions	Collocator	Guest	A. Additions	Collocator	Guest
	Quantity of:	Quantity of:		Quantity of:	Quantity of:
DS0 2 wire			DS0 2 wire		
DS1			DS1		
DS3			DS3		
Fiber			Fiber		
B. Removals	Collocator	Guest	B. Removals	Collocator	Guest
	Quantity of:	Quantity of:		Quantity of:	Quantity of:
DS0 2 wire			DS0 2 wire		
DS1			DS1		
DS3			DS3		
Fiber			Fiber		

POT refers to the BellSouth or Collocator provided Point of Termination which were provisioned prior to 6/1/99. Future POT bay installations by BellSouth will be governed by the Collocation Agreement. When POT bays are not provided BellSouth will allow direct cabling of collocated equipment to the BellSouth DSX, LGX and DF.

With the direct cabling arrangement the Collocator will be responsible for providing all cabling from the collocated equipment to the BellSouth designated DF, DSX or LGX. The Collocator will also be responsible for providing the BST specified connector/connecting blocks required for termination of the DS0 circuits on the BellSouth DF. BellSouth will provide the cable support structure from the collocated equipment to the DF, DSX and LGX. BellSouth will also provide the termination equipment panels at the BellSouth DSX and LGX.

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9/16/99**13. CONTACT INFORMATION**

EQUIPMENT WIRING: Enter the name, telephone number, facsimile number, pager number and e-mail/Internet address of the person BellSouth can contact regarding information entered in item 12.

TECHNICAL: Enter the name, telephone number, facsimile number, pager number and e-mail/Internet address of the person BellSouth can contact regarding information entered in items 4 through 11.

LOCAL COORDINATOR: Enter the name, telephone number, facsimile number, pager number and e-mail/Internet address of your company's local coordinator at the selected location for the collocation arrangement.

BUILDING ACCESS: Enter the name, telephone number, facsimile number, pager number and e-mail/Internet address of your company's contact for the collocation arrangement location access security.

14. BILLING INFORMATION

Indicate the legal business company name and address, as it should appear on the monthly billing statement to be submitted by BellSouth to your company for this EIS arrangement. Provide a contact name, telephone number and facsimile number to be contacted regarding bill payment, discrepancies, etc. List billing account numbers established for other communication service(s) provided by BellSouth.

15. ATTACHMENTS

Provide via attachment additional information, which will aid BellSouth's understanding of the space requirements for the racks and equipment to be placed in the location. For (4A) equipment cage, a floor plan indicating rack layout within the cage should be provided. For (4B) cageless-conventional and (4C) cageless non-conventional arrangements, collocater must provide preferred rack equipment drawings for the floor plan layout. An explanation must be provided which describes the necessity for requiring (4C) non-conventional arrangement, if this option has been selected. The floor plan layout should include all racks identified in Item 6.

For non-enclosed arrangements additional information would include special needs, such as front and back access to equipment, doors on the storage units, aisle space requirements, AC outlets, etc. Provide drawings of the rack(s) and equipment showing all perspectives - top, side, front, back. Drawings should include all equipment shown in Item 6. For enclosed arrangements provide a proposed rack floor plan layout. List all attachments and the number of pages of each attachment.

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9/16/99**16. TECHNICAL COMPLIANCE**

Signature, title and date are required at end of the document. Each subsequent issue of the BSTEI-1P-A must also be signed.

Applicant certifies that equipment is in compliance with the following industry standards:

- Criteria Level 1 requirements as outlined in the Bellcore (Telcordia) Special Report SR-3580 Issue 1.
- Equipment design spatial requirements per GR-63-CORE, Section 2.
- Thermal heat dissipation per GR-63-CORE, Section 4, Criteria 77 - 79.
- Acoustic noise per GR-63-CORE, Section 4, Criterion 128.
- Applicable National Electric Code requirements.

Use of Space in Central Offices

From time to time BellSouth may require access to space occupied by collocator. BellSouth retains the right to access such space for the purpose of making equipment and building modifications, e.g., running, altering or removing racking; ducts; electrical wiring; HVAC; and cables. BellSouth will give reasonable notice to collocator when access to collocation space is required and collocator may elect to be present whenever BellSouth performs work in the collocation space. It is agreed that collocator will not bear any of the expense associated with this work.

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Important! Instructions for completion of this physical collocation application are provided in a separate document, the BSTEI-1P-A Ins. Please comply with the criteria contained in the instructions for completion of each item in this application document. For inquiry revisions, please post an asterisk * or the letter "C" in the margin by the item number and by the item that is being changed.

1. CUSTOMER INFORMATION

Company Name _____ ACNA _____

Company Address _____ City/State/Zip _____

COLLOCATION PROJECT COORDINATOR

Name _____ E-mail/Internet Address _____

Mailing Address _____ City/State/Zip _____

Telephone # _____ Pager # _____ Facsimile # _____

2. REQUESTED LOCATION

Wire Center Name _____ CLLI Code _____

Street Address _____ City/State/Zip _____

3. TYPE OF INTERCONNECTION ACTIVITY

- _____ Initial arrangement installation
- _____ Existing arrangement augmentation, equipment change, wiring, entrance, riser changes
- _____ Existing arrangement augmentation, partial equipment disconnect and removal
- _____ Existing arrangement, complete equipment disconnect and removal
- _____ Conversion of existing virtual arrangement to a physical arrangement.
- _____ Direct connection between collocation arrangements within this location

4. SPACE REQUIREMENTS – Chose option A or B. C is not available as an option except under certain circumstances. Please read the instructions carefully to determine when C may be selected. See next page for description of each type of space.**Important!** BellSouth will evaluate, reserve space and respond to only one option per application.

	No	Yes	New / Add'l Sq Ft	+ Existing Sq Ft	= Total Sq Ft
4A. Equipment Cage					
4B. Cageless – Conventional	No	Yes	Complete Section 6.		
4C. Cageless - Non-conventional	No	Yes	New /Add'l Sq Ft	+ Existing Sq Ft	= Total Sq Ft

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9/16/99**4A. Equipment Cage**

Provide via attachment a proposed equipment floor plan layout, which will aid BellSouth's understanding of the space requirements for the equipment to be placed in the cage. Per FCC 99-48 inclusive contracts, the collocater is responsible for cage construction and securing all applicable construction permits. BellSouth will provide cage specifications. For pre FCC 99-48 inclusive contracts, BellSouth may construct the cage.

4B. Cageless – Conventional - Conventional lineup rack space requirements. Complete Section 5.

When this option is selected, BellSouth assigns floor space in conventional equipment rack lineups. If available, contiguous space will be assigned for racks of equal depth. When racks of various depths are collocated, BellSouth may assign space in multiple lineups to accommodate rack depth. Any technical requirements for adjacent placement of racks must be described below or in an attachment. Provide rack numbers and explanation of technical requirements.

4C. Cageless - Non-conventional - Non-conventional floor space requirements

4C is not available as an option except under certain circumstances. Please read the BSTEI-1P-A Instructions carefully to determine when 4C may be selected. The instructions provide a detailed description for cageless – non-conventional lineup space. If the equipment to be collocated cannot be placed in conventional rack lineups as described in 4B above, and cageless space is desired, this option may be requested. It is the responsibility of the collocater to determine and explain, via an attachment, the total floor space requirements (square feet) for the equipment arrangement. Floor space requirements should include equipment and aisles. The collocater is responsible for all cable rack, frame and aisle lighting and other support structure within the perimeter of the cageless floor space assigned for such an arrangement.

Provide via attachment a proposed equipment floor plan layout, which will aid BellSouth's understanding of the space requirements for the equipment. An explanation must be provided which describes the necessity for requiring a cageless non-conventional arrangement.

5. CAGELESS - CONVENTIONAL LINEUP REQUIREMENTS

The following sub-sections must be completed to summarize the requirements for a cageless-conventional lineup collocation arrangement:

- 5A. Complete this table when requesting space for new equipment or when reserving space for future equipment.
- 5B. Complete this table to reflect changes in the use of floor space previously assigned to a collocator. Complete 5B when installing equipment in space previously reserved, when replacing existing equipment, or when removing equipment from space that is to be reserved by the collocator for future use.
- 5C. Complete this table when space is being released either by removal of existing equipment, or by releasing space previously reserved for future use.

Standard Rack height for cageless arrangements is 7'0". BellSouth may assign space in equipment areas configured for 9'0" or 11'6" relay racks. If space is assigned in such areas the collocater must install matching height racks or rack extenders for use with 7'0" racks. To avoid requirements for ladder access, the maximum working equipment height in these areas is 7'0".

- 5A. **New cageless (conventional lineup) space requirements:** Complete this table when requesting space for new equipment or when reserving space for future equipment. Please group racks by depth. Duplicate this page as required to reflect all new space requirements.

[illegible]

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9/16/99**5. CAGELESS REQUIREMENTS** continued from page 3.

- 5B. Changes in use of existing space:** Complete this table to reflect changes in the use of space previously assigned. Please group racks by depth. Use this table to reflect the installation of equipment in space previously reserved, replacement of existing equipment, or removal of equipment from space that is to be reserved for future use. Duplicate this table as required.

1	2	3	4	5	6A	6B	6C	7
Rack # (from Sec. 6)	Rack Depth Inches	Rack Width Inches	Spacer Width Inches	Rack + Spacer Width Col. 3 + Col. 4 Inches	Check (✓) Column 6A, 6B, or 6C			Relay Rack Location
					Add rack to reserved space	Replace existing equipment	Remove rack & retain space	

- 5C. Space to be vacated:** Use this table to reflect all cageless space to be released either by removal of existing equipment, or by releasing space previously reserved for future use. Duplicate this table as required.

1	2	3	4
Current use of Space check (✓) Col. 1 or 2		Rack # (from Sec. 6 if currently equipped with rack)	Relay Rack Location
Equipped with Rack (✓)	Reserved for future use (✓)		Provide relay rack location of space to be vacated

Section 5 Notes:

1. A maximum of two year's growth space may be reserved.
2. No part of any apparatus attached to the rack shall extend horizontally beyond the front or rear edges of the front and rear base or guardrail of the rack. Guardrail extenders should be provided if required. Rack depth is measured between the leading edges of the front and rear base or guardrails. In table 5A, please subtotal rack and spacer lineup requirements for groups of equal depth racks.
3. Specify actual width of rack, not the mounting plate width.

Complete columns 1 through 11 for all equipment to be installed or removed. Duplicate this table as required.

[illegible]

- A: Show rack number on the attached floor plan layout. To reserve rack space list rack number(s) and write "Reserved" in the Description column.
- B: Does this equipment meet the following Bell Communications Research Network Equipment-Building Systems (NEBS) requirements?
- Criteria Level 1 requirements as outlined in the Bellcore (Telcordia) Special Report SR-3580, Issue 1.
 - Equipment design spatial requirements per GR-63-CORE, Section 2.
 - Thermal heat dissipation per GR-063-CORE, Section 4, Criteria 77-79.
 - Acoustic noise per GR-063-CORE, Section 4, Criterion 128.
 - Applicable National Electric Code requirements.
- Enter a YES or NO. If NO, attach a separate document listing specific explanations for each equipment type and reasons for NEBS and/or National Electric Code noncompliance.

PHYSICAL EXPANDED INTERCONNECTION APPLICATION DOCUMENT

7. -48V POWER AND GROUNDING

Indicate which of the following apply:

- ☐ Power requirements for initial installation.
☐ Additional power requirements for an existing arrangement augmentation.
☐ Arrangement augmentation, no additional power required.

Completion of this section is required if -48V telecommunications equipment power is to be provided by BST. Refer to BSTEI-1P-A Instructions for a complete description of available power options and responsibilities.

7A. Does any of this equipment require an isolated ground plane and associated power supply grounding as described in Bellcore (Telcordia) Technical Reference TR-NWT-000295 (a.k.a. TR-295) and BellSouth Engineering and Installation Standards for Central Office Equipment TR-73503?

7A1. Yes ☐ No ☐ If yes, complete section 7B.

Will any of this equipment be installed (and grounded) as part of the building integrated ground plane (i.e. not part of an isolated ground plane)?

7A2. Yes ☐ No ☐ If yes, complete section 7C.

7B. -48V DC Power for Equipment Installed as Part of an Isolated Ground Plane

Specify the quantity of BST provided isolated ground -48V DC breakers. BST will always provide redundant "A" and "B" breaker pairs. Order in multiples of two, i.e., for each "A" and "B" breaker pair order two breakers. All breakers are rated at 225 amps.

Existing	Additional	Total	Terminating BDFB/PDF Rack No. per collocater provided equipment layout

7C. -48V DC Power for Equipment installed as Part of the Building Integrated Ground Plane

Collocater may provide or request BST to provide Battery Distribution Fuse Bay, Power Distribution Frame, or similar power distribution equipment for distributing power to integrated ground equipment.

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7. **-48V POWER AND GROUNDING** continued from page 6.

7C1. Collocator Provided BDFB/PDF

If collocator will provide BDFB/PDF, specify the quantity of the BST provided integrated ground – 48V DC breakers. BST will always provide redundant “A” and “B” breaker pairs. Order in multiples of two, i.e., for each “A” and “B” breaker pair order two breakers. All breakers are rated at 225 amps.

Existing	Additional	Total	Terminating BDFB/PDF Rack No. per collocater provided equipment layout

7C2. BellSouth Provided BDFB or Miscellaneous Power Board Fuse Positions

Complete the following table for all fuse positions to be provided by BST.

Note: Fuses must be engineered, reserved and provided by the Collocator's certified vendor.

BST Provided BDFB Fuse Position Quantity						Protection Device Rating (amperes)
Existing		Additional		Total		
A Load	B Load	A Load	B Load	A Load	B Load	
						(Max 60 amps)

7D. Framework Ground

BST will provide an interconnection point (ground bar or ground cable extension) for connecting the Collocator provided equipment framework ground to the building principal ground. Refer to BSTEI-1P-A for details. The Collocator will be responsible for extending a single framework ground connection from the Caged or Non-conventional cageless arrangement to the BellSouth provided bar. In cageless arrangements the Collocator will be responsible for connecting framework ground conductors to the lineup grounding conductor. Specific grounding arrangements should be clarified during the BellSouth-Collocator coordination meetings.

**PHYSICAL EXPANDED INTERCONNECTION
APPLICATION DOCUMENT****8. DIRECT CONNECTION – CO-CARRIER CROSS CONNECTS**

If covered in the collocation agreement, collocation arrangements may be directly interconnected without using BST cross connect facilities.

Do you request a direct connection between non-contiguous collocation arrangement(s) in this location? Yes _____ No _____

If yes, for each direct connection provide the following information:

- Identity of ownership of the equipment at each end of the connection
- Equipment rack locations at each end of the connection
- Type of service (DS0, DS1, DS3, Fiber)
- Copper or fiber cable and number of conductors
- If fiber, specify fiber building cable or patchcord.

Direct Connection – Co-Carrier Cross Connects				
Ownership	Collocator A – Name, ACNA		Collocator B – Name, ACNA	
Equipment Rack Location				
Type of Service	DS0	DS1	DS3	Fiber
Check all that apply				
Type of Cable	Building or Patchcord?	Outside Diameter	Number of Pairs/Fibers	Weight
Fiber				
Copper				

9. CABLE FACILITIES

Indicate the quantity for each type of cable to be installed.

Type of Cable	Number of Cables	Note
Fiber Entrance		Complete 10A
Fiber Riser		Complete 10B
Microwave Radio - Coax		Complete 10C
Microwave Radio - Waveguide		Complete 10D

For Microwave Radio entrance facilities, indicate the type of contract applicable for your microwave antenna.

☐ Crown Antenna Mount Program
☐ Microwave Collocation
☐ Other (Check "Other" if your microwave antenna will not be located on BellSouth property.)

PHYSICAL EXPANDED INTERCONNECTION APPLICATION DOCUMENT

10. CABLE INFORMATION – FIBER

Collocator provided & owned fiber entrance facilities

Yes _____ No _____

Multiple entry points requested

Yes _____ Number _____ No _____

10A. Complete the table below for each fiber entrance cable to be installed or removed.

- _____ Add fiber entrance cable(s) for initial installation.
 _____ Add fiber entrance cable(s) to existing arrangement.
 _____ Fiber entrance cable not required for this application.
 _____ Fiber entrance cable to be removed.

Cable Description	Outside Diameter (in.)	Number of Fibers	Weight (lb/kft)	Sheath Type Metallic/Dielectric	Cable Tensile Load (lb/f)

Note 1: Outside plant cable must meet the requirements in Bellcore GR-20-CORE or TR-NWT-000020.

Note 2: If multiple entry is requested, please show each cable on the fiber entrance cable table. Multiple entry availability will be provided in response to an application.

10B. Complete the table below for each fiber riser cable to be installed or removed.

- _____ Add fiber riser cable(s) for initial installation.
 _____ Add fiber riser cable(s) to existing arrangement.
 _____ Fiber riser cable not required for this application.
 _____ Fiber riser cable to be removed.

Cable Description	Outside Diameter (in.)	Number of Fibers	Weight (lb/kft)	Sheath Type	Cable Tensile Load (lb/f)
				Dielectric	
				Dielectric	
				Dielectric	

Note 1: Dielectric, fire retardant riser rated cable should be provided. Riser cable must meet the requirements in Bellcore (Telcordia) GR-409-CORE.

Note 2: If multiple entry is requested, please show each cable on the riser cable table. Multiple entry availability will be provided in response to an application.

Note 3: Abandoned/disconnected fiber riser cable must be removed by the collocator's certified vendor at the time the associated equipment is removed.

Note 4: If this application is for a subsequent collocation arrangement in a central office, additional riser cables may be required if the placement of the equipment for the subsequent order is not contiguous with the existing arrangements. BellSouth will notify the collocator on the inquiry response if additional riser cables are required.

**PHYSICAL EXPANDED INTERCONNECTION
APPLICATION DOCUMENT****10. CABLE INFORMATION – MICROWAVE RADIO**

Collocator provided and owned microwave entrance facilities Yes _____ No _____

10C. Complete the table below for microwave coax cable to be installed or removed.

- _____ Add coax cable(s) for initial installation.
_____ Add coax cable(s) to existing arrangement.
_____ Coax cable not required for this application.
_____ Coax cable to be removed.

Cable Description	Outside Diameter (in.)	Weight (lb/kft)	Sheath Type	Cable Tensile Load (lb/f)
			Metallic	

10D. Complete the table below for microwave waveguide cable to be installed or removed.

- _____ Add waveguide cable(s) for initial installation.
_____ Add waveguide cable(s) to existing arrangement.
_____ Waveguide cable not required for this application.
_____ Waveguide cable to be removed.

Waveguide Description	Dimensions	Shape	Weight (lb/kft)	Waveguide Tensile Load

**PHYSICAL EXPANDED INTERCONNECTION
APPLICATION DOCUMENT**

11. **SHARED SPACE – Caged physical collocation only.** This is available via FCC 99-48 inclusive contracts only.

Provide the name and ACNA for any telecommunications provider to be sharing the enclosure.

Guest Company Name _____ ACNA _____

Guest Company Name _____ ACNA _____

12. **EQUIPMENT WIRING REQUIREMENTS**

_____ Initial installation for Collocator (Host)
 _____ Equipment addition for Collocator (Host)
 _____ Equipment addition for Collocator Guest _____ Guest ACNA
 _____ Wiring Change for Collocator (Host)
 _____ Wiring Change for Collocator Guest _____ Guest ACNA

Complete the table below for additions and removals. Duplicate table if necessary.

- 12A. **Additions:** Enter the number of DS0 2 wire, DS1, DS3, and/or fiber lowspeed equipment ports that will be wired to a POT bay or directly to the BST DSX, LGX or frame.

- 12B. **Removals:** Indicate the type and quantity of the circuits to be disconnected. For all removals, attach a cable and pair and/or T1TIE/T3TIE/fiber inventory identifying the specific connections to be disconnected.

* POT Connections			DSX, LGX and/or Frame Connections		
A. Additions	Collocator	Guest	A. Additions	Collocator	Guest
	Quantity of:	Quantity of:		Quantity of:	Quantity of:
DS0 2 wire			DS0 2 wire		
DS1			DS1		
DS3			DS3		
Fiber			Fiber		
B. Removals	Collocator	Guest	B. Removals	Collocator	Guest
	Quantity of:	Quantity of:		Quantity of:	Quantity of:
DS0 2 wire			DS0 2 wire		
DS1			DS1		
DS3			DS3		
Fiber			Fiber		

* POT refers to the BellSouth or Collocator provided Point of Termination, which were provisioned prior to 6/1/99. Future POT bay installations by BellSouth will be governed by the Collocation Agreement. When POT bays are not provided BellSouth will allow direct cabling of collocated equipment to the BellSouth DSX, LGX and DF.

BellSouth Reference No.

Inquiry Receipt Date
Inquiry Issue No.



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13. CONTACT INFORMATION

	Name	Telephone Number	Facsimile Number	Pager Number	Email/Internet Address
Equipment Wiring					
Technical					
Local Coordinator					
Building Access					

14. BILLING INFORMATION

BAN (Billing Account Number - Provided by BellSouth)

Billing Name _____
(Indicate the legal business name as it should appear on the monthly billing statement.)

Bill Department/Title _____

Bill Address _____ City/State/Zip _____

Billing Contact Name _____

Address _____

Telephone Number _____ Facsimile Number _____

List Billing Account Number(s) for other BellSouth communication service(s)

- 15. ATTACHMENTS** List attachments and the number of pages for each attachment. For (4A) equipment cage, a floor plan indicating rack layout within the cage should be provided. For (4B) cageless-conventional and (4C) cageless non-conventional arrangements, collocator must provide preferred rack equipment drawings for the floor plan layout.

Attachment 1: _____

Attachment 2: _____

Attachment 3: _____

Attachment 4: _____

Remarks: _____

BellSouth Reference No.

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16. TECHNICAL COMPLIANCE

Applicant certifies that equipment is in compliance with the following industry standards:

- Criteria Level 1 requirements as outlined in the Bellcore (Telcordia) Special Report SR-3580 Issue 1.
- Equipment design spatial requirements per GR-63-CORE, Section 2.
- Thermal heat dissipation per GR-63-CORE, Section 4, Criteria 77 - 79.
- Acoustic noise per GR-63-CORE, Section 4, Criterion 128.
- Applicable National Electric Code requirements.

I hereby certify that the equipment listed on page 5 in this document meet the industry standards for safety and compatibility. For equipment which is noncompliant, attached is documentation describing the equipment, including exceptions or deviations from the above standards.

Signature _____ Date _____

Print Name _____

Title _____

Company _____

Use of Space in Central Offices

From time to time BellSouth may require access to space occupied by collocator. BellSouth retains the right to access such space for the purpose of making equipment and building modifications, e.g., running, altering or removing racking; ducts; electrical wiring; HVAC; and cables. BellSouth will give reasonable notice to collocator when access to collocation space is required and collocator may elect to be present whenever BellSouth performs work in the collocation space. It is agreed that collocator will not bear any of the expense associated with this work.

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Please comply with the criteria contained in the instructions for completion of each item in the application document.

For inquiry revisions, please post an asterisk * or the letter "C" in the margin by the item number and by item that is being changed.

The Application Document (BSTEI-1P-A), appropriate fee(s), and required technical documentation should be mailed to:

**BellSouth Telecommunications, Inc.
Collocation Coordinator**

(Contact your BellSouth Account Executive for the name and address for your company's Collocation Coordinator.)

Make checks payable to: BellSouth

BellSouth Reference Number - This reference number is provided by BellSouth to the collocator on the inquiry response, and must be included in future references to this Physical Expanded Interconnection arrangement project.

Inquiry Receipt Date - BellSouth enters the date when the application fee, and a bona fide BSTEI-1P-A are received.

Inquiry Issue Number - The initial inquiry will be numbered issue 1. The first revision will be numbered issue 2. Subsequent revisions will be sequentially numbered. All changes to Issue 1 of a collocation inquiry must be documented on a revised BSTEI-1P-A and re-submitted to BellSouth. The inquiry response interval will apply to each revision submitted. (See Section 6.2 of the Physical Collocation contract for interval information.) All changes submitted must be clearly marked on the application document either by indicating an asterisk * or the letter "C" in the margin by the item number and by item that is being changed.

1. CUSTOMER INFORMATION

Enter the legal business name and address of your company. Enter the Bellcore-assigned Access Customer Name Abbreviation (ACNA). (Contact your BellSouth Account Team for assistance.)
COLLOCATION PROJECT COORDINATOR: Enter the name, e-mail/Internet address, mailing address, telephone number, pager number and facsimile number of the person who will be the primary coordinator for this collocation arrangement project.

2. REQUESTED LOCATION

Enter the requested location by wire center name, the first eight characters of the Common Language Location Identification Code (CLLI), street address, city, state, and zip code. (Refer to NECA Tariff FCC No. 4.)

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9/16/99**3. TYPE OF INTERCONNECTION ACTIVITY**

Indicate the type of interconnection activity being ordered on this application.

Initial arrangement installation: This is the initial arrangement installation at this location. A fee must be submitted.

Existing arrangement augmentation, equipment change, wiring, entrance, riser changes: Your company has an existing EIS arrangement in this location and desires to add, replace or remove equipment, and/or modify wiring and or add, replace or remove entrance or riser cable. A fee must be submitted.

Existing arrangement augmentation, partial equipment disconnect and removal: Your company has an existing EIS arrangement in this location and desires to disconnect and remove some equipment and/or cable (owned by your company.)

Existing arrangement, complete equipment disconnect and removal: Your company has an existing EIS arrangement in this location and desires to disconnect and remove all equipment and cable (owned by your company.)

Conversion of existing virtual arrangement to a physical arrangement: Your company has an existing virtual collocation arrangement in this location that you want to convert to a physical collocation arrangement. Note: Relocation of virtually collocated equipment will be evaluated on a case by case basis. A fee must be submitted.

Direct connection of collocation arrangements within this location: This applies to the interconnection of two collocation arrangements occupying non-contiguous space. If covered in the collocation agreement, collocation arrangements may be directly interconnected without using BST cross connect facilities. Complete item 8. A fee must be submitted.

4. SPACE REQUIREMENTS

Chose option A or B. C is not available as an option except under certain circumstances. Please read the instructions carefully to determine when C may be selected. See below for a description of each type of space.

Important! BellSouth will evaluate, reserve space and respond to only one option per application.

4A. Equipment Cage

Complete the table. Indicate "Yes" if you have an existing cage or enclosure, or if you request construction of a new cage. Provide the "New Square Feet" if you plan construction of a new cage. Provide the additional square footage if you would like to add to an existing cage or establish another caged arrangement at this location. Provide the existing square footage if you have an existing cage. Cage expansions will be limited to locations where space adjacent to the existing cage is available. Add the new/additional square feet plus the existing square feet to determine the "Total Square feet" for the contiguous cage space requested.

4A. Equipment Cage continued from page 2.

Per FCC 99-48 inclusive contracts, the collocater is responsible for cage construction and securing all applicable permits for construction. In response to an Inquiry, BellSouth will provide cage specifications and a list of BellSouth certified contractors for cage construction. For pre FCC 99-48 inclusive contracts, BellSouth may construct the cage. Provide via attachment a proposed equipment floor plan

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layout, which will aid BellSouth's understanding of the space requirements for the equipment to be placed in the cage. The collocater is responsible for all cable support structure and equipment lighting within the cage.

4B. Cageless - Conventional - Conventional lineup rack space requirements.

Complete the table. Indicate "Yes" if you have an existing cageless arrangement, or if you are requesting a new cageless arrangement. Complete Section 5.

When this option is selected BellSouth will assign floor space in conventional equipment rack lineups. If available, contiguous space will be assigned for racks of equal depth. When racks of various depths are collocated BellSouth may assign space in multiple lineups to accommodate rack depth. BellSouth will precondition such space with bar or ladder type lineup cable rack, via or feeder cable rack as required, equipment lighting and overhead framework ground conductors. This space will be configured to support equipment racks that can be grounded through the building integrated ground plane.

The collocater is responsible for the installation of the collocated equipment and all associated transmission and power cabling.

Technical requirements for adjacent placement of racks must be described. Provide rack numbers and explanation of technical requirements for adjacent placement.

4C. Cageless - Non-conventional – Non-conventional floor space requirements.

4C is not available as an option except under certain circumstances. If the equipment to be collocated **cannot** be placed in Cageless - Conventional rack lineups as described in 4B above, and cageless space is desired, this option may be requested. Requirements that may prevent the placement of equipment in Cageless- Conventional lineups may include special cable racking or isolated grounding, as required with many switching systems.

Complete the table. Indicate "Yes" if you have an existing non-conventional arrangement, or if you are requesting a new non-conventional arrangement. Provide the "New Square Feet" if this is the initial request for non-conventional space in this central office. Provide the additional square footage if you would like to add to an existing non-conventional arrangement or establish another non-conventional arrangement at this location. Provide the existing square feet if you have an existing non-conventional arrangement in this central office. Expansion of existing non-conventional space will be limited to locations where space adjacent to the existing arrangement is available. Add the new/additional square feet plus the existing square feet to determine the "Total Square feet" for the non-conventional space requested. Provide an explanation of special support structure requirements.

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4C. Cageless - Non-conventional – continued from page 3.

It is the responsibility of the Collocator to determine and explain the total floor space requirements (square feet) for the equipment arrangement (including equipment and aisles). The Collocator is responsible for all cable rack, frame and aisle lighting and other support structure within the perimeter of the floor space assigned for such arrangements. Provide via attachment a proposed equipment floor plan layout, which will aid BellSouth's understanding of the space requirements for the equipment. An explanation must be included which describes the necessity for this option.

5. CAGELESS – CONVENTIONAL LINEUP REQUIREMENTS

Standard Rack height for cageless arrangements is 7'0". BellSouth may assign space in equipment areas configured for 9'0" or 11'6" relay racks. If space is assigned in such areas the collocator must install matching height racks or rack extenders for use with 7'0" racks. To avoid requirements for ladder access, the maximum working equipment height in these areas is 7'0".

The following sub-sections must be completed to summarize the requirements for a cageless – conventional lineup collocation arrangement.

5A. Complete this section when requesting space for new equipment or when reserving space for future equipment. Space requested in this table will be used to establish billable floor space assigned for collocation use.

1	2	3	4	5	6	7
Complete Col. 1 or 2		Rack Depth	Rack Width	Spacer Width	Rack + Spacer Width (Col. 4 + Col. 5)	Lineup Space Subtotal Col. 6 for all racks of equal depth
Rack # (from Sec. 6)	Future Space (√)	Inches	Inches	Inches	Inches	ft./ in

Rack # – Provide the Rack Number from the Section 6 Equipment Table for all racks being installed or removed.

Future Space - Check this column when reserving rack space for future growth. Space for a maximum of two year's growth may be reserved

Rack Depth - No part of any apparatus attached to the rack shall extend horizontally beyond the front or rear edges of the front and rear base or guardrail of the rack. Guardrail extenders should be provided if required. Rack depth is measured between the leading edges of the front and rear guardrails. Please subtotal rack and spacer lineup requirements for groups of equal depth racks.

Rack Width - Specify actual width of rack, not the mounting plate width.

Spacer Width - Specify width of any spacers to be installed.

Rack + Spacer width - Sum requirements for each rack.

Lineup Space - Subtotal rack and spacer widths for all racks of equal depth.

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5. CAGELESS – CONVENTIONAL LINEUP REQUIREMENTS continued from page 4.

- 5B. Complete this table to reflect changes in the use of floor space previously assigned to a collocator. Complete 5B when installing equipment in space previously reserved, when replacing existing equipment, or when removing equipment from space that is to be reserved by the collocator for future use. Equipment additions reflected in this section will not affect billable floor space.

1	2	3	4	5	6A	6B	6C	7
Rack # (from Sec. 6)	Rack Depth Inches	Rack Width Inches	Space r Width Inches	Rack + Spacer Width Col. 3 + Col. 4 Inches	Check (✓) Column 6A, 6B, or 6C			Relay Rack Location
					Add rack to reserved space	Replace existing equipment	Remove rack & retain space	

Rack # – Provide the Rack Number from the Section 6 Equipment Table for all racks being installed or removed.

Rack Depth - No part of any apparatus attached to the rack shall extend horizontally beyond the front or rear edges of the front and rear base or guardrail of the rack. Guardrail extenders should be provided if required. Rack depth is measured between the leading edges of the front and rear guardrails. Please subtotal rack and spacer lineup requirements for groups of equal depth racks.

Rack Width - Specify actual width of rack, not the mounting plate width.

Spacer Width - Specify width of any spacers to be installed.

Rack + Spacer width - Sum requirements for each rack.

Relay Rack Location - Provide relay rack location.

- 5C. Complete this section when space is being released either by removal of existing equipment, or by releasing space previously reserved for future use. The amount of billable floor space assigned for collocation use will be reduced based upon information provided in this section. Complete this table for either total or partial space release.

1	2	3	4
Current use of Space check (✓) Col. 1 or 2		Rack # (from Sec. 6 if currently equipped with rack)	Relay Rack Location
Equipped with Rack (✓)	Reserved for future use (✓)		Provide relay rack location of space to be vacated

Rack # – Provide the Rack Number from the Section 6 Equipment Table for all racks being installed or removed.

Relay Rack Location - Provide relay rack location.

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6. EQUIPMENT TO BE INSTALLED OR REMOVED

Complete columns 1 through 11. Include all equipment to be installed or removed. Duplicate this table as required. Include all equipment that is required to support multiple fiber cable entrances, as applicable. The equipment listed must be shown on an attached rack layout.

1. **Rack No.** - Enter the rack number as shown on an attached proposed floor plan layout.
2. **Vendor/Manufacturer & Contact Number** - Enter the vendor's name and telephone number.
3. **Model Number** - Enter the model number of the equipment.
4. **Description** - Enter the functional description of the equipment.
5. **Existing Quantity** - Enter the quantity of the equipment currently installed.
6. **Add (+)** - Enter the quantity to be installed. **Remove (-)** - Enter the quantity to be removed.
7. **Total Quantity** - Enter the total quantity remaining after the addition/removal.
8. **Heat Dissipation (Watts)** - Enter the heat dissipation in watts per unit and for the total quantity of units. The sum of the "Total" column should reflect the total heat release for all collocated equipment.
9. **List 1 (Nominal) -48 V DC Power Requirements (AMPS)** - Enter in AMPS the -48V List 1 power requirements per unit and for the total quantity of units. The sum of the "Total" column should reflect the total List 1 power requirements of all collocated equipment.
10. **List 2 (Worst Case) -48 V DC Power Requirements (AMPS)** - Enter in AMPS the -48V List 2 power requirements per unit and for the total quantity of units. The sum of the "Total" column should reflect the total List 2 power requirements of all collocated equipment.
11. **NEBS Yes/No** - Does this equipment meet the following Bell Communications Research Network Equipment-Building Systems (NEBS) requirements?
 - Criteria Level 1 requirements as outlined in the Bellcore (Telcordia) Special Report SR-3580, Issue 1.
 - Equipment design spatial requirements per GR-63-CORE, Section 2.
 - Thermal heat dissipation per GR-063-CORE, Section 4, Criteria 77-79.
 - Acoustic noise per GR-063-CORE, Section 4, Criterion 128.
 - Applicable National Electric Code requirements.

Enter a YES or NO. If NO, attach a separate document listing specific explanations for each equipment type and reasons for NEBS and/or National Electric Code noncompliance.

Page Sub-total - Provide the page total heat dissipation, List 1 and List 2 -48V DC power requirements.

Total Installed Eqpt - Provide the total heat dissipation, List 1 and List 2 -48V DC power requirements for all collocated equipment. This total may be listed on the last page of a multi-page equipment list.

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9/16/99**7. -48V POWER AND GROUNDING**

Indicate by a \checkmark which of the following apply:

Power requirements for initial installation.

Additional power requirements for an existing arrangement augmentation.

Arrangement augmentation, no additional power required.

Completion of this section is required if -48V telecommunications equipment power is to be provided by BST. Power plant construction requirements and costs will be based upon the information provided. BellSouth can provide -48V DC power configured to serve equipment installed as part an isolated single point ground or as part of the building integrated ground plane. Isolated ground power options are addressed in section 7B. Integrated ground power options are addressed in section 7C.

It is recommended that all collocated equipment arrangements be configured with a power disconnect capability, either internal to the equipment frame or via a collocater provided fuse panel. If no power disconnect is provided, a request will have to be submitted to BellSouth to disconnect power at the BellSouth provided fuse or circuit breaker whenever power must be removed from the equipment.

BellSouth and Collocater responsibilities are outlined in the following sub-sections.

- 7A. Completion of this section is required to identify whether the collocated equipment will require an isolated ground plane and associated power supply grounding as described in Bellcore (Telcordia) Technical Reference TR-NWT-000295 (a.k.a. TR-295) and BellSouth Engineering and Installation Standards for Central Office Equipment TR-73503. The answer to both 7A1 and 7A2 cannot be "No". Any equipment not part of an isolated ground plane is by default part of the integrated ground plane.

7B. **-48V DC Power for Equipment Installed as Part of an Isolated Ground Plane**

If equipment requires a TR-00295 compliant isolated ground plane, the collocater **must** provide Battery Distribution Fuse Bay, Power Distribution Frame, or similar power distribution equipment for distributing power to the equipment to be installed on the isolated ground plane. This BDFB/PDF must be dedicated to the isolated ground equipment only. If integrated ground equipment is also installed it must utilize one of the power options described in section 7C.

Specify the quantity of BST provided isolated ground -48V DC circuit breakers. BST will always provide redundant "A" and "B" circuit breaker pairs. Order in multiples of two, i.e., for each "A" and "B" breaker pair order two circuit breakers. All circuit breakers are rated at 225 amps.

BellSouth responsibilities:

- ground window
- power feeder cable support structure between the BellSouth power board and the collocated equipment or equipment cage (i.e. cable rack that will be shared by multiple parties).
- circuit breaker protection device(s)

7. **-48V POWER AND GROUNDING** continued from page 7.

7B. Collocater responsibilities:

- Power cable support structure within a collocation equipment cage or collocater requested non-conventional cageless collocation area (refer to Sections 4 for a description of non-conventional collocation space.)
- Terminating power feeder cables at collocater provided BDFB/PDF

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BellSouth or Collocator Responsibilities as determined by current Collocation Agreement or local negotiation:

- Furnish, engineer and install power cable feeders

Note: A certified power vendor must be used to engineer and install power feeder cable from a BST power board to a collocator provided BDFB/PDF. Specific installation activities restricted to a certified power vendor includes placement of the cable in the cable support structure and termination of the cable at the BST power board. The certified power vendor must follow all applicable BST engineering and installation standards, including use of detail MOPs for power work and fuse / circuit breaker assignments. Connections to the ground window must follow TR-295.

7C. **-48V DC Power for Equipment installed as Part of the Building Integrated Ground Plane**

Collocator may provide or request BellSouth to provide Battery Distribution Fuse Bay, Power Distribution Frame, or similar power distribution equipment for distributing power to integrated ground equipment.

7C1. **Collocator Provided BDFB/PDF**

If collocator will provide BDFB/PDF, specify the quantity of the BST provided integrated ground -48V DC circuit breakers. BST will always provide redundant "A" and "B" breaker pairs. Order in multiples of two, i.e., for each "A" and "B" circuit breaker pair order two circuit breakers. All circuit breakers are rated at 225 amps.

BellSouth responsibilities:

- power feeder cable support structure between the BST power board and the collocated equipment or equipment cage (i.e. cable rack that will be shared by multiple parties).
- circuit breaker protection device(s)

Collocator responsibilities:

- power cable support structure within a collocation equipment cage or collocator requested non-conventional collocation area (refer to Sections 5 and 6 for a description of non-conventional collocation space).
- terminating power feeder cables at collocator provided BDFB/PDF

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9/16/99**7C1. Collocator Provided BDFB/PDF** continued from page 8.

BellSouth or Collocator Responsibilities as determined by current Collocation Agreement or local negotiation:

- Furnish, engineer and install power cable feeders

Note: A certified power vendor must be used to engineer and install power feeder cable from a BST power board to a collocator provided BDFB/PDF. Specific Installation activities restricted to a certified power vendor include placement of the cable in the cable support structure and termination of the cable at the BST power board. The certified power vendor must follow all applicable BST engineering and installation standards, including use of detail MOPs for power work and fuse / circuit breaker assignments. Connections to the ground window must follow TR-295.

7C2. BellSouth Provided BDFB or Miscellaneous Power Board Fuse Positions

BellSouth will provide fuse positions as requested.

BellSouth responsibilities:

- BDFB or miscellaneous Power Board fuse positions
- Power distribution cable support structure between the BellSouth BDFB/power board and the collocated equipment or equipment cage (i.e. cable rack that will be shared by multiple parties).

Collocator responsibilities: (to be engineered and installed by BellSouth certified vendor)

- Power cable support structure within a collocation equipment cage or collocator requested non-conventional collocation area (refer to Sections 4 and 5 for a description of non-conventional collocation space).
- Appropriately sized and rated protection devices (fuses) per TR-73503
- Appropriately sized power distribution cables per TR-73503
- Terminating the distribution cable at both ends (the collocated equipment and the BellSouth BDFB).

Note: Any certified vendor may be used to terminate distribution cable on a BellSouth BDFB. The certified vendor must follow all applicable BellSouth engineering and installation standards, including use of detail MOPs (Method of Procedures) for power work and fuse assignments.

The maximum rating for a protection device to be placed in a BellSouth provided BDFB or power board miscellaneous fuse position is 60 amps. Typical sizes are 10, 15, 30, 45 and 60 amps. Protection devices should be sized at 1.5 times the maximum load. Quantities should be specified in multiples of 2 for 1 "A" and 1 "B" fuse position. Whenever possible, TPS type fuses should be provided.

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7D. Framework Ground

BellSouth will provide an interconnection point (ground bar or ground cable extension) for connecting the collocator provided equipment framework ground to the building principal ground. The collocator will be responsible for extending a single framework ground connection from the Caged or Non-conventional cageless arrangement to the BellSouth provided bar or cable extension. In cageless arrangements the collocator will be responsible for connecting framework ground conductors to the lineup grounding conductor.

If a collocator requests an isolated ground plane, the collocator's certified vendor will be responsible for engineering and installing framework grounds from the equipment to the BellSouth provided ground window. The isolated ground plane must be established and all connections to the ground window must be compliant with TR-295.

Specific grounding arrangements should be clarified during the BellSouth-collocator coordination meetings.

8. DIRECT CONNECTION – CO-CARRIER CROSS CONNECTS

If covered in the collocation agreement, collocation arrangements may be directly interconnected without using BST cross connect facilities. Indicate if you plan to directly connect between non-contiguous collocation arrangement(s) in this location

If yes, for each direct connection provide the following information on the table:

- Identify the ownership of the equipment at each end of the connection
- Equipment rack locations at each end of the connection
- Type of service (DS0, DS1, DS3, Fiber)
- Copper or fiber cable and number of conductors
- If fiber, specify fiber building cable or patchcord.

Direct Connection – Co-Carrier Cross Connects				
Ownership	Collocator A – Name, ACNA		Collocator B – Name, ACNA	
Equipment Rack Location				
Type of Service	DS0	DS1	DS3	Fiber
Check all that apply				
Type of Cable	Building or Patchcord?	Outside Diameter	Number of Pairs/Fibers	Weight
Fiber				
Copper				

BellSouth will provide cable support structure, if feasible, for the interconnection of two collocation arrangements occupying non-contiguous space. Direct connections and the required support structure between collocation arrangements occupying contiguous space are the responsibility of the Collocators occupying the space,

9. CABLE FACILITIES

Indicate the quantity for each type of cable to be installed.

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Type of Cable	Number of Cables	Note
Fiber Entrance		Complete 10A
Fiber Riser		Complete 10B
Microwave Radio - Coax		Complete 10C
Microwave Radio - Waveguide		Complete 10D

For Microwave Radio entrance facilities, indicate the type of contract applicable for your microwave antenna: Crown Antenna Mount Program or Microwave Collocation. A Microwave collocation application must accompany your request for physical collocation if Microwave Collocation is your choice for provisioning of outside microwave facilities.

Check "Other" if your microwave antenna will not be located on BellSouth property.

10. **CABLE INFORMATION - FIBER**

Indicate if you plan to provide and own fiber entrance facilities or if you plan to use BellSouth's fiber entrance facilities. **Expanded interconnection** allows for private fiber entrance facilities and equipment that are owned by third parties to be placed in the location and interconnected to BellSouth's tariffed services via cross-connects. **Service Interconnection** allows equipment owned by third parties to be placed in the location and interconnected to BellSouth tariff services without the use of private fiber entrance facilities. Indicate if you are interested in multiple entry points. If yes, indicate the number of entry points being requested.

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9/16/99**10. CABLE INFORMATION – FIBER** continued from page 11.**10A.** Complete the table for each fiber entrance cable to be installed or removed. An example is provided.

Check "Fiber entrance cable(s) for initial installation" if this is the initial application for this location. Check "Add fiber entrance cable(s) to existing arrangement" if you have an existing EIS arrangement in this location and you are adding additional fiber entrance cable(s) on this application. For "Add fiber entrance cable", show only the new fiber entrance cable(s) to be added on the table below. Check "Fiber entrance cable(s) not required for this application" if fiber entrance cable(s) are not required. Check "Fiber entrance cable to be removed" if the cable is being abandoned or disconnected.

Cable description - Enter the alphanumeric description.**Outside diameter** - Enter the outside diameter of the cable measured in inches.**Number of fibers** - Enter the number of fibers contained in the cable.**Weight (lb/kft)** - Enter the weight in pounds per kilofeet of the cable.**Sheath Type** - Enter the sheath type for each cable.**Cable Tensile Load** - Enter the Cable Tensile Load.

Cable Description	Outside diameter (in.)	Number of Fibers	Weight (lb/kft)	Sheath Type Metallic/Dielectric	Cable Tensile Load (lb/f)
AT34Q2MT-024	0.7	24 pair	400	Dielectric	600

Note 1: Outside plant cable must meet the requirements in Bellcore (Telcordia) GR-20-CORE or TR-NWT-000020.

Note 2: If multiple entry is requested, please show each cable on the fiber entrance cable table. Multiple entry availability will be provided in response to an application.

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9/16/99**10. CABLE INFORMATION - FIBER** continued from page 12.**10B. Complete the table for each fiber riser cable to be installed or removed. An example is provided.**

Check "Fiber riser cable(s) for initial installation" if this is the initial application for this location. Check "Add fiber riser cable(s) to existing arrangement" if you have an existing EIS arrangement in this location and you are adding additional fiber riser cable(s) on this application. (See note 3 below.) For "Add fiber riser cable", show only the new fiber riser cable(s) to be added on the table below. Check "Fiber riser cable not required for this application" if fiber riser cable(s) are not required. Check "Fiber riser cable to be removed" if the riser cable is being abandoned or disconnected.

Cable description - Enter the alphanumeric description.**Outside diameter** - Enter the outside diameter of the cable measured in inches.**Number of fibers** - Enter the number of fibers contained in the cable.**Weight (lb/kft)** - Enter the weight in pounds per kilofeet of the cable.**Sheath Type** - Riser cable must be dielectric.**Cable Tensile Load** - Enter the Cable Tensile Load.

Cable Description	Outside diameter (in.)	Number of Fibers	Weight (lb/kft)	Sheath Type	Cable Tensile Load (lb/f)
AT34Q2MT-024	0.7	24 pair	400	Dielectric	600

BellSouth will provide the cable rack and/or duct to support the riser cable between the entrance vault or facility and the collocated equipment. Collocator shall provide the riser cable.

Either BellSouth or the collocator, as determined by the current Collocation Agreement or local negotiation, shall contract with a BellSouth certified vendor to install the riser cable.

Note 1: Dielectric, fire retardant riser rated cable must be used. Riser cable must meet the requirements in Bellcore (Telcordia) GR-409-CORE.

Note 2: If multiple entry is requested, please show each cable on the riser cable table. Multiple entry availability will be provided in response to an application.

Note 3: Abandoned/disconnected fiber riser cable must be removed by the collocator's certified vendor at the time the associated equipment is removed.

Note 4: If this application is for a subsequent collocation arrangement in a central office, additional riser cables may be required if the placement of the equipment for the subsequent order is not contiguous with the existing arrangements. BellSouth will notify the collocator on the inquiry response if additional riser cables are required.

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10. CABLE INFORMATION – MICROWAVE RADIO

10C. Complete the table for microwave coax cable to be installed or removed.

Check "Add coax cable for initial installation" if this is the initial application for this location. Check "coax cable to existing arrangement" if you have an existing EIS arrangement in this location and you are adding a coax cable on this application. Check "Coax entrance cable not required for this application" if coax is not required. Check "Coax cable to be removed" if the coax is being abandoned or disconnected. An example is provided.

Cable Description – Enter a brief description of the coax

Outside diameter - Enter the outside diameter of the coax measured in inches.

Weight (lb/kft) - Enter the weight in pounds per kilofeet of the cable.

Sheath Type - Enter the sheath type for each cable.

Cable Tensile Load - Enter the Cable Tensile Load.

Cable Description	Outside Diameter (in.)	Weight (lb/kft)	Sheath Type	Cable Tensile Load (lb/f)
Andrew EFX2-50	3/8"	.09	Metallic	175

10D. Complete the table below for microwave waveguide cable to be installed or removed.

Check "Add waveguide for initial installation" if this is the initial application for this location. Check "Add waveguide(s) to existing arrangement" if you have an existing EIS arrangement in this location and you are adding additional waveguide on this application. Check "Waveguide not required" if waveguide is not required. Check "Waveguide to be removed" if the waveguide is being abandoned or disconnected. An example is provided.

Waveguide Description – Enter a brief description of the waveguide.

Dimensions - Enter the waveguide dimensions measured in inches.

Shape – Enter the cross sectional shape of the waveguide.

Weight (lb/kft) - Enter the weight in pounds per kilofeet of the cable.

Waveguide Tensile Load - Enter the Cable Tensile Load for flexible waveguide.

Waveguide Description	Dimensions	Shape	Weight (lb/kft)	WaveguideT ensile Load
Andrew EW20	5.02 X 2.83'	Elliptical	1.85	N/A

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11. **SHARED SPACE – Caged physical collocation only .**

Shared space is available via FCC –99-48 inclusive contracts only.

Provide the Guest Company name and ACNA for the telecommunications provider(s) to be sharing the enclosure.

A collocator may allow other telecommunications carriers to share the collocator's caged collocation arrangement pursuant to terms and conditions agreed to by the collocator ("Host") and other telecommunications carrier(s) ("Guests") and pursuant to the terms and conditions provided in the BellSouth Collocation Handbook.

The Host will be the sole interface and responsible party to BellSouth for the purpose of submitting applications for initial and additional equipment placements of Guest; for payment of rates and charges contained within its Agreement with BellSouth; and for purposes of ensuring that the safety and security requirements of its Agreement with BellSouth are fully complied with by the Guest, its employees and agents. All applications and augmentations require a fee submitted by the Host. In addition, Guest(s) may arrange directly with BellSouth for the provision of the interconnecting facilities between BellSouth and the Guest and for the provisions of the services and access to unbundled network elements

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12. EQUIPMENT WIRING REQUIREMENTS

Indicate if this is the initial installation, an equipment addition to an existing arrangement, or if this request is for wiring changes only. Indicate if the additions or changes are for the Host or Guest collocator. Duplicate the table if necessary.

Section A – Additions - Indicate the quantity of DS0 2 wire, DS1, DS3 and/or fiber lowspeed equipment ports that will be wired to a POT (Point of Termination) bay. Indicate the quantity of DS0 2 wire, DS1, DS3 and/or fiber lowspeed equipment ports that will be wired to the BellSouth DSX, LGX or frame. It is recommended that all lowspeed ports not used for connection to other equipment be wired to the POT, DSX, LGX or frame.

Section B – Removals - Indicate the type and quantity of the circuits to be disconnected from the POT, DSX, LGX or frame. For all removals, attach a cable and pair and/or T1TIE/T3TIE/fiber inventory identifying the specific connections to be disconnected. The collocator's certified vendor must remove all abandoned/unused cable connections to the POT, DSX, LGX or frame when the associated equipment is removed.

* POT Connections			DSX, LGX and/or Frame Connections		
A. Additions	Collocator	Guest	A. Additions	Collocator	Guest
	Quantity of:	Quantity of:		Quantity of:	Quantity of:
DS0 2 wire			DS0 2 wire		
DS1			DS1		
DS3			DS3		
Fiber			Fiber		
B. Removals	Collocator	Guest	B. Removals	Collocator	Guest
	Quantity of:	Quantity of:		Quantity of:	Quantity of:
DS0 2 wire			DS0 2 wire		
DS1			DS1		
DS3			DS3		
Fiber			Fiber		

POT refers to the BellSouth or Collocator provided Point of Termination which were provisioned prior to 6/1/99. Future POT bay installations by BellSouth will be governed by the Collocation Agreement. When POT bays are not provided BellSouth will allow direct cabling of collocated equipment to the BellSouth DSX, LGX and DF.

With the direct cabling arrangement the Collocator will be responsible for providing all cabling from the collocated equipment to the BellSouth designated DF, DSX or LGX. The Collocator will also be responsible for providing the BST specified connector/connecting blocks required for termination of the DS0 circuits on the BellSouth DF. BellSouth will provide the cable support structure from the collocated equipment to the DF, DSX and LGX. BellSouth will also provide the termination equipment panels at the BellSouth DSX and LGX.

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9/16/99**13. CONTACT INFORMATION**

EQUIPMENT WIRING: Enter the name, telephone number, facsimile number, pager number and e-mail/Internet address of the person BellSouth can contact regarding information entered in item 12.

TECHNICAL: Enter the name, telephone number, facsimile number, pager number and e-mail/Internet address of the person BellSouth can contact regarding information entered in items 4 through 11.

LOCAL COORDINATOR: Enter the name, telephone number, facsimile number, pager number and e-mail/Internet address of your company's local coordinator at the selected location for the collocation arrangement.

BUILDING ACCESS: Enter the name, telephone number, facsimile number, pager number and e-mail/Internet address of your company's contact for the collocation arrangement location access security.

14. BILLING INFORMATION

Indicate the legal business company name and address, as it should appear on the monthly billing statement to be submitted by BellSouth to your company for this EIS arrangement. Provide a contact name, telephone number and facsimile number to be contacted regarding bill payment, discrepancies, etc. List billing account numbers established for other communication service(s) provided by BellSouth.

15. ATTACHMENTS

Provide via attachment additional information, which will aid BellSouth's understanding of the space requirements for the racks and equipment to be placed in the location. For (4A) equipment cage, a floor plan indicating rack layout within the cage should be provided. For (4B) cageless-conventional and (4C) cageless non-conventional arrangements, collocator must provide preferred rack equipment drawings for the floor plan layout. An explanation must be provided which describes the necessity for requiring (4C) non-conventional arrangement, if this option has been selected. The floor plan layout should include all racks identified in Item 6.

For non-enclosed arrangements additional information would include special needs, such as front and back access to equipment, doors on the storage units, aisle space requirements, AC outlets, etc. Provide drawings of the rack(s) and equipment showing all perspectives - top, side, front, back. Drawings should include all equipment shown in Item 6. For enclosed arrangements provide a proposed rack floor plan layout. List all attachments and the number of pages of each attachment.

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16. TECHNICAL COMPLIANCE

Signature, title and date are required at end of the document. Each subsequent issue of the BSTEI-1P-A must also be signed.

Applicant certifies that equipment is in compliance with the following industry standards:

- Criteria Level 1 requirements as outlined in the Bellcore (Telcordia) Special Report SR-3580 Issue 1.
- Equipment design spatial requirements per GR-63-CORE, Section 2.
- Thermal heat dissipation per GR-63-CORE, Section 4, Criteria 77 - 79.
- Acoustic noise per GR-63-CORE, Section 4, Criterion 128.
- Applicable National Electric Code requirements.

Use of Space in Central Offices

From time to time BellSouth may require access to space occupied by collocator. BellSouth retains the right to access such space for the purpose of making equipment and building modifications, e.g., running, altering or removing racking; ducts; electrical wiring; HVAC; and cables. BellSouth will give reasonable notice to collocator when access to collocation space is required and collocator may elect to be present whenever BellSouth performs work in the collocation space. It is agreed that collocator will not bear any of the expense associated with this work.

Case Reference Number: DYBHFLPO-SUU-03
Supporting Space Preparation Cost Data

Response Expiration Date: October 6, 1999

Line Item	Prorate Amount
Space Construction	\$ 85,779.00
Frame, Cable, Cable Support, etc.	\$ 51,000.00
Power	\$ 178,354.00
Estimated Space Preparation Fee Total - Item 2 above	\$ 315,133.00

NOTE: Major BST equipment rearrangements required to create space. An equipment layout must be provided – equipment type in each bay and sequence of bays in the switching machine. Bays of similar size were grouped together for space efficiency. Two switch equipment line-ups and 2 circuit line-ups are proposed. Bonding of the isolated and integrated power is required. Prior to installation, all ground and bonding must be reviewed by BST.

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET 981834-7

NO. 990321-TP EXHIBIT NO. 12

COMPANY/

WITNESS: HendricksDATE: 1-12-2000

Please direct questions to: Nancy K. Nelson, Regional Collocation Manager
Office 205.321.4986 FAX 205.321.5058 Internet - Nancy.Nelson1@bridge.bellsouth.com



Southwestern Bell Telephone

Physical Collocation Quote Summary Sheet - Ver 1.01

Based on Texas Local Access Tariff, Section 5, Effective 10/29/99

Amount of Application and Project Coordination Fees, and Engineering
Design Charges paid with application submittal:

Construction Interval (Days):

Case#:	
CLLI:	
Quote Date:	
Company Name:	
Address1:	
Address2:	
City:	
State:	
ZIP:	
Contact Name:	

Remarks:

Extended Charges	
Monthly Recurring	Non-recurring

Application/Project Management Fees
 Caged Collocation
 Cageless Collocation
 Caged Common Collocation
 DC Power, Standard Power Arrangement - CO and RSM
 DC Power Panel (Maximum 50 AMP) - Optional
 DC Power Panel (100/200 AMP) (Optional)
 DC Transmission Energy Charge
 Eligible Structure Ground
 Security Cards
 Timing Source Arrangement,
 Optional Standard Frame or Cabinet
 Interconnection Arrangement Options
 Optical Circuit Arrangement
 Timing Interconnection Arrangement
 Copper Cable Termination Arrangement
 Power Arrangement
 Conduit Space
 Entrance Fiber Charge
 Conduit for Fiber Optic Cable (Caged Only)
 Innerduct, (Caged only)
 Miscellaneous Collocation Charges
 2" Rack Mounting Plate Space
 Pre-visits
 Construction Inspections
 Adjacent On-Site Structure Arrangements
 Adjacent Off-site Arrangement Planning
 Collocation Space Availability Report Charge
 Collocation to Collocation Connection
 Non-tariffed Items

FLORIDA PUBLIC SERVICE COMMISSION
 DOCKET 981834-TP
 NO. 990321-TP EXHIBIT NO 12
 COMPANY/
 WITNESS: Hendricks
 DATE 1-12-2000

SUBTOTAL	\$0.00	\$0.00
Less Fees Received with Application		\$0.00
Non-recurring Balance Due		\$0.00
First 50% Due With Quote Acceptance		\$0.00
Final 50% Due before Space Turnover		\$0.00
Monthly Rates to begin upon completion of Southwestern Bell Work	\$0.00	

The rates and charges are based on the interim approved tariff effective 10/29/99 and are subject to true-up. Final approval of the rates and charges by the Texas Public Utility Commission may affect other portions of the Tariff

See Detail Price Sheet for Greater Explanation of Charges

NW

Case #: _____

Physical Collocation Quote Detail Price Sheet - Ver 1.01

Based on Texas Local Access Tariff, Section 5, Effective 10/29/99

Tariff Sec #	Unit	USOC	Recurring	recurring	Qty	Extended Charges	
						Monthly Recurring	Non-recurring

21.1

Application/Project Management Fees
CO Arrangements

Initial	Application	NRBCE	None	\$3,605.00	
Subsequent	Application	NRBZD	None	\$3,605.00	
Cable Only	Application	NRB5H	None	\$1,150.00	
Non-standard	Application	NRBZE	None	\$1,436.00	

CEVs, Huts, Cabinets

Standard	Application	NRB1G	None	\$260.00	
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21.2

Caged Collocation
Floor Space Charges

Up to 100 sq. ft. collocation area	sq. ft.	SP14L	\$4.70	None	
101-200 sq. ft. collocation area	sq. ft.	SP11F	\$4.27	None	
201-300 sq. ft. collocation area	sq. ft.	SP11G	\$4.23	None	
301-400 sq. ft. collocation area	sq. ft.	SP11H	\$4.22	None	

(Augment rates are same as above per unit.)

Telecommunications Infrastructure Space Charge

Up to 100 sq. ft. collocation area	sq. ft.	SP14M	\$0.64	\$41.66	
101-200 sq. ft. collocation area	sq. ft.	SP11J	\$0.43	\$28.14	
201-300 sq. ft. collocation area	sq. ft.	SP11K	\$0.30	\$19.73	
301-400 sq. ft. collocation area	sq. ft.	SP11L	\$0.24	\$15.50	

(Augment rates are same as above per unit.)

Cage Common Systems Materials Charge

Up to 100 sq. ft. collocation area	sq. ft.	SP14A	None	\$23.50	
101-200 sq. ft. collocation area	sq. ft.	SP11M	None	\$18.50	
201-300 sq. ft. collocation area	sq. ft.	SP11N	None	\$16.50	
301-400 sq. ft. collocation area	sq. ft.	SP11O	None	\$15.50	

Safety & Security

sq. ft.	SP14N	\$0.00	\$0.00	
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RSM Option

Additional Dedicated HVAC Charge	request	NRB1H	None	\$3,100.00	
Dedicated Power Plant Floor Space Charge	request	SP1SY	\$394.00	None	

21.3

Cageless Collocation
Planning Charges

Initials	request	NRB5J	None	\$4,489.21	
Subsequent, Cabling Only	request	NRB5K	None	\$1,360.37	

Land and Building Charge

single rack	SP11Q	\$30.64	None	
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Relay Rack Charge (Optional)

single rack	SP11R	\$10.60	None	
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HVAC Charge

per 10 amps	SP11T	\$4.01	None	
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RSM Option

Additional Dedicated HVAC Charge	request	NRB1H	None	\$3,100.00	
Dedicated Power Plant Floor Space Charge	request	SP1SY	\$394.00	None	

Telecommunications Infrastructure

Up to 100 sq. ft. collocation area	sq. ft.	SP11M	\$0.00	\$0.00	
101-200 sq. ft. collocation area	sq. ft.	SP11V	\$0.00	\$0.00	
201-300 sq. ft. collocation area	sq. ft.	SP11W	\$0.00	\$0.00	
301-400 sq. ft. collocation area	sq. ft.	SP11X	\$0.00	\$0.00	

Cageless Common Systems Materials Charge

sq. ft.	SP14B	None	\$0.00	
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Safety & Security,

sq. ft.	SP14Q	\$0.00	\$0.00	
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Physical Collocation Quote Detail Price Sheet - Ver 1.01

Based on Texas Local Access Tariff, Section 5, Effective 10/29/99

Tarif	Sec #	Unit	USOC	Recurring	recurring	Qty	Extended Charges	
							Monthly Recurring	Non-recurring

21.4

Caged Common Collocation
Planning Charges

Initials (RC by lin. ft. and NRC by request)	linear ft.	SP11Y	\$0.76	\$2,992.81	
Subsequent, Cabling Only	request	NRB5L	None	\$1,360.37	
Land and Building Charge	linear ft of rack				
	space	SP11Z	\$27.19	None	
Cable Racking Charge	linear ft of rack				
HVAC Charge	space	SP111	\$3.76	None	
RSM Option	per 10 amps	SP112	\$4.01	None	
Additional Dedicated HVAC Charge	request	NRB1H	None	\$3,100.00	
Dedicated Power Plant Floor Space Charge	request	SP1SY	\$394.00	None	

Telecommunications Infrastructure Space Charge

Up to 100 sq. ft. collocation area	sq. ft.	SP113	\$0.00	\$0.00	
101-200 sq. ft. collocation area	sq. ft.	SP114	\$0.00	\$0.00	
201-300 sq. ft. collocation area	sq. ft.	SP115	\$0.00	\$0.00	
301-400 sq. ft. collocation area	sq. ft.	SP116	\$0.00	\$0.00	

Common Systems

Cage Preparation Charge	linear ft of rack				
	space	SP117	\$1.95	\$0.00	
Grounding Charge	linear ft of rack				
	space	SP118	\$0.18	\$0.00	
Safety & Security	sq. ft.	SP119	\$0.00	\$0.00	

21.5

DC Power, Standard Power Arrangement - CO and RSM
Arrangements (Caged Collocation)

Per 20 AMPS	each	SP1PT	\$104.96	None	
Per 40 AMPS	each	SP1QD	\$209.91	None	
Per 50 AMPS	each	SP1PS	\$262.39	None	
Per 100 AMPS	each	SP1QE	\$524.78	None	
Per 200 AMPS	each	SP1QF	\$1,049.57	None	
Per 400 AMPS	each	(2)SP1QF	XX.XX		

Power Consumption Charges Cageless, Caged Common Arrangements

DC Plant	per amp	SP12D	\$6.12	None	
AC Usage	per amp	SP12E	\$2.12	None	

Adjacent On-site Arrangements

DC Plant	per amp	SP12F	\$5.19	None	
AC Usage	per amp	SP12G	\$2.12	None	

21.6

DC Power Panel (Maximum 50 AMP) - Optional

each	SP1QP	\$13.03	\$850.00	
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21.7

DC Power Panel (100/200 AMP) (Optional)

each	SP14R	\$8.12	\$1,793.00	
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21.8

DC Transmission Energy Charge

Standard CO Arrangement (Caged)	AC per DC Amp	SP1PU	\$2.03	None	
CEV, HUT and Cabinet Arrangement	Per 2" Mounting Space	SP1QK	\$1.75	None	
RSM CO Arrangement	AC per DC Amp	SP1QL	\$2.03	None	

21.9

Eligible Structure Ground Cable Arrangement

Caged	ft.	SP1CR	\$0.02	\$1.00	
Caged Common	linear ft of rack				
	space	SP12H	\$0.18	\$0.00	

Physical Collocation Quote Detail Price Sheet - Ver 1.01

Based on Texas Local Access Tariff, Section 5, Effective 10/29/99

Tariff Sec #	Unit	USOC	Recurring	recurring	Qty	Extended Charges	
						Monthly Recurring	Non-recurring

21.10 Security Cards

Access Cards	per card, new and replacement	NRBZW	None	\$17.31	
ID Cards	per card, new and replacement	NRBZX	None	\$10.00	

21.11 Timing Source Arrangement
(previously on Sheet 46)

per timing circuit	SP1QT	\$4.70	\$215.00	
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21.12 Optional Standard Frame or Cabinet

Standard Frame	each	NRB5M	None	\$2,159.00	
Standard Cabinet	each	NRB5N	None	\$3,064.00	

**21.13 Interconnection Arrangement Options
DS1 Arrangements**

o a D C S	Caged Collocation				
	SWBT provides cable rack	per 28 DS1s	SP1QM	\$131.47	\$7,692.97
	LSP provides cable rack	per 28 DS1s	SP1S7	\$129.07	\$7,576.42
	Cageless, Caged Common Collocation				
	SWBT provides cable rack	per 28 DS1s	SP12J	\$295.73	\$1,830.99
	LSP provides cable rack	per 28 DS1s	SP12K	\$0.00	\$0.00
	Adjacent On-site Collocation				
	SWBT provides cable rack	per 28 DS1s	SP12L	\$295.14	\$2,341.45
	LSP provides cable rack	per 28 DS1s	SP12M	\$0.00	\$0.00
	Adjacent Off-site Collocation				
	SWBT provides cable rack	per 28 DS1s	SP12N	\$295.73	\$1,830.99
	LSP provides cable rack	per 28 DS1s	SP12O	\$0.00	\$0.00
T o a D S X	Caged Collocation				
	SWBT provides cable rack	per 28 DS1s	SP1T3	\$10.79	\$1,834.44
	LSP provides cable rack	per 28 DS1s	SP1T4	\$8.38	\$1,717.88
	Cageless, Caged Common Collocation				
	SWBT provides cable rack	per 28 DS1s	SP12P	\$14.51	\$1,830.99
	LSP provides cable rack	per 28 DS1s	SP12Q	\$0.00	\$0.00
	Adjacent On-site Collocation				
	SWBT provides cable rack	per 28 DS1s	SP12R	\$13.91	\$2,341.45
	LSP provides cable rack	per 28 DS1s	SP12S	\$0.00	\$0.00
	Adjacent Off-site Collocation				
	SWBT provides cable rack	per 28 DS1s	SP12T	\$14.51	\$1,830.99
	LSP provides cable rack	per 28 DS1s	SP12U	\$0.00	\$0.00

Adjacent Off-site DS1 Arrangement

Racking	per 28 DS1s	SP12V	\$0.61	None	
Connection to MDF	per 450 DS1s	SP12W	\$311.43	\$485.31	

Regeneration (applicable to adjacent structures or at collocator request)

SP12X	\$0.00	\$0.00	
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DS1 Arrangement Augments

DCS	SP12Y	\$10.33	\$0.00	
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Physical Collocation Quote Detail Price Sheet - Ver 1.01

Based on Texas Local Access Tariff, Section 5, Effective 10/29/99

Tariff Sec #	Unit	USOC	Recurring	recurring	Qty	Extended Charges	
						Monthly Recurring	Non-recurring
	DCS	SP12Z	\$1.73	\$0.00			

DS3 Arrangements

DCS	Caged Collocation						
	SWBT provides cable racks	per 1 DS3	SP1T5	\$36.56	\$2,109.13		
	LSP provides cable racks	per 1 DS3	SP1T6	\$34.16	\$1,992.57		
	Cageless, Caged Common Collocation						
	SWBT provides cable racks	per 1 DS3	SP121	\$74.09	\$467.89		
	LSP provides cable racks	per 1 DS3	SP122	\$0.00	\$0.00		
DSX	Adjacent On-site Collocation						
	SWBT provides cable racks	per 1 DS3	SP123	\$73.49	\$598.33		
	LSP provides cable racks	per 1 DS3	SP124	\$0.00	\$0.00		
	Caged Collocation						
	SWBT provides cable racks	per 1 DS3	SP1QN	\$10.23	\$830.92		
	LSP provides cable racks	per 1 DS3	SP1S8	\$7.83	\$714.37		
	Cageless, Caged Common Collocation						
	SWBT provides cable racks	per 1 DS3	SP125	\$12.71	\$467.89		
	LSP provides cable racks	per 1 DS3	SP126	\$0.00	\$0.00		
	Adjacent On-site Collocation						
	SWBT provides cable racks	per 1 DS3	SP127	\$12.11	\$598.33		
	LSP provides cable racks	per 1 DS3	SP128	\$0.00	\$0.00		

DS3 Arrangement

Racking	per 1 DS3s	SP13C	\$0.61	None	
Regeneration (applicable to adjacent structures or at collocator request)		SP13D	\$0.00	\$0.00	

Copper Cable Interconnection Arrangement

Caged Collocation					
SWBT provides cable racks	per 100 pairs	SP1QQ	\$7.58	\$1,235.67	
LSP provides cable racks	per 100 pairs	SP1S9	\$5.18	\$1,119.11	
Cageless Collocation					
SWBT provides cable racks	per 100 pairs	SP13E	\$6.42	\$899.93	
Caged Common Collocation					
SWBT provides cable racks	per 100 pairs	SP13F	\$6.37	\$1,205.78	
Adjacent On-site Collocation					
Copper Cable Arrangement	per 100 pairs	SP13G	\$6.27	\$1,371.93	
Racking	per Rack	SP13H	\$30.63	\$387.23	
Adjacent Off-site Augments		SP13J	\$311.43	\$485.31	
Voice Grade	per 1 pair	SP13K	\$0.38	\$0.00	
Shielded Cable Arrangement (Optional)	per 100 shielded pairs	SP14S	\$12.76	\$2,817.00	

21.14 Optical Circuit Arrangement

(12 fiber pairs) Caged Collocation	per 12 fiber pair cable	SP1QR	\$8.73	\$569.00	
Cageless Collocation	per 12 fiber pair cable	SP13L	\$8.23	\$2,933.42	
Caged Common Collocation	per 12 fiber pair cable	SP13M	\$8.23	\$3,377.87	
Adjacent On-site	per 12 fiber pair cable	SP13N	\$7.49	\$3,751.22	
Adjacent On-site Racking	per 12 fiber pair cable	SP13O	\$0.76	None	
Adjacent Off-site Collocation	per 12 fiber pair cable	SP13P	\$9.02	\$3,370.20	

21.15 Timing Interconnection Arrangement	per 100 pairs	SP1QS	\$0.85	\$160.00	
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21.16 Copper Cable Termination Arrangement	per 100 pairs	SP1CV	\$5.00	None	
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21.17 Power Arrangement					
Caged Collocation					
Power Dedicated - 20 AMP	each	SP1QU	\$53.37	\$3,480.00	
Power Dedicated - 40 AMP	each	SP1QV	\$75.72	\$4,936.00	

Physical Collocation Quote Detail Price Sheet - Ver 1.01

Based on Texas Local Access Tariff, Section 5, Effective 10/29/99

Tariff Sec #	Unit	USOC	Recurring	recurring	Qty	Extended Charges	
						Monthly Recurring	Non-recurring
	Power Dedicated - 50 AMP	each	SP1QW	\$83.91	\$5,470.00		
	Power Dedicated - 100 AMP	each	SP1QX	\$92.10	\$6,004.00		
	Power Dedicated - 200 AMP	each	SP1QY	\$113.38	\$7,392.00		
	Cageless Collocation Power Delivery Charge	Per Cable Rack	SP13Q	\$0.10	None		
	<u>Caged Common Collocation Power Delivery Charge</u>						
	Power Dedicated - 40 AMP	each	SP13R	None	\$219.84		
	Power Dedicated - 100 AMP	each	SP13S	None	\$286.75		
	Power Dedicated - 200 AMP	each	SP13T	None	\$373.74		
	<u>Adjacent On-site Collocation Power Delivery Charge</u>						
	Power - 200 AMPs Cables	each	SP13U	\$15.90	\$7,802.44		
	Power - 400 AMPs Cables	each	SP13V	\$31.81	\$15,150.85		
	Power - 600 AMPs Cables	each	SP13W				
	Power - 800 AMPs Cables	each	SP13X				
	For Augments the Power Delivery Charge.						
	Power Dedicated - Up to 20 Amps		SP13Y	\$53.37	\$3,480.00		
	Power Dedicated - 21 - 40 Amps		SP13Z	\$75.72	\$4,936.00		
	Power Dedicated - 41 - 50 Amps		SP131	\$83.91	\$5,470.00		
	Power Dedicated - 51 - 100 Amps		SP132	\$92.10	\$6,004.00		
	Power Dedicated - 101 - 200 Amps		SP133	\$113.38	\$7,392.00		
21.18	<u>Conduit Space</u>	per foot	SP1CA	\$0.0156	None		
21.19	<u>Entrance Fiber Charge</u>						
	Caged Collocation	per cable sheath	SP1Q9	None	\$219.00		
	Cageless	per cable sheath	SP134	\$13.76	\$1,116.22		
	Caged Common	per cable sheath	SP135	\$2.11	\$1,116.22		
	<u>Adjacent On-site</u>						
	Per Cable	per cable sheath	SP136	\$0.58	\$1,213.28		
	Racking	per rack	SP137	\$22.18	\$270.61		
	Cable Entrance	per wall opening	SP138	None	\$774.88		
21.20	<u>Conduit for Fiber Optic Cable (Caged Only)</u>	per linear foot	SP1Q7	None	\$2.15		
21.21	<u>Innerduct. (Caged only)</u>	per foot of innerduct	SP1Q8	None	\$2.15		
21.22	<u>Miscellaneous Collocation Charges</u>						
	Cage wire partition removal	per linear foot	NRBYV	None	\$164.00		
	Cage-to-cage conduit placement	per linear foot	NRBYW		\$2.15		
21.23	<u>2" Rack Mounting Plate Space</u>						
	Large cabinet size	each	SP1QZ	\$7.20	None		
	Medium cabinet size	each	SP1Q1	\$8.15	None		
	Small cabinet size	each	SP1Q2	\$9.70	None		
	Maxihut	each	SP1Q3	\$4.00	None		
	Minihuts	each	SP1Q4	\$3.35	None		
	CEV - 24 foot	each	SP1Q5	\$5.40	None		
	CEV - 16 foot	each	SP1Q6	\$7.20	None		
21.24	<u>Pre-visits</u>						
	CPAT - 2nd Level	per 15 minutes	NRB11	None	\$20.77		
	Loop Electronics Coordinator - 1st Level	per 15 minutes	NRB12	None	\$15.19		
	Floor Space Planner - 1st Level	per 15 minutes	NRB13	None	\$15.15		

Physical Collocation Quote Detail Price Sheet - Ver 1.01

Based on Texas Local Access Tariff, Section 5, Effective 10/29/99

Tariff Sec #	Unit	USOC	Recurring	recurring	Qty	Extended Charges	
						Monthly Recurring	Non-recurring
Craft - Group 1	per 15 minutes	NRB14	None	\$12.45			

21.25 Construction Inspections

Project Manager - 2nd Level	per 15 minutes	NRB15	None	\$21.71	
CPAT - 2nd Level	per 15 minutes	NRB16	None	\$20.77	

21.26 Adjacent On-Site Structure Arrangements
Planning Charges

Initial	Per request	SP139	None	\$6,125.65	
Subsequent, Cabling Only	Per request	SP14V	None	\$1,224.33	
Land Rental, per square foot	Per sq. ft.	SP14T	\$0.10	None	
Extension of 100 AMP AC Service from C.O. Switchboard (optional)	Per request	SP14D	None	\$6,447.00	
AC Usage	per KWH	SP14E	\$0.05	None	

21.26.1 Adjacent Off-site Arrangement
Planning

Per request	SP14W	None	\$1,904.51	
per report and per eligible structure requested	NRBYX	None	\$121.00	

21.27 Collocation Space Availability Report Charge



Case #: _____

Physical Collocation Quote Detail Price Sheet - Ver 1.01

Based on Texas Local Access Tariff, Section 5, Effective 10/29/99

Tariff Sec #	Unit	USOC	Recurring	recurring	Qty	Extended Charges	
						Monthly Recurring	Non-recurring

21.28 Collocation to Collocation Connection

Physical to Physical	<u>Fiber Cable</u>					
	SWBT Provides Cable, Engineers and Installs	Per 12 Fibers	SP16A	\$0.60	\$442.00	
	Collocator Provides Cable, SWBT Engineers and Installs	Per 12 Fibers	SP16B	None	\$310.00	
	Collocator Provides Cable and Installs, SWBT Engineers	Per 12 Fibers	SP16C	None	\$140.00	
	<u>Copper Cable</u>					
	SWBT Provides Cable, Engineers and Installs	per 28 DS1s	SP16D	\$1.44	\$626.00	
	Collocator Provides Cable, SWBT Engineers and Installs	per 28 DS1s	SP16E	None	\$310.00	
	Collocator Provides Cable and Installs, SWBT Engineers	per 28 DS1s	SP16F	None	\$140.00	
	<u>Coax Cable</u>					
	SWBT Provides Cable, Engineers and Installs	Per 1 DS3	SP16G	\$1.14	\$562.00	
	Collocator Provides Cable, SWBT Engineers and Installs	Per 1 DS3	SP16H	None	\$310.00	
	Collocator Provides Cable and Installs, SWBT Engineers	Per 1 DS3	SP16J	None	\$140.00	
Cageless to Cageless and Physical to virtual	Cable Racking and Hole					
	For Optical	per cable	SP16K	\$0.25	None	
	DS1 or DS3	per cable	SP16L	\$0.20	None	
	Connection for DS1	per 28 DS1s	SP16M	None	\$721.30	
	Connection for DS3	per 1 DS3	SP16N	None	\$184.32	
	Connection for Optical	per Cable	SP16O	None	\$1,155.59	

Physical to Virtual Same as Cageless to Cageless

Non-tariffed Items

[illegible]



Physical Collocation Quote Detail Price Sheet - Ver 1.01

Based on Texas Local Access Tariff, Section 5, Effective 10/29/99

Tariff Sec #	Unit	USOC	Recurring	recurring	Qty	Extended Charges	
						Monthly Recurring	Non-recurring

The rates and charges are based on the interim approved tariff effective 10/29/99 and are subject to true-up. Final approval of the rates and charges by the Texas Public Utility Commission may affect other portions of the Tariff

SOUTH FLORIDA BUILDING CODE 1998

DADE COUNTY EDITION

BellSouth Telecommunications, Inc.
FPSC Docket Nos. 981834-TP & 990321-TP
Exhibit WKM-1
Page 1 of 72

Chapter: 05 Section: 00

☐

501	GENERAL REQUIREMENTS
502	OCCUPANCY CLASSIFIED
503	CHANGE IN USE
504	OCCUPANT LOAD
505	ADJOINING OCCUPANCY
506	FIRE DIVISIONS
507	PARTY WALLS
508	OCCUPANCY SEPARATIONS
509	SPECIAL HAZARD PROTECTION
510	MIXED OCCUPANCIES
511	LOCATION ON PROPERTY
512	SANITATION
513	CEILING HEIGHTS
514	ALLOWABLE AREA
515	FACILITIES FOR PHYSICALLY DISABLED
516	SAFEGUARDS

Chapter: 05 Section: 01

☐

0501.1

The intent of this Code is that buildings shall be of one type of construction required for the occupancies contained therein.

0501.2

No building or structure shall be erected nor any lot or portion of a lot be subdivided or sold nor any lot line moved by sale of land or otherwise in such a manner as to eliminate, nullify or reduce any required spaces for light and ventilation or means of egress or in any way to create violations of any of the provisions of this Code.

Chapter: 05 Section: 02

☐

0502.1

(a) Every building or portion thereof, whether existing or hereafter erected, shall be classified by the Building Official according to its use or the character of its occupancy, as a building of Group A, B, C, D, E, F, G, H, I or J Occupancy, as defined in Chapters 6, 7, 8, 9, 10, 11, 12, 13, 14, and 15 respectively.

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET 981834-TP

NO. 990321-TP

EXHIBIT NO.

14

COMPANY/

WITNESS:

DATE

Milner

1-12-2000

DOCUMENT NUMBER-DATE

13255 OCT 28 03

FPSC-RECORDS/REPORTING

(b) (1) Where minor accessory uses do not occupy more than 10 percent of the area of any floor of a building, nor more than 10 percent of the basic area permitted by occupancy, the major use of the building shall determine the occupancy classification.

(2) In buildings of Group G, Division 1 Occupancy, rooms for storing, sorting and unpacking goods held for retail sales shall be considered and classified the same as retail sales display areas.

(c) Minor accessory buildings not exceeding 10 percent of the area of the ground floor of the primary building, nor 1500 sq. ft., whichever is larger, and constructed of unprotected incombustible materials may, where complying with Subsection 1701.6 herein, be constructed without changing the limiting areas based on group of occupancy classification.

0502.2

Any occupancy not specifically mentioned shall be classified by the Building Official in the Group it most nearly resembles.

0502.3

Unless otherwise classified, accessory buildings shall conform to the requirements of the occupancy to which the building is accessory.

0502.4

When an occupancy is located in an unusual structure, such as within a vehicle or vessel, or a structure which is windowless or underground, the occupancy and the applicable portions of this Code and NFPA 101, including chapter 30 of NFPA 101.

Chapter: 05 Section: 03

☐

0503.1

No change in the character of occupancy of a building shall be made except as set forth in Subsection 104.7.

0503.2

No change in the character of occupancy of a building shall be made without a Certificate of Occupancy, as required in Section 307 of this Code.

0503.3

Buildings in existence at the time of the passage of this Code shall comply with Subsection 104.8 herein.

Chapter: 05 Section: 04

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0504.1

The occupant load shall be computed as set forth in Paragraph 3102.2(d) of this Code.

Chapter: 05 Section: 05

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0505.1

Adjoining units of different occupancies within a fire division shall be separated by a separation at least as fire-resistive as set forth in Section 508 of this Code.

0505.2

Two or more units of different occupancy may be contained within a fire division, but all such units shall conform to the provisions of Chapters 6 through 15 of this Code for the most restrictive of the occupancies so contained except as otherwise set forth

in Subsection 502.1 hereinabove.

Chapter: 05 Section: 06

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0506.1

Where in this Code and particularly in Chapters 6 through 15 of this Code, specific maximum allowable areas are set forth, the building may be separated into fire divisions and each such fire division shall be considered a separate building and be of the maximum allowable area provided the fire division separation walls (fire barriers) comply with this section.

0506.2

(a) Fire division separation walls shall be not less than 4-hour fire barriers in buildings of Type I, 3-hour fire barriers in buildings of Type II, and 2-hour fire barriers in buildings of Types III, IV, and V Construction.

(b) The total width of all openings in such walls shall not exceed 25 percent of the length of the wall in each story.

(c) Openings shall be protected as required in Section 1807 and Chapter 31, both of this Code.

0506.3

Fire barriers used for division separation need not extend to the outer edge of horizontal projecting elements such as balconies, roof overhangs, canopies, marquees, or ornamental projections provided that the exterior wall at the termination of the fire division separation wall and the projecting elements are not less than 1-hour fire resistive construction for a width equal to the depth of the projecting elements, but such fire protection need not extend more than 10'-0" on either side of the termination. Wall openings within such widths shall be protected by not less than 3/4-hour fire-resistive assemblies.

0506.4

Fire division separation walls shall extend from the foundation to a point at least 30" above the roof.

EXCEPTIONS:

1. 4-hour and 3-hour fire division separation walls may terminate at the bottom of the roof deck provided the roof deck is of incombustible construction for the area within 40 feet on each side of the wall.

2. 2-hour fire division separation walls (other than townhouses) may terminate at the underside of roof deck provided that the roof is of at least one-hour fire resistive construction on each side of the fire division separation wall termination.

3. 2-hour fire division separation walls for townhouses shall extend a minimum of 10" above the finished roof surface provided that the roof is of at least one-hour fire resistive construction on each side of the fire division wall. Instead of the 10" extension, the Building Official may accept such other method of design or construction which allows for the independence of the sheathing, structural and roof components of adjacent townhouse units.

0506.5

Where a fire division separation wall separates portions of a building having different heights, such wall may terminate at a point 30" above the lower roof level provided the exterior wall for a height of 10'-0" above the lower roof is one hour fire-resistive construction with openings protected by 3/4 hour fire-resistive assemblies.

EXCEPTION: The fire division separation wall may terminate at the deck of the lower roof provided the lower roof is a of at least one-hour fire-resistive construction for the width of 10'-0", without openings, measured from the wall.

0506.6

Fire dampers in ducts passing through fire division separation walls shall be required as set forth in Section 4905 of this Code.

Chapter: 05 Section: 07

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0507.1 EXTERIOR WALLS:

Subject to the applicable legal provisions of common ownership, a wall may be used as a PARTY WALL when conforming to the following requirements.

(a) Where the Type or Types of Construction used and/or combined floor areas of an existing and a proposed building are such that a separation into fire divisions is required, such walls shall meet the requirements for fire walls under this Code.

(b) Where not required as a fire wall but used to separate Occupancies, such wall shall conform with the requirements for separations of Occupancies under this Code.

(c) Such wall in all its parts shall conform to the engineering regulations of this Code or shall be made to conform therewith.

(d) Party walls used as common walls between separately owned buildings shall be incombustible and rated a minimum of two hours and shall meet the provisions of Subsection 506.4 hereinabove.

0507.2 SEPARATION BETWEEN TENANTS:

(a) In any building where rooms or spaces are occupied by separate tenants, not less than 1-hour fire-resistive construction shall be provided between tenants and between tenants and common areas.

EXCEPTIONS:

(1) As otherwise permitted for the group of occupancy by Chapter 31 of this Code.

(2) Fire separation will not be required between tenants or between tenants and common areas of Group A, B, F, G, Division 1, H, and J Occupancies where walls or partitions are omitted or where visual intercommunication through separation walls or partitions is provided for 50 percent or more of the area of the wall or partition.

(3) Group F, Division 1 tenancies 400 sq. ft. and less in area shall not be required to meet the provisions of the Subsection when one story in height provided fire division walls are constructed for each 10,000 sq. ft. of building area.

(b) Fire-resistive separation between tenants shall be continuous between fire barriers. Where exposed combustible materials are used in an attic or ceiling the separation between tenants shall be continuous to the deck above such space and shall include any eaves or overhangs.

EXCEPTION: A barrier required for an occupied space below interstitial space is not required to extend through the interstitial space provided the construction assembly forming the bottom of the interstitial space has a fire resistance rating equal to that of the fire barrier.

(c) Openings in fire-resistive separations between tenants shall be protected as set forth in Section 1807 of this Code by assemblies complying with Section 3706 of this Code and air movement openings shall be provided with smoke and/or fire dampers, as required therein.

(d) Walls or partitions required by this Code to be fire-resistive based on group of occupancy, type of construction, occupancy separation in Section 503 herein, draft stopping as set forth under types of construction, or protection of means of egress in Chapter 31 of this Code, may serve as separation between tenants where such walls and partitions also comply with this subsection.

Chapter: 05 Section: 08

☐

0508.1

Occupancy separations shall be provided between the various groups and divisions of occupancies as specified herein and in Table No. 5-A, but shall be not less fire-resistive than required for the type of construction.

(Click on the "FIGURE" button to view the appropriate tables or figures associated with this Code Section)

0508.2 FORM OF OCCUPANCY SEPARATION:

Occupancy separations shall be in the form of fire barriers which may be vertical, horizontal or inclined, depending upon the geometry and relative position of the portions to be separated, and shall consist of a system of walls, partitions, floors or other construction of such materials and construction, so arranged as to provide a complete, secure and continuous firebreak of the required fire-resistive rating between the portions of the building so separated.

0508.3 CLASSIFICATIONS OF OCCUPANCY SEPARATION:

(a) Fire barrier separations between occupancies within a fire division and between fire divisions shall be classified, each classification designated by the number of hours of fire-rating as set forth herein.

(b) A four-hour fire barrier separation shall be of not less than 4-hour fire-resistive construction and openings therein shall be protected in accordance with Paragraph 506.2(c) herein.

(c) (1) A 3-hour fire barrier separation shall be of not less than 3-hour fire-resistive construction.

(2) All openings in walls of 3-hour fire barrier separations shall be protected by a fire assembly having a 3-hour fire barrier rating.

(3) The total width of all openings in any 3-hour fire barrier in any one story shall not exceed 25 percent of the length of the wall in that story and no single opening shall have an area greater than 120 sq. ft.

(4) All openings in floors forming a 3-hour fire barrier separation shall be protected by vertical enclosures extending above and below such openings. The walls of such vertical enclosures shall be of not less than 2-hour fire-resistive construction and all openings therein shall be protected by a fire assembly having a 1-1/2 hour fire protection rating.

(d) A 2-hour fire barrier separation shall be for not less than 2-hour fire-resistive construction. All openings in such separation shall be protected by a fire assembly having a one and one-half hour fire protection rating.

(e) A 1-hour fire barrier separation shall be of not less than 1-hour fire resistive construction. All openings in such separation shall be protected by a fire assembly having a 3/4 hour fire protection rating

EXCEPTION: As otherwise permitted by the group of occupancy or Section 1807 of this Code.

(f) A 3/4 -hour fire barrier shall be of not less than 3/4-hour fire resistive construction and openings therein shall be protected with assemblies of not less than a 20-minute fire protection rating.

(g) A 20-minute fire barrier shall be of not less than 20-minute fire resistive construction, and openings therein shall be protected with assemblies of not less than a 20 minute fire protection rating.

0508.4 DESIGN AND MATERIAL OF OCCUPANCY SEPARATION:

Walls which form separations between occupancies or between fire divisions shall also conform with the provisions of PART VI as they pertain to design and materials.

Chapter: 05 Section: 09

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0509.1

Protection shall be provided from any area having a degree of hazard greater than that normal to the general occupancy of the building or structure, such as storage of combustibles or flammables, heat-producing appliances, or maintenance purposes, as set forth in this section.

(a) Enclosures with construction in accordance with Section 1807 of this Code with a fire resistance rating as specified by the group of occupancy, but not less than 1 hour without windows and with doors of 3/4 -hour fire protection rating, or

(b) Protection with automatic extinguishing systems in accordance with Chapter 38 of this Code as required for the group of occupancy.

(c) Both (a) and (b) above when specified for the group of occupancy by Chapter 38 or 31 both of this Code.

0509.2

Where hazardous processes or storage are of such a character as to introduce an explosion potential, explosion venting or an explosion suppression system specifically designed for the hazard involved shall be provided as set forth in Chapter 41 and 49 of this Code.

0509.3 HAZARDOUS UTILITIES:

(a) GENERAL: Individual feeders and shut-offs shall be provided for every separate fire division in every building.

(b) ELECTRIC: Where electricity is served to multiple tenants (more than 2), the provisions of Paragraph 4506.1 (d) of this Code shall be satisfied.

(c) GAS: Where gas is served to separated fire divisions or occupancies, there shall be individual valves, and valves and meters shall be located on the exterior of the building in a conspicuous and accessible place. Installation shall be as set forth in Chapter 47 of this Code.

(d) OTHER: Other utilities which may constitute hazards shall, in general, be governed by the provisions of this section and shall be subject to such additional requirements as the Building Official may prescribe.

Chapter: 05 Section: 10

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0510.1

Where two or more types of occupancy occur within the same building or structure, and are so intermingled that separate safeguards are impracticable, means of egress facilities, construction, protection and other requirements shall comply with the most restrictive life safety requirements of the occupancies involved.

0510.2

Where two or more types of occupancy occur in different parts or separate floors of the same building, the combined width of means of egress at any floor or part, other than the first or ground floor, shall not be less than required for the specific occupancy considered separately and the occupant content of only that floor or part of the building. See also Subsection 3102.2 of this Code.

0510.3

Additional requirements for mixed occupancies shall be as set forth in Chapter 31 of this Code.

Chapter: 05 Section: 11

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0511.1

The location of all buildings and/or structures shall conform to the provisions of applicable zoning.

0511.2

The location of all buildings and the protection of certain openings shall conform to the requirements of the group of occupancy in which such building is classified in this Code, according to the use or the character of the occupancy.

0511.3 SEPARATION FROM THE METROMOVER:

New construction of buildings and structures shall not be located within 5 feet horizontal separation from the Metromover. Horizontal separation shall mean the distance from the exterior wall of such building or structure to the Metromover when projected on a horizontal plane. The Building Official and the Metro Dade Transit Agency may approve locations for new construction of buildings and structures that are less than 5 feet horizontally from the Metromover where the portions of the building and/or structure within 5 feet of the Metromover are separated by means of 4 hour fire rated walls. When openings are permitted in required 4 hour fire rated walls separating buildings and/or structures from the Metromover, they shall be protected with Class A fire door assemblies and arranged as horizontal exit separations.

Chapter: 05 Section: 12

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0512.1 WASTE STORAGE:

Adequate permanent enclosures shall be provided for the storage of waste within the lines of the lot or lots occupied.

0512.2 TOILET ROOMS:

(a) Toilet facilities shall be provided on each floor for each sex using that floor and shall be located to be readily accessible except that in a building where the two lower levels, such as a first floor and mezzanine, or the first floor and second floor where there is no mezzanine, are occupied by a single tenant and the toilet facilities are not for public use, the combined total toilet facilities required for these two levels may be located in either the first or second level. Toilet facilities in Group A or B Occupancies, such as restaurants, bars, transportation terminals and similar locations, will be permitted this two-level exception when the travel distance from the remote corner of one level to the entrance door of the toilet facility of the other level does not exceed 150'-0".

(b) Minimum toilet facilities shall be a toilet room having one water closet and one lavatory, which may serve both sexes but not more than nine persons.

(c) Water closets for public use, except within the residence or apartment of a single family, shall be of an elongated type and shall be equipped with open front seats, and shall be separated from the rest of the room, and from each other, by stalls of impervious materials. Such stalls shall be equipped with self-closing doors and shall be open at the top and at least 12" from the floor for ventilation.

(d) The floors and walls of the public toilet rooms, to a height of 5'-0", shall be tile or similar impervious materials.

(e) Toilet rooms connected to rooms where food is prepared or served to the public shall be separated therefrom by a vestibule with close-fitting doors.

EXCEPTION: Toilet rooms, connected to rooms where food is served, that are completely enclosed, have close fitting, self-closing doors and mechanical ventilation that causes a negative pressure relative to areas of food service.

(f) Toilet rooms connected to public rooms or passageways shall have a vestibule or shall otherwise be arranged or screened to insure decency and privacy.

(g) Public toilets shall bear signs plainly indicating for which sex and/or group such room is intended.

(h) Required facilities in public buildings shall be available to employees and the public without charge.

(i) Warehouses or storage buildings renting or leasing bays or stalls of not more than 500 sq. ft. and that do not have separate electric service for the purpose of determining the required toilet facilities only, such buildings shall be considered as a single tenant. Toilet facilities shall be provided with a travel distance not to exceed 500'-0".

(j) Requirements for plumbing fixtures and systems shall be as set forth in Chapter 46 of this Code.

0512.3 SCREENING:

(a) Food-storage and preparation rooms shall have outside openings screened with 18-mesh-wire screening. Screen doors shall be equipped with self-closing devices.

(b) Public dining rooms, restaurants, tearooms and similar places for serving food to the public shall be completely screened with 18-mesh wire to effectively prevent the entrance of insects. This requirement for screening or installation of fans in public dining shall not be construed to prevent the serving of food to the public in outdoor areas.

Chapter: 05 Section: 13

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0513.1 GENERAL:

(a) Headroom shall be defined as the minimum ceiling height from the finished floor surface to the lowest point of the ceiling or other overhead obstruction. The minimum headroom in means of egress shall be 7'-6".

EXCEPTIONS:

(1) Headroom on stairs may be 6'-8", measured as specified in Paragraph 3102.1(b) of this Code.

(2) Pipes, ducts and stationary mechanical appurtenances may be permitted to reduce the headroom at a point to not less than 6'-8". For corridors serving as exit access, the term "point" shall be taken to mean a section of the ceiling not exceeding two feet in the direction of exit travel.

(3) The headroom under mechanical appurtenances with exposed moving parts, including any ceiling fan, shall be not less than 7'-0".

(b) Small storage closets, slop-sink closets, storage space under a stair and similar small areas where persons do not generally walk into shall not be limited to height.

(c) Doors connecting space where minimum ceiling heights are herein regulated shall be of not less than 6'-8" in height.

(d) The minimum height of entrances for pedestrian or vehicular traffic and for parking spaces under or within a building shall be 6'-8".

EXCEPTION: As otherwise set forth in (b), above.

(e) The ceiling height of a limited storage mezzanine or area where persons may infrequently be and only for the purpose of placing or removing stored materials shall not be limited.

0513.2 CEILING HEIGHTS BY SPECIFIC USE:

- (a) Ceiling heights of residential Occupancies shall comply with Sections 1305, 1405, and 3104 of this Code as applicable.
- (b) Stairways and landings shall have headroom as set forth in Subsection 3102.1 of this Code.
- (c) The maximum headroom of parking garages for passenger cars, where the design is based on a reduced live load, shall not exceed 7'-6" fixed.
- (d) Headroom under roof signs shall comply with Subsection 4206.4 of this Code

Chapter: 05 Section: 14

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0514.1 BASIC FLOOR AREA:

- (a) (1) The area of a one-story building in Fire Zones 1 and 2 shall not exceed the limits set forth in Chapters 6 through 15 of this Code except as provided in Subsection 514.2 herein.
- (2) Buildings in Fire Zone 3 may have basic areas of one-third more than the limits set forth in Chapters 6 through 15 of this Code and the basic areas so computed may be further increased as provided in Subsection 514.2 herein.
- (b) Basements and cellars need not be included in the total allowable area provided they do not qualify as a story or exceed the area permitted for a 1-story building.
- (c) The total area of all floors of a multi-story building shall not exceed twice the area allowed for one-story buildings.
- (d) No single floor area shall exceed that permitted for 1-story buildings.

0514.2

- (a) BASIC AREA INCREASES: The basic areas provided in Subsection 514.1 hereinabove may be increased by the percentages set forth in one of the following:

- (1) Where public space, streets, or yards more than 20'-0" in width extend along and adjoin two sides of a building, the basic floor area may be increased at a rate of 1-1/4 percent for each 1'-0" by which such space, street, or yard exceeds 20'-0", but such increase shall not exceed 50 percent.
- (2) Where public space, streets, or yards more than 20'-0" in width extend along and adjoin three sides of a building, the basic floor area may be increased at a rate of 2-1/2 percent for each foot by which such space, street, or yard exceeds 20'-0", but such increase shall not exceed 100 percent.

(3) (aa) Where public space, streets, or yards more than 20'-0" in width extend on all sides of a building and adjoin the entire perimeter, the basic floor area may be increased at a rate of 5 percent for each 1'-0" by which such space, street, or yard exceeds 20'-0".

(bb) Such increases shall not exceed 100 percent, except as provided in Paragraph 514.2(b) herein.

(4) Floor areas so computed are the maximum allowable except where unlimited as provided in Paragraph 514.2(b) or except in buildings provided with automatic fire extinguishing systems as set forth in Paragraph 514.2(c) herein.

(b) UNLIMITED AREA:

(1) The areas of buildings of Groups F and G Occupancy shall not be limited where such buildings do not exceed 2 stories in height, are entirely surrounded by public space, streets, or yards not less than 60'-0" in width, and are provided with an approved automatic fire extinguishing system throughout as set forth in Chapter 38 of this Code.

(2) The areas of 1-story buildings of Groups F and G Occupancy Type II, Type III (Protected), or Type IV Construction shall not be limited where such buildings are entirely surrounded and adjoined by public space, streets, or yards not less than 60'-0" in width.

(c) AUTOMATIC FIRE EXTINGUISHING SYSTEMS:

(1) The basic areas provided in Subsection 514.1 hereinabove may be tripled in 1-story buildings and doubled in buildings more than 1-story where such buildings are provided with approved automatic fire extinguishing systems throughout, as set forth in Chapter 38 of this Code.

(2) In buildings of Group E occupancy, the area increases permitted in the Sub-paragraphs of paragraph 514.2 (a) hereinabove applied to the advised basic area.

(d) PUBLIC SPACE, STREETS, OR YARDS: where the width of public space, streets, or yards is used to increase floor area, such space, street or yard shall remain unobstructed to provide permanent access not less than 20'-0" in width for fire-fighting equipment to serve each building.

Chapter: 05 Section: 15

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For 515 Accessibility Requirements please refer to F.S. 553.501-513
(Florida Americans with Disabilities Accessibility Implementation Act)
also
Portions of Fair Housing Act
Sections 760.22 (a)(b) - 760.23 (10), Florida Statutes

Section 515, which covers pages 5-13 through 5-25, has been deleted in its entirety.
Please discard and replace with page 5-13 of Supplement No.2.

You can get copies of above mentioned materials by contacting:

State of Florida
Department of Community Affairs

2740 Centerview Drive
Tallahassee, FL 32399
(904) 487-1824

Chapter: 05 Section: 16

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0516.1 GENERAL:

(a) Safeguards in and around buildings and structures such as covers, railings, stair-railings, handrails, or other safeguards as defined and provided in the regulations of the Occupational Safety and Health Administration.(OSHA)29CFR Part 1910 as applied to permanent structures, set forth in Section 402 of this Code, and as provided herein.

(b) Such safeguards shall also be designed to comply with Section 515 herein and to resist the loads set forth in Subsection 2305.7 of this Code.

0516.2 WALL AND FLOOR OPENINGS:

(a) Open or glazed wall openings; open or glazed sides of balconies, landings and other walking surfaces; unenclosed floor and roof openings; roofs used for other than services for the building or structure and, except in Groups E and F Occupancies, any other abrupt differences in level exceeding 30", including yard areas, shall be provided with safeguards not less than 42" in height.

(b) Such differences in level exceeding 30" in and around Groups E and F Occupancies shall be provided with safeguards not less than 42" in height.

(c) Safeguards may be omitted at loading docks, truck wells and similar locations where it is apparent that the edge of the higher level is for loading, and on docks, seawalls and decorative fountains where the lower level is the water surface.

(d) (1) Safeguards in and around buildings of other than Groups H and I Occupancies shall be provided with additional rails, vertical pickets, or an ornamental filler below the top rail which will reject a 6" diameter object.

(2) Safeguards in and around buildings of Groups H and I Occupancies shall provide protection for children by providing additional rails, vertical pickets, or an ornamental filler below the top rail which will reject a 4" diameter object; permitting, however, such ornamental fillers to have individual openings not exceeding 64 sq. in.in area.

(3) Where a balustrade is used to comply with the requirements of this paragraph, the maximum clearance between the bottom rail of the balustrade and the adjacent surface shall not exceed 2". For safeguards on stairs, the 2" clearance shall be measured from the bottom rail of the balustrade to a line passing through the tread nosings.

(e) Intermediate rails, balusters, and panel fillers shall be designed for a uniform horizontal load of not less than 25 lb/sq.ft. over the gross area of the guard, including the area of any openings in the

guard, of which they are a part. Reactions due to this loading need not be added to the loading specified by Subparagraph 3103.3(e)(5)(dd) of this Code in designing the main supporting members of guards.

EXCEPTION: Safety glazing will be permitted as an equal alternate to pickets, if tested by an accredited laboratory to satisfy the resistance requirements of this Code for wind, live and kinetic energy impact loading conditions.

(f) Areas in all occupancies, from which the public is excluded, requiring such protection may be provided with vertical barriers having a single rail midway between a top rail and the walking surface provided the design meets the requirements of the sub-section 2305.7 of this Code.

0516.3 STAIRWAYS AND RAMPS:

Safeguards for stairways, ramps, and landings shall also meet the requirements set forth in Subsection 3103.3 of this Code.

0516.4 VEHICLE SAFEGUARD BARRIERS:

(a) Vehicle safeguard barriers are required in parking garages whenever there is a difference in level exceeding 1' - 0".

(b) Unless separate pedestrian safeguards are provided vehicle safeguard barriers shall, in addition to the requirements of this subsection, meet all other requirements of Section 516.

(c) The requirement of Subparagraph 516.2 (d) (1) for the rejection of a 6 inch diameter object shall be met when the barrier is subjected to a horizontal load of 25 lb/sq. ft., applied as specified in 516.2 (e).

(d) Vehicle safeguard barriers shall be capable of resisting a minimum horizontal ultimate load of 10,000 lb. applied 18 inches above the floor at any point in the barrier system. This load need not be applied in combination with loads specified in 516.2 (e) and in Subsection 2305.7.

(e) Vehicle safeguard barrier systems of metal framing, concrete or masonry may be designed by allowable stress design for a concentrated horizontal load of 7500 lbs. in lieu of the 10,000 lb. ultimate load specified above.

(f) Special requirements for cable safeguard barriers:

- (1) Horizontal deflection under design load shall not exceed 18 inches.
- (2) The design load shall be assumed to be resisted by not more than two cables.
- (3) The cable system including anchors shall be protected against corrosion.
- (4) Cable tension under design load shall not exceed 90% of the yield strength of the cable.

(5) The uppermost cable shall be at least 42 inches above the adjacent surface. Cables shall not be spaced more than 6 inches apart.

(6) An installation plan prepared by the structural engineer of record shall be submitted to the Building Official for his or her approval.

(7) Installation shall be witnessed by a Special Inspector who shall certify:

(aa) That the installation has been in accordance with the approved installation plan.

(bb) That the initial tension designated by the Structural Engineer of Record has been provided in all cables.

(cc) That all anchors have been seated at a total load, including initial tension, equal to 85% of the yield strength of the cable, unless a positive locking device is provided that does not require a tension jack for the tensioning of the barrier strand.

(dd) Special inspectors shall conform with the requirement of Section 305.3 (c), (d), (e), and (f).

(8) Drawings will indicate the initial tension, the expected increase in tension under vehicular impact, and the required maximum capacity of the strand barrier system.

STANDARD BUILDING CODE 1997

TABLE 600

BellSouth Telecommunications, Inc.
FPSC Docket Nos. 981834-TP & 990321-TP
Exhibit WKM-1
Page 17 of 72

TABLE 600
FIRE RESISTANCE RATINGS
REQUIRED FIRE RESISTANCE IN HOURS

STRUCTURAL ELEMENT	TYPE I	TYPE II	TYPE III	TYPE IV		TYPE V		TYPE VI	
				1-Hour Protected	Unprotected	1-Hour Protected	Unprotected	1-Hour Protected	Unprotected
PARTY AND FIRE WALLS (a)	4	4	4	4	4	4	4	4	4
INTERIOR BEARING WALLS (l)									
Supporting columns, other bearing walls or more than one floor	4	3	2	1	NC	1 (h)	0 (h)	1	0
Supporting one floor only	3	2	1	1	NC	1	0	1	0
Supporting roofs only	3	2	1	1	NC	1	0	1	0
INTERIOR NONBEARING PARTITIONS	See 704.1, 704.2 and 705.2								
COLUMNS (q)	(l)		See 605						
Supporting other columns or more than one floor	4	3	H(d)	1	NC	1	0	1	0
Supporting one floor only	3	2	H(d)	1	NC	1	0	1	0
Supporting roofs only	3	2	H(d)	1	NC	1	0	1	0
BEAMS, GIRDERS, TRUSSES & ARCHES (l)			See 605						
Supporting columns or more than one floor	4	3	H(d)	1	NC	1	0	1	0
Supporting one floor only	3	2	H(d)	1	NC	1	0	1	0
Supporting roofs only	1 1/2(e,p)	1(e,f,p)	H(d)	1(e,p)	NC(e)	1	0	1	0
FLOORS & FLOOR/CEILING ASSEMBLIES (l)	3	2	See 605 H (o)	(n) 1	(n,o) NC	(n) 1	(m,n,o) 0	1	(o) 0
ROOFS & ROOF/CEILING ASSEMBLIES (g)	1 1/2(e,p)	1 (e,f,p)	See 605 H(d)	1(e,p)	NC(e)	1	0	1	0
EXTERIOR BEARING WALLS and gable ends of roof (g, i, j)	(% indicates percent of protected and unprotected wall openings permitted. See 705.1.1 for protection requirements.)								
Horizontal separation (distance from common property line or assumed property line).									
0 ft to 3 ft (c)	4(0%)	3(0%)	3(0%)(b)	2(0%)	1(0%)	3(0%)(b)	3(0%)(b)	1(0%)	1(0%)
over 3 ft to 10 ft (c)	4(10%)	3(10%)	2(10%)(b)	1(10%)	1(10%)	2(10%)(b)	2(10%)(b)	1(20%)	0(20%)
over 10 ft to 20 ft (c)	4(20%)	3(20%)	2(20%)(b)	1(20%)	NC(20%)	2(20%)(b)	2(20%)(b)	1(40%)	0(40%)
over 20 ft to 30 ft	4(40%)	3(40%)	1(40%)	1(40%)	NC(40%)	1(40%)	1(40%)	1(60%)	0(60%)
over 30 ft	4(NL)	3(NL)	1(NL)	1(NL)	NC(NL)	1(NL)	1(NL)	1(NL)	0(NL)
EXTERIOR NONBEARING WALLS and gable ends of roof (g, i, j)	(% indicates percent of protected and unprotected wall openings permitted. See 705.1.1 for protection requirements.)								
Horizontal separation (distance from common property line or assumed property line).									
0 ft to 3 ft (c)	3(0%)	3(0%)	3(0%)(b)	2(0%)	1(0%)	3(0%)(b)	3(0%)(b)	1(0%)	1(0%)
over 3 ft to 10 ft (c)	2(10%)	2(10%)	2(10%)(b)	1(10%)	1(10%)	2(10%)(b)	2(10%)(b)	1(20%)	0(20%)
over 10 ft to 20 ft (c)	2(20%)	2(20%)	2(20%)(b)	1(20%)	NC(20%)	2(20%)(b)	2(20%)(b)	1(40%)	0(40%)
over 20 ft to 30 ft	1(40%)	1(40%)	1(40%)	NC(40%)	NC(40%)	1(40%)	1(40%)	0(60%)	0(60%)
over 30 ft (k)	NC (NL)	NC(NL)	NC(NL)	NC(NL)	NC(NL)	NC(NL)	NC(NL)	0(NL)	0(NL)

For SI: 1 ft = 0.305 m.

NC = Noncombustible
NL = No Limits
H = Heavy Timber Sizes

Notes:

- a. See 704.5 for extension of party walls and fire walls.
- b. See 704.5 for parapets.
- c. See 705 for protection of wall openings.
- d. Where horizontal separation of 20 ft or more is provided, wood columns, arches, beams, and roof deck conforming to heavy timber sizes may be used externally.
- e. In buildings not over two stories approved fire retardant treated wood may be used.
- f. In one-story buildings, structural members of heavy timber sizes may be used as an alternate to unprotected structural roof members. Stadiums, field houses and arenas with heavy timber wood dome roofs are permitted. An approved automatic sprinkler system shall be installed in those areas where 20 ft clearance to the floor or balcony below is not provided.
- g. See 1517 for penthouses and roof structures.
- h. The use of combustible construction for interior bearing partitions shall be limited to the support of not more than two floors and a roof.
- i. Exterior walls shall be fire tested in accordance with 601.3. The fire resistance requirements for exterior walls with 5 ft or less horizontal separation shall be based upon both interior and exterior fire exposure. The fire resistance requirements for exterior walls with more than 5 ft horizontal separation shall be based upon interior fire exposure only.
- j. Where Appendix F is specifically included in the adopting ordinance, see F102.2.6 for fire resistance requirements for exterior walls of Type IV buildings in Fire District.
- k. Walls or panels shall be of noncombustible material or fire retardant treated wood, except for Type VI construction.
- l. For Group A - Large Assembly, Group A - Small Assembly, Group B, Group E, Group F, Group R occupancies and Automobile Parking Structures, occupancies of Type I construction, partitions, columns, trusses, girders, beams, and floors may be reduced by 1 hour if the building is equipped with an automatic sprinkler system throughout, but no component or assembly may be less than 1 hour.
- m. Group A - Large Assembly (no stage requiring proscenium opening protection) and Group A - Small Assembly occupancies of Type V Unprotected construction shall have 1-hour fire resistant floors over any crawl space or basement.
- n. For Group B and Group M occupancies of Type IV or Type V construction, when five or more stories in height a 2-hour fire resistant floor shall be required over the basement.
- o. For unsprinklered Group E occupancies of Type III, Type IV Unprotected, Type V Unprotected or Type VI Unprotected, floors located immediately above useable space in basements shall have a fire resistant rating of not less than 1 hour.
- p. In buildings of Group A, B, E, and R occupancies, the required fire resistance of the roof or roof/ceiling assembly including the beams, girders, trusses, or arches that support the roof only may be omitted where every part of the roof structural members have a clear height of 20 ft (6096 mm) or more above any floor, mezzanine or balcony.
- q. See 701.4.

703.10 - 704.1.3.3.3

ment in a cubic-foot box, using the shoveling procedure as outlined in ASTM C 29.

703.10 Glass block. Glass block shall be labeled to conform to NFPA 257 or UL 9.

SECTION 704 FIRE RESISTANT SEPARATIONS

704.1 Occupancy separation requirements

704.1.1 The minimum fire resistance of construction separating any two occupancies in a building of mixed occupancy shall be the higher rating required for the occupancies being separated, as specified in Table 704.1.

TABLE 704.1
OCCUPANCY SEPARATION REQUIREMENTS

Large or Small Assembly	2 hour
Business	1 hour
Educational	2 hour
Factory-Industrial	2 hour
Hazardous	See 704.1.4
Institutional	2 hour
Mercantile	1 hour
Residential	1 hour
Storage, Moderate Hazard S1	3 hour
Storage, Low Hazard S2	2 hour
Automobile Parking Garages ¹	1 hour
Automobile Repair Garages	2 hour

Note:

1. See 411.2.6 for exceptions.

704.1.2 Accessory occupancies.

704.1.2.1 Portions of buildings used as accessory offices or for customary nonhazardous uses necessary for transacting the principal business in Group S and Group F occupancies need not be separated from the principal use. Group F occupancies producing, using or storing low hazard products listed in 312.2.2 need not be considered mixed occupancies. Height and area will be governed by the principal intended use.

704.1.2.2 The following occupancies need not be separated from the uses to which they are accessory:

1. A kitchen in a Group A occupancy does not constitute a mixed occupancy. A fire resistant separation is not required.
2. Assembly rooms having a floor area of not over 750 sq ft (70 m²).
3. Administrative and clerical offices and similar rooms which, in area per story, do not exceed 25% of the story area of the major use when not related to Group H occupancies.

Exception: Accessory uses in Group F and S occupancies conforming to 704.1.2.1.

4. Rooms or spaces used for customary storage of nonhazardous materials in Group A, Group B, Group E, Group F, Group M, and Group R,

which in aggregate do not exceed one-third of the major occupancy floor area in which they are located.

5. Portions of buildings which are less than 3,000 sq ft used as accessory small businesses to and open for business simultaneously with the principal retail sales occupant, only in a Group M occupancy.

Exception: Item 5 shall not apply to separation walls between tenants and malls in covered mall buildings.

704.1.2.3 A 1-hour occupancy separation shall be permitted in assembly rooms greater than 750 sq ft (70 m²) but less than 2,000 sq ft (186 m²) in area when all of the following are met:

1. The occupant content does not exceed 300 persons calculated in accordance with Table 1003.1.
2. The assembly room does not constitute the major occupancy classification of the building.
3. The assembly room is not associated with a hazardous or Group S1 occupancy.
4. The assembly room is not associated with a kitchen.
5. The assembly room is not a theater or restaurant.

704.1.3 Special occupancy separations.

704.1.3.1 Assembly and educational. Fire resistance separation shall not be required between Sunday school rooms and a church auditorium of Group A - Small Assembly occupancy, and between classrooms in day schools and auditoriums, gymnasiums, cafeterias, and libraries of small assembly occupancy, which are used only as accessory uses to the education occupancy.

704.1.3.2 Automobile parking garages. A separation between an automobile parking garage used exclusively for the storage of passenger vehicles that will accommodate not more than nine passengers and any other occupancy having a rating of 2 hours or more in Table 704.1 shall be 2 hours.

704.1.3.3 Boiler and machinery rooms

704.1.3.3.1 Every central heating boiler as defined in the Standard Mechanical Code, installed in any building other than a one or two family dwelling or Group F, shall be separated from the rest of the building by not less than 1-hour fire resistant construction.

704.1.3.3.2 A central heating boiler installed in a Group A or H occupancy shall be separated from the rest of the building by construction having a fire resistance rating of not less than 2 hours.

704.1.3.3.3 Steam boilers. Every steam boiler carrying more than 15 psi (103 kPa) pressure with a rating in excess of 10 boiler horsepower (98 kW)

installed in a building other than one of Group F occupancy, shall be located in a separate room or compartment, shall not be located under a means of egress and shall be separated from the rest of the building by construction having at least 2-hour fire resistance. This rating may be reduced in accordance with the hazard existing when in the opinion of the building official it is desirable to provide for explosion venting upward.

704.1.3.3.4 Refrigerant system machinery rooms. Where required by the Standard Mechanical Code due to refrigerant type, amount, system classification and occupancy, a Level 2 machinery room shall be of noncombustible construction. A minimum of 1-hour construction shall separate the machinery room from other occupied spaces. A minimum of 3/4-hour C-labeled doors shall be used when separating from other occupancies.

704.1.4 Hazardous occupancies

704.1.4.1 The separation of a hazardous occupancy from other occupancies shall be in accordance with Table 704.1.4.

TABLE 704.1.4
 HAZARDOUS OCCUPANCY SEPARATION REQUIREMENTS

OCCUPANCY	H1	H2	H3	H4
A	NP	4	4	4
B	NP	2	2	1
E	NP	4	4	4
F	NP	2	1	1
H1	—	NP	NP	NP
H2	NP	—	1	2
H3	NP	1	—	1
H4	NP	2	1	—
I	NP	4	4	4
M	NP	2	2	2
R1,2,3, and 4	NP	4	4	4
S1,2	NP	2	2	2

Note:

NP = H1 occupancies not permitted to be attached to other occupancies or other H subclassifications.

704.1.4.2 The separation of a hazardous occupancy subclassification shall only apply to storage areas.

704.1.4.3 Building areas intended for the use, processing, manufacture or generation of materials having different hazard classifications, all of them being Group H, need not be separated further within the confines of the Group H occupancy provided the requirements for each hazard are met.

704.1.4.4 Accessory areas, other than assembly occupancies, that do not exceed 10% of the allowable area for the hazardous occupancy subclassification in Table 500 and that do not exceed 1,500 sq ft (139 m²) shall not be required to comply with 704.1. Where accessory areas are separated from hazardous occupancies by

partitions, the partitions shall be not less than 1-hour fire resistant construction with an opening protection rating not less than 3/4-hour. Opening protection shall be either self-closing or automatic-closing in accordance with 705.1.3.2.3.

704.2 Interior wall and partition fire separation requirements

704.2.1 General

704.2.1.1 This section shall apply to the fire separation requirements of interior walls and partitions for the various occupancies and types of construction. Partitions of higher fire resistance rating required by other sections of this code may also serve to meet the requirements of this section.

704.2.1.2 All partitions enclosing vertical openings such as stairways, utility shafts and elevator shafts which are required to have a fire resistance rating shall extend from floor to floor or floor to roof. These walls shall be continuous through all concealed spaces such as the space above a suspended ceiling. The supporting structure shall have a fire resistance rating equal to or greater than the fire resistance rating required for the vertical enclosure. Where the openings are offset at intermediate floors, the offset and floor construction shall be of construction having a fire resistance of not less than that required for the enclosing partitions.

704.2.1.3 All other partitions required to have a fire resistance rating shall extend from the top of the floor below to the ceiling above and shall be securely attached thereto. Where said ceiling is not a part of an assembly having a fire resistance rating at least equal to that required for the partition, the partition shall be constructed tight against the floor or roof deck above.

704.2.1.4 Corridor partitions, smokestop partitions, horizontal exit partitions, exit enclosures, and fire rated walls required to have protected openings shall be effectively and permanently identified with signs or stenciling in a manner acceptable to the authority having jurisdiction. Such identification shall be above any decorative ceiling and in concealed spaces. Suggested wording: FIRE AND SMOKE BARRIER PROTECT ALL OPENINGS.

704.2.1.5 Any required smoke barrier shall be continuous from outside wall to outside wall, from floor slab to floor slab or roof deck, from smoke barrier to smoke barrier, or a combination thereof, including continuity through all concealed spaces such as those found above suspended ceilings however, smoke barriers are not required in interstitial spaces designed and constructed with ceilings equivalent to smoke barriers. Smoke barriers shall be of 1-hour fire resistant construction. Fixed wired glass vision panels shall be permitted in such barriers provided the panels do not individually exceed an area of 1,296 sq in (0.84 m²) and are mount-

704.2.2 - 704.4.1

ed in steel frames. There is no restriction on the total number of such panels in any barrier.

Exception: Smoke barriers in Group I Restrained occupancies shall be permitted to be constructed of minimum 0.10 inch (2.5 mm) thick steel.

704.2.2 Partition requirements by occupancy

704.2.2.1 Group I Restrained

704.2.2.1.1 Smoke barriers shall be constructed in accordance with 704.2.1.5.

704.2.2.1.2 All interior partitions in Type I and Type II construction shall be of noncombustible construction.

704.2.2.2 Group I Unrestrained. Smoke barriers shall have a minimum 1-hour fire resistance rating and be constructed in accordance with 704.2.1.5.

704.2.2.3 Group R Residential. Nonfire rated partitions may be constructed within small residential care/assisted living facilities (Group R4 Small Facility), one and two family dwellings and within individual dwelling units unless required by Table 600. The tenant separation in a two family dwelling shall comply with 704.3.

Exception: Shaft enclosures in Group R4 occupancies shall be enclosed and protected in accordance with the requirements of Table 705.1.2.

704.2.3 Partitions within tenant space

704.2.3.1 Partitions dividing portions of stores, offices or similar places occupied by one tenant only, which do not establish an exit access corridor serving an occupant load of 30 persons or more, and partial partitions, may be temporary or permanent and constructed in accordance with 609 without fire resistance, provided that:

1. Their location is restricted by their method of construction or by means of permanent tracks, guides or other approved methods.
2. Flammability shall be limited to materials having an interior finish classification as set forth in Table 803.3 for rooms or areas.

704.2.4 Exit access corridors. Fire resistance rating of exit access corridors shall be in accordance with Table 704.2.4.

**TABLE 704.2.4
FIRE RESISTANCE RATING OF EXIT ACCESS CORRIDORS**

OCCUPANCY	OCCUPANT LOAD	FIRE RESISTANCE RATING (hours)	
		Sprinklered	Unsprinklered
A,B,F,M,S	less than 30	0	0
A	30 or more	1	1
B,F,M,S	30 or more	0	1
R1,R2,R3	less than 10, Note 1	0	0
R1,R2	10 or more, Note 1	1/2	1
R4	16 or less	0	0
R4	more than 16, Note 1	0	1
E	Note 2	1	1
I Unrestrained	All	0	N/A
I Restrained	All	0	0, Note 3
H	All	1	1

Notes:

1. Corridors within guest rooms or dwelling units need not be rated.
2. Corridors need not be rated in Group E occupancies with rooms used either for instruction with at least one exit door directly to the exterior at ground level or for assembly purposes with at least one-half of the required exits directly to the exterior at ground level.
3. Unsprinklered use condition 5 shall have exit access corridors of 1-hour fire resistance.

704.3 Tenant fire separation

704.3.1 In a building or portion of a building of a single occupancy classification, when enclosed spaces are provided for separate tenants, such spaces shall be separated by not less than 1-hour fire resistance.

Exception: In Group B and Group S occupancies, partitions not rated for fire resistance may be used to separate tenants provided no area between partitions rated at 1 hour or more exceeds 3,000 sq ft (278.7 m²).

704.3.2 In buildings with usable crawl spaces, tenant separation walls required to have a fire resistance rating shall extend from the underside of the floor to the ground below. A suitable foundation shall be provided at grade level.

Exception: The wall need not be extended when the floor above the crawl space has a minimum 1-hour fire resistance rating.

704.4 Townhouse fire separation

704.4.1 Each townhouse shall be considered a separate building and shall be separated from adjoining townhouses by a party wall complying with 704.4.2 or by the use of separate exterior walls meeting the requirements of Table 600 for zero clearance from property lines as required for the type of construction. Separate exterior walls shall include one of the following:

1. A parapet not less than 18 inches (457 mm) above the roof line.
2. Roof sheathing of noncombustible material or fire retardant treated wood, for not less than a 4 ft (1219

mm) width on each side of the exterior dividing wall.

3. One layer of 5/8 inch (15.9 mm) Type X gypsum board attached to the underside of roof decking, for not less than a 4 ft (1219 mm) width on each side of the exterior dividing wall.

704.4.2 When not more than three stories in height, townhouses may be separated by a single wall meeting the following requirements:

1. Such wall shall provide not less than a 2-hour fire resistance rating. Plumbing, piping, ducts, electrical or other building services shall not be installed within or through the 2-hour wall, unless such materials and methods of penetration have been tested in accordance with 701.2.
2. Such wall shall be continuous from the foundation to the underside of the roof sheathing or shall have a parapet extending not less than 18 inches (457 mm) above the roof line. When such wall terminates at the underside of the roof sheathing, the roof sheathing for not less than a 4-ft (1219 mm) width on each side of the wall shall be of noncombustible material, or fire retardant treated wood, or one layer of 5/8 inch (15.9 mm) Type X gypsum wallboard attached to the underside of the roof decking.
3. Each dwelling unit sharing such wall shall be designed and constructed to maintain its structural integrity independent of the unit on the opposite side of the wall.

Exception: Said wall may be penetrated by roof and floor structural members provided that the fire resistance rating and the structural integrity of the wall is maintained.

704.5 Fire wall extensions and parapets

704.5.1 Fire wall extensions

704.5.1.1 Party walls and fire walls shall extend not less than 3 ft (914 mm) above the roof.

Exception: Fire walls shall not be required to extend above the roof where the roof is:

1. Noncombustible in Types I, II and IV construction, or
2. Noncombustible or fire retardant treated wood for an area within 40 ft (12.2 m) of each side of the wall in Types III, V and VI construction.

704.5.1.2 Party walls and fire walls shall extend not less than 18 inches (457 mm) past exterior intersecting walls of combustible construction or exterior noncombustible walls with combustible projections or veneers. The party or fire wall shall extend not less than 18 inches (457 mm) past any combustible projection or veneer. Party walls or fire walls shall extend to the inside facing of the exterior surface of noncombustible construction.

704.5.1.3 Fire walls shall be in accordance with the requirements of NCMA-TEK 5-8 or equivalency in brick or poured concrete or other nationally recognized tested systems.

704.5.2 Parapet Walls

In Type III and Type V Construction, exterior walls shall extend not less than 18 inches (457 mm) above the roof.

Exceptions:

1. Walls located more than 15 ft (4.57 m) from a common property line or centerline of a public way.
2. Where the roof slopes more than 4:12 from the back of the exterior wall.

SECTION 705 PROTECTION OF OPENINGS

705.1 Protection of wall openings

705.1.1 Protection of openings in exterior walls

705.1.1.1 The provisions of 705.1.1 do not apply to Group R3 occupancies.

705.1.1.2 Every exterior wall within 15 ft (4572 mm) of a property line shall be equipped with approved opening protectives.

Exceptions:

1. Exterior walls not required by Table 600 to have a fire resistance rating.
2. Show windows fronting on a street or public space.
3. Open parking structures meeting the requirements of 411.3.

705.1.1.3 Where openings in an exterior wall are above and within 5 ft (1524 mm) laterally of an opening of the story below, such openings shall be separated by an approved noncombustible flame barrier extending 30 inches (762 mm) beyond the exterior wall in the plane of the floor or by approved vertical flame barriers not less than 3 ft (914 mm) high measured vertically above the top of the lower opening. Such flame barriers are not required when a complete approved automatic sprinkler system is installed.

705.1.1.4 Fresh air intakes shall be protected against exterior fire exposure by means of approved fire doors, dampers, or other suitable protection in accordance with the degree of exposure hazard.

705.1.2 Protection of openings in interior walls

705.1.2.1 General. Openings in interior walls and partitions shall be protected in accordance with 705.1.2 and Table 705.1.2.

Exceptions:

1. Where fire resistance is required due to type of construction only.
2. Ducts in accordance with 705.1.2.2.
3. One and two family dwellings.

TABLE 705.1.2 - 705.1.2.3.1

TABLE 705.1.2
MINIMUM FIRE RESISTANCE OF WALLS, PARTITIONS
AND OPENING PROTECTIVES¹ (hrs)

COMPONENT	WALLS AND PARTITIONS ⁹	OPENING PROTECTIVES
SHAFT ENCLOSURES (including stairways, exits & elevators)		
4 or more stories	2	1 1/2
less than 4 stories	1 ²	1 ²
all refuse chutes	2	1 1/2
WALLS AND PARTITIONS		
fire walls ³	4	3
within tenant space	See 704.2.3	
tenant space (see also 704.3)	1	3/4
horizontal exit	2	1 1/2
exit access corridors	See Note 4,5	20 min. ¹⁰
smoke barriers	See 409.1.2	
refuse and laundry chute access rooms	1	3/4
incinerator rooms	2	1 1/2
refuse and laundry chute termination rooms	1	3/4
hazardous occupancy control areas	1	3/4
high rise buildings	See 412	
covered mall buildings	See 413	
assembly buildings	See Note 2	
bathrooms & restrooms	See Note 6	
OCCUPANCY SEPARATIONS⁷		
	Required Fire Resistance	
	4	3
	3	3
	2	1 1/2
	1	3/4
EXTERIOR WALLS⁸	All	3/4

Notes:

- Table 600 may require greater fire resistance of walls to insure structural stability.
- All exits and stairways in Group A and H occupancies shall be 2-hours with 1 1/2-hour door assemblies.
- See also 503.1.2.
- See 704.2.3 and 704.2.4.
- See 409 for sprinklered Group I - buildings.
- Fire rated bathroom/restroom doors are not required when opening onto fire rated halls, corridors, exit access provided:
 - no other rooms open off of the bathroom/restroom, and
 - no gas or electric appliances are located in the bathroom/restroom, and
 - the walls, partitions, floor and ceiling of the bathroom/restroom have a fire rating at least equal to the rating of the hall, corridor or exit access, and
 - the bathroom/restroom is not used for any other purpose than it is designed.

- See 704.1.
- See Table 600, 705.1.1 and 503.4.8.
- See 704.2.2.3 for walls and partitions in Group R4 occupancies.
- In Group R4 Large Facility occupancies, sleeping room doors shall resist the passage of smoke but closers are not required.

705.1.2.2 Fire dampers

705.1.2.2.1 Fire dampers, installed in accordance with manufacturers installation instructions, shall be provided in ducts penetrating walls or partitions having a fire resistance rating of one hour or more.

Exceptions:

- Where branch ducts connect to return risers in which the air flow is upward and subducts at least 22 inches (559 mm) long are carried up inside the riser at each inlet.
- In duct systems of any duct materials or combinations thereof allowed by Chapter 6 of the Standard Mechanical Code penetrating 1-hour walls or partitions, where the duct penetrating the rated wall or partition meets all of the following minimum requirements:
 - the duct shall not exceed 100 sq inch (0.06 m²),
 - the duct shall be of 0.0217 inch (0.55 mm) minimum steel,
 - the duct shall continue with no duct openings for not less than 5 ft (1.5 m) from the rated wall,
 - the duct shall be installed above a ceiling, and,
 - the duct does not terminate at a wall register in the rated wall.

705.1.2.2.2 Fire dampers shall comply with the requirements of UL 555 and shall bear the label of an approved testing agency. Closure shall interrupt any migratory air flow and restrict the passage of flame. Fire dampers shall be classified and identified for use in either.

- Static systems that automatically shut down in the event of fire.
- Dynamic systems that operate in the event of fire.

705.1.2.3 Smoke barriers

705.1.2.3.1 An approved damper designed to resist the passage of smoke shall be installed in accordance with the manufacturer's installation instructions at each air transfer opening or duct penetration of a required smoke barrier. The required smoke damper shall be arranged to operate automatically, controlled by a smoke detection system and manual positioning shall be permitted from a remote command station.

Adoption of the South Florida Building Code

Charter and Code of the City of Miami, Sec. 10.3

Code of the City of Coral Gables, Sec. 6-26

The Code of the City of Miami Beach, Sec. 8-1

Code of Broward County, Sec. 5-36

Monroe County Code, Sec. 6-16

Code of Ordinances of the City of Ft. Lauderdale, Sec. 9-1

Adoption of the Standard Building Code

Palm Beach County Code, Sec. 7-36

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BellSouth Telecommunications, Inc.
FPSC Docket Nos. 981834-TP & 990321-TP
Exhibit WKM-1
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CHAPTER 31

MEANS OF EGRESS

3101 GENERAL

3101 GENERAL

3101.1 SCOPE This chapter adopts minimum Standards for means of egress for all buildings and structures regulated by this Code.

3101.2 APPLICATION:

(a) , Every building, structure or portion thereof shall be provided with means of egress as set forth in this Chapter.

(b) Pursuant to F. S. 633.05, the requirements of this Chapter are superseded for buildings in which the State Fire Marshal has established uniform fire safety requirements.

(c) Where conflict exists in this Code between a general provision and specific provision for an occupancy, the specific requirement shall supersede.

3101.3 STANDARDS: Pursuant to the provisions of Subsection 402.2 of this Code, the requirements for new construction of the National Fire Protection Association Life Safety Code, NFPA 101, are hereby adopted as a mandatory minimum standard for life safety.

3101.4 WORKMANSHIP: Means of egress shall be in conformance with the tolerances, quality and methods of construction, if any, specified in the Standards set forth in Subsection 3101.3 above.

SOUTH FLORIDA BUDG CODE LADE

CITY OF PORT ORANGE

BellSouth Telecommunications, Inc.
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GENERAL PLAN REVIEW COMMENTS

March 1999

THE FOLLOWING CODES ARE IN EFFECT FOR THE CITY OF PORT ORANGE

SBCCI	The Southern Building Code Congress International
SBC	The Standard Building Code 1997 edition
SMC	The Standard Mechanical Code 1997 edition
SPC	The Standard Plumbing Code 1994 edition
SGC	The Standard Gas Code 1997 edition
SFPC	The Standard Fire Prevention Code 1997 edition
NEC	The National Electrical Code 1996 edition
NFPA	The National Fire Protection Association
LS 101	The Life Safety Code 1997 edition

SBCE 1997

704.2.4 - 704.3.2

for exit access purposes, they do not serve 30 people or more;

5. The partitions do not block exits without providing alternate means of exiting;
6. The location of the partitions is restricted by their methods of construction or fixed by permanent tracks or guides; and
7. The flammability of the partitions is in accordance with Table 603.3.

If a corridor is established, thereby limiting access to an exit through a restricted path, and that corridor serves 30 people or more, the exit access corridor would have to be fire resistant, full height, and permanent. (See also 704.2.4.) Partitions meeting all of the other conditions, and which establish a corridor that serves less than 30 people, do not have to be fire resistant, full height, or permanent. (See also 413.3.1 and 413.4.5.) Partial partitions are not considered as forming corridors, by definition.

704.2.4 Exit access corridors. Fire resistance rating of exit access corridors shall be in accordance with Table 704.2.4.

TABLE 704.2.4
FIRE RESISTANCE RATING OF EXIT ACCESS CORRIDORS

OCCUPANCY	OCCUPANT LOAD	FIRE RESISTANCE RATING (hours)	
		Sprinklered	Unsprinklered
A,B,F,M,S	less than 30	0	0
A	30 or more	1	1
B,F,M,S	30 or more	0	1
R1,R2,R3	less than 10, Note 1	0	0
R1,R2	10 or more, Note 1	1/2	1
R4	16 or less	0	0
R4	more than 16, Note 1	0	1
E	Note 2	1	1
I Unrestrained	All	0	N/A
I Restrained	All	0	0, Note 3
H	All	1	1

Notes:

1. Corridors within guest rooms or dwelling units need not be rated.
2. Corridors need not be rated in Group E occupancies with rooms used either for instruction with at least one exit door directly to the exterior at ground level or for assembly purposes with at least one-half of the required exits directly to the exterior at ground level.
3. Unsprinklered use condition 5 shall have exit access corridors of 1-hour fire resistance.

Section 704.2.4 gives the fire resistance requirements for corridors based on occupancy and occupant load. The table also takes into account whether the building is sprinklered. For example, a corridor in a sprinklered hotel which serves more than 10 people is required to have a 1/2-hour fire resistant rating.

704.3 Tenant fire separation

704.3.1 In a building or portion of a building of a single occupancy classification, when enclosed spaces are provided for separate tenants, such spaces shall be separated by not less than 1-hour fire resistance.

Exception: In Group B and Group S occupancies, partitions not rated for fire resistance may be used to separate tenants provided no area between partitions rated at 1 hour or more exceeds 3,000 sq ft (278.7 m²).

A tenant is a person, agent, firm, or corporation who has temporary occupation or possession by lease or other rights of a building or portion of a building owned by another. Since the building or space is owned by another, the tenant may not have complete control over the tenant space and may have no control over the spaces of other tenants. Due to this lack of control, tenants are afforded protection from each other by a fire resistant separation for each tenant space. The code requires a fire resistant separation when the separate tenant spaces are enclosed. The separation includes partitions and floors or floor/ceiling assemblies. When the tenants are of the same occupancy group, a 1-hour fire resistant separation is required between the tenant spaces. When the tenants are different occupancy groups, the fire resistant separation required is determined by 704.1. A notable exception to this general rule is provided for a building of single business or storage occupancy that does not exceed 3,000 sq ft (278.7 m²) in area. In such a building, a fire resistant wall or partition is not required between the tenant spaces when the combined area of the tenant spaces does not exceed 3,000 sq ft (278.7 m²).

704.3.2 In buildings with usable crawl spaces, tenant separation walls required to have a fire resistance rating shall extend from the underside of the floor to the ground below. A suitable foundation shall be provided at grade level.

Exception: The wall need not be extended when the floor above the crawl space has a minimum 1-hour fire resistance rating.

A usable crawl space is one designed to be used for equipment or storage. (See 202, Definitions.) When a usable crawl space occurs under tenant spaces, one of the following is required:

1. The fire resistant tenant separation wall must separate the crawl space by extending through the crawl space to a foundation at grade level; or
2. The floor above the crawl space must have a 1-hour fire resistance rating. (The crawl space then does not need to be separated with fire resistant walls.)

§ 19-149

BOCA RATON CODE

Secs. 19-149—19-170. Reserved.

ARTICLE III. BUILDING CONSTRUCTION STANDARDS*

Sec. 19-171. Standard Building Code adopted by reference.

There is hereby adopted by the city for the purpose of establishing rules and regulations for the construction, modification, alteration, maintenance, repair, location, relocation, moving, removing, demolition, equipment, use and occupancy of or additions to buildings or structures and any accessory or related facilities or appurtenances associated with or connected or attached to such buildings or structures, including application for permit, issuance of permits, drawings and examination thereof, conditions of permits, permit fees and charges, inspections, certificates of occupancy or completion and related matters, that certain building code known as the Standard Building Code published by the Southern Building Code Congress International, as authorized by Chapter 553, Florida Statutes, as it may from time to time be amended, and Appendixes A, D, and H as they may from time to time be amended, and the same is hereby adopted and incorporated as fully as if set forth at length herein, except that the provisions of such code as amended or revised by ordinances to meet the specific needs of the city shall be controlling within the corporate limits of the city.
(Code 1966, § 7-8; Ord. No. 4289, § 18, 11-26-96)

Sec. 19-172. Amendments to Standard Building Code.

The Standard Building Code adopted in this article is amended as follows:

- (a) Chapters 1, 11 and 13 are deleted in their entirety.
- (b) Section 202, Definitions, is amended by adding the following definitions in their proper alphabetical order:

Accessory facility: A building or structure on the same plot as the main use building that is of secondary or subordinate importance and is not essential in itself to the main use building, but adds to the aesthetics, convenience or effectiveness of the main use building.

Accessory use: (See chapter 28 of the city Code of Ordinances.)

Agency: Means same as "applicable governing body."

Building (main use): A building that has as its primary use 1 or more of the specified permitted uses as established under the applicable zoning district regulations of the city, as distinguished from accessory facility.

Governing body: Means same as "applicable governing body."

*Cross references—Fire prevention and protection, ch. 7; buildings or structures moved in the city must comply with the building code, § 19-381.

Forwarded by Daryl L. Scott
Fire Lieutenant at City of Boca Raton Fire Rescue Services Dept.

§ 7-26

BOCA RATON CODE

NFPA	85F	1988	Pulverized Fuel Systems, Installation and Operation of
NFPA	86	1990	Ovens and Furnaces
NFPA	86C	1991	Industrial Furnaces Using a Special Processing Atmosphere
NFPA	86D	1990	Industrial Furnaces Using Vacuum as an Atmosphere
NFPA	88A	1991	Parking Structures
NFPA	88B	1991	Repair Garages
NFPA	90A	1993	Air Conditioning and Ventilating Systems, Installation of
NFPA	90B	1993	Warm Air Heating and Air Conditioning Systems, Installation of
NFPA	91	1992	Exhaust Systems for Air Conveying of Materials
NFPA	92B	1991	Smoke Management Systems
NFPA	96	1994	Ventilation Control and Fire Protection of Commercial Cooking Operations
NFPA	99	1993	Health Care Facilities
NFPA	99B	1993	Hypobaric Facilities
→ NFPA	101	1994	Safety to Life from Fire in Buildings and Structures— Amended as follows: Section 19-3.5.6 is deleted
NFPA	102	1992	Assembly Seating, Tents, and Membrane Structures
NFPA	110	1993	Emergency and Standby Power Systems
NFPA	111	1993	Stored Electrical Energy Emergency and Standby Power Systems
NFPA	130	1993	Fixed Guideway Transit Systems
NFPA	170	1994	Standard Fire Safety Symbols
NFPA	211	1992	Chimneys, Fireplaces, Vents and Solid Fuel-Burning Appliances
NFPA	214	1992	Water-Cooling Towers
NFPA	220	1992	Types of Building Construction
NFPA	221	1994	Fire Walls and Fire Barrier Walls
NFPA	231	1990	General Storage
NFPA	231C	1991	Rack Storage of Materials
NFPA	231D	1994	Rubber Tires, Storage of
NFPA	231F	1987	Roll Paper, Storage of
NFPA	232	1991	Records, Protection of
NFPA	241	1993	Construction, Alteration and Demolition Operations, Safeguarding of
NFPA	251	1990	Building Construction and Materials, Standard Methods of Fire Tests of
NFPA	252	1990	Door Assemblies, Standard Methods of Fire Tests of
NFPA	253	1990	Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source, Standard Method of Test for
NFPA	255	1990	Building Materials, Method of Test of Surface Burning Characteristics of Building Materials
NFPA	256	1993	Roof Coverings, Methods of Fire Tests of



CITY OF PALM BEACH GARDENS

10500 N. MILITARY TRAIL • PALM BEACH GARDENS, FLORIDA 33410-4698

April 6, 1999

Mr. Marcello Penso
Offerle-Lerner A1A
Architects and Planners
34 SW Fourth Street
Boca Raton, FL 33432

Dear Mr. Penso,

Per your request, this letter is to advise that the City of Palm Beach Garden adheres to the 1997 SBCCI building codes and the 1997 NFPA codes.

Sincerely,


Jack Hanson
Building Official

770-458-4391

Attn: Ray

RECEIVED
APR 05 1999
SMOAK DESIGNS INC.
ARCHITECTS

Seminole County, Florida

Model Codes in effect:

1. Standard Building Code, 1994 ed.
2. Standard Plumbing Code, 1994 ed.
3. Standard Mechanical Code, 1994 ed.
4. National Electrical Code, 1996 ed.
5. Standard Fire Prevention Code, 1994 ed.
6. Life Safety Code 1994 ed.

See County Code for AMENDMENTS

CODES ENFORCED BY SEMINOLE COUNTY
RE: LAKE MARY CO.
365 INTERNATIONAL PARKWAY

JANE@ BUDG DEPARTMENT
407-830-8919

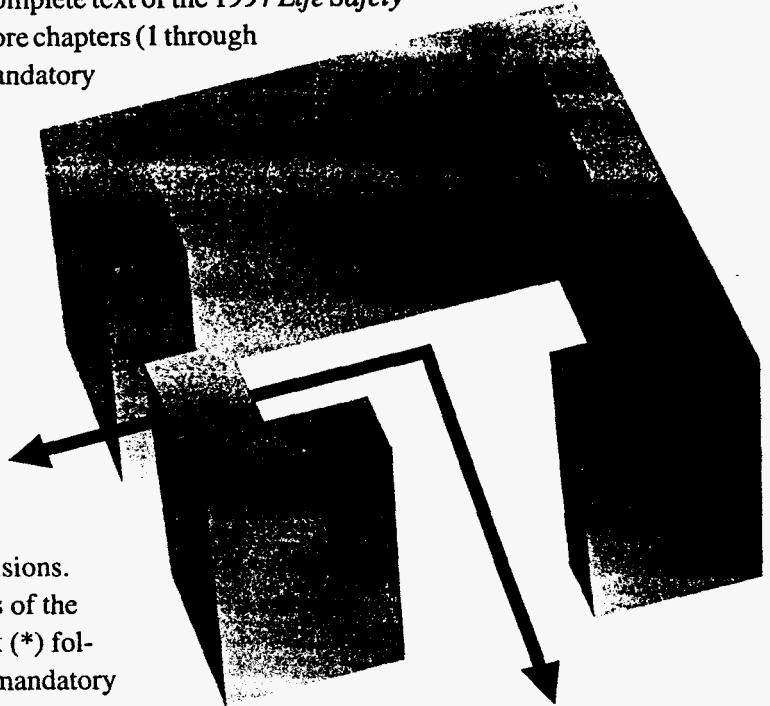
PART ONE

Life Safety Code and Commentary

Part One of this handbook includes the complete text of the 1997 *Life Safety Code*, which is made up of mandatory core chapters (1 through 33) and nonmandatory appendix material. The mandatory *Code* provisions found in Chapters 1 through 33 were prepared by the thirteen Committees on Safety to Life within the framework of NFPA's consensus standards-development system. Because these provisions are designed to be suitable for adoption into law, or for reference by other codes and standards, the text is concise, without extended explanation.

The material found in Appendix A of the *Code* was also developed by the Committees on Safety to Life within NFPA's standards system. The appendix material is designed to assist users in interpreting the mandatory *Code* provisions. It is not considered to be part of the requirements of the *Code*; it is advisory or informational. An asterisk (*) following a *Code* paragraph number indicates that mandatory material pertaining to that paragraph appears in Appendix A. For readers' convenience in this handbook, Appendix A material has been repositioned to appear immediately following its base paragraph in the body of the *Code* text.

The explanatory commentary accompanying the *Code* was prepared by the handbook editor. The commentary immediately follows the *Code* text it discusses and is easily identified by green shading. Designed to help users understand and apply *Code* provisions, it gives detailed explanations of the reasoning behind *Code* requirements, examples of calculations, applications of requirements, and tables of useful information. Over 300 drawings and photographs show practical applications of specific *Code* provisions. Used together with the *Code*, the commentary provides a rich resource for assessing the level of life safety from fires in buildings.



CHAPTER 1

General

A-1 The following is a suggested procedure for determining the *Code* requirements for a building or structure.

1. Determine the occupancy classification. Refer to the occupancy definitions in Chapter 4 and the occupancy Chapters 8 through 31. Also see 4-1.12 for buildings with more than one use.
2. Determine if the building or structure is new or existing. Refer to the definitions in Chapter 3.
3. Determine the occupant load. Refer to 5-3.1 and the -1.7 section of occupancy Chapters 8 through 31.
4. Determine the hazard of contents. Refer to Section 4-2.
5. Refer to the applicable occupancy chapter of the *Code* (Chapters 8 through 31). Refer as necessary to Chapters 1 through 7 for general information (e.g., definitions) or as directed by the occupancy chapter.
6. Determine the occupancy subclassification or special use condition, if any. Chapters 12 and 13, health care occupancies; Chapters 14 and 15, detention and correctional occupancies; Chapters 16 and 17, hotels and dormitories; Chapters 22 and 23, residential board and care occupancies; and Chapters 24 and 25, mercantile occupancies, contain subclassifications or special use definitions.
7. Proceed through the applicable occupancy chapter verifying compliance with each referenced section, subsection, paragraph, subparagraph, and referenced codes, standards, and other documents.
8. Where two or more requirements apply, the occupancy chapter generally takes precedence over the base Chapters 1 through 7.
9. Where two or more occupancy chapters apply, such as in a mixed occupancy (see 4-1.12), the most restrictive requirements apply.

The steps outlined in A-1 were developed to help the user determine which *Code* requirements may apply to a given building. Because specific occupancy requirements are detailed in separate chapters, the *Code* user should first identify the proper occupancy classification of a building. This will direct the *Code* user to the appropriate chapter(s) for that occupancy.

For example, a jewelry retail sales operation (i.e., a jewelry store) occupying all of the twelfth floor of a multitenanted building uses 5000 sq ft (465 sq m), or 95 percent, of the floor area for sales purposes. Using the occupancy definitions found in Chapter 4, the jewelry store should be classified as a mercantile occupancy. By determining that the floor is a mercantile occupancy, the *Code* user narrows the range of choice of applicable occupancy chapters from Chapters 8 through 31 to the two that specifically address mercantile occupancies—Chapter 24 or Chapter 25.

Using the definition of "existing building" found in Chapter 3, the user can determine if the building is subject to the requirements for new construction or for existing buildings. If the jewelry store used in the example was occupied subsequent to the adoption of the *Code* currently being enforced, the user would determine that the life safety features required are those applicable to new construction. Thus, the user could narrow the applicable occupancy requirements to those detailed in Chapter 24, "New Mercantile Occupancies."

Next, the *Code* user would identify the subclassification of the mercantile occupancy as Class A, Class B, or Class C based on the 5000-sq ft (465-sq m) floor area used for sales purposes. Because the jewelry store occupies more than 3000 sq ft (280 sq m) but less than 30,000 sq ft (2800 sq m), it would fall into a Class B mercantile occupancy. The user would then locate the requirements of Chapter 24 that specifically

apply to Class B mercantile occupancies. The user would note that Chapter 24 does not repeat the requirements found in Chapters 1 through 7 because the *Code* mandatorily references the use of those chapters. Because the jewelry store is in the high-rise portion of the building, 24-4.2 requires compliance with a portion of the Section 32-8 high-rise building requirements of Chapter 32, "Special Structures and High-Rise Buildings"—specifically, the automatic sprinkler system provisions.

In this example, the *Code* user recognizes that the requirements of Chapters 1 through 7, Chapter 24, and a portion of Chapter 32 are applicable and must be met. This selection process is outlined in Figure 1-1.

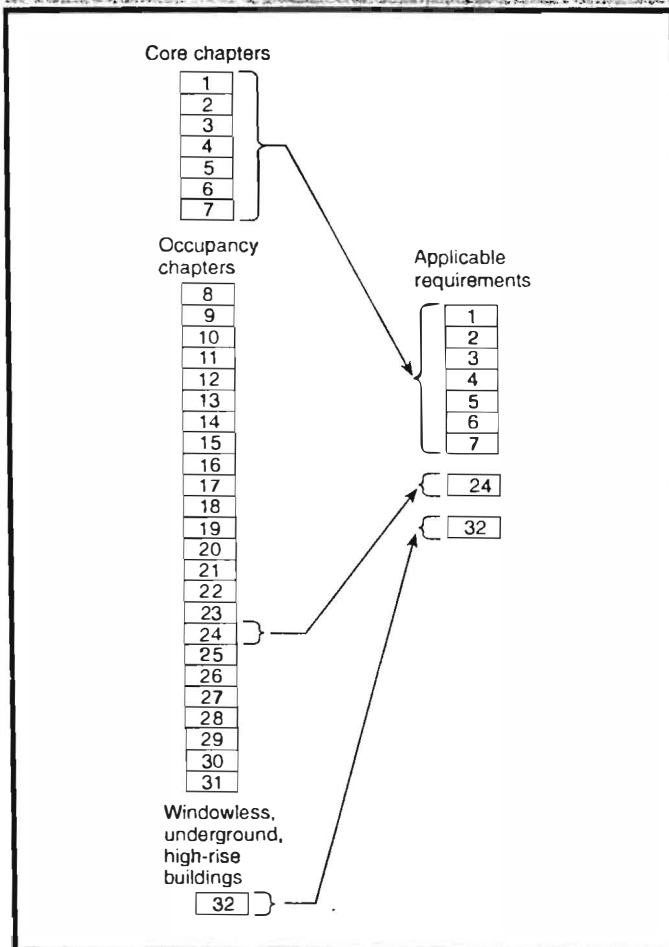


Figure 1-1. Selecting *Code* requirements applicable to a given occupancy. In the example detailed in the commentary, a new jewelry store located in the high-rise portion of a building is classified as a Class B mercantile occupancy based on the floor area used for sales purposes. The new Class B mercantile occupancy is subject to the requirements of Chapters 1 through 7, Chapter 24, and a portion of Chapter 32 of the *Code*.

Section 1-1 Title

1-1.1 Title.

NFPA 101*, *Code for Safety to Life from Fire in Buildings and Structures*, shall be known as the *Life Safety Code*®, is cited as such, and shall be referred to herein as "this *Code*" or "the *Code*."

As discussed in the preface to this handbook, the name of the *Code* was changed from the *Building Exits Code* to the *Life Safety Code* in 1966. This is significant because the change in title expanded the scope of the *Code* from a specification-based code for stairs, doors, and fire escapes to a performance- and specification-based code addressing myriad factors affecting life safety in the event of fire.

Section 1-2 Scope

1-2.1

This *Code* addresses life safety from fire. Its provisions will also aid life safety in similar emergencies.

In addressing life safety from fire and similar emergencies, the *Code* delves heavily into the movement of people in an emergency. However, many of the building features that assist with safe movement of people in an emergency also provide increased safety during normal building use. For example, new stairs are required to have a maximum riser height of 4 in. (101.6 mm) and a maximum tread depth of 11 in. (279.4 mm) to reduce the potential to trip under emergency egress use. This "safe" geometry also reduces the potential to trip any time the stair is used.

1-2.2*

The *Code* addresses those construction, protection, and occupancy features necessary to minimize danger to life from fire, including smoke, fumes, or panic.

A-1-2.2 The *Code* recognizes that panic in a burning building may be uncontrollable, but deals with the potential panic hazard through measures designed to prevent the development of panic. Experience indicates that panic seldom develops, even in the presence of potential danger, so long as occupants of buildings are moving toward exits that they can see within a reasonable distance with no obstructions or undue congestion in the path of travel. However, any

uncertainty as to the level of panic, the use of means of egress, the presence of smoke, or the stoppage of egress travel, such as may occur when one person stumbles and falls on the stairs, may be conducive to panic. Panic danger is greatest when there are large numbers of people in a confined area.

Evaluation of recent fires in occupied buildings confirms that panic is *not* a typical reaction of occupants in a burning building. Studies of building fires indicate that occupants typically exhibit altruistic behavior toward others. Human behavior in response to a threatening situation may follow one of a variety of actions. Individuals may choose to investigate, sound an alarm, assist with rescue, seek help, or flee. Each of these acts constitutes normal behavior, even when taken collectively. Most people avoid direct contact with a fire while undertaking another action.

1-2.3

The *Code* identifies the minimum criteria for the design of egress facilities so as to permit prompt escape of occupants from buildings or, where desirable, into safe areas within buildings.

Relocating building occupants to safe areas within a building includes moving them (1) into an area of refuge, (2) through doors in a horizontal exit into another fire compartment, or (3) through doors in a smoke barrier into another smoke compartment. In some cases, considering total evacuation to the exterior is not practical. Building design can be made more flexible by using arrangements that rely on relocating occupants to safe areas within the building.

1-2.4

The *Code* recognizes that life safety is more than a matter of egress and, accordingly, deals with other considerations that are essential to life safety.

There are numerous elements that impact the overall level of life safety. The *Code* addresses many of these items, including combustibility of interior finishes and preparedness of occupants in evacuation actions. There are, however, areas that are not addressed. One example is public education related to fire safety.

1-2.5

Vehicles, vessels, or other similar conveyances, as defined in Section 32-6, shall be treated as a building.

It is not uncommon to find railroad cars converted to dining or drinking establishments, ships or barges converted to hotels or restaurants, or transportation trailers used for storage or mercantile sales. Where these vehicles, vessels, or other mobile structures are in a fixed location and occupied as a building, the *Code* intends that they be regulated as a building under all applicable *Code* requirements. The fact that there are axles, wheels, and ties on a trailer or that a ship is still floating does not assure they are not in fixed location and not occupied as buildings. The authority having jurisdiction should ensure that the vehicle or vessel is regulated by some other agency, such as the Coast Guard or Department of Transportation, before exempting it from the requirements of the *Code*.

1-2.6

The *Code* does not attempt to address all those general fire prevention or building construction features that are normally a function of fire prevention and building codes.

The *Code* is not intended to be either a building code or a fire prevention code. However, in the interest of public safety, the *Code* does contain provisions typically associated with a fire prevention or building code. For example, although construction requirements are typically considered the domain of a building code, Chapters 12 and 13 provide minimum, fire-rated construction requirements for buildings housing health care occupancies. This is done to ensure structural integrity of the building for the period of time required for staff to evacuate those occupants incapable of self-preservation.

Similarly, although preventative measures are typically associated with a fire prevention code, the operating features sections located at the end of most of the occupancy chapters contain requirements that (1) limit the flammability of contents introduced into certain occupancies, (2) regulate smoking, and (3) require the training of facility employees. These operational items, when combined with egress and other specific occupancy chapter requirements, provide an appropriate life safety package.

The *Code* intentionally excludes traditional building code issues such as wind loads, seismic considerations, and exterior exposure protection.

1-2.7

The prevention of personal injuries incurred by an individual's own negligence, and the preservation of property from

loss by fire have not been considered as the basis for any of the provisions of this *Code*.

Although the *Code* requirements were developed to provide life safety from fire, adherence to its requirements may assist in property conservation and prevention of personal injuries. For example, the automatic sprinkler systems required for life safety purposes provide substantial property protection benefits as well.

Section 1-3* Application

A-1-3 It is the intent of this section that a building addition, or alteration designed to meet the requirements of a prior edition of the *Code* be required to meet those requirements for the life of the building. Requirements for existing buildings in this edition of the *Code* would apply if those requirements are more restrictive.

There are some cases where the requirements for new construction are less restrictive, and it might be justified to allow an existing building to use the less restrictive requirements. However, extreme care needs to be exercised when making this allowance, because the less restrictive provision might be the result of a new requirements elsewhere in the *Code*. For example, in editions of the *Code* prior to 1991, corridors in new health care occupancies were required to have a 1-hour fire resistance rating. Since 1991 these corridors have been required only to resist the passage of smoke. However, this is based on the new requirement that all new health care facilities must be protected throughout by automatic sprinklers.

1-3.1 New and Existing Buildings.

The *Code* applies to both new construction and existing buildings. In various chapters there are specific provisions for existing buildings that might differ from those for new construction.

In order to provide a minimum level of life safety to all occupancies in all structures, the *Code* must be applicable to both new construction and existing buildings. There are provisions throughout the *Code* that specifically apply to existing buildings. Also there are requirements for new construction that have been modified to apply differently to existing buildings. The modifications were made to limit the resulting disruption and financial impact on existing buildings to those modifications necessary to provide the minimum level of life safety. The requirements

applicable to new construction are often more stringent than those for existing buildings, because providing appropriate life safety requirements is considered less disruptive and more cost-effective during construction. If no modification for existing buildings appears within a *Code* requirement, the same provision applies for new construction and existing buildings.

If the current edition of the *Code* is adopted and supersedes a previous edition, it is the *Code's* intent that existing buildings be brought into compliance with the provisions for existing buildings found in the current edition.

See also 1-3.2, 1-3.4, 1-3.7, 1-3.10, and the definitions of *building*, *existing* and *existing* in Section 3-2.

1-3.2 Time Allowed for Compliance.

A limited but reasonable time shall be allowed for compliance with any part of this *Code* for existing buildings commensurate with the magnitude of expenditure, disruption of services, and degree of hazard.

In some cases, appreciable costs—in terms of actual monetary expenditures and disruption of daily activities—may be involved in immediately bringing an existing building into *Code* compliance. Where this is true, it would be appropriate for the operator or owner of the facility to formulate a schedule, approved by the authority having jurisdiction, that allows suitable periods of time for correcting various deficiencies. However, the degree of hazard is an important consideration in this instance and, if the degree of hazard is serious enough, it may be necessary to close the building to occupancy while renovations are made to bring the building features associated with the serious hazard into compliance. Once the building is reoccupied, the authority having jurisdiction might allow some reasonable, additional time for bringing the remaining deficient features into code compliance with the requirements specifically applicable to existing buildings.

1-3.3 Authority Having Jurisdiction.

The authority having jurisdiction shall determine the adequacy of means of egress and other measures for life safety from fire in accordance with the provisions of this *Code*.

This requirement gives the authority having jurisdiction the final determination of whether or not adequate life safety is provided in a building. When the

authority having jurisdiction determines the *Code* has not specifically addressed the situation encountered, the authority can supplement the requirements in the *Code* to address the specific situation. This is an important responsibility because the *Code* cannot anticipate every type of building and occupancy configuration.

1-3.4* Modification of Requirements for Existing Buildings.

The requirements for existing buildings shall be permitted to be modified if their application clearly would be impractical in the judgment of the authority having jurisdiction, but only where it is clearly evident that a reasonable degree of safety is provided.

A-1-3.4 In existing buildings, it is not always practical to strictly apply the provisions of this *Code*. Physical limitations may require disproportionate effort or expense with little increase in life safety. In such cases, the authority having jurisdiction should be satisfied that reasonable life safety is ensured.

In existing buildings it is intended that any condition that represents a serious threat to life be mitigated by application of appropriate safeguards. It is not intended to require modifications for conditions that do not represent a significant threat to life, even though such conditions are not literally in compliance with the *Code*.

This provides the authority having jurisdiction latitude in applying the *Code* to existing buildings. The *Code* recognizes there may be situations where applying the requirements to existing situations would not be practical so it gives the authority having jurisdiction the authority to modify those requirements. However, the *Code* reemphasizes that a reasonable degree of safety must be provided.

Paragraph 1-3.4 also allows the authority having jurisdiction some flexibility in dealing with historically preserved buildings. These buildings may have numerous design defects, such as open stair shafts or highly combustible interior finishes. Rather than waiving requirements, the authority having jurisdiction might require that the facility attain an equivalent level of safety. The authority having jurisdiction might require the use of sprinkler systems, smoke detection systems, voice alarm systems for staged evacuation, smoke control systems, or other appropriate features to overcome the existing life safety defects. This would be done in lieu of rebuilding the structure to the written specification requirements,

which might totally destroy the historical character of the structure. The alternatives used in such an instance may actually raise the level of safety to many times over that which is already present in the existing building.

1-3.5 Referenced Publications.

Existing buildings or installations that do not comply with the provisions of the referenced standards contained in this document (*see Chapter 33*) shall be permitted to be continued in service provided the lack of conformity with these standards does not present a serious hazard to the occupants as determined by the authority having jurisdiction.

1-3.6 Additions.

Additions shall conform to the provisions for new construction.

Although the addition must conform to the requirements for new construction, the existing portion of the building is generally permitted to conform to the requirements for existing buildings. The exception to this rule involves assembly and mercantile occupancies. For example, mercantile occupancies further subclassify the occupancy into Class A, Class B, and Class C based on floor area used for sales purposes. If consideration of the combined space created by the addition and the existing portion of the building results in a reclassification from Class C to Class B or from Class B to Class A, the existing portion of the building must also meet the requirements applicable to new construction. For assembly occupancies, the same concept exists, but its application criteria are specified differently given that assembly occupancies no longer use the subclassification scheme (i.e., Class A, Class B, and Class C). If the addition creates sufficient space for the occupant load of the combined existing and new assembly spaces to increase from less than 500 to more than 500 occupants and require a third exit, or from less than 1000 to more than 1000 and require a fourth exit, the existing portion of the building must also meet the requirements applicable to new construction. See also 1-3-10, 9-1.1.3 and its reference to 5-4.1.2, and 25-1.1.3.

1-3.7* Modernization or Renovation.

Any alteration or any installation of new equipment shall be accomplished as nearly as practicable with the requirements for new construction. Only the altered, renovated,

or modernized portion of an existing building, system, or individual component shall be required to meet the provisions of this *Code* applicable to new construction. If the alteration, renovation, or modernization adversely impacts required life safety features, additional upgrading shall be required. Existing life safety features that do not meet the requirements for new buildings, but exceed the requirements for existing buildings, shall not be diminished further. In no case shall the resulting life safety features be less than those required for existing buildings.

A-1-3.7 The following is an example of what is intended by 1-3.7. In a hospital that has 6-ft (1.8-m) wide corridors, these corridors cannot be reduced in width even though the requirements for existing hospitals do not require 6-ft (1.8-m) wide corridors. However, if a hospital has 10-ft (3-m) wide corridors, they may be reduced to 8 ft (2.4 m) in width, which is the requirement for new construction. If the hospital corridor is 3 ft (0.9 m) wide, it would have to be increased to 4 ft (1.2 m). If alterations require replacement of a portion of a hospital corridor wall, this portion of the corridor would not be required to be increased to 8 ft (2.4 m) in width unless it was practical to do so.

Only those existing building features, systems, or components undergoing change or alteration must conform with the *Code* provisions applicable to new construction. For example, in an occupancy that requires 1-hour fire resistance-rated corridors for new construction but permits existing ½-hour fire resistance-rated corridors to remain in use, a renovation project is undertaken to replace existing doors in the corridor walls. There is no requirement that the renovation project be expanded in scope to include replacing the existing, code-complying, ½-hour fire resistance-rated corridor walls with walls having the minimum 1-hour fire resistance rating required for new construction.

Conformance with the provisions applicable to new construction may not be practical if the existing structure involved cannot reasonably accommodate the feature required for new construction. For example, a hospital might have an existing corridor 6 ft (183 cm) wide that, if replaced, would normally be required to be 8 ft (244 cm) wide as specified for new construction. However, if the building's column spacing is 7 ft by 7 ft (213 cm by 213 cm), there is no easy and effective way to achieve an 8-ft (244 cm) corridor width. The authority having jurisdiction would judge if a 6-ft (183 cm) wide or even a 7-ft (213 cm) wide corridor is adequate or if additional provisions are required to permit a corridor less than 8 ft (244 cm) in width to be rebuilt.

Where renovations or alterations are made, they must comply with the requirements for new construction to the extent practicable. For example, it is practical to install carpeting meeting the requirements for new interior floor finish. Similarly, where a corridor wall is to be rebuilt, it may not be practical to widen the corridor to meet the minimum width requirements for new corridors, but most likely it will be practical to rebuild it to the required fire resistance rating for new construction.

Another example is the installation of a new smoke barrier in an existing hospital. A smoke barrier can be made to meet nearly all the requirements for a new smoke barrier. However, if the corridor that the smoke barrier extends across is not sufficiently wide to install two 41.5-in. (105-cm) clear width doors, the requirement for two 41.5-in. (105-cm) clear width doors would have to be modified. The authority having jurisdiction would judge such a modification and might permit a set of doors or possibly a single door of a width that the corridor could accommodate. The requirement to perform renovations as nearly as practicable with the requirements for new construction may seem arbitrary, but it is necessary to allow evaluation on a case-by-case basis.

The last sentence of 1-3.7 captures an important, but elusive, concept. In applying the requirements for new construction to a renovated component or system, one needs to compare the requirements for new construction to those for existing buildings. This is done to assure that the level of safety afforded by compliance with the requirement for new construction is not less than that provided by complying with the corresponding requirement applicable to existing buildings. For example, Chapter 16 for new hotels/dormitories includes no requirement for smoke barriers because all new hotels/dormitories must either be protected by automatic sprinklers or provide direct exterior exit access from all guest rooms. During renovation of a floor in an existing, nonsprinklered hotel that utilizes inside corridors for exit access from guest rooms, the Chapter 16 exemption of smoke barriers must not be applied to the existing building. Rather, the requirements of 17-3.7 for cross-corridor smoke barriers would apply. See also A-1-3 for another example of the same concept.

1-3.8 Priority of Chapter Requirements.

Where specific requirements contained in Chapters 8 through 32 differ from general requirements contained in Chapters 1 through 7, the requirements of Chapters 8 through 32 shall govern.

The *Life Safety Code* is formatted such that the first seven chapters contain administrative provisions and fundamental requirements establishing minimum acceptable criteria for all types of occupancies. Chapters 8 through 31 of the *Code* establish criteria for life safety based upon the characteristic needs of specific occupancies. Chapter 32 further modifies those provisions if unusual situations exist or the building is windowless, underground, or high rise. Where requirements differ between the general provisions of Chapters 1 through 7 and the more specific provisions of Chapters 8 through 32, the requirements contained in Chapters 8 through 32 take precedence.

To avoid conflicts, if an occupancy chapter exempts itself from a requirement of a core chapter, the core chapter will usually contain an exception allowing the deviation. For example, although 5-2.2.3.3 requires treads of stairs and landing floors to be solid, the Exception to 5-2.2.3.3 permits non-combustible grated stair treads and landings in various specified occupancies including industrial occupancies as provided in Chapter 28. Exception No. 1 to 28-2.2.3.1 confirms the exemption for non-combustible grated stair treads and landings in industrial occupancies. See also the commentary following A-1-3.12.

1-3.9 Provisions in Excess of Code Requirements.

Nothing in this *Code* shall be construed to prohibit a better type of building construction, additional means of egress, or otherwise safer conditions than those specified by the minimum requirements of this *Code*.

Although the *Life Safety Code* is a minimum code, it does not prohibit the use of a design that exceeds the provisions of the *Code*. In practice, however, economic considerations usually discourage the use of a design that exceeds minimum requirements.

However, there have been instances where money was saved or additional money generated when *Code* provisions were exceeded. For example, a hotel was constructed with full automatic sprinkler protection although such protection was not required by the code in effect at the time. By sprinklering the building, a third stairway was permitted to be eliminated because of the increased travel distance allowed in a sprinklered building. The construction cost of the stair was saved and additional revenue-producing guest rooms were built in the space the stair otherwise would have occupied.

1-3.10 Conditions for Occupancy. No new construction or existing building shall be occupied in whole or in part in violation of the provisions of this *Code*.

Exception: Buildings shall be permitted to remain in use, provided that

- (a) A plan of correction has been approved, and
- (b) The occupancy classification remains the same, and
- (c) No serious life safety hazard exists as judged by the authority having jurisdiction.

From an enforcement standpoint, this paragraph is probably one of the most important in the *Code*, because it states that a building, whether it be new or existing, may not be occupied if it is in violation of the provisions of the *Code*.

Because the *Code* applies retroactively, 1-3.10 prohibits the use of existing nonconforming facilities. However, the Exception to 1-3.10 permits the building to continue to be used provided the occupancy classification remains the same and there is no serious life safety hazard, as judged by the authority having jurisdiction, that would constitute an imminent threat. This does not exempt the building from compliance with the *Code* but permits it to continue to be used. A plan, as prescribed by 1-3.2, for bringing the building into compliance with the *Code* to the extent deemed necessary by the authority having jurisdiction under 1-3.4 must be established and fulfilled.

1-3.11 Construction, Repair, and Improvement Operations.

1-3.11.1* Buildings or portions of buildings shall be permitted to be occupied during construction, repair, alterations, or additions only if all required means of egress and all required fire protection features are in place and continuously maintained for the portion occupied.

A-1-3.11.1 Fatal fires have occurred when a required stair has been closed for repairs or removed for rebuilding, when a required automatic sprinkler system has been shut off to change piping, etc.

The provisions of 1-3.11.1 help to control a relatively common practice—the occupation of completed portions of a partially completed structure. To permit such occupation, the *Code* requires that all egress features for the portion occupied be complete and maintained usable. In many cases the egress facilities, although completed, are not usable because they are

blocked with stored building materials and equipment needed for the ongoing construction, or doors are locked to limit access to parts of the building still under construction. In such cases occupancy should be prohibited.

To permit occupation of completed portions of a partially completed structure, the *Code* also requires all fire protection features to be in place and continuously maintained. The incidence of fire is more frequent, and therefore more likely, during construction, alterations, and repairs. Extra caution and concern need to be exercised to ensure adequate egress capacity and arrangement during periods of construction in any occupied building.

1-3.11.2* In buildings under construction, adequate escape facilities shall be maintained at all times for the use of construction workers. Escape facilities shall consist of doors, walkways, stairs, ramps, fire escapes, ladders, or other approved means or devices arranged in accordance with the general principles of the *Code* insofar as they can reasonably be applied to buildings under construction.

A-1-3.11.2 See also NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*.

1-3.11.3 Flammable or explosive substances or equipment for repairs or alterations shall be permitted in a building of normally low or ordinary hazard classification while the building is occupied only if the condition of use and safeguards provided do not create any additional danger or impediment to egress beyond the normally permissible conditions in the building.

1-3.12* Changes of Occupancy.

In any building or structure, whether necessitating a physical alteration or not, a change from one occupancy classification to another, or from one occupancy subclassification to another subclassification of the same occupancy, shall be permitted only if such structure, building, or portion thereof conforms with the requirements of this *Code* applying to new construction for the proposed new use.

Exception: Where specifically permitted elsewhere in the Code, existing construction features shall be permitted to be continued in use in conversions.

A-1-3.12 Examples of changes from one occupancy subclassification to another subclassification of the same occupancy could include a change from a Class B to a Class A mercantile occupancy. Hospitals and nursing homes are both health care occupancies and are defined separately, but they are not established as separate suboccupancies; thus, a

change from one to the other does not constitute a change of occupancy subclassification.

For example, a building was used as a hospital but has been closed for four years. It is again to be used as a hospital. As long as the building was not used as another occupancy during the time it was closed, it would be considered existing.

Hotels and apartments, although both residential occupancies, are treated separately, and a change from one to the other constitutes a change of occupancy.

Although 1-3.12 requires that the provisions for new construction be applied to an existing building upon change of occupancy, Chapter 22, "New Residential Board and Care Occupancies," applies special rules to conversions. For example, if an existing hotel is converted to a large board and care facility, existing corridor walls are exempted from the ½-hour fire resistance rating requirement of 22-3.3.6.3. See the Exception to 22-3.3.6.3. See also the definition of conversion in 22-1.3. This is another example of an occupancy-specific requirement taking precedence over a general core chapter requirement as explained in the commentary following 1-3.8.

1-3.13 Maintenance and Testing.

1-3.13.1 Whenever or wherever any device, equipment, system, condition, arrangement, level of protection, or any other feature is required for compliance with the provisions of this *Code*, such device, equipment, system, condition, arrangement, level of protection, or other feature shall thereafter be continuously maintained in accordance with applicable NFPA requirements or as directed by the authority having jurisdiction.

Paragraph 1-3.13.1 emphasizes the importance of maintaining items required by the *Code*. It is useless to have an egress door that will not open, a self-closing device that does not close the door, or a sprinkler system with no water.

1-3.13.2* Existing life safety features such as, but not limited to, automatic sprinklers, fire alarm systems, standpipes, and horizontal exits, if not required by the *Code*, either shall be maintained or removed.

A-1-3.13.2 The presence of a life safety feature, such as sprinklers or fire alarm devices, creates a reasonable expectation by the public that these safety features are functional. When systems are inoperable or taken out of service, but the devices remain present, they present a false sense of safety. Also, before taking any life safety features out of

service, extreme care needs to be exercised to ensure that the feature is not required, was not originally provided as an alternative or equivalency, or is no longer required due to other new requirements in the current *Code*. It is not intended that the entire system or protection feature be removed. Instead components such as sprinklers, initiating devices, notification appliances, standpipe hose, and exit systems should be removed to reduce the likelihood of relying on inoperable systems or features. Alternatively, signage could be provided to indicate that a system is no longer operable.

The *Code* directs that nonrequired life safety features either be maintained or removed to prevent false expectations or a false sense of security by building occupants. For example, if the water supply to a nonrequired wet standpipe system were permanently shut off because the system piping leaked but the hose and nozzle for occupant use were left attached to the standpipe, an occupant could be endangered while attempting to use the system. If the nonrequired standpipe system were turned off and abandoned, it would be necessary, as a minimum, to remove all hoses and nozzles and place prominent signage at each outlet station advising that the system was out of service. The standpipe system piping, however, would not have to be removed.

1-3.13.3 Equipment requiring periodic testing or operation to ensure its maintenance shall be tested or operated as specified elsewhere in this *Code* or as directed by the authority having jurisdiction.

1-3.13.4 Maintenance and testing shall be under the supervision of a responsible person who shall ensure that testing and maintenance are made at specified intervals in accordance with applicable NFPA standards or as directed by the authority having jurisdiction.

Section 1-4 Purpose

1-4.1

The purpose of this *Code* is to provide minimum requirements, with due regard to function, for the design, operation, and maintenance of buildings and structures for safety to life from fire. Its provisions will also aid life safety in similar emergencies.

This *Code* specifies the minimum requirements that collectively help to ensure safety to occupants from fires and similar emergencies to the degree specified

by the objective stated in 1-4.2. However, it is not the *Code's* intent to prevent the user from exceeding the specified minimum requirements. See also 1-3.9.

1-4.2*

An objective of this *Code* is to protect the occupants not intimate with the initial fire development from loss of life and to improve the survivability of those who are intimate with the fire development.

A-1-4.2 The phrase "intimate with the initial fire development" refers to the person(s) at the ignition source and not to all persons within the same room or area. *Code* provisions aimed at protecting occupants not intimate with the initial fire development may also protect those who are intimate with the initial fire development.

The performance-oriented language used in this edition of the *Code* specifies its purpose as protecting the occupants not intimate with the initial fire development from loss of life, while also improving the survivability of those who are intimate with the fire. The objective stated in 1-4.2 was developed first and the occupancy chapter requirements were revised as necessary to accomplish the objective.

1-4.3*

Protection of occupants is achieved by the combination of prevention, protection, egress, and other features with due regard to the capabilities and reliability of the features involved.

A-1-4.3 The level of life safety from fire is defined through requirements directed at the

- (a) Prevention of ignition,
- (b) Detection of fire,
- (c) Control of fire development,
- (d) Confinement of the effects of fire,
- (e) Extinguishment of fire,
- (f) Provision of refuge and/or evacuation facilities,
- (g) Staff reaction, and
- (h) Provision of fire safety information to occupants.

The occupancy chapters make varying use of any or all of the features enumerated in subparts (a) through (h). A business occupancy located in a single-story building uses fewer of the features to accomplish the intended minimum level of life safety than a health care occupancy does. The health care occupancy

accomplishes its minimum level of life safety by extensively applying features (a) through (g) using a defend-in-place strategy. This strategy recognizes that the occupants are both incapable of self-preservation and difficult to move, particularly vertically to other floors or to the exterior of the building.

1-4.4

The *Code* endeavors to avoid requirements that might involve unreasonable hardships or unnecessary inconvenience or interference with the normal use and occupancy of a building, but provides for fire safety consistent with the public interest.

Buildings are normally designed to accommodate a specific functional need. The *Code* considers the normal occupancy of a building and attempts not to interfere with its regular use or to set requirements that would cause unreasonable hardship or unnecessary inconvenience to its normal functioning. For example, although self-closing devices on doors help to assure continuous fire- and smoke-compartmentation, the health care occupancy provisions of this *Code* do not require self-closing devices on patient room doors because of the day-to-day functional need for staff to monitor conditions while doors remain open. The health care occupancy chapters achieve the intended minimum level of life safety, without unduly interfering with normal operation of the facility, by combining other features and protection schemes.

Section 1-5 Assumption

1-5.1

The protection methods assume a single fire source.

Section 1-6 Equivalency

Section 1-6, Equivalency, presents a powerful design alternative that transforms what would otherwise be a typical specification code into a goal-oriented performance code where state-of-the-art life safety system design is permitted and encouraged.

1-6.1*

Nothing in this *Code* is intended to prevent the use of calculation methods, test methods, systems, methods, or devices

effectiveness, durability, and safety as alternatives to those prescribed by this *Code*, provided technical documentation is submitted to the authority having jurisdiction to demonstrate equivalency and the system, method, or device is approved for the intended purpose.

A-1-6.1 Before a particular mathematical fire model or evaluation system is used, its purpose and limitations need to be known. The technical documentation should clearly identify any assumptions included in the evaluation. Also, it is the intent of the Committee on Safety to Life to recognize that future editions of this *Code* are a further refinement of this edition and earlier editions. The changes in future editions will reflect the continuing input of the fire protection/life safety community in its attempt to meet the purpose stated in this *Code*.

With each new edition, the *Code* continues its evolution from a specification code into what is intended to be a performance-oriented document. Paragraph 1-6.1 recognizes that, although the written specification language is presented as a basis for enforcement, it should not inhibit the use of alternate or equivalent systems or design approaches to comply with *Code*-specified performance criteria. It is stipulated, however, that equivalency must be demonstrated by appropriate technical documentation. The evaluation and approval of equivalencies is the responsibility of the authority having jurisdiction.

The *Code* contemplates several forms of equivalency:

Code-specified alternative—The *Code* presents a written requirement and then provides an alternate method of obtaining the desired level of protection, usually via an exception. For example, for new educational occupancies, paragraph 10-3.6 requires that interior corridors be constructed of 1-hour fire resistance-rated assemblies. However, Exception No. 2 to 10-3.6 allows the 1-hour rating requirement to be reduced to that of a nonrated smoke-resisting assembly if the building is protected throughout by an approved, supervised automatic sprinkler system. Thus, the *Code* has judged the combination of smoke-resisting corridor partitions and sprinkler protection to be the equivalent of 1-hour fire resistance-rated corridor walls for new educational occupancies.

NFPA 101A Equivalency Methodologies—NFPA 101A, *Guide on Alternative Approaches to Life Safety*,¹ provides a set of equivalency methodologies that may be used to assess equivalency for health care occupancies, detention and correctional occupancies, board and care occupancies, and business occupancies.

Each system awards positive point values for strong life safety and fire protection features of a building and assesses negative point values for unsafe conditions. Factors are weighted with respect to their impact on life safety principles. Positive point values are permitted to offset negative point values. The completed evaluations are presented to the authority having jurisdiction for review and approval.

In addition to the fire safety evaluation systems, NFPA 101A contains an alternate method of calculation for stair widths, and a procedure for determining evacuation capability for board and care occupancies. Use of each of these methods is subject to the review and approval of the authority having jurisdiction.

More recent edition of the Code—As explained in A-1-6.1, future editions of the *Code* are considered refinements of earlier editions because they clarify intent with respect to the revised topics. Use of a newer edition in its entirety should be considered as equivalent to use of an earlier edition.

Caution must be exercised when applying this concept. One must recognize that specific provisions are part of a carefully crafted set of requirements that result in a desired level of life safety. A revision to one portion of the *Code* may be a part of, or the result of, changes to other *Code* sections. Therefore, it would be inappropriate to refer only to a specific section of a more recent edition of the *Code* that reflects a less stringent requirement than previous editions, without taking into account whatever associated provisions that may have become more stringent to compensate for the more relaxed subject provision. See also A-1-3 for an example illustrating this point.

It is not the intent of the *Code* to limit the user to the three specified methods of judging equivalency. It is the intent to allow emerging technology to be used to satisfy the prescribed performance requirements. Fire modeling has developed to the stage that authorities having jurisdiction are routinely approving equivalency on such basis. Additionally, results of fire tests and other documented forms of engineering analysis have received the approval of authorities having jurisdiction.

In an effort to move the 1997 edition of the *Code* toward a performance-based code, an advisory appendix chapter, Appendix C, Proposed Structure for a Performance-Based Design Option, was written. Although the proposed appendix was rejected by the association membership for inclusion in the *Code*, the draft document contains useful information warranting presentation here. It appears in its entirety as Figure 1-2, without edits, as it originally appeared in the 1996 Fall Meeting Report on Comments.

1-6.2*

Alternative systems, methods, or devices approved as equivalent by the authority having jurisdiction shall be recognized as being in compliance with this *Code*.

This emphasizes that there is more than one way to achieve *Code* compliance. The building either follows the specification criteria or achieves equivalency. When one implements an alternative approach to life safety, and that alternative is judged by the authority having jurisdiction as providing equivalency to the *Code* requirements, the building is considered to be *Code* compliant. Compliance via equivalency is different from a waiver that permits continued use of a noncomplying building.

A-1-6.2 An equivalent method of protection is one providing an equal or greater level of safety. It is not a waiver or deletion of a *Code* requirement.

Section 1-7* Fire Exit Drills

A-1-7 The term "fire exit drill" is used to avoid confusion between drills held for the purpose of rapid evacuation of buildings and drills of fire-fighting practice that from a technical viewpoint are correctly designated as "fire drills," although this term is by common usage applied to egress drills in schools, etc.

The purpose of fire exit drills is to educate the building occupants in the fire safety features and the egress facilities available. Speed in emptying buildings, while desirable, is not the only objective.

The usefulness of a fire exit drill and the extent to which it can be carried off depends on the character of the occupancy; fire exit drills being most effective in occupancies where the occupant load of the building is subject to discipline and habitual control. For example, schools offer possibilities of more highly developed and valuable fire exit drills than other types of occupancy.

In buildings where the occupant load is of a changing character and not subject to discipline, such as hotels or department stores, no regularly organized fire exit drill, such as that which may be conducted in schools, is possible. In such cases, the fire exit drills must be limited to the regular employees, who can, however, be thoroughly schooled in the proper procedure and can be trained to properly direct other occupants of the building in case of fire. In occupancies such as hospitals, regular employees can be rehearsed in the proper procedure in case of fire; such training always is

(Log #CC78)
Committee: FUN101-507 - (Appendix C): Accept
SUBMITTER: Technical Committee on
Fundamentals

COMMENT ON PROPOSAL NO: 101-639

RECOMMENDATION: Replace proposed Appendix
C with the following:**APPENDIX C
PROPOSED STRUCTURE FOR A
PERFORMANCE-BASED DESIGN OPTION***This Appendix is not part of the requirements of this NFPA document, but is included for informational purposes.*

NOTICE: This appendix provides guidance on features that will be needed when a complete performance-based design option is added to the *Code*. It is not complete and is not intended for regulatory use at this time. It is intended solely to introduce the subject for informational purposes and solicit proposals for further development.

NOTICE: Supplemental, advisory text that might not be suited for future placement within the body of the *Code* is presented within this appendix but is preceded by paragraph numbers that begin with the word "Appendix". Such text is further delineated by placing it within square brackets [].

Introduction

Future editions of this *Code* are expected to provide explicit fire safety goals and performance objectives. The purpose of these fire safety goals and objectives is to clearly identify the intent of the prescribed fire safety measures and facilitate the use of engineered fire safety alternatives in meeting the goals and objectives (i.e., a performance-based alternative).

This appendix has been prepared as a means to introduce the concepts of fire safety goals and objectives as they might apply to the *Life Safety Code* in the future. In addition, some basic concepts of performance-based fire safety design have been included to promote the development, advancement and acceptance of the concepts throughout the building and fire community. It should be noted that these concepts are not fully developed, and that the approach, definitions, concepts and criteria provided herein are provided as examples only in order to stimulate further discussion. It is not the intent of this appendix to in any way prohibit the application of performance-based design approaches that differ from the concepts introduced within this appendix.

This appendix introduces this approach, defines its structure, and presents elements in as much detail as the work to this point permits. It is the intent of the committee to encourage development of elements of this option in the peer reviewed fire protection engineering literature. The objective is to include a complete performance-based design option in the *Code*.

This proposed structure follows the guidelines in the July 1995 document "NFPA's Future in Performance-Based Codes and Standards: Report of the NFPA In-House Task Group".

Creating the Two Options.

It is anticipated that Chapter 1 of the *Code* will include a new section titled "Design Options" that will state certain chapters of the *Code* apply to a performance-based design option and certain chapters apply to a prescriptive-based design option. *Code* compliance is achieved if either option is used. Because the performance-based design option is an

elaboration of the existing and established concept of equivalency, the new section on design options will appear next to the section on equivalency or will be combined with it.

The proposed performance-based design option is not intended to be restrictive. The equivalency concepts of Section 1-5 would apply to both the prescriptive-based and performance-based design options.

It has not yet been determined whether the performance-based design option will use the traditional occupancy structure of the *Code*. If it does not, it will be because it has been determined that occupancy categories are not needed to specify the fire safety goals, fire scenarios, and assumptions relevant to a particular building design. If the occupancy structure is used, then the performance-based design option, like the current prescriptive-based approach, will rely on both general chapters and occupancy chapters to specify requirements.

An example of a design option section not employing the occupancy structure would be as follows:

SECTION 1-x DESIGN OPTIONS

1-x.1 Performance-Based Design Option. A design in accordance with Chapters 1 through 3 and the performance-based criteria of Chapter 4 (Performance-Based Designs) shall be considered as meeting the objectives of this *Code*.

1-x.2 prescriptive-Based Design Option. A design in accordance with Chapters 1 through 3 and the prescriptive criteria of Chapters 5 through 33 shall be considered as meeting the objectives of this *Code*.

The following definitions would be added to Chapter 3, Section 3-2:

Performance-Based Design Option*. An option within a code or standard whereby compliance is achieved by demonstrating that a proposed design will meet specified fire safety goals using referenced approved methods.

[Appendix 3-2 Performance-Based Design Option
More specifically, fire safety goals are translated into performance objectives and performance criteria. Fire models and other calculation methods are used in combination with the building design specifications, specified fire scenarios, and specified assumptions, to calculate whether the performance criteria are met, in which case there is compliance with the *Code* under the performance-based design option.]

Prescriptive-Based Design Option. An option within a code or standard whereby compliance is achieved by demonstrating compliance with specified construction characteristics, limits on dimensions, protection systems, or other features, but without explicit reference to how these requirements collectively achieve explicitly stated fire safety goals.

The following material would appear as a new Chapter 4, entitled Performance-Based Design Option (i.e., the letter C would be replaced with the number 4 in each paragraph number).

SECTION C-1 GENERAL

C-1.1* Application. The performance-based design option is applicable to both new and existing buildings.

[Appendix C-1.1 Application — Overview of Performance-Based Design Option The fire safety goals of the *Code* are contained within the scope, application, and purpose sections of Chapter 1. Only

Figure 1-2—Proposed Appendix C for NFPA 101, 1997 edition, as it appeared in the Safety to Life Committee's Report on Comments. It was initially accepted, but eventually rejected on the floor at the 1996 Fall Meeting.

in the performance-based design options section will these fire safety goals be translated into quantitative performance objectives and performance criteria suitable for quantitative calculation and assessment.

Fire scenarios provide the fire challenge or "load" against which one determines whether the performance criteria are met. Fire models and other calculation methods are used to determine whether the building design will achieve the performance criteria, given each of the fire scenarios.

The quantitative characterization of the building design needs to be sufficiently complete and in a format to support the calculations. For example, building characteristics that affect occupant behavior (e.g., a complex, maze-like layout) must be assessed.]

C-1.2 Definitions.

Computer Fire Model. A fire model that has been adapted for use on a computer.

Fire Model.* Structured approach to predicting one or more effects of a fire.

[Appendix C-1.2 **Fire Model** Due to the complex nature of the principles involved, models are often packaged as computer software. Attached to the fire models will be any relevant input data, assumptions and limitations needed to properly implement the model.]

Fire Safety Goal.* Overall outcome to be achieved with regard to fire.

[Appendix C-1.2 **Fire Safety Goal** Goals are non-specific and are measured on a qualitative basis. They should be stated in terms of conditions (like loss avoidance) that are intrinsically desirable and do not rely on any assumptions. For example, "avoidance of flashover" would not be a goal because it relies on assumptions about what kinds of fires cause harm. Goals should be stated in terms that are potentially measurable, even if the precise measurement scale is not specified. Thus, they may be stated in terms of impact on people or property, business interruption or environmental impact.]

Fire Scenario.* Specification of fire conditions under which a proposed solution is expected to meet the fire safety goals.

[Appendix C-1.2 **Fire Scenario** The fire scenario describes factors critical to the outcome of the fire such as ignition sources and locations, nature and configuration of the fuel, ventilation, characteristics and locations of occupants, and condition of the supporting structure and other equipment.]

Performance Criteria.* Performance objectives for individual products, systems, assemblies or areas that are further quantified and stated in engineering terms.

[Appendix C-1.2 **Performance Criteria** Engineering terms include temperatures, radiant heat flux, and levels of exposure to fire products. Performance criteria provide threshold values which are treated as data for calculations used to develop a proposed solution. Examples of performance criteria include limiting a structural member to a critical temperature, limiting COHb levels to less than 25%, limiting upper layer temperatures to less than 500°C above ambient, and limiting radiant flux at floor level to less than 20 kW/m².]

Performance Objectives.* Requirements of the fire, building, or occupants which need to be met in order to achieve a fire safety goal.

[Appendix C-1.2 Performance Objectives

Examples of performance objectives include prevention of structural damage, no life loss to persons not intimate with initial fire development, separating occupants from fire effects for a specified length of time, and containing the fire to the room of origin.

In general, objectives define a series of actions necessary to make the achievement of a goal much more likely. Objectives are stated in more specific terms than goals and are measured on a more quantitative rather than qualitative basis.]

Safety Factor.* An adjustment made to reflect uncertainty in the assumptions made, the tools and methods used, and the limiting value of a parameter or item being measured.

[Appendix C-1.2 **Safety Factor** It should be noted that safety factors may be present in many components of an analysis or design. Careful attention should be given to both the lack of safety factors and the possibility that multiple safety factors are present.]

SECTION C-2 PERFORMANCE OBJECTIVES AND CRITERIA

C-2.1 Performance Objective. The fire safety goals of the *Code*, as stated in Chapter 1 are captured in the following quantitative performance objective:

A structure shall be designed, constructed and maintained to protect the occupants not intimate with the initial fire development from instantaneous or cumulative exposure to conditions that exceed approved survivability criteria for the period of time determined necessary.

C-2.2* Survivability Criteria. The performance objective above requires that specific survivability criteria be developed.

[Appendix C-2.2 **Survivability criteria** should include cumulative exposures to carbon monoxide, hydrogen cyanide, oxygen vitiation, convected heat, and radiant heat.

Note that survivability criteria are only relevant when occupants are exposed to fire conditions. Oxygen levels, for example, need not be maintained above a stated threshold in any area at any time when occupant exposure is not an issue.

The specification of survivability criteria implies a judgment on acceptable risk, just as the choices in the prescriptive-based *Code* imply such judgments. For example, there will be people whose condition before the fire is so frail that any degradation in their environment can lead to death. Survivability criteria cannot be reasonably established to save such people.

Threshold values identified in the literature are those at which it is predicted that roughly half the exposed population will be fatally affected. More conservative criteria would be needed to assure that most people will be protected from loss of life but are more difficult to set with available evidence. Data on 50 percent lethality levels are more available than data on the distribution of lethality levels.]

C-2.3* Assumptions. All assumptions that can affect design performance shall be explicitly stated.

[Appendix C-2.3 **Assumptions** are any conditions or features that affect the achievement or failure to achieve performance criteria but are not part of the fire scenario or the building design specifications.]

C-2.3.1* Occupant Characteristics. Assumed characteristics of the buildings occupants that affect rate of response, susceptibility to products of

Figure 1-2. Continued.

combustion, and rate of travel shall be explicitly identified.

[Appendix C-2.3.1 Assumptions regarding occupants are needed so that the assessment can calculate for each occupant whether, and if so when, the occupant will act in response to the fire; what actions the occupant will take and how effectively, with particular attention to speed of movement; and any occupant characteristics that affect survivability, e.g., fire conditions that will lead to loss of life.

Chapter 5 in NFPA 101A, *Guide on Alternative Approaches to Life Safety*, presents one approach to assessing the evacuation capability of occupants.

Occupancy categories are another way of organizing appropriate assumptions regarding occupants.]

C-2.3.2* Building Characteristics. Assumptions regarding characteristics of the building or its contents, equipment, or operations not inherent in the design specifications, but that affect occupant behavior or the rate of hazard development shall be explicitly identified.

[Appendix C-2.3.2 Such assumptions may be needed to determine how quickly fire and its effects will spread (e.g., doors normally open vs. normally closed). Issues of reliability are a major part of this group of assumptions.]

C-2.4 Safety Factors. Safety factors shall be used to account for uncertainty in assumptions, single-valued data, and deterministic models.

SECTION C-3 FIRE SCENARIOS

C-3.1* The choice of fire scenarios shall include the most common and the most severe fires to be reasonably expected in the building under evaluation.

[Appendix C-3.1 The choice of the appropriate fire scenarios is a critical step in the performance-based design option. The fire is the driving force for the development of smoke, heat and other products of combustion. It is important to select a wide range of fire scenarios to represent every type of fire that will affect the building's fire safety performance in a distinctive manner.

The fire scenario heat release rate should be based upon information related to the fuel in the area. Fire test results such as found in the Appendix of NFPA 72, *National Fire Alarm Code*, and other recognized references can be used to determine the necessary information.

There are dangers if the chosen fire scenarios are too severe or not severe enough. If a fire scenario is too severe, then a building in compliance with the prescriptive-based code will fail to achieve the fire safety goals if confronted with such a fire. This will unreasonably discourage use of the performance-based design option and shed doubt unrealistically on the adequacy of the prescriptive-based design option. There are always fires too severe for the Code (e.g., a ground-zero explosion of a strategic nuclear weapon). The challenge is to find the boundary that meets the limits of reasonable expectations. If the fire scenarios selected do not adequately reflect reasonably severe fire conditions, the resulting performance-based design might fail to achieve the needed level of fire safety.

The three fire scenarios described below illustrate a generic approach, in which many of the specific details of the scenario either need to be provided, are referenced to a more detailed guide, or are deferred to those presenting a performance-based design proposal, who must justify the reasonableness of their detailed specifications:

(a) Common Scenario #1 - Ordinary Fire in Occupied Room. Common scenario #1 shall be designed to be representative of a free-burning fire in ordinary combustibles, ignited by a small open-flame source, in one of the principal occupied spaces of the occupancy under consideration, with testing and modeling specifications for the scenario as specified in (whatever new NFPA standard is used to present and specify the standard scenarios).

(b) Common Scenario #2 - Fire with Initial Smoldering Stage in Occupied Room. Common scenario #2 shall be designed to be representative of a fire started by cigarette ignition of upholstered furniture, in one of the principal occupied spaces of the occupancy under consideration, with testing and modeling specifications for the scenario as specified in (whatever new NFPA standard is used to present and specify the standard scenarios).

(c) High-Challenge Scenario #1 - Fire Originating in Means of Egress. High-challenge scenario #1 shall be designed to be representative of a free-burning fire in ordinary combustibles, ignited by a small open-flame source, in the means of egress of the occupancy under consideration, with testing and modeling specifications for the scenario as specified in (whatever new NFPA standard is used to present and specify the standard scenarios).

Shown below are constructive steps to be used in specifying fire scenarios.

(1) Common scenarios can be partly specified through routine statistical analysis of fire experience in similar buildings. An advantage of common or typical scenarios is that they provide a good picture of what the buildings performance will usually be if fire occurs. Such scenarios also tend to fit easily within the scope of available fire models and calculation methods. This means the authority having jurisdiction can review results for these scenarios to obtain a basic sense of the building's level of safety and the appropriateness of the calculations.

(2) High-challenge scenarios are any scenarios that pose unusual fire challenges to the building design. High-challenge scenarios can be developed by refining common scenarios (e.g., changing the area of fire origin) to create a greater challenge. Also, high-challenge scenarios can be developed by reducing the challenge in scenarios previously identified as beyond the design expectations, i.e., too severe to use as the basis for evaluation.

Shown below are illustrative techniques for developing high-challenge scenarios from common scenarios.

(1) Change the area of fire origin. Consider an area (e.g., bedroom) where occupants are likely to be in a particularly vulnerable status. Consider an area (e.g., concealed spaces, external surfaces) where fire can develop outside the effective range of key fire protection features (e.g., detectors, sprinklers). Consider an area (e.g., means of egress) that is critical to occupant movement to safety.

(2) Increase the initial size or speed of development of the fire. This may be done by adjusting parameters in a fire growth model (e.g., increasing the alpha value in a t-squared modeled fire, reflecting a fast or ultra-fast fire, increasing the peak heat release rate value for the fire) or by increasing the assumed room fuel load or decreasing the space between major combustible items.

(3) Assume common degradations in design assumptions. For example, assume doors are blocked open, allowing fire passage of fire efforts to secondary

Figure 1-2, Continued.

spaces; or, assume an unlimited oxygen supply for fire growth, which could result from open doors, broken windows, or other circumstances.

Developing high-challenge scenarios from scenarios beyond design expectations will involve less challenging quantitative assumptions. For example, if the bomb used in the World Trade Center incident of 1993 is deemed too severe for a high-rise office building, how small a bomb would constitute an appropriate high-challenge test? Or, if the *Code* cannot assure protection of occupants who are intimate with initial fire development, how close can occupants be and not be considered intimate?]

SECTION C-4 FIRE MODELS AND CALCULATION METHODS

C-4.1* The models and methods used to evaluate performance shall be appropriate to the fire scenarios selected. Use and limitations of fire models shall be determined in accordance with ASTM *Standard Guide for Determining Uses and Limitations of Fire Models*.

[Appendix C-4.1 Calculation methods are tools that permit a proposed solution to be assessed with regard to the applicable fire safety goals, assumptions and fire scenarios. Due to the complex nature of the principles and relationships involved, calculation methods are often packaged as computer software. Calculation methods contain scientific and mathematical relationships needed to model the behavior of certain aspects of a fire event, such as the growth and spread of the fire, the generation of harmful products, the response of fire protection systems, the behavior of occupants or others, or the impact of the fire on exposed people or property. Calculation methods are useful in codes and standards if they permit the user to assess whether or predict when a critical event will be reached (e.g., the achievement of the fire safety goals or the failure of the fire safety system).

Several fire models and calculation methods will typically be employed during the design and assessment process as it is unlikely that a single model will be capable of simulating all that is needed. As technology advances, it is likely that new methods will be developed to fill gaps in needed calculations or to improve on the performance of existing models. Also, existing methods are likely to be integrated into more comprehensive packages that will need to be re-evaluated in their new form.

It is not appropriate for the *Code* to prescribe specific methods by name. Instead, the *Code* should direct users to appropriate sources of accepted engineering practices for performing the needed calculations. The process of selecting and identifying fire safety goals, including objectives and criteria; assumptions about the condition and location of occupants being protected; and applicable fire scenarios will fully describe what the *Code* considers to be acceptable safety. When the performance objectives and criteria; and the input data of scenarios, assumptions, and the proposed design itself are stated explicitly and quantitatively, modeling can be used to predict performance.

It is anticipated that the fire protection engineering community will develop resources, in a form suitable for reference by the *Code*, so that a user will take from the *Code* clear guidance on the performance outcome values that need to be calculated and the input data to be developed and used, and then will take from the fire protection engineering resources clear guidance on how to predict performance outcomes from input data.

Before a particular fire model or calculation method is used, its purpose and limitations must be known.

The technical documentation needs to clearly identify any assumptions included in the evaluation.]

C-4.2 Computer Fire Models.

C-4.2.1 Documentation. Computer fire models shall be documented in accordance with ASTM E 1472, *Standard Guide for Documenting Computer Software for Fire Models*.

C-4.2.2 Predictive Capability. Computer fire models shall be evaluated for their predictive capability in accordance with ASTM E 1555, *Standard Guide for Evaluating the Predictive Capability of Fire Models*. When required by the authority having jurisdiction, such evaluation shall include scenarios specific to this application.

C-4.2.3 Data. Input data for computer fire models shall be obtained in accordance with ASTM E 1591, *Standard Guide for Data for Fire Models*.

C-4.3 Sensitivity Analysis. When required by the authority having jurisdiction, a sensitivity analysis shall be conducted to study the impact of variation of assumptions or input data.

SECTION C-5 PRESCRIPTIVE REQUIREMENTS

C-5.1* Building features that have prescribed requirements in Chapters 5-33 but are not included in the model or assumptions shall comply with Chapters 5-33 as appropriate.

[Appendix C-5.1 Some prescriptive requirements will be needed even in a performance-based design option. Some such requirements will reflect the absence of any logical alternative to the requirement (e.g., a sprinkler system requires an adequate water supply, consistent with its design). Some such requirements will be necessary to support the assumption embedded in the building design specifications (e.g., the use of listed parts assures that the building design will perform as intended) or to support other assumptions (e.g., a detector maintenance program provides assurance that an assumption of detector operability is reasonable).]

SECTION C-6 DOCUMENTATION

C-6.1* The performance-based design option shall be prepared by a person with qualifications acceptable to the authority having jurisdiction.

[Appendix C-6.1 Qualifications should include experience, education, and credentials that demonstrate knowledgeable and responsible use of applicable models and methods.]

C-6.2 The performance-based design option shall be documented in a manner acceptable to the authority having jurisdiction.

C-6.3 Documentation submitted for design approval shall include but not be limited to:

- (1) Identification of the building
- (2) List of survivability criteria with sources
- (3) List of assumptions about occupant characteristics
- (4) List of assumptions about building characteristics
- (5) List of safety factors
- (6) Descriptions of fire scenarios

Figure 1-2. Continued.

(7) Description of input data or methods used, including known limitations

(8) List of input data

(9) Output of model or method including sensitivity analysis when required

(10) List of prescriptive requirements complied with

(11) Computer fire model documentation if required by the authority having jurisdiction

(12) Summary of public review or comment

SUBSTANTIATION: The draft revision reformat the material for better presentation, responds to some of the public comments, and clarifies intent.

COMMITTEE ACTION: Accept.

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 8

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 8

Figure 1-2. Continued.

advisable in all occupancies whether or not regular fire exit drills can be held.

Paragraphs 1-7.1 through 1-7.5 serve as a primer on how to conduct a fire exit drill. The Operating Features section (i.e., the -7 section) of some of the occupancy chapters provides fire exit drill details that directly correlate a drill with the characteristics of the occupancy. To help understand that the drill details have been matched to the needs of the occupants, compare those in 10-7.1—applicable to new educational occupancies—against those in 12-7.1—applicable to new health care occupancies.

1-7.1

Fire exit drills conforming to the provisions of this *Code* shall be conducted regularly in occupancies where specified by the provisions of Chapters 8 through 32, or by appropriate action of the authority having jurisdiction. Drills shall be designed in cooperation with the local authorities.

1-7.2*

Fire exit drills, where required by the authority having jurisdiction, shall be held with sufficient frequency to familiarize occupants with the drill procedure and to have the conduct of the drill a matter of established routine. Drills shall include suitable procedures to ensure that all persons in the building or all persons subject to the drill actually participate.

A-1-7.2 If a fire exit drill is considered merely as a routine exercise from which some persons may be excused, there is a grave danger that in an actual fire the drill will fail in its intended purpose. However, there might be some circumstances under which all occupants might not participate in a fire exit drill, for example, infirm or bedridden patients in a health care occupancy.

1-7.3

Responsibility for the planning and conduct of drills shall be assigned only to competent persons qualified to exercise leadership.

1-7.4

In the conduct of drills, emphasis shall be placed on orderly evacuation under proper discipline rather than on speed.

1-7.5*

Drills shall be held at expected and unexpected times and under varying conditions to simulate the unusual conditions that occur in the case of fire.

A-1-7.5 Fire is always unexpected. If the drill is always held in the same way at the same time it loses much of its value, and when for some reason during an actual fire it is not possible to follow the usual routine of the fire exit drill to which occupants have become accustomed, confusion and panic may ensue. Drills should be carefully planned to simulate actual fire conditions. Not only should they be held at varying times, but different means of exit should be used based on an assumption that, for example, some given stairway is unavailable by reason of fire or smoke, and all the occupants must be led out by some other route. Fire exit drills should be designed to familiarize the occupants with all available means of exit, particularly emergency exits that are not habitually used during the normal occupancy of the building.

Section 1-8 Units

1-8.1

Metric units of measurement in this *Code* are in accordance with the modernized metric system known as the International System of Units (SI).

1-8.2

If a value for measurement as given in this *Code* is followed by an equivalent value in other units, the first stated shall be regarded as the requirement. A given equivalent value may be approximate.

The metric values that appear within parentheses immediately following the U.S. Customary Units values might mistakenly appear as intentionally precise values representing the requirement rather than an approximation. For example, 5-2.1.2.2 requires that door openings in means of egress provide clear width of at least 32 in. (81 cm). Because the value 81 is not a nice round value, such as 80 or 90, it seems so precise as to be easily mistaken as the requirement. However, the value 81 is an approximation derived by multiplying 32 in. by the conversion factor of 2.54 cm per inch and rounding the resultant value of 81.28 to 81. As explained in 1-8.2, the first stated value, in U.S. Customary Units, is the requirement and the

equivalent value, in metric units, is the approximation.

1-8.3

The conversion procedure for the SI units has been to multiply the quantity by the conversion factor and then round the result to the appropriate number of significant digits.

Reference Cited in Commentary

NFPA 101A, *Guide on Alternative Approaches to Life Safety*, National Fire Protection Association, Quincy, MA, 1995. (Note: The 1995 edition of NFPA 101A is calibrated to measure equivalency against the requirements of the 1994 edition of the *Code*. The 1998 edition of NFPA 101A will measure equivalency against the requirements of the 1997 edition of the *Code*.)

CHAPTER 2

Fundamental Requirements

Chapter 2 outlines the fundamental concepts that are addressed in detail via the myriad requirements contained in the other chapters of the *Code*. Achieving these life safety fundamentals helps to ensure a reasonable level of life safety in building design and arrangement. The following are the fundamentals. Simply stated:

1. To provide for adequate safety without dependence on any single safeguard,
2. To ensure that construction is sufficient to provide structural integrity during a fire while occupants seek safe refuge within the building or egress to the building exterior,
3. To provide an appropriate degree of life safety considering the size, shape, and nature of the occupancy,
4. To ensure that the egress paths are clear, unobstructed, and unlocked,
5. To ensure that the exits and egress routes are clearly marked so as to avoid confusion and provide the cues needed for their effective use,
6. To provide adequate lighting,
7. To ensure prompt occupant response by providing early warning of fire,
8. To provide for back-up or redundant egress arrangements,
9. To ensure the suitable enclosure of vertical openings, and
10. To allow for design criteria that exceed the scope of this *Code* and address the normal use and needs of the occupancy in question.

2-1*

Every building or structure, new or old, designed for human occupancy shall be provided with means of egress and other

safeguards sufficient to permit the prompt escape of occupants or shall furnish other means to provide a reasonable degree of safety for occupants. The design of means of egress and other safeguards shall be such that reliance for safety to life will not depend solely on any single safeguard; additional safeguards shall be provided for life safety in case any single safeguard is ineffective due to human or mechanical failure.

A-2-1 It is not always necessary to completely evacuate the building or structure to escape from a fire or other emergency. An area of refuge formed by horizontal exits, smoke barriers, other floors, or similar compartmentation often can serve as a place for the occupants to remain in relative safety until the emergency is over. In those occupancies where access to the exits is by way of enclosed corridors, particularly those occupancies with sleeping occupants, a single fire might block access to all exits, including horizontal exits and smoke barriers. In such cases, the occupants may achieve a greater degree of safety by remaining in their rooms.

2-2

Every building or structure shall be constructed, arranged, equipped, maintained, and operated to avoid undue danger to the lives and safety of its occupants from fire, smoke, fumes, or resulting panic during the period of time reasonably necessary for escape from the building or structure or for that period of time needed to defend in place.

2-3

Every building or structure shall be provided with means of egress and other safeguards of kinds, numbers, locations, and capacities appropriate to the individual building or structure, with due regard to the character of the occupancy, the capabilities of the occupants, the number of persons exposed, the fire protection available, the height and type of construction

of the building or structure, and other factors necessary to provide all occupants with a reasonable degree of safety.

2-4

In every building or structure, means of egress shall be arranged and maintained to provide free and unobstructed egress from all parts of the building or structure at all times when it is occupied. No lock or fastening shall be installed to prevent free escape from the inside of any building. Means of egress shall be accessible to the extent necessary to ensure reasonable safety for occupants having impaired mobility.

Exception: Locks shall be permitted in mental health, detention, or correctional facilities where supervisory personnel are continually on duty and effective provisions are made to remove occupants in case of fire or other emergency.

Problems with locking devices have repeatedly been a contributing factor in multiple-fatality fires in correctional facilities. Some of these problems include malfunctioning locks, an inability to locate keys in smoke or in the dark (frequently caused by smoke obscuration of lighting), locks jammed with toothpicks and chewing gum, and lock releases made inoperative from pushing against the doors. All of these problems appear in the fire record. Prior to a fire, it might often have been assumed that, in the event of an emergency, there would be effective provisions for releasing locks and that personnel would be continually in attendance. Extreme care must be exercised to ensure that locks can and will be unlocked or that alternate methods of providing life safety, that are independent of evacuation, are provided. See also "The Seminole County Jail Fire" and "Fire in Prisons."^{1, 2}

2-5

Every exit shall be clearly visible, or the route to reach every exit shall be conspicuously indicated in such a manner that every occupant of every building or structure who is physically and mentally capable will readily know the direction of escape from any point. Each means of egress, in its entirety, shall be arranged or marked so that the way to a place of safety is indicated in a clear manner. Any doorway or passageway that is not an exit or a way to reach an exit, but is capable of being confused with an exit, shall be arranged or marked to prevent occupant confusion with acceptable exits. Every effort shall be taken to avoid occupants mistakenly traveling into dead-end spaces in a fire emergency.

2-6

Where artificial illumination is required in a building or structure, egress facilities shall be included in the lighting design in an adequate and reliable manner.

2-7

In every building or structure of such size, arrangement, or occupancy that a fire itself might not provide adequate occupant warning, fire alarm facilities shall be provided where necessary to warn occupants of the existence of fire. Fire alarms alert occupants to initiate emergency procedures and facilitate the orderly conduct of fire exit drills.

Several multiple-fatality fire incidents, especially in hotels, have shown that fire alarm sounding devices were inadequate to alert building occupants. This was because occupants either could not hear the alarm or did not recognize the alarm as a fire alarm signal. Confusion with sounds made by telephones or alarm clocks has been reported. Authorities having jurisdiction must ensure that sounding devices can be heard over ambient noise levels and can be recognized as fire alarm signals. See "Familiar Problems Cause 10 Deaths in Hotel Fire" and "Ten Die in Greece, New York Hotel Fire."^{3, 4}

2-8

Two means of egress, as a minimum, shall be provided in every building or structure, section, and area where size, occupancy, and arrangement endanger occupants attempting to use a single means of egress that is blocked by fire or smoke. The two means of egress shall be arranged to minimize the possibility that both might be rendered impassable by the same emergency condition.

2-9

Every exit stair, exit ramp, and other vertical opening between floors of a building shall be suitably enclosed or protected, as necessary, to afford reasonable safety to occupants while using means of egress and to prevent spread of fire, smoke, or fumes through vertical openings from floor to floor before occupants have entered exits.

Unprotected or improperly protected vertical openings have repeatedly appeared in NFPA fire records as a major contributing factor in multiple-death fires. The following is a list of multiple-death fires in which unprotected vertical openings have been identified as a significant factor in these deaths:

November 20, 1980, Las Vegas, NV	85 dead ⁶
January 9, 1981, Clonsburgh, NJ	31 dead ⁷
March 14, 1981, Chicago, IL	19 dead ⁷
October 28, 1982, Pittsburgh, PA	5 dead ⁸
April 19, 1983, Worcester, MA	7 dead ⁹
June 14, 1983, Fort Worth, TX	5 dead ¹⁰
August 31, 1983, Gwinnett, GA	8 dead ¹¹
December 31, 1986, San Juan, PR	97 dead ¹²

See also the commentary on Section 6-2.

2-10*

Compliance with this *Code* shall not be construed as eliminating or reducing the necessity for other provisions for safety of persons using a structure under normal occupancy conditions. Also, no provision of the *Code* shall be construed as requiring or permitting any condition that might be hazardous under normal occupancy conditions.

A-2-10 The provisions of this *Code* will not necessarily provide a building suitable for use by physically handicapped people. Reference is made to CABO/ANSI A117.1, *American National Standard for Accessible and Usable Buildings and Facilities*.

References Cited in Commentary

¹ Richard Best, "The Seminole County Jail Fire," *Fire Journal*, Vol. 70, No. 1, January 1976, pp. 5-10, 17.

² David P. Demers, "Fire in Prisons," *Fire Journal*, Vol. 72, No. 2, March 1978, pp. 29-42.

³ David P. Demers, "Familiar Problems Cause 10 Deaths in Hotel Fire," *Fire Journal*, Vol. 74, No. 1, January 1980, pp. 52-56.

⁴ David P. Demers, "Ten Die in Greece, New York Hotel Fire," *Fire Journal*, Vol. 73, No. 4, July 1979, pp. 25-30.

⁵ Richard Best and David P. Demers, "Fire at the MGM Grand," *Fire Journal*, Vol. 76, No. 1, January 1982, pp. 19-37.

⁶ Richard Best and Steven W. Hill, "Fires in Two Boarding Facilities Kill 34 Residents," *Fire Journal*, Vol. 76, No. 4, July 1982, pp. 44-57, 106.

⁷ Steven Hill, "19 Die in Chicago Hotel Fire," *Fire Journal*, Vol. 76, No. 2, March 1982, pp. 53-55, 60-61.

⁸ James R. Bell, "Five Die in Pittsburgh Boarding Home Fire," *Fire Journal*, Vol. 77, No. 5, September 1983, pp. 68-71, 75.

⁹ Richard Best, "Fire in Community Home Causes Seven Deaths," *Fire Journal*, Vol. 78, No. 2, March 1984, pp. 19-23, 79-80.

¹⁰ Ron Côté, Thomas Klem, and William P. Walls, "Five Die in Fire at Texas Ramada Inn," *Fire Journal*, Vol. 78, No. 2, March 1984, pp. 55-57, 60-70.

¹¹ Tom Timoney, "Eight Mentally Handicapped Occupants Die in Georgia Fire," *Fire Journal*, Vol. 78, No. 3, May 1984, pp. 91-97, 134.

¹² Thomas J. Klem, Investigation Report on the Dupont Plaza Hotel Fire, NFPA LS-11, National Fire Protection Association, Quincy, MA, 1987.

CHAPTER 28

Industrial Occupancies

Section 28-1 General Requirements

Industrial occupancy is a broad classification. The following are examples of industrial occupancies:

Factories of all kinds	Laundries
Gas plants	Recycling plants
Laboratories	Autobody and repair shops
Refineries	Food processing plants
Dry cleaning plants	Hangars (for servicing)
Sawmills	Postal central sorting
Power plants	maintenance facilities
Pumping stations	
Telephone exchanges	

The national fire incident databases indicate that the classifications of industrial and manufacturing properties accounted for 27,500 structure fires per year as reported to U.S. fire departments from 1984 to 1988. These fires led to 45 civilian (non-fire-service personnel) deaths and 858 civilian injuries a year. Only one-fourth of the people who died in fires in those properties from 1980 to 1988 were outside the room of fire origin when the fire began.

Many industrial properties pose the particular hazard of rapid fire development as a result of explosion or flash fire. This fact is underscored each year in the detailed descriptions of multiple-death and large-loss fires. In the 1980s, eight industrial fires killed 10 or more people, although three of those fires took place in coal mines, which are addressed as special structures by the *Life Safety Code*. The other five consisted of two fireworks manufacturing plant incidents, one in Oklahoma in 1985 and one in Tennessee in 1983; a 1980 metal manufacturing plant inci-

dent in New York; a 1984 refinery incident in Illinois, where the 17 dead included many employees who acted as fire fighters; and a 1989 polyolefin plant incident in Texas, which also ranks as the fourth highest property loss from fire in U.S. history, after adjusting for inflation, and the highest loss to involve only one property.

28-1.1 Application.

The requirements of this chapter shall apply to both new and existing industrial occupancies. Industrial occupancies shall include factories making products of all kinds and properties used for operations such as processing, assembling, mixing, packaging, finishing or decorating, repairing, and similar operations.

Unlike most occupancies covered in the *Code*, both new and existing industrial occupancies are covered in one chapter. Where the requirements vary, it is common for exceptions that apply to existing industrial occupancies to appear or for additional requirements that are limited to new industrial occupancies to be included.

The statistics provided by the national fire incident databases demonstrate that the potential loss of life from fire in an industrial occupancy is directly related to the hazard of the industrial operation or process. Most multiple-death industrial fires are the result of flash fires caused by highly combustible material or explosions involving combustible dusts, flammable liquids, or gases.

Although industrial fire losses constitute a high percentage of the annual property loss from fire, such fires have not, as a general rule, resulted in extensive loss of life. A number of operating features common

to industrial occupancies have contributed to this favorable record. Continued emphasis on proper egress design and maintenance and day-to-day attention to industrial safety and training programs can help to perpetuate this trend.

One of the major features to be considered in the design of an industrial building's life safety system is the widespread utilization of automatic sprinkler protection. Originally developed for industrial property protection, the automatic sprinkler has also been largely responsible for an excellent life safety record in industrial occupancies. This record has been recognized by the fire protection community, as evidenced by the widespread use of automatic sprinkler systems for life safety protection in buildings with significant hazards to life. Automatic sprinkler protection in industrial occupancies has been a principal factor in ensuring safety to life through the control of fire spread. Limiting the size of a fire by means of sprinklers provides sufficient time for the safe evacuation of occupants exposed to fire. The contribution of the automatic sprinkler to safety to life can be fully appreciated only when the wide range of fire risks associated with the many processes used in an industrial facility are recognized.

Employees and other occupants of industrial buildings are generally ambulatory and capable of quick response to fires. They are also able to exit rapidly once properly alerted. To capitalize on this employee capability, many industrial facilities include life safety measures in their emergency preplanning. A well-conceived plan provides a valuable tool in preventing loss of life. Provisions that should be part of the emergency preplan include measures for alerting employees, identification and posting of exit access routes, establishment of group assembly areas for occupants once they have evacuated the building, and procedures for determining that all employees have safely evacuated. Responsibilities are usually established and assigned in the preplan to ensure that the tasks necessary to facilitate safe evacuation of the building are performed. The preplan should routinely be evaluated through simulated fire exercises and drills. Only through the execution of such drills can flaws in the preplan be recognized and modified.

Although the life safety record in industry has been relatively good, a major problem may be emerging in the trend toward constructing large industrial plants that house hazardous operations. The introduction of new materials, such as extensive quantities of plastics, has increased the need for additional measures to help protect employees from fire. Com-

pared with industrial buildings of the early twentieth century, the modern industrial complex has placed a larger number of employees in a more complex and increasingly hazardous environment. This trend has increased the need for industrial management to concentrate on life safety principles, not only during the design stage, but also during day-to-day plant operations.

As part of their employee training programs, most industrial firms include education in the use of first aid fire-fighting equipment, such as in-plant standpipes, hose, and portable fire extinguishers. Industrial training of this type, where fully utilized, has resulted in a major reduction in property loss and life loss. Although first aid fire-fighting measures are primarily a property protection measure, there is also a significant life safety benefit. In any situation where the spread of a fire is checked through effective employee action, employee life safety is also provided. If fire spread is restricted to the incipient stages, there is no significant threat to life safety.

28-1.2 Mixed Occupancies.

In any building occupied for both industrial and other purposes, means of egress shall comply with 4-1.12.

In addition to requiring that the means of egress complies with 4-1.12, which covers mixed occupancies, the intent of this paragraph is that the other life safety features addressed by the *Code* comply with 4-1.12.

28-1.3 Special Definitions.

(None.)

Although no special definitions are listed in 28-1.3, industrial occupancies are subclassified and defined in 28-1.4.1(a), (b), and (c) under the labels *general industrial occupancy*, *special purpose industrial occupancy*, and *high hazard industrial occupancy*.

28-1.4 Classification of Occupancy.

(See 4-1.9.)

The method for determining the degree of hazard to life safety posed by an industrial occupancy is at best a result of personal judgment and not an exact

ence. The authority having jurisdiction must use judgment based on past experience, a review of reference materials, and full discussion with third parties to evaluate the life safety measures in an industrial occupancy. The *Code* establishes broad categories of occupancy classification so that the relative risks to life safety posed by various types of buildings can be assessed.

A common error made when classifying industrial occupancies is the use of hazard categories for automatic sprinklers contained in NFPA 13, *Standard for the Installation of Sprinkler Systems*,¹ to determine the hazard to life safety. While the guidelines in NFPA 13 may not differ greatly from those of the *Life Safety Code* when classifying high hazard occupancies, the remaining categories in NFPA 13 are usually not suitable for the general industrial occupancy classification of the *Code*. This is particularly true when classifying low hazard occupancies, which are classified differently by NFPA 13 (light hazard) than by the *Life Safety Code*. The distinction is that the life safety industrial occupancy classification is concerned with determining the overall hazard to occupants in a manufacturing building for purposes of implementing an adequate means of egress system, while the NFPA 13 classification system is concerned with determining the hazard so that a sprinkler system can be designed to meet the challenge of the hazard.

To examine the conflicts between life safety occupancy classification and classifications in other fire codes, consider a metalworking plant using a flammable solvent in a dip tank coating operation. From a life safety standpoint, the normally ordinary hazard classification of the metalworking plant should not be changed to high hazard solely because of the presence of a dip tank coater. An adequate means of safe egress leading away from the coater is needed to ensure the safety of the occupants, but additional exits and a reduction in travel distance to an exit, as specified for a high hazard area, are not required. However, if the coater is the principal piece of equipment in a separately enclosed area, that area should be considered as a high hazard industrial occupancy.

When determining the life safety hazard classification for an industrial occupancy, the authority having jurisdiction should carefully analyze the nature of that industrial operation to ensure an accurate evaluation of the hazard to occupants. A number of resources are available as aids to properly determine the degree of risk to life safety. One aid that should not be overlooked is the expertise of the industrial plant operator. The operator has available a wealth of hazard information. However, the information may

be treated as confidential material to prevent competitors from learning the details of an industrial process. An enforcing authority should earn the trust of the operator by carefully handling such material. It is vital that process data be kept confidential, because once an enforcing authority is known to be a source of data on industrial secrets, further cooperation will be difficult to obtain.

Another resource is the engineering department of the company responsible for a facility's insurance coverage. In addition, discussions with officials who oversee jurisdictions where similar facilities exist and a review of NFPA literature will provide further information on a particular process and its associated hazards.

To assess the risk to life safety in an industrial occupancy, a number of factors should be considered. It should be determined if the manufacturing process includes the handling of flammable, reactive, or explosive materials in quantities that could expose occupants to an initial fire or explosion. If so, the occupancy is a strong candidate for a high hazard classification.

It should also be determined whether the manufacturing process requires a large number of people or whether it is basically a large collection of machines or equipment occasionally attended by operators. In some instances, the operators may be clustered in one location, such as a control room. If a building is predominantly occupied by machinery or equipment and is used by few employees, the building can be classified as a special purpose industrial occupancy. See 28-1.4.1(b).

If an industrial building is used mostly for storage of materials (such as preparatory stock for assembly or finished goods), it might meet the requirements for classification as a storage occupancy. See Chapter 29.

Occupancy classification is dependent on the burning and explosive characteristics of the materials contained in a building, not on the quantity of combustibles. For example, there is no reason to classify a building as high hazard simply because it is associated with a manufacturing process that requires extensive quantities of ordinary combustible materials distributed in such a manner that the process would involve a high combustible load.

The classification of an industrial occupancy for life safety purposes does not depend on the type of structure housing the industrial process. The basic purpose of the hazard classification in Chapter 4 is to evaluate the risk of contents (see Section 4-2). The classification is determined by an evaluation of the

contents and other factors in a fire's development that affect the time available for safe evacuation of the occupants. Once employees are evacuated to a safe location, the extent of fire spread in the structure becomes a threat to property. As long as life safety measures are met, the threat of heavy fire damage to a building is beyond the scope of the *Life Safety Code*. Also see the commentary following 28-1.4.1(b) and 28-1.4.1(c).

28-1.4.1 Subclassification of Industrial Occupancies. Each industrial occupancy shall be subclassified according to its use as follows:

(a) *General Industrial Occupancy.* Ordinary and low hazard industrial operations conducted in buildings of conventional design suitable for various types of industrial processes. Included are multistory buildings where floors are occupied by different tenants or buildings suitable for such occupancy and, therefore, subject to possible use for types of industrial processes with a high density of employee population.

(b) *Special Purpose Industrial Occupancy.* Includes ordinary and low hazard industrial operations in buildings designed for and suitable only for particular types of operations, characterized by a relatively low density of employee population, with much of the area occupied by machinery or equipment.

It can be difficult to determine if a building qualifies as a special purpose industrial occupancy. For example, a structure is often erected to protect a large machine or equipment from weather. Once constructed, authorities might try to impose exit requirements applicable to a general industrial occupancy, despite the fact that there is to be only a handful of personnel occupying the building. Steel mills, paper plants, generating plants, and other operations with large machines are examples of the types of industrial occupancies requiring massive structures for process control and weather protection. These structures often represent minimum hazards to life safety and should be classed as special purpose industrial occupancies. In many of the more modern operations, all process control is conducted from a control room by remote means, which further reduces the number of occupants likely to be exposed to a fire.

However, the special purpose industrial occupancy classification cannot be applied to a building simply to reduce egress requirements. Economic considerations, or staffing limitations that result in occupancy by fewer employees than usual, cannot be used

as justification for reducing life safety features. The full number and arrangement of exits required for a general industrial occupancy should be maintained. A reduction in aisles, doors, stairways, and other components of the means of egress cannot be justified by the temporary classification of a building as a special purpose industrial occupancy.

(c)* *High Hazard Industrial Occupancy.* Includes buildings having high hazard materials, processes, or contents. Incidental high hazard operations in low or ordinary occupancies and protected in accordance with Section 4-2 and 28-3.2 shall not be the basis for overall occupancy classification.

A-28-1.4.1(c) High hazard occupancy may include occupancies where gasoline and other flammable liquids are handled, used, or stored under such conditions as to involve possible release of flammable vapors; where grain dust, wood flour or plastic dusts, aluminum or magnesium dust, or other explosive dusts may be produced; where hazardous chemicals or explosives are manufactured, stored, or handled; where cotton or other combustible fibers are processed or handled under conditions that might produce flammable flyings; and other situations of similar hazard.

Chapter 28, Industrial Occupancies, and Chapter 29, Storage Occupancies, include detailed provisions on high hazard occupancy.

A high hazard occupancy classification is limited to those industrial buildings housing extremely hazardous operations. Incidental use of restricted quantities of flammable liquids in a building does not constitute a high hazard, although some additional life safety precautions may be required during the limited period of use. Refer to NFPA 30, *Flammable and Combustible Liquids Code*,² for guidance. Storage of flammable liquids, such as paint, in sealed containers does not require a high hazard occupancy classification unless the operation includes mixing or blending operations that require the containers to be opened. Mixing and blending of flammable liquids can be conducted in a separate room with a fire barrier between the storage and mixing areas. In this operation, the mixing and blending room would be considered a high hazard industrial occupancy, while the adjacent, fire-separated storage area would be considered a general purpose industrial occupancy or possibly a storage occupancy subject to the requirements of Chapter 29.

Combustible dusts released from an industrial or manufacturing process constitute a significant threat to life safety and might justify a high hazard

classification. Major loss of life has occurred in industrial occupancies that release extensive quantities of combustible dusts. Opportunity for the quick escape of employees who work in operations releasing combustible dust should be provided to prevent injury or loss of life if a dust explosion occurs. In high hazard occupancies that are subject to explosions, the provisions of 28-3.2 require special consideration of the techniques for explosion suppression or venting to ensure the life safety of occupants. Full utilization of fire protection engineering techniques should be employed in these occupancies to minimize the risk to life safety.

The industrial occupancies that clearly require classification as a high hazard are those associated with the production of explosives or highly reactive chemicals. In some especially hazardous operations, additional exits will be necessary to ensure rapid egress to prevent loss of life in the event of an explosion or fire. Where installation of the preventive or protective measures specified in 28-3.2 is not possible due to the nature of the industrial operation, consideration should be given to operating procedures that restrict access to a limited number of people during the hazardous portion of the operation. The operating procedures would limit the potential threat to those trained personnel who are fully aware of the extent of the hazard. Procedures should also include a record of personnel who have signed in or out to ensure prompt determination of the number of personnel exposed to a hazardous operation, and thus the number who may require rescue.

28-1.5 Classification of Hazard of Contents.

Classification of hazard of contents shall be as defined in Section 4-2.

28-1.6 Minimum Construction Requirements.

(No requirements.)

Some occupancy chapters, such as Chapters 12 and 13, which address the life safety needs of nonambulatory health care occupants, specify minimum building construction type requirements to help ensure structural integrity for the time period needed for a lengthy evacuation or for safe refuge within the building. There are no minimum construction requirements imposed, because industrial occupancies characteristically have ambulatory occupants and do not provide sleeping accommodations.

28-1.7* Occupant Load.

The occupant load for which means of egress shall be provided from any floor of an industrial occupancy shall be the maximum number of persons intended to occupy that floor, but not less than one person for each 100 sq ft (9.3 sq m) of gross floor area.

Exception: In a special purpose industrial occupancy, the occupant load shall be the maximum number of persons to occupy the area under any probable conditions.

A-28-1.7 In most cases, the requirements for maximum travel distance to exits will be the determining factor rather than numbers of occupants, as exits provided to satisfy travel distance requirements will be sufficient to provide egress capacity for all occupants, except in cases of unusual arrangement of buildings or high occupant load of a general manufacturing occupancy.

The occupant load of an industrial building is based on an average of 100 sq ft (9.3 sq m) of gross floor area per occupant. Many industrial users of the Code confuse this concept with the actual number of employees who use the facility. The usual complaint is that the number of potential employees calculated for egress purposes in accordance with the 100-sq ft (9.3-sq m) criterion far exceeds the anticipated or actual number of employees. Many industrial managers argue that using the larger number as a basis for egress design requires more exits, wider doors, and more passageways than are needed for emergency egress purposes, reducing productive work space and resulting in increased cost.

The concept of determining occupant load by using an occupant load factor is useful, although it does not necessarily relate directly to the actual number of building occupants. It is a means of calculating the minimum egress requirements based on the needs of an average industrial occupancy. Although actual conditions may vary in an individual location, the amount of egress width determined by the occupant load calculation will normally provide the necessary, adequate, and required means of egress for a typical industrial building with little or no penalty to the building's owner/operator.

See Figure 28-1 for examples of occupant load determination using the occupant load factor for a general industrial occupancy and using the probable number of occupants for a special purpose industrial occupancy.

In Figure 28-1, illustration (a), the general industrial occupancy must provide a means of egress for at least 2000 persons based on use of an occupant load factor of 1 person per 100 sq ft (9.3 sq m).

In Figure 28-1, illustration (b), a special purpose industrial occupancy can size its means of egress for the maximum 20 persons (actual anticipated employee population) who are apt to occupy the facility under any probable condition.

In Figure 28-1, illustration (c), the 200-person tour groups that visit this special purpose industrial occupancy on the first Monday of each month must be added to the 45 employees (actual employee population) who are normally present, for a total occupant load of 245 persons.

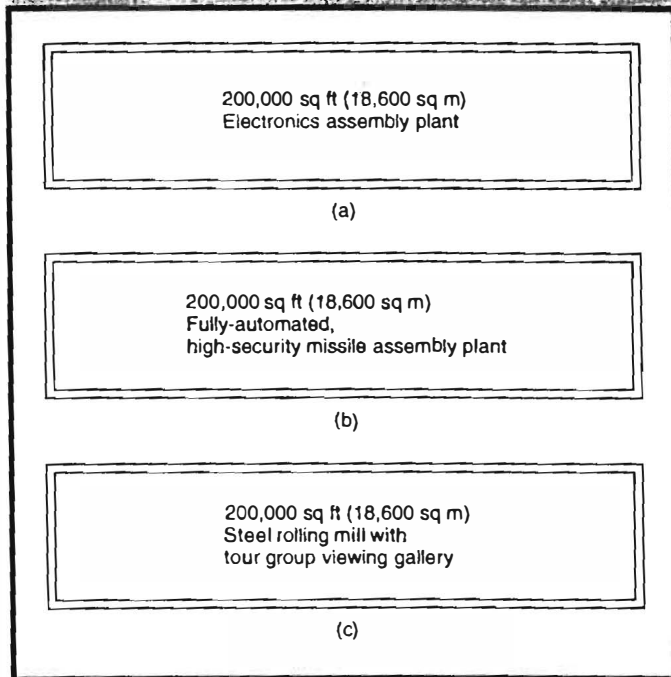


Figure 28-1. Determination of occupant load of industrial occupancies. See the commentary associated with 28-1.7.

Section 28-2 Means of Egress Requirements

28-2.1 General.

Each required means of egress shall be in accordance with the applicable portions of Chapter 5.

28-2.2 Means of Egress Components.

28-2.2.1 Components of means of egress shall be limited to the types described in 28-2.2.2 through 28-2.2.13.

28-2.2.2 Doors.

28-2.2.2.1 Doors complying with 5-2.1 shall be permitted.

28-2.2.2.2 Delayed egress locks complying with 5-2.1.6.1 shall be permitted.

Use of the delayed egress locking device covered by 5-2.1.6.1 is allowed on any door in recognition of the security needs of some industrial occupancies. In effect, the allowable 15- or 30-second delay will be experienced only under nonfire condition or very early in a fire's growth, because the door must be usable immediately upon sprinkler operation, or smoke or heat detection, or loss of power controlling the locking mechanism. The building must be protected throughout by an approved automatic sprinkler system or automatic fire detection system.

28-2.2.2.3 Access-controlled egress doors complying with 5-2.1.6.2 shall be permitted.

The Code recognizes access-controlled egress doors in industrial occupancies as security measures that do not compromise the use of the means of egress system.

28-2.2.2.4 Existing horizontal sliding fire doors shall be permitted in the means of egress under the following conditions:

- They are held open by fusible links,
- The links are rated at not less than 165°F (74°C),
- The fusible links are located not more than 10 ft (3 m) above the floor,
- The fusible link is in immediate proximity to the door opening,
- The fusible link is not located above a ceiling, and
- The door is not credited with providing any protection under this Code.

Horizontal sliding fire doors exist in many industrial occupancies for property protection purposes. Although the Code normally does not recognize these doors within the required means of egress, Paragraph 28-2.2.2.4 makes a special exemption for existing horizontal sliding fire doors. By requiring the fusible link to be positioned in immediate proximity to the door opening, rated 165°F (74°C) or higher, and located not more than 10 ft (3 m) above the floor, the Code helps to assure that the door will remain open until rising temperatures make it unsafe to pass through the door opening. In recognition that the door will not close early in the fire development, the door cannot be credited as a fire door for life safety purposes.

However, it might serve for property protection purposes. See Figure 28-2.

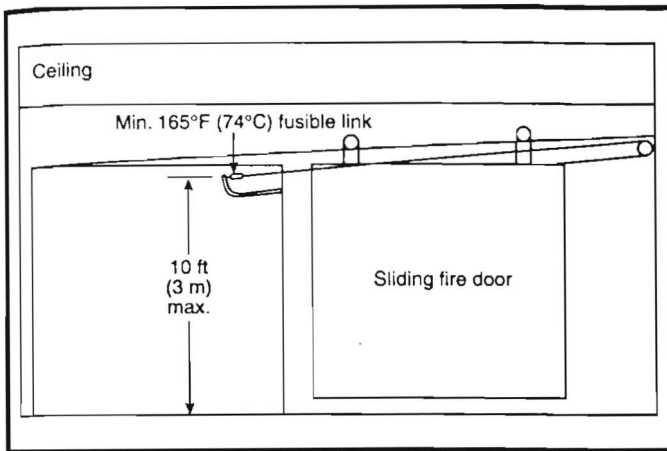


Figure 28-2. Existing horizontal sliding fire door in accordance with 28-2.2.2.4. By requiring the fusible link to be positioned in immediate proximity to the door opening, rated 165°F (74°C) or higher, and located not more than 10 ft (3 m) above the floor, the door should remain open until rising temperatures make it unsafe to pass through the door opening.

28-2.2.3 Stairs.

28-2.2.3.1 Stairs complying with 5-2.2 shall be permitted.

Exception No. 1: Noncombustible grated stair treads and landing floors.

Exception No. 2: Industrial equipment access in accordance with 28-2.5.6.

Exception No. 1 to 28-2.2.3.1 exempts stair treads and landings in industrial occupancies from the provisions of 5-2.2.3.3, which would otherwise require that all stair treads and stair landing floors be solid. Although the requirement for solid treads and landing floors is intended to prevent occupants from avoiding use of the stair because they become afraid when they are able to see through the openings to the floor or ground below, occupants of industrial occupancies are usually more familiar, and thus more comfortable, with grated or expanded metal treads and landings. The grated walking surfaces provide slip resistance in what can sometimes be greasy and slippery surroundings. For consistency, an exception appears in 5-2.2.3.3 to alert the user that industrial occupancies, in accordance with Chapter 28, are exempt from the solid tread and landing provisions.

Exception No. 2 serves to remind the user that 28-2.5.6 has special provisions for industrial equip-

ment access stairs that differ from the requirements of Chapter 5. See the commentary following 28-2.5.6.

28-2.2.3.2 Spiral stairs complying with 5-2.2.2.4 shall be permitted.

Note that 5-2.2.2.4 permits spiral stairs to serve only an occupant load of five or fewer persons. Spiral stairs may be effectively used in industrial occupancies to provide exit access from small mezzanines, platforms, and equipment.

28-2.2.3.3 In existing buildings, winders complying with 5-2.2.2.5 shall be permitted.

28-2.2.4 Smokeproof Enclosures. Smokeproof enclosures complying with 5-2.3 shall be permitted.

This paragraph does not mandate the use of smokeproof enclosures. However, it does recognize a smokeproof enclosure as part of the means of egress system in an industrial occupancy only if the smokeproof enclosure meets the requirements of 5-2.3. For an example of an occupancy requiring a smokeproof enclosure, see 19-2.11 in which existing, nonsprinklered high-rise apartment buildings are required to be provided with smokeproof enclosures in accordance with 5-2.3. See 28-2.2.1.

28-2.2.5 Horizontal Exits.

28-2.2.5.1 Horizontal exits complying with 5-2.4 shall be permitted.

This paragraph does not mandate the use of horizontal exits. However, it does recognize a horizontal exit as part of the means of egress system in an industrial occupancy only if the horizontal exit meets the requirements of 5-2.4, as modified by 28-2.2.5.2. See 28-2.2.1.

28-2.2.5.2* In horizontal exits where the doorway is protected by a fire door on each side of the wall in which it is located, one fire door shall be of the swinging type as provided in 5-2.4.3.6 and the other shall be permitted to be an automatic sliding fire door that shall be kept open whenever the building is occupied.

A-28-2.2.5.2 The customary building code requirement for fire doors on both sides of an opening in a fire wall may

be met by having an automatic-sliding fire door on one side, and self-closing fire door swinging out from the other side of the wall. This arrangement qualifies only as a horizontal exit from the side of the sliding door. (For further information, see A-5-2.4.3.8.)

The intent of 28-2.2.5.2 is to recognize the common practice of combining a horizontal exit used for life safety with a fire barrier of significant fire resistance rating used for property protection. Opening protectives for such a fire barrier can require the use of a set of doors to achieve the required fire protection rating. It is impractical for both doors to swing in the same direction without interfering with each other; yet operation of two doors that swing in opposite directions is cumbersome for daily or common usage. One swinging and one sliding door, as shown in Figure 28-3, provide an acceptable arrangement for day-to-day functioning of the building. The open sliding door does not compromise life safety, because by the time its fusible link mechanism releases the door and allows it to close, temperatures in the vicinity of the door opening render use of the door impractical. See also the commentary on 28-2.2.2.4. The provisions of 28-2.2.2.4 also permit an existing horizontal sliding door (as depicted in Figure 28-2) to serve within the means of egress.

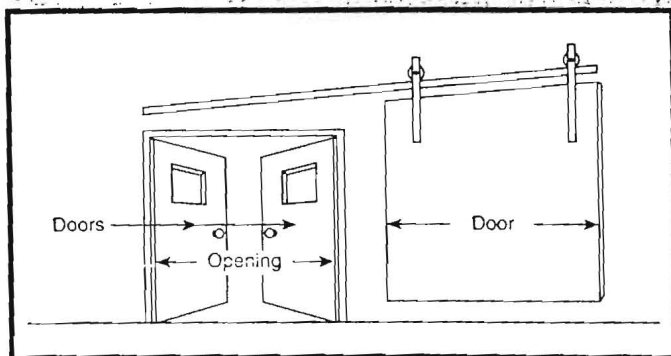


Figure 28-3. Example of combination swinging and sliding doors allowed by 28-2.2.5.2.

28-2.2.6 Ramps. Ramps complying with 5-2.5 shall be permitted.

Exception: Industrial equipment access in accordance with 28-2.5.6.

This paragraph does not mandate the use of ramps in industrial occupancies. However, it does recognize

a ramp as part of the means of egress system only if the ramp meets the requirements of 5-2.5. See 28-2.2.1.

The Exception serves to remind the user that 28-2.5.6 has special provisions for industrial equipment access ramps that differ from the requirements of Chapter 5. See the commentary following 28-2.5.6.

28-2.2.7 Exit Passageways. Exit passageways complying with 5-2.6 shall be permitted.

This paragraph does not mandate the use of exit passageways in industrial occupancies. However, it does recognize an exit passageway as part of the means of egress system only if the exit passageway meets the requirements of 5-2.6. See 28-2.2.1.

28-2.2.8 Escalators and Moving Walks. In existing buildings, previously approved escalators and moving walks complying with 5-2.7 and located within the required means of egress shall be permitted.

Note that 5-2.7 allows existing escalators and moving walks to continue to be recognized within the required means of egress if an occupancy chapter so allows. In earlier editions of the Code, such escalators and moving walks may have been recognized as providing egress capacity for 75 persons. To qualify as exits, escalators and moving walks must also meet the requirements of 5-1.3.2, which addresses exit enclosures.

Note that escalators protected in accordance with the sprinkler-vent, spray nozzle, rolling shutter, or partial enclosure method do not constitute acceptable exits, but can continue to serve as exit access if previously approved as such.

28-2.2.9 Fire Escape Stairs. Existing fire escape stairs complying with 5-2.8 shall be permitted.

28-2.2.10 Fire Escape Ladders. Fire escape ladders complying with 5-2.9 shall be permitted.

Exception: Fixed industrial stairs in accordance with ANSI A1264.1, *Safety Requirements for Workplace Floor and Wall Openings, Stairs and Railings Systems*, minimum requirements for fixed stairs shall be permitted where fire escape ladders are permitted in accordance with 5-2.9.1.

The geometry associated with the incline angle and the size and shape of surfaces intended for foot

placement on fire escape ladders falls within the range permitted for fixed industrial stairs. However, most fixed industrial stairs meet criteria that result in a safer arrangement than that provided by the fire escape ladder detailed in 5-2.9. Therefore, the Exception to 28-2.2.10 recognizes fixed industrial stairs as substitutes for fire escape ladders.

28-2.2.11 Slide Escapes. Approved slide escapes complying with 5-2.10 shall be permitted as components in 100 percent of the required means of egress for both new and existing high hazard industrial occupancies. Slide escapes shall be counted as means of egress only where regularly used in drills so that occupants are familiar with their use through practice.

The intent of 28-2.2.11 is to allow the use of slide escapes, which are a common means of egress from areas housing explosives or other highly hazardous materials in chemical industry buildings. This provision allows consideration of slide escapes as part of the required means of egress from both new and existing high hazard industrial occupancies. In many high hazard industrial occupancies, slide escapes are the only practical means of ensuring safe egress prior to an explosion or flash fire.

28-2.2.12 Alternating Tread Devices. Alternating tread devices complying with 5-2.11 shall be permitted.

The provisions of 5-2.11, in effect, limit the use of alternating tread devices to those locations where the Code recognizes the use of fire escape ladders (and fixed industrial stairs). See 28-2.2.10, Exception to 28-2.2.10, 5-2.9, and 5-2.11.

28-2.2.13 Areas of Refuge. Areas of refuge complying with 5-2.12 shall be permitted.

28-2.3 Capacity of Means of Egress.

The capacity of means of egress shall be in accordance with Section 5-3.

Editions of the Code prior to 1991 required a minimum 44-in. (112-cm) width for corridors and passageways within the required means of egress of industrial occupancies. A corridor or passageway of that minimum width would provide egress capacity for 220 persons [that is, 44 in. / 0.2 in. per person (approx-

mately 112 cm / 0.5 cm per person) in accordance with 5-3.3.1 for level travel components]. The prior requirement produced artificially large egress systems, when compared to the occupant load, for many industrial occupancies. The requirement was dropped, and the minimum 36-in. (91-cm) width requirement of 5-3.4.1, which addresses the width of any exit access, was made applicable to industrial occupancies. Exit access is required to be wider than 36 in. (91 cm) only if a corridor or passageway in an industrial occupancy is to provide capacity for more than 180 persons [that is, 36 in. / 0.2 in. per person (approximately 91 cm / 0.5 cm per person)].

Exception: In special purpose industrial occupancies, means of egress shall be sized to accommodate the occupant load as determined in accordance with the Exception to 28-1.7; spaces not subject to human occupancy because of the presence of machinery or equipment shall be excluded from consideration.

The Exception to 28-2.3 places practical limits on the number of required means of egress and on the arrangement of the means of egress in a special purpose industrial occupancy. There is no life safety purpose served by providing exits from the center of a large machine or equipment installation that is unoccupied under normal operating conditions. A number of industries provide weather shelter for large processes and equipment. Typical examples include steel rolling mills, paper extruders, and metal-working machines, all of which occupy a majority of the floor space in the sheltered building. In many of the more sophisticated operations, full process control is conducted from a remotely located control room. Personnel normally occupy the building only for maintenance and adjustment purposes, and then only on a limited basis. To provide exits from these special purpose industrial occupancies would serve no useful purpose and could unjustly impose an economic penalty in the name of safety.

The large areas normally enclosed by special purpose structures would require excessive egress width if the occupant load were calculated on the basis of 100 sq ft (9.3 sq m) per person. If provisions for the capacity of the means of egress in a special purpose industrial occupancy were based on the requirements specified for general industrial occupancies, the result would be extensive egress facilities for nonexistent occupants. Such arrangements might actually result in the requirement of exits from the interior of machinery and equipment installations, which

would be incompatible with the equipment's design. In many cases, these exits would originate from locations that, even under normal operating conditions, would be considered dangerous for humans. Poorly conceived exit facilities serve no life safety purpose and detract from an otherwise well-designed exit system.

28-2.4 Number of Means of Egress.

(See also Section 5-4.)

28-2.4.1 There shall be not less than two means of egress from every story or section, and at least one exit must be reached without traversing another story.

The provisions of 28-2.4.1, which apply to the minimum required number of means of egress for industrial occupancies clarify that, in addition to providing every story or section with access to at least two means of egress, one of the exits must be located on each floor so that the entrance to that exit (for example, a door that opens into an enclosed exit stair) can be reached without having to travel to another floor.

Exception: In low and ordinary hazard industrial occupancies, a single means of egress shall be permitted from any story or section, provided that the exit can be reached within the distance allowed as common path of travel. (See 28-2.5.3.)

This exception recognizes that there are small floors or areas in low and ordinary hazard industrial occupancies that, if provided with access to only a single exit, are no less safe than larger areas of a building that have access to two exits where an occupant must first travel through the maximum allowable common path. Where a single exit is provided, the occupant travels the 50 ft (15 m) [or 100 ft (30 m) in sprinklered buildings] of common path allowed by 28-2.5.3, enters the exit (see Figure 28-4), and is judged to have reached a point of safety. In larger buildings and larger building areas that do not meet the limited travel distance for a single exit, a minimum of two exits must be provided. By traveling to the nearer of the two exits, the occupant is permitted to travel the same 50 ft (15 m) [or 100 ft (30 m) in sprinklered buildings] of common path that the occupant of the single exit building traveled to reach the one exit before reaching the point where travel to the two exits in different directions is possible. Although the

occupant of the single-exit building has reached an exit by this point, the occupant of the multiple-exit building is then allowed an additional 150 ft (45 m) [200 ft (60 m) if building is sprinklered] of exit access travel before the safety of an exit must be reached. Therefore, the exception for the single exit provides a level of life safety at least equivalent to that of the multiple-exit building.

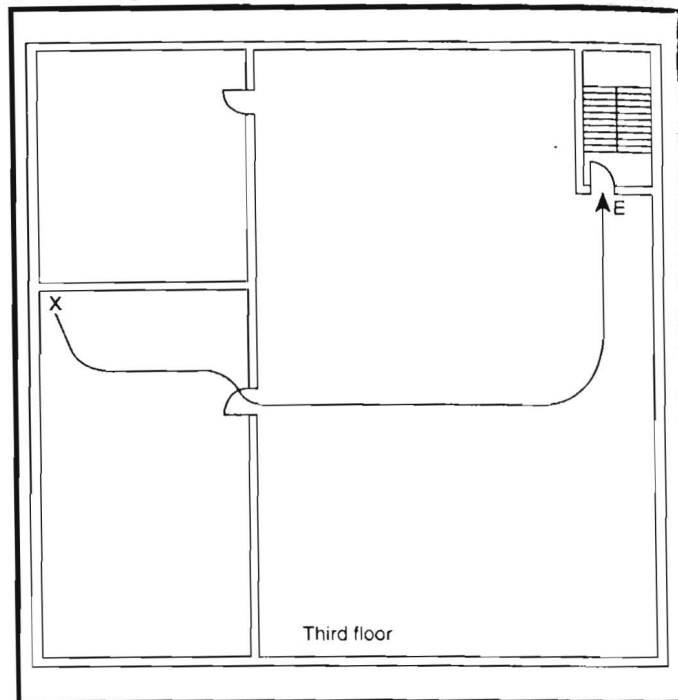


Figure 28-4. Example of single means of egress from a story of a low or ordinary hazard industrial occupancy. This is permitted, provided the distance to the single exit (X to E) does not exceed the allowable common path of travel [50 ft (15 m), or 100 ft (30 m) if building is sprinklered, in accordance with 28-2.5.3].

28-2.4.2 Floors or portions thereof with an occupant load of more than 500 shall have the minimum number of separate and remote means of egress specified by 5-4.1.2.

Exception: Existing buildings.

Historically, the Code has required more than two exits based on occupant load for assembly occupancies only. Third, fourth, and subsequent exits were provided in industrial occupancies to meet travel distance requirements or as a convenience for day-to-day use. Paragraph 5-4.1.2 extends the concept of requiring three or four exits based on occupant load to all occupancies. The Exception to 28-2.4.2, in com-

pliance with the option offered by the Exception to 5-4.1.2, exempts existing buildings from the requirement for third and fourth exits to avoid forcing existing, previously complying means of egress systems into noncompliance.

28-2.4.3 Areas with high hazard contents shall comply with Section 5-11.

Section 5-11, Special Provisions for Occupancies with High Hazard Contents, includes an adequate set of provisions for high hazard areas and is referenced by this chapter to provide commensurate protection to industrial occupancies that contain high hazard areas. The provisions of Section 5-11 are vital to life safety in high hazard occupancies. The requirement for two means of egress for all high hazard occupancies recognizes that there is the possibility that a fire or explosion might block or destroy one of the two exits. Two separate and equal means of egress from high hazard areas provide a necessary redundancy to ensure the evacuation of occupants under fire or explosion conditions and to minimize the potential for injury or loss of life. The Exception to 5-11.3 recognizes that it is not necessary to require two means of egress from very small high hazard areas [maximum 200 sq ft (18.6 sq m)], with limited occupant load (maximum 3 persons), if the room door can be reached within 25 ft (7.6 m) of travel.

28-2.5 Arrangement of Means of Egress.

28-2.5.1 Means of egress shall be arranged in accordance with Section 5-5.

28-2.5.2 Dead-end corridors in general industrial and special purpose industrial occupancies shall not exceed 50 ft (15 m).

28-2.5.3 Common paths of travel in general industrial and special purpose industrial occupancies shall not exceed 50 ft (15 m).

Exception: In buildings protected throughout by an approved, supervised automatic sprinkler system installed in accordance with Section 7-7, common paths of travel shall not exceed 100 ft (30 m).

See the discussion of dead-end corridor pockets and common path of travel in 5-5-1.6 and its associated commentary.

28-2.5.4 Common paths of travel shall be prohibited in high hazard industrial occupancies.

Exception: As permitted by the Exception to 5-11.3.

28-2.5.5 Ancillary Facilities.

28-2.5.5.1* Means of egress from ancillary facilities shall be arranged to permit travel in independent directions such that both means of egress paths are not compromised by the same fire or similar emergency.

Exception: Existing facilities.

A-28-2.5.5.1 Ancillary facilities located within industrial occupancies might include administrative office, laboratory, control, and employee service facilities that are incidental to the predominant industrial function and are of such size that separate occupancy classification is not warranted.

28-2.5.5.2* Ancillary facilities in special purpose industrial occupancies where delayed evacuation is anticipated shall have minimum 2-hr fire resistance-rated separation from the predominant industrial occupancy, and shall have one means of egress that is separated from the predominant industrial occupancy by 2-hr fire resistance-rated construction.

Exception: Existing facilities.

A-28-2.5.5.2 Occupants of ancillary facilities located within special purpose industrial occupancies might be required by administrative controls to remain in the facility when a fire occurs in the predominant industrial area to perform an orderly shutdown of process equipment in order to control the spread of the fire and minimize damage to important equipment.

The presence of ancillary facilities within an industrial occupancy can create unusual challenges to life safety. For example, the means of egress for factory office workers with little knowledge of the industrial processes and operations—and their respective hazards—might require leaving the safety of the office area and traveling across the factory production floor. In other cases, safe egress is not assured to employees assigned to a control room who might have to perform orderly shutdown of certain processes—in order to control the spread of fire—before evacuating a building. The requirements of 28-2.5.5.1 and 28-2.5.5.2 are illustrated in Figure 28-5.

In Figure 28-5, control room 1—with a single means of egress—forces the occupant to travel in one direction only into the open manufacturing area; it does not meet the requirement of 28-2.5.5.1 that egress be arranged to permit travel in independent

directions such that both means of egress paths are not compromised by the same fire or similar emergency. Control room 1 appears to need a second exit access door located remotely from the first.

Control room 2 in Figure 28-5 meets the requirements of both 28-2.5.5.1 and 28-2.5.5.3. It permits egress travel in independent directions such that both means of egress paths are not compromised by the same fire or similar emergency. Further, it provides one of the two means of egress via an exit passage-way-like arrangement separated from the predominant industrial occupancy by 2-hour fire resistance-rated construction. Also, control room 2 itself is surrounded by 2-hour fire resistance-rated construction. This permits occupants charged with special emergency duties to delay their egress and still be afforded adequate life safety.

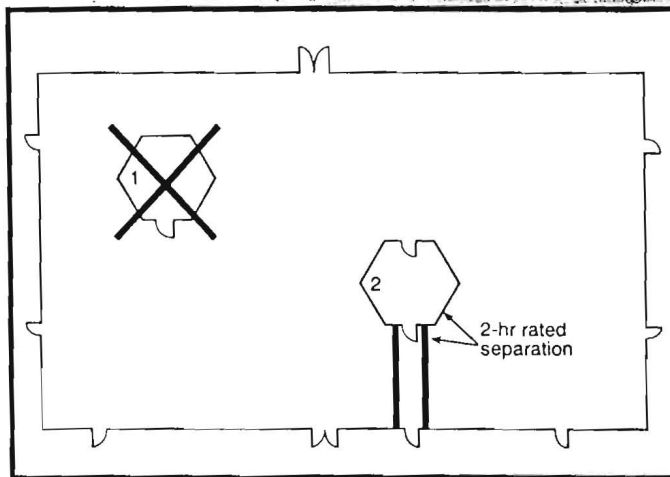


Figure 28-5. Special provisions for ancillary facilities. See the commentary following A-28-2.5.5.2.

28-2.5.6 Industrial equipment access walkways, platforms, ramps, and stairs that serve as a component of the means of egress from the involved equipment shall be permitted in accordance with the applicable provisions of Chapter 5 as modified by Table 28-2.5.6. Any such means of egress component shall not serve more than 20 people.

Paragraph 28-2.5.6 permits industrial equipment access walkways, platforms, ramps, and stairs serving not more than 20 persons to deviate from some of the usual dimensional criteria specified by Chapter 5. The dimensional criteria detailed in Table 28-2.5.6 are illustrated in Figure 28-6.

Table 28-2.5.6 Equipment Access Dimensional Criteria

Minimum horizontal dimension of any walkway, landing, or platform	22 in. (55.9 cm) clear
Minimum stair or ramp width	22 in. (55.9 cm) clear between rails
Minimum tread width	22 in. (55.9 cm) clear
Minimum tread depth	10 in. (25.4 cm)
Maximum riser height	9 in. (22.9 cm)
Maximum height between landings	12 ft (3.7 m)
Headroom, minimum	6 ft 8 in. (203 cm)

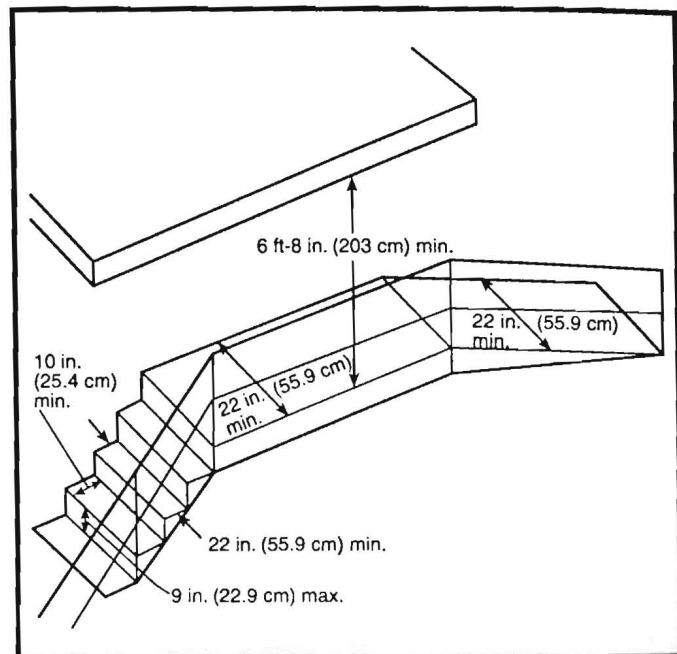


Figure 28-6. Industrial equipment access dimensional criteria. See Table 28-2.5.6.

28-2.6 Travel Distance to Exits.

28-2.6.1 Travel distance, measured in accordance with Section 5-6, shall not exceed 200 ft (60 m).

Exception No. 1: Travel distance shall not exceed 250 ft (76 m) in buildings protected throughout by an approved, supervised automatic sprinkler system installed in accordance with Section 7-7.

Exception No. 2: As permitted by 28-2.6.2.

Exception No. 3: As permitted by 28-2.6.3.

Exception No. 4: Travel distance to exits in high hazard industrial occupancies shall not exceed 75 ft (23 m).

28-2.6.2 In low or ordinary hazard general industrial occupancies, travel distance shall not exceed 400 ft (122 m) if the following additional provisions are met in full:

(a) Application shall be limited to one-story buildings.

(b)* Smoke and heat venting shall be provided by engineered means or by building configuration to ensure that occupants shall not be overtaken by spread of fire or smoke within 6 ft (183 cm) of floor level before they have time to reach exits.

A-28-2.6.2(b) Smoke and heating venting should be in accordance with NFPA 204M, *Guide for Smoke and Heat Venting*.

(c) Automatic sprinkler or other automatic fire extinguishing systems installed in accordance with Section 7-7 shall be provided. The extinguishing system shall be supervised.

The provisions of 28-2.6.2 are meant to provide flexibility in determining the layout of the means of egress system in a single-story industrial building with a large floor area that houses a low or ordinary hazard general industrial occupancy.

The construction of tunnels and elevated means of egress that originate from the center of an industrial building with an extensive floor area is rarely attempted. Only a handful of buildings have ever been provided with such egress facilities, and most were World War II airframe manufacturing buildings of massive size. In most industrial buildings, it is not practicable or economical to construct exit tunnels or overhead passageways. These special types of means of egress are not easily altered if modifications are necessary to adjust to changes in the layout of an industrial facility. In addition, the construction costs for tunnels and elevated passageways are high due to the special design features required to ensure their safety, including fire resistance-rated supports for the elevated passageways, waterproofing, and other features necessary to maintain the integrity of underground tunnels. Another negative factor in such construction is the confining nature of a tunnel or elevated passage, which tends to discourage use of these means of egress.

The use of horizontal exits that pass through firewalls is common in many industrial occupancies. Full consideration of the provisions in Chapter 5 is required to ensure the safe use of these types of exits. A common violation of the provisions of Chapter 5 is the failure to provide the proper type of fire door in a fire wall. A horizontal sliding fire door cannot be considered as an acceptable element of a means

of egress (except in existing installations in accordance with 28-2.2.2.4). Because a horizontal exit may be used from both sides of a fire wall, careful consideration of the direction of door swing is necessary to ensure that the Code will recognize this use. In many instances, two doors swinging in opposite directions will be required so that the exit may be used as a means of egress from both sides of the fire wall. See 5-2.1.4, 5-2.4.3.6, and 28-2.2.5.

The increase in allowable travel distance to 400 ft (122 m) is often applied to exits in a general purpose industrial occupancy classified as a low or ordinary hazard, in accordance with the requirements of 28-2.6.2 (a) through (c).

Subpart (a) limits use of the increased travel distance provisions to one-story buildings. Any stairs or other impediments to the rapid movement of occupants would result in slower evacuation of the building and increase the possibility of exposure to smoke or fire.

To satisfy the intent of 28-2.6.2(b), judgment must be exercised in the design of systems for smoke and heat venting. The provisions of Appendix A of the Code that recommend utilization of the guidelines of NFPA 204, *Guide for Smoke and Heat Venting*,³ should be sufficient in most instances. In addition, in accordance with the recommendations of A-7-3.1, NFPA 92B, *Guide for Smoke Management Systems in Malls, Atria, and Large Areas*,⁴ can be consulted when designing buildings with ceilings of heights approximating those of covered mall buildings and atria.

The limitation on smoke accumulation in 28-2.6.2(b) is a key factor in the design of the smoke removal system. The average evacuation speed of a person who is walking is approximately 250 ft (76 m) per minute, or a little over 4 ft (1.2 m) per second. Where this evacuation speed is applied to the 400-ft (122-m) travel distance allowed by the Code, the maximum time required to reach an exit should not exceed 2 minutes. It is an extremely rare situation in which the smoke that accumulates in an industrial building is so extensive that it fills the structure and descends to less than 6 ft (1.8 m) above the floor level in 2 minutes. The added benefit of a properly designed system for smoke and heat venting ensures that there will be little possibility that the means of egress will be blocked by smoke.

The use of available, computerized smoke-filling and evacuation time models can provide documentation that permits a designer to meet the smoke and heat venting requirements in some buildings by providing only a high ceiling and no mechanical smoke removal equipment.

The installation of a complete automatic extinguishing system as required by 28-2.6.2(c) is intended to ensure control and extinguishment of incipient fires and ultimately minimize exposure of the occupants to a fire. It is not the intent of this paragraph to allow only an automatic sprinkler system to provide the required protection, because a number of equally effective extinguishing agents and systems may be used for specific industrial fire hazards. The importance of this provision is the requirement for automatic initiation of the fire control and extinguishing system to minimize the extent of the occupants' exposure to fire. The installed system is required to be fully supervised to ensure that it will operate when a fire occurs. Adequate procedures must be provided by the building's owner or tenant to ensure the prompt correction of any impairments to the extinguishing systems. In some facilities, the degree of fire risk during the impairment period may require limitations on hazardous operations and the number of occupants so that the level of safety to life will be equivalent to that provided when the extinguishing system is operational.

28-2.6.3 In low or ordinary hazard special purpose industrial occupancies, travel distance shall not exceed 300 ft (91 m), or if the building is protected throughout by a supervised, automatic sprinkler system installed in accordance with Section 7-7, travel distance shall not exceed 400 ft (122 m).

Low and ordinary hazard special purpose industrial occupancies, which are characterized by large, specialized equipment and low occupant load, are allowed an increase in travel distance over that allowed for low and ordinary general industrial occupancies. Paragraph 28-2.6.3 permits an increase to 300 ft (91 m) if the building is not sprinklered, and to 400 ft (122 m) if the building is protected throughout by a supervised sprinkler system, without mandating the additional requirements of 28-2.6.2.

For a summary of the various travel distance allowances for industrial occupancies, see Figure 28-7.

28-2.7 Discharge from Exits.

Discharge from exits shall be in accordance with Section 5-7.

The purpose of 5-7.2 is to control the arrangement of exits from upper stories that discharge to the outside through the level of exit discharge. Paragraph 5-7.2

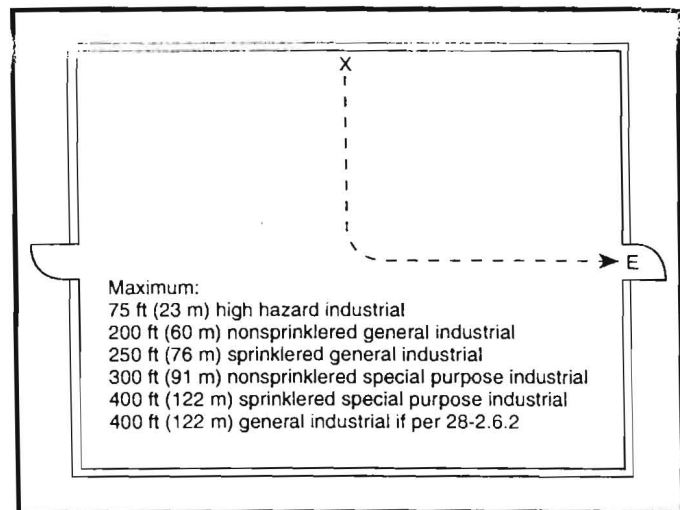


Figure 28-7. Summary of industrial occupancy travel distance options allowed by 28-2.6.1 through 28-2.6.3.

modifies the general rule for complete enclosure of exits up to their point of discharge to the outside of the building, because the safeguards specified in 5-7.2—especially automatic sprinkler protection for the level of exit discharge—maintain reasonable safety. When the arrangement of exits is evaluated, a stairway is not considered as discharging through the level of discharge if it leads to the outside through an exit passageway in accordance with 5-2.6. This is true despite the fact there are doors—in the exit passageway walls—between the base of the enclosed stairway and the door to the outside on the level of exit discharge.

28-2.8 Illumination of Means of Egress.

Illumination of means of egress shall be provided in accordance with Section 5-8.

Exception: Structures occupied only during daylight hours, with skylights or windows arranged to provide the required level of illumination on all portions of the means of egress during these hours.

Paragraph 28-2.8 is not meant to require the installation of extensive and unneeded illumination systems in industrial occupancies. Illumination is required for the exit access, which is limited to designated aisles, corridors, and passageways that lead to an exit. There is no requirement for the provision of illumination throughout the building, which in many industrial

occupancies would involve lighting an extensive floor area. The purpose of the lighting system is to ensure that occupants are able to see the means of egress and not to illuminate the operation of production facilities.

In addition, the Code does not require illumination of the means of egress if the building is occupied during the daylight hours only. To meet the requirements of the Exception to 28-2.8, the building, including stairways, must have sufficient windows and skylights to ensure natural illumination. The authority having jurisdiction should make certain that the building is not occupied after daylight hours.

28-2.9* Emergency Lighting.

All industrial occupancies shall have emergency lighting in accordance with Section 5-9.

Exception No. 1: Special purpose industrial occupancies without routine human habitation.

Exception No. 2: Structures occupied only during daylight hours, with skylights or windows arranged to provide the required level of illumination on all portions of the means of egress during these hours.

Exceptions to the requirement for emergency lighting are included in the Code for the same reasons that illumination of the means of egress is not required (see Exception to 28-2.8). An additional exception has been made for special purpose industrial occupancies that are not routinely occupied. There is no need to install an extensive and costly emergency lighting system in an unoccupied building.

A-28-2.9 The authority having jurisdiction should review the facility and determine the "designated" stairs, aisles, corridors, ramps, and passageways that should be required to be provided with emergency lighting. In large locker rooms or laboratories using hazardous chemicals, for example, the authority having jurisdiction should determine that emergency lighting is needed in the major aisles leading through those spaces.

28-2.10 Marking of Means of Egress.

Signs designating exits or ways of travel thereto shall be provided in accordance with Section 5-10.

28-2.11 Special Means of Egress Features.

(Reserved.)

Section 28-3 Protection

28-3.1 Protection of Vertical Openings.

Every stairway, elevator shaft, escalator opening, and other vertical opening shall be enclosed or protected in accordance with Chapter 5 and 6-2.4.

Exception No. 1: Unprotected vertical openings connecting not more than three floors shall be permitted in accordance with 6-2.4.5.

Exception No. 2: Atriums in accordance with 6-2.4.6 shall be permitted.

Exception Nos. 1, 2 and 6 to 28-3.1 recognize the provisions of Chapter 6, which sanction limited (maximum three-story) vertical openings, atriums, and two-story convenience openings in industrial occupancies. See 6-2.4.5, 6-2.4.6, and 6-2.4.8.

Exception No. 3: In special purpose and high hazard occupancies where unprotected vertical openings are in new or existing buildings and are necessary to manufacturing operations, they shall be permitted beyond the specified limits, provided every floor level has direct access to one or more enclosed stairs or other exits protected against obstruction by any fire or smoke in the open areas connected by the unprotected vertical openings.

Exception No. 3 to 28-3.1 strictly limits the use of unprotected vertical openings in high hazard and special purpose industrial occupancies. Direct access to one or more enclosed stairways or to other exits is required from any areas connected by unprotected vertical openings. This provision recognizes that many high hazard and special purpose industrial occupancies require openings between floor levels to accommodate piping, conveyors, and other devices and equipment essential to the orderly operation of the facility. In most of these situations, full enclosure is not practical or feasible. In high hazard occupancies, the provision of two means of egress will, in most situations, be sufficient to comply with this exception. In special purpose occupancies, additional exits or other special arrangements will normally be required for compliance with the provision that stairways and exits be protected against obstruction from fire and smoke in open areas connected by unprotected vertical openings.

Exception No. 3: Existing open stairways and existing escalators shall be permitted where connecting only two floor levels.

Exception No. 4 to 28-3.1 limits existing open stairways, existing open ramps, and existing escalators that are unenclosed or unprotected by permitting them to connect only two floors. An existing open stairway connecting three floors would have to be enclosed, protected, or permitted by another of the exceptions to 28-3.1.

Exception No. 5: In existing buildings with low or ordinary hazard contents and protected throughout by an approved, automatic sprinkler system installed in accordance with Section 7-7, unprotected vertical openings shall be permitted, provided the vertical opening does not serve as a required exit. All required exits under such conditions shall consist of outside stairs in accordance with 5-2.2, smokeproof enclosures in accordance with 5-2.3, or horizontal exits in accordance with 5-2.4.

Exception No. 5 to 28-3.1 recognizes that an existing industrial occupancy may contain unprotected vertical openings and still provide a reasonable level of safety to life if the building contains only low or ordinary hazards and is protected by a complete automatic sprinkler system. Smokeproof enclosures and outside stairways (the only types of vertical exits allowed by this exception) must be fully enclosed or protected against vertical fire spread and meet the requirements of Chapter 5. The unenclosed vertical openings may not serve as part of the means of egress, although they can remain as convenience openings and stairways to be used for normal operations.

While the major reason for allowing this provision is economic (enclosing all vertical openings in existing buildings is expensive), there is actually little effect on the life safety of occupants where the building houses low or ordinary hazards. However, some difficulties in fire control are created, because unprotected vertical openings can contribute to fire spread in buildings and result in extensive property damage and potential impact on occupants prior to evacuation; therefore, a complete automatic sprinkler system is required.

Exception No. 6: Two-story convenience openings in accordance with 6-2.4.8 shall be permitted.

Every high hazard industrial occupancy, operation, or process shall have automatic extinguishing systems or such other protection appropriate to the particular hazard, such as explosion venting or suppression, protecting any area subject to an explosion hazard for the purpose of minimizing danger to occupants in case of fire or other emergency before they have time to utilize exits to escape. Activation of the fire extinguishing or suppression system shall initiate the required building fire alarm system in accordance with 28-3.4.3.4. Hazardous areas in industrial occupancies protected by automatic extinguishing systems shall be exempt from the smoke-resisting enclosure requirement of 6-4.1.2.

A-28-3.2 Emergency lighting should be considered where operations require lighting to perform orderly manual emergency operation or shutdown, maintain critical services, or provide safe start-up after a power failure.

The intent of 28-3.2 is to provide for the life safety of the occupants of industrial buildings by controlling the risk associated with hazardous operations. The alternatives offered in the paragraph are not inclusive, and a proper fire protection engineering solution might not incorporate the listed provisions. The Code intends to allow for engineering judgment in a wide range of potentially hazardous situations, including some where protection may be limited. The intent of the paragraph is also broad in application, because, in many highly hazardous operations, an explosion may be immediately preceded by a fire or other emergency, such as an overheated reactor vessel, an exothermic reaction, or increased pressure. Because such conditions may initiate an explosion, depending upon the process and arrangement of the equipment, immediate egress from the facility may be necessary. If fire or other emergencies are likely to develop rapidly into an explosion, adequate precautions are necessary for life safety.

In many modern facilities, provisions that prove adequate for the life safety of occupants may already be included for process control and property protection, and any additional measures will not increase the life safety of operators to an appreciable degree.

Section 4, Chapters 13 and 14, of the NFPA *Fire Protection Handbook*⁵ discuss the basic principles of explosion prevention, venting, and suppression. These chapters also contain an extensive bibliography on the subject. Recommendations for the design and utilization of vents to limit pressures developed by explosions are contained in NFPA 68, *Guide for Venting of Deflagrations*.⁶ Standards for explosion pre-

vention systems are found in NFPA 69, *Standard on Explosion Prevention Systems*.⁷ See also the NFPA *Industrial Fire Hazards Handbook*.⁸

Paragraph 6-4.1 requires that where a hazardous area is protected by automatic sprinklers, the hazardous area must be enclosed by walls and doors that are, at minimum, smoke resisting rather than enclosed with fire barriers of 1-hour fire resistance rating and doors of 45-minute fire protection rating. The last sentence of 28-3.2 exempts hazardous areas in industrial occupancies from the requirement for smoke-resisting enclosures if those areas are protected by automatic sprinklers. For consistency, similar wording appears in Exception No. 2 to 6-4.1.2.

28-3.3 Interior Finish.

28-3.3.1 Interior finish shall be in accordance with Section 6-5.

28-3.3.2 Interior Wall and Ceiling Finish. Interior wall and ceiling finish complying with 6-5.5 shall be Class A, Class B, or Class C in operating areas; and interior wall and ceiling finish shall be as required by 5-1.4 in exit enclosures.

28-3.3.3 Interior Floor Finish. (No requirements.)

28-3.4 Detection, Alarm, and Communication Systems.

28-3.4.1 General. Industrial occupancies shall be provided with a fire alarm system installed in accordance with Section 7-6.

Exception: If the total capacity of the building is under 100 persons and fewer than 25 persons are above or below the level of exit discharge.

28-3.4.2 Initiation. Initiation of the required fire alarm system shall be by manual means in accordance with 7-6.2.1(a).

Exception No. 1: Initiation shall be permitted by means of an approved, automatic fire detection system installed in accordance with 7-6.2.1(b) that provides protection throughout the building.

Exception No. 2: Initiation shall be permitted by means of an approved, automatic sprinkler system installed in accordance with 7-6.2.1(c) that provides protection throughout the building.

28-3.4.3 Notification.

28-3.4.3.1 The required fire alarm system shall either

(a) Provide occupant notification in accordance with 7-6.3, or

(b) Sound an audible and visible signal in a constantly attended location for the purposes of initiating emergency

The requirements of 28-3.4.3.1 and 28-3.4.3.4 contain two separate and distinct provisions for audible alarms activated by the fire alarm system required by 28-3.4.1. In low and ordinary hazard industrial occupancies (see 28-3.4.3.1), the system may activate an evacuation alarm or it may sound an alarm in a continuously attended location for the purpose of initiating emergency action. This provision allows an interface between the alarm system and the plant's emergency organization. The alarm system may be controlled from a central security console or a similar location. The key feature is that the location from which the alarm sounds must be continuously staffed. This requirement need not be interpreted as mandating installation of supervisory service, such as that connected to a central station, but the location must be fully attended at all times when the building is occupied.

In high hazard occupancies (see 28-3.4.3.4), the alarm must be arranged to provide evacuation signals, because the safety of the occupants of these areas depends on their immediate notification of a fire.

28-3.4.3.2 A presignal system in accordance with Exception No. 1 to 7-6.3.2 shall be permitted.

28-3.4.3.3 A positive alarm sequence in accordance with Exception No. 2 to 7-6.3.2 shall be permitted.

28-3.4.3.4 In high hazard industrial occupancies as defined in 28-1.4, the required fire alarm system shall automatically initiate an occupant evacuation alarm signal in accordance with 7-6.3.

28-3.5 Extinguishing Requirements.

(None.)

28-3.6 Corridors.

The provisions of 5-1.3.1 shall not apply.

Without the exemption to the requirements of 5-1.3.1 provided by 28-3.6, all new industrial occupancy corridors serving more than 30 persons would be required to have a 1-hour fire resistance rating, with openings protected by 20-minute fire protection-rated door assemblies. The exemption to 5-1.3.1

was adopted because of the ambulatory nature of occupants of industrial occupancies and the emergency escape routes, exits, and work egress are provided.

Section 28-4 Special Provisions

28-4.1 High-Rise Buildings.

High-rise industrial occupancies shall comply with the automatic sprinkler requirements of 32-8.2.1.

Exception No. 1: Low hazard industrial occupancies.

Exception No. 2: Special purpose industrial occupancies.

Exception No. 3: Existing industrial occupancies.

This paragraph references a portion of the high-rise building provisions of Section 32-8 written to permit an occupancy chapter to mandate their use. New, high-rise, general-purpose industrial occupancy buildings classified as ordinary hazard and new high-rise industrial occupancy buildings classified as high hazard are required to be protected throughout by an approved, supervised automatic sprinkler system in accordance with 32-8.2.1. The remainder of Section 32-8 is not mandated for high-rise industrial occupancy buildings.

Section 28-5 Building Services

28-5.1 Utilities.

Utilities shall comply with the provisions of Section 7-1.

28-5.2 Heating, Ventilating, and Air Conditioning.

Heating, ventilating, and air conditioning equipment shall comply with the provisions of Section 7-2.

28-5.3 Elevators, Escalators, and Conveyors.

Elevators, escalators, and conveyors shall comply with the provisions of Section 7-4.

28-5.4 Rubbish Chutes, Incinerators, and Laundry Chutes.

Rubbish chutes, incinerators, and laundry chutes shall comply with the provisions of Section 7-5.

Section 28-6* Special Provisions for Aircraft Servicing Hangars

Section 28-6, Special Provisions for Aircraft Servicing Hangars, is nearly identical to Section 29-6, Special Provisions for Aircraft Storage Hangars. Because aircraft hangars are used for both storage and repair, corresponding requirements can be found in both Chapters 28 and 29.

A-28-6 For further information on aircraft hangars, see NFPA 409, *Standard on Aircraft Hangars*.

28-6.1

The requirements of Sections 28-1 through 28-5 shall be met, except as modified by 28-6.2 through 28-6.4.

28-6.2

Exits from aircraft servicing areas shall be provided at intervals of not more than 150 ft (45 m) on all exterior walls. There shall be a minimum of two means of egress from each aircraft servicing area. Horizontal exits through interior fire walls shall be provided at intervals of not more than 100 ft (30 m) along the wall.

Exception: Dwarf or "smash" doors in doors used for accommodating aircraft shall be permitted to be used for compliance with these requirements.

28-6.3

Means of egress from mezzanine floors in aircraft servicing areas shall be arranged so that the maximum travel distance to reach the nearest exit from any point on the mezzanine shall not exceed 75 ft (23 m). Such means of egress shall lead directly to a properly enclosed stair discharging directly to the exterior, to a suitable cutoff area, or to outside stairs.

28-6.4

No dead end shall be permitted to be more than 50 ft (15 m) deep.

Exception: No dead end shall be allowed for high hazard contents areas.

References Cited in Commentary

- ¹ NFPA 13, *Standard for the Installation of Sprinkler Systems*, 1996 edition, National Fire Protection Association, Quincy, MA.

² NFPA 30, *Flammable and Combustible Liquids Code*, 1996 edition, National Fire Protection Association, Quincy, MA.

³ NFPA 204, *Guide for Smoke and Heat Venting*, 1997 edition, National Fire Protection Association, Quincy, MA.

⁴ NFPA 92B, *Guide for Smoke Management Systems in Malls, Atria, and Large Areas*, 1995 edition, National Fire Protection Association, Quincy, MA.

⁵ NFPA *Fire Protection Handbook*, 18th ed., National Fire Protection Association, Quincy, MA, 1997.

⁶ NFPA 68, *Guide for Venting of Deflagrations*, 1994 edition, National Fire Protection Association, Quincy, MA.

⁷ NFPA 69, *Standard on Explosion Prevention Systems*, 1997 edition, National Fire Protection Association, Quincy, MA.

⁸ *Industrial Fire Hazards Handbook*, 3rd ed., National Fire Protection Association, Quincy, MA, 1990.

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET 981834-9

NO. 990321-TP EXHIBIT NO. 15

COMPANY/

WITNESS: Milner

DATE: 1-13-2000

Tariff & Sections	SWBT Proposed Language	CLECs' Proposed Language	Commission Findings
			above.
END OF MODIFICATIONS NEW CHANGES TO COLLOCATION TARIFFS			
Definitions -- Section 2			
Adjacent Structure And Adjacent Off-site Arrangement	<p>SWBT agrees with AT&T proposed language referencing the definition of the term 'Legitimately Exhausted*' and with clarifying the types of adjacent structures: "huts, mini huts, or other structures similar to those that SWBT uses to house telecommunications equipment..."</p> <p><i>*SWBT's agreement is contingent on the definition of Legitimately Exhausted being limited to the context intended by the FCC's 99-48 order – to identify when SWBT is required to permit adjacent structure collocation.</i></p> <p>SWBT does not agree with AT&T's proposal that the CLEC and SWBT must mutually agree on the location of the designated space on SWBT's property for placement of the adjacent structure. The FCC's order recognized that the incumbent LECs have a legitimate reason to exercise some measure of control over design or construction parameters. SWBT maintains the right to designate the location for an adjacent structure, subject to nondiscrimination requirements as specified by the FCC.</p> <p>SWBT does not agree with AT&T's proposal to strike the requirement for power arrangements to adjacent structures beyond the 200 foot limitation to be handled on a unique request, but does agree with AT&T's request for clarification of the term "unique request" by replacing it with "ICB basis." There are specific technical limitations and economic factors</p>	<p><u>AT&T Comment:</u> AT&T concurs that Adjacent Space Collocation should be provided to Collocators, as required by the FCC's Advanced Services Order. However, the provision of this form of collocation should be economical and efficient, both of which are lacking in SWBT's proposal. SWBT's provision and definition of Adjacent Space Collocation should be modified to correct the following problems:</p> <p>(1) the term "legitimately exhausted" should be defined, which also includes a requirement that SWBT be required to remove unused obsolete equipment, for all of the reasons stated above;</p> <p>(2) SWBT should not be given unilateral right to assign the location of the adjacent space, whereas the FCC rules relies on State Commissions to determine the amount of discretion that SWBT might be given in this regard. FCC Order, ¶44;</p> <p>(3) "similar structures" as used in the first sentence should be clarified to include cabinets, mini- or maxi-huts, or other similar structures, so that the term is not defined as only being similar to CEVs.</p> <p><u>AT&T Language:</u> 6.1.1(D) Adjacent Space Collocation – When space is legitimately exhausted, as that term is defined in Section 2 of this Tariff, inside a SWBT Eligible Structure, SWBT will permit Collocators to physically collocate in adjacent controlled environmental vaults or similar structures that SWBT uses to house equipment, to the extent technically feasible. . . . SWBT reserves the right to assign the location of the designated space on SWBT premises where the adjacent structure will be placed. SWBT and CLEC will mutually agree the location of the designated space on SWBT premises where the adjacent structure will be placed. SWBT will not withhold agreement as</p>	<p>The Commission finds that the tariff should be amended to include off-site adjacent collocation within the definition of "Adjacent Structure." The FCC's March 31, 1999 Order does not restrict collocation to the premises of the ILEC. Specifically, the Order provides that collocation is authorized "in adjacent controlled environmental vaults or similar structures to the extent technically feasible." FCC Order at ¶ 44. The term "adjacent" is not defined or restricted to the premises or property of the ILEC. This is a critical point because SWBT may not have appropriate space on its property adjacent to the Eligible Structure conducive to collocation, while an adjacent non-SWBT property would provide an opportunity for collocation. Limiting adjacent collocation to SWBT property could therefore have the effect of precluding a CLEC from collocating adjacent to an eligible structure.</p> <p>The Adjacent Off-site Arrangement provides CLECs with an alternative to obtain access to unbundled loops, switch ports, and dedicated transport from a CLEC location adjacent to a SWBT central office for the provisioning of Telecommunications Service. Under this method SWBT UNEs will be extended to the adjacent location through rates established in this tariff. Any dispute as to whether or not an off-site collocation facility is adjacent will be resolved by the use of the Third Party Engineer process provided for in Section 6.2.1 using the standards set forth below. In this arrangement, the CLEC provides its own power and agrees to secure all necessary rights of way, easements and other agreements needed from third parties.</p> <p>For Adjacent Off-site Collocation, the collocation site is presumed to be adjacent if it is located on a property that is contiguous to or within one street block of SWBT's Central Office or Eligible Structure. The collocation site is presumed to be non-adjacent if, after an economic cost/benefit analysis, including a review of any technical barriers to collocation, it is determined that it is less expensive to extend a trunking facility/pay for direct transport and entrance facility to Collocator's switch than it is to collocate at the proposed</p>

Tariff & Sections	SWBT Proposed Language	CLECs' Proposed Language	Commission Findings
	<p>that require that power delivery beyond 200 feet be addressed on a case by case basis. Otherwise, the tariff average rates would have to be raised to include these unique instances of extraordinary costs directly attributable to the requesting carrier, which is inconsistent with the FCC's order.</p> <p>SWBT agreed to the suggested revisions in language from the CLEC Coalition: SWBT will provide power and physical collocation services <i>and facilities</i> to such adjacent structures, subject to the same <i>nondiscrimination</i> requirements..."</p> <p>SWBT's position is that the term collocation requires the activity to be on SWBT's property or premises. ¶¶ 93-94. In addition, if the activity is off of SWBT's property, it infringes on SWBT's ability to provide safety and engineering constraints. ¶ 94. Finally, SWBT has no obligations to provide an arrangement off of SWBT's property as it is not "collocation." ¶ 94.</p> <p>SWBT's cites FCC Order, para. 44, recognized that the ILEC may have a legitimate reason to exercise some major control over design or construction.</p> <p>SWBT proposed language:</p> <p><u>Adjacent Structure</u> - A collocator provided structure placed on SWBT property adjacent to an Eligible Structure. This arrangement is only permitted when space is legitimately exhausted inside the Eligible Structure and to the extent technically feasible.</p>	<p>to the site desired by Collocator, subject only to reasonable safety and maintenance requirements. SWBT will <u>offer the following increments of AC power</u>: [AT&T reserves the right to amend this section at such time as it is allowed to network its Collocation Cost Model] to the adjacent structure up to 200 cable feet from the Central Office power source. When power requirements are outside of these office capacity and distance limitations, SWBT will treat the requirements as a unique request and coordinate a mutually agreeable solution for provisioning power with the Collocator. At its option, the Collocator may choose to provide its own AC and DC power to the adjacent structure. SWBT will provide physical collocation services to such adjacent structures, subject to the same requirements as other collocation arrangements in this tariff.</p> <p><u>In the event that interior space in an Eligible Structure becomes available, SWBT will provide the option to the Collocator to relocate its equipment into the interior space.</u> In the event the Collocator chooses to relocate its equipment into the interior space, appropriate charges applicable for collocation within the Eligible Structure will apply.)</p> <p><u>CLEC Comment:</u> Adjacent Structures – Paragraph 61.1.(D). SWBT's proposed adjacent collocation commitments in paragraph 61.1(D) omit important provisions from the FCC Order. To comply with the FCC Order, the final sentence of the first paragraph in (D) should state: SWBT will provide power and physical collocation services <i>and facilities</i> to such adjacent structures, subject to the same <i>nondiscrimination</i> requirements as traditional collocation arrangements. FCC Order ¶ 44. The Commission should also confirm that no restrictions exist with respect to the <i>types</i> of facilities a CLEC decides to use for an adjacent collocation. In addition, it appears that a Collocator that is forced to construct an adjacent structure due to space constraints in a central office will have to pay twice to collocate if the Collocator must bear the cost of moving into the central office once space becomes available. These costs need to be more equitably apportioned among the parties, including SWBT.</p> <p><u>MCI WorldCom Comments:</u></p>	<p>site. One such factor is whether regeneration is required and if so, the cost must be factored into the economic analysis. All other situations falling between these parameters will be judged on a case by case basis, weighing the factors used to set the parameters. The Third Party Engineer shall use these standards to make a determination.</p> <p>The Commission finds that SWBT and the collocators shall mutually agree upon the location of the "adjacent structure." If SWBT has the unilateral ability to site the structure the Commission believes there is potential for SWBT to increase a CLEC's costs by locating the structure in a remote area. SWBT is correct in arguing that the FCC recognized the ILEC's interests in design and construction of the structure. However, under AT&T's amendment, SWBT retains the ability to express its preference for siting the structure. The amendment merely requires that SWBT express its site preference and mutually agree with the collocator about SWBT's concerns. Each of SWBT's facilities is geographically unique. Therefore, the parties should be required to mutually agree based upon the particulars of each location.</p> <p>SWBT's reliance on the ILEC's right to maintain "major control over design or construction" over adjacent structures is misplaced. The FCC's discussion of this issue relates to on-site adjacent structures. When the structure is constructed off-site, the ILEC's concerns over design are eliminated.</p> <p>The Commission also finds that, to the extent space in an Eligible Structure is "legitimately exhausted" and the SWBT property also has within close proximity an "administrative office" where network facilities could be housed, that space should be looked at as a possible adjacent on-site collocation location. It is not necessary to make a change to the tariff to reflect this, however.</p> <p>Accordingly, Section 2, relating to the definition of Adjacent Structure should be modified as follows, and a new definition of "Adjacent Off-site Arrangement" should be added:</p> <p><u>Adjacent Structure</u> - A Collocator-provided structure placed on SWBT property (Adjacent On-site) or non-SWBT property (Adjacent Off-site) adjacent to an 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</p>

Tariff & Sections	SWBT Proposed Language	CLECs' Proposed Language	Commission Findings
		<p>Regulations - Section 6.1.1(D) The second paragraph of Section 6.1.1(D), regarding removal of adjacent space, should be deleted. Paragraph 44 of FCC 98-147 makes no mention of a CLEC having to remove any structure constructed as "adjacent space" at the point when more traditional space becomes available. The choice to move or not should be at the discretion of the CLEC who, in order to meet business needs, determined in the first instance it would use an adjacent space and has expended monies to build out such space. Should the CLEC choose to move for growth reasons, it should be the CLEC who makes the election. The CLEC should not be forced to move. Moreover, if the collocating CLEC elects to move into the "interior space" when such space becomes available, then the CLEC should be obligated to pay SWBT only the difference between the applicable collocation charges and what the CLEC incurred to construct its collocation space in the adjacent structure.</p> <p>AT&T's Additional Comments: This is an issue raised by the CLEC Coalition in their comments and at the Collocation Workshop. See Tr. 50-56; 91-94. AT&T concurs with the CLEC Coalition's request to delete the phrase "on SWBT's property" as part of this definition. Moreover, as Mr. Turner explained, from a costing perspective, there are more efficient and effective means of defining Adjacent Space and Adjacent Space Collocation that would alleviate SWBT's concerns. <i>Id.</i> at 54-55. AT&T's Proposed language:</p> <p>Adjacent Structure - A collocator provided structure placed on SWBT property adjacent to an Eligible Structure. This arrangement is only permitted when space is Legitimately Exhausted inside the Eligible Structure and to the extent technically feasible.</p> <p>CLEC Coalition: SWBT's definition of Adjacent Structure refers to the structure placed on SWBT property adjacent to its Eligible Structure. There is no reason to require that an adjacent structure must be on SWBT property. The structure could be on SWBT's property or another's property. A CLEC should not be foreclosed from pursuing the option to procure a structure on an adjacent property, not owned by SWBT, from which it would interconnect. Finally, CLECs note that there is</p>	<p>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.</p> <p>Adjacent Off-site Arrangement - Where Physical Collocation space within a SWBT Eligible Structure is Legitimately Exhausted, and Collocator's Adjacent On-site space is not within 50 ft. 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 the Collocator elects to collocate by Adjacent Off-site Arrangement, the Collocator shall provide both the AC and DC power required to operate such facility.</p> <p>Any dispute as to whether the off-site space is adjacent, or as to the time interval or price quote submitted by SWBT shall be resolved on a case-by-case basis by use of the Third Party Engineer process provided for in Section 6.2.1. Until such dispute is resolved, Collocator may obtain Adjacent Off-site collocation through the rates established in this Tariff. If such space is determined to be non-adjacent by the Third Party Engineer or the Public Utility Commission upon appeal, the applicable entrance facility charges as set forth in the UNE rate schedule of the Collocator's interconnection agreement apply and the Collocator is responsible for the true-up of rates.</p> <p>For Adjacent Off-site Collocation, the collocation site is presumed to be adjacent if it is located on a property that is contiguous to or within one street block of SWBT's Central Office or Eligible Structure. The collocation site is presumed to be non-adjacent if, after an economic cost/benefit analysis, including a review of any technical barriers to collocation, it is determined that it is less expensive to extend a trunking facility/pay for direct transport and entrance facility to Collocator's switch than it is to collocate at the proposed site. One factor in the analysis is whether regeneration is required and if so, what the cost implications are in comparing the collocation and entrance facility scenarios. All other situations falling between these parameters will be judged on a case by case basis, weighing the factors used to set the parameters. The Third Party Engineer shall use these standards to make a determination.</p>

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 28183-18 EXHIBIT NO. 16

COMPANY 1 Milwaukee

WITNESS: 1-13-2007

DATE 1-13-2007

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September 20, 1999

VIA FEDERAL EXPRESS**GLENN T. REYNOLDS**

Chief, Enforcement Division
Common Carrier Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Supra Telecom adv. BellSouth; Request For
Accelerated Docket & Pre-filing Mediation

Dear Mr. Reynolds:

Pursuant to 47 C.F.R. § 1.730, Supra Telecom hereby requests that you consider the following grievance by Supra Telecommunications & Information Systems, Inc. ("Supra Telecom") against BellSouth Telecommunications, Inc. ("BellSouth") for the Common Carrier Bureau's Accelerated Docket, once a formal complaint has been filed pursuant to 47 U.S.C. § 208. Additionally, pursuant to 47 C.F.R. § 1.730(b), Supra Telecom also requests that the Commission Staff schedule and supervise pre-filing settlement negotiations and/or mediation between the parties. In support thereof, Supra Telecom states as follows:

The nature of Supra Telecom's potential complaint against BellSouth arises from BellSouth's recent interpretation of this Commission's First Report And Order (dated March 31, 1999) in CC Docket No. 98-147 (i.e. In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability) (hereinafter referred to as "FCC's Order"). The FCC's Order provides that LEC's must make available cageless collocation when requested, that an incumbent must give the collocater the option of collocating equipment in any unused space within the incumbent's premises and that the incumbent may not utilize unreasonable segregation requirements to impose unnecessary additional costs upon competitors. See FCC's Order at ¶ 42. Furthermore, the FCC's Order requires incumbents to make collocation space available in single-bay increments. See FCC's Order at ¶ 43. Finally, 47 C.F.R. § 51.323(j) (1999) states in pertinent part that "an incumbent LEC shall permit a collocating telecommunications carrier to subcontract the construction of physical collocation arrangements with contractors approved by the incumbent LEC." Supra Telecom's proposed complaint against BellSouth deals with violations of the FCC's Order and 47 C.F.R. § 51.323(j).

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Chief, Enforcement Division
Common Carrier Bureau
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Prior to the FCC's Order, BellSouth took the position that all physical collocation arrangements required the collocater's equipment to be segregated in a common collocation area within the central office having a separate entrance. Moreover, when insufficient space existed to construct a separate collocation space having fire-rated walls, BellSouth would proclaim that physical collocation was no longer possible at those central offices. Between July and October of 1998, BellSouth provided Supra Telecom quotations for the initial cost of physically collocating within fifteen (15) BellSouth central offices. The average space preparation fee quoted by BellSouth for those fifteen offices was \$66,000 per central office. After the FCC's Order, Supra Telecom requested quotes for cageless collocation spaces within four (4) BellSouth central offices under comparable conditions to 1998 quotes previously requested and received. On or about August 31, 1999, BellSouth provided Supra Telecom quotes for cost of space preparation in these central offices which averaged approximately \$210,000 per central office for collocation within existing BellSouth line-ups.

Of the four (4) central offices quoted, one office (MIAMFLPL) had previously been quoted in 1998. For that office, in 1998, BellSouth's quotation for space construction and space preparation for collocation within a separate enclosed structure was \$30,112. In 1999, the same quotation for equivalent collocated equipment was quoted by BellSouth at a cost of \$167,295 for just the space preparation work necessary to allow the equipment within an existing line-up. A review of the relevant documents show nothing to explain why the cost of cageless collocation increased by 555 % over the cost of caged collocation within the span of approximately one year.

Upon receipt of the four (4) quotes averaging over \$210,000 per central office, Supra Telecom demanded that BellSouth provide a detailed breakdown of the relevant estimated charges and why the cost of cageless collocation was more than five (5) times the previous quotations for "caged" collocation. As of the writing of this letter, more than two weeks has elapsed since Supra Telecom's request for a breakdown of charges; however, BellSouth has refused and/or failed to honor this reasonable request. Additionally, Supra Telecom has requested the right to hire BellSouth certified contractors to perform the space preparation work. However, on September 10, 1999, BellSouth replied in a letter denying this request; claiming that the space preparation fee constituted (unnamed and unspecified) upgrades to the central office which can only be performed by BellSouth.

The FCC's Order states in paragraph 6 in pertinent part that "we strengthen our collocation rules to reduce the costs and delays faced by competitors that seek to collocate equipment in an incumbent LEC's central office." In paragraph 598 of the FCC's Order 96-325, the Commission also stated that "LECs have both an incentive and the capability to impose higher construction costs than the new entrant might need to occur. We therefore conclude that collocating parties should have the right to subcontract the construction of the physical

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ATTORNEY AT LAW

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collocation arrangements".

BellSouth's actions are a violation of 47 U.S.C. § 201(c)(6) which requires nondiscriminatory access to collocation space on rates, terms, and conditions that are just, reasonable, and nondiscriminatory. Moreover, BellSouth's conduct is a violation of the spirit, intent and language of the Commission's ruling in Docket No. 98-147, the prior Order No. 96-325 and 47 C.F.R. § 51.323(j). The most likely reason for BellSouth's refusal to provide Supra Telecom a breakdown of proposed space preparation expenses is that BellSouth is simply violating the provisions of the above referenced statute, and FCC Orders and rules. Apparently, BellSouth is attempting to impose a tremendous amount of unnecessary expense upon Supra Telecom in order to block collocation within the four (4) central offices (three (3) of which happen to be tandem access offices). Supra Telecom also fears the worst for other central offices for which orders and/or quotations are currently in progress. Supra Telecom cannot compete with BellSouth under these unreasonable and outrageous constraints.

Supra Telecom believes that this dispute is appropriate for the accelerated docket procedure because:

- (1) Time is currently of the utmost essence to Supra Telecom. If Supra Telecom does not effectuate a deployment of its network soon, it may not survive as a potential competitor. BellSouth is cognizant of this fact and is deliberately obstructing the collocation process in blatant contempt for the FCC's prior rulings;
- (2) Although the FCC issued its recent order in Docket No. 98-147 with the intent of removing obstacles to collocation, BellSouth has apparently combed the order in bad faith to find ways of drastically inflating the cost of collocation. A resolution of the obstacles raised by BellSouth will ultimately save other CLECs the expense and aggravation of the future similar disputes and obstructive tactics. Accordingly, a resolution of this dispute will advance competition in the telecommunications market;
- (3) The issues presented in this dispute are narrowly focused and succinct. The issues will be: (a) whether a CLEC must be forced to allow an ILBC to perform all space preparation work or whether a CLEC can submit the job(s) to qualified contractors for competitive bidding; (b) what types of space preparation charges can or cannot be imposed by an ILBC upon a CLEC; and (c) whether an ILBC can impose the cost of rearranging a central office upon a CLEC, particularly when such rearrangement of equipment and space is not truly necessary to accommodate the requesting CLEC;
- (4) The issues presented clearly state a claim for a violation of the Telecommunications Act,

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particularly under 47 U.S.C. § 251(c)(6):

- (5) Given the huge size of BellSouth compared to Supra Telecom, BellSouth would not be prejudiced or unfairly imposed by including this proceeding on the Accelerated Docket; and
- (6) The issues raised are important to all CLECs attempting to physically collocate within ILEC central offices, and removing barriers to collocation as quickly as such barriers can be raised by ILECs will ultimately confirm the Commission's resolve to foster competition and minimize the damaging impact of ILEC obstruction tactics upon the fledgling CLEC industry.

Accordingly, for the above stated reasons, Supra Telecom believes that the above referenced dispute is appropriate for inclusion in the Common Carrier Bureau's Accelerated Docket proceedings. Therefore, Supra Telecom respectfully requests the assistance of the Commission and Staff to resolve the above reference dispute in an expedited manner through mediation and if such mediation is not successful, by inclusion in the Accelerated Docket proceedings.

If you have any questions or comments, please feel free to contact me at my law office at (305) 531-5286 or at my Supra Telecom office at (305) 476-4206.

Sincerely,



Mark E. Buchele
General Counsel
Supra Telecom

cc: Frank Lamancuso
Rae Lynn Idhayan

MARK E. BUCHELE
ATTORNEY AT LAW

BELLSOUTH

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October 8, 1999

VIA HAND DELIVERY, FAX, AND U.S. MAIL

Glenn T. Reynolds, Esq.
Frank G. Lamancusa, Esq.
Enforcement Division-Common Carrier Bureau
Federal Communications Commission
445 12th Street, S.W.
Suite 5-A848
Washington, D.C. 20554

Re: BellSouth's Response to Supra's Request for Inclusion of a Dispute with
BellSouth on the Commission's Accelerated Docket

Gentlemen:

This letter is in response to allegations made by Supra Telecommunications & Information Systems, Inc. ("Supra") against BellSouth Telecommunications, Inc. ("BellSouth") regarding BellSouth's collocation practices. The allegations are without merit and fail to state a claim upon which relief can be granted. Moreover, because of the potential complex factual discovery that would be necessary to resolve the dispute, inclusion on the Commission's accelerated docket is impracticable and should be denied.

I. Introduction

The essence of Supra's complaint focuses on two areas - the costs charged by BellSouth for central office ("CO") work necessary to prepare the site for collocation and the ability of Supra to use outside contractors to perform such site preparation. As to the first issue, the estimates are what BellSouth expects to incur; and BellSouth is authorized to recover such costs in full. Indeed, BellSouth cannot be expected to subsidize the collocation of other telecommunications carriers within central offices. Furthermore, the mere naked allegation that costs are "too high" should not be the basis of an accelerated docket complaint. The accelerated docket proceeding was not meant to be, nor should the enforcement division entertain the responsibility of it being, a forum that determines rates based on costs. Clearly, types of costs

necessary for collocation and whether such costs are reasonable cannot be determined in the limited discovery and trial period required by an accelerated docket proceeding.¹

Regarding the second issue, the Commission's orders make clear, and common sense dictates, that an incumbent local exchange carrier ("ILEC") does not have an obligation to turn over the keys of its central office to a competitive local exchange carrier ("CLEC") and allow the CLEC to perform whatever construction the CLEC wishes. Such a theory completely misconstrues several paragraphs of the *Local Competition Order*² and *Advanced Services Order*, as well as defies reasonable bounds of logic. Accordingly, based on the discussion herein, the enforcement division should deny Supra's request to have its complaint accepted on the accelerated docket.

II. The Costs

A. Supra's Allegations

Supra's allegations center around cost estimates it received for collocation of equipment in four BellSouth central offices located in Florida. These estimates, Supra claims, are too high. Supra's allegations appear to be related not only to the amount of costs, but also the types of costs that BellSouth estimated would be required for collocation site readiness in these central offices. Supra bases its claims on the fact that between July and October of 1998 it requested cost estimates for 15 central offices. The average estimate for these offices was \$66,000. Supra alleges, however, that in August of 1999 it requested estimates for the four central offices in question "under comparable conditions to the 1998 [requests]" and the average cost for these four central offices was approximately \$210,000. Additionally, Supra provides as an example one of the four central offices, Miami - Palmetto ("Palmetto"), for which it requested a cost estimate in both 1998 and 1999. It states that the cost estimate for Palmetto in 1998 was \$30,112 compared to an estimated cost of \$167,295 in 1999. Based on the comparison of the average cost for the 1998 and 1999 estimates and the cost for Palmetto, Supra alleges that BellSouth is in violation of 47 U.S.C. § 251(c)(6) and filed its letter with the enforcement division seeking acceptance of a complaint on the accelerated docket.

¹ The Commission even recognized that pricing and pricing methodologies for collocation were best left to the state commissions. See *In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Dkt. No. 98-147, *First Report and Order and Further Notice of Proposed Rulemaking*, FCC 99-48 (rel. Mar. 31, 1999) ("*Advanced Services Order*") ¶ 51 ("We expect state commissions will determine the proper pricing methodology to ensure that incumbent LECs properly allocate site preparation costs among new entrants.").

² *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, *First Report and Order*, 11 FCC Rcd 15499 (1996) ("*Local Competition Order*"), modified on reconsideration, 11 FCC Rcd 13042 (1996), vacated in part, *Iowa Utilities Bd v. FCC*, 120 F.2d 753 (8th Cir. 1997), *aff'd in part and rev'd in part sub nom. AT&T Corp. v. Iowa Utilities Board*, 119 S. Ct. 721 (1999).

The most inaccurate statement made by Supra in its letter to the enforcement division is the claim that the requests for costs estimates for the four central offices in question were "under comparable conditions to the 1998 [estimates] previously requested and received [i.e., the 15 estimates received in 1998]." This is clearly not the case and Supra is well aware that the collocation requests for the four offices in question differ significantly from those requested in 1998. The conditions requested by a CLEC will greatly impact the collocation cost. To fully explain the cost differences related to the conditions requested by a CLEC, an explanation of the costs associated with collocation is needed.

Collocation costs can be classified into three basic categories – space construction, cable support and frame infrastructure and power infrastructure. Space construction relates to such things as general construction costs, heating, ventilating, and air-conditioning ("HVAC") costs, electrical costs, security system costs, and architectural/engineering/project management ("A&E") costs. Cable support and frame infrastructure relates to costs associated with such things as cable support, frame and isle lighting, framework ground conductors, and air conditioning outlet circuits. Power infrastructure relates to changes required in the power plant construction as a result of collocation. The amount of work required, and accordingly the costs to perform such work, will vary for each of these items depending on the conditions of the request made by the CLEC, as well as the space availability in the central office. For example, if the only space available for collocation requires the conversion of office space, then significant space construction costs will be incurred. Comparatively, if a central office has readily available space for collocation space, construction costs will probably be low. Likewise, if the CLEC wishes to place equipment that requires additional power support, power infrastructure costs will be larger than if the CLEC collocates small amounts of equipment that will not tax the current power supply. BellSouth apologizes for making these seemingly palpable statements; however, these are the very principles Supra refuses to accept in making its allegations regarding the collocation costs.

The difference between the average cost estimates in 1998 and the estimate for the four central offices in 1999 was caused by the conditions of the requests made by Supra, e.g., the space requested, the type of equipment requested to be collocated, and the available space within the central offices. For example, in the 1998 request for Palmetto, Supra's original request was for 6 bays of equipment. The 1999 request, however, seeks to collocate 28 bays of equipment. This is a significant increase in space, infrastructure, and power needs over the 1998 request.³ In essence, Supra requested the estimated cost for a Yugo in 1998 and then requested the estimated cost for a Suburban in 1999 and is complaining because the Suburban's price is higher.

The estimates for the other 14 collocation sites in 1998 had similar differences in the conditions requested by Supra. Because Supra's complaint centers on the cost associated with the four 1999 requests, BellSouth will focus on the cost estimates for these offices and not

³ For example the number of bays of equipment directly affect the associated heat load for the central office. Thus, the original 6 equipment bays had a total heat dissipation of 28,600 WATTS, the latest heat release associated with the 1999 request, a total of 28 bays, is now 42,739 WATTS. This increase in heat release requires an additional 4.02 Tons of HVAC. See further discussion at II.B.

belabor the enforcement division with the cost estimates of each of the 15 1998 requests. If the enforcement division believes this information is necessary in its decision or would merely like to review it, BellSouth will provide such information.

B. The Cost Estimates Associated with the Supra's 1999 Request to Collocate in Four Central Offices: Port Orange, Palm Beach Gardens, Palmetto, and Golden Glades

An explanation of the 1999 cost estimates for the four central offices must begin with an understanding of how the estimates are derived. When a CLEC wants to obtain collocation space in a central office, it must submit an application to BellSouth that provides specific data regarding its collocation needs. BellSouth analyzes the application to determine if space is available in the central office and, if so, works to provide an initial cost estimate for the work that will be necessary to ready the site for the CLEC's equipment.

The initial estimate is prepared using all available information at the time of the estimate, however, many factors can impact this estimate. For example, unexpected construction costs, changes in the CLEC's equipment, and the number of CLECs seeking collocation in the same central office,⁴ are all factors that are not usually known at the time of the initial estimate. These factors can cause the estimate to increase or decrease. Accordingly, the CLEC is informed in the collocation agreement that the initial estimate is in fact merely an estimate that is subject to true up once all costs are incurred. After completing the initial estimate, BellSouth tenders this figured to the CLEC. If the CLEC wishes to proceed, it must then submit a "firm order" to BellSouth along with money in the amount of fifty percent (50%) of the initial cost estimate. Upon receiving the firm order, BellSouth begins the readiness work required for the central office.

In August 1999, Supra submitted applications for the four central offices in questions and BellSouth responded with an initial estimate for each. These initial estimates are what prompted Supra's allegations. Supra has not submitted a firm order to BellSouth for any of the four offices. Since BellSouth provided Supra with the initial estimates, it has determined additional space construction and preparation costs for some of the central offices that were not included in the initial estimates. Accordingly, in this letter BellSouth provides the enforcement division with detailed cost elements that support each of the initial estimates. However, BellSouth notes that the current estimates have increased over the initial estimates. BellSouth identifies the amount of the new estimate in the appropriate section below.

Moreover, BellSouth has attempted, in the refinement of its processes, to address some of the uncertainties associated with establishing the cost estimate for collocation space. To that end, BellSouth has established new methods for determining costs for various activities routinely performed during site readiness, e.g., HVAC and electrical work. These methods allow the

⁴ BellSouth performs site readiness work based on the number of firm orders it has when it begins work. Some of the readiness costs, within a relevant range of space prepared for collocation, remain constant. Thus, if additional CLECs place firm orders each CLECs share of those costs is reduced.

CLEC to obtain faster, firm estimates for the readiness costs. BellSouth is in the process of entering new collocation agreements with CLECs in its region that reflect the new methods and processes. Supra has thus far declined to enter such an agreement.

The following is a description of the work that must be performed in each of the four central offices in order for Supra to be able to collocate the equipment it requested. Pursuant to the preceding discussion, where applicable, BellSouth provides the updated estimate, after each location for each type of cost and central office in the appropriate sections.⁵ The amounts listed in the summary table on page 8, however, represent the initial estimates.

1. Space Construction

a. Port Orange

Supra requested 31 bays of enclosed/unenclosed space. This cost estimate for space construction in Port Orange includes HVAC costs, electrical costs, and A&E fees. The HVAC work in this instance included the addition of 3 ducts, rebalancing, and controls. Supra's equipment is estimated to emit 16,094 watts of heat, which is equal to 4.5 tons of required cooling to offset this heat. Additionally, an electrical panel addition was required for the AC electrical needs.

b. Palm Beach Gardens

Supra requested 26 bays of enclosed/unenclosed space. This cost estimate for space construction in Palm Beach includes HVAC costs, electrical costs, and A&E fees. The HVAC work in this instance included the addition of 2 ducts, rebalancing, and controls. SUPRA's equipment is estimated to emit 13,701 watts of heat, which is equal to 4 tons of required cooling to offset this heat. Additionally, an electrical panel addition was required for the AC electrical needs. The cost for preparing this space was originally estimated at \$75,004, of which 72% (358 sq. ft. / 500 sq. ft.)⁶ or \$54,003 (as set forth in the table below) would be prorated to Supra. Since the initial estimate, BellSouth has found out that a card reader is not necessary, but additional HVAC ductwork would be needed. Accordingly, the new costs for the space are estimated at \$82,768, of which 72% (358 sq. ft. / 500 sq. ft.), or \$59,593, would be prorated to Supra. This increases the initial estimate for Palm Beach by \$5,590.

c. Palmetto

Supra requested 28 bays of enclosed/unenclosed space. Supra plans to collocate switching and transmission equipment in this central office. Because of space limitations and ground plane requirements for these types of equipment, collocation in Palmetto requires that the equipment for Supra be placed in two separate floor areas – switch rack in one corner and

⁵ For example, many of the specific cabling requirements for cable support and frame infrastructure discussed in II.B.2. were unknown when BellSouth submitted its initial estimate to Supra. BellSouth has since been able to determine the cabling and rearrangements requirements in the central office. The discussion in Section II B.2. below provides such detail.

⁶ An explanation of the allocation method is set forth in Exhibit 1.

transmission equipment in the common area. The placement of the equipment on the first floor includes rebalancing the existing HVAC⁷ system and adding additional ductwork. Lighting will be installed, and verification of the heat and electrical loads will also need to be completed.

d. Golden Glades

Supra requested 28 bays of enclosed/unenclosed space. Just as in Palmetto, Supra plans to collocate both switching and transmission equipment in Golden Glades. Space limitations also exist at Golden Glades. Moreover, the same ground plane requirements are present at Golden Glades, thus Supra's equipment will be placed on two separate floor areas - 12 bays on one floor and 16 on the other. The placement of the equipment on the first floor includes demolition of an existing office and, with the removal of the walls and ceiling tiles, asbestos abatement may be needed. The cooling of the two areas of the affected building will need to be re-balanced, and additional ductwork added. Lighting will be installed, and verification of the heat and electrical loads will also need to be completed.

A full description of the space construction cost estimates, by type, for each of the four central offices is set forth in Exhibit 1.

2. Cable Support and Frame Infrastructure

In addition to the items mentioned above, Cable support and frame infrastructure consists of the cable rack and fiber protection duct used to support and protect all telecommunications equipment and copper and fiber cabling within the CO building. Except where special technical requirements apply to collocated equipment, BellSouth installs all cable support structure in unenclosed collocation space. CLEC's install all cable support structure within the CLEC's enclosed collocation space.

Many of the specific cabling requirements were unknown when BellSouth submitted its initial estimate to Supra. Pursuant to the above discussion, since the initial estimate was better provided, BellSouth has been able to determine the cabling and rearrangements requirements in the central office. The discussion below provides that detail. Additionally, after each location BellSouth provides the updated estimate. The amounts listed in the summary table below represent the initial estimate.

a. Port Orange

This cost estimate consists of the cost for 80 feet of two tiered cable racking and the cost for the relocation of central office equipment to provide Supra space. The updated estimate is the same as the initial estimate - \$51,000.

⁷ The rebalancing will optimize the amount of cooling being provided to an area. This may include the decreasing of the amount of air being provided to one area while increasing the amount of air being provided to another area.

b. Palm Beach Gardens

This cost estimate consists of the cost for 60 feet of two tiered cable racking (transport only), and the cost for the relocation of central office equipment to provide Supra space. Fifty-two percent (52%) of this cost is allocated to Supra. The updated estimate is \$25,903, while the initial estimate was \$5,000 as listed in the summary below.

c. Palmetto

This cost estimate consists of the cost for 260 feet of two tiered cable racking. Seventy-three percent (73%) of this cost is allocated to Supra. The updated estimate is \$24,656, while the initial estimate was \$13,000 as listed in the summary below.

d. Golden Glades

This cost estimate consists of the cost for 325 feet of two tiered cable racking. Forty-one percent (41%) of this cost is allocated to Supra. The updated estimate is \$17,685, while the initial estimate was \$13,000 as listed in the summary below.

3. Power Infrastructure

To understand the power infrastructure costs of collocating in the four offices, a brief explanation of the power requirements is needed. The primary parts of a DC power plant are the rectifiers, batteries, and power board, which are typically located in a dedicated power room. The power room is located on a floor designed to handle the floor loading from the batteries (typically the basement) and is built per local codes for fire protection. The power board distributes large power feeds to other power distribution bays, battery distribution fuse bay ("BDFB") and power distribution frame ("PDF"), located near the network elements in the office. Generally, circuit type network elements obtain power feeds from a BDFB, while switching systems obtain power feeds from a PDF that is integral to the switching system.

With respect to physical collocation in BellSouth central offices, CLECs have the choice to obtain power feeds from either a BellSouth provided BDFB or from the BellSouth power board to a CLEC provided BDFB or PDF. When the CLEC chooses to obtain power feeds from a BellSouth BDFB, the CLEC is allowed to use a certified vendor to install the power feeds from the CLEC network element to the BellSouth BDFB. Therefore, this cabling cost is not reflected in an estimate of power plant construction from BellSouth to the CLEC. When the CLEC chooses to obtain power feeds from a BellSouth power board to a CLEC provided BDFB or PDF, BellSouth has historically performed the construction of the power feeds.⁸

⁸ Under the terms of the new contract discussed above, BellSouth is willing to allow any CLEC to use any certified power vendor to perform installation of dedicated power feeds, including from the BellSouth power board to the CLEC's BDFB or PDF. Although Supra has not yet adopted the new contract amendment, BellSouth is willing to allow Supra to use any certified power vendor to install the dedicated power feeds for these four central offices. If Supra wishes to pursue this offer, BellSouth will modify the estimate of power plant construction to include the cost of any common power cable racking required, and eliminate the cost of power

This dedicated cabling cost is reflected in an estimate of power plant construction from BellSouth to the CLEC. The distance from the power board to the BDFB or PDF can be quite large depending on the specific office arrangement. The longer the distance, the larger the power cables must be to meet voltage drop requirements. The larger the cable, the greater both material cost (copper) and installation labor costs. The four current Supra Telecom inquiries all request power feeds from a BellSouth power board to Supra provided BDFBs or PDFs.⁹ The majority of the estimated power plant construction costs are a result of this cabling. This cost estimate is provided directly from Lucent, BellSouth's vendor for installation. A full description of the power cost estimates for each of the four offices is attached as Exhibit 2.

The following is a summary of the estimated total costs set forth in Exhibits 1 - 3:

	Palmetto	Golden Glades	Palm Beach	Port Orange
Space Construction Costs	\$22,295	\$59,341	\$69,810	\$85,779
Cable Support and Frame Infrastructure	\$13,000	\$13,000	\$5,000	\$51,000
Power Costs	\$132,000	\$132,000	\$80,000	\$115,077 ¹⁰
Total Costs	\$167,295	\$204,541	\$154,810	\$251,856

The above discussion sets forth, in detail, the costs that BellSouth expects to incur to provide collocation space for Supra in the central offices indicated. As explained, the costs are driven by the conditions of collocation requested by Supra.

feeder cables or power cable rack dedicated to Supra. The power feeder cables and dedicated power cable rack will be the responsibility of Supra.

Indeed, this was one of the major reasons for the differences between the average cost of the 1998 estimates and the 1999 estimates. Fourteen of fifteen of Supra's 1998 requests sought power feeds from a BellSouth BDFB. The estimated power plant construction charges for these 14 requests, therefore, did not contain any cost associated with the dedicated power feeds. Comparatively, the four 1999 Supra requests seek a power architecture that is different from the 1998 requests. The new architecture requires large dedicated power feeds that are significantly more expensive due to the material (copper) and the installation labor.

¹⁰ The initial estimate provided to Supra was \$178,354. The difference is the result of BellSouth error in the calculation method. Exhibit 2 demonstrates the calculation that should have been used for the initial estimate.

III. Use of CLEC Controlled Contractors to Perform All Site Readiness Work

In addition to its claim regarding the costs for collocation, Supra also claims that it "requested the right to hire BellSouth certified contractors to perform space preparation work," but was denied. The letter, as stated, is misleading. BellSouth certainly has no objection to Supra using a certified contractor to perform the work on its dedicated collocation space. Indeed, BellSouth's policy on the provisioning of collocation space allows a CLEC to utilize a certified contractor to install the space enclosure and other elements that are inside the space leased by the CLEC that are dedicated to that CLEC and do not affect BellSouth or another CLEC's equipment.

BellSouth's position is based on national property management industry-wide practices for building owners with multi-tenant occupancies. Owners of multi-tenant premises typically limit tenants to work only in their space and on their specific systems in multi-tenant leased situations. For example, when a tenant leases space in a multi-tenant building, the tenant is allowed to build walls inside their space, add lighting and receptacles and install equipment but they are not allowed to do major mechanical or electrical work that serves or runs through other tenant space. This is based on safety and service reliability concerns for all occupants of the building. Likewise in BellSouth's collocation arrangements, the tenant/CLEC may install the welded wire cage that surrounds its equipment, frame and aisle lighting and electrical receptacles on its equipment. It may ground the wire cage and its equipment and perform the asbestos abatement inside its space, if required. These elements are dedicated to that particular tenant/CLEC. The landlord/BellSouth, however, performs all site readiness work that is outside of the tenant's/CLEC's space and that could potentially affect the landlord/BellSouth's and other tenants'/CLECs' working equipment. Such work includes, but is not limited to, system mechanical equipment changes and ductwork, ground bar additions, security access installations, handicapped upgrades required by the Americans with Disabilities Act, and other code required common improvements. These items are common to all tenants/CLECs and the landlord/BellSouth.¹¹

BellSouth has informed Supra that it may use a certified contractor to perform the work specific to its space identified above or even become a certified contractor and perform the work itself. Supra's letter, however, fails to reveal the rest of the story regarding its request. Supra desires to not only have its contractor perform work on its area of collocation, but also wants its contractor to perform all site readiness work, i.e., work on common areas that affect all carriers including BellSouth, within the central office. Consistent with BellSouth's position discussed above, the Commission has placed no such obligation on BellSouth or any other ILEC. The Commission has not placed this obligation on ILECs for good reasons — planning, network reliability, and safety requirements, simply make Supra's request unreasonable.

¹¹ BellSouth explains why such work should be performed by the building owner, BellSouth in this case, in section III.B., below.

A. BellSouth's Obligations Under the Collocation Orders

As a basis for its allegation that BellSouth should allow Supra to perform all construction for site readiness in the central office, Supra cites, out of context, paragraph 6 from the *Advanced Services Order* and paragraph 598 from the *Local Competition Order*. Paragraph 6 of the *Advanced Services Order* is a portion of the Executive Summary in which the Commission states its goals in adopting the new collocation rules. It states in full

We adopt, in this order, additional measures to further facilitate the development of competition in the advanced services market. First, we strengthen our collocation rules to reduce the costs and delays faced by competitors that seek to collocate equipment in an incumbent LEC's central office. For example, we require incumbent LEC's to make available to requesting competitive LECs shared cage and cageless collocation arrangements. Moreover, when collocation space is exhausted at a particular LEC location, we require incumbent LECs to permit collocation in adjacent controlled environmental vaults or similar structures to the extent technically feasible.¹²

While BellSouth realizes that the examples listed were not intended to be exhaustive, they illustrate the measures taken in the Order to reduce cost and delays, the apparent crux of Supra's argument, in collocation. Nowhere in the Order did the Commission address the use of contractors by CLECs to perform the work for site readiness within the central office. The rules adopted by the Commission for collocation are fully articulated in its Orders; and Supra cannot use the complaint process to circumvent long established rulemaking procedure¹³ by attempting to bootstrap unreasonable obligations on an ILEC through a general statement made in the summary paragraphs of an Order.

Supra's reliance on the *Local Competition Order* is equally misplaced. The section cited by Supra relates to the construction of a collocation cage for a CLEC to place its equipment and does not give a CLEC the ability to have all site readiness work performed by the CLEC's contractor. In the *Local Competition Order* the Commission required that a CLEC's physically collocated equipment must be placed inside a collocation cage within the ILEC's facility. The Commission required caged collocation in order to provide the ILECs, and other CLECs, physical security for their respective networks. The Commission stated

We conclude that the physical separation provided by the collocation cage adequately addresses [physical security] concerns. At the same time, we recognize that the construction costs of

¹² *Advanced Services Order* ¶ 6.

¹³ If Supra wanted the Commission to amend the rules to allow a CLEC the ability to have a contractor to perform the work it requested, its forum was the rulemaking proceeding in the *Advanced Services Order* docket or the *Local Competition Order* docket. See 47 C.F.R. 1.411 - 1.429.

physical security arrangements could serve as a significant barrier to entry, particularly for smaller competitors. We also conclude that CLECs have both an incentive and the capability to impose higher construction costs than the new entrant might need to incur. We therefore conclude that collocating parties should have the right to subcontract the construction of the physical collocation arrangements with contractors approved by the incumbent LEC.¹⁴

Clearly the Commission's statement, quoted only in part by Supra, relates to the use of a certified contractor by a CLEC to perform the construction of a CLEC's collocation cage.¹⁵ Accordingly, the enforcement division must not brook Supra's specious attempt to use a portion of this statement, quoted out of context, as *cart blanche* to use a contractor to perform any work within the BellSouth's central office that is required for collocation. The central office is property of BellSouth. Any construction that commonly affects all of the collocators, including BellSouth, must be performed by BellSouth. Any other finding would be beyond the rules established by the Commission, constitute an improper takings in violation of the Fifth Amendment of the Constitution, and, as discussed fully below, be an abuse of policies regarding planning, network protection, and safety.

B. Policies Regarding Planning for Multiple Collocators, Network Protection, and Safety Dictate that Common Work that Affects More than One Carrier be Performed by the ILEC.

Consistent with the policy established regarding a multi-tenant occupancy, there are significant policy reasons why a CLEC cannot be permitted to perform all site readiness work for collocation. First, planning, and execution of the plans, in the central office must be performed by the BellSouth. If a CLEC is allowed to perform all site readiness work, either one CLEC must be allowed to perform all work common to all collocators or multiple CLECs would have to be allowed to attempt piece-meal work on common pieces of equipment in common areas. Either scenario is obviously not workable. If one CLEC is allowed to do the common work for the entire central office, how should that CLEC be selected?¹⁶ Even if all CLECs could agree on one CLEC to perform this work, who would be responsible for planning future growth, or be

¹⁴ *Local Competition Order* ¶ 598 (emphasis added).

¹⁵ Although the Commission reversed its position regarding the requirement for caged collocation in the Advanced Services Order, many CLECs continue to want their equipment to be placed in a cage. As stated previously, BellSouth allows a CLEC to use a certified contractor to perform this work. BellSouth has established procedures, available upon request by any CLEC, on how to become a certified contractor. Moreover, BellSouth allows CLECs to use a certified contractor to perform other types of work, beyond building the collocation cage, that affect only the CLEC within the central office. See discussion above.

¹⁶ For example, Supra wishes to perform this common work even though BellSouth has yet to receive firm orders from Supra for collocation in the four central offices. If Supra is allowed to perform this work, all other CLECs must wait until Supra decides to go forward with its ever-changing collocation plans.

held accountable for failures in the equipment. Clearly any notion that a single entity other than the ILEC should perform such work is illogical.

Moreover, it is equally foolish to suggest that multiple carriers could perform the common area work. This would not only significantly increase costs, e.g., duplication of effort in planning, design and construction, it would create chaos in the central office. Multiple engineers, whether working concomitantly or sequentially, preparing designs for multiple occupants with multiple contractors trying to work on one piece of machinery or one piece of duct is at best disconcerting and potentially dangerous. Whose work would take precedence? How would system and plant requirements be determined if no one has the overall responsibilities? In the event of equipment failure, how would responsibility be assigned? Indeed, BellSouth contends that under such conditions collocation would come to a grinding halt.

Second, protection against network outages requires that BellSouth perform common work especially power plant construction of common elements. Such common elements include any portion of a power plant system that is shared or may be shared by multiple users. Examples include rectifiers, batteries, power boards, and common BDFBs. Reasons for this position include the requirement to not impede the entry of any CLEC into the marketplace and maintenance of reliability and safety standards. BellSouth routinely receives concurrent physical collocation inquiries from multiple CLECs for the same central office. Any one or combination of inquiries may trigger power capacity exhaust.

Finally, it is essential for safety reasons that one carrier perform work on power plant common elements. Multiple carriers working these elements greatly increase the possibility for improper wiring. Improperly wired systems present a serious shock hazard. Indeed, BellSouth has experienced an instance where safety was compromised. A CLEC and certified vendor implemented a design change with the CLEC's PDF to save money that resulted in a violation of National Electric Code Article 240-8 "Fuses or Circuit Breakers in Parallel". The condition represented a serious potential shock hazard and was found in several Atlanta metropolitan offices. When the condition was brought to the attention of the CLEC and certified vendor, they jointly took immediate action to remedy the situation. The condition was not intentional, the individuals involved simply were not aware of the implications of the design change. This example demonstrates that because the ILECs are the most experienced with their own power plant elements, they should be responsible for work on all common elements within the central office.

The Commission clearly has not required that an ILEC allow a CLEC to perform all site readiness costs necessary in a central office to allow a CLEC to collocate its equipment. As explained above, to do so would create chaos within the central office and slow the collocation process.

IV. Conclusion

BellSouth has demonstrated in this letter that its costs for collocating Supra's equipment in the four requested central offices are justified and reasonable. Supra's allegations that

BellSouth improperly increased its costs between 1998 and 1999 are completely without merit. Any cost increase was primarily caused by changes made in the conditions under which Supra wanted collocation the four central offices. Moreover, Supra's request to perform all construction for collocation within the central office has no basis under the Commission's rules or in practice. It is abundantly clear that the landlord in a multi-tenant situation, such as collocation in a central office, should perform work that is common to all tenants.

BellSouth contends that this letter should obviate the need for any further complaint process on this matter. In the abundance of caution, however, BellSouth states that the facts in this instance make Supra's request to be placed on the Commission's accelerated docket impractical. Stripped of veneer, Supra's claim is a mere request to have the enforcement division arbitrate the costs associated with collocation in four central offices in Florida. The outcome is not "likely to advance competition in the relevant telecommunications market."¹⁷ Moreover, the facts that must be fleshed out in order to decide if such costs are reasonable are tedious. Not only would BellSouth's financial records be placed in issue, but Lucent's records are also highly relevant to such costs as they are the vendor that makes up the lion's share of the total cost for collocation work performed in each central office. Such fact gathering through discovery is not suited for a decision under the time constraints imposed by the accelerated docket. Indeed, the issue of damages and liability are basically indivisible.¹⁸ In order to determine if the costs are unreasonable and discriminatory requires a determination of what reasonable and nondiscriminatory costs are. Once again, such a determination cannot be made outside of a full cost proceeding. If Supra has a complaint about the cost of collocation, this issue should be left to the state commission and the arbitration process.

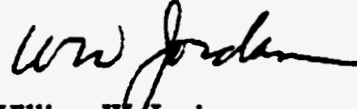
Finally, any proceeding on the issue of construction costs would be an extremely poor use of the enforcement division's time. BellSouth allows CLECs to construct dedicated facilities within the central office. For good reasons, discussed above, this is all BellSouth is required to do. Indeed, under its new collocation agreement, BellSouth goes beyond its obligations in allowing outside contractors to perform work. Any decision that required BellSouth to do more than it already does would expand the Commission's rules. Such expansion can only be carried

¹⁷ See *In the Matter of Implementation of Telecommunications Act of 1996, Amendment of Rules Governing Procedures to be Followed When Formal Complaints are Filed Against Common Carriers*, CC Docket No. 96-238, *Second Report and Order*, 13 FCC Rcd 17018 (1998) ("Accelerated Docket Order") ¶ 18.

¹⁸ *Id.* ¶ 19 ("we believe that the time constraints of the Accelerated Docket typically will make it difficult to decide issues of both liability and damages in a single proceeding.")

out in a rulemaking proceeding. Accordingly, for the reasons stated above, the enforcement division should deny Supra's request to include this case on the accelerated docket.

With kindest Regards



William W. Jordan
Vice President - Federal Regulatory

cc: Ms. Michelle Carey
Enforcement Division-Common Carrier Bureau
Federal Communications Commission
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BY HAND DELIVERY

Ms. Audrey Wright
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Mark E. Buechele, Esq.
P. O. Box 398555
Miami Beach, FL 33239-8555
BY FAX AND U. S. MAIL

Port Orange

Below is the detail initial estimate of the costs associated with the Supra inquiry at the BellSouth central office in Port Orange. Supra has requested space for 14 bays of equipment, this equals 406 SF of floor space {116 (equipment foot print) x 3.5 (aisle recovery)}.

Note: As detailed engineering is performed other facility modifications may need to be performed.

Cost Estimate for Supra Collocation at Daytona Port Orange	Total Project Cost	Supra Cost
General Construction \$250 of construction costs. This includes the cost for rekeying one door to provide collocator access. Total General Construction Costs	\$250	\$250*
HVAC Costs \$12,000 for 3 ducts (one main duct and two branch ducts to provide air at both ends of the long area dedicated to Supra) \$3,350 for 2 relief dampers. Due to installation of a new duct path from the mechanical room(s) which penetrate existing fire rated walls \$1,000 for rebalancing the system \$15,000 for controls \$7,838 general conditions, overhead & profit, taxes, supervision Total HVAC Costs	\$39,188	\$39,188
Electrical Costs \$25,000 for a new electrical panel \$600 for new lights and outlets. \$1,015 for the EWFD system. \$6,641 general conditions, overhead & profit, taxes, supervision Total Electrical Costs	\$33,256	\$33,256*
Security System Costs \$ 0 for the installation of new card readers Total Security System Costs	\$0	\$0
Architectural/Engineering/Project Management Fees \$11,285 A&E fees, based on estimated construction costs \$ 1,800 Project Management Total Architectural/Engineering/Project Management Fees	\$13,085	\$13,085*
Total Cost	\$89,779	\$85,779

* There are no prorated costs as Supra is the only collocator that will utilize this area of the Port Orange central office.

Palm Beach

Below is the detail initial estimate of the costs associated with the Supra inquiry at the BellSouth central office in Palm Beach. Supra has requested space for 26 bays of equipment, this equals about 358 SF of floor space {102 (equipment foot print) x 3.5 (aisle recovery)}.

At Palm Beach, there is an area available for Supra and two other collocators. This area is roughly equal to 500 sq. ft. Supra occupies 358 square feet of this area (equipment footprints + circulation area).

Note: As detailed engineering is performed other facility modifications may need to be performed.

Cost Estimate for Supra Collocation at West Palm Beach Gardens	Total Project Cost	Supra Cost
General Construction \$10,000 for card access system installation \$ 250 for rekeying several doors to permit collocator access \$ 3,000 general conditions, supervision, overhead and profit, taxes Total General Construction Costs	\$13,250	\$12,333
HVAC Costs \$8,000 for 1 main duct and 3 branch ducts to feed the four rows of equipment installations \$1,000 for HVAC rebalancing \$5,000 for HVAC controls \$3,500 general conditions, supervision, overhead & profit, taxes. Total HVAC Costs	\$17,500	\$16,285
Electrical Costs \$25,000 for a new electrical panel \$1,250 for the Early Warning Fire Detection system modifications \$6,563 general conditions, overhead & profit, taxes, supervision Total Electrical Costs	\$32,813	\$30,542
Security System Costs \$ 0 for the installation of new card readers Total Security System Costs	\$0	\$0
Architectural/Engineering/Project Management Fees \$ 9,422 of A/E fees, based on the estimated construction costs \$ 2,019 of Project Management costs Total Architectural/Engineering/Project Management Fees	\$11,441	\$10,644
Total Cost	\$75,004	\$69,810

Palmetto

Below is the detail initial estimate of the costs associated with the Supra inquiry at the BellSouth Palmetto central office. Supra has requested space for 26 bays of equipment, this equals about 358 sq. ft. of floor space {102 (equipment foot print) x 3.5 (aisle recovery)}.

Note: As detailed engineering is performed other modifications may need to be performed.

Cost Estimate for Supra Collocation at Miami Palmetto	Total Project Cost	Supra Cost
General Construction \$ 0 of construction costs Total General Construction Costs	\$0	\$0
HVAC Costs \$ 8,000 for 2 branch ducts to feed the four rows of equipment installations \$ 2,000 for HVAC rebalancing \$ 2,500 for general conditions, supervision, overhead and profit, taxes Total HVAC Costs	\$12,500	\$12,500*
Electrical Costs \$1,050 for extra light fixtures and outlets for the area \$ 263 for general conditions, supervision, overhead and profit, taxes Total Electrical Costs	\$1,313	\$1,313*
Security System Costs \$ 25,875 for the installation of new card access system Total Security System Costs	\$25,875	\$3,234
Architectural/Engineering/Project Management Fees \$ 4,248 of A/E fees, based on the estimated construction costs \$ 1,000 of Project Management Costs Total Architectural/Engineering/Project Management Fees	\$5,248	\$5,248*
Total Cost	\$44,936	\$22,295

* There are no prorated costs as Supra is the only collocator that will utilize this area of the Palmetto central office.

Golden Glades

Below is the detail initial estimate of the costs associated with the Supra inquiry at the BellSouth Golden Glades central office. Supra has requested space for 28 bays of equipment, this equals about 371 SF of floor space {106 (equipment foot print) x 3.5 (aisle recovery)}

Note: As detailed engineering is performed other physical facility modifications may need to be performed.

Cost Estimate for Supra Collocation at Miami Golden Glades	Total Project Cost	Supra Cost
General Construction \$ 316 for the demolition of a suspended ceiling \$ 400 for the removal of a door frame and door \$ 300 for the demolition of existing light fixtures \$8,372 for the demolition of interior partitions \$ 400 for the general rekeying of doors \$2,190 for the installation of a dust partition \$3,791 general conditions, supervision, overhead and profit, taxes. \$ 638 asbestos abatement Total General Construction Costs	\$16,407	\$16,407*
HVAC Costs \$20,050 for 2 main duct and 3 branch ducts to feed the four rows of equipment installations \$ 2,000 for HVAC rebalancing \$ 450 general conditions, supervision, overhead & profit, taxes. Total HVAC Costs	\$22,500	\$22,500*
Electrical Costs \$1,400 for extra light fixtures and outlets for the area \$ 350 general conditions, overhead & profit, taxes, supervision Total Electrical Costs	\$1,750	\$1,750*
Security System Costs \$ 25,875 for the installation of new card readers Total Security System Costs	\$25,875	\$3,234
Architectural/Engineering/Project Management Fees \$13,345 of A/E fees, based on estimated construction costs \$ 2,105 of Project Management costs Total Architectural/Engineering/Project Management Fees	\$15,450	\$15,450*
Total Cost	\$81,982	\$59,341

* There are no prorated costs as Supra is the only collocator that will utilize this area of the Golden Glades central office.

PORT ORANGE**DYBHFLPO-SUU-03**

SUPRA application DYBHFLPO-SUU-03 dated August 13, 1999.

Page 2 of 12 listed a total of 631 Amperes (631A) for -48VDC Power Requirements.
Page 2 of 12 listed a total of 47,070 watts (47,070W) for Heat Dissipation, which equates to a nominal 981A drain @48VDC.

Page 5 of 12 had four (4) feeders identified for isolated ground plane. (Rack # 6)

Page 6 of 12 had four (4) feeders identified for integrated ground plane. (Rack # 33)

Lucent response:

Brief description of recommended power plant construction to serve collocation request:

ADD 4 A & B FEEDS FROM PBD 0112.01,02 to new Collocator BDFB

Possibly to be located in 0199.00 & 0199.01 (approx 120")

Estimated EF&I interval to complete power plant construction requirements 30 days
(calendar days from receipt of BellSouth order to project completion)

Estimated installation (construction) interval 21 days

Estimated EF&I cost: \$ 46,455.00

Incl approx 40' of cable rack @ 2,110.00

PCM response:

14 days were added to the Lucent cycle to allow for authorization approval and other administrative requirements.

Taxes (Florida = 7.0%), Hauling & Hoisting and other normal charges were included to bring the overall Cable/Rack estimate to \$51,000 (46,455 + 7% tax and estimated handling and hoisting fee).

Anticipated costs for Power Plant additions were calculated at \$64,077. (This was based on P# 3B5043, which has been initiated and is priced at \$70,000 in Capital costs and is required to meet the request's drain requirements at 631A.)

The sum of the above is the \$115,077* estimated as Power Costs.

* As described in footnote 10, the initial estimate was incorrectly calculated as \$178,354.

PALM BEACH

Supra application WPBHFLGR.SUU.03 dated August 16, 1999.

Page 4 of 12 requested (2) 225a isolated feeds to their switch.
 Page 5 of 12 requested (2) 225a integrated feeds to their BDFB.
 Page 6 of 12 shows n/a. (BellSouth BDFB fuse positions)

LUCENT'S RESPONSE IS AS FOLLOWS:

Application is requesting drop feeds to two (2) collocation supplied bdfb's, one integrated & one isolated.

Feeds are rated 180 ampere and fused at 225 amperes. Integrated feed is estimated @ 2x 150 ft from power plant

Isolated feed is estimated @ 2x 150 ft from power plant

\$ 75,000	Lucent's estimated cost
3,998	Estimated tax
300	Estimated BellSouth engineering
600	Estimated BellSouth labor
102	Estimated BellSouth other
<u>\$ 80,000</u>	Estimated cost of job

Estimated EF&I interval: 90 DAYS

Estimated installation interval: 30 DAYS

BellSouth estimated final costs: **\$80,000**

(Includes taxes, telco labor, and telco engineering. Total estimated costs rounded up to nearest thousand.)

PALMETTO

Supra application MIAMFLPL.SUU.05 dated August 16, 1999.

Page 4 of 12 requested (2) 225a isolated feeds to their switch.

Page 5 of 12 requested (2) 225a integrated feeds to their BDFB.

Page 6 of 12 shows n/a.(BellSouth BFDB fuse positions)

LUCENT'S RESPONSE IS AS FOLLOWS:

Application is requesting drop feeds to collocation supplied BDFB. Request is for one integrated & one isolated BDFB feeds. All feeds are rated 180 ampere, and fused at 225 amps.

Integrated feed is estimated @ 160 ft from power plant.

Isolated feed is estimated @ 200 ft from power plant.

providing 2 feeders (1) pair a & b 160 feet to collocators integrated ground plane BDFB.
also providing 2 feeders (1) pair a & b 200 feet to collocators isolated BDFB.

124,255	Lucent's estimated cost
6,704	Estimated tax
300	Estimated BellSouth engineering
600	Estimated BellSouth labor
141	Estimated BellSouth other
<u>132,000</u>	Estimated cost of job

Estimated EF&I interval: 90 DAYS

Estimated installation interval: 30 DAYS

BellSouth estimated final costs: **\$132,000**

(Includes taxes, telco labor, and telco engineering. Total estimated costs rounded up to nearest thousand.)

GOLDEN GLADES

Supra application **NDADFLGG.SUU.04** dated August 16, 1999.

Page 4 of 12 requested (2) 225a isolated feeds to their switch.

Page 5 of 12 requested (4) 225a integrated feeds to their BDFB.

Page 6 of 12 shows n/a. (BellSouth BDFB fuse positions)

LUCENT'S RESPONSE IS AS FOLLOWS:

Application is requesting drop feeds to three (3) collocation supplied BDFB's, two integrated & one isolated.

Feeds are rated 180 ampere and fused at 225 amperes. Integrated feed is estimated @ 4 x 140 ft from first floor power plant

Isolated feed is estimated @ 2 x 75 ft from second floor power plant.

The power plant requires an additional distribution bay.

Providing 4 feeders (2) pairs a & b 140 feet to collocators integrated ground plane BDFB.

One distribution bay for 225 ampere breakers must be added to meet this request

Second floor- providing 2 feeders (1) pair a & b 75 feet to collocators isolated BDFB.

\$123,622	Lucent's estimated cost
6,669	Estimated tax
300	Estimated BellSouth engineering
600	Estimated BellSouth labor
809	Estimated BellSouth other
<u>\$132,000</u>	Estimated cost of job

Estimated EF&I interval: 90 days

Estimated installation interval: 30 days

BellSouth estimated final costs: **\$132,000**

(Includes taxes, telco labor, and telco engineering. Total estimated costs rounded up to nearest thousand.)



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1311 Executive Center Drive, Suite 200
Tallahassee, FL 32301-5027

November 24, 1999

VIA FACSIMILE

Glenn T. Reynolds, Esq.
Frank G. Lamancusa, Esq.
Enforcement Division, Common Carrier Bureau
Federal Communications Commission
445 12th Street SW, Suite 5-A848
Washington, D.C. 20554

Re: Supra Telecom adv. BellSouth
Request for Accelerated Docket and Prefiling Mediation

Gentlemen:

As a follow-up to Mark Buechele's letter to you, dated November 13, 1999, enclosed is a copy of a letter from BellSouth to Supra, dated November 22, 1999. In its letter, BellSouth advises that it can no longer hold the physical collocation space in the four offices that are the subject of Supra's complaint to the FCC. BellSouth's stated reason for this action is that Supra has not entered firm orders for these offices; therefore, if firm orders are not received by December 6 1999, BellSouth will release the space.

Supra will submit firm order commitments for these offices. However, inasmuch as BellSouth is requiring that the firm orders be accompanied by a check for BellSouth's asserted costs, Supra is unwilling to pay the disputed moneys until a resolution has been reached between the parties and the FCC.

We are bringing this to your attention to further demonstrate BellSouth's continued actions in holding CLECs hostage for unsubstantiated costs imposed by it. Without your immediate assistance in the resolution of this matter, Supra is at risk of losing critical collocation space that we have incurred several thousands of dollars to secure. Not only have we paid BellSouth over sixteen thousand dollars in application fees, we spent over one hundred and fifty thousand dollars in litigation expenses before the Florida PSC in an attempt to secure collocation space in these offices. Needless to say, these offices are very critical to the viability of our network.

Glenn T. Reynolds, Esq.
Frank G. Lamancusa, Esq.
Federal Communications Commission
November 24, 1999
Page 2 of 2

Thank you for your consideration of this matter.

Yours very truly,

A handwritten signature in cursive script, appearing to read "Ann H. Shelfer".

Ann H. Shelfer
V.P.-Public Policy Advocate

Enclosure

cc: Ms. Nancy White

Legal Department

NANCY B. WHITE
General Counsel Florida

BellSouth Telecommunications, Inc.
160 South Monroe Street
Room 400
Tallahassee, Florida 32301
(904) 347-6660

November 22, 1999

VIA FACSIMILE

David V. Dimlich, Esq.
Legal Counsel
Supra Telecommunications &
Information Systems, Inc.
2620 S.W. 27th Avenue
Miami, FL 33133

Dear David:

As you know, as a result of the Federal Communications Commission's Order 99-48, BellSouth withdrew its petitions for waiver of physical collocation on the Daytona Beach Port Orange Central Office, the Miami Palmetto Central Office, the West Palm Beach Gardens Central Office, and the North Dade Golden Glades Central Office. Supra had physical collocation applications on file with BellSouth for these central offices. BellSouth responded to these applications on August 31, 1999 and provided cost estimates. As stated in the collocation handbook, Supra had 30 days from that date in which to provide BellSouth with firm orders for these offices. BellSouth has not received a firm order for the Daytona Beach Port Orange office, Miami Palmetto office, North Dade Golden Glades Office or West Palm Beach Gardens Office.

As noted above, the 30 day time period elapsed sometime ago. BellSouth can no longer continue to hold the physical collocation space in these four offices available for Supra. Therefore, if BellSouth does not receive firm orders from Supra for these four offices by December 6, 1999, BellSouth will release the space. If Supra desires, at a later time, to physically collocate in these four offices, Supra will be required to file a new application for physical collocation, along with the appropriate application fee.

In addition, please note that the physical collocation arrangements for these four offices will be engineered without a Point of Termination ("POT") pay in order to assign space in these offices in the most efficient manner possible. I

advised the parties of this at the prehearing conference held on July 26, 1999. Moreover, it is my understanding that Supra has not yet executed an amendment to its contract to incorporate the requirements of the FCC order or the partial amendments that incorporates only the terms regarding the elimination of the POT bays as the demarcation point and the new security provisions. Supra can contact their negotiator, Pat Finlen at (404) 927-8389 for more details.

Sincerely,



Nancy B. White

cc: Nancy Nelson
Peggy McKay

BELLSOUTH

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November 24, 1999

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VIA HAND DELIVERY, FAX, AND U.S. MAIL

Glenn T. Reynolds, Esq.
Frank G. Lamancusa, Esq.
Enforcement Bureau
Federal Communications Commission
445 12th Street, S.W.
Suite 5-A848
Washington, D.C. 20554

Re: BellSouth's Response to Supra's "Follow-Up" Letter Regarding Its Request for
Inclusion of a Dispute with BellSouth on the Commission's Accelerated Docket

Gentlemen:

In its initial letter to the Enforcement Bureau ("Bureau"), Supra Telecommunications & Information Systems, Inc. ("Supra") made unsubstantiated claims that BellSouth Telecommunications, Inc.'s ("BellSouth") charges for collocation in four central offices were too high. In response to these allegations, BellSouth demonstrated in its October 8, 1999 letter to the Bureau that the costs, although estimates, were the actual costs that BellSouth would incur to permit Supra to collocate in these central offices and were therefore reasonable and allowable pursuant to the Telecommunications Act of 1996 ("1996 Act"), the Commission's orders, and the Supra interconnection agreement. Unable to support its initial claims, Supra brought new oral claims against BellSouth at the meeting between the parties and the Bureau on October 25, 1999. The Bureau very explicitly required Supra to put *all* of these new claims in writing and present them to BellSouth so that BellSouth would have the opportunity to respond. On Monday night, November 15, 1999, 15 business days after the meeting, Supra faxed a 17 page single spaced opus to BellSouth ("Supra's November 13th Letter").¹ In this letter, Supra alleges 10 separate practices that BellSouth is engaged in that "obstruct and delay the collocation process."² The last section of the letter states, however, that the practices listed in the letter "are not a complete list, but rather are practices raised solely by BellSouth's oral and written responses to

¹ Supra's dated its November 13, 1999. Supra was aware that BellSouth would receive only seven business days to respond to its letter.

² Supra's November 13th Letter, page 1 of 17.

**PLEASE DATE-STAMP
AND RETURN**

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Supra Telecom's September 20, 1999 letter."³ This statement is completely contrary to the specific instructions given to Supra by the Bureau -- Supra was to provide a list of *all* collocation allegations it has against BellSouth. BellSouth can only assume that the disclaimer was put in the letter as a hedge to attempt to bring more allegations once the alleged practices in its letter are shown to provide no colorable claim against BellSouth. At some identifiable point BellSouth should be free from expending any more resources to respond to Supra's baseless claims. Accordingly, the Bureau must ignore Supra's insinuation of further allegations and make its determination on the claims Supra has placed in writing.

BellSouth will respond to each of the claims in the order set forth in Supra's November 13th Letter.

Allegation No. 1:

In this allegation, Supra claims that BellSouth violates the Commission's *Advanced Services Order*⁴ because BellSouth selects where a CLEC may collocate its equipment. It is important to understand Supra is not alleging that BellSouth denied Supra collocation space in a central office where Supra believes space is available. Instead, Supra's claim is merely that it did not get to select the exact space in which to place its equipment. In support of its claim, Supra relies on a portion of the *Advanced Services Order* that states "incumbent LECs must allow competitors to collocate in any unused space in the incumbent LEC's premises, without requiring the construction of a room, cage, or similar structure, and without requiring the creation of a separate entrance to the competitor's collocation space." Clearly the intent underlying this collocation rule is to allow CLECs access to all available unused space without artificially increasing their costs or delaying their time of entry. The language of the Order was not intended to allow a CLEC to come into the central office and select any space that it may want. Such an interpretation would be unreasonable for several reasons.

First, space management demands that one entity, presumably the owner of the premises, assign space. Allowing CLECs to come in and select the space will lead to an inefficient use of space and ultimately less space available for collocation.

Second, there are technical reasons that must be considered in determining where a CLEC's equipment should be located within a central office. Such factors include:

- **Overall cable length.** Cable congestion and related expense can be avoided or at least minimized by careful consideration of existing and future equipment

³ *Id.* at 15 of 17.

⁴ *In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Dkt. No. 98-147, *First Report and Order and Further Notice of Proposed Rulemaking*, FCC 99-48 (rel. Mar. 31, 1999) ("*Advanced Services Order*").

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requirements of both the collocating CLEC and others that have or will collocate in the future. Orderly equipment growth, *i.e.*, grouping like equipment together, allows economic efficiencies while reducing excessive cable rack congestion and resultant re-routing of cables.

- **Distance between related equipment.** Some equipment components, *e.g.*, switch call processors, must be placed so that the cable length between the components does not exceed an amount recommended by the equipment manufacturer.
- **Grouping of equipment into families of equipment.** Families of equipment, *e.g.*, switching equipment or transmission equipment, must be placed together for technical reasons, such as electrical grounding, discussed below, as well as to maximize the contiguous space within a given central office recovered when existing equipment is replaced by more modern equipment. Having all equipment located in the same part of the central office allows the recovery of larger "blocks" of floorspace rather than smaller parcels of floorspace interspersed among other racks of equipment.
- **Electrical grounding requirements.** Switching equipment typically requires an "isolated grounding" source while transmission equipment typically requires an "integrated grounding" source. Safety codes require that equipment served by different grounding sources be physically separated in order to avoid technicians receiving electrical shocks or being electrocuted because they simultaneously contact dissimilar grounding sources.
- **"Holes" in existing equipment line-ups.** "Holes" in equipment line-ups are spaces intentionally left empty to accommodate future growth and still assure adherence to the principles described above. (In some cases, cables and framework are modular in nature and economic efficiency results from pre-assembly and provision of such cables or framework.)

Third, assignment of space by the incumbent LEC is necessary to insure that the incumbent LEC's rights, as owners of the property, are not subordinated to the rights of the CLECs. For example, the Commission stated in the *Local Competition Order* that incumbent LECs may reserve space for future use.⁵ Moreover, in ordering cageless collocation in the *Advanced Services Order*, the Commission explicitly granted the incumbent LECs the right to

⁵ *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, *First Report and Order*, 11 FCC Rcd 15499 (1996) ("Local Competition Order") ¶ 604, modified on reconsideration, 11 FCC Rcd 13042, (the Commission "allowed [incumbent LECs] to retain a limited amount of floor space for defined future use.").

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put their equipment in cages.⁶ If CLECs were allowed to simply choose the placement of its equipment, each of these rights would be circumvented. The bottom line of this issue is that someone must allocate the limited space within the central office. Notwithstanding the constitutional implications that would arise if the incumbent LEC's ability to control its property were given over to each individual CLEC, the results yield a helter-skelter practice of proportioning central office space. The assignment of space by the incumbent LEC is necessary for the most efficient use of the limited space. BellSouth disclosed the above position regarding assignment of space in the central office to the Commission in a letter to the Chief of the Common Carrier Bureau dated June 1, 1999.⁷ BellSouth has received no advice from the Commission that its interpretation of the order is incorrect. Accordingly, Supra's claim that BellSouth's practices violate the *Advanced Services Order* is without merit.

The remainder of Supra's allegations in this section are not only inaccurate, but are equally without merit. BellSouth denies it "admitted that it does not allow the CLEC to have any input as to where equipment will be located." Moreover, pursuant to the above discussion, BellSouth questions the relevance of the alleged admission even if it were true. BellSouth states, however, that although it assigns collocation space, it often discusses with the CLEC the type of equipment it plans on collocating and takes into consideration any requests made by the CLEC. BellSouth will, if possible, accommodate the CLECs requests. BellSouth, likewise, questions the claim that BellSouth refuses to allow the CLEC to tour the central office in order to identify alternative collocation space. A tour is not necessary or required unless BellSouth denies a CLEC space, subsequent to the *Advanced Services Order*. Supra was not denied space in the offices in question, and therefore, a tour is not needed.⁸ BellSouth will grant a tour to any CLEC for any central office in which collocation is denied because of space exhaustion.

Supra also makes the bare allegation that BellSouth purposefully assigns CLECs space that requires the addition of overhead lighting and air conditioning, which increases the CLECs' cost and causes delay.⁹ Regarding overhead lighting, a central office is not a warehouse within which BellSouth has unlimited space to place CLECs. The subject matter in question is unused space. The facts are that most central offices, especially those selected by Supra, have limited size and space availability. It would be impossible for BellSouth to know for any central office

⁶ *Advanced Service Order* ¶ 42.

⁷ A copy of that letter is attached as Exhibit 1.

⁸ BellSouth informs the Bureau, however, that Supra has been on several tours of the central offices.

⁹ Supra implies that BellSouth requires that a permit be obtained before construction of overhead lighting and air conditioning may be completed. It is not BellSouth, but the local municipalities that require such permits. Indeed, BellSouth has worked tirelessly with various municipalities, including Dade County, Florida, to reduce the number of permits required for central office construction of collocation arrangements.

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what CLECs will seek collocation, the equipment that these unknown CLECs will seek to collocate, or when that they may seek to collocate it. Given the space limitation and the uncertainty of the collocators, it would be impossible to devise a plan to give all collocators the undesirable space. To the contrary, BellSouth utilizes the most efficient plan available for the unused space on its premises. This space is assigned pursuant to the collocator's needs and availability. The location of overhead lights is not a factor.

The need for additional air conditioning is based on the collocated equipment's production of heat. The equipment manufacturer's engineering standards make such determination. BellSouth follows the same procedure for all equipment whether it is its own or the equipment of collocators. Network and service reliability require that adequate air conditioning be installed to meet these cooling standards. BellSouth should not and cannot ignore its own network reliability in order to allow Supra, or any CLEC, to save money.¹⁰

Finally, Supra proposes that incumbent LECs be required to rearrange their central offices to accommodate CLEC collocation. Supra alleges that such rearrangements "will only" benefit the incumbent LECs and therefore the incumbent LECs should bear the full cost of the rearrangements. How can Supra make such a claim? While rearranging a central office may yield slightly more collocation space, it will in no way benefit the incumbent LEC. This statement is so illogical that instead of listing the obvious multiple reasons why rearrangement of a central office will not benefit the incumbent LEC, BellSouth believes that if the Bureau wants to give any credence to this claim, Supra must present evidence to support its allegation.

Allegation No. 2:

Supra next alleges that BellSouth uses an improper formula to calculate floor space for collocation. A brief background of collocation requirements is helpful to understand why Supra's claim has no merit. In the *Local Competition Order*, the collocation requirement for incumbent LECs was limited to basic transmission facilities needed for interconnection between the incumbent LEC and CLEC networks, and for access to incumbent LEC unbundled network elements. The *Local Competition Order*, however, did not require collocation of enhanced services equipment, customer premises equipment or switching equipment. The vast majority of basic transmission equipment as defined in the *Local Competition Order* can be installed in 12-inch deep open equipment racks. The standard configuration of telecommunications equipment racks within the central office places the racks in lineups with front maintenance access and rear wiring and cabling access. The average width of a central office maintenance aisle is three feet and the width of a wiring and cabling aisle is two feet. Based on these dimensions, BellSouth

¹⁰ Supra asserts that another CLEC, Bluestar Networks, Inc. ("Bluestar"), has filed a complaint against BellSouth at the Florida Public Service Commission regarding collocation. Supra has inaccurately characterized this complaint. Notwithstanding, BellSouth has turned over the requested collocation space to Bluestar and collocation is progressing in the central offices.

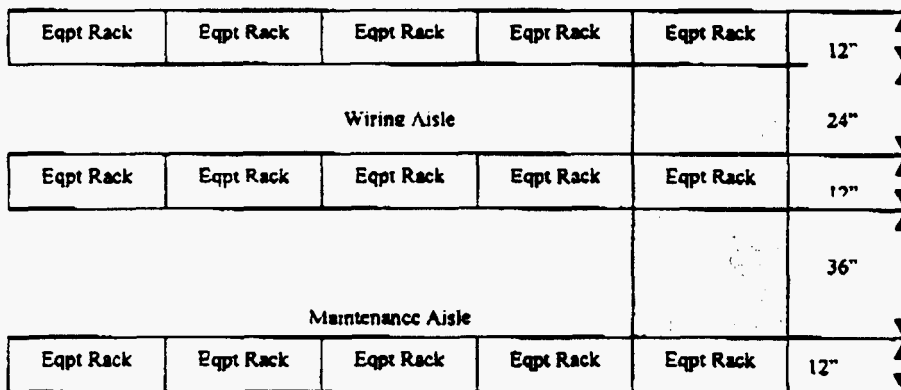
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developed and incorporated into its initial collocation agreements a floor space computation to compute billable floor space as follows:

- Equipment rack shadow print (one sq. ft.) + a factor of 2.5 times the shadow print = total billable floor space, i.e., 3.5.¹¹

This formula, assuming a 12" deep rack, charges a CLEC for the floor space occupied by the equipment plus half of the shared maintenance and wiring and cabling aisle space necessary to install and maintain the equipment.

The shaded areas of the following figure represents the resulting floor space billed:



The *Advanced Services Order* revised the types of equipment that can be collocated within a central office to include switching and enhanced services capable equipment. These types of equipment have varying physical dimensions. BellSouth does not dispute that the 2.5 factor¹² overcompensates for aisle space requirements when equipment racks with depths greater than 12" are collocated. As a result of the *Advanced Services Order* BellSouth has modified its billable space calculation formula for cageless collocation in all new collocation agreements as follows:

- [(depth of the equipment lineup in which the rack is placed) + (0.5 x maintenance aisle depth) + (0.5 x wiring aisle depth)] X (width of rack and spacers) = total billable floor space

¹¹ See Section V.(B) of Supra's collocation agreement.

¹² As noted in the formula above, the 2.5 factor added to the one square foot equipment rack is the 3.5 factor complained of by Supra.

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This formula provides for an accurate computation of the floor space consumed by the collocated equipment, regardless of the physical width and depth measurements of the equipment rack or cabinet.

Supra's initial collocation agreement, which contained the 3.5 factor, was in effect until October 5, 1999. BellSouth offered the revised formula to Supra in BellSouth's new standard collocation contract on July 8, 1999. Supra, however, rejected negotiations under the new contract and instead opted to adopt the collocation provisions in AT&T's interconnection agreement on October 5, 1999. Floor space under the AT&T contract is calculated under the old formula. Supra cannot have it both ways – it cannot reject an offer; accept another offer, and then complain about the offer it rejected. BellSouth is willing to negotiate its standard agreement with Supra at any time. Accordingly, Supra's complaint on this issue is moot.

Allegation No. 3:

Supra's third allegation is comprised of three sub-claims that can be summarized as follows: (a) Supra alleges that BellSouth requires the construction of needless overhead lighting and air conditioning; (b) Supra alleges that BellSouth improperly requires the contractor of its choice to perform such construction; and (c) Supra alleges that BellSouth improperly refuses CLECs the ability to install equipment until such construction is complete.

(a) Construction of Overhead Lighting and Air Conditioning

Supra's allegation related to lighting and air conditioning centers on two themes – construction of the lighting and air conditioning is unnecessary and that by requiring such construction, permits must be obtained that delay collocation. It is unclear from the letter whether Supra claims that BellSouth requires the permits or whether it claims that municipalities require the permits for allegedly needless construction. If the claim is that BellSouth requires the permits, Supra is woefully mistaken. BellSouth does not require CLECs to obtain building permits; the local municipality sets these requirements. BellSouth merely requires that the CLECs' certified contractors follow local building code requirements. If a permit is required by code, then the contractor is responsible for obtaining a permit. Any certified contractor hired by BellSouth to perform construction projects must conform to the same requirements. This requirement is specifically stated in BellSouth's master contract with the certified contractors it uses to do collocation infrastructure work. The requirement states:

ARTICLE 27 – COMPLIANCE WITH LAWS

27.1 Contractor shall comply with the provisions of all applicable federal, state, county, and local laws, ordinances, regulations, and codes including, but not limited to Contractor's obligations, as an employer with regards to the health, safety and payment of its employees, and identification and

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procurement of required permits, certificates, approvals, and inspections in Contractor's performance of this agreement.

BellSouth does not require the permits, the municipalities do. BellSouth cannot allow the permit requirements to be ignored.

If Supra claims that BellSouth purposefully assigns collocation space only in areas that do not have lighting and air conditioning, even though available lighted and air conditioned collocation space actually exists, thus requiring that lighting and air conditioning be constructed, then Supra is, once again, woefully mistaken. BellSouth explained in its response to Allegation No. 1 that assignment of collocation space is not based on where infrastructure may be lacking but rather on where there is unused space; of that unused space, the space that is best situated for a CLEC's needs; and the efficient use of the central office. Ignoring the invidious intent of this claim, such a ridiculous policy would be impossible to implement and BellSouth vehemently denies that such a policy is in place. Indeed, BellSouth's preferred option is to utilize existing building infrastructure, lighting and air conditioning, where this existing infrastructure meets the design requirements for the collocater's equipment. Central office construction is very disruptive to BellSouth. BellSouth has no desire to require any more central office construction than is absolutely necessary.

BellSouth's contractors get permits for the construction of collocation space as required by the local building codes. Supra challenged BellSouth "to identify a single instance when a building permit was not required to prepare the collocation space." Since August 1, 1999 BellSouth has implemented 292 collocation projects in Florida. Of these projects, 92, or 32%, did not require a building permit.¹³ This is confirmation of the misguided nature of Supra's claims.

(1) Air Conditioning Requirements

Supra claims that BellSouth requires the construction of air conditioning "regardless of whether or not the [air conditioning] vent is needed or has any impacting [sic] on area cooling." This is not true. Mechanical engineers review the heat release information for the CLEC's equipment and the existing cooling infrastructure available in the space. The work required to provide adequate cooling takes into account the amount of heat released and the concentration of the heat producing equipment. Telecommunications equipment is very sensitive to heat fluctuations. The mechanical design review ensures that the CLEC's equipment gets the proper air conditioning. In cases where the mechanical review determines that no additional air conditioning is required, the existing infrastructure is utilized.

¹³ The specifics of these projects are confidential. Should the Bureau wish to view the details of the projects, *e.g.*, the CLECs name, central office, *etc.*, BellSouth can provide them subject to proper confidentiality restrictions.

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The equipment that Supra has proposed to collocate generates a significant amount of heat, in most instances over 4 tons of cooling is required. This generally requires additional ductwork to get the cooling over the hottest equipment and rebalancing of the airflow in the remaining space. In some cases it may require a replacement or upgrade of the existing mechanical unit or the installation of an additional unit. BellSouth requires only those replacements or upgrades as required by the engineering review.

(2) Lighting Requirements

Supra suggests that it should be allowed to use DC lighting instead of AC lighting, but that BellSouth requires the use of AC lighting. Supra claims that the only reason BellSouth will not allow the use of DC lighting in place of AC lighting is because AC lighting requires obtaining building permits. Supra alleges that BellSouth does this to delay the collocation process. This assertion is false. Supra has commingled two different types of lighting: (1) access lighting, which is code required, and (2) task lighting. Each type has different requirements for installation. The Standard Building Code and National Fire Protection Act requires access lighting for building occupants to safely traverse a space whether in an equipment building or the home. This lighting can be natural, *e.g.*, through a window, or artificial light from a bulb in a fixture. Fixtures are generally mounted to a ceiling for general coverage of the space and passageways. The building owner provides this code-required access lighting for multi-tenant space. If such lighting must be added, removed, relocated, or replaced, it must have code review and possible permitting action. Access lighting typically uses commercial AC power from a public electric utility. BellSouth uses commercial AC power, with a standby engine as back up.

Task lighting is located where the work or other activity takes place to supplement the access-required lighting.¹⁴ This lighting can be an overhead light mounted in a cable racking system in a telephone equipment area, or mounted on the telephone equipment itself. This lighting can be either AC or DC powered depending upon equipment vendor specifications. Switching equipment comes with DC powered lighting, while circuit equipment requires overhead lighting that can be AC or DC.¹⁵ Task lighting may or may not require a code review and a permit. Supra may obtain a BellSouth certified contractor to install task lighting over its equipment, however, this will not alleviate the need for access lighting in the common areas. Moreover, regardless of whether Supra's task lighting will or will not require review and permitting, any change to access lighting, as discussed above, will always require a review and permit.

(b) Selection of Contractors for Common Area Work

¹⁴ A typical example of task lighting is a lamp on a table or desk in the home.

¹⁵ Supra has indicated it desires to collocate both switching and circuit equipment.

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Supra contends that it should be able to select its own contractor to perform all collocation preparation work, including work on common areas. BellSouth has explained that Supra may hire its own BellSouth certified contractor to perform work specific to its area, under caged or cageless collocation, but work on common areas must be performed by BellSouth.¹⁶ This is not only consistent with the Commission's order regarding collocation,¹⁷ but is only logical for two reasons discussed below. Further, this practice is consistent with Supra's collocation agreement at section IV (B).

First, it would be logistically impossible to have multiple entities performing work on common areas that affect all of the parties located within the central office. It is imperative to the public switched network that construction be kept to a minimum. Therefore, when construction can be the responsibility of one entity it should be. As a matter of necessity, and logic, one entity must be in-charge of such construction. If not the incumbent LEC, who should this entity be? Supra claims it should be, but would the next CLEC not have the same argument? The incumbent LEC owns the property and is the only common tenant in all central offices within its region. Common sense dictates that it should control the common areas of the central offices. Second, in a collocation environment, the incumbent LEC is the owner and landlord of the building. It is inherent in landlord-tenant law that the landlord is responsible for common areas. Thus, depriving the incumbent LEC of its inalienable rights in its property would no doubt constitute a taking in violation of the Fifth Amendment of the United States Constitution.

(c) Access to the Collocation Space Prior to Completion of Construction

Finally, Supra alleges that it cannot begin installation of its equipment prior to the completion of central office construction. Once again, Supra has made an errant claim. BellSouth does allow a CLEC into the central office to begin installation of their equipment prior to the completion of construction. The CLECs can do this by executing a waiver agreement with BellSouth. The timing of when the CLEC can gain access is subject to negotiation in the waiver process.

Allegation No. 4:

Supra's fourth allegation relates to the need for back-up battery power in the event that electrical power is lost in the central office. Supra's allegations take on three prongs. First, Supra alleges that BellSouth requires eight hours of back-up battery power when three hours, or zero in Supra's case, would be sufficient. Second, Supra claims that it should be allowed to build its own back-up battery power plant. Third, Supra alleges that if back-up battery power is supplied to Supra by BellSouth, the cost for building the power supply should be recovered

¹⁶ See Letter to Glenn Reynolds and Frank Lamancusa from Whit Jordan dated October 8, 1999 at 9.

¹⁷ *Id.* at 10-11.

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through recurring monthly costs and not through the up front charge for collocation space preparation.

(1) Necessity for Back-Up Power

At the outset of this discussion BellSouth must clarify yet another error in Supra's letter. Supra's claim that BellSouth requires eight hours of back-up battery power is not true. Numerous Bellcore, now Telcordia, and other industry studies have established optimum battery reserve requirements for reliable telecommunications service. The Hinsdale, Illinois incident, the northern California earthquake of 1989, Hurricane Andrew, and other high profile service interruptions triggered the Network Reliability Council Steering Team to establish the Power Focus Team as one of seven teams to examine the reliability of the United States public switched network. The Power Focus Team analyzed 294 service events reported by all major local and interexchange carriers in the United States over a 27-month period. Based on the analysis, the Power Focus Team established "best practices" for telecommunications service providers to follow. Best Practice 6.4.1 describes battery reserve sizing as:

"Provide a minimum of 3 hours battery reserve for central offices equipped with fully automatic standby systems. Provide a minimum of 8 hours reserve for offices not equipped with stationary engines and dependent on portable generators. Travel time should be added to the 3 hours except for fully attended locations and for sites where it would not be a significant factor such as those near fully attended locations."

It is BellSouth's policy to adhere to this industry standard best practice; therefore, a central office equipped with an automatic standby plant does not have a planned eight hours of battery reserve, but does have a minimum of three hours of battery reserve. Pursuant to BellSouth's statutory obligation to provide nondiscriminatory physical collocation,¹⁸ BellSouth is required to provide back-up power to Supra in parity with what it provides itself. This is exactly what BellSouth proposed in the cost estimates. The Commission has approved the best practices guidelines and they appear to be in the best interest of not only the end user customer but also the carrier.

When a CLEC collocates in a BellSouth central office, BellSouth reviews the power capacity in the central office and determines whether it is capable of supplying the minimum number of hours of back-up power, as established in the above standard, necessary for the equipment that is being collocated. If it is sufficient, no upgrade is made. If it is not sufficient, an upgrade to the system is needed. The CLEC is charged only for the costs to upgrade the system to supply the power that is needed to support its equipment for three hours. The allegation that BellSouth requires and charges for eight hours is wrong.

¹⁸ 47 U.S.C. § 251(c)(6).

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(2) Ability to Build Its Own Back-Up Battery Power Plant

Supra argues that it should be able to construct its own battery plant. Although this appears inconsistent with its earlier claim that no back-up power is needed, BellSouth is not opposed to such construction subject to technical feasibility.¹⁹ BellSouth has allowed CLECs to install their own dedicated DC power plants, subject to technical feasibility and adherence to safety and environmental requirements. Such requirements include floor space availability, floor loading, adequate ventilation, adherence to building and fire codes, safety precautions when using valve regulated batteries, and environmental regulations.

The technical considerations are numerous and therefore a separate power plant in many instances is infeasible. For example, lead-acid batteries are heavy. The floor must be able to support the weight. Lead-acid batteries emit a mixture of hydrogen and oxygen gases, which can be explosive or corrosive in sufficient concentration. Adequate ventilation is required to maintain concentrations at safe levels. Building or fire and life safety codes may require batteries to be placed within fire rated walls. Therefore, most power plants are placed in power rooms, constructed to meet these technical considerations. Valve regulated batteries are susceptible to a condition called thermal runaway, which can lead to explosions. Temperature compensation or current limiting devices, or both, must be added to the power plant to minimize the potential of such an event. Federal and state law require notification of local fire fighting organizations of the existence, location, and quantity of hazardous materials such as lead-acid batteries, commonly referred to as SARA reporting.

Supra did not specify its intention to install a dedicated DC power plant at the four sites referenced in the original complaint. In candor to the Bureau, however, adequate floor space does not exist to permit Supra to construct its own power room and install its own dedicated power plant at these four sites that were the subject of Supra's initial complaint.

As part of its argument that it should be allowed to build its own battery power plant, Supra claims that if BellSouth constructs the battery power upgrade then BellSouth should not be able to retain the upgrade if Supra leaves. This makes no sense. The power upgrade is integrated into the battery power plant. It cannot physically be separated from the remaining power plant. Thus, it is not possible for Supra to take the upgrade should it leave. Moreover, BellSouth cannot be given the burden of paying for the upgrade if the CLEC leaves. This is a power upgrade that BellSouth did not need to install but for the CLEC's equipment. BellSouth may never use the power. BellSouth cannot be saddled with the burden of every CLEC's business decisions.

In addition to the above claims, Supra also alleges that BellSouth uses uncompetitive prices for construction costs and marks up the contractor's cost by 30 percent to the CLEC. In the event the above technical constraints will not allow the CLEC to build its own power plant,

¹⁹ See Supra Contract section V(C).

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an upgrade to BellSouth's power plant must be performed. In its October 8, 1999 response, BellSouth explained in detail what portion of the power upgrade must be performed by BellSouth and what may be performed by a CLEC.²⁰ BellSouth does not see the need to repeat that discussion here. Moreover, BellSouth will address the selection of contractors and price in response to Allegation No. 6 below. BellSouth, however, states that it is at a loss to understand Supra's claim that BellSouth receives a 30 percent profit margin on construction. BellSouth does not now, nor has it ever, included a mark-up for BellSouth profit on a contractor's bill.

(c) Recurring and Nonrecurring Charges

Supra states that in arbitrations before the Florida Public Service Commission ("FPSC") the FPSC found that charges for power plant expansions are more appropriately recovered in recurring charges. Supra then alleges that BellSouth "currently charges as monthly recurring fee, power rates which already include recovery of power plant upgrades ... and thus seeks a double recovery of power upgrade charges." This allegation is false. The language quoted by Supra relates to an arbitration proceeding in which the FPSC addressed the recovery of power upgrades that were to be shared by several collocators. In such situations, BellSouth does include the cost for the upgrade in the recurring cost. In situations where the upgrade is to be used by only one collocator, however, BellSouth charges the cost of the upgrade to the collocator as an up-front cost. The cost for the upgrade is not included in the recurring power charges in these instances. There is no attempt to double recover the costs.

Allegation No. 5:

Supra states that in the October 25, 1999 meeting with the Bureau, BellSouth "admitted that it requires cageless collocators to use separate overhead racking and that collocators are prohibited from using space available in existing overhead racks (irrespective of how much space is available)." BellSouth denies that it made any such admission and states that this is not its policy. Indeed, BellSouth does not require a CLEC to utilize separate overhead racking to interconnect with BellSouth. BellSouth's policy is best explained by describing how racking is handled for physical collocation within a BellSouth central office. BellSouth has established the following options for physical collocation²¹:

- **Caged Arrangement.** This option provides a specific amount of dedicated, enclosed space for a CLEC. Utilization of the space is at the discretion of the CLEC. All infrastructure (cable rack, fiber duct, framework grounding conductors, and frame and aisle lighting) required by the CLEC within the caged space to provide dedicated support for the CLEC's equipment is the responsibility of the CLEC. BellSouth

²⁰ *Id.* at 7 - 8.

²¹ BellSouth also offers adjacent collocation when space is legitimately exhausted, however, adjacent collocation is not at issue here.

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provides all common use cable racking and fiber duct, framework ground sources, etc., required to interconnect with the equipment installed within the CLEC's caged space. BellSouth will utilize any feasible existing infrastructure to interconnect with the CLEC's space.

- **Cageless Arrangements (conventional equipment lineups).** This floor space option is offered to a CLEC that does not desire a caged arrangement and that is collocating telecommunications equipment that requires no specialized supporting infrastructure. BellSouth assigns floor space in conventional equipment rack lineups for collocated equipment following the same practices utilized with BellSouth equipment. The infrastructure required to support these space arrangements is shared by all equipment occupying the space. Any existing infrastructure will be utilized.
- **Cageless - Non-conventional.** BellSouth recognizes that the specifications of some telecommunications equipment/systems require unique installation arrangements that are not technically compatible with the conventional cageless arrangements described above. BellSouth therefore offers this option to allow CLECs to address the specialized infrastructure requirements of its equipment. The CLEC is responsible for determining the necessity for any specialized infrastructure requirements and conveying this information to BellSouth. An example of such an arrangement could be a switching system that requires system specific overhead cable racking and/or isolated framework grounding. For such an arrangement the CLEC must determine total floor space requirements for its equipment arrangement as if the arrangement were to be installed in a cage. BellSouth will identify and assign floor space that will allow the CLEC to construct the special infrastructure within the requested space required for its equipment. BellSouth will provide interconnecting cable racking and fiber duct, framework ground sources, and electrical sources to the CLEC space. Although such arrangements do not result in the most efficient use of floor space, they do offer a compromise for cageless arrangements that cannot be placed in conventional transmission equipment lineups. The infrastructure for such an arrangement will be dedicated to the CLEC's equipment. Therefore, in an effort to maintain efficient space utilization, BellSouth restricts this option to equipment *requiring* specialized infrastructure.

Under each of the above collocation arrangements, the common cable racking is analyzed to determine if additional common racking will be needed to support the collocater's cable needs.²² If needed, additional common racking is built and connected to existing racking so the CLEC's cable traverses all interconnected common racks necessary to interconnect with the appropriate equipment in the central office. The cost of the additional common racks is charged to the CLEC. Supra mistakenly believes that because the infrastructure construction costs to

²² As stated in the above description, BellSouth utilizes all available racking and does not require that new racks be built if existing racks are sufficient.

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build these common racks to interconnect with other racks to support the CLEC's equipment is charged to the CLEC, then the associated cable rack is dedicated to the CLEC. While in some locations it may be correct that the initial use of the cable rack will be for the CLEC alone, utilization and expansion of space beyond the CLEC's arrangement may require that other CLECs or BellSouth, or both, utilize the same infrastructure for equipment cabling. Likewise, the CLEC's cabling will initially utilize cable racking previously constructed over space occupied by BellSouth and other CLEC equipment, and may, in the future, utilize new cable racking installed over BellSouth space or other CLECs' space, or both. No costs for new cable racking constructed to serve BellSouth or other CLECs, or costs for existing rack space used by the CLEC, will be assessed to the CLEC. Under this arrangement all occupants in the building, including BellSouth, are treated exactly the same.²³ Supra's complaint is without merit.

As for cabling, BellSouth charges for cabling work that is dedicated to and benefits only the CLEC. Presently there are only two categories of cabling which fit this description: (1) primary power feeders dedicated to the CLEC's equipment, and (2) CLEC private entrance facility cable. Under BellSouth's new standard collocation agreement, which Supra rejected in favor of another agreement, the responsibility for installing the above cabling is the CLEC's and the CLEC's certified engineering and installation vendor.

BellSouth, Supra and all CLECs are required to comply with BellSouth Engineering and Installation Standards, which were adopted from industry practices and Telcordia recommendations, regarding the segregation of certain types of cable (transmission, power feeder and fiber) to dedicated cable racks. Aside from this requirement, CLECs are allowed to utilize space in existing cable racks. Supra's claim that they are prohibited from utilizing space in existing cable racks is untrue. A CLEC is billed central office infrastructure space preparation charges only when new cable rack (or other infrastructure) construction is required to accommodate the collocation space occupied by the CLEC.

Supra contends that if racks are congested then BellSouth should be required to remove unused and obsolete cable to make room for collocators' cable. BellSouth has never denied space due to cable congestion. BellSouth applies sound engineering to decisions regarding how best to address cable congestion problems. Dependent upon the specific circumstance of the congestion problem and growth plans for the central office, cable mining (removing unnecessary cables) or installation of additional cable racking, or both, may be viable solutions. Such solutions regarding Supra's complaint, however, are moot. None of the costs for infrastructure, including racks, were caused by congestion.

Allegation No. 6:

²³ Supra alleges that BellSouth does not have a system in place to reimburse CLECs for the cost of racking when that racking is used by other CLECs. Pursuant to the above described policy to use all available racking on a shared basis, a reimbursement plan is not needed.

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This allegation is a continuation of the claims made by Supra in its initial September 20, 1999 letter to the Bureau. Essentially Supra continues to argue that it should be allowed to perform all central office space preparation work for collocation. BellSouth will not repeat its arguments for why space preparation work on common areas in the central office must be done by the incumbent LEC as set forth in its October 8, 1999 letter, but will address specific comments made by Supra.

Supra begins by misstating the work that BellSouth will allow a CLEC's certified contractor to perform and the work that BellSouth's contractor must perform. BellSouth explicitly stated in its October 8, 1999 letter that a CLEC may have a certified contractor perform work that is dedicated to the CLEC. This work may be performed by the CLEC's certified contractor no matter whether the CLEC is obtaining caged or cageless collocation. Supra states that such work is limited to equipment installation. This description is inaccurate, however, because the CLEC's certified contractor may perform much more work than mere equipment installation. For example, a CLEC may engage a certified contractor to perform installation of dedicated power feeds, including those from the BellSouth power board to the CLEC's battery distribution fuse bay ("BDFB") or power distribution frame ("PDF"). Moreover, as discussed above, to the extent technically feasible, a CLEC may construct its own back-up battery power plant. Indeed, the only work that a CLEC may not have a certified contractor perform is work that is common to the building or users of the building, such as air conditioning, overhead lighting, and cable support structure. The policy is applied to all CLECs for all collocation and is consistent with the Commission's rule that allows CLECs to use certified contractors to perform physical collocation arrangements. Supra's claim that it should be allowed to perform all site preparation work if it is the only CLEC that will use the collocation space is another attempt to obfuscate the facts. Regardless of whether it is the only collocater that will use a specific space, the work done on the common areas will affect all of the tenants, even if the only other occupant is BellSouth.

Supra next alleges that BellSouth does not perform competitive bidding on collocation projects and therefore costs are artificially inflated. Supra further alleges that BellSouth's contracts with contractors contain cost over-runs which BellSouth has no incentive to try to control. Supra even alleges that BellSouth adds an additional thirty percent to the contractor's invoice as profit for being a "middle man," thus giving BellSouth an incentive to inflate costs. While these allegations may be interesting fiction, they have no basis in fact. BellSouth will first address the claim that it adds a thirty percent profit to the contractor's invoice. This is absolutely not true. BellSouth does not add any percentage for BellSouth profit.²⁴ BellSouth is uncertain what Supra bases such claims on, especially since it has never placed an accurate and complete firm order on any collocation space, and has never participated in the true-up process where the

²⁴ As discussed in the paragraph below, BellSouth's certified contractors operate on a cost of services plus a percentage fee basis. Thus, while the certified contractor adds a percentage to its costs, which is passed on to the CLEC, BellSouth does not mark-up anything for itself.

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details of the actual costs are presented to the CLEC. As to the competitive bidding claims, BellSouth believes that an explanation of its contracting process with contractors will be helpful.

BellSouth has contracted with Parsons Infrastructure and Technology Group, Inc. to perform the building project management and implementation of all collocation projects. Their responsibilities include the procurement of contractors. Parsons' preferred procurement practice is to select contractors through the competitive bid process. However, for physical collocation projects, the time frame required to complete these projects does not, in most cases, give sufficient time to bid the work.²⁵ Because of the sensitive nature of telecommunications equipment and the critical requirement of uninterrupted service, the need for a contractor to be certified and thus familiar with BellSouth facilities and practices is heightened with projects involving aggressive schedules. These factors, along with the lack of sufficient time for bidding, support sole source procurement for collocation projects.

The use of negotiated subcontractors, however, does not preclude the use of compensation methods that promote competitive pricing. The construction work for collocation projects is performed on the basis of cost of the services plus a fixed percentage fee basis with a guaranteed maximum. Any costs above the guaranteed maximum are to be absorbed by the Vendor and any savings below the estimated costs will revert to the collocater. The guaranteed maximum cost can be adjusted by a supplemental work order or change order if changes are made to the scope of work. This type of contract requires the contractor to have receipts for all items billed including material, labor, and subcontractor's billing. The percentage fee allowed is typically below the industry standard. This process shortens the time frame to complete projects but still assures a competitive price.

Parsons negotiates projects for physical collocation with general certified contractors who have master contracts with BellSouth. BellSouth selected these contractors by sending out samples of projects to multiple contractors in Florida, Louisiana, North Carolina, and South Carolina for bid. The result of this process was the assurance of a percentage markup lower than the standard markup. This figure was used to negotiate the same markup with contractors in all of the BellSouth territory.

It is evident based on this discussion, that BellSouth has conscientiously tried to limit the cost of construction in the central office. This is for good reason - BellSouth uses these same procedures for work it performs in the central office for its own equipment. Accordingly, BellSouth has every incentive to negotiate construction contracts with a price that is as low as

²⁵ BellSouth believes it to be ironic that one of Supra's chief complaints is the time required to complete collocation, but wants to open up the process to competitive bidding that even it must admit will significantly slow the process.

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possible. Clearly, a CLEC could not obtain prices lower or have the work done faster than is currently being performed by BellSouth's contractors.²⁶

Finally, even though timing dictates that BellSouth follow the above procedures for most collocation projects, a project can be put through a bid process if the CLEC disputes the estimates received from BellSouth and requests that additional bids be obtained. Such a request will, however, require that BellSouth receive relief from the construction interval. For this to occur, detailed plans and specifications would need to be prepared and an invitation to bid would be sent out to prospective contractors. If interested, these contractors would attend a pre-bid meeting to discuss the aspects of the project. The contractors would then be given a reasonable amount of time to gather cost data and subcontractor bids for submittal of their bid. This time period could be lengthened if addenda are added to the project due to changes in the scope of work requested by a collocater or BellSouth. The contractors would then submit their bids for the project and a determination made as to the lowest, responsive bidder. After a contract is signed with the winning bidder, the contractor could apply for a building permit, which is a precursor to starting construction. The timing for this process usually makes it unworkable in a collocation project.²⁷ This process is based on the American Institute of Architects competitive bidding procedures.

Supra has never requested that it be allowed to obtain more estimates from certified contractors for the work to be performed in the central offices in question. Even though BellSouth contends it will only delay the collocation process, with no cost savings, pursuant to the above discussion, BellSouth will obtain estimates from other certified contractors if Supra will waive the time intervals for completing construction.

Supra next contends that BellSouth's policy of performing work on common areas "encourages the ILEC to characterize all central office work as potentially shared work" This claim is not true. Indeed, BellSouth has specific categories of work that are common and that are dedicated to the CLEC. It does not pick and choose such categories of work among collocation projects. This is just another example of Supra mischaracterizing the facts to support its flimsy arguments.

²⁶ Even if a CLEC could obtain a lower price or have the work performed faster, that would not out-weigh the two central points BellSouth has made throughout this process: (1) as the owner and landlord, BellSouth has the right to perform the work on common areas, and (2) it is logistically impossible to have multiple CLECs performing separate projects on the common areas, and if only one company can perform this work it must be the owner of the property.

²⁷ It would be possible to bid these projects with pre-certified contractors if the collocater allows additional time during the construction period for the bidding process described above. This provision can be negotiated with the Account Team Coordinator on a case by case basis for the Property Management portion of the space preparation work.

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Supra sets forth several alleged reasons why it is financially burdened because it cannot perform all of the space preparation work. First it states that it is precluded "from negotiating better prices." This claim is highly speculative. BellSouth demonstrated above that its negotiated contract has incentives to be competitive. Moreover, Supra must understand that not just any contractor can perform the work required for collocation within a central office. Competitors available to bid on given projects may not be overly abundant. Second, Supra claims that it could work out a financing deal with the contractor, thus eliminating the requirement to pay BellSouth one-half of the estimated cost up-front and the remainder, subject to true-up, when the project is complete. This argument is tenuous at best. Contractors are not in the business of lending money. In fact, the reason BellSouth requires that one-half of the estimate be paid up-front is so that it can pay the certified contractors who perform the work. The Bureau must be skeptical of Supra's claim. Third, Supra once again claims that BellSouth adds a thirty percent mark-up. As discussed previously, this is untrue. The Bureau should rebuke Supra for making unfounded accusations. Fourth, Supra alleges that BellSouth has no accountability for the costs estimates that it provides to the CLEC and can change the estimate without any recourse by the CLEC. This argument is disingenuous considering that Supra was offered a standard contract that has standard prices for most of the collocation costs. Supra, however, turned down that contract for one that is priced on an individual case basis. Finally, Supra states that "experience has shown that BellSouth's final collocation costs bills [sic] may even double the original estimate." BellSouth asks to what experience is Supra referring? Supra has never placed an accurate and complete firm order for collocation space, even though BellSouth has held space open in four central offices based on its initial application. Accordingly, Supra has had no experience with BellSouth's final collocation costs.

Allegation No. 7:

Supra claims that BellSouth has refused to allow it "the ability to collocate equipment within remote vaults that house BellSouth's remote switching equipment." The issue of whether incumbent LECs have an obligation to allow collocation in remote terminals has been the subject of several proceedings before the Commission, most recently the *UNE Remand Order*.²⁸ BellSouth intends to comply with the *UNE Remand Order* once it becomes binding upon BellSouth.

²⁸ *In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, *Third Report and Order and Further Notice of Proposed Rulemaking*, FCC 99-238, released November 5, 1999.

Allegation No. 8:

Supra claims that BellSouth installs security-monitoring devices for no other reason than to impose additional collocation expenses on CLECs. An elucidation of this issue would seem unnecessary based on the plain wording of the Commission order on this matter. Because Supra raised the issue, BellSouth feels compelled to respond. In addressing network security issues, the Commission stated in the *Advanced Services Order* that:

We agree with commenting incumbent LECs that protection of their equipment is crucial to the incumbents' own ability to offer service to their customers. Therefore, incumbent LECs may establish certain reasonable security measures that will assist in protecting their networks and equipment from harm. The incumbent LEC may not, however, unreasonably restrict the access of a new entrant to the new entrant's equipment. We permit incumbent LECs to install, for example, security cameras or other monitoring systems, or to require competitive LEC personnel to use badges with computerized tracking systems.²⁹

Network security is not an issue limited to BellSouth. In a cageless collocation environment, other carriers have the same security concerns. Indeed, in addition to BellSouth's right to install these systems, it has an obligation to other collocators to maintain security requirements to protect their networks as well as its own. These card reader access systems allow for a secured entry to BellSouth central offices and they also allow for the tracking of traffic into the central office. This is an efficient way to ensure the protection and integrity of the public switched network as well as the equipment and network of collocators in those central offices. BellSouth makes the determination of the appropriateness of a card reader access system based on the collocation situation in the central office. BellSouth does not base this determination upon the carriers collocated in the central office, but upon the types of arrangements in that central office.

The cost of the card reader access system is recovered through security access system rate elements. The Commission specifically stated "[w]e expect that state commissions will permit incumbent LECs to recover the costs of implementing these security measures from collocating carriers in a reasonable manner." BellSouth currently has proposed interim rates for these elements, but is finalizing the cost study. In both the interim rates and the new cost studies, BellSouth is included in the allocation of the costs of the security card reader access system.

²⁹ *Advance Services Order* ¶ 48.

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Allegation No. 9:

In this allegation Supra makes the specious claim that it should not be required to have power and infrastructure (air conditioning) installed to support its equipment at full power. Instead, Supra alleges that it should be allowed to ramp-up these costs. Such a claim defies logic. Supra claims to be concerned about cost, but under this scenario it would pay for the initial power and infrastructure cost to operate the equipment at less than full power and then incur the same cost to upgrade these systems once more power is used. This would essentially double, or triple depending on how many times the power output of the equipment is increased. By installing such power and infrastructure cost at full power for the equipment the initial cost is only incrementally higher. This would therefore be completely impractical from a cost perspective. Supra's suggested practice would also interpose unnecessary delay later on when Supra needs the additional equipment capacity.

Moreover, safety concerns prohibit the power and infrastructure to be installed for the equipment to operate at only partial capacity. BellSouth has no idea when Supra will increase its equipment output. If the output was increased without the power being upgraded to handle that output, then it could have serious ramifications on the fuses in the central office.

Allegation No. 10:

Supra argues that BellSouth should provide more detailed estimates of the collocation costs within a central office. Once again, this complaint is the product of Supra's collocation agreement. The cost estimates provided to Supra for the offices at issue were provided consistent with Supra's then in effect collocation agreement. Once that agreement expired, Supra had many choices. As discussed earlier, BellSouth offered to negotiate from its current standard collocation agreement with Supra on July 8, 1999. Supra instead chose to adopt the collocation provisions in AT&T's interconnection agreement. Under the current standard agreement, many of the proposed prices for the space preparation are set rather than on an individual case basis. Thus, Supra would know with much greater certainty the cost of collocation for any given office.

Supra alleges that the need for more detailed estimates is evident because of an alleged double billing for cabling in the Port Orange estimate provided by BellSouth in its October 8, 1999 letter. Supra claims that \$51,000 was included for a cabling/racking charge in the power cost and that the same \$51,000 charge was included for cable support. Supra is incorrect. The \$51,000 charge included in the total power cost for Port Orange consisted of an estimate by Lucent of \$46,455 to add four A & B feeds from the PDF to Supra's BDFB and the additional power cable rack necessary to connect to the cable rack to be added in Supra's collocation area. Added to this amount were seven percent Florida sales tax and an estimated fee for hauling and hoisting, which brought the total to \$51,000. The other \$51,000 charge was for cabling support in Supra's collocation area, which will be utilized by Supra's equipment only, and consisted of \$36,000 for the cable racking. The remaining \$15,000 consisted of an estimate to rearrange a

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switch maintenance control center ("MCC") necessary to allow collocation in that central office.³⁰ The two figures were coincidentally the same estimate amount, but were for entirely different work.

Supra also alleges that BellSouth's current procedure for determining costs and payment of these costs "hides ... charges and leaves CLECs paying monies which are never accounted for or otherwise justified." This statement is a gross misrepresentation of the facts. Supra is well aware that once a space preparation project is complete a "true-up" is performed between the estimated and the final cost. The true-up provides the details of the actual costs incurred for preparing the collocation space. Supra's statement is merely another attempt to disparage BellSouth.

Finally, Supra alleges that BellSouth has no procedure in place to reimburse CLECs in the event that another CLEC collocates within a central office after the first CLEC has already placed equipment. BellSouth does not have such a system in place because one is not needed. If a CLEC is placed in an area that will accommodate more than one collocater, only portions of the common costs are allocated to that CLEC. This is accomplished based on a prorated cost for the central office. Accordingly, the CLEC is not charged for space, or work on common costs that are not directly attributable to that CLEC's collocation arrangement. Therefore, the CLEC is not entitled to such a rebate. In some of the central offices in which Supra seeks collocation, the space it was assigned was the only space available that met Supra's collocation space requirements and the space will be utilized only by Supra. Consequently, no other CLEC will share in that cost, thus the entire amount is apportioned to Supra.

Conclusion

In its summation, Supra attempts to paint a picture of a small company being bullied by the big monopoly. Supra contends that if only BellSouth would play fair then it could get into the telecommunications business and begin competing. BellSouth will admit that it has a size advantage over Supra, but that's where the agreement ends. BellSouth has gone to exhaustive measures in an attempt to please Supra. When Supra requested collocation space, BellSouth reserved the space, and continues to hold the space, even though Supra has never placed an accurate and complete firm order for collocation. Moreover, BellSouth has responded to every request and attempted to work with Supra to address all of its concerns. Nothing BellSouth has done, however, is acceptable to Supra.

To begin, throughout its letter Supra repeatedly states that "during the October 25th meeting BellSouth admitted ..." to various practices, while in the conclusion it states that "BellSouth admitted to engaging in most, if not all, of the practices referenced above." The above response expressly documents that for most, if not all, of the items Supra states that

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Supra was the only CLEC able to use the space made available by the rearrangement, therefore it was assigned the full cost of the rearrangement.

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BellSouth admitted to performing, BellSouth denies. In general, BellSouth contends that Supra misrepresented much of the discussions that took place at the October 25th meeting, just as they have with many of the facts surrounding the collocation issues. Accordingly, BellSouth firmly disagrees with Supra's claim that "few (if any) material issues of fact exist in this dispute" Indeed, based on this response, BellSouth believes that many factual disputes remain. Moreover, BellSouth denies any and all allegations by Supra that BellSouth is in violation, in letter or spirit, of any Commission rule regarding collocation.

Supra attempts to further disparage BellSouth by suggesting that another CLEC has experienced the same alleged trouble experienced by Supra. Supra states that:

A company called Bluestar Networks followed BellSouth's instructions without complaint, paid outrageous monies demanded by BellSouth, and now more than six months later has nothing to show for the money but a complaint before the FPSC in which BellSouth claims that it will take another three to six months before Bluestar can even begin installing a single piece of equipment.³¹

The specific details of Bluestar's collocation arrangement are confidential. As BellSouth stated previously, however, BellSouth has turned over to Bluestar its collocation space and collocation is progressing.

Supra's claim that it made an "apple-to-apple" comparison of the same applications in its initial letter is another factual dispute. According to BellSouth's records the only application for collocation in the Palmetto office to which BellSouth responded with a cost estimate to Supra in 1998 was for six bays of equipment. The comparison set forth in BellSouth's October 8, 1999 letter is accurate.

BellSouth stands by its collocation practices. BellSouth is in compliance with all Commission rules and executes them in a non-discriminatory manner. BellSouth understands that Supra does not agree with the cost of implementing collocation, but these costs are real costs to BellSouth and cannot be ignored simply because one party does not like them. BellSouth has numerous CLECs collocating in its central offices. Some of these collocation agreements required intense negotiations and some even required arbitration at the state commission. For each of these entities, however, some form of agreement was able to be reached and collocation for these entities is moving forward. Supra, however, has failed to even place an accurate and complete firm order with BellSouth. Instead, it has taken a recalcitrant stance on every issue. Moreover, its actions are not consistent with its words. For example, it states it wants known prices for collocation instead of estimates. Yet when presented with an opportunity to enter a contract that provides standard costs on many of the collocation charges, it refused and instead choose a contract that requires estimates on an individual case basis on most prices be prepared.

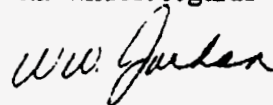
³¹ Supra November 13th Letter at 16 of 17.

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While BellSouth does not claim to be perfect in administrating collocation issues, it certainly has not experienced a fraction of the problems Supra alleges.

The accelerated docket is not the appropriate forum for any complaint Supra may have regarding these issues. Supra's letters and BellSouth's responses demonstrate the numerous factual disputes that exist. Clearly, Supra is unsure of BellSouth's policies and practices as is evident by the multiple errant statements it made. The time constraints of the accelerated docket proceeding will not allow for these factual disputes to be fully discovered and resolved. The Bureau must therefore deny Supra's request to have its complaint included on the accelerated docket.

With kindest regards



William W. Jordan
Vice President - Federal Regulatory

cc: Ms. Michelle Carey
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November 29, 1999

Memo via Hand Delivery, FAX, and U. S. Mail

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RE: Attachment to BellSouth's Supra's "Follow-Up"
Letter Dated November 24, 1999

Gentlemen:

Attached is Exhibit 1 to BellSouth's Supra Response dated November 24, 1999 that was omitted from the original letter. Any questions regarding this attachment please call me on 202.463.4114.

Yours truly,



William W. Jordan
Vice-President - Federal Regulatory

Attachment

EXHIBIT I**BELLSOUTH**

Robert T. Blau, Ph.D., CFA
Vice President - Executive and
Federal Regulatory Affairs

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June 1, 1999

Mr. Lawrence Strickling
Chief, Common Carrier Bureau
Federal Communications Commission
The Portals
445 12 Street, S.W.
Washington, D.C. 20554

Re: Ex Parte - CC Docket No. 98-147

Dear Mr. Strickling:

The Commission recently adopted its First Report and Order and Further Notice of Proposed Rulemaking¹ in the above referenced docket. The Order established several new rules regarding collocation of a competitive local exchange carrier's ("CLEC") equipment in BellSouth's central offices beyond those established in the *Interconnection Order*.² BellSouth is currently taking the steps required to comply fully with these rules. In particular, BellSouth is taking steps to satisfy the directives contained in paragraph 42 of the *Collocation Order*. Because the language of that paragraph is susceptible to more than one interpretation, however, BellSouth wishes to share with you how BellSouth intends to meet those directives.

This letter explaining BellSouth's interpretation of the *Collocation Order* is prompted by BellSouth's concern that a CLEC might seize upon the word "any" as it appears in paragraph 42 to justify an unreasonable demand for space. We note that in the *Interconnection Order*, the Commission "allowed [incumbent LECs] to retain a limited amount of floor space for defined future use." *Interconnection Order* ¶ 604. Moreover, paragraph 42 of the *Collocation Order* states that the incumbent LEC may separate its equipment from a CLEC by enclosing that equipment in a cage. Once enclosed within a cage, any unused space between the incumbent LEC's equipment would become unavailable to a CLEC.³ Accordingly, from these other collocation principles one is led to the conclusion that the word "any" cannot be interpreted to

¹ *In the Matter of Deployment of Wireline Services offering Advanced Telecommunications Capability*, CC Docket No. 98-147, *First Report and Order and Further Notice of Proposed Rulemaking*, FCC 99-48, released March 31, 1999, ¶¶ 11-12 ("Collocation Order").

² *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, *First Report and Order*, 11 FCC Rcd 15499 (1996) ("Interconnection Order"), modified on reconsideration, 11 FCC Rcd 13042

³ BellSouth understands that this cage cannot become a tool for warehousing unreasonable amounts of space.

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permit a CLEC to place its equipment at any place within the incumbent LEC's premises that the CLEC chooses.

Paragraph 42 of the *Collocation Order* states:

Subject only to technical feasibility and the permissible security parameters outlined below, incumbent LECs must allow competitors to collocate in any unused space in the incumbent LEC's premises, without requiring the construction of a room, cage, or similar structure, and without requiring the creation of a separate entrance to the competitor's collocation space. ... In addition, an incumbent LEC ... may not require competitors to collocate in a room or isolated space separate from the incumbent's own equipment. The incumbent LEC may take reasonable steps to protect its own equipment, such as enclosing the equipment in its own cage, and other reasonable security measures as discussed below. The incumbent LEC may not, however, require competitors to use separate rooms or floors, which only serves to increase the cost of collocation and decrease the amount of available collocation space. The incumbent LEC may not utilize unreasonable segregation requirements to impose unnecessary additional costs on competitors.

The *Collocation Order* made clear that the intent underlying the new collocation rules is to allow CLECs access to collocation space without artificially increasing their costs or delaying their time of entry. BellSouth interprets the above rule to continue to permit incumbent LECs to establish reasonable space assignments within a central office to ensure that space is efficiently used consistent with this intent. Such incumbent LEC action is also necessary to assure that the LECs' rights, granted by the Commission, are not subordinated to those of the CLEC.⁴

Under this approach BellSouth will assign space to a CLEC within the central office, as opposed to allowing the CLEC to simply select space in an inefficient manner. A systematic process to assign space in an orderly manner is needed to avoid the ineffective use of the available space. If a CLEC were allowed to simply select the space it wanted without any limitation it would lead to inefficient space allocation. This, of course, would decrease the space available for collocation and ultimately the number of CLECs that could collocate in a central office. Indeed, the Commission recognized the potential problems of improper space allocation in its *Interconnection Order*.⁵

⁴ See discussion above regarding collocation principles established in the *Interconnection Order* and in paragraph 42 of the *Collocation Order*.

⁵ See *Interconnection Order* ¶ 586 ("Because collocation space on incumbent LEC premises may be limited, inefficient use of space by one competitive entrant could deprive another entrant of the opportunity to collocate facilities or expand existing space.")

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Beyond the need to maintain an efficient space allocation process, there are numerous technical factors that only the incumbent LEC is in a position to take in consideration in assigning space within the central office. The following is a partial list of such technical factors that must be considered in determining where within a BellSouth central office physical collocation of a CLEC's equipment should occur:

- **Overall cable length.** Cable congestion and related expense can be avoided or at least minimized by careful consideration of existing and future equipment requirements of both the collocating CLEC and others that have or will later collocate there. Orderly equipment growth, i.e., grouping like equipment together, allows economic efficiencies while reducing excessive cable rack congestion and resultant re-routing of cables.
- **Distance between related equipment.** Some equipment components, e.g., switch call processors, must be placed so that cable length between the components does not exceed a pre-determined amount.
- **Grouping of equipment into families of equipment.** Families of equipment, e.g., switching equipment or transmission equipment, must be placed together for technical reasons such as electrical grounding, which is discussed in the next bullet point, as well as to maximize the contiguous space within a given central office recovered when existing equipment is replaced by more modern equipment. Having all equipment located in the same part of the central office allows the recovery of larger "blocks" of floorspace rather than smaller parcels of floorspace interspersed among other racks of equipment.
- **Electrical grounding requirements.** Switching equipment typically requires an "isolated grounding" source while transmission equipment typically requires an "integrated grounding" source. Safety codes require that equipment served by different grounding sources be physically separated in order to avoid technicians receiving electrical shocks or being electrocuted because they simultaneously contact dissimilar grounding sources.
- **"Holes" in existing equipment line-ups.** "Holes" in equipment line-ups are spaces intentionally left empty to accommodate future growth and still assure adherence to the principles described above. (In some cases, cables and framework are modular in nature and economic efficiency results from pre-assembly and provision of such cables or framework.)

Reconciling these types of technical issues with the overall goal of the Commission to ensure that as many CLECs as possible are able to collocate in the space available within a central office without unreasonable delay or expense, BellSouth interprets the rules established

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in the *Collocation Order* to permit BellSouth to assign space in its central offices in an efficient, reasonable manner. BellSouth assures the Commission that any space assignment will not increase the CLECs' cost of collocating, nor delay its placement of equipment in the central office. Moreover, BellSouth commits itself to work with each CLEC to accommodate that CLEC's location preferences if it has reasonable grounds for preferring a specific location within the central office.

If you have any questions regarding BellSouth's interpretation of the Order, please call me at 202/463-4108.

Sincerely,



Robert T. Blau

RTB/ibl

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November 13, 1999

VIA EXPRESS MAIL**GLENN T. REYNOLDS, ESQ.****FRANK G. LAMANCUSA, ESQ.****Enforcement Division - Common Carrier Bureau****Federal Communications Commission****445 12th Street, S.W.****Suite 5-A848****Washington, D.C. 20554**

**Re: Supra Telecom adv. BellSouth; Request For
 Accelerated Docket & Pre-filing Mediation**

Gentlemen:

This letter is a follow-up to my prior letter of September 20, 1999, BellSouth's letter of October 8, 1999 and our meeting of Monday, October 25, 1999. I apologize for not providing this letter any sooner, however I was ill most of last week and thus was unable to work on this letter during that time period. The intent of this letter is to characterize those practices engaged in by BellSouth which stifle and delay cageless collocation. Supra Telecom hopes that by identifying these harmful practices and showing the absence of any material factual dispute, that the FCC will consider this matter appropriate for summary disposition and resolution on the accelerated docket procedure. The following are a listing of practices, evident from BellSouth's October 8th letter and our October 25th meeting, which obstruct and delay the collocation process.

-
- (A) **Practice No. 1:** BellSouth selects where the CLEC's equipment will be collocated and does not allow the CLEC to tour the central office to identify any alternative locations which might speed the collocation process and/or reduce costs.

At the October 25th meeting, BellSouth admitted that it does not allow the CLEC to have any input as to where equipment will be collocated. According to BellSouth, orderly growth in the central office mandates that only the ILEC can choose the location of each collocation space; irrespective of the cost to the CLEC. BellSouth also admits that it refuses to allow the CLEC any opportunity to tour the central office in order to identify alternative collocation spaces. This

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practice directly contradicts the FCC's First Report And Order (dated March 31, 1999) in CC Docket No. 98-147 (i.e. In the Matters of Deployment of Wireline Services Offering Advanced Telecommunications Capability) (hereinafter referred to as "FCC Order") which requires ILECs to "give competitors the option of collocating equipment in any unused space within the incumbent's premises, to the extent technically feasible." See FCC Order at ¶ 42. Additionally, this position taken by BellSouth demonstrates that BellSouth will say anything depending upon the proceeding. At the October 25th meeting, BellSouth unequivocally stated that CLECs have no input in determining their collocation space. However in 1998, before the Florida Public Service Commission ("FPSC") in Docket Nos. 960757-TP, 960833-TP and 960846-TP, BellSouth's witness Redmond testified that collocators can negotiate the location of the collocation space with BellSouth. In any event, irrespective of any position taken by BellSouth in prior proceedings, the reality is that BellSouth prohibits CLECs from being involved in selecting the collocation space.

Apart from directly violating the FCC's Order, this practice also opens the CLEC to unnecessary expenses and delays in the collocation process. For example, at the October 25th meeting BellSouth admitted that when preparing cageless collocation space, that it must obtain a building permit from local municipalities in order to install overhead lighting and air-conditioning vents over the collocation space. Although BellSouth claims that lighting and vents are only necessary if not present over the collocation space, allowing BellSouth to choose the CLEC's collocation spot virtually guarantees the BellSouth will choose a collocation spot which does not have either lighting or air-conditioning vents thus guaranteeing a six to eight month as a result of alleged building permit delays. BellSouth has used this excuse on not only Supra Telecom, but other CLECs as well. For example, Bluestar Networks has recently filed a complaint with the FPSC in which it is alleged that on May 7, 1999 cageless collocation requests were made by Bluestar, but in September 1999 BellSouth was claiming that cageless collocation space for a mere 12 bays of equipment, would be delayed until at least January 2000 due to the lack of building permits needed to begin overhead lighting and air-conditioning vent work. Allowing BellSouth to choose the collocation site without allowing the CLEC to right to pick from alternative locations, guarantees that BellSouth will pick a space that: (a) will "need" overhead lighting and/or air-conditioning vents; and (b) will maximize the cost to a CLEC of overhead racking and cabling needed to interconnect with BellSouth's equipment.

Moreover, BellSouth claims that since only the ILEC can choose the collocation site, that if in the ILEC's discretion equipment needs to be moved, that the ILEC can pass that cost on to the collocator. This practice is not only violative of the FCC's Order (see FCC Order at ¶ 42), but also imposes unnecessary costs on the CLEC for a benefit only derived by the ILEC. Logically, an ILEC will not (and has no incentive to) rearrange a central office if the sole purpose of the rearrangement is to make space available to a collocating CLEC. Obviously,

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rearranging a central office permits the ILEC to accommodate collocation while freeing up space for the ILEC's own future use. Since most (if not all rearrangements) will only benefit the ILEC, collocators should not be required to pay the cost of moving the ILEC's equipment; particularly if the CLEC can identify other available space in the central office equally available for collocation.

Allowing an ILEC to completely control where a CLEC can collocate equipment is like "trusting the cat with the canary." The ILEC has no incentive to provide the CLEC with space which will minimize collocation time and expense to the CLEC. For this reason, Supra Telecom believes that CLECs should be allowed to choose from any other space available within the central office, so long as the choice of space does not material disrupt the ILEC or other CLECs having higher priority for the chosen collocation space as a result of prior collocation requests. This rule is consistent with the FCC's Order and allows the CLEC the ability to make intelligent decisions regarding their collocation arrangement and associated space preparation costs.

(B) Practice No. 2: BellSouth uses a formula to calculate space usage which often has no basis in reality and which can over-calculate space usage by more than fifty percent. BellSouth uses this faulty formula to overcharge CLECs for both recurring charges and collocation space preparation costs.

In the cageless collocation environment, BellSouth attempts to calculate collocation space by multiplying an arbitrary number of 3.5 by the equipment footprint. The calculated number is supposed to represent the amount of actual space a cageless collocator will occupy and is used by BellSouth to calculate monthly recurring charges together with allocated collocation space preparation charges. However, as will be explained below, the calculations utilized by BellSouth are not based upon reality and can overcharge a collocator by as much as fifty percent (and more). At the October 25th meeting, BellSouth conceded that its method of calculating space utilization was incorrect; yet BellSouth failed to provide any reason for continuing this erroneous practice. In order to understand why BellSouth's practices are in error, it is important to understand how BellSouth calculates collocation space.

When a collocator requests "cageless" collocation from BellSouth, BellSouth applies a formula to the request in order to determine the actual amount of space utilized by the equipment. BellSouth's methodology for calculating space usage attempts to recover not only the actual space occupied by the equipment, but also one-half of the spacing between equipment line-ups. The standard layout of a BellSouth central office puts two equipments line-ups back-to-back with a twenty-four inch (24") spacing between the line-ups and thirty-six inch (36") access

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aisles in front of the line-ups. When working with transmission equipment having a bay depth of twelve inches (12"), every linear foot of equipment line-up occupies not only the equipment footprint area, plus one-half of the front and back spacing as well, thereby yielding three and one-half square feet of space for every linear foot of line-up (i.e. aisle space of 18", equipment space of 12" and back space of 12"). With a bay depth of twelve inches (12"), each linear foot of equipment line-up has a footprint of one square foot, thus yielding a multiplication factor of 3.5. The factor of 3.5 utilized by BellSouth comes from BellSouth's standard transmission equipment line-up.

The problem with BellSouth's use of the 3.5 factor is that the factor assumes that all equipment bays are twelve inches (12") deep and that every line-up requires a twenty-four inch (24") space between line-ups and thirty-six inch (36") aisles. However, switching equipment comes in twenty-four inch (24") deep bays, while other equipment comes in bay depths of fifteen to eighteen inches (15"-18"). The majority of equipment being collocated by Supra Telecom comes in twenty-four inch (24") deep bays, and which vendors state can be placed closer together than the standard BellSouth central office layout. To illustrate the problem, assuming BellSouth's standard aisle and back spacing, for every linear foot of a switch line-up, the equipment footprint plus one-half of the front and back spacing yields an actual space usage of four and one-half square feet (i.e. aisle space of 18", equipment space of 24" and back space of 12"). Given the fact that every linear foot of switching equipment line-up requires two square feet of equipment space, the space factor for switching equipment line-ups is 2.25 (rather than the 3.5 used by BellSouth). Therefore, assuming standard BellSouth spacing between line-ups, one-hundred square feet of switching equipment footprint translates into two-hundred and twenty-five (225) square feet of actual space utilized. However when BellSouth calculates space preparation costs and recurring monthly charges, BellSouth arbitrarily (and without any basis in reality) states that Supra Telecom is utilizing three-hundred and fifty (350) square feet of space; thereby overcharging Supra Telecom by more than fifty-five percent (55%). This overcharge not only imposes higher monthly charges for use of non-existent space, but if BellSouth performs the space preparation work, imposes a higher space preparation charge due to an erroneous calculation that Supra Telecom is using more space than it actually is using. Thus if BellSouth is allowed to perform work and allocate costs on CLECs, BellSouth is allocating a disproportionately larger share of the expenses on Supra Telecom, simply because Supra Telecom seeks to primarily collocate switching equipment.

BellSouth's use of standard factors in calculating space also discourages maximum utilization of space. In reality, using the recommendations of equipment vendors, the aisle spacing and back spacing utilized by BellSouth can easily and safely be reduced to cause an overall reduction in total space utilized by fifteen to twenty percent (20%). However, since BellSouth always forces collocators to pay for space equal to 3.5 times the equipment footprint,

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collocators have no incentive to maximize space utilization. Therefore, BellSouth's artificial methods of calculating collocation space not only discriminate against collocators of switching equipment, but also discourage efficient space utilization in central offices. Accordingly, Supra Telecom asks that this practice be struck down and that collocators be permitted to request and only be required to pay for the actual space utilized within the central office.

- (C) **Practice No. 3:** BellSouth requires overhead AC lighting and air-conditioning vents which are unnecessary and only serve to delay the collocation process by requiring building permits. BellSouth claims that only it can perform this work and that collocators must wait until this work is finished before beginning installation; thereby effectively delaying collocation by more than six months to a year.

At the October 25th meeting, BellSouth admitted that it requires overhead AC lighting and air-conditioning vents over all cageless collocation arrangements. BellSouth also concedes that these conditions require building permits from local municipalities before such work can begin. BellSouth also admits that the permitting process often lasts several months and constitutes as much of eighty percent of the delay in collocation. Although BellSouth claims that it will not require a CLEC to install overhead lighting or air-conditioning vents if such items already exist over the collocation space, given the fact that BellSouth dictates where the CLEC will collocate, it is virtually assured that BellSouth will require building permits for all cageless collocation. Supra Telecom challenges BellSouth to identify a single instance when a building permit was not required to prepare the collocation space.

The root of the problem is not with local municipalities, but with BellSouth's imposition of unnecessary requirements that cause such delays to trigger. In reality BellSouth is imposing discriminatory requirements on CLECs which BellSouth does not impose upon itself. For example, BellSouth does not obtain a building permit every time BellSouth installs a new piece of equipment. This is because BellSouth either wires the overhead light without obtaining a building permit, or installs hundreds of lights at one time. In the situation where BellSouth has installed overhead lighting in bulk, it is inconceivable that BellSouth can reserve lighted spaces for itself, while forcing collocators into unlighted areas. With respect to air-conditioning vents, BellSouth does not install such vents over its own non-switching equipment, yet imposes this requirement on all collocators (regardless of equipment heat dissipation). Requiring such air-conditioning vents almost certainly imposes significant delays which BellSouth can laugh at, while simply passing the blame onto local authorities. The disparate treatment with regards to lighting and air-conditioning vents, which BellSouth imposes upon collocators is discriminatory, intended to impose unreasonable delays on collocators, and should be stopped by the FCC.

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With respect to switching equipment, although BellSouth has in some instances installed air-conditioning vents over switching equipment, switch vendors do not require such vents and in fact state that such vents are unnecessary. The cooling capacity of a central offices' air-conditioning system is built into the unit and realistically is not effected by the addition or subtraction of air-conditioning vents over collocated equipment. Moreover, contrary to its own equipment, BellSouth requires air-conditioning ducts over all collocator's equipment, regardless of whether or not the vent is needed or has any impacting on area cooling. If the equipment vendor advises a collocator that there is no need for air-conditioning vents over a collocator's equipment, BellSouth should not be allowed to force this requirement upon the collocator without proof that the lack of such vents will have some measurably negative impact on the equipment or service of the ILEC or other collocators.

Additionally, BellSouth's requirements of overhead lighting and air-conditioning vents are illusionary. Most equipment placed in collocation spaces are equipped with optional DC overhead lighting which is operated from the 48 volt DC power supply which feeds the collocated equipment. Installation of DC overhead lighting does not require a building permit before installation. However, when confronted with this issue, BellSouth has insisted on the use of AC lighting over DC lighting without any explanation. Since there is little difference between DC lighting and AC lighting (other than the building permit requirements), it appears that BellSouth requires AC overhead lighting simply to delay the collocation process with unnecessary building permits.

Although Supra Telecom opposes the BellSouth practice of requiring every collocator to install overhead AC lighting and air-conditioning vents over the collocator's equipment, Supra Telecom believes that if such items are required, that collocators should be allowed to limit BellSouth's abuse as follows. First, before being forced into a space that requires a building permit, the collocator should be allowed to inspect the central office to determine if alternate space is available which already has lighting and/or air-conditioning vents. Second, if no such space is available, then the collocator should be allowed to substitute DC overhead lighting in place of AC lighting. Third, the collocator should also be allowed to apply for its own building permits, and hire certified contractors to install any AC lighting and/or air-conditioning vents. BellSouth currently contends that only it is allowed to obtain the building permits and perform the lighting and vent work. BellSouth also requires the overhead work (i.e. lighting and vents) to be completed before equipment installation can begin. BellSouth cannot dispute that the delays in obtaining permits and completing the overhead work (i.e. lighting and vents) can take six to eight months (if not longer). Currently, only BellSouth is in control of this process, and BellSouth has no incentive to timely complete these tasks. Supra Telecom sees no reason why it cannot hire the contractors and/or obtain any required building permits, while allowing BellSouth to monitor the work to ensure compliance with BellSouth's specifications. Supra

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Telecom also sees no reason why a collocater cannot begin equipment installation in parallel with obtaining the building permits and performing the overhead lighting and ducting work. On October 25th, BellSouth's only excuse for prohibiting parallel work on the collocation space was to state: "Well, you don't want somebody working on a ladder when somebody else is working below the ladder." This flimsy excuse should not be allowed to stand when BellSouth's practices only serve to increase costs and delay collocation.

-
- (D) Practice No. 4: BellSouth forces CLECs to upgrade BellSouth's DC battery plant. BellSouth refuses to allow collocators to design operate a separate battery back-up system and forces collocators to donate the DC battery plant upgrades to BellSouth. BellSouth forces CLECs to pay the power plant upgrades, while imposing recurring power charges which already include recovery of power plant upgrades; thus charging the CLEC double for power plant upgrades.**

At the October 25th meeting, BellSouth candidly admitted that a majority of the collocation costs quoted to Supra Telecom represent the cost of DC battery plant upgrades which BellSouth claims are necessary as a result of the collocation requests. To better understand why BellSouth's position is obstructive, an overview of such equipment is helpful. Traditionally, telecommunications equipment have been designed to operate on 48 volt direct current (DC) power. The 48 volt DC power is obtained by lowering and rectifying the alternating current (AC) power provided by the power company. This rectified power is then attached directly to strings of 48 volt DC batteries. In the event of a power failure, each central office has a back-up generator which continues to supply AC power to the rectifiers, thereby continuing to charge the batteries. In the event the back-up generator fails, then the battery line-ups exist to continue providing power to those telephones serviced by the central office. Battery line-ups have traditionally been designed to provide eight hours of back-up DC battery power; but there is no technical reason for choosing eight hours of back-up time over any other capacity.

At the October 25th meeting, BellSouth conceded that there is no technical reason why a CLEC must have any back-up power at all. BellSouth conceded that if a CLEC's equipment has no back-up power, a loss of AC voltage from the power company coupled with a failure of the back-up generator, would simply result in the CLEC's equipment losing power and would not impact the ILEC's customers. Thus a collocater's choice of whether or not to have back-up power, has no affect on the ILEC or any other collocators. Nevertheless (and without justification), BellSouth has argued that every collocater is obligated to pay BellSouth to upgrade the DC battery power plant, that such upgrades must be common to both BellSouth and all collocators, that such upgrades must provide eight hours of back-up time as calculated by the

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CLEC's maximum potential power usage, that only BellSouth can hire contractors to perform this work, and that all upgrades must become the property of BellSouth. This position is extremely obstructively because it guarantees that BellSouth will impose unnecessary and unreasonable costs and delays on collocators.

First, there is no legitimate reason why all battery upgrades must be tied into BellSouth's system. A collocator should be allowed to collocate its battery plant and simply have those batteries provide power solely to the collocator via a separate feeder line. The collocator should not be forced to purchase eight hours of battery back-up time when two or three hours will suffice and reduce costs by more than fifty to sixty percent. Moreover, there is no reason why the ILEC should be allowed to retained the battery plant upgrades if the collocator leaves. Finally, there is no reason why a collocator should be forced to pay uncompetitive prices for power plant upgrades via contractors chosen by the ILEC, together with a thirty percent profit margin for BellSouth. The system forced upon Supra Telecom is obstructive, abusive and guarantees to make collocation unprofitable. In this instance, the outrageous collocation estimates forced upon Supra Telecom are largely due to costly upgrades to the DC battery power plant, which Supra Telecom can perform through certified contractors at a fraction of the BellSouth charges. Because BellSouth can provide no legitimate technical or business reason for these practices, they should be struck down in favor of allowing collocators the freedom to design and contract for their own back-up power systems. So long as certified contractors are used to perform the work under the auspices of BellSouth, collocators should be free to design, construct and install their own back-up power systems.

In addition to the above, in Docket Nos. 960757-TP, 960833-TP and 960846-TP, the FPSC arbitrated recurring charges for DC power supplied to a collocator's equipment and concluded that "power plant expansions are more appropriately recovered in recurring charges because they will benefit both BellSouth and future collocators [t]herefore, power plant investment shall not be included in any space preparation charge assessed to a collocator." In those dockets, the FPSC also established recurring monthly rates for DC power which include the recovery of potential power plant upgrades. BellSouth currently charges as monthly recurring fee, power rates which already include recovery of power plant upgrades. Notwithstanding the fact that the FPSC has already stated that BellSouth should not charge a space preparation fee for power, BellSouth continues to do so and thus seeks a double recovery of power upgrade charges. This simply presents another reason for striking down BellSouth's space preparation charges for power upgrades.

(E) Practice No. 5: Irrespective of space availability, BellSouth forces CLECs to install

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separate overhead racking in order to interconnect with BellSouth's equipment. BellSouth prohibits CLECs from contracting their racking and cabling work.

At the October 23th meeting, BellSouth admitted that it requires cageless collocators to use separate overhead racking and that collocators are prohibited from using space available in existing overhead racks (irrespective of how much space is available). The overhead racking supports cables that are used to interconnect the collocator's equipment with the ILEC's equipment. BellSouth has stated that the overhead racking currently within the central offices belongs to BellSouth and thus collocators need to install separate racking. BellSouth also claims that because more than one collocator may potentially share the collocator's racking, that only BellSouth should be allowed to install the cabling and racking.

BellSouth's policy regarding overhead racking even applies when no other collocators are present. For example, in the Daytona Port Orange, Miami Palmetto and Miami Golden Glades central offices, BellSouth claims that Supra Telecom will be the only collocator and thus all of the cost of installing cabling and racking must be borne by Supra Telecom. Despite the fact that Supra Telecom will be the only collocator, BellSouth still refuses to allow Supra Telecom to perform the racking and cabling work. Moreover, at the October 23th meeting BellSouth candidly admitted that it has no procedure for refunding Supra Telecom for the cost of such items in the event future collocators enter the central offices. Therefore BellSouth's policies require Supra Telecom to pay BellSouth for cabling and racking work which future collocators may use without reimbursing Supra Telecom. This procedure is clearly in violation of the FCC's Order. See FCC Order at ¶ 51.

Supra Telecom sees no reason why it must be forced to pay BellSouth to perform cabling and racking work. If overhead rack space is available, Supra Telecom and other collocators should be allowed to utilize that space for their cabling. Rack space should be treated no different than floor space for which collocation is required. Moreover, if the shortest overhead racking route between a collocator's equipment and the interconnection point is congested, the collocator should have the choice of running its cabling along alternative routes which may not be congested. Furthermore, when racking space has been exhausted, ILECs such as BellSouth should be required to remove old and unused cabling which often congests central office racking. The latest FCC Order requires ILECs to remove unused and obsolete equipment which occupies available collocation space. See FCC Order at ¶ 60 ("incumbent LECs must remove obsolete unused equipment from their premises upon reasonable request by a competitor"). Since rack space is conceptually no different than floor space, or space within an equipment bay, if rack space has been exhausted, the CLEC should have the option of requesting that the ILEC remove unused cabling congesting the overhead racks. In reality, when BellSouth wants to increase rack space, it often removes obsolete cabling. If BellSouth can remove cabling for itself, it can (and

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should be required to) do the same for CLECs.

Supra Telecom is familiar with the collocation policies of Sprint and SBC. With respect to the ILEC operations of those companies, racking is already included in the cost of their collocation space. If Sprint and SBC can include these items as part of the collocation package, there is no reason why BellSouth must separate out these items in order to force more unnecessary wasted time and expense on collocators.

As a last option, if overhead racking space has been exhausted, then the collocator should be allowed to hire a certified contractor to install new racking; or, in the alternative, the collocator should be allowed to pursue competitive bids from certified contractors. The collocator should under no means be forced to accept the ILEC's contractor or otherwise have to pay the ILEC any additional amounts not charged by the contractor. Finally, and contrary to BellSouth policies, under no circumstances should a CLEC ever be forced to purchase cabling from an ILEC.

- (F) Practice No. 6: With the exception of equipment installation, BellSouth refuses to allow CLECs to use certified contractors to perform space preparation work in cageless collocation. BellSouth currently provides the CLEC "estimates", demanding payment of half of the estimate before work commences, and the remainder (together with inevitable cost over-runs) before the space is provided to the CLEC. BellSouth adds a thirty percent profit to the space preparation charges and claims to have no accountability to the CLEC for the final space preparation charges.

Prior to bringing this matter to the FCC, BellSouth refused to allow Supra Telecom to perform or contract for any of the alleged collocation space preparation work. Nevertheless, at the October 25th meeting, BellSouth claimed that collocators are allowed to use certified contractors to perform work within their collocation space. With respect to the four applications involved in this dispute, three of the four are in locations in which BellSouth claims that Supra Telecom will be the only collocator (i.e. Daytona Port Orange, Miami Palmetto and Miami Golden Glades central offices). Despite the fact that BellSouth is forcing Supra Telecom to bear the full cost space preparation work claimed to be necessary in these central offices, BellSouth has refused to allow Supra Telecom to perform this work and BellSouth's October 8th letter proves this position.

Based upon the above it is clear that BellSouth's policy with respect to allowing collocators to hire certified contractors to perform space preparation work is as follows. In

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caged collocation, the collocator controls the space within the collocation enclosure and therefore is allowed to use certified contractors to perform space preparation work within the enclosure. However, in cageless collocation, BellSouth claims that any work other than equipment installation has the potential of affecting BellSouth and thus only BellSouth must be allowed to perform this work. The logic advanced by BellSouth guarantees that cageless collocation costs will always be unreasonably and unnecessarily expensive. Moreover, this logic contradicts 47 C.F.R. § 51.323(j) (1999) which states in pertinent part that "an incumbent LEC shall permit a collocating telecommunications carrier to subcontract the construction of physical collocation arrangements with contractors approved by the incumbent LEC."

At the October 25th meeting, BellSouth conceded that it only engages in competitive bidding when negotiating long-term contracts with suppliers. After the contract is negotiated, no competitive bidding takes place, therefore the unique needs or negotiation postures of CLECs are lost in the process and the CLEC is stuck paying rates that the CLEC never had an opportunity to negotiate. BellSouth has no incentive to ensure that the build-out costs are kept reasonable. Indeed, to the contrary, BellSouth has little or no desire to see competition within its central offices. Moreover, BellSouth adds an additional thirty percent profit to the contractor's invoices; thus giving BellSouth the incentive to encourage the contractor to inflate its charges. Accordingly, BellSouth has every incentive to ensure that the contractor's prices are unreasonably high. Although BellSouth claims that it doubts that a CLEC can negotiate better prices than BellSouth, the reality is that whatever agreements BellSouth has with vendors were probably negotiated years ago prior to the advent of any competitive pressures on certified contractors. Moreover, the agreements probably contain cost over-runs which BellSouth has no incentive to prevent on behalf of the CLEC. Where the CLEC might be able to drastically reduce or eliminate cost over-runs, BellSouth will simply pass through every cost over-run to the CLEC. In short, only allowing ILECs to hire contractors to perform collocation space preparation work stifles and threatens to undermine potential competition.

There is no reason why a CLEC should not be able to perform all space preparation work, so long as the work is performed by an ILEC's certified contractor and so long as the ILEC has the ability to oversee the work to ensure that the quality meets the ILEC's standards. Competition among certified contractors will lead to lower collocation costs, which in a competitive environment will be passed on to the consumer. BellSouth's approach perpetuates a lack of meaningful competition among certified contractors. If BellSouth is concerned about the quality of work performed by contractors hired by CLECs, the solution is not for BellSouth to perform the work, but rather to revoke the certification of any contractor failing to meet specifications. Placing accountability with the contractors and BellSouth oversight personnel will actually encourage higher quality work and competition among qualified contractors.

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BellSouth also argues that if another CLEC can potentially share in the central office upgrades, that only the ILEC should be allowed to perform the space preparation work. This logic only encourages the ILEC to characterize all central office work as potentially shared work which then can only be performed by the ILEC (who has no incentive to perform the work). Battery plant upgrades and cabling/racking, as discussed previously, are perfect examples of work that are relevant to only one CLEC, but which BellSouth has attempted to re-characterize as shared upgrades in order to wrestle control of the work from Supra Telecom; thereby allowing BellSouth an opportunity to delay the collocation process.

The system utilized by BellSouth imposes unnecessary financial burdens upon CLECs for various reasons. First, the BellSouth system precludes CLECs from negotiating better prices. Second, the BellSouth system prevents CLECs from financing the space preparation work. The CLEC must pay half of the estimate cost before work begins and the balance before the space is provided to the CLEC. If the CLEC were in control the process, the CLEC could negotiate financing terms from the certified contractors. Third, BellSouth adds a mark-up of thirty percent to the contractor's invoices which it claims as a profit for being a "middle-man." This profit charge is obscene and obviously provides no benefit to anyone but BellSouth. Fourth, BellSouth has no accountability for the cost of the space preparation work. The estimates which BellSouth initially provided are just estimates which BellSouth can change without any recourse by the CLEC. The CLEC does not know what the final bill will be until the space preparation work is completed, and the CLEC has no option other than to pay the bill or forfeit the space. Experience has shown that BellSouth's final collocation cost bills may even double the original estimate.

Additionally, the system utilized by BellSouth prevents a CLEC from designing the most cost-efficient network because the CLEC has no collocation cost information available at the design stage. BellSouth has converted the collocation process into a system whereby virtually everything is on an ICB (or individual case basis), thereby preventing CLECs from taking into consideration the cost of collocation (which BellSouth seems to make so substantial) when designing their networks. Therefore, no CLEC can sit down and plan a facilities-based network which will minimize expense, since at the planning stage the CLEC has no information regarding the potential cost of collocation. At least if the CLEC is able to control its space preparation costs, the CLEC can negotiate with vendors and certified contractors in order to meet its budgeted expenditures. This is impossible under the system BellSouth has created.

The pro-competitive advantages to allowing CLECs to contract space preparation work are many and far outweigh any arguments which BellSouth can possibly present. Moreover, there is no technical reason for precluding CLECs from performing space preparation work. Sprint is an ILEC in portions of Florida and in a recent Florida Collocation Docket has testified that CLECs should be allowed to hire certified contractors to perform any and all space

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preparation work. If Sprint allows CLECs to hire certified contractors to perform all space preparation work, then BellSouth has no legitimate reason for precluding CLECs from performing this work. Moreover, in SBC's territories in Texas, to Supra Telecom's knowledge there are no ICBs in the collocation process, rather everything has been broken down into either standard recurring charges or standard non-recurring charges. Therefore a CLEC wishing to physically collocate in an SBC territory in Texas can precisely calculate its potential collocation costs in the network design phase; something which no CLEC in a BellSouth territory can do.

If the CLEC were in charge of the space preparation work, the CLEC could obtain competitive bidding, hold contractors to their initial price estimates and control the pace of the space preparation work. Finally, instead of being required to pay an enormous amount of money up-front, if the CLEC were in charge of the process, the CLEC could negotiate more favorable financing terms which suit the CLEC's business plan. In short, the procedures employed by BellSouth are the old monopolistic "one-size fits all" approach which guarantees higher prices and inferior work. The Telecommunications Act charts the FCC to encourage competition, not perpetuate monopolistic approaches. Accordingly, 47 C.F.R. § 51.323(j) should be enforced to permit CLECs the right to perform all space preparation work by ILEC certified contractors.

(G) Practice No. 7: BellSouth refuses to allow collocation in spaces which currently house BellSouth remote terminals.

To date BellSouth has refused to allow Supra Telecom the ability to collocate equipment within remote vaults that house BellSouth's own remote switching equipment. With the advent of xDSL and the need to access sub-loops, BellSouth's refusal to allow this collocation can only be viewed as an anticompetitive attempt to preclude competition in advanced services such as xDSL. This anticompetitive practice should be struck down by the FCC.

(H) Practice No. 8: BellSouth unnecessarily forces CLECs to pay for new security systems which were previously deemed unnecessary by BellSouth and which only have been adopted and required as a result of cageless collocation.

BellSouth's October 8th letter demonstrates that as a result of cageless collocation, BellSouth has decided to install at selective central offices, card readers and other security devices which previously were deemed unnecessary by BellSouth. Supra Telecom sees no purpose for these items other than to impose additional collocation expenses on CLECs.

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(I) Practice No. 9: BellSouth forces CLECs to initially overpay both recurring and non-recurring charges, by precluding CLECs from "ramping-up" their operations.

The entire process of collocation created by BellSouth requires a CLEC to specify the maximum usage of all equipment to be collocated. For example, switches are initially installed as a frame with a small percentage of line cards actually being installed. As more and more customers are placed onto the switch, new cards are added to the switch which fill existing locations in the switch frame. Likewise, as new line cards are added to the switch, new cabling becomes necessary to interconnect the switch with BellSouth's equipment. As is evident, when telecommunications equipment is initially collocated, minimum amounts of power and cabling are actually required; and with time and normal growth, power and cabling requirements are increased. Despite the reality of how equipment grows within the central office, BellSouth forces CLECs to initially order and pay for the maximum capacity of the equipment to be collocated. A CLEC cannot make changes to the initial order without incurring new charges and being forced into a lengthy application process. Therefore, CLECs are forced to unnecessarily pay for power upgrades, cabling upgrades and air conditioning upgrades which may never even be needed given future uncertainty. Since BellSouth does not impose these same burdensome requirements on itself and its own growth within central offices, BellSouth is engaging in discriminatory collocation practices which must be stopped. Rather than be forced to start off with maximums, CLECs should be allowed to "ramp-up" upgrades to match their growth and only pay for upgrades in power, cabling and air conditioning as needed.

(J) Practice No. 10: BellSouth refuses to provide detailed cost estimates and has no procedure allowing the CLEC to control space preparation costs or for reimbursing CLECs for shared space preparation costs.

Although Supra Telecom believes that CLECs should be allowed to hire certified contractors to perform all aspects of the collocation space preparation, in the event this is not mandated, then ILECs should be required to provide CLECs detailed cost estimates and a procedure by which the CLEC can meaningfully be involved in designing the work requirements and obtaining competitive bids for the space preparation work. Future CLECs should not have to file complaints with the FCC or PSCs in order to obtain meaningful detailed estimates. Indeed, Supra Telecom will note that the estimates provided by BellSouth in its October 8th response are still not detailed enough. For example, the power estimates are scant and for the only central office in which any detail was provided, a double charge of \$51,000 was found for

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the same item (see Exhibit 2, Port Orange, where BellSouth includes the cable/racking charge of \$51,000 in its estimate of the total power cost of \$115,077, while at the same time charging this same amount of \$51,000 a second time as a separate item for cable support in the summary on page 8 of BellSouth's letter). Supra Telecom believes that this double billing is inherent in the estimates for each of the other three central offices, but has not been provided a detailed breakdown of the power expense for those offices.

Supra Telecom believes that CLECs should be allowed to reasonably control space preparation costs and should be allowed to see the actual bids and monies paid. The current procedure by BellSouth hides these charges and leaves CLECs paying monies which are never accounted for or otherwise justified. Clearly, refusing to provide detailed estimates and billing information opens the process to rampant abuse.

In addition to the above, at the October 25th meeting, BellSouth admitted that it had no procedure for reimbursing CLECs for space preparation costs for items which subsequent CLECs obtain a benefit. This lack of procedures is a violation of the FCC's Order which prohibits an ILEC from forcing a CLEC to pay the full cost of site preparation work which may be utilized by the ILEC or other collocators. See FCC Order at ¶ 51. Not only should CLECs be allowed to challenge the estimates, but they should also be allowed to audit the bills, and not be required to pay the ILEC a profit for space preparation services or otherwise pay unjust and/or unreasonable contractor overcharges.

The above list of practices are not a complete list, but rather are practices raised solely by BellSouth's oral and written responses to Supra Telecom's September 20th letter.

Supra Telecom has been attempting to deploy a facilities-based network for over a year by collocating such equipment in BellSouth central offices. After more than a year, Supra Telecom has nothing to show for its work but a trail of excuses and abusive practices employed by BellSouth which have effectively precluded Supra Telecom from becoming a facilities-based carrier. During that time period, Supra Telecom has had to watch as BellSouth refused collocation based upon obstructive practices relating "caged" collocation which were struck down by the FCC's Order, but which have since been transformed to the above obstructive and discriminatory practices relating to "cageless" collocation. In the interim, Supra Telecom has lost face with suppliers and has had to endure two layoffs. Supra Telecom currently has equipment sitting in warehouses which have no place to be installed because of BellSouth's refusal to act in good faith in allowing "cageless" collocation to Supra Telecom. Time and delay only benefit BellSouth since vendors eventually lose their patience wondering why equipment, which has

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already been shipped, cannot be installed; while the company cannot earn sufficient revenue to continue its operations. Supra Telecom's business plan of serving the consumer and small business market (i.e. 1 to 5 lines) has been set back by more than a year as a result of BellSouth, and threatens to be set back even more as a result of BellSouth's current obstructive and discriminatory practices. Consumers continue to be hurt and suffer as a result of BellSouth's conduct.

It is Supra Telecom's belief that the outrageous costs of the collocation estimates provided by BellSouth are a direct result of the above abusive and discriminatory practices which BellSouth has adopted since the FCC ordered cageless collocation. Supra Telecom will note that during the October 25th meeting, BellSouth admitted to engaging in most, if not all, of the practices referenced above. Thus, it is Supra Telecom's belief that few (if any) material issues of fact exist in this dispute and that this dispute can be resolved by an order condemning the above referenced practices. BellSouth has engaged in the above referenced practices simply to stall and delay collocation within its central offices. Although one might be tempted to say that if Supra Telecom simply paid the monies that BellSouth has demanded in order to enter the four above referenced central offices, that Supra Telecom would eventually become a facilities-based carrier. However, the reality is that on May 7, 1999, a company called Bluestar Networks followed BellSouth's instructions without complaint, paid the outrageous monies demanded by BellSouth, and now more than six months later has nothing to show for their money but a complaint before the FPSC in which BellSouth claims that it will take another three to six months before Bluestar can even begin installing a single piece of equipment.

In my September 20th letter, I pointed out that for the Miami-Palmetto central office, BellSouth's 1999 estimate for cageless collocation was more than five times the cost of BellSouth's 1998 estimate for enclosed collocation. In its October 8th response, BellSouth claimed that the comparison was unfair because the 1998 estimate purportedly was for six bays of equipment while the 1999 estimate was for 28 bays of equipment. However, this representation is incorrect because in 1998 there were two applications for the Miami-Palmetto central office. The first application in 1998 was for approximately six bays, while the second was for approximately 28 bays. The comparison made in my letter of September 20th letter was an "apple-to-apple" comparison of the virtually equivalent applications. The difference in cost of five times between the two applications was not a result of any increase in the number of bays of collocated equipment, but rather primarily a result of the abusive practices referenced above.

In the FCC's recent ruling in Order No. 99-238, the FCC recognized that non-recurring collocation costs are sunken costs which present significant barriers to entry if such costs are too high and cannot reasonably be recovered based upon the amount of business a CLEC can capture. See FCC Order No. 99-238 at ¶¶ 77-78. The abusive and discriminatory practices of

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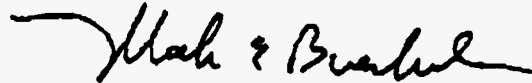
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BellSouth referenced above are deliberate attempts to impose unreasonably high sunken costs associated with collocation in order to discourage competitors from physically collocating with BellSouth central offices. Because ILECs such as BellSouth will seek any excuse to delay and increase the cost of collocation, the FCC and state commissions are being forced to address every obstructive practice on a case-by-case basis. Since ILECs are forcing the resolution of these obstructive practices, competition will be served by hearing these issues on an expedited basis and subsequently striking down such abusive and discriminatory practices as referenced above.

Accordingly, for the above stated reasons, Supra Telecom believes that the above referenced dispute is appropriate for inclusion in the Common Carrier Bureau's Accelerated Docket proceedings. Therefore, Supra Telecom respectfully requests the assistance of the Commission and Staff to resolve the above reference dispute in an expedited manner through mediation and if such mediation is not successful, by inclusion in the Accelerated Docket proceedings.

If you have any questions or comments, please feel free to contact me at my law office at (305) 531-5286 or at my Supra Telecom office at (305) 476-4206.

Sincerely,



Mark E. Buechele
General Counsel
Supra Telecom

cc: Rae Lynn Tibayan-Remy
William Jordan
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FLORIDA PUBLIC SERVICE COMMISSION

DOCKET 981834

NO. 990321-4P EXHIBIT NO. 17

COMPANY/

WITNESS: Reid

DATE 2-13-2000

SHARED CAGED AND SUBLEASED CAGED COLLOCATION GUIDELINES AND RESPONSIBILITIES

Shared Caged Collocation

A shared caged collocation arrangement is a caged collocation space shared by two or more competitive local exchange carriers (CLECs) pursuant to terms and conditions determined by those CLECs. Non-recurring charges (NRCs) associated with the initial installation of the shared caged arrangement will be paid by each CLEC, based on the percentage of the total space it utilizes. Ordering and payment for all required services will be the responsibility of the "host CLEC" (HC), designated by the CLECs sharing the cage ("guest collocators" or GCs). GTE will allow shared caged collocation in its wire centers or access tandems, where feasible, for interconnection purposes or access to unbundled network elements (UNEs).

The following are the shared caged collocation guidelines:

- All shared caged collocation arrangements will be for new cages, which are to be jointly applied for and occupied by two or more CLECs at the same time.
- The shared cage CLECs will designate one of the CLECs sharing the cage as the HC, which will be GTE's primary point of contact.
- The shared caged CLECs (through the HC) must inform GTE of the proportionate amount of floor space each CLEC is using in the cage. This is necessary for allocating initial NRCs.
- The HC is responsible for collecting the applicable NRCs from each of the GCs.
- The HC is responsible for paying GTE for all shared caged charges associated with the collocation arrangement.
- The shared caged CLECs must all independently interconnect to GTE's network; they cannot share the caged space solely to connect to another collocated CLEC.
- GTE will not be involved in negotiating terms and conditions between or among the CLECs sharing a cage.
- Space within shared caged arrangements cannot be warehoused for the purposes of subleasing.
- All equipment in the shared arrangement must be installed in compliance with GTE's standards.
- The HC will provide GTENS a letter of authorization (LOA) signed by the HC and all GCs verifying that the terms and conditions of the arrangement are acceptable to all parties and reflecting that the HC and to the shared caged collocators may order UNEs via a local service request (LSR).

- The HC will be held responsible for all actions and omissions of the GCs.
- The HC will have the option of providing or requiring GTE to provide GTE-standard transmission and power cables of sufficient length.

The following outlines GTE's responsibilities with respect to shared caged collocation:

- Cable Pull – Pull CLEC-provided fiber cable into the wire center and to the CLECs' cage.
- Cable Splice – Perform any splicing of the cable required inside the zero manhole or wire center.
- Cable Termination – Make all cable terminations on the MDF and patch panels.
- Entrance Facility Space – Provide space in GTE's wire center entrance facilities (zero manhole/conduit system) for CLEC-provided cables, if available.
- Overhead Support and Cable Racking – Provide materials and installation.
- Entrance Cable Route – Determine route of CLECs' cable from zero manhole to the cage.
- Final Inspection – Perform final inspection of the CLECs' equipment for compliance with GTE standards.
- Engineer and install all power, transmission and ground cables.
- Engineer and install AC power outlet(s).

The following outlines the HC's responsibilities with respect to shared caged collocation:

- The HC must submit all pertinent collocation applications and fees as required for a standard caged collocation arrangement on behalf of the GCs.
- The HC will provide GTE an LOA signed by all CLECs participating in the shared arrangement verifying that this arrangement is acceptable to all the CLECs and also reflecting that allows the GC(s) may order UNEs via an LSR.
- The HC will be held responsible for all actions and omissions of the GCs.
- The HC will be responsible for ordering and paying for all tariffed collocation services, just as it would be in a standard caged collocation arrangement.
- The HC will be responsible for installing and maintaining all GC equipment within the shared area, just as it would be in the case of caged collocation.
- The HC is responsible for ensuring that all equipment in the shared arrangement is installed in compliance with GTE standards.
- Where there is insufficient space to store and stage CLEC equipment within the central office prior to installation, the HC will be responsible for obtaining temporary storage space.

- The HC will coordinate with GTE for space to stage equipment; however, GTE is not responsible for the security of the CLEC equipment located in a staging area.

The following outlines the GCs' responsibilities with respect to shared caged collocation:

- The GCs must have a network interconnection agreement with GTE.
- The GCs must submit their own LSRs to GTE to order UNEs.

Subleased Caged Collocation

In a subleased caged arrangement, vacant floor space available in the caged collocation arrangement of an existing CLEC (the "Host CLEC" or HC) may be made available to a third party (the Guest CLEC or GC) for interconnecting or accessing UNEs in GTE's wire centers and access tandems. The HC will sublease the floor space to the GC pursuant to terms and conditions agreed to by the HC and GCs. The HC will be responsible for ordering and paying for all services required by the GCs.

The following are the Subleased Caged Collocation Guidelines:

- All subleased floor space arrangements will be for space located within an existing HC's cage.
- GTE is not responsible for any notification of availability of surplus floor space in existing HC's cage.
- GTE will not be involved in negotiating the terms and conditions between and among the subleasing parties.
- The HC cannot warehouse space for the purposes of subleasing.
- The HC has the option of providing or requiring GTE to provide GTE-standard transmission, power, and grounding cables of sufficient length.
- The subleased caged CLECs must all interconnect to GTE's network and cannot share the caged space solely to connect to another collocated CLEC.

The following are GTE's responsibilities with respect to shared subleased collocation:

- Cable Pull – Pull the CLEC-provided fiber cable into the wire center and to the CLECs' cage.
- Cable Splice – Perform any splicing of the cable required inside the zero manhole or wire center.

- Cable Termination – Make all cable terminations on the MDF and manual DSX patch panels.
- Overhead Support and Cable Racking – Provide materials and installation.
- Entrance Facility Space – Provide space in GTE's wire center entrance facilities (zero manhole/conduit system) for CLEC-provided cables, if available.
- Entrance Cable Route – Determine route of CLECs' cable from zero manhole to the cage.
- Final Inspection – Perform final inspection of the CLECs' equipment for compliance with GTE standards.
- Engineer and install all power, transmission and ground cables.
- Engineer and install AC power outlet(s).

The following are the HC's responsibilities with respect to shared subleased collocation:

- The HC must submit, on behalf of the GCs, all pertinent collocation applications and fees as required for a standard caged collocation arrangement.
- The HC will provide to GTE an LOA signed by all CLECs participating in the subleased arrangement verifying that this arrangement is acceptable to all parties and reflecting that the GCs will order UNEs via an LSR.
- The HC will be held responsible for all actions and omissions of the GC.
- The HC will be responsible for ordering and paying for all tariffed collocation services, just as in a standard caged collocation arrangement.
- The HC will be responsible for installing and maintaining the GCs' equipment within the subleased area, just as in the case of caged collocation.
- The HC must ensure that all equipment in the subleased arrangement is installed in compliance with GTE standards.
- As part of the application, the HC must provide a floor plan of equipment layout.

The following are the GC's responsibilities with shared subleased collocation:

- The GC must have a network interconnection agreement with GTE.
- The GC cannot sublease from the HC solely to connect to another collocated CLEC.
- The GC must submit its own LSRs to GTE to order UNEs.

CLEC-TO-CLEC INTERCONNECT GUIDELINES AND RESPONSIBILITIES

CLEC-to-CLEC Interconnect Arrangements

A CLEC-to-CLEC interconnect arrangement is the interconnection of a CLEC's equipment in a cage, bay or cabinet to the same or a different CLEC's cage, bay or cabinet equipment within the central office.

The following are GTE's responsibilities with respect to CLEC-to-CLEC Interconnect Arrangements:

- Application – Review and approve cable type and shielding based on the signal type.
- Overhead Support and Cable Racking – Provide materials and installation.
- Cable Route - Determine the best cable route between CLECs to minimize occurrences of CLEC cables running over GTE's in-service equipment.
- Final Inspection – Perform final inspection of interconnect cables to assure compliance with GTE standards

The following are the CLECs' responsibilities with respect to CLEC-to-CLEC Interconnect Arrangements:

- The CLEC that initiates the CLEC-to-CLEC interconnect arrangement must submit a collocation application form, ASR and the appropriate fee.
- Each CLEC is responsible for its own cable termination.
- CLECs must coordinate the termination of all cable shields. Shields must be grounded at one end only to prevent ground loops.

The following are CLEC options with respect to CLEC-to-CLEC Interconnect Arrangements:

- The CLEC has the option of providing all cables or requesting that GTE provide all cables. The applicable tariff or interconnection agreement will determine cable costs.
- The CLEC has the option of running the cable; However, if the cable run is over GTE's or another CLEC's in-service equipment, the CLEC must use an approved GTE contractor or meet GTE contractor qualification requirements. Also, the cable run must be completed during the maintenance window.
- If GTE runs the cable, the CLEC will be charged out of the applicable state tariff or interconnection agreement.
- Overhead support and cable racking charges will be applied based on the applicable state tariff or interconnection agreement.

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET

NO. 7818349 EXHIBIT NO. 18

COMPANY/ 990321-18

WITNESS: Per

DATE 1-12-14-200



GTE Service
Corporation

One Tampa City Center
201 N. Franklin Street
P.O. Box 110
Tampa, FL 33601-0110

99 DEC 30 10:00

December 30, 1999

T-992142

RECEIVED

DEC 30 1999

CMU

Mr. Walter D'Haeseleer, Director
Division of Communications
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Dear Mr. D'Haeseleer:

Attached are four (4) copies of the following pages from our
Facilities For Intrastate Access Tariff:

Table of Contents

Ninth Revised Page 1

Index

Third Revised Index Page 3

Section 19

Second Revised Contents Page 1

Second Revised Page 1

Second Revised Page 2

Original Pages 3 through 22

This proposed tariff filing provides Competitive Local Exchange Carriers (CLECs) access to central office cross connect points that may serve as a point of interconnection for the exchange of traffic with GTE Florida Incorporated and/or to access unbundled network elements in those telephone company wire centers or access tandems listed in the National Exchange Carrier Association, Inc., Tariff FCC 4.

Collocation shall be accomplished through caged or cageless collocation, except in those instances where caged or cageless collocation is not practical for technical reasons or due to space limitations. In such cases, the Company shall provide adjacent collocation or other methods of collocation, subject to space availability and technical feasibility.

Mr. Walter D'Haeseleer, Director
Page Two

T-992142

It would be appreciated if you would handle this filing with the Commissioners and members of the Staff, as appropriate, for approval.

Acknowledgement, date of receipt, and authority number of this filing are requested. A duplicate letter of transmittal is enclosed for this purpose.

Sincerely,

Beverly Y. Menard

Beverly Y. Menard
Regulatory & Governmental Affairs
Assistant Vice President - Florida/Georgia

BYM/bf
Enclosures

**GTE FLORIDA INCORPORATED – FLORIDA
COLLOCATION SERVICE
Executive Summary**

T - 992142

(A) INTRODUCTION

Collocation provides Competitive Local Exchange Carriers (CLECs) access to central office cross connect points that may serve as a point of interconnection for the exchange of traffic with the Company and/or to access unbundled network elements in those Telephone Company wire centers or access tandems listed in the National Exchange Carrier Association, Inc., Tariff FCC 4.

Collocation shall be accomplished through Caged or Cageless Collocation, except in those instances where Caged or Cageless Collocation is not practical for technical reasons or due to space limitations. In such cases, the Company shall provide adjacent collocation or other methods of collocation, subject to space availability and technical feasibility.

(B) RATE ELEMENTS / CHARGES

(See Attachment)

(C) CONCLUSION

This tariff will enable CLECs to lease space on GTE's premises in order to collocate their equipment used for interconnection or access to unbundled network elements.

<u>Rate Element</u>	<u>NRC/MRC</u>	<u>Increment</u>	<u>PRICE</u>
Engineering/Major Augment Fee	NRC	per occurrence	\$1,129.00
Minor Augment Fee	NRC	per occurrence	\$200.00
Access Card Administration	NRC	per card	\$21.00
Cage Fencing 100 & Over Square Feet Floor Space	NRC	1 SF fencing	\$9.00
Cage Fencing 75 - 99 Square Feet Floor Space	NRC	1 SF fencing	\$10.00
Cage Fencing 50 - 74 Square Feet Floor Space	NRC	1 SF fencing	\$11.00
Cage Fencing 25 - 49 Square Feet Floor Space	NRC	1 SF fencing	\$13.00
Cage Gate	NRC	per gate	\$498.00
Cage Grounding Bar	NRC	per bar	\$1,198.00
BITS Timing	NRC	per project	\$255.00
Cage Site Preparation Charge (Initial 100 SF)	NRC	per sq ft	\$336.00
Incremental Caged Site Preparation Charge (over 100 SF)	NRC	per sq ft	\$42.00
Cageless Site Preparation Charge	NRC	per bay	\$4,800.00
Cable Support Charge	NRC	per project	\$8,981.00
Fiber Cable Pull - Engineering	NRC	per project	\$607.00
Fiber Cable Pull - Place Innerduct	NRC	per lin ft	\$2.00
Fiber Cable Pull - Labor	NRC	per lin ft	\$1.00
Fiber Cable Pull - Cable Fire Retardant	NRC	per occurrence	\$38.00
Engineering Cost - Fiber Splice	NRC	per project	\$31.00
Fiber Cable Splice	NRC	per fiber	\$45.00
DC Power	NRC	per 40 amps	\$2,473.00
Cable Material Charge	NRC	per project	\$9,350.00
Caged Floor Space	MRC	per sq ft	\$3.00
Relay Rack Floor Space	MRC	per lin ft	\$13.00
Cabinet Floor Space	MRC	per lin ft	\$18.00
Cable Subduct Space - Manhole	MRC	per project	\$6.00
Cable Subduct Space	MRC	per lin ft	\$0.03
Fiber Cable Vault Splice - 48 Fiber-Material	MRC	per splice	\$9.00
Fiber Cable Vault Splice - 48 Fiber	MRC	per subduct	\$1.00
Fiber Cable Vault Splice - 96 Fiber-Material	MRC	per splice	\$26.00
Fiber Cable Vault Splice - 96 Fiber	MRC	per subduct	\$1.00
Cable Rack Space - Metallic	MRC	per occurrence	\$51.00
Cable Rack Space - Fiber	MRC	per innerduct ft	\$0.02
DC Power	MRC	per 40 amps	\$550.00
Facility Termination - DS0	MRC	per 100 pr	\$4.00
Facility Termination - DS1	MRC	per 28 pr	\$15.00
Facility Termination - DS3	MRC	per DS3	\$11.00
BITS Timing	MRC	per occurrence	\$11.75
Adjacent-Engineering Fee Onsite	NRC	per occurrence	\$958.00
Adjacent Fiber Cable Pull-Engineering	NRC	per project	\$607.00
Adjacent Fiber Cable Pull-Place Innerduct	NRC	1 lin ft	\$2.00
Adjacent Fiber Cable Pull	NRC	1 lin ft	\$1.00
Adjacent-Cable Fire Retardant	NRC	per occurrence	\$38.00
Adjacent Metallic Cable Pull-Engineering	NRC	per project	\$607.00
Adjacent Metallic Cable Pull	NRC	1 lin ft	\$1.00
Adjacent Metallic Cable Splice-Engineering	NRC	per project	\$31.00
Adjacent Metallic Cable Splicing (greater than 200 pair)	NRC	per DSO/DS1 pair	\$1.00
Adjacent Metallic Cable Splicing (less than 200 pair)	NRC	per DSO/DS1 pair	\$2.00
Adjacent Fiber Cable Splicing-Engineering Costs	NRC	per fiber	\$31.00
Adjacent Fiber Cable Splicing (48 fiber cable or less)	NRC	per fiber	\$45.00

Adjacent Fiber Cable Splicing (greater than 48 fiber)	NRC	per fiber	\$40.00
Adjacent Facility Pull-Engineering	NRC	per project	\$72.00
Adjacent Facility Pull	NRC	1 lin ft	\$1.00
Adjacent DSO Cable Termination (Connectorized)	NRC	per 100 pr	\$4.00
Adjacent DSO Cable Termination (Unconnectorized)	NRC	per 100 pr	\$38.00
Adjacent DS1 Cable Termination (Connectorized)	NRC	per 28 pr	\$1.00
Adjacent DS1 Cable Termination (Unconnectorized)	NRC	per 28 pr	\$29.00
Adjacent DS3 Coaxial Termination (Connectorized)	NRC	per DS3	\$1.00
Adjacent DS3 Coaxial Termination (Unconnectorized)	NRC	per DS3	\$10.00
Adjacent Fiber Cable Termination	NRC	per fiber term	\$45.00
Adjacent Subduct Space-Manhole	MRC	per project	\$6.00
Adjacent Subduct Space	MRC	1 lin ft	\$0.03
Adjacent Conduit Space (4" Duct)-Metallic-Manhole	MRC	per conduit	\$10.00
Adjacent Conduit Space (4" Duct)-Metallic Cable	MRC	1 lin ft	\$0.03
Adjacent Facility Termination DSO Cable-Material	MRC	per 100 pr	\$4.00
Adjacent Facility Termination DS1 Cable-Material	MRC	per 28 pr	\$15.00
Adjacent Facility Termination DS3 Cable-Material	MRC	per coaxial	\$11.00
Adjacent Cable Vault Space (per 1200 pr)-Material	MRC	per splice	\$453.00
Adjacent Cable Vault Space (per 1200 pr)	MRC	per cable	\$4.00
Adjacent Cable Vault Space (per 900 pr)-Material	MRC	per splice	\$331.00
Adjacent Cable Vault Space (per 900 pr)	MRC	per cable	\$3.00
Adjacent Cable Vault Space (per 600 pr)-Material	MRC	per splice	\$221.00
Adjacent Cable Vault Space (per 600 pr)	MRC	per cable	\$3.00
Adjacent Cable Vault Space (per 100 pr)-Material	MRC	per splice	\$46.00
Adjacent Cable Vault Space (per 100 pr)	MRC	per cable	\$1.00
Adjacent Cable Vault Space (48 fiber)-Material	MRC	per splice	\$9.00
Adjacent Cable Vault Space (48 fiber)	MRC	per subduct	\$1.00
Adjacent Cable Vault Space (96 fiber)-Material	MRC	per splice	\$26.00
Adjacent Cable Vault Space (96 fiber)	MRC	per subduct	\$1.00
Adjacent Cable Rack Space-Metallic DSO	MRC	1 lin ft	\$0.01
Adjacent Cable Rack Space-Metallic DS1	MRC	1 lin ft	\$0.01
Adjacent Cable Rack Space-Fiber	MRC	per innerduct ft	\$0.02
Adjacent Cable Rack Space-Coaxial	MRC	per lin ft	\$0.01
Collocation Space Report	NRC	per CO requested	\$1,624.00
Misc Svcs-Labor-Basic Bus Day-First 1/2 Hr	NRC	per Technician	\$41.66
Misc Svcs-Labor-Basic Bus Day-Each Additional 1/2 Hr	NRC	per Technician	\$20.83
Misc Svcs-Labor-OT Non-Bus Day - First 1/2 Hr	NRC	per Technician	\$100.00
Misc Svcs-Labor-OT Non-Bus Day - Each Addtl 1/2 Hr	NRC	per Technician	\$75.00
Misc Svcs-Labor-Premium Non-Bus Day - First 1/2 Hr	NRC	per Technician	\$150.00
Misc Svcs-Labor-Premium Non-Bus Day - Each Addtl 1/2 H	NRC	per Technician	\$125.00

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(C)

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19. COLLOCATION SERVICE

(N)

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(N)

19. COLLOCATION SERVICE

(N)

19.1 General

- 19.1.1 GTE (hereafter referred to as the Company) shall provide collocation services in accordance with, and subject to, the terms and conditions of this Tariff and any additional applicable regulations in other Company tariffs.
- 19.1.2 Collocation provides access to central office cross connect points that may serve as a point of interconnection for the exchange of traffic with the Company and/or to access unbundled network elements in those Telephone Company wire centers or access tandems listed in the National Exchange Carrier Association, Inc., Tariff FCC 4.
- 19.1.3 Collocation shall be accomplished through caged or cageless collocation, except in those instances where caged or cageless collocation is not practical for technical reasons or due to space limitations. In such cases, the Company shall provide Adjacent Collocation or other methods of collocation, subject to space availability and technical feasibility.
- 19.1.4 The provision of collocation by the Company, as set forth in this Tariff, does not constitute a joint undertaking with the Competitive Local Exchange Carrier (CLEC) for the furnishing of the services. In addition, the regulations, terms and conditions of this Tariff do not apply to any CLEC offering of services to its subscribers.

19.2 Description of Types of Collocation

19.2.1 Single Caged

A single caged arrangement is a form of caged collocation, which allows a single CLEC to lease caged floor space to house his equipment within a Company wire center or access tandem.

19.2.2 Shared Caged

A shared caged arrangement is a newly constructed caged collocation arrangement that is jointly applied for and occupied by two or more CLECs within a Company wire center or access tandem pursuant to terms and conditions agreed to by those CLECs. When two or more CLECs request establishment and jointly apply for a new caged collocation arrangement to be used as a shared caged arrangement, one of the participating CLECs must agree to be the Host CLEC (Host) and the other(s) to be the Guest CLEC (Guest).

The Company will not issue separate billing for any of the rate elements associated with the shared caged collocation arrangement between the Host and the Guest(s), but the Company will provide the Host with information on the proportionate share of the nonrecurring charges for each CLEC in the shared arrangement. The Host will be responsible for ordering and payment of all collocation applicable services ordered by the Host and Guest(s).

The Host CLEC and Guest(s) are the Company's customers and have all the rights and obligations applicable hereunder to CLECs purchasing collocation-related services, including, without limitation, the obligation to pay all applicable charges, whether or not the Host is reimbursed for all or any portion of such charges by the Guest(s). The Host CLEC and the Guest CLEC(s) are solely responsible for determining whether to share a caged collocation arrangement and if so, upon what terms and conditions. All terms and conditions for caged collocation as described in this Tariff will apply to shared caged collocation requirements. Additional details on shared caged collocation are set forth in the Company's Collocation Service Packet, described in Section 19.3.1 following.

19.2.3 Subleased Caged

Vacant space available in a CLEC's (Host) existing caged collocation arrangement may be made available to a third party (Guest) for the purpose of interconnection and/or for access to unbundled network elements in the Company's wire center(s) or access tandem(s) via the subleasing collocation arrangement. Details of subleasing collocation arrangements are set forth in the Company's Collocation Support Packet. The Host CLEC subleases floor space to the Guest CLEC pursuant to terms and conditions agreed to by the Host and Guest involved. The Guest(s) must each be independently collocated within the subleased caged space.

(N)

19. COLLOCATION SERVICE

(N)

19.2 Description of Types of Collocation (Continued)

19.2.4 Cageless

Cageless collocation is a form of collocation in which CLECs can place their equipment in Company wire center(s) or access tandem(s) conditioned space. A cageless collocation arrangement allows a CLEC, using Company approved vendors, to install equipment in single bay increments in an area designated by the Company. This space will be in a separate lineup, if available. If a separate bay lineup is not available, the CLEC's bay will be segregated by at least one vacant bay from the Company's own equipment unless no other collocation space is available. The equipment location will be designated by the Company and will vary based on individual wire center or access tandem configurations. CLEC equipment will not share the same equipment bays with Company equipment.

19.2.5 Adjacent

An adjacent collocation arrangement permits a CLEC to construct or procure a structure on Company property for collocation for the purposes of provisioning expanded interconnection and/or access to unbundled network elements in accordance with the terms and conditions of this Tariff. Adjacent collocation is only an option when the following conditions are met:

- Space is legitimately exhausted in the Company's wire center or access tandem for caged and cageless collocation; and
- It is technically feasible to construct a hut or similar structure on Company property that adheres to local building code, zoning requirements, and Company building standards.

Additional details on adjacent collocation are set forth in the Company's Collocation Services Packet.

19.2.6 Other

A CLEC shall have the right to order collocation services offered pursuant to the Company's other tariffs, including, without limitation, the right to order virtual collocation services in accordance with, and subject to, the terms and conditions of the Company's existing federal collocation tariff (GTOC Tariff FCC No. 1).

19.3 Ordering Conditions

19.3.1 Application

(A) Point of Contact/Collocation Services Packet

The Company will establish points of contact for the CLEC to contact to place a request for collocation. The point of contact will provide the CLEC with the Collocation Services Packet, which shall contain general information and requirements, including a list of engineering and technical specifications, fire, safety, security policies and procedures, and an application form.

(B) Application Form/Fee

- CLECs requesting collocation at a wire center or access tandem will be required to complete the application form and submit the non-refundable engineering fee set forth in Section 19.14 following for each wire center or access tandem at which collocation is requested. The application form will require the CLEC to provide all engineering, floor space, power, environmental and other requirements necessary for the function of the service. The CLEC will also provide the Company with specifications for any non-standard or special requirements at the time of application. The Company reserves the right to assess the CLEC any additional charges not included in Section 19.14 on an Individual Case Basis (ICB) associated with complying with the application request or to refuse an application where extensive modifications are required.

(C) Notification of Acceptance/Rejection

The Company will notify the CLEC in writing within fifteen (15) days following receipt of the completed application if the CLEC's requirements cannot be accommodated as specified. Should the CLEC submit ten (10) or more applications within a ten (10) day period, the response interval will be increased by ten (10) days for every ten (10) additional applications or fraction thereof.

(N)

19. COLLOCATION SERVICE

(N)

19.3 Ordering Conditions (Continued)

19.3.1 Application (Continued)

(D) Changes

The first application form submitted by the CLEC shall be designated the original application. Original applications for collocation arrangements that have not been inspected and approved by the CLEC are subject to requests for minor or major changes to the services requested in the application. Changes will not be initiated until a completed application has been submitted along with the appropriate Engineering Fee, if applicable.

Major changes are requests that add telecommunications equipment that requires additional AC or DC power systems; heating, ventilation and air conditioning (HVAC) system modifications; or change the size of the cage. At the election of the CLEC, major changes may be handled in one of the following two methods to the extent technically feasible.

(1) Method 1: Additional Application

The CLEC may elect to have a major change to its original collocation application treated by the Company as an additional (new) application. An additional application is subject to the same provisioning process and conditions as an original application. On receipt of a complete additional application and Engineering Fee, the Company will notify the CLEC in writing within fifteen (15) days following receipt of the completed additional application if the CLEC's additional requirements cannot be accommodated as specified. Filing an additional application does not change the Company's obligation to process and fulfill the original application nor does it change the time intervals applicable to the processing and fulfillment of the original application. All of the provisions herein applicable to an original application similarly apply to an additional application.

(2) Method 2: Supplemental Application

The CLEC may elect to have a major change to its original collocation application treated by the Company as a supplemental application. A supplemental application may affect the Company's obligation to process and fulfill the original application. On receipt of a supplemental application and Engineering Fee, the Company will notify the CLEC in writing within fifteen (15) days following receipt of the completed supplemental application if the CLEC's requirements cannot be accommodated as specified. Upon notification that the Company can accommodate the requirements of the supplemental application, the CLEC may elect to proceed with the supplemental application. The Company's obligations under the original application will be merged with the obligations of the supplemental application and the combined project time line will be based on the date the supplemental application was received. All of the provisions herein applicable to an original application similarly apply to a supplemental application.

Minor changes are those requests that do not require additional AC or DC power systems, HVAC system upgrades, or changes in cage space. The CLEC will be required to submit a revised application, but the deliverable dates for the project will not change.

19.3.2 Space Availability

The Company will notify the CLEC within fifteen (15) days following receipt of the completed application form and non-refundable engineering fee, if space is available at the selected wire center or access tandem. If space is not available, the Company will notify the CLEC in writing. Space availability and reservation shall be determined in accordance with Section 19.5 following.

19.3.3 Price Quote

The Company shall provide the CLEC with a price quote for collocation services required to accommodate the CLEC's request within thirty (30) days of the application date, provided that no Individual Case Basis (ICB) rates are required in the quote. The quote will be honored for ninety (90) days from the date of issuance. However, the Company reserves the right to change the price quote at any time prior to acceptance by the CLEC. If the quote is not accepted by the CLEC within such ninety (90) day period, the CLEC will be required to submit a new application form and engineering fee and a new quote will be provided based on the new application form.

(N)

19. COLLOCATION SERVICE

(N)

19.3 Ordering Conditions (Continued)

19.3.4 Access Service Request (ASR)

Upon notification of available space, the CLEC will be required to send a completed Access Service Request (ASR) form to the Company's collocation point of contact. A copy of an ASR form is included in the Collocation Services Packet.

19.3.5 Augmentation

All requests for an addition or change to an existing collocation arrangement that has been inspected and turned over to the CLEC is considered an augmentation. An augmentation request will require the submission of a complete application form and a non-refundable Engineering or Minor Augment fee. A Minor Augment fee may not be required under the circumstances outlined below. The definition of a major or minor augment is as follows:

- (A) Major Augments are those requests that require AC or DC power, add equipment that generates more BTUs of heat, or an increase in the caged floor space, over what the CLEC requested in its original application. A complete application and Engineering Fee will be required when submitting a caged or cageless request that requires a major augment.
- (B) Minor Augments of caged and cageless collocation arrangements will require the submission of a complete application form and the Augment Fee. Minor augments are those requests that do not require more AC or DC power, add equipment that generates more BTUs of heat, or an increase in the caged floor space over what the CLEC requested in its original application. The requirements for a minor augment request cannot exceed the capacity of the existing electrical/power or HVAC system. Requests for Collocator to Collocator interconnects and DS0, DS1, and DS3 cross connects are included as minor augments.

Minor augments that require an augment fee are those requests that require the Company to perform a service or function on behalf of the CLEC including but not limited to: requests to pull cable for CLEC to CLEC interconnects, DS0, DS1, and DS3 facility terminations.

Minor augments that do not require a fee are those augments performed solely by the CLEC, that do not require the Company to provide a service or function on behalf of the CLEC, including but not limited to, requests to install additional equipment in the CLEC's cage. Prior to the installation of the additional equipment, the CLEC agrees to provide the Company with an application form with an updated equipment listing that includes the equipment to be installed in the CLEC's collocation arrangement. Once the updated equipment list is submitted to the Company, the CLEC may proceed with the augment. The CLEC agrees that changes in equipment provided by the CLEC under this provision will not exceed the engineering specifications for power and HVAC as requested on the original application. All augments will be subject to Company inspection, in accordance with the terms of this Tariff for the purpose of ensuring compliance with Company safety standards.

19.3.6 Expansion

The Company will not be required to construct additional space to provide for caged, cageless and/or adjacent collocation when available space has been exhausted. Where the CLEC seeks to expand its existing collocation space, the Company shall make contiguous space available to it to the extent possible; provided, however, the Company does not guarantee contiguous space to the CLEC to expand its existing collocation space. CLEC requests for expansion of existing space within a specific wire center or access tandem will require the submission of an application form and the appropriate major augment fee.

19.3.7 Relocation

CLEC requests for relocation of the termination equipment from one location to a different location within the same wire center or access tandem will be handled on an ICB basis. The CLEC will be responsible for all costs associated with the relocation of its equipment.

19.3.7 Relocation

CLEC requests for relocation of the termination equipment from one location to a different location within the same wire center or access tandem will be handled on an ICB basis. The CLEC will be responsible for all costs associated with the relocation of its equipment.

(N)

19. COLLOCATION SERVICE

(N)

19.4 Installation and Operation

19.4.1 Planning and Coordination

Upon receipt of the ASR and fifty percent (50%) of the applicable nonrecurring charges (NRCs), set forth in Section 19.14, associated with the ordered collocation services, the Company will:

- (A) Schedule a meeting with the CLEC to determine engineering and network requirements.
- (B) Initiate the necessary modifications to the wire center or access tandem to accommodate the CLEC's request.
- (C) Work cooperatively with the CLEC to ensure that services are installed in accordance with the service requested.

The CLEC is responsible for coordinating with the Company to ensure that services are installed in accordance with the ASR. The CLEC shall meet with the Company, if requested by the Company, to review design and work plans for installation of CLEC designated equipment within the Company's premises. The Company and the CLEC must meet and begin implementation of the ASR within six (6) months of receipt of the collocation application form and engineering fee(s) set forth in Section 19.14, or the identified space may be reclaimed and made available for use as provided in Section 19.5.6. The CLEC is responsible to have all of its cables and other equipment ready for installation on the date scheduled. If the CLEC fails to notify the Company of a delay in the installation date, it will be subject to the appropriate labor charge(s) set forth in Section 19.14.

19.4.2 Space Preparation

(A) Cage Construction

For caged collocation, the Company will construct the cage with a standard enclosure or the CLEC may subcontract this work to a Company approved contractor.

(B) Site Selection/Power

The Company shall designate the space within its wire center and/or access tandem where the CLEC shall collocate its equipment. The Company shall provide, at the rates set forth in Section 19.14, 48V DC power with generator and/or battery back-up, AC convenience outlet, heat, air conditioning and other environmental support to the CLEC equipment in the same standards and parameters required for Company equipment within that wire center or access tandem. Standard 48V DC power shall be provided in 40 amp increments. The Company will be responsible for the installation of the AC convenience outlets, overhead lighting and equipment superstructure per the established rates.

(C) Timing

- The Company shall use its best efforts to minimize the additional time required to condition collocation space, and will inform the CLEC of the time estimates as soon as possible. The Company shall complete delivery of the floor space to the CLEC within ninety (90) days of receipt of the ASR and fifty percent (50%) of the NRCs, assuming that the material shipment and construction intervals for the improvements required to accommodate the request (e.g., HVAC, system/power plant upgrade/ cables) are met. Space delivery within such time frame shall also be subject to the permitting process of the local municipality. Prior to the CLEC beginning the installation of equipment in a cage, bay or cabinet, the CLEC and the Company must conduct a walk through of the designated collocation space. Upon acceptance of the arrangement by the CLEC, billing will be initiated, access cards will be issued and the CLEC may begin installation of equipment.

19.4.3 Equipment and Facilities

(A) Purchase of Equipment

The CLEC will be responsible for supply, purchase, delivery, installation and maintenance of its equipment and equipment bay(s) in the collocation area. If it chooses, the Company will assist the CLEC in the purchase of equipment by establishing a contact point with GTE Supply. The Company is not responsible for the design, engineering, or performance of CLEC equipment and provided facilities for collocation.

(N)

19. COLLOCATION SERVICE

(N)

19.4 Installation and Operation (Continued)

19.4.3 Equipment and Facilities (Continued)

(B) Permissible Equipment

The CLEC is permitted to place in its collocation space only equipment that is used or useful for interconnection or access to unbundled network elements. The CLEC shall not place in its collocation space equipment that is designed exclusively for switching or enhanced services and that are not necessary for interconnection or access to unbundled network elements. The CLEC may place in its collocation space ancillary equipment such as cross connect frames and metal storage cabinets. However, metal storage cabinets must meet Company wire center environmental standards.

(C) Specifications

The CLEC facilities shall not physically, electronically, or inductively interfere with or impair the service of the Company's or any other CLEC facilities, create hazards or cause physical harm to any individual or the public. All CLEC equipment used for caged and cageless collocation must be tested to, and expected to meet, one of the following requirements as described in Addendum E of the Collocation Services Packet:

- Be tested to, and fully meet, Network Equipment Building Systems (NEBS) Level 3 requirements.
- Be tested to, and meet, at least the NEBS (Level 1) family of requirements as described in Bellcore Special Report SR-3580, plus specific additional risk/safety/hazard criteria specified in Addendum E of the Collocation Services Packet. Equipment that does not conform to the additional criteria must be installed in a compliant NEBS Level 3 cabinet.

Any CLEC equipment that does not conform to NEBS Level 1 will not be allowed to be installed.

The Company reserves the right to remove and/or refuse use of CLEC facilities and equipment from its list of approved products if such products, facilities and equipment are determined to be no longer compliant with NEBS standards or Electromagnetic Compatibility and Electrical Safety Generic Criteria for Network Telecommunication Equipment (GR-1089-CORE). The Company also reserves the right to remove and/or refuse use of CLEC facilities or equipment which does not meet or comply with:

- Fire and safety codes;
- the same specific risk/safety/hazard standards which the Company imposes on its own wire center and access tandem equipment;
- Company practices for AC/DC bonding and grounding requirements; and/or
- the industry standard requirements shown in the following publications:

TR-NWT-000499
TR-NWT-000063
TR-TSY-000191
TR-TSY-000487
TR-NPL-000320
Part 15.109 (47 C.F.R. FCC Rules and Regulations)
ANSI T1.102
UL 94

More detailed specifications information will be provided to the CLEC in the Collocation Services Packet.

(D) Cable

The CLEC is required to provide proper cabling, based on circuit type (VF, DS0, xDSL, DS1, DS3, etc.) to ensure adequate shielding. The Company cable standards (which are set forth in the Collocation Services Packet) are required to reduce the possibility of interference. The CLEC is responsible for providing fire retardant riser cable that meets Company standards. The Company is responsible for placing the CLEC's fire retardant riser cable from the cable vault to the collocation space. The Company is responsible for installing CLEC provided fiber optic cable in the cable space or conduit from the first manhole to the wire center or access tandem. This may be shared conduit with dedicated innerduct.

(N)

19. COLLOCATION SERVICE

(N)

19.4 Installation and Operation (Continued)

19.4.3 Equipment and Facilities (Continued)

(D) Cable (Continued)

If the CLEC provides its own fiber optic facility then it shall be responsible for bringing its fiber optic cable to the wire center or access tandem manhole and leave sufficient cable length for the Company to be able to fully extend such cable through to CLEC space. Due to physical and technical constraints, removal of cable will be at the Company's option. The Company will make every effort to contact the CLEC in the event CLEC equipment disrupts the network. If the Company is unable to make contact with the CLEC, the Company shall temporarily disconnect the CLEC's service, as provided in Section 19.4.7. The Company will notify the CLEC as soon as possible after any disconnects of CLEC equipment.

(E) Manhole/Splicing Restrictions

The Company reserves the right to prohibit all equipment and facilities, other than fiber optic cable, from its entrance manholes. The CLEC will not be permitted to splice fiber optic cable in Manhole #1 (first Company manhole outside of the wire center). Where the CLEC is providing underground fiber optic cable in Manhole #1, it must be of sufficient length as specified by the Company to be pulled through the wire center or access tandem conduit to the CLEC collocation arrangement. The Company is responsible for installing a cable splice, if necessary, where CLEC provided fiber optic cable meets Company standards within the wire center or access tandem cable vault or designated splicing chamber. The Company will provide space and racking for the placement of an approved secured fire retardant splice enclosure.

(F) Access Points and Restrictions

The interconnection point for caged and cageless collocation is the point where CLEC-owned cable facilities connect to Company termination equipment. The demarcation point for the CLEC is its terminal equipment or interconnect/cross connect panel within its cage, bay/frame or cabinet. The CLEC must tag all entrance facilities to indicate ownership. The CLEC will not be allowed access to Company DSX line-ups, MDF or any other Company facility termination points. The DSX and MDF are to be considered Company demarcation points only. Only Company employees, agents or contractors will be allowed access to the MDF or DSX to terminate facilities, test connectivity, run jumpers and/or hot patch in-service circuits.

(G) Staging Area

For caged and cageless collocation arrangements, the CLEC shall have the right to use the designated staging area, a portion of the wire center(s) or access tandem(s) and loading areas, if available, on a temporary basis during its equipment installation work in the collocation space. The CLEC is responsible for protecting the Company's equipment and wire center or access tandem walls and flooring within the staging area and along the staging route. The CLEC will meet all Company fire, safety, security and environmental requirements. The temporary staging area will be vacated and delivered to the Company in an acceptable condition upon completion of the installation work. The CLEC may also utilize a staging trailer, which can be located on the exterior premises of the Company's wire center or access tandem. The Company may assess the CLEC a market value lease rate for the area occupied by the trailer.

(H) Testing

Upon installation of the CLEC equipment, with prior notice, the Company will schedule time to work with the CLEC during the turn-up phase of the equipment to ensure proper functionality between CLEC equipment and the connections to Company equipment. The time period for this to occur will correspond to the Company's maintenance window installation requirements. The CLEC is solely responsible to provide its own monitor and test points, if required, for connection directly to his terminal equipment.

(N)

19. COLLOCATION SERVICE

(N)

19.4 Installation and Operation (Continued)

19.4.3 Equipment and Facilities (Continued)

(1) Collocator to Collocator Interconnect Arrangements

The Company shall provide, upon the CLEC's request, a Collocator to Collocator Interconnect arrangement between its equipment and the equipment of other collocated CLECs. When initiating a Collocator to Collocator Interconnect request, the CLEC must submit an Application Form, ASR, and a Minor Augment Fee. The Company will be responsible for engineering and installing the overhead superstructure for the Collocator to Collocator Interconnect arrangement, if required, and determining the appropriate cable route.

The CLEC has the option of providing all cables and connectors for the arrangement and the option of running the cables for the Collocator to Collocator Interconnect Arrangement. If the Company provides the cables and connectors and/or runs the cable, the applicable cable and labor rates in Section 19.14 will be applied.

19.4.4 Access to Collocation Space

The Company will permit CLEC employees, agents, and contractors approved by the Company to have direct access to CLEC caged or cageless collocated equipment twenty-four (24) hours a day, seven (7) days a week. CLEC employees, agents, or contractors must comply with the policies and practices of the Company pertaining to fire, safety, and security as described in the Company's Security Procedures and Requirements Guidelines, which are attached to the Collocation Services Packet. The Company reserves the right, with 24 hours prior notice to the CLEC, to access the CLEC's collocated partitioned space to perform periodic inspections to ensure compliance with Company installation, safety and security practices. Where the CLEC shares a common entrance to the wire center or access tandem with the Company, the reasonable use of shared building facilities, e.g., elevators, unrestricted corridors, etc., will be permitted. However, access to such facilities may be restricted by security requirements for good cause shown, and a Company employee may accompany CLEC personnel.

19.4.5 Network Outage, Damage and Reporting

The CLEC shall be responsible for:

- Any damage or network outage occurring as a result of CLEC owned or designated termination equipment in Company wire centers or access tandems;
- Providing trouble report status when requested;
- Providing a contact number that is readily accessible 24 hours a day, 7 days a week;
- Notifying the Company of significant outages which could impact or degrade the Company's switches and services and provide estimated clearing time for restoral; and
- Testing its equipment to identify and clear a trouble report when the trouble has been sectionalized (isolated) to a CLEC service.

19.4.6 Security Requirements

(A) Background Tests; Training

All employees, agents and contractors of the CLEC must meet certain minimum requirements as set forth in the Company's Collocation Service Packet. When the CLEC submits the collocation ASR for caged or cageless collocation, or as soon as reasonably practicable thereafter, the CLEC must submit to the Company's Security Department, for prior approval, the background investigation certification form included in the Collocation Service Packet for all employees, agents and contractors that will require access to Company wire centers and/or access tandems. The CLEC must agree that its employees/vendors with access to Company wire center(s) or access tandem(s) shall at all times adhere to the rules of conduct established by the Company for the wire center or access tandem and Company personnel and vendors.

(N)

19. COLLOCATION SERVICE

(N)

19.4 Installation and Operation (Continued)

19.4.6 Security Requirements (Continued)

(A) Background Tests; Training (Continued)

The Company reserves the right to make changes to such procedures and rules to preserve the integrity and operation of Company network or facilities or to comply with applicable laws and regulations. The Company will provide the CLEC with written notice of such changes. Where applicable, the Company will provide information to the CLEC on the specific type of security training required so its employees can complete such training.

(B) Security Standards

The Company will be solely responsible for determining the appropriate level of security in each wire center or access tandem. The Company reserves the right to deny access to Company buildings for any CLEC employee, agent or contractor who cannot meet the Company's established security standards. Employees, agents or contractors of the CLEC are required to meet the same security requirements and adhere to the same work rules that Company employees and contractors are required to follow. The Company also reserves the right:

- To deny access to Company buildings for CLEC employee, agent and contractor for falsification of records, violation of fire, safety or security practices and policies or other just cause; and
- To provide a Company employee, agent or contractor to accompany and observe the CLEC at no cost to the CLEC.

The Company may use reasonable security measures to protect its equipment, including enclosing its equipment in its own cage or other separation, utilizing monitored card reader systems, digital security cameras, badges with computerized tracking systems, identification swipe cards, keyed access and/or logs, as deemed appropriate by the Company.

(C) Access Cards/Identification

Access cards or keys will be provided to no more than six (6) CLEC appointed individuals for each Company wire center or access tandem. All CLEC employees, agents and contractors requesting access to the wire center or access tandem are required to have a photo identification card, which identifies the person by name and the name of the CLEC. The ID must be worn on the individual's exterior clothing while on Company premises. The Company will provide the CLEC with instructions and necessary access cards or keys to obtain access to Company buildings.

The CLEC is required to immediately notify the Company by the most expeditious means, when any CLEC employee, agent or contractor with access privileges to Company buildings is no longer in its employ, or when keys, access cards or other means of obtaining access to Company buildings are lost, stolen or not returned by an employee, agent or contractor no longer in its employ. The CLEC is responsible for the immediate retrieval and return to the Company all keys, access cards or other means of obtaining access to Company buildings if lost, stolen or upon termination of employment of an employee and/or termination of service. The CLEC shall be responsible for the replacement cost of keys, access cards or other means of obtaining access when lost, stolen or failure of it or its employee, agent or contractor to return them to the Company.

19.4.7 Emergency Access

The CLEC is responsible for providing a contact number that is readily accessible 24 hours a day, 7 days a week. The CLEC will provide access to its collocation space at all times to allow the Company to react to emergencies, to maintain the building operating systems (where applicable and necessary) and to ensure compliance with OSHA/Company regulations and standards related to fire, safety, health and environmental safeguards. The Company will attempt to notify the CLEC in advance of any such emergency access. If advance notification is not possible the Company will provide notification of any such entry to the CLEC as soon as possible following the entry, indicating the reasons for the entry and any actions taken which might impact CLEC facilities or equipment and its ability to provide service. The Company will restrict access to CLEC collocation space to persons necessary to handle such an emergency.

(N)

19. COLLOCATION SERVICE

(N)

19.4 Installation and Operation (Continued)

19.4.7 Emergency Access (Continued)

The emergency provisioning and restoration of interconnection service shall be in accordance with Part 64, Subpart D, Paragraph 64.401, of the FCC's Rules and Regulations, which specifies the priority for such activities. The Company reserves the right, without prior notice, to access CLEC collocation space in an emergency, such as fire or other unsafe conditions, or for purposes of averting any threat of harm imposed by the CLEC or CLEC equipment upon the operation of Company equipment, facilities and/or employees located outside the CLEC's collocation space. The Company will notify the CLEC as soon as possible when such an event has occurred.

In case of a Company work stoppage, CLEC employees, contractors or agents will comply with the emergency operation procedures established by the Company. Such emergency procedures should not directly affect CLEC access to its premises, or ability to provide service. The CLEC will notify the Company point of contact of any work stoppages by CLEC employees.

19.5 Space Requirements

19.5.1 Space Availability

The Company shall permit the CLEC to secure collocation space on a first-come, first-serve priority basis upon the Company's receipt of fifty percent (50%) of the applicable nonrecurring charges (NRCs) described in Section 19.4.1. If the Company is unable to accommodate caged and cageless collocation requests at a wire center or access tandem due to space limitations or other technical reasons, the Company will post a list of all such sites on its Website and will update the list within ten (10) business days of any known changes. This information will be listed at the following public Internet URL:

<http://www.gte.com/Regulatory>

Where the Company is unable to accommodate caged and cageless collocation requests at a wire center or access tandem due to space limitations or other technical reasons, the Company shall:

- (A) Submit to the state commission, subject to any protective order as the state commission may deem necessary, detailed floor plans or diagrams of the wire center or access tandem; and
- (B) Allow the CLEC to tour the entire premises of the wire center or access tandem, without charge, within ten (10) business days of the tour request.

19.5.2 Minimum/Maximum/Additional Space

The minimum amount of floor space available to each CLEC at the time of the initial application will be twenty-five (25) square feet of caged collocation space or one (1) single bay in the case of cageless collocation. The maximum amount of space available in a specific wire center or access tandem to each CLEC will be limited to the amount of existing suitable space which is technically feasible to support the collocation arrangement requested. Existing suitable space is defined as available space in a wire center or access tandem which does not require the addition of AC/DC power, heat and air conditioning, battery and/or generator back-up power and other requirements necessary for provisioning collocation services. Additional space to provide for caged, cageless and/or adjacent collocation will be provided on a per request basis, where feasible, and where space is being efficiently used. Additional space can be requested by a CLEC by completing and submitting a new application form and the applicable non-refundable engineering fee set forth in Section 19.14 as described in Section 19.6.1. The Company will not be required to lease additional space when available space has been exhausted.

19.5.3 Use of Space

The Company and CLEC will work cooperatively to determine proper space requirements, and efficient use of space. In addition to other applicable requirements set forth in this Tariff, the CLEC shall install all its equipment within its designated area in contiguous line-ups in order to optimize the utilization of space within Company premises. The CLEC shall use the collocation space solely for the purposes of installing, maintaining and operating its equipment to interconnect for the exchange of traffic with the Company and/or for purposes of accessing unbundled network elements and for no other purposes. The CLEC shall not construct improvements or make alterations or repairs to the collocation space without the prior written approval of the Company. The collocation space may not be used for administrative purposes and may not be used as CLEC employee(s) work location, office or retail space, or storage. The collocation space shall not be used as the CLEC's mailing or shipping address.

(N)

19. COLLOCATION SERVICE

(N)

19.5 Space Requirements (Continued)

19.5.4 Reservation of Space

The Company reserves the right to manage its own wire center and access tandem conduit requirements and to reserve vacant space for planned facilities. The Company will retain and reserve a limited amount of vacant floor space within its wire centers and access tandems for its own specific future uses on terms no more favorable than applicable to other CLECs seeking to reserve collocation space for their future use. If the remaining vacant floor space within a wire center or access tandem is reserved for the Company's own specific future use, the wire center or access tandem will be exempt from future caged and cageless collocation requests. The CLEC shall not be permitted to reserve wire center or access tandem cable space or conduit system. If new conduit is required, the Company will negotiate with the CLEC to determine an alternative arrangement for the specific location. The CLEC will be allowed to reserve collocation space for its caged/cageless arrangements based on its documented forecast provided to the Company and subject to space availability. Such forecast must demonstrate a legitimate need to reserve the space for use on terms no more favorable than applicable to the Company seeking to reserve vacant space for its own specific use. CLEC cageless collocation bays may not be used solely for the purpose of storing CLEC equipment.

19.5.5 Collocation Space Report

Upon request by the CLEC and upon its signing a collocation nondisclosure agreement, the Company will make available a Collocation Space Report with the following information for the wire center or access tandem requested:

- Amount of caged and cageless collocation space available;
- Number of telecommunications carriers with existing collocation arrangements;
- Modifications of the use of space since the last Collocation Space Report requested; and,
- Measures being taken, if any, to make additional Collocation spaces available.

The Collocation Space Report is not required prior to the submission of a collocation application for a specific wire center or access tandem in order to determine collocation space availability for the wire center or access tandem. The Collocation Space Report will be provided to a CLEC within ten (10) business days of the request, provided the request is submitted during the ordinary course of business. A Collocation Space Report fee, as specified in Section 19.14, will be assessed per request and per wire center or access tandem.

19.5.6 Reclamation

When initiating an application form, the CLEC must have the capability of installing equipment approved for collocation at the Company wire center or access tandem within a reasonable period of time, not to exceed six (6) months from the date the collocation arrangement agreement is accepted. If the CLEC does not utilize its collocation space within the established time period, and has not met the space reservation requirements of Section 19.5.4, the Company may reclaim the unused collocation space to accommodate another CLEC request or the Company's future space requirements.

The Company shall have the right, for good cause shown, and upon six (6) months' notice, to reclaim any collocation space, cable space or conduit space in order to fulfill its obligation under public service law and its tariffs to provide telecommunication services to its end users. In such cases, the Company will reimburse the CLEC for reasonable direct costs and expenses in connection with such reclamation. The Company will make every reasonable effort to find other alternatives before attempting to reclaim any such space.

19.6 Indemnification

19.6.1 The CLEC shall defend, indemnify and save harmless the Company, its directors, officers, employees, servants, agents, affiliates and parent from and against any and all suits, claims, demands, losses, claims, and causes of action and costs, including reasonable attorneys' fees, whether suffered, made, instituted or asserted by the CLEC or by any other party, which are caused by, arise out of or are in any way related to:

- (A) The installation, maintenance, repair, replacement, presence, engineering, use or removal of CLEC equipment or by the proximity of such equipment to the equipment of other parties occupying space in Company wire center(s) or access tandem(s), including, without limitation, damages to property and injury or death to persons, including payments made under Workers' Compensation Law or under any plan for employees' disability and death benefits;

(N)

19. COLLOCATION SERVICE

(N)

19.6 Indemnification (Continued)

19.6.1 (Continued)

(B) The CLEC's failure to comply with any of the terms of this Tariff; or

(C) Any act or omission of the CLEC, its employees, agents, affiliates, former or striking employees or contractors. The obligations of this Section shall survive the termination, cancellation, modification or rescission of the collocation agreement, without limit as to time.

19.6.2 Subject to any limitations of liability set forth in this Tariff, the Company shall be liable to the CLEC only for and to the extent of any damage directly and primarily caused by the negligence of Company agents or employees to CLEC designated facilities or equipment occupying a Company wire center or access tandem. The Company shall not be liable to the CLEC or its customers for any interruption of CLEC service or for interference with the operation of CLEC designated facilities arising in any manner out of the CLEC's presence in Company wire center(s) or access tandem(s), unless such interruption or interference is caused by the Company's willful misconduct. In no event shall the Company or any of its directors, officers, employees, servants, agents, affiliates and parent be liable for any loss of profit or revenue by CLEC or for any loss of AC or DC power, HVAC interruptions, consequential, incidental, special, punitive or exemplary damages incurred or suffered by the CLEC, even if the Company has been advised of the possibility of such loss or damage.

19.7 Insurance

19.7.1 The CLEC shall, at its sole cost and expense, obtain, maintain, pay for and keep in force insurance as specified following and underwritten by an insurance company(s) having a best insurance rating of at least AA-12.

19.7.2 The Company shall be named as an Additional Insured and a Loss Payee on all applicable policies as specified following:

- Comprehensive general liability coverage on an occurrence basis in an amount of \$2,000,000 combined single limit for bodily injury and property damage with a policy aggregate of \$4,000,000. This coverage shall include the contractual, independent contractors products/completed operations, broad form property and personal injury endorsements.
- Umbrella/Excess Liability coverage in an amount of \$10,000,000 excess of coverage specified above.
- All Risk Property coverage on a full replacement cost basis insuring all of the CLEC's real and personal property located on or within Company wire centers. The CLEC may also elect to purchase business interruption and contingent business interruption insurance, knowing that the Company has no liability for loss of profit or revenues should an interruption of service occur.
- Statutory Workers Compensation coverage.
- Contractual Liability coverage.
- Automobile Liability coverage.
- Employers Liability coverage in an amount of \$2,000,000.

19.7.3 All policies purchased by the CLEC shall be deemed to be primary and not contributing to or in excess of any similar coverage purchased by the Company.

19.7.4 All insurance must be in effect on or before the Company authorizes access by CLEC employees or placement of CLEC equipment or facilities within Company premises and such insurance shall remain in force as long as CLEC facilities remain within any space governed by this Tariff. If the CLEC fails to maintain the coverage, the Company may pay the premiums and seek reimbursement from the CLEC. Failure to make a timely reimbursement will result in disconnection of service.

19.7.5 The CLEC shall submit certificates of insurance and copies of policies reflecting the coverage specified above with the fifty percent (50%) payment of the NRCs described in Section 19.4.1. Commencement of work by the Company will not begin until these are received.

(N)

19. COLLOCATION SERVICE

(N)

19.7 Insurance (Continued)

- 19.7.6 The CLEC shall arrange for its insurance company to provide the Company with thirty- (30) days' advance written notice of cancellation, non-renewal or termination.
- 19.7.7 The CLEC must also conform to the recommendation(s) made by the Company's fire insurance company, with which the Company has already agreed, or shall hereafter agree.
- 19.7.8 Failure to comply with the provisions of this Section will be deemed a material breach of the terms of this Tariff.

19.8 Confidentiality

In addition to its other confidentiality obligations hereunder, the CLEC shall not use or disclose and shall hold in confidence all information of a competitive nature provided to it by the Company in connection with collocation, or known to a CLEC as a result of its access to Company wire center(s) or access tandem(s), or as a result of the interconnection of its equipment to Company facilities. Similarly, the Company shall not use or disclose and shall hold in confidence all information of a competitive nature provided to it by a CLEC in connection with Collocation, or known to the Company as a result of the interconnection of the CLEC's equipment to Company facilities. Such information is to be considered proprietary and shared within the Company and the CLEC on a need to know basis only. Neither the Company nor the CLEC shall be obligated to hold in confidence information that:

- Was already known to the CLEC free of any obligation to keep such information confidential;
- Was or becomes publicly available by other than unauthorized disclosure; or
- Was rightfully obtained from a third party not obligated to hold such information in confidence.

19.9 Casualty

If the collocation equipment location in the Company wire center(s) or access tandem(s) is rendered wholly unusable through no fault of the CLEC, or if the building shall be so damaged that Company shall decide to demolish it, rebuild it, or abandon it for wire center or access tandem purposes (whether or not the demised premises are damaged in whole or in part), then, in any of such events, the Company may elect to terminate the collocation arrangements in the damaged building by providing written notification to CLECs as soon as practicable but no later than one hundred eighty (180) days after such casualty, specifying a date for the termination of the collocation arrangements. The termination date shall not be more than sixty (60) days after the giving of such notice. Upon the date specified in such notice, the term of the collocation arrangement shall expire as fully and completely as if such date were the date set forth for the termination of the agreement. CLECs shall immediately quit, surrender and vacate the premises without prejudice. Unless the Company serves a termination notice as provided for herein, it shall make the repairs and restorations with all reasonable expedition, subject to delays due to adjustment of insurance claims, labor troubles and causes beyond the Company's reasonable control. After any such casualty, CLECs shall cooperate with the Company's restoration by removing from the collocation space, as promptly as reasonably possible, all of their salvageable inventory and movable equipment, furniture and other property. The Company will work cooperatively with the CLECs to minimize any disruption to service, resulting from any damage. The Company shall provide written notification to CLECs detailing its plans to rebuild and will restore service as soon as practicable. In the event of termination, the Company's rights and remedies against CLECs in effect prior to such termination, and any fees owing, shall be paid up to such date. Any advance payments of fees made by CLECs for periods after such date, shall be returned.

19.10 Termination of Service

19.10.1 Grounds for Termination

The Company's obligation to provide collocation is contingent upon the CLEC's compliance with the terms and conditions of this Tariff and other applicable requirements of the collocation agreement, including, without limitation, Company receipt of all applicable fees, rates, charges, application forms and required permits. Failure of the CLEC to make payments when due may result in termination of service. In addition to the other grounds for termination of collocation services set forth herein, the Company also reserves the right to terminate such services upon thirty (30) days notice in the event the CLEC is not in conformance with Company standards and requirements, and/or imposes continued disruption and threat of harm to Company employees and/or network, or the Company's ability to provide service to other CLECs.

(N)

19. COLLOCATION SERVICE

(N)

19.10 Termination of Service (Continued)

19.10.2 Effects of Termination

Upon the termination of collocation service, the CLEC shall disconnect and remove its equipment from the designated collocation space. The Company reserves the right to remove CLEC equipment if the CLEC fails to remove and dispose of the equipment within the thirty (30) days of discontinuance. The CLEC will be charged the appropriate labor charge(s) set forth in Section 19.14 for the removal of such equipment. Upon removal by the CLEC of all its equipment from the collocation space, it will reimburse the Company for the cost to restore the collocation space to its original condition at time of occupancy. The cost will be applied based on the labor rates set forth in Section 19.14. Upon termination of collocation services, the CLEC relinquishes all rights, title and ownership of cable to the Company.

19.11 Miscellaneous

The Company retains ownership of wire center or access tandem floor space, adjacent land and equipment used to provide all forms of collocation. The Company reserves for itself and its successors and assignees, the right to utilize the wire center(s) or access tandem(s) space in such a manner as will best enable it to fulfill its service requirements. The CLEC does not receive, as a result of entering into a collocation arrangement, any right, title or interest in Company wire center facility, the multiplexing node, multiplexing node enclosure, cable space, cable racking, vault space or conduit space other than as expressly provided herein. To the extent that a CLEC requires use of a Company local exchange line, it must order a business local exchange access line (B1). A CLEC may not use Company official lines.

19.12 Rate Regulations

19.12.1 Rates and Charges

Except as otherwise described herein, the rates for Company collocation services provided pursuant to this Tariff are set forth in Section 19.14 following. The tariffed rates herein may be superseded by rates contained in future regulatory orders or as otherwise required by legal requirements.

19.12.2 Billing and Payment

The initial payment of nonrecurring charges (NRCs) shall be due and payable in accordance with Section 19.4.1. The balance of the NRCs and all related monthly recurring service charges will be billed to the CLEC when the Company provides CLEC access to the caged, cageless or adjacent collocation arrangement and shall be payable in accordance with applicable established payment deadlines.

19.12.3 Allocation of Site Preparation Costs

The CLEC shall be responsible for payment of the site preparation charge with respect to each original application, and each additional/supplemental application or augment application which involves expansion of existing square footage or additional bays. The site preparation charge is a nonrecurring charge designed to recover the Company's costs associated with preparing wire center(s) or access tandem(s) to accommodate collocation. For caged collocation arrangements, the site preparation charge shall be equal to the Initial 100 Square Feet rate set forth in Section 19.14 per square foot of caged space up to 100 square feet plus the number of square feet over 100 square feet multiplied by the Over 100 Square Feet rate. For cageless collocation arrangements, the site preparation charge set forth in Section 19.14 is applied per bay.

19.13 Description and Application of Rate Elements

19.13.1 Nonrecurring Charges

The following are nonrecurring charges (one-time charges) that apply for specific work activity.

(A) Engineering/Major Augment Fee

The Engineering/Major Augment Fee applies for each initial caged and cageless collocation request and major augment requests. This charge recovers the costs of the initial walk through to determine if there is sufficient space for caged and cageless collocation, the best location for the collocation area, what building modifications are necessary to provide collocation, and if sufficient DC power facilities exist in the wire center or access tandem to accommodate collocation. This fee also includes the total time for the Building Services Engineer and the time for the Outside Plant and Central Office Engineers to attend status meetings.

(N)

19. COLLOCATION SERVICE

(N)

19.13 Description and Application of Rate Elements (Continued)

19.13.1 Nonrecurring Charges (Continued)

(B) Minor Augment Fee

The Minor Augment Fee applies for each minor augment request of an existing caged and cageless collocation arrangement that does not require additional AC or DC power systems, HVAC system upgrades, or additional cage space.

(C) Access Card Administration

The Access Card Administration rate covers activities associated with the issuance and management of wire center and access tandem access cards. The rate is applied on a per card basis.

(D) Cage Fencing

The Cage Fencing rate is applied per square foot of fencing required to enclose the caged area. This rate includes the labor and materials to recover all of the costs incurred in constructing the CLEC's cage. There are four caged fencing rate elements based on 25 square foot increments of floor space: 25 to 49 square feet; 50 to 74 square feet; 75 to 99 square feet and 100 and over.

(E) Cage Gate

The Cage Gate rate is applied to each gate requested by the CLEC for the cage enclosure.

(F) Cage Grounding Bar

The Cage Grounding Bar rate is applied for each grounding bar provisioned in the cage enclosure. This rate recovers the cost of the ground bar, cabling, mounting hardware and labor to install.

(G) BITS Timing

The nonrecurring charge for BITS Timing includes engineering, materials, and labor costs to wire a BITS port to the CLEC's equipment. If requested, it is applied on a per project basis.

(H) Site Preparation Charge

The Site Preparation Charge is applied to each original application and each additional/supplemental application or augment application which involves the expansion of existing square footage or additional bays. The site preparation charge is a nonrecurring charge designed to recover the Company's costs associated with preparing wire center(s) or access tandem(s) to accommodate collocation. For caged collocation arrangements, the site preparation charge shall be applied on a per square foot basis. For cageless collocation arrangements, the site preparation charge shall be applied on a per bay basis.

(I) Cable Support Charge

The Cable Support Charge is applied for each initial caged and cageless collocation application. The Cable Support Charge is designed to recover the Company's engineering, material, and installation costs for dedicated overhead superstructure, facility cable pulls and cable termination.

(J) Fiber Cable Pull-Engineering

The Fiber Cable Pull-Engineering charge is applied per project to cover the engineering costs for pulling the CLEC's fiber cable, when necessary, into the Company's central office.

(K) Fiber Cable Pull-Place Innerduct

The Fiber Cable Pull-Place Innerduct charge is applied per linear foot to cover the cost of placing innerduct. Innerduct is the split plastic duct placed from the cable vault to the CLEC's equipment area through which the CLEC's fiber cable is pulled.

(N)

19. COLLOCATION SERVICE

(N)

19.13 Description and Application of Rate Elements (Continued)

19.13.1 Nonrecurring Charges (Continued)

(L) Fiber Cable Pull-Labor

This charge is applied per linear foot and covers the labor costs of pulling the CLEC's fiber cable into the Company's central office.

(M) Fiber Cable Pull-Fire Retardant

This charge is associated with the filling of space around cables extending through walls and between floors with a non-flammable material to prevent fire from spreading from one room or floor to another.

(N) Fiber Splice-Engineering

The Fiber Splice-Engineering charge is applied per project and covers the engineering costs for fiber cable splicing projects.

(O) Fiber Splice

The Fiber Splice charge is applied per fiber cable spliced and recovers the labor cost associated with the splicing.

(P) DC Power

The DC Power Charge is applied per 40 amps requested for each caged and cageless collocation application. This NRC recovers the Company's engineering, material and installation costs for providing and terminating DC power runs to the collocation area.

(Q) Cable Material Charge

The CLEC has the option of providing its own cable or the Company may, at the CLEC's request, provide the necessary transmission, power and grounding cables. If the Company provides these cables, the Cable Material Charge will be applied.

(R) Adjacent Engineering Fee

The Adjacent Engineering Fee provides for the initial activities of the Central Office Equipment Engineer, Land & Building Engineer and the Outside Plant Engineer associated with determining the capabilities of providing Adjacent On-Site collocation. The labor charges are for an on-site visit, preliminary investigation of the manhole/ conduit systems, wire center and property, and contacting other agencies that could impact the provisioning of adjacent collocation.

(S) Adjacent Fiber Cable Pull-Engineering

The Adjacent Fiber Cable Pull-Engineering fee provides for engineering associated with pulling the CLEC's fiber cable in an adjacent collocation arrangement. The Adjacent Fiber Cable Pull-Engineering charge includes the time incurred by the Outside Plant Engineer on the project to determine the conduit/subduct assignment and associated outside plant activity to complete the work.

(T) Adjacent Fiber Cable Pull-Place Innerduct

This NRC covers the cost for placing innerduct, if required for adjacent collocation, which is the split plastic duct placed from the cable vault to the CLEC's equipment area through which the CLEC's fiber is pulled.

(U) Adjacent Fiber Cable Pull-Labor

This charge covers the labor costs for pulling CLEC fiber cable for an adjacent collocation arrangement. Refer to Adjacent Fiber Cable Pull-Engineering above.

(N)

19. COLLOCATION SERVICE

(N)

19.13 Description and Application of Rate Elements (Continued)

19.13.1 Nonrecurring Charges (Continued)

(V) Adjacent-Cable Fire Retardant

This charge is associated with the filling of space around cables extending through walls and between floors with a non-flammable material to prevent fire from spreading from one room or floor to another.

(W) Adjacent Metallic Cable Pull-Engineering

This NRC covers the engineering costs of pulling metallic cable for adjacent collocation into the Company wire center. For adjacent collocation, the metallic cable will be spliced in the cable vault to a stubbed connector located on the vertical side of the main distribution frame to provide proper protection for central office equipment.

(X) Adjacent Metallic Cable Pull-Labor

This charge covers the labor costs of pulling metallic cable for adjacent collocation into the Company wire center.

(Y) Adjacent Cable Splice-Engineering

This charge covers the outside plant engineering costs for cable splice projects associated with an adjacent collocation arrangement.

(Z) Adjacent DS1/DS0 Cable Splice-Greater Than 200 Pair

This charge is for the labor to splice metallic cables and is based on a per pair spliced.

(AA) Adjacent DS1/DS0 Cable Splice-Less Than 200 Pair

This charge is for the labor to splice metallic cables and is based on a per pair spliced.

(AB) Adjacent Fiber Cable Splice

This charge covers the labor to splice fiber cables and is based on a per fiber spliced.

(AC) Adjacent Facility Pull-Engineering

This charge covers the engineering cost associated with the interconnection wire (cable) from the main distribution frame connector to a termination block or DSX panel.

(AD) Adjacent Facility Pull-Labor

This charge covers the labor of running the interconnection wire (cable) from the main distribution frame connector to a termination block or DSX panel.

(AE) Adjacent DS0 Cable Termination (Connectorized)/ Adjacent DS0 Cable Termination (Unconnectorized)

These charges cover the labor to terminate these types of interconnection wire (cable) for adjacent collocation to the main distribution frame block or DSX panel.

(AF) Adjacent DS1 Cable Termination (Connectorized)/ Adjacent DS1 Cable Termination (Unconnectorized)

These charges cover the labor of terminating these types of interconnection wire (cable) for adjacent collocation to the main distribution frame block or DSX panel.

(AG) Adjacent DS3 Coaxial Cable Termination (Preconnectorized)/Adjacent DS3 Coaxial Cable Termination (Unconnectorized)

These charges cover the labor of terminating this type of interconnection wire (cable) for adjacent collocation to the main distribution frame block or DSX panel.

(AH) Adjacent Fiber Cable Termination

This charge covers the labor of terminating fiber cable for adjacent collocation to the main distribution frame block or DSX panel.

(*)

19. COLLOCATION SERVICE

(N)

19.13 Description and Application of Rate Elements (Continued)

19.13.1 Nonrecurring Charges (Continued)

(AI) Collocation Space Report

When requested by a CLEC, the Company will submit a report which indicates the Company's available collocation space in a particular premises. The report will be issued within ten business days of the request. The report will specify the amount of collocation space available at each requested premises, the number of collocators and any modifications in the use of the space since the last report. The report will also include measures that the Company is taking to make additional space available for collocation.

(AJ) Miscellaneous Services-Labor

Additional labor, if required by the CLEC to complete a collocation request will be rated as set forth in Section 19.14.

19.13.2 Monthly Charges

The following are monthly charges. Monthly charges apply each month or fraction thereof that Collocation Service is provided.

(A) Caged Floor Space

Caged Floor Space is the cost per square foot to provide environmentally conditioned caged floor space to the CLEC. Environmentally conditioned space is that which has proper humidification and temperature controls to house telecommunications equipment. The cost includes only that which relates directly to the land and building space itself.

(B) Relay Rack Floor Space

The Relay Rack Floor Space charge provides for the environmentally conditioned floor space that a relay rack occupies based on linear feet. The standardized relay rack floor space depth is based on half the aisle area in front and back of the rack, and the depth of the equipment that will be placed within the rack.

(C) Cabinet Floor Space

The Cabinet Floor Space charge provides for the environmentally conditioned floor space that a telecommunications equipment cabinet occupies based on linear feet. The standardized floor space depth is based on the size of the cabinet and half of the aisle in the front and rear of the cabinet. The cabinet size is based on the Company's standard cabinet size of 33 inches by 29 inches.

(D) Cable Subduct Space-Manhole

This charge applies per project per month and covers the cost of the space that the outside plant fiber occupies within the manhole.

(E) Cable Subduct Space

The Subduct Space charge covers the cost of the subduct space that the outside plant fiber occupies and applies on a per linear foot basis.

(F) Fiber Cable Vault Splice

The Fiber Cable Vault Splice charge applies per subduct or per splice and covers the space and material cost associated with the CLEC's fiber cable splice within the Company's cable vault.

(G) Cable Rack Space-Metallic

The Cable Space-Metallic charge is applied for each Caged or Cageless collocation arrangement. The charge is designed to recover the space utilization cost that the CLEC's metallic cable occupies within the Company's cable rack system.

(H) Cable Rack Space-Fiber

The Cable Rack Space-Fiber charge recovers the space utilization cost that the CLEC's fiber cable occupies within the Company's cable rack system.

(N)

19. COLLOCATION SERVICE

(N)

19.13 Description and Application of Rate Elements (Continued)

19.13.2 Monthly Charges (Continued)

(I) DC Power

The DC Power monthly charge is applied on a per 40 amp basis. This charge is designed to recover the monthly facility and utility expense to power the collocation equipment.

(J) Facility Termination (DS0)

This charge is applied per 100 pair cable terminated. This charge is designed to recover the labor and material cost of the main distribution frame 100 pair circuit block.

(K) Facility Termination (DS1)

The Facility Termination (DS1) charge is applied per 28 pair DS1 cable terminated. This charge is designed to recover the labor and material cost of the DSX facility termination panel.

(L) Facility Termination (DS3)

The Facility Termination (DS3) charge is applied per DS3 cable terminated. This charge recovers the labor and material cost of the DSX facility termination panel.

(M) BITS Timing

The BITS Timing monthly charge is designed to recover equipment and installation cost to provide synchronized timing for electronic communications equipment. This rate is based on a per port cost.

(N) Adjacent Cable Subduct Space-Manhole

This charge covers the space utilization cost that the outside plant fiber or metallic cable occupies within the manhole.

(O) Adjacent Cable Subduct Space

The Adjacent Cable Subduct Space charge covers the space utilization cost of the subduct that the outside plant fiber or metallic cable occupies within the conduit system.

(P) Adjacent Conduit Space (Metallic)-Manhole

This charge covers the space utilization cost that the outside plant metallic cable occupies within the manhole.

(Q) Adjacent Conduit Space (Metallic)

This charge covers the space utilization cost that the outside plant metallic cable occupies within the conduit system.

(R) Adjacent Facility Termination DS0 Cable

This charge is applied per 100 pair cable terminated. This charge is designed to recover the labor and material cost of the main distribution frame 100 pair circuit block.

(S) Adjacent Facility Termination DS1 Cable

The Facility Termination (DS1) charge is applied per 28 pair DS1 cable terminated. This charge is designed to recover the labor and material cost of the DSX facility termination panel.

(T) Adjacent Facility Termination DS3 Cable

The Facility Termination (DS3) charge is applied per DS3 cable terminated. This charge recovers the labor and material cost of the DSX facility termination panel.

(U) Adjacent Cable Vault Space

The Adjacent Cable Vault Space charge covers the cost of the space the CLEC's cable occupies within the cable vault. The charge is based on the diameter of the cable or subduct.

(V) Adjacent Cable Rack Space

This charge covers the space utilization cost that the CLEC's fiber, metallic or coaxial cable occupies within the cable rack system. The charge is based on the linear feet occupied.

(N)

19. COLLOCATION SERVICE

(N)

19.14 Rates and Charges

	<u>Nonrecurring Charge</u>	<u>Monthly Rate</u>
(A) Engineering/Major Augment Fee, Per Occurrence	\$ 1,129.00	\$ -
(B) Minor Augment Fee, Per Occurrence	200.00	-
(C) Access Card Administration, Per Card	21.00	-
(D) Cage Fencing, Per Square Foot Fencing		
100 Sq. Ft. and Over	9.00	-
75-99 Sq. Ft.	10.00	-
50-74 Sq. Ft.	11.00	-
25-49 Sq. Ft.	13.00	-
(E) Cage Gate, Per Gate	498.00	-
(F) Cage Grounding Bar, Per Bar	1,198.00	-
(G) BITS Timing		
Per Project	255.00	-
Per Month, Per Occurrence	-	11.75
(H) Cage Site Preparation Charge		
Initial 100 Square Feet, Per Square Foot	336.00	-
Over 100 Square Feet, Per Square Foot	42.00	-
(I) Cageless Site Preparation Charge, Per Bay	4,800.00	-
(J) Cable Support Charge, Per Project	8,981.00	-
(K) Fiber Cable Pull-Engineering		
Per Project	607.00	-
(L) Fiber Cable Pull-Place Innerduct		
Per Linear Foot	2.00	-
(M) Fiber Cable Pull-Labor		
Per Linear Foot	1.00	-
(N) Fiber Cable Pull-Cable Fire Retardant		
Per Occurrence	38.00	-
(O) Fiber Splice-Engineering		
Per Project	31.00	-
(P) Fiber Cable Splice		
Per Fiber	45.00	-
(Q) DC Power, Per 40 Amps		
Per Project	2,473.00	-
Per Month	-	550.00
(R) Cable Material Charge		
Per Project	9,350.00	-
(S) Caged Floor Space, Per Square Foot,		
Per Month	-	3.00
(T) Relay Rack Floor Space, Per Linear Foot,		
Per Month	-	13.00
(U) Cabinet Floor Space, Per Linear Foot,		
Per Month	-	18.00
(V) Cable Subduct Space-Manhole		
Per Project, Per Month	-	6.00

(N)

19. COLLOCATION SERVICE

(N)

19.14 Rates and Charges (Continued)

	<u>Nonrecurring Charge</u>	<u>Monthly Rate</u>
(W) Cable Subduct Space, Per Linear Foot, Per Month	\$ -	\$.03
(X) Fiber Cable Vault Splice-48 Fiber Material, Per Splice, Per Month	-	9.00
(Y) Fiber Cable Vault Splice-48 Fiber Per Subduct, Per Month	-	1.00
(Z) Fiber Cable Vault Splice-96 Fiber Material, Per Splice, Per Month	-	26.00
(AA) Fiber Cable Vault Splice-96 Fiber, Per Subduct, Per Month	-	1.00
(BB) Cable Rack Space-Metallic, Per Occurrence, Per Month	-	51.00
(CC) Cable Rack Space-Fiber, Per Innerduct Foot, Per Month	-	.02
(DD) Facility Termination DS0, Per 100 Pair, Per Month	-	4.00
DS1, Per 28 Pair, Per Month	-	15.00
DS3, Per DS3, Per Month	-	11.00
(EE) Adjacent Engineering Fee On-Site, Per Occurrence	958.00	-
(FF) Adjacent Fiber Cable Pull-Engineering Per Project	607.00	-
(GG) Adjacent Fiber Cable Pull-Place Innerduct Per Linear Foot	2.00	-
(HH) Adjacent Fiber Cable Pull Per Linear Foot	1.00	-
(II) Adjacent Cable Fire Retardant Per Occurrence	38.00	-
(JJ) Adjacent Metallic Cable Pull-Engineering Per Project	607.00	-
(KK) Adjacent Metallic Cable Pull Per Linear Foot	1.00	-
(LL) Adjacent Metallic Cable Splice Engineering, Per Project Greater than 200 Pair, Per DS0/DS1 Pair	31.00 1.00	- -
200 Pair or less, per DS0/DS1 Pair	2.00	-
(MM) Adjacent Fiber Cable Splice Engineering, Per Fiber Greater than 48 Fiber, Per Fiber	31.00 40.00	- -
48 Fiber or Less, Per Fiber	45.00	-
(NN) Adjacent Facility Pull-Engineering Per Project	72.00	-
(OO) Adjacent Facility Pull Per Linear Foot	1.00	-

(N)

19. COLLOCATION SERVICE

(N)

19.14 Rates and Charges (Continued)

	Nonrecurring Charge	Monthly Rate
(PP) Adjacent Cable Termination		
- DS0 Cable (Connectorized) Per 100 Pair	\$ 4.00	\$ -
- DS0 Cable (Unconnectorized) Per 100 Pair	38.00	-
- DS1 Cable (Connectorized) Per 28 Pair	1.00	-
- DS1 Cable (Unconnectorized) Per 28 Pair	29.00	-
- DS3 Coaxial Cable (Preconnectorized) Per DS3	1.00	-
- DS3 Coaxial Cable (Unconnectorized) Per DS3	10.00	-
- Fiber Cable, Per Fiber Termination	45.00	-
(QQ) Adjacent Subduct Space		
Manhole, Per Project	-	6.00
Per Linear Foot	-	.03
(RR) Adjacent Conduit Space (4" Duct) Manhole, Metallic,		
Per Conduit	-	10.00
Per Linear Foot	-	.03
(SS) Adjacent Facility Termination-Material		
DS0 Cable, Per 100 Pair	-	4.00
DS1 Cable, Per 28 Pair	-	15.00
DS3 Cable, Per Coaxial	-	11.00
(TT) Adjacent Cable Vault Space		
Per 1200 Pair, Material, Per Splice	-	453.00
Per 1200 Pair, Per Cable	-	4.00
Per 900 Pair, Material, Per Splice	-	331.00
Per 900 Pair, Per Cable	-	3.00
Per 600 Pair, Material, Per Splice	-	221.00
Per 600 Pair, Per Cable	-	3.00
Per 100 Pair, Material, Per Splice	-	46.00
Per 100 Pair, Per Cable	-	1.00
Per 48 Fiber, Material, Per Splice	-	9.00
Per 48 Fiber, Per Subduct	-	1.00
Per 96 Fiber, Material, Per Splice	-	26.00
Per 96 Fiber, Per Subduct	-	1.00
(UU) Adjacent Cable Rack Space		
- Metallic DS0, Per Linear Foot	-	.01
- Metallic DS1, Per Linear Foot	-	.01
- Fiber, Per Innerduct Foot	-	.02
- Coaxial, Per Linear Foot	-	.01
(VV) Collocation Space Report-Per Wire Center or Access Tandem Requested	1,624.00	-
(WW) Labor Rates, Per Technician		
Basic Business Day		
1st Half Hour	41.66	-
Each Additional Half Hour	20.83	-
Overtime Non-Business Day		
1st Half Hour	100.00	-
Each Additional Half Hour	75.00	-
Premium Non-Business Day		
1st Half Hour	150.00	-
Each Additional Half Hour	125.00	-

(N)

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
)	
GTE Telephone Operating Companies)	Transmittal No. 1234
Revisions to Tariff F.C.C. No. 1)	
)	
GTE Systems Telephone Companies)	Transmittal No. 304
Revisions to Tariff F.C.C. No. 1)	

ORDER

Adopted: December 20, 1999

Released: December 20, 1999

By the Chief, Competitive Pricing Division:

I. INTRODUCTION

1. In this Order, we suspend for one day and set for investigation the tariffs filed by GTE Telephone Operating Companies (GTOC) and GTE Systems Telephone Companies (GSTC) (collectively GTE) seeking to establish rates, terms, and conditions for Expanded Interconnection Service. GTE filed Transmittal No. 1234 on behalf of GTOC and Transmittal No. 304 on behalf of GSTC on December 6, 1999 with effective dates of December 21, 1999. On December 13, 1999, Sprint Corporation (Sprint) filed a petition to reject or in the alternative, suspend and investigate GTE's tariff filings.¹ On December 16, 1999, GTE filed a reply.²

II. DISCUSSION

2. Sprint argues that GTE's tariff filings fail to include adequate cost and investment information to support the site preparation charge associated with the service. Sprint further contends that the tariff filings do not include specific information regarding the costs that will be directly incurred by GTOC and GSTC in the provision of expanded interconnection service and do not include an adequate explanation of demand. GTE's reply includes additional cost support and investment data.

3. We find that Sprint's Petition raises substantial questions of lawfulness that

¹ Sprint Petition to Reject or in the Alternative, Suspend and Investigate, filed December 13, 1999 (Sprint Petition).

² GTE Reply to Sprint Petition, filed December 16, 1999 (GTE Reply).

warrant investigation. These issues include but are not limited to whether: (1) the site preparation charge associated with the filing is adequately supported by cost and investment data; (2) the filing includes sufficient data regarding the specific costs that will be incurred in the provision of the service; and (3) the demand data included in the filing is adequate.

4. We will, accordingly, suspend GTOC and GSTCs' tariff filings for one day and initiate an investigation into the lawfulness of the tariffs. The specific issues that will be the subject of the investigation will be identified in an upcoming designation order and may include, but may not be limited to, the issues identified in this Order. We may also, by order, identify discrete issues that do not warrant further investigation.

III. *EX PARTE* REQUIREMENTS

5. This investigation is a permit-but-disclose proceeding and subject to the requirements of section 1.1206(b) of the Commission's rules, 47 C.F.R. § 1.1206(b), as revised. Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must contain a summary of the substance of the presentation and not merely a listing of the subjects discussed. More than a one or two sentence description of the views and arguments presented is generally required. See 47 C.F.R. § 1.1206(b)(2), as revised. Other rules pertaining to oral and written presentations are set forth in section 1.1206(b) of the Commission's rules. 47 C.F.R. § 1.1206(b).

IV. ORDERING CLAUSES

6. ACCORDINGLY, IT IS ORDERED that, pursuant to section 204(a) of the Communications Act of 1934, 47 U.S.C. § 204(a), and through the authority delegated pursuant to sections 0.91 and 0.291 of the Commission's rules, 47 C.F.R. §§ 0.91 and 0.291, the tariff revisions filed by GTE Telephone Operating Companies under Transmittal No. 1234 and GTE Systems Telephone Companies under Transmittal No. 304 ARE SUSPENDED for one day and an investigation IS INSTITUTED.

7. IT IS FURTHER ORDERED that, pursuant to sections 204(a) and 4(i) of the Communications Act of 1934, 47 U.S.C. §§ 204(a) and 154(i), and through the authority delegated pursuant to sections 0.91 and 0.291 of the Commission's rules, 47 U.S.C. §§ 0.91 and 0.291, GTE Telephone Operating Companies and GTE Systems Telephone Companies SHALL KEEP ACCURATE ACCOUNT of all monies received that are associated with the rates that are subject to this investigation.

8. IT IS FURTHER ORDERED that GTE Telephone Operating Companies and GTE Systems Telephone Companies SHALL FILE supplements reflecting the one day suspensions. For this purpose, we waive sections 61.58 and 61.59 of the Commission's rules, 47 C.F.R. §§ 61.58 and 61.59. Carriers should cite the "DA" number on the instant Order as the authority for the filings.

9. IT IS FURTHER ORDERED that GTE Telephone Operating Companies and GTE Systems Telephone Companies SHALL FILE these supplements no later than five business

days from the release date of this Order.

10. IT IS FURTHER ORDERED that Sprint's petition to reject or in the alternative, suspend and investigate the Expanded Interconnection Services tariff filings of GTE Telephone Operating Companies and GTE Systems Telephone Companies IS GRANTED to the extent indicated herein and otherwise IS DENIED.

FEDERAL COMMUNICATIONS COMMISSION

Jane E. Jackson
Chief, Competitive Pricing Division
Common Carrier Bureau

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
GTE Telephone Operating Companies)	Transmittal No. 1234
Revisions to Tariff FCC No. 1)	
)	
GTE Systems Telephone Companies)	Transmittal No. 304
Revisions to Tariff FCC No. 1)	

PETITION TO REJECT OR IN THE ALTERNATIVE, SUSPEND AND INVESTIGATE

Sprint Corporation hereby respectfully submits its petition to reject, or in the alternative, suspend and investigate the above-captioned tariff filings of the GTE Telephone Operating Companies and the GTE Systems Telephone Companies (collectively, GTE) filed on December 6, 1999. As demonstrated below, GTE's proposed rates are excessive and inadequately cost-justified and should not be allowed to become effective.

In the instant transmittals, GTE is proposing to make changes to its Expanded Interconnection Services (EIS) offering, including introduction of rate elements for EIS request previously billed under individual case basis (ICB) arrangements. Among other things, GTE has proposed a non-recurring site preparation charge of \$33,560.00 per 100 square feet¹ to recover "site modification, security access, security arrangements, electrical requirements, major HVAC and power system modifications and miscellaneous charges" (Section 17.9.1(B)(15)).

¹ Higher charges apply for larger cages.

The information filed by GTE in support of its proposed site preparation charge typifies the inadequacy of the justification provided. GTE provided a single page of information regarding investment and cost data ("Investment and Cost Data summary") associated with the site preparation charge. 88 percent of the proposed \$33,560 charge is purportedly due to "Total Contractor Labor"; there is only a single line, summarizing the alleged expense (\$29,503.56), to "justify" this amount. GTE does not explain whether its alleged costs are based on upgrades needed in what it considers a typical office, whether they are an estimated average of the cost of upgrading all (either nationwide or statewide) of its offices, or whether the costs are based on price quotes actually received from contractors to make specific modifications in specific offices. GTE does not identify which of the costs purportedly incurred are directly associated with accommodating a collocation request (such as floor reinforcement), and which are general building modifications (such as replacing the HVAC system). Of course, nowhere in the instant tariff filing does GTE break down even the broadest categories of costs it alleges it will incur (*e.g.*, HVAC, power, electrical, ducting, demolition, painting, flooring, etc.) to accommodate a collocation request. Thus, it is impossible to assess the reasonableness of the alleged costs underlying GTE's proposed rates.

Based on previous discussions regarding ICB collocation charges Sprint has had with GTE, including negotiations conducted under the auspices of the FCC,² it appears that the bulk of the alleged site preparation costs are associated with HVAC and power upgrades. In the

² On October 5, 1999, Sprint requested that the FCC accept for consideration under the Accelerated Docket a complaint by Sprint regarding GTE's collocation policies and practices.

course of discussions relating to collocation in certain of GTE's California offices, it became clear that in at least one case, GTE was planning to replace the HVAC system for the *entire* office as the result of a request by a competitor to collocate a 10x10 foot cage. Even more astonishing was GTE's express intent to recover most, if not all, of that cost from its competitors, even though GTE occupied and used the vast majority of the space in the office and would clearly benefit from installation of a new HVAC system for the entire office. Even in offices where less drastic HVAC and power upgrades (general environmental conditioning) were purportedly necessary, GTE sought to recover from potential collocators all of the costs of the modifications, apparently refusing to assign to itself any of the costs of the upgrades.³

GTE's practice of allocating general overhead costs (such as replacement of the HVAC system) to its competitors but not to itself is clearly unreasonable and anti-competitive. Where GTE benefits from the upgrade, there is no rational basis for refusing to assign to itself some portion of those costs, based, for example, on the amount of space occupied by GTE relative to its collocated customers. If GTE is allowed to recover all overhead costs from its competitors and to assess prohibitively high rates on those competitors, CLECs will be substantially discouraged from even requesting collocation and from offering competitive local services in markets where GTE is the incumbent carrier.

GTE's documentation relating to collocation demand is as inadequate as its cost information. GTE simply states, with no additional detail, that annual demand associated with

³ In our most recent discussions with GTE, GTE stated that it has abandoned its "fill factor" approach under which it would allocate to itself one-fourth of non-recurring environmental conditioning costs.

the site preparation charge (100 square feet) is expected to be 13 (GTE Demand and Revenue Analysis, line 1, page 1 of 1). GTE does not explain whether this demand figure represents its expected number of collocation requests nationwide (the site preparation charge applies in all of GTE's jurisdictions), or the average number of collocation requests per office. If 13 represents nationwide demand, Sprint can assert, based upon our own collocation plans and the requests we have submitted to date, that a forecast of 13 requests is grossly understated. Because the site preparation charge is intended to recover one-time expenses allegedly incurred by GTE through the imposition of this charge on *each* collocation request received by GTE regardless of whether site preparation is necessary or not, any understatement of demand will result in a substantial windfall to GTE.⁴ On the other hand, if the 13 demand figure represents collocation requests per office (which seems equally improbable), GTE must be claiming total average cost of approximately \$436,280 per office, which seems an excessive amount to accommodate 10x10 foot cage requests.

Use of a reasonable demand figure is also important to ensure that collocation costs are properly allocated among parties requesting collocation. In its *Advanced Services* proceeding,⁵ the Commission stated that:

...incumbent LECs must allocate space preparation, security measures, and other collocation charges on a pro-rated basis so the first collocater in a particular incumbent premises will not be responsible for the entire cost of site preparation.... [T]he incumbent must develop a system of partitioning the cost by comparing, for example, the amount of conditioned space actually occupied by the new entrant with the overall space conditioning expenses.

⁴ Although GTE does not explain how it derived its proposed site preparation charge, Sprint presumes that GTE divided the alleged one-time costs by its forecasted demand figure of 13. If the denominator is too low, the resulting proposed rate will be too high.

⁵ *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, *First Report and Order and Further Notice of Proposed Rulemaking* released March 31, 1999, para. 51.

Because of the lack of demand information, it is impossible to determine whether GTE has developed its rates in compliance with this explicit Commission requirement.

GTE's attempt to disguise its blatantly unreasonable cost allocation practices by burying its costs in an unexplained, one-line cost estimate for "total contractor labor," as well as its failure to provide any meaningful demand data, must not be tolerated by the Commission. The lack of data included with these tariff filings is an insult to the agency responsible for GTE's regulation. GTE cannot be allowed to decide on its own that the Commission does not need relevant cost support data, or that the Commission may ignore its regulatory responsibility to ensure that rates are just and reasonable. Unless incumbent LECs such as GTE are required to provide collocation to their competitors at rates and terms which are just and reasonable, competition in the local market simply will not develop and the goals of the 1996 Telecommunications Act will not be met. GTE has utterly failed to provide adequate cost support for its proposed rates or any explanation whatsoever of the cost allocation methodology it employed. Therefore, the Commission should reject, or alternatively suspend and investigate, the instant tariff filings.

Respectfully submitted,

SPRINT CORPORATION

Leon M. Kestenbaum
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Washington, D.C. 20036
(202) 857-1030

December 13, 1999

Neiron May

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
GTE Telephone Operating Companies)	Transmittal No. 1234
Revisions to Tariff FCC No. 1)	
)	
GTE Systems Telephone Companies)	Transmittal No. 304
Revisions to Tariff FCC No. 1)	

GTE REPLY TO SPRINT PETITION

Dated: December 16, 1999

GTE Service Corporation, on behalf of its
affiliated local exchange companies,

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(202) 463-5214

Their Attorneys

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
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GTE Telephone Operating Companies)	Transmittal No. 1234
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GTE Systems Telephone Companies)	Transmittal No. 304
Revisions to Tariff FCC No. 1)	

GTE REPLY TO SPRINT PETITION

GTE Service Corporation, on behalf of its affiliated local exchange companies, ("GTE") respectfully replies to the Petition to Reject or in the Alternative, Suspend and Investigate ("Petition") filed by Sprint Corporation on December 13, 1999 against the above-referenced transmittals. Sprint challenges the rates proposed as excessive and unsupported. GTE believes that the material filed in support of the transmittals and additional material provided herein¹ show that the rates proposed are just and reasonable and are in accordance with the Commission's collocation policy. Thus, the transmittals should be permitted to go into effect as scheduled on December 21, 1999.

The transmittals propose a Site Preparation Charge for the cost of construction associated with requests for Physical Expanded Interconnection Services ("EIS") and establish rates for other elements that are currently billed on an Individual Case Basis

¹ While GTE believes the material filed in support of the transmittals adequately support the tariff in compliance with the FCC tariff rules, GTE is also providing additional workpapers and cost support to further substantiate the reasonableness of the tariff.

("ICB"). In the past, since GTE did not have significant collocation experience in any of its jurisdictions to develop general rates, collocation rates were filed on an ICB basis. These transmittals modify the tariff to comply with the FCC's 1999 Collocation Order² and significantly eliminate GTE's reliance on ICB EIS rates.

A. GTE's Site Preparation Charge is reasonable and properly justified.

Sprint challenges the investment and cost data associated with the Site Preparation Charge. GTE is proposing a charge of \$33,560. In developing this general rate, GTE used data from specific cost studies and from the 25 ICB estimates developed in 1999 for major HVAC and power upgrades. Attachment A to this Reply is a summary of the individual cost components provided on the summary sheets in GTE's filing. The individual cost components are discussed in the detail below.

The physical building modification cost includes all costs associated with modifying the central office ("CO") in order to accommodate collocation. There may be two external contractors involved in this process, an engineering firm and a general contracting firm. The engineering firm's involvement is twofold. First, the engineer is responsible for identifying, at a high level, the building modifications necessary to accommodate collocation. Second, the engineer works with an architect to create blueprints that detail the necessary construction to the collocation area. The general contracting firm uses these drawings in order to plan the actual construction and identify the necessary subcontractors. The general contractor is responsible for

² *Deployment of Wireline Services Offering Advanced Telecommunications Capability, First Report and Order and Further Notice of Proposed Rulemaking*, CC Docket No. 98-147, FCC 99-48, released Mar. 31, 1999.

completing the necessary construction for the building modification portion of the project, including hiring and coordinating all necessary subcontractors.³

In challenging the source of the cost data used in the GTE filing, Sprint argues that the cost may not be typical of an office with collocation. Each cost category represents the average cost incurred for a collocation project. This methodology is presented in Attachments B through F. Since each central office is different and building modification requirements vary, not all cost elements will be incurred on each collocation project. Due to the differences presented in the COs and collocation projects, several of the building modification cost elements reflect the probability/frequency of incurred costs (see Attachment A).

Sprint also questions if all the cost elements were directly related to a collocation request. Cost elements, other than those for HVAC and power upgrades, used in this study were calculated based on the actual construction cost of the most recent collocation projects completed in California and Texas as shown in Attachments B through E. These two state costs were then brought to an average cost based on the

³ Sprint also alleges that the Site Preparation Charge includes an unreasonably high percentage of contractor labor. GTE first identified the known material costs. Although the remaining costs of \$29,503.56 were classified as "contractor labor", this includes both the contractor's labor and materials. GTE uses outside contractors for the majority of this work. These contractors typically provide total cost estimates and do not provide a breakdown between labor and material in their estimates to GTE. Thus, costs associated with contractor labor and materials make up 88 percent of the proposed charge of \$33,560.

National Construction Estimator.⁴ Costs related to HVAC and power upgrades were based on collocation modifications and project quotes that were derived as a direct result of collocation requests (Attachment F).

The supporting cost detail found in Attachments B through F further support the categories used by GTE to fulfill a collocation request.

B. Description of each of the building modification cost elements.

1. Security Access – Refer to Attachment B

Card Reader & Controller/ Card Reader Modification – In some physical collocation arrangements, it is necessary to install a card reader/controller or a card reader, or to modify existing equipment, to provide the collocater with secured access to the facility. These costs are presented on an equipment type basis or modification.

2. Security Fencing/Storage Security – Refer to Attachment C

Storage Security - This cost may also be for the modification of existing equipment cabinets and file cabinets in order to provide for locking. This cost is based on estimates from contractors who perform this type of activity. The placement of locking hasps or bars is based on 20 per central office. A cost for providing a chain type lock (bicycle) is also used for those pieces of equipment that can be locked in a shelf area. Security Fencing – In some central offices it may be necessary to construct a fenced area to provide a secured area for GTE's switching equipment, other

⁴ The National Construction Estimator is a nationally accepted publication used for industrial and commercial construction. The National Construction Estimator provides national average costs for material and labor. State specific indices are provided by state to adjust the national material and labor estimates to state specific levels.

telecommunications equipment, and spare cards or test equipment. This cost is based on the cost of cage fencing per square footage of fencing material.

3. Site Modifications – Refer to Attachment D

Demolition and Site Work – The demolition and site work cost represents the cost to remodel, repair or rehabilitate the CO in order to provide collocation. Also included is the cost to clean up any associated debris caused by the demolition work.

Steel/Metals Work – The steel/metals work cost represents the labor and materials necessary to install new metal facilities in the CO. This cost includes but is not limited to stairways, catwalks and guardrails.

Painting/Finishes – The painting/finishes cost represents the labor and materials necessary to paint portions of the CO as it applies to collocation. It includes (but is not limited to) painting doors, walls and hardware.

Interior Door – The interior door cost represents the cost to install a new door inside the CO. The cost includes the labor and materials to cut the frame and place the door in the frame.

Flooring Work – The flooring cost includes the labor and materials to place new flooring material in the collocation area (e.g., in some offices it is necessary to pull-up carpeting and place a tile floor).

HVAC – Minor (Heating, Ventilation, and Air Conditioning) - The HVAC - Minor cost represents the cost for minor HVAC work and duct modifications at the immediate area of the collocater's location within the central office.

Hardware – Lockset for Door – This cost element represents the labor and materials cost to install a lockset in an existing or new door. The cost is per unit and is incurred for each lockset needed for the project.

Dust Partition (Plastic Curtain) – The dust partition cost represents the cost to place a temporary dust curtain around the construction area. The purpose of the curtain is to protect the existing equipment in the CO from dust and debris produced during construction projects.

4. Electrical – Refer to Attachment E

Electrical Lighting – This cost element is for the installation of one electrical light four-foot in length. The cost includes the material and labor to install the lighting equipment. The light may be controlled by a manual switch or a motion detector.

Electrical Outlet – This cost element is to place one electrical outlet for the collocator use in their specific collocation area. This cost includes the material and labor to place one outlet.

Floor Grounding Bar – The floor grounding bar is located in the collocation area and is used to provide ground potential to each collocator. The floor ground bar is grounded back to the main central office ground. This cost includes all material and labor to place a cable from the main ground source to the collocation area. PVC conduit is used to enclose this ground wire.

5. Major HVAC/Power Additions – Refer to Attachment F

The major HVAC/Power costs are those costs necessary to provide conditioned space within the central office where the collocator's equipment will be placed. The major power addition cost is the cost necessary to provision DC power plant equipment

that has the ability to sustain necessary power levels for all telecommunications equipment to operate within the central office. These costs are specifically related to the power plant equipment for the central office.

Although Sprint alleges that GTE's allocation of the replacement costs of a HVAC system is unreasonable, GTE has based these costs on activity GTE has experienced with current collocation modifications and project quotes. In developing this general rate, GTE used data from the 25 ICB estimates, ranging from approximately \$15,000 to \$2.6 million, developed in 1999. The Attachment F detail consists of a total of 25 ICB quotes for major environmental conditioning or a power plant upgrade. These quotes were provided to collocators between the period of January 1, 1999 and September 30, 1999. During this same time period, a total of 491 collocation quotes were provided to collocators. The ICB total amount (\$9,274,264.93) divided by the total number of collocation quotes yields the total ICB amount (\$18,888.52) per collocation quote. This total amount per collocation quote is part of the averaged "Site Preparation Cost."

- GTE's calculation is based HVAC and power quotes for ICBs that were triggered by collocation requests during 1999. In some cases, these requests may have required an enhancement or partial replacement of an entire HVAC system in a given office. In all cases, however, the cost would only have been incurred because of the collocation request. GTE had no plans to replace, enhance or upgrade the HVAC system or power for its own purposes. Therefore, it is reasonable and appropriate to allocate the cost of these HVAC system or power upgrades entirely to collocators.

Sprint alleges that GTE did not properly document the collocation demand or fill factors. GTE has included in Attachment G the workpapers used to determine GTE's national fill factor of three collocators per office. This was determined by dividing the total number of collocators currently in GTE's offices by the total number of collocated offices. This represents the average number of collocators in GTE's central offices.

The annual demand figure of 13 that Sprint refers to in its Petition is not used in any calculation for the determination of costs. The demand figure of 13 refers to the forecasted demand in the year 2000 for the Site Preparation charge for the federal EIS tariff offering only. GTE expects that additional Site Preparation charges will be assessed under state collocation tariffs. These forecasted units were depicted in the filing solely for the use of the calculation of federal Site Preparation charge revenues and are based on reasonable expectations of demand given historical experience with federal collocation offerings. Therefore, the figure of \$436,280 that Sprint refers to its filing is not GTE's average cost per office, but simply reflects expected revenue for the interstate EIS tariff.

For the foregoing reasons, GTE has properly justified its proposal. Sprint's Petition should be denied and the transmittals should be permitted to go into effect as scheduled on December 21, 1999.

Dated: December 16, 1999

Respectfully submitted,

GTE Service Corporation, on behalf of its
affiliated local exchange companies,

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Certificate of Service

I hereby certify that a copy of the foregoing document of GTE Service Corporation was hand delivered to the following parties:



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Attachment A

Summary

GTE Incorporated: Collocation Cost/Pricing Study - All States
Summary of Site Preparation

Cost Elements	Increment	Cost	Frequency	Units	Fill Factor	Subtotal	Price
Security Access							
New Technology Card Reader & Conn	per reader	\$12,788.79	82.1%	1.0	3.0	\$3,499.87	
Card Reader Modification	per reader	\$2,662.49	15.0%	1.0	3.0	\$133.12	
						<u>\$3,632.99</u>	
Security Fencing/Storage Security							
Storage Security	per collo off.	\$2,800.00	64.5%	1.0	3.0	\$602.00	
Security Fencing	1 SF fencing	\$11.01	35.5%	884.7	3.0	\$1,152.39	
						<u>\$1,754.39</u>	
Site Modifications (for Construction inside GTE CO only)							
Demolition and Site Work	per request	\$1,497.56	100.0%	1.0	3.0	\$499.19	
Scrub/Grass Work	per request	\$2,472.81	20.0%	1.0	3.0	\$164.85	
Painting/Finishes	per request	\$1,651.80	5.0%	1.0	3.0	\$27.53	
Interior Door	per request	\$4,130.63	80.0%	1.0	3.0	\$1,101.50	
Flooring Work	per request	\$2,266.49	5.0%	1.0	3.0	\$37.77	
HVAC - Minor (Heating, Ventilating & Cooling)	per req	\$2,526.03	90.0%	1.0	1.0	\$2,273.43	
Hardware - Lockset for Door	per unit	\$401.66	80.0%	1.0	3.0	\$107.11	
Dust Partition	per request	\$2,279.43	100.0%	1.0	1.0	\$2,279.43	
						<u>\$6,490.81</u>	
Electrical							
Lighting	per unit	\$992.56	100.00%	1.0	1.0	\$992.56	
Electrical Outlets	per outlet	\$900.03	100.00%	1.0	1.0	\$900.03	
Floor Grounding Bar	per bar	\$2,706.24	100.00%	1.0	3.0	\$902.08	
						<u>\$2,794.68</u>	
Major HVAC & Power Additions							
	per request	\$18,888.52	100.00%	1.0	1.0	\$18,888.52	
						<u>\$33,553.57</u>	
Total Site Preparation Rate		\$58,976.06					<u>\$33,560.00</u>

Attachment B
Security Access

GTE EIS Cost Study - California
 Non-Recurring Costs - Single Cage
 Building Modification - Security Access - Card Reader/Controller Cost

Description	New Technology Card Readers with Controller ¹		Modifications per Existing Readers ¹
	Reader	Controller	Cost
	Cost	Cost	
California Adjusted Cost to National Avg	\$7,756.82	\$1,883.80	\$2,356.19
Texas Adjusted Cost to National Avg	\$8,153.53	\$4,840.88	0
Average Cost	\$7,955.18	\$3,362.34	\$2,356.19
Adjustment for California (13%)	\$1,034.17	\$437.10	\$306.50
California Cost	\$8,989.35	\$3,799.44	\$2,662.69

Note:

- 1) New technology card readers use the "swipe card" and contains "Smart Card" features.
- 2) Modification costs for existing card readers could occur when a doorway (passageway) is blocked by a collocater and a new reader access must be created. These costs will be less because the controller has previous been installed during the initial site modification.

Attachment C
Security Fencing/Storage Security

GTE: EIS Cost Study - California
Non-Recurring Costs - Single Cage
Building Modification - Storage Security

Storage Cabinet Security									
Ln	Description	Source	Cost Per Cabinet	Cabinets Per CO	Hasp Lock	Bar-Type Lock	Core Lock	Cost	Destination
Equipment									
1	2-door cabinets for test equipment/spare cards	Note 2		10	\$8.00		\$50.00	\$580.00	
2	Filing cabinets for circuit layout records, etc.	Note 2		10		\$40.00	\$50.00	\$900.00	
3					Subtotal Storage Cabinet Security			\$1,480.00	

Labor

4	Installation per cabinet	Note 2	\$60.00	20				\$1,200.00	
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Rack Storage Security						
Description	Source	Cost	Cable Locks	Core		
		Per Cabinet	Per CO	Lock	Cost	
Equipment						
5 Rack Lock for Exposed Test Equipment	Note 2		2	\$10.00	\$50.00	\$120.00

LN 3 + Ln 4 + Ln 5

Total Storage Security per CO \$2,800.00 Summary - 1

Note:

- 1) Cost is to provide the ability to secure existing cabinets. Cost does not include the purchase of new or additional cabinets.
- 2) Costs for cabinet/rack equipment and installation are an average cost obtained from contractor proposals.

GTE: EIS Cost Study - California
Non-recurring Costs
Cage Fencing Cost

Summary of Cage Fencing Costs:	
Over 100 Square Feet Floor Space (per Square Foot)	\$11.01
75 - 99 Square Feet Floor Space (per Square Foot)	\$11.79
50 - 74 Square Feet Floor Space (per Square Foot)	\$13.10
25 - 49 Square Feet Floor Space (per Square Foot)	\$16.04
Cage Gate	\$624.53

Description	Cage Fencing Sq. Ft Surface (Note 1)	Cage Cost	Gate Cost
California Adjusted Cost to National Avg	306.88	\$2,687.65	\$709.22
Texas Adjusted Cost to National Avg	369.71	\$3,905.82	\$396.13
Average Cost	338.30	3,296.74	552.68
Adjustment for California (13%)	N/A	\$428.58	\$71.85
California Cost	338.30	\$3,725.32	\$624.53

Note:

1) The cage fencing by square foot average is a national average. The square footage cost used for surface fencing is the same for all states.

GTE: EIS Cost Study - California
Non-recurring Costs
Cage Fencing Cost

Ln	Description	Source	Cage Fencing Space Area			
			Over 100 Square Feet A	75 - 99 Square Feet B	50 - 74 Square Feet C	25 - 49 Square Feet D
1	Cage Fencing Floor Space Area (Square Feet)		100	75	50	25
2	Square Root of Cage Floor Space	SQRT Ln 1	10.00	8.66	7.07	5.00
3	Percent of Cage Floor Space	Ln 2 / Ln 2A	100.00%	86.60%	70.71%	50.00%
4	Average Cage Fencing Area (Square Feet)	Ln 3 * Ln 4A	338.30	292.98	239.21	169.15
5	Cage Cost per Square Foot	Note 1	\$5.98			
6	Average Cage Fencing Area Cost	Ln 4A * Ln 5A	\$2,023.03			
7	Average Cage Enclosure Cost	Cage Enclosure - 1	\$3,725.32			
8	Vendor Engineering & Overhead Cost	Ln 7 - Ln 6	\$1,702.29			
9	Vendor Engineering & Overhead Cost per Square Foot	Ln 8A / Ln 4	\$5.03	\$5.81	\$7.12	\$10.06
10	Total Cage Enclosure Cost per Square Foot of Fence Surface	Ln 5A + Ln 9	\$11.01	\$11.79	\$13.10	\$16.06

Note:

1) The cost per square foot for the cage was provided by the Contractor used by GTE to construct the cage.

Attachment D
Site Modifications

GTE EIS Cost Study - California
Non-recurring Costs
Building Modification - Site Modifications

Sites	Demo/site	Interior Door	Flooring	Exterior Door	Concrete Work	Steel/Metal Work	Painting / Finishes	Lockset for Door	Dust Partition
California Adjusted Cost to National Avg	1,551.96	\$3,624.27	\$1,988.65	\$7,429.35	\$1,286.21	\$1,413.33	\$557.04	\$352.42	\$1,596.15
Texas Adjusted Cost to National Avg	1,098.59	\$3,686.58	\$2,022.84	\$4,295.68	\$353.79	\$2,963.32	\$2,366.50	\$358.48	\$2,438.24
Average Cost	1,325.28	3,655.43	2,005.75	5,862.52	820.00	2,188.33	1,461.77	355.45	2,017.20
Adjustment for California (13%)	\$172.29	\$475.21	\$260.75	\$762.13	\$106.60	\$284.48	\$190.83	\$46.21	\$262.24
California Cost	\$1,497.57	\$4,130.64	\$2,266.50	\$6,624.65	\$926.60	\$2,472.81	\$1,651.60	\$401.66	\$2,279.44

Note:

All adjustments are made using The 1998 National Construction Estimator which is a nationally accepted publication used for industrial and commercial construction. The Construction Estimator provides national average costs for material and labor. State specific indices are provided by National Construction Estimator to adjust the national material and labor estimates to Note 1: The source for the Loaded Labor Rates is referenced in Loaded Labor Rates - 1. 101 - Equipment Installer, 011 - Equipment Engineer.. National average is then brought to a California amount by using the California factor.

GTE: EIS Cost Study - California
Non-recurring Costs
Building Modification - Minor HVAC

<u>Sites</u>	<u>HVAC¹</u>
California Adjusted Cost to National Avg	\$2,298.45
Texas Adjusted Cost to National Avg	\$2,172.40
Average Cost	\$2,235.43
Adjustment for California (13%)	\$290.61
California Cost	<u>\$2,526.03</u>

Note:

1) HVAC is considered to be minor duct work revisions. Major revisions considered on Individual Case Basis.

GTE: EIS Cost Study - California
Non-Recurring Costs Physical and Virtual EIS
Building Modification - Site Modifications

Texas Sites	Index ²	Interior Door	Flooring	Lockset for Door
Irving East				\$323.72
Walnut Hill				316.42
Irving Main			3,246.15	
Irving Southwest		3,332.77	366.06	
Plano West		3,250.40		
Average		\$3,291.59	\$1,806.11	\$320.07
Index to National Average:	-12%	\$3,686.58	\$2,022.84	\$358.48
California Index:	13%	\$4,165.83	\$2,285.81	\$405.08
Index to National Average		\$3,624.27	\$1,988.65	\$352.42

Note:

1) There is no existing California data for these cost elements. Actual Texas Collocation projects were used to develop costs for these elements.

2) The 1998 National Construction Estimator is a nationally accepted publication used for industrial and commercial construction. The Construction Estimator provides national average costs for material and labor. State specific indices are provided by state to adjust the national material and labor estimates to state specific level.

GTE: EIS Cost Study - California
Non-Recurring Costs Physical and Virtual EIS
Building Modification - Site Modifications

Texas Sites	Index ¹	Interior Door	Flooring	Lockset for Door
Irving East				\$323.72
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Irving Southwest		3,332.77	366.06	
Plano West		3,250.40		
Average		\$3,291.59	\$1,806.11	\$320.07
Index to National Average:	-12%	\$3,686.58	\$2,022.84	\$358.48
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Note:

1) There is no existing California data for these cost elements. Actual Texas Collocation projects were used to develop costs for these elements.

2) The 1998 National Construction Estimator is a nationally accepted publication used for industrial and commercial construction. The Construction Estimator provides national average costs for material and labor. State specific indices are provided by state to adjust the national material and labor estimates to state specific level.

GTE: EIS Cost Study - California
Non-Recurring Costs - EIS

	Vendor Markup and Supervision Costs	Cage Enclosure									Cage
		Cage	%	w/Shared	Cage	%	w/Shared	Electrical	%	w/Shared	Total
Baldwin Park	\$15,217.12	\$2,730.00	12%	4,607.34	\$545.58	2%	920.76	\$4,805.99	22%	8,110.93	\$8,081.57
Bell Gardens (Florence)	7,520.96	2,184.00	21%	3,795.96	545.58	5%	948.26	7,460.34	73%	12,966.66	10,189.92
Claremont	6,377.25	2,730.00	34%	4,912.75	389.70	5%	701.28	3,594.63	45%	6,468.69	6,714.33
Clark	8,843.93	2,184.00	11%	3,119.65	545.58	3%	779.31	6,472.07	31%	9,244.78	9,201.65
Covina	10,260.73	2,730.00	13%	4,039.63	389.70	2%	576.65	5,156.57	24%	7,630.26	8,276.27
La Habra	9,209.28	2,020.20	13%	3,180.38	545.58	3%	858.90	2,553.02	16%	4,019.19	5,118.80
Long Beach Main	6,125.65	2,020.20	25%	3,567.12	545.58	7%	963.35	3,582.23	45%	6,325.24	6,148.01
Long Beach Uptown	10,941.25	1,992.90	7%	2,766.48	545.58	2%	757.36	5,715.32	20%	7,933.82	8,253.80
Marshall	7,457.74	1,638.00	14%	2,665.48	545.58	5%	887.81	8,573.16	72%	13,950.93	10,756.74
Ontario	11,789.01	2,730.00	11%	4,063.21	389.70	2%	580.01	4,464.88	18%	6,645.32	7,584.58
Pico	6,328.76	2,184.00	30%	4,059.07	545.58	7%	1,013.99	2,903.01	39%	5,395.39	5,632.59
Pomona	5,700.73	2,730.00	33%	4,621.73	389.70	5%	659.74	4,329.78	53%	7,330.07	7,449.48
Rowland	11,292.05	1,474.20	6%	2,179.20	545.58	2%	806.49	1,706.02	7%	2,521.88	3,725.80
San Dimas	11,814.12	2,184.00	7%	3,015.78	545.58	2%	753.37	9,146.47	29%	12,629.93	11,876.05
Valley View	8,540.41	2,184.00	13%	3,315.02	545.58	3%	828.12	5,216.31	32%	7,917.66	7,945.89
Westminster	5,629.67	1,638.00	28%	3,197.47	545.58	9%	1,065.00	3,729.59	63%	7,280.37	5,913.17
Whittier South	9,228.46	1,856.40	8%	2,578.91	545.58	2%	757.92	5,485.94	23%	7,621.06	7,887.92

GTE: EIS Cost Study - California
Non-Recurring Costs - EIS

		Demo		Doors							
Vendor Markup and Supervision Costs		/ Site	%	w/Shared	/ Hardware	%	w/Shared	Concrete	%	w/Shared	
Baldwin Park	\$15,217.12	\$2,047.42	9%	3,455.37	\$3,842.11	17%	6,484.22	\$876.00	4%	1,478.40	
Bell Gardens (Florence)	7,520.96	0.00	0%	0.00	0.00	0%	0.00	0.00	0%		
Claremont	6,377.25	0.00	0%	0.00	0.00	0%	0.00	0.00	0%		
Clark	8,843.93	0.00	0%	0.00	0.00	0%	0.00	0.00	0%		
Covina	10,260.73	0.00	0%	0.00	0.00	0%	0.00	0.00	0%		
La Habra	9,209.28	0.00	0%	0.00	0.00	0%	0.00	0.00	0%		
Long Beach Main	6,125.65	0.00	0%	0.00	0.00	0%	0.00	0.00	0%		
Long Beach Uptown	10,941.25	0.00	0%	0.00	0.00	0%	0.00	0.00	0%		
Marshall	7,457.74	344.53	3%	560.65	0.00	0%	0.00	0.00	0%		
Ontario	11,789.01	0.00	0%	0.00	7,118.42	29%	10,594.73	0.00	0%		
Pico	6,328.76	0.00	0%	0.00	0.00	0%	0.00	0.00	0%		
Pomona	5,700.73	0.00	0%	0.00	0.00	0%	0.00	0.00	0%		
Rowland	11,292.05	0.00	0%	0.00	0.00	0%	0.00	0.00	0%		
San Dimas	11,814.12	967.20	3%	1,335.56	0.00	0%	0.00	0.00	0%		
Valley View	8,540.41	0.00	0%	0.00	0.00	0%	0.00	0.00	0%		
Westminister	5,429.67	0.00	0%	0.00	0.00	0%	0.00	0.00	0%		
Whittier South	9,228.66	0.00	0%	0.00	0.00	0%	0.00	0.00	0%		

GTE: EIS Cost Study - California
Non-Recurring Costs - EIS

		Steel						New Card					
Vendor	Markup and Supervision Costs	Framing	%	w/Shared	Painting	%	w/Shared	Units	Reader	%	w/Shared	Units	
Baldwin Park	\$15,217.12	0.00	0%	-	\$240.00	1%	405.04	1.00	\$5,059.90	23%	8,539.44	0.00	
Bell Gardens (Florence	7,520.96	0.00	0%	-	0.00	0%	-	0.00	0.00	0%	-	0.00	
Claremont	6,377.25	0.00	0%	-	0.00	0%	-	0.00	0.00	0%	-	0.00	
Clark	8,843.93	0.00	0%	-	0.00	0%	-	1.00	7,776.00	38%	11,107.33	1.00	
Covina	10,260.73	0.00	0%	-	0.00	0%	-	3.00	10,147.00	47%	15,014.68	0.00	
La Habra	9,209.28	0.00	0%	-	0.00	0%	-	1.00	7,140.00	45%	11,240.43	0.00	
Long Beach Main	6,125.65	0.00	0%	-	0.00	0%	-	0.00	0.00	0%	-	0.00	
Long Beach Uptown	10,941.25	0.00	0%	-	0.00	0%	-	2.00	14,268.00	51%	19,806.38	0.00	
Marshall	7,457.74	0.00	0%	-	0.00	0%	-	0.00	0.00	0%	-	0.00	
Ontario	11,789.01	0.00	0%	-	718.75	3%	1,069.75	1.00	4,758.84	20%	7,082.84	0.00	
Pico	6,328.76	0.00	0%	-	240.00	3%	446.05	0.00	0.00	0%	-	0.00	
Pomona	5,700.73	0.00	0%	-	0.00	0%	-	0.00	0.00	0%	-	0.00	
Rowland	11,292.05	0.00	0%	-	0.00	0%	-	1.00	8,046.30	34%	11,894.22	0.00	
San Dimas	11,814.12	1,176.46	4%	1,624.52	0.00	0%	-	2.00	14,016.00	45%	19,354.03	0.00	
Valley View	8,540.41	0.00	0%	-	0.00	0%	-	1.00	6,830.40	41%	10,367.63	0.00	
Westminster	5,629.67	0.00	0%	-	0.00	0%	-	0.00	0.00	0%	-	0.00	
Whittier South	9,228.66	0.00	0%	-	0.00	0%	-	1.00	9,261.34	39%	12,865.85	0.00	

Card Reader 7000 0.8045977
Controller 1700 0.1954023

GTE: EIS Cost Study - California
Non-Recurring Costs - EIS

		Mod Ext.									Panic	
Vendor Markup and Supervision Costs		Card Reader	%	w/Shared	Wire Mesh	%	w/Shared	Gate	%	w/Shared	Hardware	%
Baldwin Park	\$15,217.12	0.00	0%	-	\$873.60	4%	1,474.35	0.00	0%	-	0.00	0%
Bell Gardens (Florence)	7,520.96	0.00	0%	-	0.00	0%	-	0.00	0%	-	0.00	0%
Claremont	6,377.25	0.00	0%	-	0.00	0%	-	0.00	0%	-	0.00	0%
Clark	8,843.93	1,896.00	9%	2,708.27	819.00	4%	1,169.87	623.52	3%	890.64	327.35	2%
Covina	10,268.73	0.00	0%	-	1,201.20	6%	1,777.44	623.52	3%	922.63	327.35	2%
La Habra	9,209.28	0.00	0%	-	1,528.80	10%	2,406.77	623.52	4%	981.60	327.35	2%
Long Beach Main	6,125.65	0.00	0%	-	900.90	11%	1,590.74	623.52	8%	1,100.97	327.35	4%
Long Beach Uptown	10,941.25	0.00	0%	-	1,201.20	4%	1,667.47	623.52	2%	865.55	327.35	1%
Marshall	7,457.74	0.00	0%	-	0.00	0%	-	0.00	0%	-	0.00	0%
Ontario	11,789.01	0.00	0%	-	1,801.80	7%	2,681.72	623.52	3%	928.02	327.35	1%
Pico	6,328.76	0.00	0%	-	0.00	0%	-	0.00	0%	-	0.00	0%
Pomona	5,708.73	0.00	0%	-	0.00	0%	-	0.00	0%	-	0.00	0%
Rowland	11,292.05	0.00	0%	-	2,020.20	9%	2,986.30	1,247.04	5%	1,843.40	327.35	1%
San Dimas	11,814.12	0.00	0%	-	1,228.50	4%	1,696.38	623.52	2%	860.99	0.00	0%
Valley View	8,540.41	0.00	0%	-	764.40	5%	1,160.26	623.52	4%	946.42	327.35	2%
Westminister	5,629.67	0.00	0%	-	0.00	0%	-	0.00	0%	-	0.00	0%
Whittier South	9,228.66	0.00	0%	-	1,774.50	7%	2,465.13	1,247.04	5%	1,732.39	654.70	3%

eg. Baldwin Park
 Reader Controllor
 6,870.82 1,668.63

GTE: EIS Cost Study - California
Non-Recurring Costs - EIS

		Plastic						
Vendor Markup and Supervision Costs		w/Shared	Curtain	%	w/Shared	HVAC	%	w/Shared
Baldwin Park	\$15,217.12	-	0.00	0%	-	\$1,107.90	5%	1,869.77
Bell Gardens (Florence)	7,520.96	-	0.00	0%	-	0.00	0%	-
Claremont	6,377.25	-	0.00	0%	-	1,261.79	16%	2,270.65
Clark	8,843.93	467.59	0.00	0%	-	0.00	0%	-
Covina	10,268.73	484.39	0.00	0%	-	813.83	4%	1,204.24
La Habra	9,209.28	575.34	0.00	0%	-	1,297.48	8%	2,042.61
Long Beach Main	6,125.65	578.01	0.00	0%	-	0.00	0%	-
Long Beach Uptown	10,941.25	454.42	1,410.00	5%	1,957.32	2,103.03	7%	2,919.36
Marshall	7,457.74	-	0.00	0%	-	787.74	7%	1,281.87
Ontario	11,789.01	487.21	0.00	0%	-	1,207.02	5%	1,796.47
Pico	6,328.76	-	0.00	0%	-	1,498.86	20%	2,785.71
Pomona	5,700.73	-	0.00	0%	-	777.36	9%	1,316.03
Rowland	11,292.05	483.90	1,232.86	5%	1,822.44	7,013.01	30%	10,366.79
San Dimas	11,814.12	-	0.00	0%	-	1,132.44	4%	1,563.73
Valley View	8,540.41	496.87	0.00	0%	-	0.00	0%	-
Westminister	5,629.67	-	0.00	0%	-	0.00	0%	-
Whittier South	9,228.66	989.51	1,241.16	5%	1,724.22	1,645.26	7%	2,285.59

GTE: EIS Cost Study - California
Non-Recurring Costs - EIS

Vendor Markup and Supervision Costs	Total	Reconciliation of %	Vendor Markup and Supervision Costs		Total w/Shared	
Baldwin Park	\$15,217.12	\$22,128.50	100%	15,217.12	-	37,345.62
Bell Gardens (Florence)	7,520.96	10,189.92	100%	7,520.96	-	17,710.88
Claremont	6,377.25	7,976.12	100%	6,377.25	-	14,353.37
Clark	8,843.93	20,643.52	100%	8,843.93	-	29,487.45
Covina	10,260.73	21,389.17	100%	10,260.73	-	31,649.90
La Habra	9,209.28	16,035.95	100%	9,209.28	-	25,245.23
Long Beach Main	6,125.65	7,999.78	100%	6,125.65	-	14,125.43
Long Beach Uptown	10,941.25	28,186.90	100%	10,941.25	-	39,128.15
Marshall	7,457.74	11,889.01	100%	7,457.74	-	19,346.75
Ontario	11,789.01	24,140.28	100%	11,789.01	-	35,929.29
Pico	6,328.76	7,371.45	100%	6,328.76	-	13,700.21
Pomona	5,700.73	8,226.84	100%	5,700.73	-	13,927.57
Rowland	11,292.05	23,612.56	100%	11,292.05	-	34,904.61
San Dimas	11,814.12	31,020.17	100%	11,814.12	-	42,834.29
Valley View	8,540.41	16,491.56	100%	8,540.41	-	25,031.97
Westminster	5,629.67	5,913.17	100%	5,629.67	-	11,542.84
Whittier South	9,228.66	23,711.92	100%	9,228.66	-	32,940.58

1-24-1995 4.55PM

FROM NEW YORK

**GTE COST BREAKDOWN - MGC
BALDWIN PARK C O.**

DESCRIPTIONS	QUANTITY	UNIT	UNIT COST	TOTAL COST
GENERAL CONDITIONS	1	LOT	-	\$ 3,580.00
DEMO/SITE WORK	1	LOT	-	\$ 2,047.42
CONCRETE	1	LOT	-	\$ 878.00
DOORS & HARDWARE	1	EACH	-	\$ 3,842.11
PAINTING	1	LOT	-	\$ 240.00
CARD READER				
NEW CARD READER	1	EACH	-	\$ 5,059.90
CAGE				
CAGE - WIRE MESH MATERIAL	500	SQFT	\$ 5.46	\$ 2,730.00
VESTIBULE - WIRE MESH MATERIAL	180	SQFT	\$ 5.46	\$ 873.60
GATE - CAGE (SLIDING)	1	EACH	\$ 545.58	\$ 545.58
GATE - VESTIBULE (SWINGING)	0	EACH	\$ 623.32	\$ -
PANIC HARDWARE	0	EACH	\$ 327.35	\$ -
LABOR TO INSTALL	1	-	\$ 504.00	\$ 504.00
PLASTIC CURTAIN	0	EACH	-	\$ -
MISC. MATERIALS	LOT	-	-	\$ 61.62
HVAC	LOT	-	-	\$ 1,107.00
ELECTRICAL				\$ 4,805.98
120V A/C OUTLET	1 UNIT			-
OVERHEAD LIGHTING	1 UNIT			-
GROUND BAR/CABLES	1 UNIT			-
CABLE RACK INSTALLATION	LOT			BY GTE
MARK-UP				\$ 3,888.68

TOTAL COST

\$30,160.78

**GTE COST BREAKDOWN - MGC
BELL GARDENS C.O**

DESCRIPTIONS	QUANTITY	UNIT	UNIT COST	TOTAL COST
GENERAL CONDITIONS	LOT	-	-	\$ 1,249.23
DEMO/SITE WORK	0	-	-	N/A
CONCRETE	0	-	-	N/A
STEEL FRAMING	0	-	-	N/A
PAINTING	0	-	-	N/A
CARD READER				
NEW CARD READER	0	EACH	-	N/A
CAGE				
CAGE - WIRE MESH MATERIAL	400	SQFT	\$ 5.46	\$ 2,184.00
VESTIBULE - WIRE MESH MATERIAL	0	SQFT	\$ 5.46	\$ -
GATE - CAGE (SLIDER)	1	EACH	\$ 545.58	\$ 545.58
GATE - VESTIBULE (SWINGING)	0	EACH	\$ 623.52	\$ -
PANIC HARDWARE	0	EACH	\$ 327.36	\$ -
LABOR TO INSTALL	1	-	\$ 578.00	\$ 578.00
MISC MATERIALS	LOT	-	-	\$ 128.42
HVAC	N/A			N/A
ELECTRICAL				\$ 7,480.34
120V A/C OUTLET	1 UNIT			INCL
OVERHEAD LIGHTING	1 UNIT			INCL
GROUND BARS/CABLES	1 UNIT			INCL
CABLE RACK INSTALLATION	LOT		NONE REQUIRED	
MARK-UP				\$ 1,618.21

TOTAL COST

\$13,959.78

1-24-1995 4 53M

FROM RET. R. R. CO. 12/1/94 12/1/94

**GTE COST BREAKDOWN - MGC
CLAREMONT**

DESCRIPTIONS	QUANTITY	UNIT	UNIT COST	TOTAL COST
GENERAL CONDITIONS	1	LOT	-	\$ 597.00
DEMO/SITE WORK	0	LOT	-	\$ -
CONCRETE	0	LOT	-	\$ -
DOORS & HARDWARE	0	EACH	-	\$ -
PAINTING	0	LOT	-	\$ -
CARD READER				
NEW CARD READER	0	EACH	-	\$ -
CAGE				
CAGE - WIRE MESH MATERIAL	500	SQFT	\$ 5.46	\$ 2,730.00
VESTIBULE - WIRE MESH MATERIAL	0	SQFT	\$ 5.46	\$ -
GATE - CAGE (SWINGING)	1	EACH	\$ 389.70	\$ 389.70
GATE - VESTIBULE (SWINGING)	0	EACH	\$ 620.52	\$ -
PANIC HARDWARE	0	EACH	\$ 327.36	\$ -
LABOR TO INSTALL	1	-	\$ 576.00	\$ 576.00
PLASTIC CURTAIN	0	EACH	-	\$ -
MISC MATERIALS		LOT	-	\$ 152.70
HVAC	LOT			\$ 1,261.76
ELECTRICAL				\$ 3,594.63
120V AC OUTLET	1 UNIT			-
OVERHEAD LIGHTING	1 UNIT			-
GROUND BARS/CABLES	1 UNIT			-
CABLE RACK INSTALLATION	LOT			BY GTE
MARK-UP				\$ 1,239.79

TOTAL COST

\$ 10,841.61

**GTE COST BREAKDOWN - MGC
CLARK C.O.**

DESCRIPTIONS	QUANTITY	UNIT	UNIT COST	TOTAL COST
GENERAL CONDITIONS	LOT	-	-	\$ 1,517.50
DEMO/SITE WORK	0	-	-	N/A
CONCRETE	0	-	-	N/A
STEEL FRAMING	0	-	-	N/A
PAINTING	0	-	-	N/A
CARD READER				
NEW CARD READER	1	EACH	-	\$ 7,776.00
MODIFY EXISTING CARD READER	1	EACH	-	\$ 1,896.00
CAGE				
CAGE - WIRE MESH MATERIAL	400	SQFT	\$ 5.46	\$ 2,184.00
VESTIBULE - WIRE MESH MATERIAL	160	SQFT	\$ 5.46	\$ 873.60
GATE - CAGE (SLIDING)	1	EACH	\$ 545.58	\$ 545.58
GATE - VESTIBULE (SWINGING)	1	EACH	\$ 623.52	\$ 623.52
PANIC HARDWARE	1	EACH	\$ 327.35	\$ 327.35
LABOR TO INSTALL	1	-	\$ 432.00	\$ 432.00
MISC MATERIALS	LOT	-	-	\$ 336.55
HVAC	N/A			N/A
ELECTRICAL				\$ 6,472.07
120V AC OUTLET	1 UNIT			-
OVERHEAD LIGHTING	1 UNIT			-
GROUND BARS/CABLES	1 UNIT			-
CABLE RACK INSTALLATION	LOT		NONE REQUIRED	
MARK-UP				\$ 3,515.72

TOTAL COST

\$20,445.29

1-24-1995 4 54PM

FROM KEY AIR CONTRACTORS

**GTE COST BREAKDOWN - MGC
COVINA**

DESCRIPTIONS	QUANTITY	UNIT	UNIT COST	TOTAL COST
GENERAL CONDITIONS	1	LOT	-	\$ 2,358.50
DEMO/SITE WORK	0	LOT	-	\$ -
CONCRETE	0	LOT	-	\$ -
DOORS & HARDWARE	0	EACH	-	\$ -
PAINTING	0	LOT	-	\$ -
CARD READER				
NEW CARD READER	3	EACH	-	\$ 10,147.00
CAGE				
CAGE - WIRE MESH MATERIAL	500	SQFT	\$ 5.46	\$ 2,730.00
VESTIBULE - WIRE MESH MATERIAL	220	SQFT	\$ 5.46	\$ 1,201.20
GATE - CAGE (SWINGING)	1	EACH	\$ 389.70	\$ 389.70
GATE - VESTIBULE (SWINGING)	1	EACH	\$ 623.52	\$ 623.52
PANIC HARDWARE	1	EACH	\$ 327.35	\$ 327.35
LABOR TO INSTALL	1	-	\$ 720.00	\$ 720.00
PLASTIC CURTAIN	0	EACH	-	\$ -
MISC. MATERIALS		LOT	-	\$ 158.43
HVAC	LOT			\$ 813.83
ELECTRICAL				\$ 5,156.58
120V AC OUTLET	1 UNIT			-
OVERHEAD LIGHTING	1 UNIT			-
GROUND BARS/CABLES	1 UNIT			-
CABLE RACK INSTALLATION	LOT			BY GTE
MARK-UP				\$ 3,682.30

TOTAL COST

\$ 28,308.41

1-27-1995 5:06PM

FROM KEY AIR CONTRACTORS 30/2344/0004

GTE COST BREAKDOWN - MGC
LA HABRA C.O.

DESCRIPTIONS	QUANTITY	UNIT	COST	TOTAL COST
GENERAL CONDITIONS	LOT	-	-	\$ 1,708.00
DEMO/SITE WORK	0	-	-	N/A
CONCRETE	0	-	-	N/A
STEEL FRAMING	0	-	-	N/A
PAINTING	0	-	-	N/A
CARD READER				
NEW CARD READER	1	EACH	-	\$ 7,140.00
CAGE				
CAGE - WIRE MESH MATERIAL	370	SQFT	\$ 5.46	\$ 2,020.20
VESTIBULE - WIRE MESH MATERIAL	280	SQFT	\$ 5.46	\$ 1,528.80
GATE - CAGE (SLIDER)	1	EACH	\$ 545.58	\$ 545.58
GATE - VESTIBULE (SWINGING)	1	EACH	\$ 623.52	\$ 623.52
PANIC HARDWARE	1	EACH	\$ 327.35	\$ 327.35
LABOR TO INSTALL	1	-	\$ 576.00	\$ 576.00
MISC MATERIALS	LOT	-	-	\$ 30.55
HVAC	LOT	-	-	\$ 1,297.48
ELECTRICAL				\$ 2,563.02
120V A/C OUTLET	1 UNIT			.
OVERHEAD LIGHTING	1 UNIT			.
GROUND BAR/CABLES	1 UNIT			.
CABLE RACK INSTALLATION	LOT	-	-	\$ 4,328.00
MARK-UP				\$ 3,302.12

TOTAL COST

\$25,980.62

1-27-1995 5 84PM

FROM KEY AIR CONTRACTORS DESIGN

**GTE COST BREAKDOWN - MGC
LONG BEACH MAIN C.O.**

DESCRIPTIONS	QUANTITY	UNIT	COST	TOTAL COST
GENERAL CONDITIONS	LOT	-	-	\$ 925.15
DEMO/SITE WORK	0	-	-	N/A
CONCRETE	0	-	-	N/A
STEEL FRAMING	0	-	-	N/A
PAINTING	0	-	-	N/A
CARD READER				
NEW CARD READER	0	EACH	-	N/A
CAGE				
CAGE - WIRE MESH MATERIAL	370	SQFT	\$ 5.46	\$ 2,020.20
VESTIBULE - WIRE MESH MATERIAL	166	SQFT	\$ 5.46	\$ 900.90
GATE - CAGE (SLIDER)	1	EACH	\$ 545.58	\$ 545.58
GATE - VESTIBULE (SWINGING)	1	EACH	\$ 623.52	\$ 623.52
PANIC HARDWARE	1	EACH	\$ 327.35	\$ 327.35
LABOR TO INSTALL	1	-	\$ 360.00	\$ 360.00
MISC. MATERIALS	LOT	-	-	\$ 22.45
HVAC	N/A			N/A
ELECTRICAL				\$ 3,582.23
120V AC OUTLET	1 UNIT			INCL
OVERHEAD LIGHTING	1 UNIT			INCL
GROUND BARS/CABLES	1 UNIT			INCL
CABLE RACK INSTALLATION	LOT			\$ 1,482.00
MARK-UP				\$ 1,638.39

TOTAL COST

\$12,427.77

1-27-1995 5:06PM

PRIME KEY AIR CONTRACTORS SYSTEM

**GTE COST BREAKDOWN - MGC
LONG BEACH UPTOWN C.O.**

DESCRIPTIONS	QUANTITY	UNIT	COST	TOTAL COST
GENERAL CONDITIONS	LOT	-	-	\$ 1,435.30
DEMO/SITE WORK	0	-	-	N/A
CONCRETE	0	-	-	N/A
STEEL FRAMING	0	-	-	N/A
PAINTING	0	-	-	N/A
CARD READER				
NEW CARD READER	2	EACH	-	\$14,268.00
CAGE				
CAGE - WIRE MESH MATERIAL	385	SQFT	\$ 5.48	\$ 1,992.90
VESTIBULE - WIRE MESH MATERIAL	220	SQFT	\$ 5.48	\$ 1,201.20
GATE - CAGE (SLIDER)	1	EACH	\$ 545.58	\$ 545.58
GATE - VESTIBULE (SWINGING)	1	EACH	\$ 623.52	\$ 623.52
PANIC HARDWARE	1	EACH	\$ 327.35	\$ 327.35
LABOR TO INSTALL	1	-	\$ 432.00	\$ 432.00
PLASTIC CURTAIN	1	EACH	-	\$ 1,410.00
MISC. MATERIALS	LOT	-	-	\$ 37.97
HVAC	LOT	-	-	\$ 2,103.03
ELECTRICAL				\$ 5,715.32
120V AC OUTLET	1 UNIT	-	-	-
OVERHEAD LIGHTING	1 UNIT	-	-	-
GROUND BARS/CABLES	1 UNIT	-	-	-
CABLE RACK INSTALLATION	LOT	-	-	\$ 4,268.00
MARK-UP				\$ 5,078.68

TOTAL COST

\$38,438.86

**GTE COST BREAKDOWN - MGC
MARSHALL C.O.**

DESCRIPTIONS	QUANTITY	UNIT	UNIT COST	TOTAL COST
GENERAL CONDITIONS	LOT	-	-	\$ 1,767.88
DEMO/SITE WORK	0	-	-	\$ 344.53
CONCRETE	0	-	-	N/A
STEEL FRAMING	0	-	-	N/A
PAINTING	0	-	-	N/A
CARD READER				
NEW CARD READER	0	EACH	-	N/A
CAGE				
CAGE - WIRE MESH MATERIAL	300	SQFT	\$ 5.48	\$ 1,638.00
VESTIBULE - WIRE MESH MATERIAL	0	SQFT	\$ 5.48	\$ -
GATE - CAGE (SLIDER)	1	EACH	\$ 545.58	\$ 545.58
GATE - VESTIBULE (SWINGING)	0	EACH	\$ 623.52	\$ -
PANIC HARDWARE	0	EACH	\$ 327.35	\$ -
LABOR TO INSTALL	1	-	\$ 578.00	\$ 578.00
MISC MATERIALS	LOT	-	-	\$ 108.42
HVAC	LOT	-	-	\$ 787.74
ELECTRICAL				\$ 8,573.16
120V A/C OUTLET	1 UNIT			-
OVERHEAD LIGHTING	1 UNIT			-
GROUND BARS/CABLES	1 UNIT			-
CABLE RACK INSTALLATION	LOT			BY GTE
MARK-UP				\$ 2,004.25

TOTAL COST

\$16,285.66

1-24-1998 & 5071

FROM DEL. TO CONTRACTOR'S OFFICE

**GTE COST BREAKDOWN - MGC
ONTARIO**

DESCRIPTIONS	QUANTITY	UNIT	UNIT COST	TOTAL COST
GENERAL CONDITIONS	1	LOT	-	\$ 2,008.52
DEMO/SITE WORK	0	LOT	-	\$ -
CONCRETE	0	LOT	-	\$ -
DOORS & HARDWARE	1	EACH	-	\$ 7,118.42
PAINTING	0	LOT	-	\$ 718.75
CARD READER				
NEW CARD READER	1	EACH	-	\$ 4,756.84
CAGE				
CAGE - WIRE MESH MATERIAL	500	SQFT	\$ 5.46	\$ 2,730.00
VESTIBULE - WIRE MESH MATERIAL	330	SQFT	\$ 5.46	\$ 1,801.80
GATE - CAGE (SWINGING)	1	EACH	\$ 389.70	\$ 389.70
GATE - VESTIBULE (SWINGING)	1	EACH	\$ 623.52	\$ 623.52
PANIC HARDWARE	1	EACH	\$ 327.35	\$ 327.35
LABOR TO INSTALL	1	-	\$ 504.00	\$ 504.00
PLASTIC CURTAIN	0	EACH	-	\$ -
MISC. MATERIALS	LOT	-	-	\$ 83.88
HVAC	LOT	-	-	\$ 1,207.02
ELECTRICAL				\$ 4,484.88
120V AC OUTLET	1 UNIT	-	-	-
OVERHEAD LIGHTING	1 UNIT	-	-	-
GROUND BARS/CABLES	1 UNIT	-	-	-
CABLE RACK INSTALLATION	LOT	-	-	INCL
MARK-UP				\$ 3,911.83

TOTAL COST

\$30,628.51

**GTE COST BREAKDOWN - MGC
PICO C.O.**

DESCRIPTIONS	QUANTITY	UNIT	UNIT COST	TOTAL COST
GENERAL CONDITIONS	LOT	-	-	\$ 1,113.00
DEMO/SITE WORK	0	-	-	N/A
CONCRETE	0	-	-	N/A
STEEL FRAMING	0	-	-	N/A
PAINTING	0	-	-	\$ 240.00
CARD READER				
NEW CARD READER	0	EACH	-	N/A
CAGE				
CAGE - WIRE MESH MATERIAL	400	SQFT	\$ 5.46	\$ 2,184.00
VESTIBULE - WIRE MESH MATERIAL	0	SQFT	\$ 5.46	\$ -
GATE - CAGE (SLIDER)	1	EACH	\$ 545.58	\$ 545.58
GATE - VESTIBULE (SWINGING)	0	EACH	\$ 623.32	\$ -
PANIC HARDWARE	0	EACH	\$ 327.35	\$ -
LABOR TO INSTALL	1	-	\$ 432.00	\$ 432.00
MISC. MATERIALS	LOT	-	-	\$ 66.42
HVAC	LOT	-	-	\$ 1,498.68
ELECTRICAL				\$ 2,903.01
120V AC OUTLET	1 UNIT			-
OVERHEAD LIGHTING	1 UNIT			-
GROUND BARS/CABLES	1 UNIT			-
CABLE RACK INSTALLATION	LOT	-	-	\$ 1,128.00
MARK-UP				\$ 1,320.39

TOTAL COST

\$11,429.26

1-24-1996 4:54PM

**GTE COST BREAKDOWN - MGC
POMONA**

DESCRIPTIONS	QUANTITY	UNIT	UNIT COST	TOTAL COST
GENERAL CONDITIONS	1	LOT	-	\$ 500.00
DEMO/SITE WORK	0	LOT	-	\$ -
CONCRETE	0	LOT	-	\$ -
DOORS & HARDWARE	0	EACH	-	\$ -
PAINTING	0	LOT	-	\$ -
CARD READER				
NEW CARD READER	0	EACH	-	\$ -
CAGE				
CAGE - WIRE MESH MATERIAL	500	SQFT	\$ 5.46	\$ 2,730.00
VESTIBULE - WIRE MESH MATERIAL	0	SQFT	\$ 5.46	\$ -
GATE - CAGE (SWINGING)	1	EACH	\$ 389.70	\$ 389.70
GATE - VESTIBULE (SWINGING)	0	EACH	\$ 623.52	\$ -
PANIC HARDWARE	0	EACH	\$ 327.35	\$ -
LABOR TO INSTALL	1	-	\$ 578.00	\$ 578.00
PLASTIC CURTAIN	0	EACH	-	\$ -
MISC MATERIALS	LOT	-	-	\$ 131.30
HVAC	LOT	-	-	\$ 777.36
ELECTRICAL				\$ 4,329.78
120V AC OUTLET	1 UNIT	-	-	-
OVERHEAD LIGHTING	1 UNIT	-	-	-
GROUND BARS/CABLES	1 UNIT	-	-	-
CABLE RACK INSTALLATION	LOT	-	-	INCL
MARK-UP				\$ 1,353.82

TOTAL COST

\$10,854.08

1-24-1995 4.55PM

FROM KEY AIR CONTRACTORS 50434-2000

**GTE COST BREAKDOWN - MGC
ROWLAND**

DESCRIPTIONS	QUANTITY	UNIT	COST	TOTAL COST
GENERAL CONDITIONS	LOT	-	-	\$ 1,966.00
DEMO/SITE WORK	0	-	-	N/A
CONCRETE	0	-	-	N/A
STEEL FRAMING	0	-	-	N/A
PAINTING	0	-	-	N/A
CARD READER				
NEW CARD READER	1	EACH	-	\$ 8,048.30
CAGE				
CAGE - WIRE MESH MATERIAL	270	SQFT	\$ 5.46	\$ 1,474.20
VESTIBULE - WIRE MESH MATERIAL	370	SQFT	\$ 5.46	\$ 2,020.20
GATE - CAGE (SLIDER)	1	EACH	\$ 545.98	\$ 545.98
GATE - VESTIBULE (SWINGING)	2	EACH	\$ 623.52	\$ 1,247.04
PANIC HARDWARE	1	EACH	\$ 327.35	\$ 327.35
LABOR TO INSTALL	1	-	\$ 648.00	\$ 648.00
PLASTIC CURTAIN	1	EACH	-	\$ 1,232.88
MISC. MATERIALS	LOT	-	-	\$ 118.03
HVAC	LOT	-	-	\$ 7,013.01
ELECTRICAL				\$ 1,706.02
120V A/C OUTLET	1 UNIT			-
OVERHEAD LIGHTING	1 UNIT			-
GROUND BARS/CABLES	1 UNIT			-
CABLE RACK INSTALLATION	LOT			BY GTE
MARK-UP				\$ 3,259.01

TOTAL COST

\$29,594.60

**GTE COST BREAKDOWN - MGC
SAN DIMAS C O.**

DESCRIPTIONS	QUANTITY		UNIT COST	TOTAL COST
GENERAL CONDITIONS	LOT	LOT		\$ 2,299.00
DEMO/SITE WORK	LOT	LOT		\$ 987.20
CONCRETE	N/A	0		N/A
STEEL FRAMING	HOLE	1		\$ 1,176.48
PAINTING	N/A	0		N/A
CARD READER	EACH	2		\$14,018.00
CAGE				
CAGE - WIRE MESH MATERIAL	SQFT	400	\$ 5.48	\$ 2,182.32
VESTIBULE - WIRE MESH MATERIAL	SQFT	225	\$ 5.48	\$ 1,228.50
GATES - CAGE (SLIDER)	EACH	1	\$ 545.58	\$ 545.58
GATES - VESTIBULE - (SWINGING)	EACH	1	\$ 823.52	\$ 823.52
PANIC HARDWARE	1 UNIT		INCL W/ CARDREADER	
LABOR		LOT	\$ 576.00	\$ 576.00
MISC MATERIALS				\$ 111.18
PLASTIC CURTAIN	N/A			N/A
HVAC	LOT			\$ 1,132.44
ELECTRICAL				\$ 9,148.47
120V A/C OUTLET	1 UNIT			-
OVERHEAD LIGHTING	1 UNIT			-
GROUND BAR/CABLES	1 UNIT			-
CABLE RACK INSTALLATION	N/A			BY GTE
MARK-UP				\$ 3,083.17

TOTAL COST

\$39,097.82

**GTE COST BREAKDOWN - MGC
WESTMINSTER C.O.**

DESCRIPTIONS	QUANTITY	UNIT	UNIT COST	TOTAL COST
GENERAL CONDITIONS	LOT	-	-	\$ 1,057.00
DEMO/SITE WORK	0	-	-	N/A
CONCRETE	0	-	-	N/A
STEEL FRAMING	0	-	-	N/A
PAINTING	0	-	-	N/A
CARD READER				
NEW CARD READER	0	EACH	-	N/A
CAGE				
CAGE - WIRE MESH MATERIAL	300	SQFT	\$ 5.46	\$ 1,638.00
VESTIBULE - WIRE MESH MATERIAL	0	SQFT	\$ 5.46	\$ -
GATE - CAGE (SLIDER)	1	EACH	\$ 545.58	\$ 545.58
GATE - VESTIBULE (SWINGING)	0	EACH	\$ 623.52	\$ -
PANIC HARDWARE	0	EACH	\$ 327.35	\$ -
LABOR TO INSTALL	1	-	\$ 504.00	\$ 504.00
MISC. MATERIALS	LOT	-	-	\$ 120.42
HVAC	N/A	-	-	N/A
ELECTRICAL				\$ 3,729.58
120V A/C OUTLET	1 UNIT			-
OVERHEAD LIGHTING	1 UNIT			-
GROUND BAR/CABLES	1 UNIT			-
CABLE RACK INSTALLATION	LOT		NONE REQUIRED	
MARK-UP				\$ 1,151.59

TOTAL COST

\$ 8,748.18

GTE COST BREAKDOWN - MGC
WHITTIER - VALLEY VIEW C.O.

DESCRIPTIONS	QUANTITY	UNIT	UNIT COST	TOTAL COST
GENERAL CONDITIONS	LOT	-	-	\$ 1,493.00
DEMO/SITE WORK	0	-	-	N/A
CONCRETE	0	-	-	N/A
STEEL FRAMING	0	-	-	N/A
PAINTING	0	-	-	N/A
CARD READER				
NEW CARD READER	1	EACH	-	\$ 6,830.40
CAGE				
CAGE - WIRE MESH MATERIAL	400	SQFT	\$ 5.46	\$ 2,184.00
VESTIBULE - WIRE MESH MATERIAL	140	SQFT	\$ 5.46	\$ 764.40
GATE - CAGE (SLIDER)	1	EACH	\$ 545.58	\$ 545.58
GATE - VESTIBULE (SWINGING)	1	EACH	\$ 623.52	\$ 623.52
PANIC HARDWARE	1	EACH	\$ 327.35	\$ 327.35
LABOR TO INSTALL	1	-	\$ 504.00	\$ 504.00
MISC. MATERIALS	LOT	-	-	\$ 31.15
HVAC	N/A	-	-	N/A
ELECTRICAL				\$ 5,216.31
120V A/C OUTLET	1 UNIT			-
OVERHEAD LIGHTING	1 UNIT			-
GROUND BARS/CABLES	1 UNIT			-
CABLE RACK INSTALLATION	LOT			\$ 784.00
MARK-UP				\$ 2,932.41

TOTAL COST

\$22,236.12

1-27-1995 5 04PM

FROM KEY AIR CONTRACTORS REQUEST

**GTE COST BREAKDOWN - MGC
WHITTIER SOUTH C.O.**

DESCRIPTIONS	QUANTITY	UNIT	UNIT COST	TOTAL COST
GENERAL CONDITIONS	LOT	-	-	\$ 1,592.00
DEMO/SITE WORK	0	-	-	N/A
CONCRETE	0	-	-	N/A
STEEL FRAMING	0	-	-	N/A
PAINTING	0	-	-	N/A
CARD READER				
NEW CARD READER	1	EACH	-	\$ 9,261.34
CAGE				
CAGE - WIRE MESH MATERIAL	340	SQFT	\$ 5.46	\$ 1,856.40
VESTIBULE - WIRE MESH MATERIAL	325	SQFT	\$ 5.46	\$ 1,774.50
GATE - CAGE (SLIDER)	1	EACH	\$ 545.58	\$ 545.58
GATE - VESTIBULE (SWINGING)	2	EACH	\$ 622.52	\$ 1,247.04
PANIC HARDWARE	2	EACH	\$ 327.36	\$ 654.70
LABOR TO INSTALL	1	-	\$ 648.00	\$ 648.00
MISC MATERIALS	LOT	-	-	\$ 29.78
PLASTIC CURTAIN	1	EACH	-	\$ 1,241.16
HVAC				\$ 1,645.26
ELECTRICAL				\$ 5,485.94
120V A/C OUTLET	1 UNIT			-
OVERHEAD LIGHTING	1 UNIT			-
GROUND BAR/CABLES	1 UNIT			-
CABLE RACK INSTALLATION	LOT			\$ 1,749.00
MARK-UP				\$ 4,103.78

TOTAL COST**\$31,834.48**

626-301-9767

Engineering Design Fee Summary for MGC Co-Location

APEX Job No.	Job Site	APEX Fee	JTC Fee	Total
✓9826	Pico C.O. 10803 E. Whittier Blvd., Whittier, CA	\$1,272.50	\$2,124.45 -300.06	\$3,396.95
9828	La Habra C.O. 900 N. Idaho St., La Habra, CA	\$1,103.91	\$2,488.70	\$3,592.61
✓9829	Valley View C.O. 13887 Telegraph Rd., Whittier, CA	\$1,099.53	\$2,480.32 2183.34	\$3,579.85
✓9830	Whittier South C.O. 13119 E. Whittier Blvd., Whittier, CA	\$877.03	\$1,878.07 217	\$2,855.10
✓9831	Westminster C.O. 6802 Westminster Blvd. Westminster, CA	\$1,080.03	\$1,706.63	\$2,786.66
✓9832	Long Beach Uptown C.O. 3440 California Ave., Long Beach, CA	\$849.53	\$3,007.76	\$3,857.29
✓9833	Long Beach Main C.O. 550 Elm Ave., Long Beach, CA	\$849.53	\$2,230.13	\$3,179.66
✓9837	Bellflower C.O. 9826 E. Oak St., Bellflower, CA	\$1,383.28	\$2,468.44	\$3,851.72
✓9838	Florence C.O. 6840 Florence Ave., Bell Gardens, CA	\$1,314.53	\$2,438.57	\$3,753.10
✓9844	San Dimas C.O. 165 N. Monte Vista, San Dimas, CA	\$854.53	\$2,880.26	\$3,734.79
✓9846	Marshall C.O. 3116 N. "E" St., San Bernardino, CA	\$1,059.53	\$2,001.58	\$3,061.09
✓9853	Artesia C.O. 18400 Pioneer Blvd., Artesia, CA	\$774.53	\$1,282.63	\$2,057.16
✓9854	Clerk C.O. 1825 Clark Ave., Long Beach, CA	\$764.53	\$2,277.63	\$3,042.16

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Engineering Design Fee Summary for MGC Co-Location (Cont'd)

APEX Job No.	Job Site	APEX Fee	JTC Fee	Total
9661	Rolling Hill C.O. 5841 West Crest Dr., Palos Verdes, CA	\$734.53	\$2,074.18	\$2,808.72
9743.6	Ontario C.O. 207 N. D St., Ontario, CA	\$1,285.00	\$4,017.78	\$5,302.78
9743.1	Claremont C.O. 315 N. Indian Hill Dr., Claremont, CA	\$1,225.00	\$2,586.76	\$3,811.76
9743.5	Chino C.O. 12409 Yorba Ave., Chino Hills, CA	\$1,285.00	\$2,083.88	\$3,368.88
9743.4	Covina C.O. 160 E. BadMo, Covina, CA	\$1,282.50	\$2,059.00	\$3,341.50
9767.1	Rowland C.O. 18131 E. Valley, La Puente, CA	\$1,285.00	\$4,025.01	\$5,310.01
9767.2	Baldwin Park C.O. 14436 Ramona Blvd., Baldwin Park, CA	\$1,629.65	\$5,554.89	\$7,184.54
9767.3	Upland C.O. 234 W. Foothill Blvd., Upland, CA	\$1,240.00	\$3,356.25	\$4,596.25
9743.2	Pomona C.O. 280 S. Locust, Pomona, CA	\$1,285.00	\$1,758.51	\$3,043.51

Engineering Design Fee Summary for COVAD Co-Location

APEX Job No.	Job Site	APEX Fee	JTC Fee	Total
9853.1	Artesia C.O. 18400 Pioneer Blvd., Artesia, CA	\$190.00	\$914.75	\$1,104.75

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GTE

EIS Non-recurring Cost Study - Texas

Building Modification - Site Modifications

<i>Texas Sites</i>	Demo/ Site	Interior Door	Exterior Door	Concrete	Steels/ Metals	Painting/ Finishes	Flooring	Dust Partition	Door or Lockset
Irving East	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,194.09	\$0.00	\$0.00	\$323.72
Irving North	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Walnut Hill	0.00	0.00	0.00	0.00	0.00	2,784.54	0.00	0.00	316.42
Woodbine	1,009.25	0.00	4,174.40	315.88	0.00	1,184.56	0.00	2,177.00	0.00
Irving Main	0.00	0.00	0.00	0.00	0.00	0.00	3,246.15	0.00	0.00
Irving Southwest	0.00	3,332.77	0.00	0.00	0.00	0.00	366.06	0.00	0.00
Plano West	952.50	3,250.40	3,496.46	0.00	2,645.82	4,058.69	0.00	0.00	0.00
Plano North	0.00	0.00	0.00	0.00	0.00	342.89	0.00	0.00	0.00
Average	\$980.87	\$3,291.58	\$3,835.43	\$315.88	\$2,645.82	\$2,112.96	\$1,806.11	\$2,177.00	\$320.07
Index to National Avg. +12%	\$1,098.58	\$3,686.57	\$4,295.68	\$353.79	\$2,963.32	\$2,366.52	\$2,022.84	\$2,438.24	\$358.48

Note 1) Source: Actual Texas physical collocation projects.

Irving East
McNeil

Calculation Labels

A=Total
B=General Conditions
C=Profit
D=Total Contract

	Invoice Cost	% of Total	Fencing Sq Feet	Total Cost ¹	Cost per Sq. Foot
	E	F=E/A	G	H=(F*(B+C)+E)*1.1275	I=H/G
Fencing - Cage	4,603.00	29%	937.00	6,622.57	12.33
Gate - Cage	200.00	1%	1.00	287.75	287.75
Vestibule	2,197.00	14%	255.00	3,160.93	12.40
Paint	850.00	5%		1,222.94	
Paint Doors	675.00	4%		971.16	
Locksets - 3 sets	675.00	4%		971.16	
Electrical					
Lighting	5,044.00	31%		7,257.06	
Electric Circuits					
Andover	1,520.00	9%		2,186.90	
A/C Outlet	280.00	2%		402.85	
Total	16,044.00				
General Conditions	2,568.00				
Profit & Overhead	1,861.00				
Total Budget	20,473.00	100%		23,083.31	

Note 1) Shared distribution includes 12.75% engineering fee.

Irving North

Calculation Labels

A=Total

B=General Conditions

C=Profit

D=Total Contract

	Invoice Cost	% of Total	Fencing Sq Feet	Total Cost ¹	Cost per Sq. Foot
	E	F=E/A	G	H=(F*(B+C)+E)*1.1275	I=H/G
Fencing - Cage 58 LF	2,378.00	60%	464.00	4,945.85	10.66
Gate	200.00	5%		415.97	415.97
Electrical					
Andover circuit	280.00	7%		582.35	
A/C Outlet	280.00	7%		582.35	
Other Electrical	840.00	21%		1,747.06	
Total	3,978.00				
General	2,880.00				
Profit & Overhead 7%	480.00				
Total Contract	7,338.00	100%		8273.595	

Walnut Hill
McNeil

Calculation Labels

A=Total
B=General Conditions
C=Profit
D=Total Contract

	Invoice Cost	% of Total	Fencing Sq Feet	Total Cost ¹	Cost per Sq. Foot
	E	F=E/A	G	H=(F*(B+C)+E)*1.1275	I=H/G
Fencing - Cage 18 LF	738.00	3%	144.00	1,037.87	7.21
Gate - Cage	200.00	1%		281.27	281.27
Fencing - Partition 62 LF 15'	5,766.00	27%	930.00	8,108.91	8.72
Interior Doors - 2 (no constructio	450.00	2%		632.85	
Locksets - 2	450.00	2%		632.85	
Paint	1,980.00	9%		2,784.54	
Drywall - 400 sq ft	1,600.00	8%	400.00	2,250.13	5.63
Dust partition	1,548.00	7%		2,177.00	
Electrical					
Andover Circuit	280.00	1%		393.77	
A/C Outlet	280.00	1%		393.77	
Grounding	6,712.00	32%		9,439.30	
Other	1,120.00	5%		1,575.09	
Total	21,124.00				
General	3,500.00				
Profit & Overhead	1,724.00				
Total Contract	26,348.00	100%		29,707.37	

Woodbine

Calculation Labels

A=Total

B=General Conditions

C=Profit

D=Total Contract

	Invoice Cost	% of Total	Fencing Sq Feet	Total Cost ¹	Cost per Sq. Foot
	E	F=E/A	G	H=(F*(B+C)+E)*1.1275	I=H/G
Fencing - Cage	3,136.00	28%	435.00	4,953.05	11.39
Demo/Site Sawing	639.00	6%		1,009.25	
Concrete 4x4 pad	200.00	2%		315.88	
Exterior Door - Door and Cut	2,643.00	23%		4,174.40	
Painting	750.00	7%		1,184.56	
Electrical					
A/C Outlet	280.00	2%		442.24	
Andover Circuit	280.00	2%		442.24	
Cage Grounding	2,274.00	20%		3,591.59	
Other Electrical	1,120.00	10%		1,768.96	
Total	11,322.00				
General	3,500.00				
Profit	1,038.00				
Total Contract	15,860.00	100%		17,882.15	

Note 1) Shared distribution includes 12.75% engineering fee.

Irving Main
McNiell

Calculation Labels

A=Total
B=General Conditions
C=Profit
D=Total Contract

	Invoice Cost	% of Total	Fencing Sq Feet	Total Cost ¹	Cost per Sq. Foot
	E	F=E/A	G	H=(F*(B+C)+E)*1.1275	I=H/G
Fencing - Cage - 2 cages	1,482.00	2%	400.00	2,045.41	5.11
Gate - Cages - 2 cages	752.00	1%		1,037.89	518.94
Drywall - Partition	11,489.00	14%	1,445.00	15,856.73	10.97
Flooring	2,352.00	3%		3,246.15	
HVAC	53,457.00	64%		73,779.57	
Electrical - added to power HVAC	11,280.00	14%		15,568.28	
Fire Detection	2,742.00	3%		3,784.42	
Total	83,554.00				
General	9,426.00				
Profit & Overhead	9,298.00				
Total Contract	102,277.00	100%		115,318.45	

Note 1) Shared distribution includes 12.75% engineering fee.

Irving Southwest

Calculation Labels

A=Total

B=General Conditions

C=Profit

D=Total Contract

	Invoice Cost	% of Total	Fencing Sq Feet	Total Cost ¹	Cost per Sq. Foot
	E	F=E/A	G	H=(F*(B+C)+E)*1.1275	I=H/G
Fencing - Cage	1,111.00	1%	232.00	1,517.50	6.54
Drywall - Vestibule	10,801.00	12%	860.00	14,752.96	17.15
Flooring	268.00	0%		366.06	
Interior Doors - 2 (with construction)	2,440.00	3%		3,332.77	
HVAC	62,321.00	68%		85,123.56	
Electrical - to power HVAC	12,244.00	13%		16,723.94	
Fire Detection - for HVAC	2,878.00	3%		3,931.03	
Total	92,063.00				
General	9,326.00				
Profit	10,139.00				
Total Contract	111,528.00	100%		125,747.82	

Note 1) Shared distribution includes 12.75% engineering fee.

Plano West
McNeil

Calculation Labels

A=Total
B=General Conditions
C=Profit
D=Total Contract

	Invoice Cost	% of Total	Fencing Sq Feet	Total Cost ¹	Cost per Sq. Foot
	E	F=E/A	G	H=(F*(B+C)+E)*1.1275	I=H/G
Demo/Site					
Sawcut	720.00	2%		952.50	
Fencing - Cage 47 LF 8'	2,491.00	7%	376.00	3,295.37	8.76
Fencing - Vestibule 44 LF 15'	4,180.00	12%	660.00	5,529.77	8.38
Gate - Cage	200.00	1%		264.58	264.58
Metals - Stairs	2,000.00	6%		2,645.82	
Interior Door - Construction	450.00	1%		595.31	
Interior - Cut patch for door	1,332.00	4%		1,762.12	
Interior Door - 2 Materials	450.00	1%		595.31	
Exterior Door - Door cut and material	2,643.00	7%		3,496.46	
Door Lockset	225.00	1%		297.66	
Paint/Finishes	3,068.00	8%		4,058.69	
Electrical					
A/C Outlet	280.00	1%		370.42	
Andover	280.00	1%		370.42	
Cage Grounding	6,063.00	17%		8,020.82	
Other	1,120.00	3%		1,481.66	
Remove Generator and Muffler	10,750.00	30%		14,221.31	
Total	36,252.00				
General	3,500.00				
Profit & Overhead	2,783.00				
Total Contract	42,535.00	100%		47,958.21	

Note 1) Shared distribution includes 12.75% engineering fee.

Project Name: **BUDGET COST STUDY**
 Project No: **Iming East**
 Date:

Division	Description	Quantity	Unit	Unit Cost	Cost
Div. 1	General Conditions - overhead	1 LS		2,568	2,568
Div. 2	Demo & Site Work - none				
	<i>cage</i> - Fencing	345 271 7F		4,603 8.5	4,003 7655
	Vestibule - vestibule	4 LS 25 3P		2,197 8.60	2,197
	Gate	1 EA		200	200
Div. 8	Paint	1 LS		850	850
	Doors	3 EA	1 ext.	225	375
Div. 10	Locksets	3 EA	2 int.	225	975
Div. 18	Electrical				
	Lighting - over cage	1 LS		5,044	5,044
	Electric Circuits - <i>Arduover</i>	1 LS		1,800	1,800
	- <i>AC author</i>				
TOTAL BUDGET COST FOR CONSTRUCTION					16,312
PROFIT & OVERHEAD					1,861
TOTAL BUDGET COST FOR CONSTRUCTION					20,173

No Card Reader in contract
 Cage size: ~~24~~ 34 sq. ft. ~~24~~ 34 sq. ft.
 Vestibule: 72 sq. ft.

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NO. 002

08/07/00 1:36PM:JMTX #759:Page 2/9

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572 717 5054 08/07/00 1:30PM:JMB:R702:Page 3/9

Project Name: **BUDGET COST STUDY**
 Project No: **IRVING NORTH**
 Date:

Division	Description	Quantity	Unit	Unit Cost	Cost
Div. 1	General Supervision Unit Control Maintenance Window	overhead 1 LS		2,880	2,880
Div. 2	Door & Site Work Fencing & 3 x 7 Gate	464 SF - 25 LF 1 LS		41 5.125 200	2,378 200
Div. 19	Electrical 20 AMP Circuits	1 EA		280	7,100
TOTAL BUDGET COST FOR CONSTRUCTION					6,658
CONTRACTOR'S PROFITS @ 7%					460
TOTAL BUDGET COST FOR CONSTRUCTION					7,338

No HVAC
 No Vestibule Cage
 No Card Reader in contract
 Cage Size: 100 sq. ft.
 200

Page 2 of 3

NO. 200 ON

08/07/00 1:30PM:JMB:R702:Page 3/9

872 717 5054

08/07/00 1:30PM:JMB:R702:Page 3/9

PWS 0004 M453-10 95-10-30

7586 LIL 006

BUDGET COST STUDY
 Project Name: WALNUT HILL
 Project No: ---
 Date:

Division	Description	Quantity	Unit	Unit Cost	Cost
Div. 1	General <i>overhead</i>	1	LS	3,500	3,500
Div. 2	Demo & Site Work				
	<i>Cage</i> - <i>variable</i> Forming 8' <i>144 SF</i> Forming 15' <i>225 SF</i> Cuts 3 x7 <i>1 EA</i>			415.125 937.50 200	738 5,765 200
Div. 8	Doors & Windows 30 x 70 <i>vestibule</i>	2	EA <i>buff int.</i>	225	450
Div. 9	Finishes Paint - new walls, doors, floor bolts <i>variable</i> Drywall 25 LF x 16 H <i>400 SF</i>	1	LS	1,900	1,900
Div. 10	Replace Lockset <i>variable</i> Dust Partition <i>100'</i>	2	EA 1 LS	225 1,548	450 1,548
Div. 16	Electrical 20 AMP Circuits <i>18 AC outlet</i> Ground bar and lead <i>40 Amp - 5 EA</i> circuit for Andover Panel	1	LS	260 1,992	1,400 1,992
TOTAL BUDGET COST FOR CONSTRUCTION					24,524
CONTRACTOR'S PROFITS @ 7%					1,724
TOTAL BUDGET COST FOR CONSTRUCTION					26,248

No HVAC
 No Vestibule Cage
 No Access Card in contract
 Cage Size: 1110 sq. ft.
 1/2 mile

Cage Size: 200 SF

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NO. 00000000

06/07/00 1:00PM: 0703: Page 4/0
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478 1004 7453-17 36-20-30

9539 114 749

BUDGET COST STUDY
WOODBINE

Project Name:
Project No:
Date:

Division	Description	Quantity	Unit	Unit Cost	Cost
Div. 1	General Supervision Dust Control	over head	1 LS	3,500	3,500
Div. 2	Demo & Site Work Fencing 15'	cage	1 LS 475 SF	3,136	7.21 3,136
Div. 3	Concrete 4 x 4 post Sawing	concrete	1 LS 1 LS	200 939	200 939
Div. 6	Doors & Windows Exterior Door 30 x 70	cage	1 LS	2,043	2,043
Div. 9	Finishes Paint - patch around door New door Boots	key mod. cage key mod.	1 LS 1 LS 1 LS	300 250 200	300 250 200
Div. 18	Electrical 20 AMP Circuits Ground bar and load circuit for Anderson Panel	AC outlet	5 EA 1 LS	200 2,554	1,000 2,554
TOTAL BUDGET COST FOR CONSTRUCTION					14,822
CONTRACTOR'S PROFITS @ 7%					1,038
TOTAL BUDGET COST FOR CONSTRUCTION					13,890

Cage Size: 55 sq. ft.
No ventilation cage
Door added to exterior of building
Card Access by others
No HVAC

578 3024 4455:10 35-10-90
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7885 LIL 315
FROM MURKILL CUST SERVICE

BUDGET COST STUDY

Project Name: Irving Main
Project No:
Date:

Division	Description	Quantity	Unit	Unit Cost	Cost
Div. 1	General Conditions - o'head	1	LS	9,428	9,428
Div. 2	Demo & Site Work				
	Fencing - cage X 2	100 99	sq ft	1,452	1,452
	Gate	2	EA	375	752
Div. 9	Finished Drywall - ventilator	1449 1449	sq ft	11,189	11,189
	Flooring	2231 2231	sq ft	2,352	2,352
Div. 18	HVAC - ICB	1	LS	33,437	33,437
Div. 18	Electrical - ICB	1	LS	11,280	11,280
	Fire Detection	1	LS	2,742	2,742
TOTAL BUDGET COST FOR CONSTRUCTION					92,979
PROFIT & OVERHEAD					9,299
TOTAL BUDGET COST FOR CONSTRUCTION					102,277

yes
Card Access 100 (2 ea.)
Cage size 100 sq ft
Ventilator size: 2231 sq ft

Brenda, this is the only project that
had a double cage.
Ea Cage shared a center
fence partition. Ea cage 99 sq ft
Ea area - 1,117

NO. 032 200-CH

08/07/00 11:27PM: 0783: Page 8/8
- 078 BLDG. SERVICE: Page 8

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498 0074, 0115, 10, 35-40-20

3385, 212, 718

BUDGET COST STUDY

Project Name:

Irving Southwings

Project No:

Date:

Division	Description	Quantity	Unit	Unit Cost	Cost
Div. 1	General Conditions - <i>o'head</i>	1 LS		9,329	9,329
Div. 2	Demo & Site Work Fencing -- <i>cage</i>	<i>2400</i> <i>292 SF</i>		1,1114.79 0	1,111 0 0
Div. 9	Finished Drywall Flooring Doors - <i>Vestibule</i>	<i>060 240 SF</i> <i>398.7 140 SF</i> 1 LS		10,501 298 2,440	10,501 298 2,440
Div. 15	HVAC -- <i>SCB</i>	1 LS		92,321	92,321
Div. 18	Electrical Fire Detection - <i>SCB</i>	1 LS 1 LS		12,244 2,578	12,244 2,578
TOTAL BUDGET COST FOR CONSTRUCTION					101,389
PROFIT & OVERHEAD					10,129
TOTAL BUDGET COST FOR CONSTRUCTION					111,328

74 *Card reader in contract*
Cage size: *120 sq. ft.* *240*
Vestibule size: *302 sq. ft.*

Vestibule is actually a room we created by partitioning off with drywall.
Cost for creating this vestibule would be \$ 4100.00.

SPR 5004 M422-10 15-13-90

1592 114 505

BUDGET COST STUDY
 Project Name: FLAMO WEST
 Project No:
 Date:

Division	Description	Quantity	Unit	Unit Cost	Cost
Div. 1	General <i>o'land</i>	1	LS	3,600	3,600
Div. 2	Demo & 316 Work				
	Fencing 8' <i>case</i>	12 376	LF	53	6,525
	Fencing 15' <i>case</i>	12 60	LF	95	6,317
	Gate 3 x 7	1	EA	200	200
Div. 3	Concrete				
	Sewer 30 x 70	1	LS	720	720
Div. 4	Metals				
	1 Set Stairs	1	LS	2,000	2,000
Div. 5	Doors & Windows				
	Demo Over Patch Opening	1	EA	150	150
	Exterior Door	1	EA - ext	2,343	2,343
	Interior Doors	2	EA - int	220	440
Div. 6	Finishes				
	Paint - Drywall	1000	SQ FT	1	1,000
	Stairs	1	LS	200	200
	Patch Paint	1	LS	700	700
	Other	9	EA	100	900
Div. 10	Fire Locking				
	Out-Patch Ridding Drywall	1	EA	225	225
		1	LS	1,332	1,332
Div. 15	Electrical				
	20 AMP Circuits <i>if outlet</i>	5	EA	200	1,000
	Ground bar and load	1	LS	3,343	3,343
	Circuit for Andover Panels	1	LS	1,750	1,750
	Remove Gen 32 including <i>ventilator</i>				
TOTAL BUDGET COST FOR CONSTRUCTION					29,788
CONTRACTOR'S PROFITS @ 7%					2,085
TOTAL BUDGET COST FOR CONSTRUCTION					31,873

200
 Colocation Cage: 300 sq. ft.
 Vestibule Size: 110 sq. ft.
 Vestibule Cost: \$4,100.00
 No HVAC
 No Card Reader in Contract

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NO. 002

- SITE BLDG. SERVICES: Page 8

08/07/00 1:37PM:JMBX 8703:Page 8/8

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BY: GTE BLDG. SERVICES

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Attachment E
Electrical

GTE EIS Cost Study - California
 Non-Recurring Costs - Single Cage
 Building Modification - Lighting Fixture

Individual Lighting Fixture

Qty	Material	Labor	Total
1	\$37.30	\$36.00	\$73.30
2	\$3.50		\$7.00

Fluorescent Lighting Fixture

Two 40 watt lamp fixture, 4' long
 40 watt lamp

Commercial/Industrial grade, rapid start with ballasts but no lamp, wire or conduit.
 Includes placing fixture and connecting prewired fixture only.

1	\$7.62	\$40.80	\$18.42
---	--------	---------	---------

Circuit Breaker

15 to 60 amps, single pole

No enclosure included, 10,000 amp interrupt capacity except as noted. Plug-in molded case 120 volt, 100 amp frame circuit breakers, 1" or 1/2" module

1	\$2.00	\$6.48	\$8.48
1	\$3.52	\$8.48	\$9.98
1	\$0.78	\$1.35	\$2.13

Electrical Outlet Box

Octagon outlet box 4" x 1 1/2" deep with 1/2" knockouts

Clamps

4" Flush Cover Blank

Steel boxes installed on an exposed wall or ceiling. These costs include fastening, but no switch or receptacle.

100	per LF \$0.45	per LF \$1.14	\$159.00
-----	------------------	------------------	----------

Electrical Wire

#

Sheathed copper cable, 600 volt, with full size ground wire.

100	per LF \$1.67	per LF \$1.49	\$316.00
-----	------------------	------------------	----------

Rigid Galvanized Steel Conduit

1/2" Rigid Conduit (10' long section)

Installed exposed in a building. No wire, fitting or supports included.

1	\$3.07	\$5.87	\$6.94
5	\$2.38	\$8.38	\$53.75

90 or 45 degree elbows

1/2" Conduit Hangers and Supports

\$656.98

\$75.00

\$731.98

\$146.40

\$876.38

13%

\$992.50

Total Individual Lighting Fixture

Service Call (Travel Cost)

Subtotal

20% Contractor Mark Up

National Average

Adjustment for California (13%)

California Cost

SOURCE: NATIONAL CONSTRUCTION ESTIMATOR

GTE: EIS Cost Study - California
 Non-Recurring Costs - Single Cage
 Building Modification - Electrical Outlet

Individual A/C Electrical Outlet

Qty	Material	Labor	Total
1	\$8.80	\$6.46	\$15.36
1	\$7.62	\$10.80	\$18.42
1	\$3.08	\$8.46	\$11.54
2	\$1.85		\$3.70
1	\$0.68	\$1.35	\$2.03
100	per LF \$0.45	per LF \$1.14	\$159.00
100	per LF \$1.67	per LF \$1.49	\$316.00
1	\$3.07	\$5.87	\$8.94
5	\$2.39	\$8.36	\$53.75
			\$588.74
			\$75.00
			\$663.74
			\$132.75
			\$796.49
			13%
			\$990.03

Electrical Receptacle

20 amp, 125 volt self-grounding, 2-pole, 3-wire duplex receptacle - side terminals (ivory)
 Standard commercial grade ivory or brown receptacle with cover and screws. White or gray receptacle will cost about 10% more. No outlet boxes included. Labor includes connecting wire, securing device in box and attaching cover.

Circuit Breaker

15 to 50 ampe, single pole
 No enclosure included, 10,000 amp interrupt capacity except as noted. Plug-in molded case 120 volt, 100 amp frame circuit breakers, 1" or 1/2" module

Electrical Outlet Box

Switch box, 3"x 2", square corner gangable boxes with mounting ears, 2" deep with 1/2" knockouts

Clamps

Blank or Switch Outlet Cover

Steel boxes installed on an exposed wall or ceiling. These costs include fastening, but no switch or receptacle.

Electrical Wire

(3) #10 Solid Copper Wires
 Sheathed copper cable, 600 volt.

Rigid Galvanized Steel Conduit

1/2" Rigid Conduit (10' long section)
 Installed exposed in a building. No wire, fitting or supports included.

90 or 45 degree ell's

1/2" Conduit Hangers and Supports

Total Individual A/C Electrical Outlet

Service Call (Travel Cost)

Subtotal

20% Contractor Mark Up

National Average

Adjustment for California (13%)

California Cost

SOURCE: NATIONAL CONSTRUCTION ESTIMATOR

GTE: EIS Cost Study - California
 Non-Recurring Costs - Single Cage
 Building Modification - Grounding Bar

Collocation Grounding System

<u>Qty</u>	<u>Cost/LF</u>	<u>Total</u>	
			Floor Grounding Bar (large bar for several collocators)
1		\$672.00	Ground Bar - Material & Labor Includes ground bar, mounting, hardware, termination, lugs, etc.
125	\$7.50	\$937.50	750 MCM Grounding Cable - Material & Labor Cable, set-up, pulling cable and travel time
125	\$3.09	\$386.25	3" PVC Sch. 40 Conduit - Material & Labor Includes conduit cost and labor to install.
		\$1,995.75	Calculated National Average
	20%	\$399.15	Contractor Mark Up
		\$2,394.90	Subtotal Collocation Grounding System
		\$311.34	Adjustment for California (13%)
		\$2,706.24	Total Collocation Grounding System

Attachment F
Major HVAC/Power Additions

GTE EIS Cost Study - California
Non-Recurring Costs
Major HVAC/POWER Additions

HVAC/POWER PLANT Addition ICB Detail

Ln	State	Quote Date	ICB Number	Central Office Name	ICB Amount
1	CA	2/26/99	CA9903313	Grovedale Hills	\$110,480.58
2	CA	3/18/99	CA9903198	Grubbsville	\$75,962.62
3	CA	4/7/99	CA9903316	San Bernardino Main	\$35,789.88
4	CA	4/12/99	CA9903316	Alondra	\$364,164.69
5	TX	4/16/99	TX9908536	Rowlett	\$14,744.20
6	OR	4/15/99	OR9901269	Hillsboro	\$422,864.14
7	IN	4/22/99	IN9901204	Lafayette East	\$20,012.00
8	IN	4/22/99	IN9901207	Lafayette South	\$18,761.80
9	IN	4/22/99	IN9901203	Lafayette Main	\$23,139.00
10	CA	5/21/99	CA9903491	Claremont	\$131,472.00
11	NC	7/7/99	NC9908163	Durham Watts	\$16,444.31
12	CA	7/16/99	CA9903312	Alameda	\$572,672.57
13	CA	7/16/99	CA9903492	Bol Air	\$55,013.81
14	CA	7/16/99	CA9903423	Comacille	\$684,703.96
15	CA	7/16/99	CA9903433	Marshallton	\$75,061.22
16	CA	7/16/99	CA9903449	Upland	\$121,115.66
17	NC	9/8/99	NC9901169	Durham Main	\$40,599.23
18	CA	9/23/99	CA9903457	Bushard	\$136,468.35
19	CA	9/23/99	CA9903461	Chino	\$708,283.45
20	CA	9/23/99	CA9903459	Cotner	\$186,450.93
21	CA	9/23/99	CA9903470	Del Rey	\$218,222.52
22	CA	9/23/99	CA9903454	Glendale	\$2,688,771.17
23	CA	9/23/99	CA9903480	Santa Monica	\$899,868.77
24	CA	9/23/99	CA9903484	Sunnyvale	\$176,931.27
25	CA	9/23/99	CA9903486	Walnut	\$2,212,978.69
26	ICB Total Amount				\$9,276,264.93
27	Total Number of Collocation Quotes in the Period				491
28	Total Amount per Collocation Quote				Ln26/ Ln27 \$18,485.52

Note 1. The period for the ICB study is from January through September 1999.

Attachment G

Fill Factors

GTE Incorporated Collocation National Fill Factor		
STATE	No. of Collocators	No. of Collocated COs
(a)	(b)	(c)
AL	0	0
AR	1	1
AZ	0	0
CA	309	90
FL	149	45
HI	14	11
IA	11	11
ID	0	0
IL	8	5
IN	20	15
KY	4	1
MI	2	2
MN	0	0
MO	11	8
NC	20	7
NV	0	0
NE	1	1
NM	0	0
OH	9	8
OK	3	1
OR	41	13
PA	8	5
SC	8	7
TX	87	33
VA	12	8
WA	45	13
WCTC	0	0
WI	2	2
Total	761	287
National Fill Factor (column b/c)		3

ST	Central Office	Customer	Project Status	Type	No. of Collocators	No. of Collocated COs
AR	RUSSELLVILLE	Telecom	Complete	Virtual	1	1
	TOTAL ARKANSAS				1	1
CA	ALAMITOS	ACI	Pending - 50%	Physical		
CA	ALAMITOS	ALS	Pending - Install	Physical		
CA	ALAMITOS	Conrad	Complete	Physical		
CA	ALAMITOS	MGC	Complete	Physical		
CA	ALAMITOS	Sprint	Pending - Quote	Physical	5	1
CA	ALISO	ACI	Complete	Physical	1	1
CA	ALONDRA	ALS	Pending - Install	Physical		
CA	ALONDRA	Conrad	Complete	Physical		
CA	ALONDRA	GST	Pending - 50%	Physical		
CA	ALONDRA	MGC	Complete	Physical		
CA	ALONDRA	Northern	Pending - Install	Physical	5	1
CA	ARTESIA	ALS	Pending - Install	Physical		
CA	ARTESIA	Conrad	Complete	Physical		
CA	ARTESIA	MGC	Complete	Physical		
CA	ARTESIA	NORTHPOINT	Pending - Quote	Physical		
CA	ARTESIA	Sprint	Pending - Quote	Physical	5	1
CA	BALDWIN PARK	ALS	Pending - Install	Physical		
CA	BALDWIN PARK	Conrad	Complete	Physical		
CA	BALDWIN PARK	MGC	Complete	Physical	3	1
CA	DEL AIR	Conrad	Complete	Physical		
CA	DEL AIR	NORTHPOINT	Pending - Quote	Physical	2	1
CA	BELLFLOWER	ALS	Pending - Install	Physical		
CA	BELLFLOWER	MGC	Complete	Physical		
CA	BELLFLOWER	NORTHPOINT	Pending - Quote	Physical		
CA	BELLFLOWER	Sprint	Pending - Quote	Physical	4	1
CA	BLOSSOM HILL	Conrad	Complete	Physical	1	1
CA	BRADLEY	Conrad	Complete	Physical	1	1
CA	BUNOY SM	ACI	Pending - Install	Physical		
CA	BUNOY SM	ALS	Pending - Install	Physical		
CA	BUNOY SM	First World	Pending - Audit	Physical		
CA	BUNOY SM	GST	Pending - 50%	Physical		
CA	BUNOY SM	MGC	Complete	Virtual		
CA	BUNOY SM	MCIWorldCom	Pending - 50%	Physical		
CA	BUNOY SM	MGC	Complete	Virtual		
CA	BUNOY SM	Northern	Pending - 50%	Physical		
CA	BUNOY SM	Sprint	Pending - Install	Physical	9	1
CA	BUSHARD	ACI	Complete	Physical		
CA	BUSHARD	Conrad	Complete	Physical		
CA	BUSHARD	First World	Pending - Audit	Physical		
CA	BUSHARD	MGC	Complete	Physical		
CA	BUSHARD	Northern	Pending - Install	Physical		
CA	BUSHARD	Sprint	Pending - Quote	Physical	5	1
CA	CAMARILLO	Conrad	Pending - Install	Physical		
CA	CAMARILLO	MGC	Pending - 50%	Physical		
CA	CAMARILLO	NORTHPOINT	Pending - Quote	Physical		
CA	CAMARILLO	Sprint	Pending - Quote	Physical	4	1
CA	CHINO	Conrad	Complete	Physical		
CA	CHINO	MGC	Complete	Physical		
CA	CHINO	NORTHPOINT	Pending - Quote	Physical		
CA	CHINO	Sprint	Pending - Quote	Physical	4	1
CA	CLAREMONT	ALS	Pending - Install	Physical		
CA	CLAREMONT	Conrad	Complete	Physical		
CA	CLAREMONT	MGC	Complete	Physical	3	1
CA	CLARK	ACI	Complete	Physical		
CA	CLARK	ALS	Pending - Install	Physical		
CA	CLARK	Conrad	Complete	Physical		
CA	CLARK	MGC	Complete	Physical		
CA	CLARK	NORTHPOINT	Pending - Quote	Physical	5	1

ST	Central Office	Customer	Project Status	Type	No. of Collocators	No. of Collocated CDS
CA	CORREO	Cover	Pending - Install	Physical		
CA	CONLIO	NORTHPOINT	Pending - Quote	Physical	2	1
CA	COVINA	ALS	Pending - Install	Physical		
CA	COVINA	Cover	Complete	Physical		
CA	COVINA	GST	Pending - Install	Physical		
CA	COVINA	ICG	Pending - Install	Physical		
CA	COVINA	MGC	Complete	Physical		
CA	COVINA	Northpoint	Pending - Install	Physical		
CA	COVINA	SCE	Pending - Install	Physical		
CA	COVINA	Sprint	Pending - Quote	Physical	8	1
CA	CUCAMONGA	Sprint	Pending - Quote	Physical	1	1
CA	DEL AMO	ACI	Complete	Physical		
CA	DEL AMO	Cover	Complete	Physical		
CA	DEL AMO	MGC	Complete	Physical		
CA	DEL AMO	Northpoint	Complete	Physical	4	1
CA	DEL REY	ACI	Complete	Physical		
CA	DEL REY	AT&T	Complete	Physical		
CA	DEL REY	Cover	Complete	Physical		
CA	DEL REY	CU	Pending - Install	Physical		
CA	DEL REY	MGC	Complete	Physical		
CA	DEL REY	Northpoint	Pending - Install	Physical		
CA	DEL REY	Northpoint	Complete	Physical		
CA	DEL REY	Sprint	Pending - Quote	Physical	8	1
CA	DOWNEY	MGC	Complete	Virtual	1	1
CA	EL MDO	ACI	Pending - Quote	Physical		
CA	EL MDO	Cover	Pending - Install	Physical		
CA	EL MDO	MGC	Complete	Virtual		
CA	EL MDO	NORTHPOINT	Pending - Quote	Physical		
CA	EL MDO	Sprint	Pending - Quote	Physical	5	1
CA	ELLWOOD	GST	Complete	Physical		
CA	ELLWOOD	Cover	Forecast		2	1
CA	FLORENCE	ALS	Pending - Install	Physical		
CA	FLORENCE	Cambridge	Forecast			
CA	FLORENCE	MGC	Complete	Physical	3	1
CA	GILROY	Cover	Pending - Install	Physical	1	1
CA	GLENDORE	ACI	Complete	Physical		
CA	GLENDORE	ALS	Pending - Install	Physical		
CA	GLENDORE	Cover	Complete	Physical		
CA	GLENDORE	MGC	Complete	Physical		
CA	GLENDORE	NORTHPOINT	Pending - Quote	Physical		
CA	GLENDORE	Sprint	Pending - Quote	Physical	8	1
CA	GOLETA	Cover	Forecast		1	1
CA	GRANADA HILLS	ALS	Pending - Install	Physical		
CA	GRANADA HILLS	Cover	Complete	Physical		
CA	GRANADA HILLS	NORTHPOINT	Pending - Quote	Physical		
CA	GRANADA HILLS	Sprint	Pending - Quote	Physical	4	1
CA	HUNTINGTON BEACH	ACI	Complete	Physical		
CA	HUNTINGTON BEACH	Cover	Complete	Physical		
CA	HUNTINGTON BEACH	MGC	Complete	Physical		
CA	HUNTINGTON BEACH	Sprint	Pending - Quote	Physical	4	1
CA	LA HABRA	Cover	Complete	Physical		
CA	LA HABRA	MGC	Complete	Physical	2	1
CA	LA PUENTE	ALS	Pending - Install	Physical		
CA	LA PUENTE	GSTPU	Complete	Virtual		
CA	LA PUENTE	MGC	Complete	Virtual		
CA	LA PUENTE	NORTHPOINT	Pending - Quote	Physical		
CA	LA PUENTE	Sprint	Pending - Quote	Physical	8	1
CA	LAS POSITAS	Cover	Forecast		1	1
CA	LA VERNE	AO	Complete	Physical		
CA	LA VERNE	ALS	Pending - Install	Physical	2	1
CA	LAGUNA BEACH	ACI	Complete	Physical		
CA	LAGUNA BEACH	Cover	Complete	Physical		
CA	LAGUNA BEACH	NORTHPOINT	Pending - Quote	Physical	3	1

ST	Central Office	Customer	Project Status	Type	No. of Collocators	No. of Collocated COs
CA	LANCASTER	ALS	Pending - Install	Physical		
CA	LANCASTER	Covered	Complete	Physical		
CA	LANCASTER	Sprint	Pending - Quote	Physical	3	1
CA	LOMPOC	Covered	Forecast		1	1
CA	LONG BEACH MAIN	ACI	Complete	Physical		
CA	LONG BEACH MAIN	Alliance	Pending - Install	Physical		
CA	LONG BEACH MAIN	Covered	Complete	Physical		
CA	LONG BEACH MAIN	ICG	Complete	Physical		
CA	LONG BEACH MAIN	MCI-Merit	Complete	Physical		
CA	LONG BEACH MAIN	MGC	Complete	Physical		
CA	LONG BEACH MAIN	Norfolk	Complete	Physical		
CA	LONG BEACH MAIN	Northpoint	Complete	Physical		
CA	LONG BEACH MAIN	SCE	Complete	Physical		
CA	LONG BEACH MAIN	TCG	Complete	Physical	10	1
CA	MANHATTAN	Covered	Complete	Physical		
CA	MANHATTAN	NORTHPOINT	Pending - Quote	Physical	2	1
CA	MAPLEGROVE	Covered	Complete	Physical	1	1
CA	MAR VISTA	Covered	Pending - Install	Physical		
CA	MAR VISTA	NORTHPOINT	Pending - Quote	Physical		
CA	MAR VISTA	Sprint	Pending - Quote	Physical	3	1
CA	MARSHALL	GSTPLI	Complete	Virtual		
CA	MARSHALL	MGC	Complete	Physical	2	1
CA	MARTIN L KING	ALS	Pending - Install	Physical	1	1
CA	MONTEBELLO	ACI	Pending - Install	Physical		
CA	MONTEBELLO	Covered	Complete	Physical		
CA	MONTEBELLO	Northpoint	Pending - Install	Physical	3	1
CA	MORGAN HILL	ACI	Pending - Install	Physical		
CA	MORGAN HILL	Covered	Complete	Physical		
CA	MORGAN HILL	NORTHPOINT	Pending - Quote	Physical	3	1
CA	NEWBURY PARK	Covered	Pending - Install	Physical		
CA	NEWBURY PARK	MGC	Pending - 50%	Physical		
CA	NEWBURY PARK	NORTHPOINT	Pending - Quote	Physical	3	1
CA	NORWALK	ACI	Complete	Physical		
CA	NORWALK	ALS	Pending - Install	Physical		
CA	NORWALK	GST	Pending - Install	Physical		
CA	NORWALK	MGC	Complete	Physical		
CA	NORWALK	Sprint	Pending - Quote	Physical	3	1
CA	NOVATO	ACI	Pending - Install	Physical		
CA	NOVATO	Covered	Complete	Physical		
CA	NOVATO	NORTHPOINT	Pending - Quote	Physical	3	1
CA	ONTARIO MAIN	ACI	Complete	Physical		
CA	ONTARIO MAIN	Covered	Complete	Physical		
CA	ONTARIO MAIN	ICG	Pending - Install	Physical		
CA	ONTARIO MAIN	MGC	Complete	Physical	4	1
CA	ONTARIO SOUTH	Covered	Forecast		1	1
CA	ONTARIO TOLL	GSTPLI	Complete	Virtual		
CA	ONTARIO TOLL	SCE	Pending - Install	Physical	2	1
CA	PACIFIC PALISADES	Covered	Complete	Physical	1	1
CA	PALM DESERT	ALS	Pending - Install	Physical		
CA	PALM DESERT	MGC	Complete	Physical		
CA	PALM DESERT	NORTHPOINT	Pending - Quote	Physical	3	1
CA	PALM SPRINGS EAST	AT&T	Complete	Physical		
CA	PALM SPRINGS EAST	MGC	Complete	Physical		
CA	PALM SPRINGS EAST	NORTHPOINT	Pending - Quote	Physical		
CA	PALM SPRINGS EAST	SCE	Pending - Install	Physical	4	1
CA	PALOS VERDES	ALS	Pending - Install	Physical		
CA	PALOS VERDES	Covered	Complete	Physical		
CA	PALOS VERDES	MGC	Complete	Physical		
CA	PALOS VERDES	Northpoint	Complete	Physical		
CA	PALOS VERDES	Sprint	Pending - Quote	Physical	3	1
CA	PICO	ACI	Complete	Physical		
CA	PICO	ALS	Pending - Install	Physical		
CA	PICO	MGC	Complete	Physical	3	1
CA	POMONA	ACI	Complete	Physical		
CA	POMONA	ALS	Pending - Install	Physical		
CA	POMONA	MGC	Complete	Physical	3	1
CA	RANCHO MIRAGE	MGC	Complete	Physical		
CA	RANCHO MIRAGE	NORTHPOINT	Pending - Quote	Physical	2	1
CA	REDLANDS	MGC	Complete	Physical		
CA	REDLANDS	NORTHPOINT	Pending - Quote	Physical	2	1

ST	Central Office	Customer	Project Status	Type	No. of Callers	No. of Collocated COs
CA	REDONDO	ALS	Pending - Install	Physical		
CA	REDONDO	Cover	Complete	Physical		
CA	REDONDO	MGC	Complete	Physical		
CA	REDONDO	Northpoint	Pending - Install	Physical		
CA	REDONDO	Sprint	Pending - Quote	Physical	3	1
CA	ROLLING HILLS	Cover	Complete	Physical		
CA	ROLLING HILLS	MGC	Complete	Physical		
CA	ROLLING HILLS	NORTHPOINT	Pending - Quote	Physical		
CA	ROLLING HILLS	Sprint	Pending - Quote	Physical	4	1
CA	ROWLAND	ALS	Pending - Install	Physical		
CA	ROWLAND	Cover	Complete	Physical		
CA	ROWLAND	MGC	Complete	Physical		
CA	ROWLAND	NORTHPOINT	Pending - Quote	Physical		
CA	ROWLAND	Sprint	Pending - Quote	Physical	5	1
CA	SAN BERNARDINO	ALS	Pending - Install	Physical		
CA	SAN BERNARDINO	Q&T/PLI	Complete	Virtual		
CA	SAN BERNARDINO	NORTHPOINT	Pending - Quote	Physical	3	1
CA	SAN DIMAS	ACI	Complete	Physical		
CA	SAN DIMAS	Cover	Complete	Physical		
CA	SAN DIMAS	MGC	Complete	Physical		
CA	SAN DIMAS	NORTHPOINT	Pending - Quote	Physical	4	1
CA	SAN FERNANDO	MGC	Pending - 50%	Physical	1	1
CA	SANTA BARBARA	GST	Complete	Physical		
CA	SANTA BARBARA	Cover	Forecast	Physical		
CA	SANTA BARBARA	MCI-Merit	Complete	Physical	3	1
CA	SANTA MARIA	COVAS	Forecast	Physical	1	1
CA	SANTA MONICA	ACI	Pending - 50%	Physical		
CA	SANTA MONICA	Atelligence	Pending - 50%	Virtual		
CA	SANTA MONICA	AT&T	Complete	Physical		
CA	SANTA MONICA	Cover	Complete	Physical		
CA	SANTA MONICA	EU	Pending - Install	Physical		
CA	SANTA MONICA	MFS	Complete	Physical		
CA	SANTA MONICA	MGC	Complete	Physical		
CA	SANTA MONICA	Nadine	Pending - Install	Physical		
CA	SANTA MONICA	Sprint	Pending - Quote	Physical	6	1
CA	SANTA MONICA TOLL	ALS	Pending - Install	Virtual		
CA	SANTA MONICA TOLL	EU	Pending - Install	Physical		
CA	SANTA MONICA TOLL	GST	Pending - Install	Physical		
CA	SANTA MONICA TOLL	ICG	Pending - Audit	Physical		
CA	SANTA MONICA TOLL	Media One	Complete	Virtual		
CA	SANTA MONICA TOLL	SCZ	Pending - Install	Physical		
CA	SANTA MONICA TOLL	TCG	Complete	Virtual	7	1
CA	SANTA YNEZ	Cover	Forecast	Physical	1	1
CA	SEPULVEDA	ALS	Pending - Install	Physical		
CA	SEPULVEDA	NORTHPOINT	Pending - Quote	Physical	2	1
CA	SIERRA MADRE	ACI	Complete	Physical		
CA	SIERRA MADRE	Cover	Complete	Physical	2	1
CA	SLATER	ACI	Complete	Physical		
CA	SLATER	Cover	Complete	Physical		
CA	SLATER	First World	Pending - Install	Physical		
CA	SLATER	MGC	Complete	Physical		
CA	SLATER	Northpoint	Complete	Physical	5	1
CA	Stadium	AT&T	Complete	Physical		
CA	STADIUM	ICG	Complete	Virtual		
CA	STADIUM	Sprint	Pending - Quote	Physical	3	1
CA	SUNLAND/TULINGA	ALS	Pending - Install	Physical	1	1
CA	SUNNYMEAD	Sprint	Pending - Quote	Physical	1	1
CA	SUNSET	ALS	Pending - Install	Physical		
CA	SUNSET	MFS	Complete	Virtual		
CA	SUNSET	Northpoint	Pending - Install	Physical		
CA	SUNSET	SCZ	Complete	Physical		
CA	SUNSET	Sprint	Pending - Quote	Physical	5	1
CA	SYLMAR	ALS	Pending - Install	Physical	1	1
CA	TERMINO	ALS	Pending - Install	Physical		
CA	TERMINO	Cover	Complete	Physical		
CA	TERMINO	MGC	Complete	Physical		
CA	TERMINO	Northpoint	Complete	Physical		
CA	TERMINO	Sprint	Pending - Quote	Physical	5	1
CA	THOUSAND OAKS	Sprint	Pending - Quote	Physical	1	1
CA	UNIVERSITY	ALS	Pending - Install	Physical		

ST	Central Office	Customer	Project Status	Type	No. of Collocations	No. of Collocated COs
CA	UNIVERSITY	NORTHPOINT	Pending - Quote	Physical	2	1
CA	UPLAND	Covad	Complete	Physical		
CA	UPLAND	MGC	Complete	Physical		
CA	UPLAND	NORTHPOINT	Pending - Quote	Physical		
CA	UPLAND	Sprint	Pending - Quote	Physical	4	1
CA	UPTOWN	ACI	Complete	Physical		
CA	UPTOWN	Akaglenes	Pending - Install	Physical		
CA	UPTOWN	ALS	Pending - Install	Physical		
CA	UPTOWN	Covad	Complete	Physical		
CA	UPTOWN	MGC	Complete	Physical		
CA	UPTOWN	Northpoint	Complete	Physical		
CA	UPTOWN	SGE	Pending - Install	Physical		
CA	UPTOWN	Sprint	Pending - Install	Physical	8	1
CA	VALLEY VIEW	ACI	Complete	Physical		
CA	VALLEY VIEW	ALS	Pending - Install	Physical		
CA	VALLEY VIEW	MGC	Complete	Physical	3	1
CA	VICTORVILLE	ALS	Pending - Install	Physical	1	1
CA	WALNUT	MGC	Complete	Virtual		
CA	WALNUT	NORTHPOINT	Pending - Quote	Physical		
CA	WALNUT	Sprint	Pending - Quote	Physical	3	1
CA	WARNER	Covad	Complete	Physical		
CA	WARNER	MGC	Complete	Physical	2	1
CA	WEST LOS ANGELES	ACI	Complete	Physical		
CA	WEST LOS ANGELES	AT&T	Complete	Physical		
CA	WEST LOS ANGELES	Covad	Complete	Physical		
CA	WEST LOS ANGELES	ELI	Pending - Install	Physical		
CA	WEST LOS ANGELES	GST	Pending - 50%	Physical		
CA	WEST LOS ANGELES	MFS	Complete	Physical		
CA	WEST LOS ANGELES	MGC	Complete	Physical		
CA	WEST LOS ANGELES	Northpoint	Complete	Physical		
CA	WEST LOS ANGELES	Sprint	Pending - 90%	Physical	8	1
CA	WESTMINSTER	ACI	Complete	Physical		
CA	WESTMINSTER	ALS	Pending - Install	Physical		
CA	WESTMINSTER	Covad	Complete	Physical		
CA	WESTMINSTER	Fri World	Pending - Install	Physical		
CA	WESTMINSTER	ICG	Pending - Install	Physical		
CA	WESTMINSTER	MGC	Complete	Physical		
CA	WESTMINSTER	Nadlink	Complete	Physical		
CA	WESTMINSTER	Northpoint	Pending - Install	Physical		
CA	WESTMINSTER	Sprint	Pending - Install	Physical	9	1
CA	WESTWOOD	ACI	Complete	Physical		
CA	WESTWOOD	Covad	Complete	Physical		
CA	WESTWOOD	Northpoint	Pending - Install	Physical		
CA	WESTWOOD	Sprint	Pending - Quote	Physical	4	1
CA	WHITTIER SOUTH	ACI	Complete	Physical		
CA	WHITTIER SOUTH	ALS	Pending - Install	Physical		
CA	WHITTIER SOUTH	MGC	Complete	Physical		
CA	WHITTIER SOUTH	Northpoint	Complete	Physical	4	1
	TOTAL CALIFORNIA				308	88

ST	Central Office	Customer	Project Status	Type	No. of Colocated	No. of Colocated COs
FL	ALAFIA	ACI	Pending - Install	Physical	1	1
FL	AUBURNDALE	PROGRESS TELECOMMUNICATIONS	Pending - Audit	Physical	1	1
FL	BAYOU	Covad	Forecast			
FL	BAYOU	KMC Telecom	Pending - Install	Physical		
FL	BAYOU	Northpoint	Pending - Install	Physical	3	1
FL	BEACH PARK	ACI	Pending - Install	Physical		
FL	BEACH PARK	ALS	Pending - Install	Physical		
FL	BEACH PARK	e.s.s. (ACSI)	Forecast			
FL	BEACH PARK	MCWorldCom	Complete	Virtual		
FL	BEACH PARK	Northpoint	Pending - Install	Physical		
FL	BEACH PARK	Northpoint	Pending - Install	Physical		
FL	BEACH PARK	Time Warner	Pending - Install	Physical	7	1
FL	BRANDON	Covad	Forecast			
FL	BRANDON	Northpoint	Pending - Install	Physical		
FL	BRANDON	Sprint	Pending - Install	Physical	3	1
FL	CARROLLWOOD	Covad	Forecast			
FL	CARROLLWOOD	Northpoint	Pending - Install	Physical		
FL	CARROLLWOOD	Sprint	Pending - Install	Physical	3	1
FL	CLEARWATER	ALS	Pending - Install	Physical		
FL	CLEARWATER	BTI	Pending - Install	Virtual		
FL	CLEARWATER	Covad	Forecast			
FL	CLEARWATER	KMC Telecom	Pending - Install	Physical		
FL	CLEARWATER	MCWorldCom	Complete	Physical		
FL	CLEARWATER	Northpoint	Complete	Physical		
FL	CLEARWATER	PROGRESS TELECOMMUNICATIONS	Pending - Install	Physical		
FL	CLEARWATER	Sprint	Pending - Install	Physical		
FL	CLEARWATER	Time Warner	Pending - Install	Physical	8	1
FL	COUNTRYSIDE	Covad	Forecast			
FL	COUNTRYSIDE	KMC Telecom	Pending - Install	Physical		
FL	COUNTRYSIDE	Northpoint	Pending - Install	Physical		
FL	COUNTRYSIDE	Sprint	Pending - Install	Physical	4	1
FL	DUNEDIN	Northpoint	Pending - Install	Physical		
FL	DUNEDIN	Sprint	Pending - Install	Physical	2	1
FL	FEATHERSOUND	BTI	Pending - Install	Virtual		
FL	FEATHERSOUND	KMC Telecom	Pending - Install	Physical		
FL	FEATHERSOUND	Northpoint	Pending - Install	Physical		
FL	FEATHERSOUND	Time Warner	Pending - Audit	Virtual	4	1
FL	GANDY	Covad	Forecast			
FL	GANDY	ICI	Pending - Install	Physical		
FL	GANDY	Northpoint	Pending - Install	Physical		
FL	GANDY	Sprint	Pending - Install	Physical	4	1
FL	HIGHLANDS	NORTHPOINT	Pending - Audit	Physical		
FL	HIGHLANDS	Sprint	Pending - Install	Physical	2	1
FL	HUDSON	Covad	Forecast			
FL	HUDSON	NORTHPOINT	Pending - Audit	Physical	2	1
FL	HYDE PARK	ACI	Pending - Install	Physical		
FL	HYDE PARK	Covad	Forecast			
FL	HYDE PARK	e.s.s. (ACSI)	Pending - Install	Virtual		
FL	HYDE PARK	Northpoint	Pending - Install	Physical	4	1
FL	INDIAN ROCKS	Sprint	Pending - Install	Physical	1	1
FL	LAKE LAND MAIN	City of Lakeland	Complete	Virtual		
FL	LAKE LAND MAIN	NORTHPOINT	Pending - Audit	Physical	2	1
FL	LAKE LAND NORTH	Sprint	Pending - Install	Physical	1	1
FL	LARGO	Covad	Forecast			
FL	LARGO	Northpoint	Pending - Install	Physical	2	1
FL	LEALMAN	Covad	Forecast			
FL	LEALMAN	Northpoint	Pending - Install	Physical		
FL	LEALMAN	Sprint	Pending - Install	Physical	3	1
FL	NEW PORT RICHEY	Northpoint	Pending - Install	Physical	1	1
FL	NORTH GULF BEACH	Covad	Forecast			
FL	NORTH GULF BEACH	Northpoint	Pending - Install	Physical		
FL	NORTH GULF BEACH	Sprint	Pending - Install	Physical	3	1
FL	OLDEMAN	ACI	Pending - Install	Physical	1	1

ST	Comm Office	Customer	Project Status	Type	No. of Collectors	No. of Collected COs
FL	PALMA SOLA	Sprint	Pending - Install	Physical	1	1
FL	PASADENA	Covad	Forecast			
FL	PASADENA	Northern	Pending - Install	Physical		
FL	PASADENA	Sprint	Pending - Install	Physical	2	1
FL	PINELLAS	ALS	Pending - Install	Physical		
FL	PINELLAS	Covad	Forecast			
FL	PINELLAS	KMC Telecom	Pending - Install	Physical		
FL	PINELLAS	Northern	Complete	Physical		
FL	PINELLAS	Sprint	Pending - Install	Physical	5	1
FL	PLANT CITY	ACI	Pending - Install	Physical	1	1
FL	SARASOTA MAIN	ALS	Pending - Install	Virtual		
FL	SARASOTA MAIN	IFN	Complete	Virtual		
FL	SARASOTA MAIN	KMC Telecom	Complete	Physical		
FL	SARASOTA MAIN	Sprint	Pending - Install	Physical	4	1
FL	SARASOTA NORTHSIDE	Sprint	Pending - Install	Physical	1	1
FL	SARASOTA SOUTHSIDE	KMC Telecom	Complete	Physical		
FL	SARASOTA SOUTHSIDE	Sprint	Pending - Install	Physical	2	1
FL	SARASOTA SPRINGS	KMC Telecom	Complete	Physical		
FL	SARASOTA SPRINGS	Sprint	Pending - Install	Physical	2	1
FL	SEMINOLE	Northern	Pending - Install	Physical	1	1
FL	ST. GEORGE	Covad	Forecast			
FL	ST. GEORGE	Northern	Pending - Install	Physical		
FL	ST. GEORGE	Sprint	Pending - Install	Physical	3	1
FL	ST. PETERSBURG MAIN	ALS	Pending - Install	Physical		
FL	ST. PETERSBURG MAIN	BTI	Pending - Install	Virtual		
FL	ST. PETERSBURG MAIN	Covad	Forecast			
FL	ST. PETERSBURG MAIN	KMC Telecom	Pending - Install	Physical		
FL	ST. PETERSBURG MAIN	Northern	Pending - Install	Physical		
FL	ST. PETERSBURG MAIN	PROGRESS TELECOMMUNICATIONS	Pending - Install	Physical	8	1
FL	ST. PETERSBURG SOUTH	Sprint	Pending - Install	Physical	1	1
FL	SULPHUR SPRINGS	Covad	Forecast			
FL	SULPHUR SPRINGS	Northern	Pending - Install	Physical	2	1
FL	SWEETWATER	ACI	Pending - Install	Physical		
FL	SWEETWATER	BTI	Pending - Install	Virtual		
FL	SWEETWATER	Covad	Forecast			
FL	SWEETWATER	McWaneCom	Complete	Physical		
FL	SWEETWATER	Northern	Pending - Install	Virtual		
FL	SWEETWATER	Northern	Complete	Physical		
FL	SWEETWATER	Sprint	Pending - Install	Physical		
FL	SWEETWATER	TCG	Complete	Physical		
FL	SWEETWATER	Time Warner	Pending - Audit	Physical	9	1
FL	TAMPA EAST	ALS	Pending - Install	Virtual		
FL	TAMPA EAST	Covad	Forecast			
FL	TAMPA EAST	espire (ACSI)	Pending - Install	Virtual		
FL	TAMPA EAST	ICI	Complete	Physical		
FL	TAMPA EAST	Level (3)	Pending - 80%	Physical		
FL	TAMPA EAST	McWaneCom	Complete	Physical		
FL	TAMPA EAST	Northern	Pending - Install	Virtual		
FL	TAMPA EAST	Northern	Complete	Physical		
FL	TAMPA EAST	Time Warner	Forecast			
FL	TAMPA EAST	Time Warner	Pending - Audit	Physical	10	1
FL	TAMPA EAX	ALS	Pending - Install	Virtual		
FL	TAMPA EAX	Covad	Forecast			
FL	TAMPA EAX	espire (ACSI)	Complete	Virtual		
FL	TAMPA EAX	ICI	Pending - Audit	Virtual		
FL	TAMPA EAX	IFN	Complete	Virtual		
FL	TAMPA EAX	Level (3)	Pending - Audit	Virtual		
FL	TAMPA EAX	McWaneCom	Pending - Install	Virtual		
FL	TAMPA EAX	Northern	Pending - Install	Virtual		
FL	TAMPA EAX	Time Warner	Complete	Virtual	8	1
FL	TAMPA MAIN (TANDEM)	ALS	Pending - Install	Virtual		
FL	TAMPA MAIN (TANDEM)	Hyperion	Forecast			
FL	TAMPA MAIN (TANDEM)	ICI	Complete	Virtual		
FL	TAMPA MAIN (TANDEM)	IFN	Pending - Install	Virtual		
FL	TAMPA MAIN (TANDEM)	Level (3)	Pending - Audit	Virtual		
FL	TAMPA MAIN (TANDEM)	McWaneCom	Complete	Virtual		
FL	TAMPA MAIN (TANDEM)	Northern	Pending - Quote	Virtual	7	1

ST	Central Office	Customer	Project Status	Type	No. of Collectors	No. of Collocated COs
FL	TAMPA WESTSIDE	ALS	Pending - install	Physical		
FL	TAMPA WESTSIDE	BTI	Pending - install	Virtual		
FL	TAMPA WESTSIDE	Covad	Forecast			
FL	TAMPA WESTSIDE	e.s.p.s (ACSI)	Pending - install	Virtual		
FL	TAMPA WESTSIDE	Level (3)	Pending - Queue	Virtual		
FL	TAMPA WESTSIDE	McGrawHillCom	Complete	Physical		
FL	TAMPA WESTSIDE	Northpoint	Complete	Physical	7	1
FL	TARPON SPRINGS	Northpoint	Pending - install	Physical		
FL	TARPON SPRINGS	Sprint	Pending - install	Physical	2	1
FL	TEMPLE TERRACE	Covad	Forecast			
FL	TEMPLE TERRACE	Northpoint	Pending - install	Physical		
FL	TEMPLE TERRACE	Sprint	Pending - install	Physical	3	1
FL	UNIVERSITY	Covad	Forecast		1	1
FL	WALLCRAFT	ACI	Pending - install	Physical		
FL	WALLCRAFT	Covad	Forecast			
FL	WALLCRAFT	Northpoint	Pending - install	Physical		
FL	WALLCRAFT	Sprint	Pending - install	Physical	4	1
FL	YBOR	ACI	Pending - 50%	Physical		
FL	YBOR	e.s.p.s (ACSI)	Pending - install	Virtual	2	1
	TOTAL FLORIDA				148	48
HI	HONOLULU-LAKEA	GST	Complete	Virtual		
HI	HONOLULU-LAKEA	Time Warner	Complete	Virtual	2	1
HI	HOVE	Tel Hawaii	Complete	Copper	1	1
HI	KAWAHAE	GST	Complete	Virtual		
HI	KAWAHAE	HawaiiTel Int'l	Pending - install	Virtual	2	1
HI	KIHEI	GST	Complete	Virtual	1	1
HI	LIHUE	GST	Complete	Virtual	1	1
HI	MOANALUA	Time Warner	Complete	Virtual	1	1
HI	NAALEHU	Tel Hawaii	Pending - install	Virtual	1	1
HI	PAHALA	Tel Hawaii	Pending - install	Copper	1	1
HI	PUNAHOU	GST	Complete	Physical		
HI	PUNAHOU	Time Warner	Complete	Virtual	2	1
HI	PULUA	Time Warner	Complete	Virtual	1	1
HI	WAIKIKI	GST	Complete	Physical	1	1
	TOTAL HAWAII				16	11
IA	ARMSTRONG	Independent News	Complete	Copper		
IA	BELLE PLAINE	Coast Creek	Complete	Copper		
IA	BENNETT	Farmers & Business Mens	Pending - install	Copper		
IA	DELMAR	Farmers & Business Mens	Pending - install	Copper		
IA	ELDONA	Heart of Iowa	Complete	Virtual		
IA	LOWDEN	Farmers & Business Mens	Pending - install	Copper		
IA	WARENOO	Coast Creek	Complete	Copper		
IA	OXFORD	South Slope Cooperative	Pending - install	Copper		
IA	SOLOM	South Slope Cooperative	Pending - install	Copper		
IA	STANNWOOD	Clarence Telephone Co.	Complete	Copper		
IA	TEFFIN	South Slope Cooperative	Pending - install	Copper		
	TOTAL IOWA				11	11
IL	ANDOVER	Cambridge	Complete	Copper	1	1
IL	CARBONDALE MAIN	McGrawHillCom	Complete	Virtual		
IL	CARBONDALE MAIN	McGrawHillCom	Complete	Virtual	2	1
IL	CARTHAGE	Telecom	Complete	Virtual	1	1
IL	DEKALB	Telecom	Complete	Virtual	1	1
IL	ROCHELLE	Rockdale Muni. Util.	Complete	Physical	1	1
	TOTAL ILLINOIS				6	5

ST	Central Office	Customer	Project Status	Type	No. of Collectors	No. of Collocated COs
IN	BUKHART MAIN	USXchange	Complete	Physical	1	1
IN	BUKHART NORTH	USXchange	Complete	Physical	1	1
IN	FORT WAYNE MAIN	ALS	Pending - Install	Physical		
IN	FORT WAYNE MAIN	KMC Telecom	Complete	Physical		
IN	FORT WAYNE MAIN	Palmer	Pending - Quote	Virtual		
IN	FORT WAYNE MAIN	USXchange	Complete	Physical	4	1
IN	FORT WAYNE NORTH	KMC Telecom	Complete	Virtual		
IN	FORT WAYNE NORTH	USXchange	Complete	Virtual	2	1
IN	FORT WAYNE NORTHEAST	USXchange	Complete	Physical	1	1
IN	FORT WAYNE NORTHWEST	USXchange	Complete	Physical	1	1
IN	FORT WAYNE SOUTH	USXchange	Complete	Physical	1	1
IN	FORT WAYNE SOUTHEAST	USXchange	Complete	Physical	1	1
IN	FORT WAYNE WAYNEDALE	USXchange	Complete	Physical	1	1
IN	FORT WAYNE WEST	KMC Telecom	Complete	Virtual		
IN	FORT WAYNE WEST	USXchange	Complete	Virtual	2	1
IN	LAFAYETTE EAST	USXchange	Pending - 50%	Physical	1	1
IN	LAFAYETTE MAIN	USXchange	Pending - 50%	Physical	1	1
IN	LAFAYETTE NORTHWEST	USXchange	Pending - 50%	Physical	1	1
IN	LAFAYETTE SOUTH	USXchange	Pending - 50%	Physical	1	1
IN	LAFAYETTE WEST	USXchange	Pending - 50%	Physical	1	1
	TOTAL INDIANA				20	10
KY	LEXINGTON MAIN	ALS	Pending - Audit	Virtual		
KY	LEXINGTON MAIN	escore (ACS)	Complete	Virtual		
KY	LEXINGTON MAIN	Hypoten	Complete	Virtual		
KY	LEXINGTON MAIN	Palmer	Pending - Audit	Virtual		
	TOTAL KENTUCKY				4	1
MI	DAVISON	Phone Michigan	Pending - 50%	Physical		
MI	SWARTZ CREEK	Phone Michigan	Pending - Install	Virtual		
	TOTAL MICHIGAN				2	2
MO	BRANSON	Telecom	Complete	Virtual	1	1
MO	COLUMBIA MAIN	Optical Tel	Complete	Virtual	1	1
MO	EWING	Mark Twain	Complete	Copper	1	1
MO	LA BELLE	Mark Twain	Complete	Copper	1	1
MO	LEWISTOWN	Mark Twain	Complete	Copper	1	1
MO	MARSHFIELD	Telecom	Complete	Virtual	1	1
MO	O FALLON	TCG	Complete	Physical		
MO	O FALLON	Telecom	Complete	Virtual	2	1
MO	WENTZVILLE	Optical Tel	Complete	Physical		
MO	WENTZVILLE	TCG	Complete	Physical		
MO	WENTZVILLE	Telecom	Complete	Virtual	3	1
	TOTAL MISSOURI				11	6
NC	DURHAM ANGER	ACI	Pending - Install	Physical		
NC	DURHAM ANGER	Cover	Pending - 50%	Physical	2	1
NC	DURHAM HOLT	ACI	Pending - Install	Physical		
NC	DURHAM HOLT	Sprint	Pending - Install	Physical	2	1
NC	DURHAM LAKEWOOD	Cover	Forecast	Physical		
NC	DURHAM LAKEWOOD	Sprint	Pending - Audit	Physical	2	1
NC	DURHAM MAIN	ACI	Pending - Install	Physical		
NC	DURHAM MAIN	ALLTEL	Complete	Physical		
NC	DURHAM MAIN	ALS	Pending - Audit	Physical		
NC	DURHAM MAIN	BT	Complete	Virtual		
NC	DURHAM MAIN	INTERPATH	Pending - Quote	Physical		
NC	DURHAM MAIN	Northstar	Complete	Physical		
NC	DURHAM MAIN	Time Warner	Complete	Virtual		
NC	DURHAM MAIN	TIME WARNER	Pending - Install	Virtual	0	1
NC	DURHAM PARKWOOD	BT	Complete	Virtual		
NC	DURHAM PARKWOOD	Fiberdown	Complete	Virtual		
NC	DURHAM PARKWOOD	ICI	Complete	Virtual		
NC	DURHAM PARKWOOD	Time Warner	Complete	Virtual	4	1

ST	Central Office	Customer	Project Status	Type	No. of Collections	No. of Collections CQs
NC	SURFAM TRIANGLE PARK	BTI	Complete	Virtual	1	1
NC	MONROE	ACI	Pending - Audit	Physical	1	1
	TOTAL NORTH CAROLINA				20	7
NE	KEARNEY	Allent Midwest	Complete	Virtual	1	1
	TOTAL NEBRASKA				1	1
OH	BRUNSWICK	Covad	Forecast		1	1
OH	DELAWARE	Covad	Forecast		1	1
OH	DELAWARE	ACI	Pending - 60%	Physical	1	1
OH	ENGLEWOOD	Covad	Forecast		1	1
OH	MEDINA	Covad	Forecast		1	1
OH	MONTROSE	ICG	Complete	Virtual		
OH	MONTROSE	NORTHPOINT	Pending - 50%	Physical	2	1
OH	TROY	Covad	Forecast		1	1
OH	WADSWORTH	Covad	Forecast		1	1
	TOTAL OHIO				6	3
OK	BROKEN ARROW MAIN	Esprit (MSI)	Complete	Physical		
OK	BROKEN ARROW MAIN	Logic	Pending - install	Physical		
OK	BROKEN ARROW MAIN	MCiWorldCom	Complete	Virtual	3	1
	TOTAL OKLAHOMA				3	1
OR	ALOMA	ACI	Complete	Physical		
OR	ALOMA	Covad	Complete	Physical		
OR	ALOMA	ELI	Complete	Physical		
OR	ALOMA	Northpoint	Complete	Physical		
OR	ALOMA	Sprint	Pending - 60%	Physical	5	1
OR	BEAVERTON	ACI	Complete	Physical		
OR	BEAVERTON	Covad	Complete	Physical		
OR	BEAVERTON	ELI	Complete	Virtual		
OR	BEAVERTON	GST	Complete	Physical		
OR	BEAVERTON	INTEGRA TELECOM	Complete	Physical		
OR	BEAVERTON	MCi-Metro	Complete	Virtual		
OR	BEAVERTON	Northpoint	Complete	Physical		
OR	BEAVERTON	Sprint	Pending - 60%	Physical		
OR	BEAVERTON	TCG	Complete	Physical	9	1
OR	BULL MOUNTAIN	Covad	Pending - 60%	Physical		
OR	BULL MOUNTAIN	Northpoint	Pending - 60%	Physical	2	1
OR	FOREST GROVE	ACI	Pending - install	Physical	1	1
OR	GRESHAM	ACI	Complete	Physical		
OR	GRESHAM	Covad	Complete	Physical		
OR	GRESHAM	ELI	Complete	Physical		
OR	GRESHAM	Northpoint	Pending - 60%	Physical		
OR	GRESHAM	Sprint	Pending - 60%	Physical	5	1
OR	HILLSBORO	ACI	Complete	Physical		
OR	HILLSBORO	AT&T LOCAL SERVICES	Pending - install	Physical		
OR	HILLSBORO	Covad	Pending - Quote	Physical		
OR	HILLSBORO	INTEGRA TELECOM	Complete	Physical		
OR	HILLSBORO	Northpoint	Complete	Physical	5	1
OR	LAGRANGE	PATHNET	Pending - install	Virtual	1	1
OR	MCMINNVILLE	ACI	Pending - install	Physical		
OR	MCMINNVILLE	INTEGRA TELECOM	Pending - 60%	Physical	2	1
OR	SOMERSET WEST	ACI	Complete	Physical		
OR	SOMERSET WEST	Covad	Complete	Physical		
OR	SOMERSET WEST	ELI	Complete	Physical		
OR	SOMERSET WEST	INTEGRA TELECOM	Complete	Physical	4	1
OR	STAFFORD	Northpoint	Pending - 60%	Physical	1	1
OR	TIGARD	ELI	Complete	Virtual	1	1
OR	TUALATIN	ACI	Complete	Physical		
OR	TUALATIN	Covad	Pending - Quote	Physical		
OR	TUALATIN	Northpoint	Complete	Physical	3	1
OR	WILSONVILLE	ACI	Complete	Physical		
OR	WILSONVILLE	Northpoint	Pending - 60%	Physical	2	1
	TOTAL OREGON				41	13

ST	Central Office	Customer	Project Status	Type	No. of Callcenters	No. of Collected COs
PA	ERIE MAIN	FAIRPOINT	Pending - install	Physical	1	1
PA	ERIE SOUTH	FAIRPOINT	Pending - install	Physical	1	1
PA	ERIE WEST	FAIRPOINT	Pending - install	Physical	1	1
PA	YORK EAST	FAIRPOINT	Pending - Audit	Physical	1	1
PA	YORK MAIN	Hyperion	Complete	Physical	2	1
PA	YORK MAIN	MCiWorldCom	Complete	Virtual	2	1
	TOTAL PENNSYLVANIA				8	5
SC	GEORGETOWN	HTC	Pending - install	Physical	1	1
SC	MYRTLE BEACH LITTLE RIVER	HTC	Pending - install	Physical	1	1
SC	MYRTLE BEACH LONG BAY	HTC	Pending - install	Physical	1	1
SC	MYRTLE BEACH MAIN	HTC	Pending - install	Physical	1	1
SC	MYRTLE BEACH OCEAN VIEW	HTC	Pending - install	Physical	1	1
SC	MYRTLE BEACH WINDY HILL	AT&T	Complete	Physical	2	1
SC	MYRTLE BEACH WINDY HILL	HTC	Pending - install	Physical	2	1
SC	PAWLEYS ISLAND	HTC	Pending - install	Physical	1	1
	TOTAL SOUTH CAROLINA				8	7
TX	BAYTOWN MAIN	ACI	Pending - 80%	Physical		
TX	BAYTOWN MAIN	ALS	Pending - install	Physical	2	1
TX	BAYTOWN NORTH	Covad	Forecast		1	1
TX	BRYAN MAIN	ALS	Pending - install	Virtual	1	1
TX	BUDA MAIN	Covad	Forecast		1	1
TX	CARROLLTON MAIN	ALS	Pending - install	Virtual		
TX	CARROLLTON MAIN	Northpoint	Pending - 60%	Physical	2	
TX	CARROLLTON NORTH	Covad Communications Co.	Pending - install	Physical	1	1
TX	DALHART	XIT	Complete	Copper	1	1
TX	DENTON	ACI	Pending - install	Physical		
TX	DENTON	ALS	Pending - install	Physical		
TX	DENTON	Covad Communications Co.	Pending - install	Physical	3	1
TX	GARLAND MAIN	ACI	Pending - install	Physical		
TX	GARLAND MAIN	Allegiance	Complete	Physical		
TX	GARLAND MAIN	ALS	Pending - install	Physical		
TX	GARLAND MAIN	Northpoint	Pending - 50%	Physical	4	1
TX	GARLAND SOUTH	ACI	Pending - install	Physical		
TX	GARLAND SOUTH	Covad Communications Co.	Pending - install	Physical	2	1
TX	GEORGETOWN MAIN	Covad Communications Co.	Pending - install	Physical	1	1
TX	GRAPEVINE MAIN	ACI	Pending - install	Physical		
TX	GRAPEVINE MAIN	Covad Communications Co.	Pending - install	Physical		
TX	GRAPEVINE MAIN	Northpoint	Pending - 80%	Physical	2	1
TX	IRVING EAST	ACI	Pending - install	Physical		
TX	IRVING EAST	ALS	Pending - 80%	Physical		
TX	IRVING EAST	SBC	Complete	Virtual		
TX	IRVING EAST	Northpoint	Pending - 50%	Physical		
TX	IRVING EAST	SBC	Complete	Physical		
TX	IRVING EAST	Sprint	Pending - install	Physical	4	1
TX	IRVING MAIN	ICD Communications	Pending - 50%	Physical		
TX	IRVING MAIN	Logix	Pending - install	Physical		
TX	IRVING MAIN	MCiWorldCom	Complete	Virtual		
TX	IRVING MAIN	Northpoint	Pending - 90%	Physical		
TX	IRVING MAIN	SBC	Complete	Physical	5	1
TX	IRVING NORTH	ALS	Pending - 80%	Physical		
TX	IRVING NORTH	Northpoint	Pending - install	Virtual		
TX	IRVING NORTH	SBC	Complete	Physical	3	1

ST	Central Office	Customer	Project Status	Type	No. of Callers	No. of Collocated COs
TX	IRVING SOUTHWEST	ALS	Pending - install	Physical		
TX	IRVING SOUTHWEST	Aspire	Complete	Virtual		
TX	IRVING SOUTHWEST	SBC	Complete	Physical	3	1
TX	IRVING WALNUT HILL	ACI	Pending - install	Physical		
TX	IRVING WALNUT HILL	ALS	Pending - install	Physical		
TX	IRVING WALNUT HILL	Level 3	Pending - install	Physical		
TX	IRVING WALNUT HILL	MCIWorldCom	Complete	Physical		
TX	IRVING WALNUT HILL	Northern	Complete	Physical		
TX	IRVING WALNUT HILL	SBC	Complete	Physical		
TX	IRVING WALNUT HILL	Time Warner	Pending - 50%	Physical	7	1
TX	IRVING WEST	Alliance	Complete	Virtual		
TX	IRVING WEST	ALS	Pending - install	Physical		
TX	IRVING WEST	ALS	Pending - install	Physical		
TX	IRVING WEST	Northern	Pending - 50%	Physical		
TX	IRVING WEST	SBC	Complete	Virtual	5	1
TX	IRVING WOODBINE	ALS	Pending - 50%	Physical		
TX	IRVING WOODBINE	SBC	Complete	Physical	2	1
TX	LEAGUE CITY MAIN	ACI	Pending - install	Physical		
TX	LEAGUE CITY MAIN	Northern	Pending - 50%	Physical	2	1
TX	LEWISVILLE SOUTH	ACI	Pending - install	Physical		
TX	LEWISVILLE SOUTH	Covad Communications Co.	Pending - install	Physical	2	1
TX	LOMB OAK	Cumby Tele Coop.	Pending - install	Copper	1	1
TX	MELISSA GROVE	Cumby Tele Coop.	Complete	Copper	1	1
TX	PEARSON	Partridge	Pending - install	Copper	1	1
TX	PLANO CROSSCREEK	ACI	Pending - install	Physical		
TX	PLANO CROSSCREEK	Covad Communications Co.	Pending - install	Physical		
TX	PLANO CROSSCREEK	SBC	Complete	Physical	3	1
TX	PLANO MAIN	ACI	Pending - install	Physical		
TX	PLANO MAIN	Alliance	Complete	Physical		
TX	PLANO MAIN	ALS	Pending - install	Physical		
TX	PLANO MAIN	Covad Communications Co.	Pending - install	Physical		
TX	PLANO MAIN	ICG Communications	Forecast	Physical		
TX	PLANO MAIN	MCIWorldCom	Complete	Physical		
TX	PLANO MAIN	SBC	Complete	Physical	7	1
TX	PLANO NORTH	ACI	Pending - install	Physical		
TX	PLANO NORTH	Covad Communications Co.	Pending - install	Physical		
TX	PLANO NORTH	SBC	Complete	Physical	3	1
TX	PLANO NORTHWEST	ALS	Pending - install	Virtual		
TX	PLANO NORTHWEST	SBC	Complete	Virtual	2	1
TX	PLANO WEST	ACI	Pending - install	Physical		
TX	PLANO WEST	Alliance	Pending - install	Physical		
TX	PLANO WEST	ALS	Pending - install	Physical		
TX	PLANO WEST	Covad Communications Co.	Pending - install	Physical		
TX	PLANO WEST	Northern	Complete	Physical		
TX	PLANO WEST	SBC	Complete	Physical	5	1
TX	QUINMAN	Peoples Telecommunications, Inc.	Pending - install	Copper	1	1
TX	ROWLEY	ACI	Pending - 50%	Physical	1	1
TX	SEYNOUR	Santa Rosa Telephone Cooperative (SRTC)	Pending - install	Copper	1	1
TX	STAFFORD	Covad Communications Co.	Pending - install	Physical		
TX	STAFFORD	XIT	Complete	Copper	2	1
TX	WINNBERLY MAIN	Covad Communications Co.	Pending - install	Physical	1	1
	TOTAL TEXAS				87	23

ST	Central Office	Customer	Project Status	Type	No. of Collocators	No. of Collocated COs
VA	CHANCELLOR 1	Coverd	Pending - install	Physical	1	1
VA	HARRISONBURG	CPW Comm	Complete	Virtual	1	1
VA	HAYMARKET	Coverd	Pending - install	Physical	1	1
VA	HOADLY	Coverd	Pending - install	Physical	1	1
VA	MANASSAS	ALS	Pending - install	Physical		
VA	MANASSAS	Coverd	Pending - install	Physical		
VA	MANASSAS	Northpoint	Pending - install	Physical	3	1
VA	OCCOQUAN	Coverd	Pending - install	Physical		
VA	OCCOQUAN	Jones Cable	Pending - Audit	Virtual		
VA	OCCOQUAN	Northpoint	Pending - install	Physical	3	1
VA	PRINCESS ANNE	Coverd	Forecast		1	1
VA	STAFFORD	Coverd	Pending - install	Physical	1	1
	TOTAL VIRGINIA				12	8
WA	BOTHELL	ACI	Complete	Physical		
WA	BOTHELL	AT&T LOCAL SERVICES	Pending - install	Physical		
WA	BOTHELL	Coverd	Complete	Physical		
WA	BOTHELL	ELI	Complete	Physical		
WA	BOTHELL	MCI-Metro	Complete	Physical		
WA	BOTHELL	Northpoint	Pending - install	Physical	5	1
WA	EVERETT CASINO	ACI	Complete	Physical		
WA	EVERETT CASINO	AT&T LOCAL SERVICES	Pending - install	Physical		
WA	EVERETT CASINO	Coverd	Complete	Physical		
WA	EVERETT CASINO	MCI-Metro	Complete	Physical		
WA	EVERETT CASINO	Northpoint	Pending - install	Physical	5	1
WA	EVERETT MAIN	AT&T LOCAL SERVICES	Pending - install	Physical		
WA	EVERETT MAIN	Northpoint	Pending - install	Physical	2	1
WA	EVERETT PRIMARY CENTER	MCI-Metro	Complete	Virtual		
WA	EVERETT PRIMARY CENTER	TCC	Complete	Virtual	2	1
WA	HALLS LAKE	ACI	Complete	Physical		
WA	HALLS LAKE	AT&T LOCAL SERVICES	Pending - install	Physical		
WA	HALLS LAKE	Coverd	Pending - install	Physical		
WA	HALLS LAKE	MCI-Metro	Complete	Physical		
WA	HALLS LAKE	Northpoint	Pending - install	Physical	3	1
WA	JUANITA	ACI	Complete	Physical		
WA	JUANITA	Coverd	Pending - install	Physical		
WA	JUANITA	Northpoint	Pending - install	Physical	3	1
WA	KIRKLAND	ACI	Complete	Physical		
WA	KIRKLAND	Coverd	Pending - install	Physical		
WA	KIRKLAND	ELI	Complete	Physical		
WA	KIRKLAND	Level 3	Pending - 50%	Physical		
WA	KIRKLAND	MFS	Complete	Physical		
WA	KIRKLAND	Northpoint	Pending - install	Physical	5	1
WA	LAKE STEVENS	Coverd	Pending - install	Physical	1	1
WA	MANOR WAY	ACI	Complete	Physical		
WA	MANOR WAY	Coverd	Pending - install	Physical	2	1
WA	MARYSVILLE	ACI	Complete	Physical		
WA	MARYSVILLE	Coverd	Pending - install	Physical	2	1
WA	REDMOND	ACI	Complete	Physical		
WA	REDMOND	Coverd	Pending - install	Physical		
WA	REDMOND	ELI	Complete	Physical		
WA	REDMOND	Level 3	Pending - 50%	Physical		
WA	REDMOND	MCI-Metro	Complete	Physical		
WA	REDMOND	MFS	Complete	Physical		
WA	REDMOND	Northpoint	Pending - install	Physical		
WA	REDMOND	TCC	Complete	Virtual	5	1
WA	RICHMOND BEACH	ACI	Complete	Physical		
WA	RICHMOND BEACH	Coverd	Pending - install	Physical	2	1
WA	SYNOUESH	ACI	Pending - install	Physical	1	1
	TOTAL WASHINGTON				45	13
WI	SARON	Chubbuck Tel	Complete	Copper	1	1
WI	RICE LAKE	Chubbuck Tel	Complete	Copper	1	1
	TOTAL WISCONSIN				2	2

From: "Culver, Michelle" <Michelle.Culver@bridge.bellsouth.com>
To: <jeremy@technologylaw.com>
Date: 10/21/99 3:02PM
Subject: BellSouth-ACI Florida Collocation Arrangements

Jeremy,

ACI had three collocation Applications involved in the Florida Waiver Docket. That Proceeding resulted in ACI being allocated space in the Boca Teeca (BCRTFLBT), Palmetto (MIAMFLPL), and West Palm Beach Gardens (WPBHFLGR) Central Offices. The Parties were advised by BellSouth that space was assigned in the most efficient manner as was possible and that accommodation of requested space was made available only by engineering the arrangements without a POT Bay, in unenclosed space.

BellSouth's offer of space in these offices was contingent upon each Party signing a Collocation Amendment which incorporates the requirements of the FCC Order 99-48 ("706 Order"), one of which is the elimination of the requirement of an intermediate device(POT Bay)in lieu of direct connection to BellSouth's network. On September 3, 1999 ACI submitted Bona Fide Firm Order for the collocation arrangements in the above mentioned central offices. To date, the Parties have not yet executed an Amendment to the Collocation Attachment of the Interconnection Agreement. In light of this fact, BellSouth is requesting that ACI execute a Partial Amendment to allow for the continued provisioning of the collocation arrangements at issue.

Attached is a draft of the Partial Amendment for ACI's review and signature. Please contact me as soon as possible so that we can bring this matter to closure.

Thank you,
Michelle Culver
404-927-1374

CC: "Peed, Mary J" <Mary.Peed@bridge.bellsouth.com>

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 981834-TP
NO. 990321-TP EXHIBIT NO. 20
COMPANY/ Williams
WITNESS: 1-13-2000
DATE: 1-13-2000

DOCUMENT NUMBER-DATE
13250 OCT 28 99
FPSC-RECORDS/REPORTING

**AMENDMENT
TO THE
AGREEMENT BETWEEN
ACI CORP.
AND
BELLSOUTH TELECOMMUNICATIONS, INC.
DATED JANUARY 8, 1999**

Pursuant to this Agreement, (the "Amendment"), ACI Corp. ("ACI"), and BellSouth Telecommunications, Inc. ("BellSouth"), hereinafter referred to collectively as the "Parties," hereby agree to amend that certain Interconnection Agreement between the Parties dated January 8, 1999, ("Agreement").

WHEREAS, BellSouth and ACI entered into an Interconnection Agreement on January 8, 1999, and;

NOW THEREFORE, in consideration of the mutual provisions contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby covenant and agree as follows:

1. Sections 3.4 and 3.5 of Attachment 4 of the Interconnection Agreement are deleted in their entirety and substituted in their place new sections 3.4 and 3.5 as follows:

3.4 Demarcation Point. BellSouth will designate the point(s) of interconnection between ACI's equipment and/or network and BellSouth's network. Each party will be responsible for maintenance and operation of all equipment/facilities on its side of the demarcation point. For 2-wire and 4-wire connections to BellSouth's network, the demarcation point shall be a common block on the BellSouth designated conventional distributing frame. ACI shall be responsible for providing, and ACI's BellSouth Certified Vendor shall be responsible for installing and properly labelling/stenciling, the common block, and necessary cabling pursuant to construction and provisioning interval requirements. For all other terminations BellSouth shall designate a demarcation point on a per arrangement basis. ACI or its agent must perform all required maintenance to equipment/facilities on its side of the demarcation point, pursuant to the subsection following, and may self-provision cross-connects that may be required within the collocation space to activate service requests. At ACI's option, a Point of Termination (POT) bay or frame may be placed in the Collocation Space.

3.5 ACI's Equipment and Facilities. ACI, or if required by this Agreement, ACI's BellSouth certified vendor, is solely responsible for the design, engineering, installation, testing, provisioning, performance, monitoring, maintenance and repair of the equipment and facilities used by ACI. Such equipment and facilities may include but are not limited to cable(s); equipment; and point of termination connections.

2. Sections 3.7 and 9 of Attachment 4 of the Interconnection Agreement are deleted in their entirety and substituted in their place are new sections 3.7 and 9, including the rates in Exhibit 1, Attachment A, as follows:

3.7 Access. Pursuant to Security and Safety requirements below, ACI shall have access to the Collocation Space twenty-four (24) hours a day, seven (7) days a week. ACI agrees to provide the name, social security number, and date of birth of each employee, contractor, or agents provided with Access Keys or cards ("Access Keys") prior to the issuance of said Access Keys. ACI must submit to BellSouth the completed Access Control Request Form (RF-2906-A) for all employees or agents requiring access to the BellSouth Central Office a minimum of 30 calendar days prior to the date ACI desires access to the Collocation Space. Access Keys shall not be duplicated under any circumstances. ACI agrees to be responsible for all Access Keys and for the return of all said Access Keys in the possession of ACI employees, contractors, Guests, or agents after termination of the employment relationship, contractual obligation with ACI or upon the termination of this Agreement or the termination of occupancy of an individual collocation arrangement.

Lost or Stolen Access Keys. ACI shall notify BellSouth in writing immediately in the case of lost or stolen Access Keys. ACI will pay BellSouth \$250.00 per Access Key(s) lost or stolen. Should it become necessary for BellSouth to re-key buildings as a result of a lost Access Key(s) or for failure to return an Access Key(s), ACI shall pay for all reasonable costs associated with the re-keying.

9. Security and Safety Requirements. Only BellSouth employees, BellSouth certified vendors and authorized employees, or authorized agents of ACI will be permitted in the BellSouth Central Office. ACI shall provide its employees and agents with picture identification which must be worn and visible at all times while in the Collocation Space or other areas in or around the Central Office. The photo Identification card shall bear, at a minimum, the employee's name and photo, and the ACI name. BellSouth reserves the right to remove from its premises any employee of ACI not possessing identification issued by ACI. ACI shall hold BellSouth harmless for any damages resulting from such removal of its personnel from BellSouth premises.

ACI will be required, at its own expense, to conduct a statewide investigation of criminal history records for each ACI employee being considered for work on the BellSouth Central Office, for the states/counties where the ACI employee has worked and lived for the past five years. Where state law does not permit statewide collection or reporting, an investigation of the applicable counties is acceptable.

ACI will be required to administer to their personnel assigned to the BellSouth Central Office security training either provided by BellSouth, or meeting criteria defined by BellSouth.

ACI shall not assign to the BellSouth Central Office any personnel with records of felony criminal convictions. ACI shall not assign to the BellSouth Central Office any personnel with records of misdemeanor convictions, without advising BellSouth of the nature and gravity of the offense(s). BellSouth reserves the right to refuse building access to any ACI personnel who have been identified to have misdemeanor criminal convictions.

For each ACI employee requiring access to a BellSouth Central Office pursuant to this agreement, ACI shall furnish BellSouth, prior to an employee gaining such access, a notarized affidavit certifying that the aforementioned background check and security training were completed. The affidavit will contain a statement certifying no felony convictions were found and certifying that the security training was completed by the employee. If the employee's criminal history includes misdemeanor convictions, ACI will disclose the nature of the convictions to BellSouth at that time.

At BellSouth's request, ACI shall promptly remove from the BellSouth's premises any employee of ACI BellSouth does not wish to grant access to its premises pursuant to any investigation conducted by BellSouth.

Notification to BellSouth. BST reserves the right to interview ACI's employees, agents, or contractors. ACI and its contractors shall cooperate fully with BellSouth's investigation into allegations of wrongdoing or criminal conduct committed by or involving ACI's employees, agents, or contractors. Additionally, BellSouth reserves the right to bill ACI for all costs associated with investigations involving its employees, agents, or contractors if it can be reasonably established that ACI's employees, agents, or contractors are responsible for the alleged act. BellSouth shall bill ACI for BellSouth property which is stolen or damaged where an investigation determines the culpability of ACI's employees, agents, or contractors. ACI shall notify BellSouth in writing immediately in the event that the CLEC discovers one of its employees already working on the BellSouth premises is a possible security risk. BellSouth reserves the right to permanently remove from its premises any employee of ACI identified as posing a security risk to BellSouth or any other CLEC, or having violated BellSouth policies set forth in the BellSouth CLEC Security Training. ACI shall hold BellSouth harmless for any damages resulting from such removal of its personnel from BellSouth premises.

Use of BellSouth Supplies by ACI Employees. Use of any BellSouth supplies by a ACI employee, whether or not used routinely to provide telephone service (e.g. plug-in cards,) will be considered theft and will be handled accordingly. Costs associated with such unauthorized use of BellSouth property may be charged to ACI as may be all associated investigative costs. At BellSouth's request, ACI shall promptly and permanently remove from BellSouth's Central Office any employee of ACI found to be in violation of this rule.

Use of Official Lines by ACI Employees. Except for local calls necessary in the performance of their work, ACI employees shall not use the telephones on BellSouth Central Office. Charges for unauthorized telephone calls made by a ACI's employees may be charged to ACI as may be all associated investigative costs. At BellSouth's request, ACI shall promptly and permanently remove from BellSouth's premises any employee of ACI found to be in violation of this rule.

Accountability. Full compliance with the Security requirements of this section shall in no way limit the accountability of any CLEC for the improper actions of its employees.

3. All of the other provisions of the Agreement, dated January 8, 1999, shall remain in full force and effect.

4. Either or both of the Parties is authorized to submit this Amendment to the respective state regulatory authorities for approval subject to Section 252(e) of the Federal Telecommunications Act of 1996.

IN WITNESS WHEREOF, the Parties hereto have caused this Amendment to be executed by their respective duly authorized representatives on the date indicated below.

ACI Corp.

BellSouth Telecommunications, Inc.

By: _____

By: _____

Name: _____

Name: Jerry Hendrix

Title: _____

Title: Senior Director

Date: _____

Date: _____

EXHIBIT 1
 Attachment A

Rates marked with an asterisk (*) are interim and are subject to true-up.

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1A1	Security Access System			
	Security system*	Per Central Office	\$52.00	
	New Access Card	Per Card		\$55.00
	Activation*	Per Card		\$35.00
	Administrative change, existing card*	Per Card		\$250.00
	Replace lost or stolen card*			

Rate "True-Up." The Parties agree that the prices reflected as interim herein shall be "true-up" (up or down) based on final prices either determined by further agreement or by final order, including any appeals, in a proceeding involving BellSouth before the regulatory authority for the state in which the services are being performed or any other body having jurisdiction over this agreement (hereinafter "Commission"). Under the "true-up" process, the interim price for each service shall be multiplied by the volume of that service purchased to arrive at the total interim amount paid for that service ("Total Interim Price"). The final price for that service shall be multiplied by the volume purchased to arrive at the total final amount due ("Total Final Price"). The Total Interim Price shall be compared with the Total Final Price. If the Total Final Price is more than the Total Interim Price, ACI shall pay the difference to BellSouth. If the Total Final Price is less than the Total Interim Price, BellSouth shall pay the difference to ACI. Each party shall keep its own records upon which a "true-up" can be based and any final payment from one party to the other shall be in an amount agreed upon by the Parties based on such records. In the event of any disagreement as between the records or the Parties regarding the amount of such "true-up," the Parties agree that the Commission shall be called upon to resolve such differences.

15

16 **II. DESCRIPTION OF RHYTHMS' BUSINESS**

17 **Q. PLEASE DESCRIBE THE TYPE OF SERVICES RHYTHMS**
18 **PROVIDES**

19 **A.** Rhythms is a nationwide provider of high-performance, high-speed data
20 xDSL-based services to customers at a reasonable price. xDSL-based services
21 are economical because they are deployed on the same copper loop ordinarily
22 used for local service between a customer's premises and the ILEC central
23 office, but provide high-speed data transmissions of up to 7 million bits per
24 second ("Mbps"). The acronym "xDSL" is used to describe the broad

1 category of DSL-based services available to customers offering a range of
2 performance characteristics.

3 **Q. PLEASE DESCRIBE THE NATURE OF RHYTHMS' BUSINESS.**

4 A. Unlike other data service providers, Rhythms does not focus solely on the
5 Internet service provider ("ISP") market, but instead will offer broad market
6 coverage – covering suburban areas as well as metropolitan areas – offering a
7 full range of services. Our services will be used for (1) the networking of
8 remote locations for, among other things, telecommuting or work-at-home
9 applications; (2) dedicated access to the Internet; and (3) dedicated "always-
10 on" access to intranet-type networking solutions. Rhythms will provide both
11 residential and business customers with a complete package of
12 telecommunications services including customer premises equipment, inside
13 wiring, premises installation, service calls, 24-hour technical support, and
14 billing. Through partnerships with other carriers and purchase of resold
15 services, Rhythms will be able to provide the customer with a full suite of
16 telecommunications services. Rhythms has been providing its services in
17 other states since December 1997, but has not yet begun offering DSL
18 services to customers in Florida markets.

19 **Q. WHAT ARE THE TECHNICAL BENEFITS OF xDSL**
20 **TECHNOLOGIES?**

21 A. xDSL-based services are deployed on an ordinary existing copper loop to
22 provide high-bandwidth digital transmission capabilities between the customer's
23 premises and the ILEC central office. By "high-bandwidth," I mean the amount
24 of information that can be carried on a circuit, usually expressed as bits per
25 second ("bps"), thousands of bits per second ("kbps"), or millions of bits per
26 second ("Mbps"). xDSL technologies provide service at a variety of

1 bandwidths, in some cases exceeding 7 Mbps in one direction, but more
2 commonly at speeds between 128 kbps and 1.5 Mbps. In contrast, an analog
3 voice-grade "plain old telephone service," or "POTS" circuit provides very
4 limited throughput. Voice traffic occupies a narrow frequency spectrum, and
5 analog modems currently used to carry data can support speeds of only 56 kbps
6 (and then only under ideal line conditions). DSL technologies allow service
7 providers like Rhythms to offer a variety of innovative high-bandwidth services
8 while efficiently using the legacy copper loop infrastructure of ILECs.

9 **Q. CAN EXISTING COPPER LOOPS SUPPORT MULTIPLE DSL-**
10 **BASED TECHNOLOGIES?**

11 **A.** Yes. Rhythms has had experience successfully deploying numerous types of
12 DSL-based services on copper loops, including Asymmetric Digital
13 Subscriber Line ("ADSL"), Rate Adaptive Digital Subscriber Line
14 ("RADSL"), High bit rate Digital Subscriber Line ("HDSL"), Symmetric
15 Digital Subscriber Line ("SDSL") and ISDN Digital Subscriber Line
16 ("IDSL").

US WEST COLLOCATION PROVISIONING INTERVALS

The following is an excerpt of the Interconnection Agreement between Covad and US West regarding provisioning intervals for cageless collocation space (referred to as "Common Collocation"):

7.5.6 Ordering

7.5.6.1 When Covad submits a Collocation request, USWC will respond confirming space availability for such request within twenty one (21) calendar days, or sooner, on a best effort basis. Within thirty (30) business days of USWC providing the space availability confirmation to Covad, Covad will accept or reject the USWC confirmation. Acceptance by Covad shall require payment to USWC, fifty percent (50%) of the flat rated charges set forth in Appendix A; the remaining fifty percent (50%) shall be paid upon delivery of the Common Collocation space to Covad

7.5.6.2 Pursuant to the completion of the requirements specified in Section 7.5.6.1, above, the common Collocation space shall be made available where space and power are readily available within 45 calendar days. Where space or power are not readily available, the common Collocation space shall be made available in 90 calendar days. USWC shall use its best efforts to deliver fifty percent (50%) of all Common Collocation space orders in batches of ten (10) or more central offices within the 45 day interval set forth above.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET
NO. 981834-TP EXHIBIT NO. 21
COMPANY/ 990321-TP
WITNESS: Moscaritolo
DATE: 1-12-14-2000

Exhibit B

Christopher Goodpastor

Subject: COVAD - Collo Negotiations/Cageless Applications



COVAD.txt



COVAD - Colo
Negotiations/Co...

-----Original Message-----

From: Campbell, Brian [mailto:Brian.Campbell1@bridge.bellsouth.com]
Sent: Monday, November 22, 1999 11:35 AM
To: tallen@Covad.COM
Subject: COVAD - Collo Negotiations/Cageless Applications

Exhibit B

Covad

Tom:

Attached is Beth Shiroishi's response concerning the collocation application process. If you would like to discuss this further, I would contact her first and if she is unavailable, feel free to contact me.

Brian

Exhibit B

Covad1

Tom,

At this time, BellSouth is developing standardized rate elements for physical collocation space preparation rate elements. These standardized rates, once final, will alleviate the individual case basis responses that BellSouth currently quotes, and will also allow COVAD to know, up front, the cost of the arrangements requested. BellSouth is presently working to develop these rates and plans to have them finalized by mid-January.

BellSouth understands COVAD's concerns about our current process and is working to resolve these issues through standardized rates. Please understand that BellSouth could not put into effect a process which favors COVAD over another carrier. We must treat all of our customers with parity. However, partly as a result of your concern, we are working to develop a process, available to all of our customers, which will benefit all parties. Thanks,

Beth

Christopher Goodpastor

From: Beth.Shiroishi@bridge.bellsouth.com
To: Brian.Campbell1@bridge.bellsouth.com
Subject: COVAD - Collo Negotiations/Cageless Applications



COVAD .txt

Attachment 4

Physical Collocation

BELLSOUTH PHYSICAL COLLOCATION

~~The rates, terms and conditions contained within this Attachment were negotiated as a whole and each rate, term and condition within the Attachment is interdependent upon the other rates, terms and conditions.~~

1.0

4.SCOPE OF ATTACHMENT

1.1 Scope of Attachment. The rates, terms, and conditions contained within this Attachment shall only apply when ~~CLEC 4Covad~~ is occupying the collocation space as a sole occupant or as a Host pursuant to Section 4.

1.2 Right to occupy. Subject to Section 4 of this Attachment, BellSouth hereby grants to ~~CLEC 4Covad~~ a right to occupy ~~that certain areaan unused space designated by BellSouth within a BellSouth central office premises, of a size which is specified by CLEC 4Covad and agreed to by BellSouth (hereinafter "Collocation Space").~~ Notwithstanding the foregoing, BellSouth shall consider in its designation for cageless collocation any unused space within the BellSouth central office premises or other enclosures as specified in the March 31, 1999 Order of the Federal Communications Commission, *In the matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, First Report and Order and Further Notice of Proposed Rulemaking, FCC 99-48 ("FCC Order 99-48"). The size specified by ~~CLEC 4Covad~~ may ~~contemplate include a request for space sufficient to accommodate CLEC 4Covad's growth within a two year period unless otherwise agreed to by the Parties under the same space reservation policies applicable to BellSouth.~~

1.2.1 Space Reclamation. In the event of space exhaust within a central office premises, ~~CLEC 4Covad~~ may be required to release space to BellSouth to be allocated to other physical collocation applicants ~~when a minimum of fifty percent of the total amount of space in CLEC 1's collocation arrangement is not being utilized within the first year of operation, or 100% of the total amount of space by the end of the second year of operation under the same policies and procedures regarding reservation of space that are applicable to BellSouth.~~

1.3 Use of Space. ~~CLEC 4Covad~~ shall use the Collocation Space for the purposes of installing, maintaining and operating ~~CLEC 4Covad's~~ equipment (to include testing and monitoring equipment) used or useful primarily to interconnect with BellSouth services and facilities, including access to unbundled network elements, for the provision of telecommunications services. Pursuant to Section 5 following, ~~CLEC 4Covad~~ may at its option, place ~~CLEC 4Covad-owned~~ fiber entrance facilities to the Collocation Space. In addition to, and not in lieu of, interconnection to BellSouth services and facilities, ~~CLEC 4Covad~~ may connect to other interconnectors within the designated BellSouth Central Office (including to its other virtual or physical collocated arrangements) through co-carrier cross connect facilities designated by ~~CLEC 4Covad~~ pursuant to section 5.6 following. The Collocation Space may be

used for no other purposes except as specifically described herein or authorized in writing by BellSouth.

1.4 Rates and charges. ~~CLEC-4~~Covad agrees to pay the rates and charges identified at Exhibit A attached hereto.

2.0

2. SPACE NOTIFICATION

2.1 Availability of Space. Upon submission of an Order an application pursuant to Section 6, BellSouth will permit CLEC 4Covad to physically collocate, pursuant to the terms of this Attachment, at any BellSouth central office premises, unless BellSouth has determined that there is no space available due to space limitations or no space available due to technical infeasibility. If available space is less than the amount requested in Covad's Order, BellSouth shall report available space in one-bay increments. When determining availability of space, BellSouth shall not require Covad to segregate its equipment from BellSouth's equipment or to deploy Covad's equipment in a room or space separate from BellSouth's equipment. BellSouth will respond to an application within ten (10) business days as to whether space is available or not available within a BellSouth central office premises.

2.2 Reporting. Upon request from CLEC 4Covad, BellSouth will provide a written report specifying the amount of collocation space available at the central office premises requested, the number of collocators present at the central office premises, any modifications in the use of the space since the last report or the central office premises requested and the measures BellSouth is taking to make additional space available for collocation arrangements.

2.2.1 The request from CLEC 4Covad must be written and must include the central office premises and Common Language Location Identification (CLLI) code of the central office premises. Such information regarding central office premises and CLLI code is located in the National Exchange Carriers Association (NECA) Tariff FCC No. 4.

2.2.2 BellSouth will respond to a request for a particular Central Office location within ten (10) business days of receipt of such request. BellSouth will make best efforts to respond in ten (10) business days to such a request when the request includes up to and including five (5) Central Office locations within the same state. The response time for requests of more than five (5) shall be negotiated between the Parties. If BellSouth cannot meet the ten business day response time, BellSouth shall notify CLEC 1 and inform CLEC 1 of the time frame under which it can respond.

2.3 Denial of Application Order. After notifying If BellSouth notifies CLEC 4Covad that BellSouth has no available space in the requested Central Office ("Denial of Application Order"), BellSouth will allow CLEC 4Covad, upon request, to tour the entire Central Office within ten (10) calendar business days of such Denial of Application Order at no cost to Covad. In order to schedule said tour within ten (10) business calendar days, the request for a tour of the Central Office must be received by BellSouth within five seven (57) business calendar days of the Denial of Application Order. Within ten (10) calendar days of notifying Covad that no space is available in a particular office, BellSouth shall submit to Covad a report specifying the amount of collocation space available at each requested premises, the number of collocators, the measures that BellSouth is taking to make additional space available for collocation, and any modifications in the use of the space since the last report.

2.4 Filing of Petition for Waiver. Upon Denial of Application BellSouth will timely file a petition with the Commission pursuant to 47 U.S.C. § 251(c)(6).

2.54 Waiting List. On a first come first served basis, BellSouth will maintain a waiting list of requesting carriers who have either received a Denial of ~~Application-Order~~ or, where it is publicly known that the central office premises is out of space, have submitted a Letter of Intent to collocate. BellSouth will notify the telecommunications carriers on the waiting list when space becomes available according to how much space becomes available and the position of telecommunications carrier on said waiting list. Upon request BellSouth will advise ~~CLEC-4Covad~~ as to its position on the list.

2.65 Public Notification. BellSouth will maintain on its Interconnection Services website a notification document that will indicate all central office premises that are without available space. BellSouth shall update such document within ten (10) ~~business-calendar~~ days of the Denial of ~~Application-Order~~ date. BellSouth will also post a document on its Interconnection Services website that contains a general notice where space has become available in a Central Office previously on the space exhaust list. BellSouth shall update this document weekly. BellSouth shall allocate said available space pursuant to the waiting list referenced in Section 2.54.

~~2.72~~ **6 State Agency Procedures.** Notwithstanding the foregoing, should any federal ~~state-regulatory~~ agency impose a procedure different ~~than from~~ procedures set forth in this section, that procedure shall supersede the requirements set forth herein. Should any state regulatory agency impose a procedure different from procedures set forth in this section, that procedure shall supersede the requirements set forth herein, to the extent it is consistent with procedures promulgated by the FCC.

~~2-3.0~~ **COLLOCATION OPTIONS**

3.1 Cageless Collocation.

3.1.1 ~~Except where local building code does not allow cageless collocation,~~ BellSouth shall allow ~~CLEC-4Covad~~ to collocate ~~CLEC-4Covad's~~ equipment and facilities without requiring the construction of a cage or similar structure and without requiring the creation of a separate entrance to the Collocation Space. BellSouth shall allow ~~CLEC-4Covad~~ to have direct access to its equipment and facilities but may require ~~CLEC-4Covad~~ to use a central entrance to the BellSouth Central Office, provided that BellSouth employees are also restricted to the use of the central entrance. BellSouth shall make cageless collocation available in single bay increments pursuant to Section 7. ~~CLEC-4 where feasible~~ ~~CLEC-4~~ BellSouth shall not require Covad to segregate its equipment from BellSouth's equipment or to deploy Covad's equipment in an isolated space separate from BellSouth's equipment.

3.1.2 BellSouth agrees to apply flat recurring and nonrecurring charges for Cageless Collocation as set forth in Appendix A for the standard two (2), four (4), and six (6) standard and large bay configurations described below. These are interim charges subject to true-up or down as stated in Appendix A. Upon request by Covad, BellSouth shall provide Covad with the relevant invoices for all charges incurred by BellSouth in providing Cageless Collocation to Covad.

3.1.3 BellSouth agrees to provide either standard- or large-sized bays, as described below, in any combination according to the specifications of Covad's Order.

3.1.3.1 Standard-sized bays— A standard-sized bay is 7 feet high, 26 inches wide, 15 inches deep and requires a 2.5 inch spacer on either side of the uprights. The bay space also entails an appropriate front and back aisle space component; normally this requires a 36-inch front aisle and 24-inch back aisle.

3.1.3.2 Large-sized bay—A large-sized bay is _____ feet high, 26 inches wide, 15 inches deep and requires a _____ inch separator on either side of the uprights. The bay space also entails an appropriate front and back aisle space component; normally this requires a 36-inch front aisle and 24-inch back aisle.

3.1.4 Covad's standard bay configuration consists of two (2), four (4), or six (6) bays. The standard two (2) and four (4) bay configuration will consist of one 40 amp power cable including both A and B feeds and associated ground. The standard six (6) bay configuration will consist of two 40 amp power cables including both A and B feeds and associated ground. The nonrecurring charge for bay configuration includes all charges for any quote preparation, ironwork, cable racking, HVAC and all other space related charges, in addition to charges for customary central office lighting and AC outlets.

3.1.5 Except where Covad's equipment requires special technical considerations (e.g., special cable racking, isolated ground plane), BellSouth shall assign cageless Collocation Space in conventional equipment rack lineups. For equipment requiring special technical considerations, Covad must provide the equipment layout, including spatial dimensions for such equipment pursuant to generic requirements contained in BellCore (Telcordia) GR-63-Core and shall be responsible for constructing all special technical requirements associated with such equipment pursuant to Section 6.5 following.

3.2 Cages and Adjacent Arrangement Enclosures. **BellSouth shall authorize the enclosure of ~~CLEC-4Covad's~~ equipment and facilities at ~~CLEC-4Covad's~~ option, or if required by local building code, ~~CLEC-4Covad~~ must arrange with a BellSouth certified contractor to construct a collocation arrangement enclosure in accordance with BellSouth's guidelines and specifications and at its sole expense. BellSouth will provide guidelines and specifications upon request. Where local building codes require enclosure specifications more stringent than BellSouth's standard enclosure specification, ~~CLEC-4Covad~~ and ~~CLEC-4Covad's~~ BellSouth certified contractor must comply with local building code requirements. ~~CLEC-4Covad's~~ BellSouth certified contractor shall be responsible for filing and receiving any and all necessary permits and/or licenses for such construction. The Certified Vendor shall bill ~~CLEC-4Covad~~ directly for all work performed for ~~CLEC-4Covad~~ pursuant to this Attachment and BellSouth shall have no liability for nor responsibility to pay such charges imposed by the Certified Vendor. ~~CLEC-4Covad~~ must provide the local BellSouth building contact with two Access Keys used to enter the locked enclosure. BellSouth shall be charged fees for access keys and related expenses that are identical to those charged by BellSouth to Covad. Except in case of emergency, BellSouth will not access ~~CLEC-4Covad's~~ locked enclosure prior to providing 72-hour advance written notice to notifying ~~CLEC-4Covad~~.**

3.2.1 BellSouth has the right to review ~~CLEC-4Covad's~~ plans and specifications for caged collocation space upon written request submitted at least fifteen (15) calendar days before ~~prior to allowing the date~~ construction is scheduled to begin. ~~to start.~~ BellSouth has the right to inspect the enclosure after construction upon written request submitted at least five (5) calendar days before activation of facilities to make sure it is designed and constructed according to BellSouth's guidelines and specifications, and ~~to~~ BellSouth may require ~~CLEC-4Covad~~ to remove or correct at ~~CLEC-4Covad's~~ cost any structure that does not meet these standards, provided that BellSouth provided Covad with written notice of such standards at least thirty (30) days before the date construction was scheduled to begin.

3.3 Shared (Subleased) Caged Collocation. ~~CLEC-4Covad~~ may allow other telecommunications carriers to share ~~CLEC-4Covad's~~ caged collocation arrangement pursuant to terms and conditions agreed to by ~~CLEC-4Covad~~ ("Host") and other telecommunications carriers ("Guests") and pursuant to this section with the following exceptions: (1) where local building code does not allow Shared (Subleased) Caged Collocation and (2) where the BellSouth central office premises is located within a leased space and BellSouth is prohibited by said lease from offering such an option. The terms and conditions of the agreement between the Host and its Guests shall be written and a copy provided to the BellSouth contact specified in Section 15 within ten (10) business days of its execution and prior to any ~~Firm Order~~ Order. Further, said agreement shall incorporate by reference the rates, terms, and conditions of this Attachment between BellSouth and ~~CLEC-4Covad~~.

~~3.1.13.1~~ **3.3.1** ~~CLEC-4Covad~~ shall be the sole interface and responsible party to BellSouth for the purpose of submitting applications for initial and additional equipment placements of Guest; for assessment of rates and charges contained within this Attachment; and for the purposes of ensuring that the safety and security requirements of this Attachment are fully complied with by the Guest, its employees and agents. The initial Guest application shall require the assessment of an Application Fee, as set forth in Exhibit A. Notwithstanding the foregoing, Guest may arrange directly with BellSouth for the provision of the interconnecting facilities between BellSouth and Guest and for the provisions of the services and access to unbundled network elements.

~~3.1.23.2~~ **3.3.2** ~~CLEC-4Covad~~ shall indemnify and hold harmless BellSouth from any and all claims, actions, causes of action, of whatever kind or nature arising out of ~~the presence knowing, intentional or negligent conduct of CLEC-4Covad's or its Guests in the Collocation Space.~~ BellSouth shall indemnify and hold harmless Covad from any and all claims, actions, causes of action, of whatever kind or nature arising out of the knowing, intentional, or negligent conduct of BellSouth or its tenants in the Collocation Space.

3.4 Adjacent Collocation. BellSouth will provide adjacent collocation arrangements ("Adjacent Arrangement"), subject to technical feasibility as defined by 47 C.F.R. § 51.5, where space within the Central Office is legitimately exhausted, ~~subject to technical feasibility, where the Adjacent Arrangement does not interfere with access to existing or planned structures or facilities on the Central Office property and where permitted by zoning and other applicable state and local regulations.~~ Covad shall be entitled to reserve adjacent space for structures or facilities under the same policies and procedures applicable to BellSouth.— The Adjacent Arrangement shall be constructed or procured by ~~CLEC-4Covad~~ and in conformance with

BellSouth's reasonable design and construction specifications. Further, ~~CLEC-4Covad~~ shall construct, procure, maintain and operate said Adjacent Arrangement(s) pursuant to ~~all~~ of applicable the terms and conditions set forth in this Attachment. ~~Rates shall be negotiated at the time of the request for Adjacent Collocation.~~

3.4.1 Should ~~CLEC-4Covad~~ elect such option, ~~CLEC-4Covad~~ must arrange with a BellSouth certified contractor to construct an Adjacent Arrangement structure in accordance with BellSouth's reasonable guidelines and specifications. BellSouth will provide guidelines and specifications upon request. Where local building codes require enclosure specifications more stringent than BellSouth's standard specification, ~~CLEC-4Covad~~ and ~~CLEC-4Covad's~~ contractor must comply with local building code requirements. ~~CLEC-4Covad's~~ contractor shall be responsible for filing and receiving any and all necessary zoning, permits and/or licenses for such construction. ~~CLEC-4Covad's~~ BellSouth Certified Vendor shall bill ~~CLEC-4Covad~~ directly for all work performed for ~~CLEC-4Covad~~ pursuant to this Attachment and BellSouth shall have no liability for nor responsibility to pay such charges imposed by the Certified Vendor. ~~CLEC-4Covad~~ must provide the local BellSouth building contact with two cards, keys or other access device used to enter the locked enclosure. Covad shall charge for BellSouth for such cards, keys, or other access device according to the comparable rates charged to Covad by BellSouth for such services. **Except in cases of emergency, BellSouth shall not access ~~CLEC-4Covad's~~ locked enclosure prior to notifying, without providing 72 hours written notice to ~~CLEC-4Covad~~.**

3.4.2 Upon written request timely made at least thirty (30) days before the date construction is scheduled to begin, BellSouth maintains the right to ~~may~~ review ~~CLEC-4Covad's~~ plans and specifications prior to construction of an Adjacent Arrangement(s). BellSouth may inspect the Adjacent Arrangement(s) following construction and prior to commencement, as defined in Section 4.1 following, to ensure the design and construction comply with BellSouth's guidelines and specifications. BellSouth may require ~~CLEC-4Covad~~, at ~~CLEC-4Covad's~~ sole cost, to correct any deviations from BellSouth's guidelines and specifications found during such inspection(s), up to and including removal of the Adjacent Arrangement, ~~within five (5) business days of a reasonable time after BellSouth's inspection, unless the Parties mutually agree to an alternative time frame.~~

3.4.3 ~~CLEC-4Covad~~ shall provide a concrete pad, the structure housing the arrangement, HVAC, lighting, and all facilities that connect the structure (i.e. racking, conduits, etc.) to the BellSouth point of interconnection. At ~~CLEC-4Covad's~~ option, BellSouth shall provide an AC power source and access to physical collocation services and facilities subject to the same nondiscriminatory requirements as applicable to any other physical collocation arrangement.

3.4.4 BellSouth shall allow Shared (Subleased) Caged Collocation within an Adjacent Arrangement pursuant to the terms and conditions set forth in Section 3.3 proceeding.

4. OCCUPANCY

4.1 Commencement Date. The "Commencement Date" shall be the day ~~CLEC-4Covad's~~ equipment becomes operational as described in Article 4.2, following.

4.2 Occupancy. BellSouth will notify ~~CLEC-4Covad~~ in writing that the Collocation Space is ready for occupancy. After receipt of such notice, ~~CLEC-4Covad~~ must place operational telecommunications equipment in the Collocation Space and connect with BellSouth's network within ~~one hundred eighty (180) days~~ the same amount of time that BellSouth may reserve space for future use under BellSouth's space reservation policies ~~after receipt of such notice.~~ ~~CLEC-4Covad~~ must notify BellSouth in writing or electronically that collocation equipment installation is complete and is operational with BellSouth's network. BellSouth may, at its option, not accept orders for interconnected service until receipt of such notice. ~~If CLEC-4Covad fails to place operational telecommunications equipment in the Collocation Space within 180 calendar days~~ within two years and such failure continues for a period of thirty (30) days after receipt of written notice from BellSouth, then and in that event ~~CLEC-4Covad's~~ right to occupy the Collocation Space terminates and BellSouth shall have no further obligations to ~~CLEC-4Covad~~ with respect to said Collocation Space. Termination of ~~CLEC-4Covad's~~ rights to the Collocation Space pursuant to this paragraph shall not operate to release ~~CLEC-4Covad~~ from its obligation to reimburse BellSouth for all costs reasonably incurred by BellSouth in preparing the Collocation Space, but rather such obligation shall survive this Attachment. For purposes of this paragraph, ~~CLEC-4Covad's~~ telecommunications equipment will be deemed operational when cross-connected to BellSouth's network for the purpose of service provision.

4.3 Termination. Except where otherwise agreed to by the Parties, ~~CLEC-4Covad~~ may terminate occupancy in a particular Collocation Space upon thirty (30) days prior written notice to BellSouth. Upon termination of such occupancy, ~~CLEC-4Covad~~ at its expense shall remove its equipment and other property from the Collocation Space. ~~CLEC-4Covad~~ shall have thirty (30) days from the termination date to complete such removal, including the removal of all equipment and facilities of ~~CLEC-4Covad's~~ Guests; provided, however, that ~~CLEC-4Covad~~ shall continue payment of monthly fees to BellSouth until such date as ~~CLEC-4Covad~~ has fully vacated the Collocation Space. Should ~~CLEC-4Covad~~ fail to vacate the Collocation Space within thirty (30) days from the termination date, BellSouth shall have the right to remove the equipment and other property of ~~CLEC-4Covad~~ at ~~CLEC-4Covad's~~ expense and with no liability for damage or injury to ~~CLEC-4Covad's~~ property unless caused by the gross negligence or intentional misconduct of BellSouth. Upon expiration of this Attachment ~~the Interconnection Agreement,~~ ~~CLEC-4Covad~~ shall surrender the Collocation Space to BellSouth in the same condition as when first occupied by the ~~CLEC-4Covad~~ except for ordinary wear and tear. ~~CLEC-4~~ shall be responsible for the cost of removing any enclosure, together with all support structures (e.g., racking, conduits), of an Adjacent Collocation arrangement at the termination of occupancy and restoring the grounds to their original condition.

5. USE OF COLLOCATION SPACE

5.1 Equipment Type. BellSouth permits the collocation of any type of equipment used or useful for interconnection to BellSouth's network or for access to unbundled network elements in the provision of telecommunications services. Such equipment used or useful for interconnection and access to unbundled network elements includes, but is not limited to

transmission equipment including, but not limited to, optical terminating equipment and multiplexers, and digital subscriber line access multiplexers, routers, ~~asynchronous~~ asynchronous transfer mode multiplexers, and remote switching modules. Nothing in this section requires BellSouth to permit collocation of equipment used solely to provide enhanced services; provided, however, that BellSouth may not place any limitations on the ability of requesting carriers to use all the features, functions, and capabilities of equipment collocated pursuant to this section.

5.1.1 ~~Such~~ The equipment of the Parties ~~equipment~~ must at a minimum meet the following BellCore (Telcordia) Network Equipment Building Systems (NEBS) General Equipment Requirements: Criteria Level 1 requirements as outlined in the BellCore (Telcordia) Special Report SR-3580, Issue 1; equipment design spatial requirements per GR-63-CORE, Section 2; thermal heat dissipation per GR-063-CORE, Section 4, Criteria 77-79; acoustic noise per GR-063-CORE, Section 4, Criterion 128, and National Electric Code standards.

5.1.2 ~~CLEC-4Covad~~ shall not use the Collocation Space for marketing purposes nor shall it place any identifying signs or markings in the area surrounding the Collocation Space or on the grounds of the central office premises.

5.1.3 ~~CLEC-4Covad~~ shall place a plaque or other identification affixed to ~~CLEC-4Covad's~~ equipment necessary to identify ~~CLEC-4Covad's~~ equipment, including a list of emergency contacts with telephone numbers.

5.2 **Entrance Facilities.** ~~CLEC-4Covad~~ may elect to place ~~CLEC-4Covad-owned~~ or ~~CLEC-4Covad-leased~~ fiber entrance facilities into the Collocation Space. BellSouth will designate the point of interconnection in close proximity to the Central Office building housing the Collocation Space, such as an entrance manhole or a cable vault which are physically accessible by both parties. ~~CLEC-4Covad~~ will provide and place fiber cable at the point of interconnection of sufficient length to be pulled through conduit and into the splice location. ~~CLEC-4Covad~~ will provide and install a sufficient length of fire retardant riser cable, to which the entrance cable will be spliced, which will extend from the splice location to the ~~CLEC-4Covad's~~ equipment in the Collocation Space. In the event ~~CLEC-4Covad~~ utilizes a non-metallic, riser-type entrance facility, a splice will not be required. ~~CLEC-4Covad~~ must contact BellSouth for instructions prior to placing the entrance facility cable in the manhole. ~~CLEC-4Covad~~ is responsible for maintenance of the entrance facilities At ~~CLEC-4Covad's~~ option BellSouth will accommodate where technically feasible a microwave entrance facility pursuant to separately negotiated terms and conditions.

5.2.1 **Dual Entrance.** BellSouth will provide at least two interconnection points at each central office premises where there are at least two such interconnection points available and where capacity exists. Upon receipt of a request for physical collocation under this Attachment, BellSouth shall provide ~~CLEC-4Covad~~ with information regarding BellSouth's capacity to accommodate dual entrance facilities. If conduit in the serving manhole(s) is available and is not reserved for another purpose for utilization within 12 months of the receipt of an application for collocation, BellSouth will make the requested conduit space available for installing a second entrance facility to ~~CLEC-4Covad's~~ arrangement. The location of the serving manhole(s) will be

determined at the sole discretion of BellSouth. Where dual entrance is not available due to lack of capacity, BellSouth will so state in the Application Response.

5.2.2 Shared Use. ~~CLEC-4Covad~~ may utilize spare capacity on an existing Interconnector entrance facility for the purpose of providing an entrance facility to another ~~CLEC-4Covad~~ collocation arrangement within the same BellSouth Central Office. ~~CLEC-4Covad~~ must arrange with BellSouth for BellSouth to splice the utilized entrance facility capacity to ~~CLEC-4Covad~~-provided riser cable.

5.3 Splicing in the Entrance Manhole. Although not generally permitted, should ~~CLEC-4Covad~~ request a splice to occur in the entrance manhole(s), BellSouth, at its sole discretion, may grant such a request, provided that BellSouth will not unreasonably withhold approval of requests to make such a splice. When the request for a splice is granted to ~~CLEC-4Covad~~ by BellSouth, ~~CLEC-4Covad~~ shall ensure its employees or agents entering and/or performing work in the entrance manhole(s) are trained and comply with BellSouth procedures and OSHA requirements regarding access to manholes and that BellSouth personnel are notified and present for all entrances and work performed in the entrance manhole(s). Manhole covers shall be properly closed and secured at the conclusion of entry and/or work. Advance notification to BellSouth shall occur at a minimum of 48 hours prior to desired entry for normal work activities and at a minimum of 2 hours prior to desired entry in an out of service condition.

5.4 Demarcation Point. BellSouth will designate the point(s) of interconnection between ~~CLEC-4Covad~~'s equipment and/or network and BellSouth's network. Each party will be responsible for maintenance and operation of all equipment/facilities on its side of the demarcation point. For 2-wire and 4-wire connections to BellSouth's network, the demarcation point shall be a common block on the BellSouth designated conventional distributing frame. ~~CLEC-4Covad~~ shall be responsible for providing, and ~~CLEC-4Covad~~'s BellSouth Certified Vendor shall be responsible for installing and properly ~~labelling~~labeling/stenciling, the common block, and necessary cabling pursuant to Section 6.4. For all other terminations BellSouth shall designate a demarcation point on a per arrangement basis. ~~CLEC-4Covad~~ or its agent must perform all required maintenance to equipment/facilities on its side of the demarcation point, pursuant to subsection 5.5, following, and may self-provision cross-connects that may be required within the collocation space to activate service requests. At ~~CLEC-4Covad~~'s option, a Point of Termination (POT) bay or frame may be placed in the Collocation Space.

5.5 ~~CLEC-4Covad~~'s Equipment and Facilities. ~~CLEC-4Covad~~, or if required by this Attachment, ~~CLEC-4Covad~~'s BellSouth certified vendor, is solely responsible for the design, engineering, installation, testing, provisioning, performance, monitoring, maintenance and repair of the equipment and facilities used by ~~CLEC-4Covad~~. Such equipment and facilities may include but are not limited to cable(s); equipment; and point of termination connections.

5.6 Co-Carrier Cross-connect. In addition to, and not in lieu of, obtaining interconnection with, or access to, BellSouth telecommunications services, unbundled network elements, and facilities, ~~CLEC-4Covad~~ may directly connect to other Interconnectors within the designated BellSouth Central Office (including to its other virtual or physical collocated arrangements) through facilities owned by ~~CLEC-4Covad~~ or through BellSouth facilities designated by ~~CLEC-4Covad~~, at ~~CLEC-4Covad~~'s option. Such connections to other carriers may be made using either optical or electrical facilities. ~~CLEC-4Covad~~ may deploy such optical

or electrical connections directly between its own facilities and the facilities of other Interconnector(s) without being routed through BellSouth equipment.

5.6.1 If ~~CLEC-1~~Covad requests a co-Carrier cross-connect after the initial installation, ~~CLEC-1~~Covad must submit an application with a Subsequent Application Fee. ~~CLEC-1~~Covad must use a Certified Vendor to place the co-Carrier cross connect, except in cases where the ~~CLEC-1~~Covad equipment and the equipment of the other Interconnector are located within contiguous collocation spaces. In cases where ~~CLEC-1~~Covad's equipment and the equipment of the other Interconnector are located in contiguous collocation spaces, ~~CLEC-1~~Covad will have the option to deploy the co-Carrier cross connects between the sets of equipment. Where cable support structure exists for such connection there will be a recurring charge per linear foot of support structure used. When cable support structures do not exist and must be constructed a non-recurring charge for the individual case will be assessed.

5.7 Easement Space. From time to time BellSouth may require access to the Collocation Space. BellSouth retains the right to access such space for the purpose of making BellSouth equipment and building modifications (e.g., running, altering or removing racking, ducts, electrical wiring, HVAC, and cables). BellSouth will give reasonable notice to ~~CLEC-1~~Covad when access to the Collocation Space is required. ~~CLEC-1~~Covad may elect to be present whenever BellSouth performs work in the Collocation Space. The Parties agree that ~~CLEC-1~~Covad will not bear any of the expense associated with this work.

~~5.8.8 Access~~. Pursuant to Section 11, ~~CLEC-1~~Covad shall have access to the Collocation Space twenty-four (24) hours a day, seven (7) days a week, without requiring either a security escort of any kind or delaying a competitor's employees' entry into BellSouth premises in any way. ~~CLEC-1~~ agrees to provide the name, social security number, and date of birth of each employee, contractor, or agents provided with Access Keys or cards ("Access Keys") prior to the issuance of said Access Keys. Access Keys shall not be duplicated under any circumstances. ~~CLEC-1~~ agrees to be responsible for all Access Keys and for the return of all said Access Keys in the possession of ~~CLEC-1~~ employees, contractors, Guests, or agents after termination of the employment relationship, contractual obligation with ~~CLEC-1~~ or upon the termination of this Attachment or the termination of occupancy of an individual collocation arrangement.

~~5.8.1 Lost or Stolen Access Keys~~. ~~CLEC-1~~ shall notify BellSouth in writing immediately in the case of lost or stolen Access Keys. ~~CLEC-1~~ will pay BellSouth \$250.00 per Access Key(s) lost or stolen. Should it become necessary for BellSouth to re-key buildings as a result of a lost Access Key(s) or for failure to return an Access Key(s), ~~CLEC-1~~ shall pay for all reasonable costs associated with the re-keying.

5.9 Interference or Impairment. Notwithstanding any other provisions of this Attachment, equipment and facilities placed in the Collocation Space shall not substantially interfere with or substantially impair service provided by BellSouth or by any other Interconnector located in the Central Office; shall not endanger or damage the facilities of BellSouth or of any other Interconnector, the Collocation Space, or the Central Office; shall not compromise the privacy of any communications carried in, from, or through the Central Office; and shall not create an unreasonable risk of injury or death to any individual or to the public. If BellSouth reasonably determines that any equipment or facilities of ~~CLEC-1~~Covad violates the

provisions of this paragraph, BellSouth shall give written notice to ~~CLEC 4Covad~~, which notice shall direct ~~CLEC 4Covad~~ to cure the violation within forty-eight (48) hours of ~~CLEC 4Covad's~~ actual receipt of written notice or, at a minimum, to commence curative measures within 24 hours and to exercise reasonable diligence to complete such measures as soon as possible thereafter. After receipt of the notice, the parties agree to consult immediately and, if necessary, to inspect the arrangement. If ~~CLEC 4Covad~~ fails to take curative action within 48 hours or if the violation is of a character which poses an immediate and substantial threat of damage to property, injury or death to any person, or interference/impairment of the services provided by BellSouth or any other interconnector, then and only in that event BellSouth may take such action as it deems appropriate to correct the violation, including without limitation the interruption of electrical power to ~~CLEC 4Covad's~~ equipment. BellSouth will endeavor, but is not required, to provide notice to ~~CLEC 4Covad~~ prior to taking such action and shall have no liability to ~~CLEC 4Covad~~ for any damages arising from such action, except to the extent that such action by BellSouth constitutes willful misconduct.

5.10 Personalty and its Removal. Subject to requirements of this Attachment, ~~CLEC 4Covad~~ may place or install in or on the Collocation Space such facilities and equipment, including storage for and spare equipment, as it deems desirable for the conduct of business; Provided that such equipment is telecommunications equipment, does not violate floor loading requirements, imposes or could impose or contains or could contain environmental conditions or hazards. Personal property, facilities and equipment placed by ~~CLEC 4Covad~~ in the Collocation Space shall not become a part of the Collocation Space, even if nailed, screwed or otherwise fastened to the Collocation Space, but shall retain their status as personalty and may be removed by ~~CLEC 4Covad~~ at any time. Any damage caused to the Collocation Space by ~~CLEC 4Covad's~~ employees, agents or representatives during the removal of such property shall be promptly repaired by ~~CLEC 4Covad~~ at its expense.

5.11 Alterations. In no case shall ~~CLEC 4Covad~~ or any person acting on behalf of ~~CLEC 4Covad~~ make any rearrangement, modification, improvement, addition, repair, or other alteration to the Collocation Space or the BellSouth Central Office without the written consent of BellSouth, which consent shall not be unreasonably withheld. The cost of any such specialized alterations shall be paid by ~~CLEC 4Covad~~.

5.12 Janitorial Service. ~~CLEC 4Covad~~ shall be responsible for the general upkeep and cleaning of the Caged Collocation Space and shall arrange directly with a BellSouth certified contractor for janitorial services. BellSouth shall provide a list of such contractors on a site-specific basis upon request.

6. ORDERING AND PREPARATION OF COLLOCATION SPACE

~~6.1 Application for Space. CLEC 1 shall submit an application document when CLEC 1 or CLEC 1's Guest(s), as defined in Section 3.3, desires to request or modify the use of the Collocation Space.~~

~~6.1.1 Initial Application. For CLEC 1 or CLEC 1's Guest(s) initial equipment placement, CLEC 1 shall submit to BellSouth a complete and accurate Application and Inquiry document (Bona Fide Application), together with payment of the Application Fee as stated in Exhibit A. The Bona Fide Application shall contain a detailed description and schematic~~

~~drawing of the equipment to be placed in CLEC 1's Collocation Space(s) and an estimate of the amount of square footage required.~~

~~6.1.2 Subsequent Application Fee. In the event CLEC 1 or CLEC 1's Guest(s) desire to modify the use of the Collocation Space, CLEC 1 shall complete an Application document detailing all information regarding the modification to the Collocation Space together with payment of the minimum Subsequent Application Fee as stated in Exhibit A. Said minimum Subsequent Application Fee shall be considered a partial payment of the applicable Subsequent Application Fee which shall be calculated as set forth below. BellSouth shall determine what modifications, if any, to the Central Office premises are required to accommodate the change requested by CLEC 1 in the Application. Such necessary modifications to the Central Office premises may include but are not limited to, floor loading changes, changes necessary to meet HVAC requirements, changes to power plant requirements, and equipment additions. The fee paid by CLEC 1 for its request to modify the use of the Collocation Space shall be dependent upon the modification requested. Where the subsequent application does not require provisioning or construction work by BellSouth, no Subsequent Application Fee will be required and the pre-paid fee shall be refunded to CLEC 1. The fee for an application where the modification requested has limited effect (e.g., does not require capital expenditure by BellSouth) shall be the Subsequent Application Fee as set forth in Exhibit A. All other modifications shall require a Subsequent Application Fee assessed at the applicable application fee. In the event such modifications require the assessment of a full Application Fee as set forth in Exhibit A, the outstanding balance shall be due by CLEC 1 within 30 calendar days following CLEC 1's receipt of a bill or invoice from BellSouth.~~

6.1 Order. Covad shall indicate its intent to collocate in a BellSouth Central Office by submitting an Order to BellSouth. A Bona Fide Order requires Covad to submit the Expanded Interconnection Bona Fide Order document (BSTEI-1P-F) ("Bona Fide Order") and a deposit of one-half of the appropriate fees. If BellSouth needs to reevaluate Covad's Order as a result of changes requested by Covad to Covad's original Order, then BellSouth will charge Covad a fee based upon the additional engineering hours required to do the reassessment. Major changes such as requesting additional may require Covad to resubmit the Order with a fee.

~~6.2 Application Order Response. In addition to the notice of space availability pursuant to Section 2.1,~~

6.2.1 BellSouth will respond within ten (10) calendar business days of receipt of an Order, disclosing Application (1) whether any space is available within a BellSouth central office premises, (2) whether the available space requires a building permit, certificate of occupancy or other permit, and, if so, a citation to the particular state and local code requiring such permit, and (3) whether the Application Order is Bona Fide, and if it is not Bona Fide, the items necessary to cause the Application Order to become Bona Fide.

6.2.2 When If space has been determined to be available, BellSouth will provide a comprehensive written response ("Comprehensive Response") within thirty three (33) business days of receipt of a complete application Bona Fide Order. The Comprehensive Response shall state:

- (a) the date on which BellSouth received the Bona Fide Order;
- (b) whether Ordinary or Extraordinary conditions exist, as described in paragraph 6.3;
- (c) the amount and configuration of the requested space, or, if the requested space is unavailable, the amount and configuration of the available space;
- (d) the date on which BellSouth shall deliver customer facility assignments ("CFAs") as required by paragraph 6.3.3;
- (e) the date on which Covad shall provide BellSouth with Covad's Access Service Requests ("ASRs") for its desired transport circuits, as required by paragraph 6.3.2;
- (f) the date on which BellSouth shall deliver transport circuits to Covad, as required by paragraph 6.3.3;
- (g) the date on which BellSouth shall deliver the requested collocation space, as required by paragraph 6.3.

~~6.2.3 When multiple applications Orders are submitted within a fifteen (15) business day window, BellSouth will respond to the applications as soon as possible, but no later than the following: within thirtythree (33) business days for applications Orders 1-150; within thirty-six (36) business days for applications Orders 611-420; within forty-two-nine (429) business days for applications Orders 2141-4530. Response intervals for multiple applications Orders submitted within the same timeframe ten-business-day period for the same state in excess of 4530 must be negotiated. All negotiations shall consider the total volume from all requests from telecommunications companies for collocation. The Application Response will detail whether the amount of space requested is available or if the amount of space requested is not available, the amount of space that is available. The response will also include the configuration of the space. When BellSouth's response includes an amount of space less than that requested by CLEC 1 or differently configured, CLEC 1 must amend its application to reflect the actual space available prior to submitting a Bona Fide Firm Order.~~

~~6.3 Bona Fide Firm Order. CLEC 1 shall indicate its intent to proceed with equipment installation in a BellSouth Central Office by submitting a Bona Fide Firm Order to BellSouth. A Bona Fide Firm Order requires CLEC 1 to complete the Application/Inquiry process described in Subsection 6.1, preceding, and submit the Expanded Interconnection Bona Fide Firm Order document (BSTEI 1P-F) indicating acceptance of the written application response provided by BellSouth ("Bona Fide Firm Order") and all appropriate fees. The Bona Fide Firm Order must be received by BellSouth no later than thirty (30) calendar days after BellSouth's response to CLEC 1's Application/Inquiry. If CLEC 1 makes changes to its application in light of BellSouth's written Application Response, BellSouth will be required to re-evaluate and respond to the change(s). In this event, BellSouth's provisioning interval will not start until the re-evaluation and response to the change(s) is complete and the Bona Fide Firm~~

~~Order is received by BellSouth and all appropriate fees and duties have been executed. If BellSouth needs to reevaluate CLEC 1's application as a result of changes requested by CLEC 1 to CLEC 1's original application, then BellSouth will charge CLEC 1 a fee based upon the additional engineering hours required to do the reassessment. Major changes such as requesting additional space or adding additional equipment may require CLEC 1 to resubmit the application with an application fee.~~

~~6.3.1 BellSouth will establish a firm order date, per request, based upon the date BellSouth is in receipt of a Bona Fide Firm Order. BellSouth will acknowledge the receipt of CLEC 1's Bona Fide Firm Order within five (5) business days of receipt indicating that the Bona Fide Firm Order has been received. A BellSouth response to a Bona Fide Firm Order will include a Firm Order Confirmation containing the firm order date.~~

~~6.2.3.2 Not including site visits allowed for permit verification under paragraph 6.3.3. BellSouth will permit one one accompanied site visit to CLEC 1's designated collocation arrangement location after receipt of the Bona Fide Firm Order without charge to CLEC 1.~~

~~6.2.4.3 Space preparation for the Collocation Space will not begin until on the date that BellSouth receives the Bona Fide Firm Order and all 1/2 of the flat-rate fees described in Appendix A.~~

~~6.2.5.4 CLEC 1 must submit to the BellSouth Regional Security Contact the completed Access Control Request Form (RF-2906-A) for all employees or agents requiring access to the BellSouth Central Office a minimum of 30-15 calendar days prior to the date BellSouth CLEC 1 desires access to deliver the Collocation Space.~~

~~6.43 Cageless Collocation Construction and Provisioning Interval. BellSouth will negotiate construction and provisioning intervals per request on an individual case basis. Excluding the time interval required to secure the appropriate government licenses and permits, BellSouth will use best efforts to complete construction for collocation arrangements under Ordinary Conditions as soon as possible and within a maximum of forty-five (45) business calendar days from receipt of a complete and accurate Bona Fide Firm Order. Ordinary Conditions are defined as space available with only minor changes to support systems required, such as but not limited to, HVAC, cabling, cable racking, AC power, and the power plant(s). Excluding the time interval required to secure the appropriate government licenses and permits, BellSouth will use best efforts to complete construction of all other collocation space ("Extraordinary Conditions") within ninety (90) business calendar days of the receipt of a complete and accurate Bona Fide Firm Order. Extraordinary conditions are defined to include but are not limited to major BellSouth equipment rearrangement or addition required to accommodate Covad's Order; power plant addition or upgrade required to accommodate Covad's Order; major mechanical addition or upgrade required to accommodate Covad's Order; major upgrade for ADA compliance required to accommodate Covad's Order; environmental hazard or hazardous materials abatement required to accommodate Covad's Order. BellSouth will reimburse Covad in an amount equal to one tenth of the total non-recurring charge for the Collocation Space for each week of delay.~~

~~6.4.1 Joint Planning Meeting. Unless otherwise agreed to by the Parties, a joint planning meeting or other method of joint planning between BellSouth and CLEC 1 will commence within a maximum of 15 business days from BellSouth's receipt of a Bona Fide Firm Order and the payment of agreed upon fees. At such meeting, the Parties will agree to the preliminary design of the Collocation Space and the equipment configuration requirements as reflected in the Application and affirmed in the Bona Fide Firm Order. The Collocation Space Completion time period will be provided to CLEC 1 during the joint planning meeting or as soon as possible thereafter. BellSouth will complete all design work following the joint planning meeting.~~

6.3.1 Transport. When ordering DS-1, DS-3, and/or OC-3 transport circuits under this Amendment, Covad shall specify the two end points of the circuits, which at a minimum shall include: (1) an interoffice circuit between two BellSouth central offices; or (2) a dedicated circuit between Covad's collocation facilities and Covad's wire center.

6.3.2 Access Service Requests. Covad shall submit to BellSouth its Access Service Requests ("ASRs") to BellSouth for its desired transport circuits a minimum of thirty (30) calendar days before BellSouth's scheduled delivery of the collocation space. If facilities exist, BellSouth shall deliver the requested transport circuits to Covad no later than fourteen (14) calendar days after the scheduled delivery of the Collocation Space by BellSouth. If facilities do not exist, BellSouth shall deliver the requested transport circuits to Covad no later than thirty (30) days after the scheduled delivery of the Collocation Space.

6.3.3 Customer Facility Assignments ("CFAs"). BellSouth shall assign CFAs fourteen (14) calendar days before the scheduled date of delivery of the Collocation Space.

~~6.4.3.32~~ **Permits.** The Parties agree that state, county, municipal, and other building permits are not required for cageless collocation. BellSouth shall use its best efforts to assign Covad collocation space within existing infrastructure. If BellSouth determines that a building permit is required, BellSouth shall provide a tour of the relevant Central Office space within five business days of its initial response to Covad's order. Covad shall assume all responsibility for obtaining the appropriate building permits, if any, for the construction required to provision Covad's requested Collocation Space. Covad shall not be responsible for obtaining any permit or license relating to any structure, construction, or modification outside of Covad's Collocation Space. Failure of either party to obtain a building permit shall not delay the provisioning of collocation space, the provisioning of transport, or the installation and activation of Covad's equipment in the Central Office. In all cases, the parties shall use best efforts to complete the permitting process before the scheduled date of delivery of the Collocation Space. ~~Each Party or its agents will diligently pursue filing for the permits required for the scope of work to be performed by that Party or its agents within 7 business days of the completion of finalized construction designs and specifications.~~

~~6.3.4.3~~ **Acceptance Walk Through.** ~~CLEC 1~~At least five calendar days before the scheduled date of delivery of the Collocation Space, Covad and BellSouth will complete an acceptance walk through of each Collocation Space requested from BellSouth by ~~CLEC 1~~Covad. BellSouth will correct any deviations to

~~CLEC-4Covad's~~ original or jointly amended requirements within ~~five~~ three (53) business days after the walk through, unless the Parties jointly agree upon a different time frame.

6.64 Use of Certified Vendor. ~~CLEC-4Covad~~ shall select a vendor which has been approved as a BellSouth Certified Vendor to perform all engineering and installation work required in the Collocation Space. ~~In some cases, CLEC-4 must select separate BellSouth Certified Vendors for transmission equipment, switching equipment and power equipment. BellSouth shall provide CLEC-4Covad with a list of Certified Vendors upon request. The Certified Vendor(s) shall be responsible for installing CLEC-4Covad's equipment and components, installing co-carrier cross connects, extending power cabling to the BellSouth power distribution frame, performing operational tests after installation is complete, and notifying BellSouth's equipment engineers and CLEC-4Covad upon successful completion of installation. The Certified Vendor shall bill CLEC-4Covad directly for all work performed for CLEC-4Covad pursuant to this Attachment and BellSouth shall have no liability for nor responsibility to pay such charges imposed by the Certified Vendor. BellSouth shall reasonably consider certifying CLEC-4Covad or any vendor proposed by CLEC-4Covad.~~

6.65 Alarm and Monitoring. BellSouth shall place environmental alarms in the Central Office for the protection of BellSouth equipment and facilities. ~~CLEC-4Covad~~ shall be responsible for placement, monitoring and removal of environmental and equipment alarms used to service ~~CLEC-4Covad's~~ Collocation Space. Upon request, BellSouth will provide ~~CLEC-4Covad~~ with applicable tariffed service(s) to facilitate remote monitoring of collocated equipment by ~~CLEC-4Covad~~. Both parties shall use best efforts to notify the other of any verified environmental hazard known to that party. The parties agree to utilize and adhere to the Environmental Hazard Guidelines identified as Exhibit B attached hereto.

6.66 ~~Basic Telephone~~Basic Service Facilities. Upon request of ~~CLEC-4Covad~~, BellSouth will provide basic telephone service to the Collocation Space under the rates, terms and conditions of the current tariff offering for the service requested. ~~BellSouth also shall provide Covad employees, contractors, agents, and representatives with reasonable access to basic facilities, such as restroom facilities, AC power, and parking, while at BellSouth's premises.~~

6.67 Space Preparation. BellSouth shall pro rate the costs of any renovation or upgrade to Central Office space or support mechanisms ~~which that is required to accommodate cageless, shared, common, or physical collocation. CLEC-4Covad's pro rated share will be calculated by multiplying such cost by a percentage equal to the amount of square footage of renovated or upgraded space occupied by CLEC-4Covad divided by the total Central Office square footage receiving renovation or upgrade. For this section, support mechanisms provided by BellSouth may include, but not be limited to heating/ventilation/air conditioning (HVAC) equipment, HVAC duct work, cable support structure, fire wall(s), mechanical upgrade, asbestos abatement, or ground plane addition. Such renovation or upgrade will be evaluated and the charges assessed on a per Central Office basis. Covad shall not be responsible for any costs incurred by BellSouth as a result of the enclosure of BellSouth's equipment in a cage or similar structure. Renovation or upgrade to Central Office space or support mechanisms shall not delay the scheduled delivery of Collocation Space to Covad. BellSouth will reimburse Covad in an amount equal to one tenth of the total non-recurring charge for the Collocation Space for each week of delay.~~

~~BellSouth will reimburse CLEC 1 in an amount equal to CLEC 1 reasonable, demonstrative and mitigated expenditures incurred as a direct result of delays to the completion and turnover dates caused by BellSouth.~~

6.08 Virtual Collocation Transition. BellSouth offers Virtual Collocation pursuant to the rates, terms and conditions set forth in its F.C.C. Tariff No. 1. For the interconnection to BellSouth's network and access to BellSouth unbundled network elements, ~~CLEC 1~~Covad may purchase 2-wire and 4-wire Cross-Connects as set forth in Exhibit A, and ~~CLEC 1~~Covad may place within its Virtual Collocation arrangements the telecommunications equipment set forth in Section 5.1.

~~6.8.1 In the event physical collocation space was previously denied at a location due to technical reasons or space limitations, and that~~Where physical collocation space ~~has is~~ subsequently become available, ~~CLEC 1~~Covad may transition its virtual collocation arrangements to physical collocation arrangements and ~~pay the appropriate non-recurring fees for physical collocation~~pay the reasonable, actual, invoiced costs incurred by BellSouth in performing the transition, ~~and for the rearrangement or reconfiguration of services terminated in the virtual collocation arrangement~~. BellSouth shall not require Covad to segregate its equipment from BellSouth's equipment or to deploy Covad's equipment in an isolated space separate from BellSouth's equipment. ~~In~~

~~6.8.2 In the event that BellSouth knows when additional space for physical collocation may become available at the location requested by CLEC 1~~Covad, such information will be provided to ~~CLEC 1~~Covad in BellSouth's written denial of ~~physical physical or cageless collocation~~. To the extent that (i) ~~physical or cageless collocation space becomes available to CLEC 1~~Covad within 180 days of BellSouth's written denial of ~~CLEC 1~~Covad's request for physical collocation, and (ii) ~~CLEC 1~~Covad was not informed in the written denial that ~~physical or cageless collocation space would become available within such 180 days, then CLEC 1~~Covad may transition its virtual collocation arrangement to a physical collocation arrangement at no cost to Covad and will receive a credit for any ~~recurring and nonrecurring charges previously paid for such virtual collocation~~ credit for any

~~CLEC 1 must arrange with a BellSouth certified vendor for the relocation of equipment from its virtual collocation space to its physical collocation space and will bear the cost of such relocation.~~

6.109 Cancellation. If, at anytime, ~~CLEC 1~~Covad cancels its order for the Collocation Space(s), ~~CLEC 1~~Covad will reimburse BellSouth for any reasonable, actual and invoiced expenses incurred up to the date that written notice of the cancellation is received. In no event will the level of reimbursement under this paragraph exceed the maximum amount ~~CLEC 1~~Covad would have otherwise paid for work undertaken by BellSouth if no cancellation of the order had occurred.

6.140 Licenses. Covad, at its own expense, will be solely responsible for obtaining from governmental authorities, and any other appropriate agency, entity, or person, all rights, privileges, and licenses necessary or required to operate as a provider of telecommunications

services to the public or to occupy the Collocation Space, unless BellSouth's assistance or participation is required by the licensing or permitting authority.-

7. RATES AND CHARGES

7.1 Non-recurring Fees. ~~In addition to the Application Fee referenced in Section 6, preceding, CLEC-4Covad shall remit payment of a Cable Installation Fee and one-half (1/2) of the estimated Space Preparation Fee as specified in Attachment A, as applicable, coincident with submission of a Bona Fide Firm Order. The outstanding balance of the actual Space Preparation Fee shall be due thirty (30) calendar days following CLEC-4Covad's receipt of a bill or invoice from BellSouth. Once the installation of the initial equipment arrangement is complete, a subsequent application fee may apply (as described in Subsection 7.4, whenif CLEC-4Covad requests a material modification to the arrangement (as described in Subsection 7.4).~~

7.2 Documentation. BellSouth shall provide documentation, including without limitation, actual invoices, to establish the actual Space Preparation Fee. The Space Preparation Fee will be pro rated as prescribed in Section 6, preceding.

7.3 Cable Installation. Cable Installation Fee(s) are assessed per entrance fiber placed.

7.4 Floor Space. The floor space charge includes reasonable charges for lighting, heat, air conditioning, ventilation and other allocated expenses associated with maintenance of the Central Office but does not include amperage necessary to power CLEC-4Covad's equipment. When the Collocation Space is enclosed, CLEC-4Covad shall pay floor space charges based upon the number of square feet so enclosed. When the Collocation Space is not enclosed, CLEC-4Covad shall pay floor space charges based upon the following floor space calculation: [(depth of the equipment lineup in which the rack is placed) + (0.5 x maintenance aisle depth) + (0.5 x wiring aisle depth)] X (width of rack and spacers). For purposes of this calculation, the depth of the equipment lineup shall consider the footprint of equipment racks plus any equipment overhang. BellSouth will assign unenclosed Collocation Space in conventional equipment rack lineups where feasible. In the event CLEC-4Covad's collocated equipment requires special cable racking, isolated grounding or other treatment which prevents placement within conventional equipment rack lineups, CLEC-4Covad shall be required to request an amount of floor space sufficient to accommodate the total equipment arrangement. Floor space charges are due beginning with the date on which BellSouth releases the Collocation Space for occupancy or on the date CLEC-4Covad first occupies the Collocation Space, whichever is sooner.

7.5 Power. BellSouth shall supply -48 Volt (-48V) DC power for CLEC-4Covad's Collocation Space within the central office premises and shall make available AC power at CLEC-4Covad's option for Adjacent Arrangement collocation.

7.5.1 Charges for -48V DC power will be assessed per ampere per month based upon the certified vendor engineered and installed power feed fused ampere capacity. Rates include redundant feeder fuse positions (A&B) and cable rack to CLEC-

~~4Covad's~~ equipment or space enclosure. When obtaining power from a BellSouth Battery Distribution Fuse Bay, fuses and power cables (A&B) must be engineered (sized), and installed by ~~CLEC-4Covad's~~ certified vendor. When obtaining power from a BellSouth Power Board, power cables (A&B) must be engineered (sized), and installed by ~~CLEC-4Covad's~~ certified power vendor. ~~CLEC-4Covad's~~ certified vendor must also provide a copy of the engineering power specification prior to the Commencement Date. In the event BellSouth shall be required to construct additional DC power plant or upgrade the existing DC power plant in a Central Office as a result of ~~CLEC-4Covad's~~ request to collocate in that Central Office ("Power Plant Construction"), ~~CLEC-4Covad~~ shall pay its pro-rata share of costs associated with the Power Plant Construction. The determination of whether Power Plant Construction is necessary shall be within BellSouth's sole, but reasonable, discretion. BellSouth shall comply with all BellCore (Telcordia) and ANSI Standards regarding power cabling, including BellCore (Telcordia) Network Equipment Building System (NEBS) Standard GR-63-CORE. BellSouth will notify ~~CLEC-4Covad~~ of the need for the Power Plant Construction and will estimate the costs associated with the Power Plant Construction if BellSouth were to perform the Power Plant Construction. The costs of power plant construction shall be pro-rated and shared among all who benefit from that construction. ~~CLEC-4Covad~~ shall pay BellSouth one-half of its prorata share of the estimated Power Plant Construction costs prior to commencement of the work. ~~CLEC-4Covad~~ shall pay BellSouth the balance due (actual cost less one-half of the estimated cost) within thirty (30) days of completion of the Power Plant Construction. ~~CLEC-4Covad~~ has the option to perform the Power Plant Construction itself; provided, however, that such work shall be performed by a BellSouth certified contractor and such contractor shall comply with BellSouth's guidelines and specifications. Where the Power Plant Construction results in construction of a new power plant room, upon termination of this Attachment ~~CLEC-4Covad~~ shall have the right to remove its equipment from the power plant room, but shall otherwise leave the room intact. Where the Power Plant Construction results in an upgrade to BellSouth's existing power plant, upon termination of this Attachment, such upgrades shall become the property of BellSouth.

7.5.2 Charges for AC power will be assessed per breaker ampere per month based upon the certified vendor engineered and installed power feed fused ampere capacity. Rates include the provision of commercial and standby AC power. When obtaining power from a BellSouth Service Panel, fuses and power cables must be engineered (sized), and installed by ~~CLEC-4Covad's~~ certified vendor. ~~CLEC-4Covad's~~ certified vendor must also provide a copy of the engineering power specification prior to the Commencement Date. Charges for AC power shall be assessed pursuant to the rates specified in Exhibit A. AC power voltage and phase ratings shall be determined on a per location basis.

7.6 Security Escort. A security escort will be required whenever ~~CLEC-4Covad~~ or its approved agent desires access to the entrance manhole, ~~or must have access to the Central Office Premises after the one accompanied site visit allowed pursuant to subsection 6.2.2 prior to completing BellSouth's Security Training requirements and/or prior to Space Acceptance.~~ Rates for a security escort are assessed in one-half (1/2) hour increments according to the schedule appended hereto as Exhibit A.

7.7 Rate "True-Up." The Parties agree that the prices reflected ~~as interim herein~~ shall be "trued-up" (up or down) ~~for the preceding six months based on final prices either determined by further agreement or by final order, including any appeals, in a proceeding involving BellSouth before the regulatory authority for the state in which the services are being performed or any other body having jurisdiction over this agreement, including without limitation the Federal Communications Commission (hereinafter "Commission").~~ Under the "true-up" process, the interim price for each service shall be multiplied by the volume of that service purchased to arrive at the total interim amount paid for that service ("Total Interim Price"). The final price for that service shall be multiplied by the volume purchased to arrive at the total final amount due ("Total Final Price"). The Total Interim Price shall be compared with the Total Final Price. If the Total Final Price is more than the Total Interim Price, ~~CLEC-4Covad~~ shall pay the difference to BellSouth. If the Total Final Price is less than the Total Interim Price, BellSouth shall pay the difference to ~~CLEC-4Covad~~. Each party shall keep its own records upon which a "true-up" can be based and any final payment from one party to the other shall be in an amount agreed upon by the Parties based on such records. ~~In the event of any disagreement as between the records or the Parties regarding the amount of such "true up," the Parties agree that the Commission shall be called upon to resolve such differences.~~

7.8 Other. ~~If no rate is identified in the contract, the rate for the specific service or function will be negotiated by the parties upon request by either party.~~ Payment of all other charges under this Attachment shall be due thirty (30) days after receipt of the bill (payment due date). ~~CLEC-4Covad~~ will pay a late payment charge of one and one-half percent (1-1/2%) assessed monthly on any balance which remains unpaid after the payment due date.

8. INSURANCE

8.1 ~~CLEC-4~~ The Parties shall, at ~~its~~ ~~their~~ sole cost and expense, procure, maintain, and keep in force insurance as specified in this Article VI and underwritten by insurance companies licensed to do business in the states applicable under this Attachment and having a BEST Insurance Rating of B ++ X (B ++ ten).

8.2 ~~CLEC-4~~ The Parties shall maintain the following specific coverage:

8.2.1 Commercial General Liability coverage in the amount of ten million dollars (\$10,000,000.00) or a combination of Commercial General Liability and Excess/Umbrella coverage totaling not less than ten million dollars (\$10,000,000.00). BellSouth shall be named as an ADDITIONAL INSURED on ALL applicable policies of Covad as specified herein. Covad shall be named as an ADDITIONAL INSURED on ALL applicable policies BellSouth as specified herein.

8.2.2 Statutory Workers Compensation coverage and Employers Liability coverage in the amount of one hundred thousand dollars (\$100,000.00) each accident, one hundred thousand dollars (\$100,000.00) each employee by disease, and five hundred thousand dollars (\$500,000.00) policy limit by disease.

8.2.3 ~~CLEC-4~~ The Parties may elect to purchase business interruption and contingent business interruption insurance, having been advised that

~~BellSouth~~ each Party assumes no liability for loss of profit or revenues of another Party should an interruption of service occur.

8.3 The limits set forth in Subsection 6.2 above may be increased by BellSouth from time to time during the term of this Attachment upon thirty (30) days notice to ~~CLEC-4Covad~~ to at least such minimum limits as shall then be customary with respect to comparable occupancy of BellSouth structures.

8.4 All policies purchased by ~~CLEC-4a Party~~ shall be deemed to be primary and not contributing to or in excess of any similar coverage purchased by ~~BellSouth~~ the other Party. All insurance must be in effect on or before the date equipment is delivered to BellSouth's Central Office and shall remain in effect for the term of this Attachment or until all ~~CLEC-4Covad's~~ property has been removed from BellSouth's Central Office, whichever period is longer. If ~~CLEC-4~~ either Party fails to maintain required coverage, ~~BellSouth~~ the other Party may pay the premiums thereon and seek reimbursement of same from ~~CLEC-4~~ the failing Party.

8.5 ~~CLEC-4~~ The Parties shall submit certificates of insurance reflecting the coverage required pursuant to this Section a minimum of ten (10) calendar days prior to the commencement of any work in delivery of the Collocation Space. BellSouth's failure to meet this interval may shall not result in construction and equipment installation delays. ~~CLEC-4~~ Each party shall arrange for ~~BellSouth~~ the other party to receive thirty (30) days advance notice of cancellation from ~~CLEC-4's~~ insurance company. ~~CLEC-4Covad~~ shall forward a certificate of insurance and notice of cancellation to BellSouth at the following address:

BellSouth Telecommunications, Inc.
Attn.: Risk Management Coordinator
600 N. 19th Street, 18B3
Birmingham, Alabama 35203.

BellSouth shall forward a certificate of insurance and notice of cancellation to Covad at the following address:

Covad Communications Company
Attn.: Contracts Administrator
2330 Central Expressway
Santa Clara, California 95050.

8.6 ~~CLEC-4Covad~~ must conform to recommendations made by BellSouth's fire insurance company to the extent BellSouth has agreed to, or shall hereafter agree to, such recommendations.

8.7 Failure to comply with the provisions of this Section will be deemed a material breach of this Attachment.

9. MECHANICS LIENS

9.1 If any mechanics lien or other liens shall be filed against property of either party (BellSouth or ~~CLEC-4Covad~~), or any improvement thereon by reason of or arising out of any

labor or materials furnished or alleged to have been furnished or to be furnished to or for the other party or by reason of any changes, or additions to said property made at the request or under the direction of the other party, the other party directing or requesting those changes shall, within thirty (30) days after receipt of written notice from the party against whose property said lien has been filed, either pay such lien or cause the same to be bonded off the affected property in the manner provided by law. The party causing said lien to be placed against the property of the other shall also defend, at its sole cost and expense, on behalf of the other, any action, suit or proceeding which may be brought for the enforcement of such liens and shall pay any damage and discharge any judgment entered thereon.

10. INSPECTIONS

10.1 Upon written request and no later than five (5) calendar days after delivery of the Collocation Space, ~~BellSouth shall~~ **conduct an inspection of CLEC-4Covad's equipment and facilities in the Collocation Space(s)** for violation of NEBS-1 safety standards. ~~prior to the activation of facilities between CLEC-1's equipment and equipment of BellSouth. Failure of BellSouth to request or conduct the inspection of Covad equipment in the time allotted will waive BellSouth's right to conduct an inspection.~~ BellSouth's inspection shall not delay activation of Covad's equipment unless violations of NEBS-1 safety standards are discovered and communicated expressly and in writing by BellSouth to Covad. In such instances, Covad may activate service upon notice to BellSouth of the cure of such safety violations, if any. **BellSouth may conduct an inspection if CLEC-4Covad adds equipment and may otherwise conduct routine inspections of safety measures at reasonable intervals if mutually agreed upon by the Parties. BellSouth shall provide CLEC-4Covad with a minimum of forty-eight (48) hours or two (2) business days, whichever is greater, advance written notice of all such inspections. All costs of such inspection shall be borne by BellSouth.**

11. ~~44.~~ SECURITY AND SAFETY REQUIREMENTS

11.1 Reasonable Security Measures. BellSouth may impose only those reasonable security measures expressly identified in this Section. BellSouth shall not use any information collected in the course of implementing or operating security arrangements for any marketing or other purpose in aid of competing with other carriers.

11.2 Access Keys. The Parties agree to provide the name, social security number, and date of birth of each existing employee, contractor, or agent provided with Access Keys or cards to a particular central office ("Access Keys") seven (7) calendar days prior to the issuance of said Access Keys or upon the initial delivery of Covad's collocation space in a particular central office. The Parties shall provide the name, social security number, and date of birth for each new employee, contractor, or agent provided with Access Keys three (3) calendar days prior to the issuance of said Access Keys. Access Keys shall not be duplicated under any circumstances. The Parties agree to be responsible for all Access Keys and for the return of all said Access Keys in the possession of their employees, contractors, Guests, or agents after termination of the employment relationship, applicable contractual obligation, or upon the termination of this Attachment.

11.1.1 BellSouth Security Contact. BellSouth shall designate a single employee to act as the sole contact with BellSouth for the ordering, delivery, and return of Access Keys and the exchange of any information described in this Section.

11.1.2 Delivery of Access Keys. On the date of delivery of the Collocation Space, BellSouth shall deliver Access Keys for all Covad employees, contractors, agents, or representatives requiring access to the relevant BellSouth central office premises.

11.1.3 Lost or Stolen Access Keys. Covad shall notify BellSouth in writing immediately in the case of lost or stolen Access Keys. Covad will pay BellSouth for reasonable, actual, and invoiced costs incurred per Access Key(s) lost or stolen. Should it become necessary for BellSouth to re-key buildings as a result of a lost Access Key(s) or for failure to return an Access Key(s), Covad shall pay for all reasonable, actual, and invoiced costs incurred for the re-keying.

11.42 Only BellSouth employees, BellSouth certified vendors and authorized employees, authorized Guests, pursuant to Section 3.3, preceding, or authorized agents of CLEC-4Covad will be permitted in the BellSouth Central Office. CLEC-4The Parties shall provide ~~to their~~ employees and agents with picture identification which must be worn and visible at all times while in the Collocation Space or other areas in or around the Central Office. The photo identification card shall bear, at a minimum, the employee's name and photo, and ~~the CLEC-4Party's name.~~ BellSouthThe Parties reserves the right to remove from its premises any employee ~~of CLEC-4~~ not possessing the required identification ~~issued by CLEC-4.~~ CLEC-4The Parties shall hold BellSouth each other harmless for any damages resulting from such removal of its personnel from BellSouth any Party's premises. CLEC-4The Parties shall be solely responsible for ensuring that any their respective Guests of CLEC-4 is ~~are~~ in compliance with all subsections of this Section 11.

11.24.1 CLEC-4The Parties will be required, at ~~their~~ own expense, to conduct a statewide investigation of criminal history records for each CLEC-4 employee being considered for work on the BellSouth Central Office, for the states/counties where the CLEC-4 employee has worked and lived for the past five years. Where state law does not permit statewide collection or reporting, an investigation of the applicable counties ~~if permitted,~~ is acceptable.

11.24.2 CLEC-4Covad will be required to administer to their personnel assigned to the BellSouth Central Office security training either provided by BellSouth, or meeting criteria defined by BellSouth. BellSouth shall be required to administer the same training to their personnel assigned to the BellSouth Central Office.

11.24.3 CLEC-4The Parties shall not assign to the BellSouth Central Office any personnel with records of felony criminal convictions. CLEC-4The Parties shall not assign to the BellSouth Central Office any personnel with records of misdemeanor convictions, without advising BellSouth of the nature and gravity of the offense(s). BellSouthThe Parties reserves shall have the right to refuse building access to any CLEC-4 personnel who have been identified to have misdemeanor criminal convictions.

~~11.1.4~~ 11.2.4 For each CLEC 1 employee requiring access to a BellSouth Central Office pursuant to this agreement, ~~CLEC 1 each Party~~ shall furnish ~~BellSouth the other Party~~, prior to an employee gaining such access, a notarized affidavit certifying that the aforementioned background check and security training were completed. The affidavit will contain a statement certifying no felony convictions were found and certifying that the security training was completed by the employee. If the employee's criminal history includes misdemeanor convictions, ~~CLEC 1 the responsible Party~~ will disclose the nature of the convictions ~~to BellSouth at that time.~~

11.24.5 At ~~BellSouth's either Party's~~ request, ~~CLEC 1 each Party~~ shall promptly remove from the BellSouth's premises any employee of ~~CLEC 1 BellSouth that Party that the other Party~~ does not wish to grant access to its premises pursuant to any investigation conducted ~~by BellSouth.~~

~~11.211.3~~ Notification to BellSouth. ~~BST reserves the right to interview CLEC 1's employees, agents, or contractors. CLEC 1 and its contractors shall cooperate fully with BellSouth's investigation into allegations of wrongdoing or criminal conduct committed by or involving CLEC 1's employees, agents, or contractors. Additionally, BellSouth reserves the right to bill CLEC 1 for all costs associated with investigations involving its employees, agents, or contractors if it can be reasonably established that CLEC 1's employees, agents, or contractors are responsible for the alleged act. BellSouth shall bill CLEC 1 for BellSouth property which is stolen or damaged where an investigation determines the culpability of CLEC 1's employees, agents, or contractors. CLEC 1 Covad shall apply to its employees that same disciplinary measures and procedures applied by BellSouth to BellSouth employees. Upon execution of this Attachment, BellSouth shall provide a written statement of disciplinary measures and procedures that apply to BellSouth employees, including without limitation the policies set forth in the BellSouth CLEC Security Training. Each Party shall notify BellSouth the other Party in writing immediately in the event that the CLEC a Party discovers one of its employees already working on the BellSouth premises is a possible security risk. BellSouth The Parties reserves the right to permanently remove from its premises any employee of CLEC 1 identified as posing a security risk to BellSouth, Covad or any other CLEC, or having violated BellSouth policies set forth in the BellSouth CLEC Security Training. CLEC 1 Each Party shall hold BellSouth the other Party harmless for any damages resulting from such removal of its personnel from BellSouth the premises.~~

~~11.311.4~~ Use of BellSouth Supplies by CLEC 1 Employees. Use of any BellSouth supplies by an ~~CLEC 1~~ employee of a Party that do not belong to that Party, whether or not used routinely to provide telephone service (e.g. plug-in cards,) will be considered theft and will be handled accordingly. Costs associated with such unauthorized use of BellSouth property may be charged to ~~CLEC 1 the offending Party~~ as may be all associated investigative costs. At ~~BellSouth's either Party's~~ request, ~~CLEC 1 the offending Party~~ shall promptly and permanently remove from BellSouth's Central Office any employee of ~~CLEC 1~~ found to be in violation of this rule.

11.45 Use of Official Lines by ~~CLEC 1 Covad~~ Employees. Except for local calls necessary in the performance of their work, ~~CLEC 1 Covad~~ employees shall not use the telephones on BellSouth Central Office. Charges for unauthorized telephone calls made by a ~~CLEC 1 Covad's~~ employees may be charged to ~~CLEC 1 Covad, as may be all associated~~

~~investigative costs. At BellSouth's request, CLEC 1 shall promptly and permanently remove from BellSouth's premises any employee of CLEC 1 found to be in violation of this rule.~~

11.56 Accountability. Full compliance with the Security requirements of this section shall in no way limit the accountability of ~~any CLEC~~ either Party for the improper actions of its employees.

11.7 Costs of Security Measures. Both BellSouth and Covad shall pay their pro rata shares of the reasonable, actual, invoiced costs incurred by BellSouth for such security measures stated herein. Covad shall not be responsible for any costs incurred by BellSouth for the segregation or enclosure of BellSouth equipment.

12. DESTRUCTION OF COLLOCATION SPACE

12.1 In the event a Collocation Space is wholly or partially damaged by fire, windstorm, tornado, flood or by similar ~~causes events~~, without fault of BellSouth, to such an extent as to be rendered wholly unsuitable for ~~CLEC 1~~ Covad's permitted use hereunder, then either party may elect within ten (10) days after such damage, to terminate this Attachment with regard to that Space, and if either party shall so elect, by giving the other written notice of termination, both parties shall stand released of and from further liability under the terms hereof with regard to the particular Space. If the Collocation Space shall suffer only minor damage as a result of the events described above and shall not be rendered wholly unsuitable for ~~CLEC 1~~ Covad's permitted use, or is damaged and the option to terminate is not exercised by either party, BellSouth covenants and agrees to proceed promptly without expense to ~~CLEC 1~~ Covad, except for improvements not the property of BellSouth, to repair the damage. BellSouth shall have a reasonable time within which to ~~use its best efforts to~~ rebuild or make any repairs as soon as possible, and such rebuilding and repairing shall be subject to delays caused by ~~storms, shortages of labor and materials, government regulations, strikes, walkouts, and causes beyond the control of BellSouth, which causes shall not be construed as limiting factors, but as exemplary only.~~ ~~CLEC 1~~ Covad may, at its own expense, accelerate the rebuild of its collocated space and equipment provided however that a certified vendor is used and the necessary space preparation has been completed. Rebuild of equipment must be performed by a BellSouth Certified Vendor. If ~~CLEC 1~~ Covad's acceleration of the project increases the cost of the project, then those additional charges will be incurred by ~~CLEC 1~~ Covad. Where allowed by law, and where practical, ~~CLEC 1~~ Covad may erect a temporary facility while BellSouth rebuilds or makes repairs. In all cases where the Collocation Space shall be rebuilt or repaired, ~~CLEC 1~~ Covad shall be entitled to an equitable abatement of rent and other charges, depending upon the unsuitability of the Collocation Space for ~~CLEC 1~~ Covad's permitted use, until such Collocation Space is fully repaired and restored and ~~CLEC 1~~ Covad's equipment installed therein (but in no event later than thirty (30) days after the Collocation Space is fully repaired and restored). Where ~~CLEC 1~~ Covad has placed an Adjacent Arrangement pursuant to section 3.4, ~~CLEC 1~~ Covad shall have the sole responsibility to repair or replace said Adjacent Arrangement provided herein. Pursuant to this section, BellSouth will restore the associated services to the Adjacent Arrangement.

13. EMINENT DOMAIN

13.1 If the whole of a Collocation Space or Adjacent Arrangement shall be taken by any public authority under the power of eminent domain, then this Attachment shall terminate as of the day possession shall be taken by such public authority and rent and other charges for the Collocation Space or Adjacent Arrangement shall be paid up to that day with proportionate refund by BellSouth of such rent and charges as may have been paid in advance for a period subsequent to the date of the taking. If any part of the Collocation Space or Adjacent Arrangement shall be taken under eminent domain, BellSouth and ~~CLEC-1Covad~~ shall each have the right to terminate this Attachment and declare the same null and void, by written notice of such intention to the other party within ten (10) days after such taking.

14. NONEXCLUSIVITY

14.1 ~~CLEC-1Covad~~ understands that this Attachment is not exclusive and that BellSouth may enter into similar agreements with other parties. Assignment of space pursuant to all such agreements shall be determined by space availability and made on a first come, first served basis.

EXHIBIT A: BELL SOUTH/CLEC ~~1Covad~~ RATES – ALABAMA
PHYSICAL COLLOCATION

Rates marked with an asterisk (*) are interim and are subject to true-up

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1BB	Flat-Rate Space Preparation Fee* (Note 2)			
	Mechanical / HVAC*	Per ten (one ten minimum)		\$2,400.00 10,000.00
	Ground Bar*	Per Connection		0
	Project Management*	Per arrangement		\$15,000.00
	Cable Racking / Fiber Duct	Per arrangement, square foot		\$25,000.00
	Frame / Aisle Lighting	Per arrangement, square foot		\$720.00
	Framework Ground Conductors	Per arrangement		\$1675.00
	Extraordinary Modifications	Per arrangement		ICB
	Two-Bay Cageless Space			ICB
	Four-Bay Cageless Space			ICB
	Six-Bay Cageless Space			ICB
	Space Enclosure (Note 3) Requested Prior to 6/1/99			
PE1BW	Welded Wire-mesh	Per first 100 sq. ft.	\$189.86	NA
PE1CW	Welded Wire-mesh	Per add'l 50 sq. ft.	\$19.29	NA
PE1PJ	Floor Space	Per square foot	\$3.85	NA
PE1BD	Cable Installation	Per Cable	NA	\$2,335.00 Disconnect Charge \$54.39
PE1PM	Cable Support Structure	Per entrance cable	\$23.23	NA

EXHIBIT A: BELLSOUTH/CLEC-1Covad RATES - ALABAMA
PHYSICAL COLLOCATION (cont.)

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1PL	Power -48V DC Power 120V AC Power single phase* 240V AC Power single phase* 120V AC Power three phase* 277V AC Power three phase*	Per amp Per breaker amp Per breaker amp Per breaker amp Per breaker amp	\$7.14 \$5.50 \$11.00 \$16.50 \$38.20	ICB ICB ICB ICB ICB
PE1P2 PE1P4 PE1P1 PE1P3 PE1F2 PE1F4	Cross Connects (Note 4) 2-wire 4-wire DS-1 DS-3 2-fiber 4-fiber 2-wire 4-wire DS-1 DS-3	Per Cross Connect	\$.28 \$.56 \$2.14 \$38.63 \$10.44 \$18.76	First / Additional \$30.76 / \$29.40 \$31.01 / \$29.58 \$60.81 / \$41.71 \$57.80 / \$39.81 \$73.00 / \$52.00 \$88.00 / \$67.00 Disconnect Charges First / Additional \$12.75 / \$11.38 \$12.82 / \$11.39 \$12.85 / \$11.50 \$14.93 / \$11.76
PE1ES Fiber PE1DS Copper	Co-Carrier Cross-Connect (Note 5) Fiber Arrangement Copper or Coaxial	Cable Support Structure, per linear foot (existing) Cable Support Structure (new)	\$0.06 \$0.03 NA	NA NA ICB
PE1A1	Security Access System Security system* New Access Card Activation* Administrative change, existing card* Replace lost or stolen card*	Per Central Office Per Card Per Card Per Card	\$52.00	\$55.00 \$35.00 \$250.00
	Space Availability Report*	Per Central Office Requested		\$550.00

EXHIBIT A: BELLSOUTH/CLEC-1-Covad RATES - ALABAMA
PHYSICAL COLLOCATION (cont.)

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
	POT Bay Arrangements Prior to 6/1/99	Per Cross Connect		
PE1PE	2 Wire Cross-Connect		\$0.08	NA
PE1PF	4 Wire Cross-Connect		\$0.17	NA
PE1PG	DS1 Cross-Connect		\$0.69	NA
PE1PH	DS3 Cross-Connect		\$4.74	NA
PE1B2	2 Fiber Cross-Connect		\$25.89	NA
PE1B4	4 Fiber Cross-Connect		\$34.91	NA
AEH	Additional Engineering Fee (Note 6)	Per request, First half hour/Add'l Half hour		First / Additional Basic Time - \$31.00 / \$22.00 Overtime - \$37.00 / \$26.00
	Security Escort			
PE1BT	Basic Time	Per 1/2	NA	\$43.47/\$25.82
PE1OT	Overtime	hour/Additional	NA	\$55.25/\$32.79
PE1PT	Premium Time	Half-hour	NA	\$67.03/\$39.76

**EXHIBIT A: BELLSOUTH/CLEC 4Covad RATES - ALABAMA
PHYSICAL COLLOCATION (cont.)**

Note(s):

N/A refers to rate elements which do not have a negotiated rate.

- ~~(1) Subsequent Application Fee:~~ BellSouth requires the submission of an Application Fee for modifications to an existing arrangement. However, when the modifications do not require BellSouth to expend capital, BellSouth will assess the Subsequent Application Fee in lieu of the Application Fee. Proposed modifications that could result in assessment of a Subsequent Application Fee would cause BellSouth to analyze the following but are not limited to: floor loading changes, changes to HVAC requirements, power requirement changes which may result in a power plant upgrade, environmental or safety requirements, or equipment relocation. Should the Subsequent Application Fee not be included as part of this Attachment, CLEC 4Covad will be assessed the full Application Fee for all subsequent activity for completed arrangements.
- ~~(21) Space Preparation Fee:~~ The Space Preparation Fee is a one-time fee, assessed per arrangement, per location. It recovers the costs associated with the shared physical collocation area within a Central Office, which include survey, engineering, design and modification costs for network, building and support systems. In the event CLEC 4Covad opts for non-enclosed space, the space preparation fee will be assessed based on the total floor space dedicated to CLEC 4Covad as prescribed in Section 7 of the Collocation Attachment.
- ~~(32) Space Enclosure:~~ For cages requested prior to June 1, 1999, the Space Enclosure Construction Fee is a monthly recurring fee, assessed per enclosure, per location with a one-hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, materials, and installation costs. The cost for additional square feet is applicable only when ordered with the first 100 square feet and must be requested in fifty (50) square foot increments. CLEC 4Covad may, at its option, arrange with a BellSouth certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In this event, the contractor shall directly bill CLEC 4Covad for the space enclosure, and this fee shall not be applicable.
- ~~(43) Cross Connects:~~ The charges for cross connects are for orders placed electronically. Cross connect elements may also be ordered manually for which there is an additional charge per element.

		Disconnect Charges
	First / Additional	First / Additional
2-wire	\$34.03 / \$32.67	\$14.48 / \$13.11
4-wire	\$34.28 / \$32.85	\$14.55 / \$13.12
DS-1	\$64.08 / \$44.98	\$14.58 / \$13.23
DS-3	\$61.07 / \$43.08	\$16.66 / \$13.49

~~(4)~~

Co-Carrier Cross-Connect: As stated in Section 1.2 of the Collocation Attachment, CLEC 4Covad may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the co-Carrier cross connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-Carrier cross connection requested, the recurring charges as stated in this Exhibit A shall apply.

- ~~(55) Additional Engineering Fee:~~ BellSouth's additional engineering, and other labor costs associated with handling CLEC 4Covad-requested modifications to requests in progress or augmentations to existing arrangements shall be recovered as Additional Engineering charges, under provisions in BellSouth's F.C.C. Number 1 Tariff, Sections 13.1 and 13.2. Should Additional Engineering rates not be included, CLEC 4Covad agrees not to make changes to collocation arrangement after a Bona Fide Firm Order is submitted.

EXHIBIT A: BELLSOUTH/CLEC-1 Covad RATES - FLORIDA
PHYSICAL COLLOCATION

Rates marked with an asterisk (*) are interim and are subject to true-up

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1BB	Flat-Rate Space Preparation Fee* (Note 2)			
	Two-Bay Cageless Space			\$10,000.00
	Four-Bay Cageless Space			\$15,000.00
	Six-Bay Cageless Space			\$25,000.00
	Space Enclosure (Note 3) <i>Requested Prior to 6/1/99</i>			
PE1BW	Wire Cage	Per first 100 sq. Ft.	\$41.99	NA
PE1BC	Gypsum Board Cage	Per first 100 sq. Ft.	\$84.10	NA
PE1BF	Fire Rated Cage	Per first 100 sq. Ft.	\$99.73	NA
PE1CW	Wire Cage	Per add'l 50 sq. Ft.	\$4.14	NA
PE1CC	Gypsum Board Cage	Per add'l 50 sq. Ft.	\$9.35	NA
PE1CF	Fire Rated Cage	Per add'l 50 sq. Ft.	\$11.30	NA
PE1PJ	Floor Space	Per sq. Ft.	\$4.25	NA
PE1BD	Cable Installation	Per Cable	\$2.77	\$1,056.00
PE1PM	Cable Support Structure		\$22.94	NA

EXHIBIT A: BELLSOUTH/CLEC-1Covad RATES - FLORIDA
PHYSICAL COLLOCATION (cont.)

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1PL	Power			
	-48V DC Power	Per amp	\$7.14	ICB
	120V AC Power single phase *	Per breaker amp	\$5.50	ICB
	240V AC Power single phase*	Per breaker amp	\$11.00	ICB
	120V AC Power three phase*	Per breaker amp	\$16.50	ICB
	277V AC Power three phase*	Per breaker amp	\$38.20	ICB
PE12C	Cross Connects (Note 4)	Per Cross Connect		
PE14C	2-wire		\$0.0524	\$11.57
	4-wire		\$0.0524	\$11.57
PE11S	DS-1/DCS		\$8.085	\$69.64
PE11X	DS-1/DSX		\$4.110	\$69.64
PE13S	DS-3/DCS		\$56.97	\$528.00
PE13X	DS-3/DSX		\$10.06	\$528.00
PE1F2	Optical Cross Connects		\$6.46	\$2,431.00
	Co-Carrier Cross-Connect (Note 5)			
PE1ES	Fiber Cable Support Structure, existing	Per linear foot	\$0.06	NA
PE1DS	Copper or Coaxial Cable Support Structure, existing	Per linear foot	\$0.03	NA
(TBD)	Cable Support Structure Construction, new	Per new construction	NA	ICB
PE1A2	Security Access System Security System*	Per Central Office	\$95.00	
	New Access Card Activation*	Per request-5 cards	NA	\$85.12
	Administrative change, existing card*	Per Card		\$35.00
	Replace lost or stolen card*	Per Card		\$250.00
	Space Availability Report *	Per Central Office Requested		\$550.00
	POT Bay (Note 6)		NA	NA

EXHIBIT A: BELLSOUTH/CLEC-1Covad RATES - FLORIDA
PHYSICAL COLLOCATION (cont.)

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
AEH	Additional Engineering Fee (Note 7)	Per request, First half hour/Add'l half hour		First /Add'l Basic Time - \$31.00/\$22.00 Overtime - \$37.00/\$26.00
	Security Escort			
	Basic Time	Per ¼ hour	NA	\$10.89
	Overtime	Per ¼ hour	NA	\$13.64
	Premium Time	Per ¼ hour	NA	\$16.40

Note(s):

N/A refers to rate elements which do not have a negotiated rate.

(1) **Space Preparation Fee:** The Space Preparation Fee is a one-time fee, assessed per arrangement, per location. It recovers the costs associated with the shared physical collocation area within a Central Office, which include survey, engineering, design and modification costs for network, building and support systems. In the event Covad opts for non-enclosed space, the space preparation fee will be assessed based on the total floor space dedicated to Covad as prescribed in Section 7 of the Collocation Attachment.

(2) **Space Enclosure:** For cages requested prior to June 1, 1999, the Space Enclosure Construction Fee is a monthly recurring fee, assessed per enclosure, per location with a one-hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, materials, and installation costs. The cost for additional square feet is applicable only when ordered with the first 100 square feet and must be requested in fifty (50) square foot increments. Covad may, at its option, arrange with a BellSouth certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In this event, the contractor shall directly bill Covad for the space enclosure, and this fee shall not be applicable.

(3) **Cross Connects:** The charges for cross connects are for orders placed electronically. Cross connect elements may also be ordered manually for which there is an additional charge per element.

	Disconnect Charges	
	First / Additional	First / Additional
2-wire	\$34.03 / \$32.67	\$14.48 / \$13.11
4-wire	\$34.28 / \$32.85	\$14.55 / \$13.12
DS-1	\$64.08 / \$44.98	\$14.58 / \$13.23
DS-3	\$61.07 / \$43.08	\$16.66 / \$13.49

(4) **Co-Carrier Cross-Connect:** As stated in Section 1.2 of the Collocation Attachment, Covad may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the co-carrier cross connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-carrier cross connection requested, the recurring charges as stated in this Exhibit A shall apply.

N/A refers to rate elements which do not have a negotiated rate.

(1) **Subsequent Application Fee:** BellSouth requires the submission of an Application Fee for modifications to an existing arrangement. However, when the modifications do not require BellSouth

to expend capital. BellSouth will assess the Subsequent Application Fee in lieu of the Application Fee. Proposed modifications that could result in assessment of a Subsequent Application Fee would cause BellSouth to analyze the following but are not limited to: floor loading changes, changes to HVAC requirements, power requirement changes which may result in a power plant upgrade, environmental or safety requirements, or equipment relocation. Should the Subsequent Application Fee not be included as part of this Attachment, CLEC 1 will be assessed the full Application Fee for all subsequent activity for completed arrangements.

- (2) ~~Space Preparation Fee~~ The Space Preparation Fee is a one time fee, assessed per arrangement, per location. It recovers costs associated with the shared physical collocation area within a Central Office, which include survey, engineering, design and modification costs for network, building and support systems. BellSouth will pro-rate the total shared space preparation costs among the collocators at each location based on the amount of square footage occupied by each collocator. This charge may vary depending on the location and type of arrangement requested.
- (3) ~~Space Enclosure Fee~~ For cages requested prior to June 1, 1999, the Space Enclosure Construction Fee is a monthly recurring fee, assessed per enclosure, per location with a one hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, materials, and installation costs. The cost for additional square foot is applicable only when ordered with the first 100 square feet and must be requested in fifty (50) square foot increments. CLEC 1 may, at its option, arrange with a BellSouth certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In this event, the contractor shall directly bill CLEC 1 for the space enclosure, and this fee shall not be applicable.

- (4) ~~Cross Connects~~ Rates shown are the equivalent per cross connect rates based on the Florida PSC Ordered rates as follows:

Cross Connects	Per Cross Connect	RC	NRC
2 wire	Per 100 X Connects	\$5.24	\$1,157.00
4 wire	Per 100 X Connects	\$5.24	\$1,157.00
DS-1/DCS	Per 28 X Connects	\$226.30	\$1,050.00
DS-1/DSX	Per 28 X Connects	\$11.51	\$1,050.00
DS-3/DCS	Per Cross Connect	\$56.97	\$528.00
DS-3/DSX	Per Cross Connect	\$10.06	\$528.00
Optical Cross Connects	Per Cross Connect	\$6.46	\$2,431.00

EXHIBIT A: BELLSOUTH/CLEC 4Covad RATES - FLORIDA
PHYSICAL COLLOCATION (cont.)

~~(5) Co-Carrier Cross-Connect:~~ As stated in Section 5 of the Collocation Attachment, CLEC 4 may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the direct connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the direct connection requested, the recurring charges as stated in this Exhibit A shall apply.

~~(6)(5)~~ **POT Bays:** BellSouth's Florida specific rates were established in the Florida Public Service Commission Docket No. 960833. The Commission did not set permanent rates for **POT Bays**, given the assumption by the parties to the Proceeding that they will always provide their own POT Bays. It will be necessary for CLEC 4Covad to provide its own POT Bays per BellSouth specifications and provide the necessary information from which BellSouth can inventory.

(7) Additional Engineering Fee: BellSouth's additional engineering, and other labor costs associated with handling CLEC 4Covad-requested modifications to requests in progress or augmentations to existing arrangements shall be recovered as Additional Engineering charges, under provisions in BellSouth's F.C.C. Number 1 Tariff, Sections 13.1 and 13.2. Should Additional Engineering rates not be included, CLEC 4Covad agrees not to make changes to collocation arrangement after a Bona Fide Firm Order is submitted.

EXHIBIT A: BELLSOUTH/CLEC-4Covad RATES - GEORGIA
PHYSICAL COLLOCATION

Rates marked with an asterisk (*) are interim and subject to true-up

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1BB	Flat-Rate Space Preparation* Fee (Note 2)			
	Two-Bay Cageless Space			\$10,000.00
	Four-Bay Cageless Space			\$15,000.00
	Six-Bay Cageless Space			\$25,000.00
PE1BW PE1CW	Space Enclosure (Note 3) Cages Prior to 6/1/99 Welded Wire-mesh Welded Wire-mesh	Per first 100 sq. ft. Per add'l 50 sq. ft.	\$170.64 \$17.33	NA NA
PE1PJ PE1PK	Floor Space Zone A Zone B	Per square foot Per square foot	\$7.50 \$6.75	NA NA
PE1BD	Cable Installation	Per Cable	NA	\$2,750.00
PE1PM	Cable Support Structure	Per entrance cable	\$13.35	NA
PE1PL	Power -48V DC Power 120V AC Power single phase* 240V AC Power single phase* 120V AC Power three phase* 277V AC Power three phase*	Per amp Per breaker amp Per breaker amp Per breaker amp Per breaker amp	\$7.14 \$5.50 \$11.00 \$16.50 \$38.20	ICB ICB ICB ICB ICB
PE1P2 PE1P4 PE1P1 PE1P3 PE1F2 PE1F4	Cross Connects 2-wire 4-wire DS-1 DS-3 2-fiber 4-fiber	Per Cross Connect	\$.30 \$.50 \$8.00 \$72.00 \$10.29 \$18.50	First / Additional \$12.60 / \$12.60 \$12.60 / \$12.60 \$155.00 / \$27.00 \$155.00 / \$27.00 \$73.00 / \$52.00 \$88.00 / \$67.00

EXHIBIT A: BELLSOUTH/CLEC-4Covad RATES - GEORGIA
PHYSICAL COLLOCATION (cont.)

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1ES	Co-Carrier Cross-Connect (Note 4) Fiber Cable Support Structure, existing	Per linear foot	\$0.06	NA
PE1DS	Copper or Coaxial Cable Support Structure, existing	Per linear foot	\$0.03	NA
(TBD)	Cable Support Structure Construction, new	Per new construction	NA	ICB
PE1A1	Security Access System Security system* New Access Card Activation* Administrative change, existing card* Replace lost or stolen card*	Per Central Office Per Card Per Card Per Card	\$52.00	\$55.00 \$35.00 \$250.00
	Space Availability Report*	Per Central Office Requested		\$550.00
PE1PE	POT Bay Arrangements Prior to 6/1/99 2 Wire Cross-Connect	Per Cross Connect	\$0.40	NA
PE1PF	4 Wire Cross-Connect		\$1.20	NA
PE1PG	DS1 Cross-Connect		\$1.20	NA
PE1PH	DS3 Cross-Connect		\$8.00	NA
PE1B2	2 Fiber Cross-Connect		\$25.53	NA
PE1B4	4 Fiber Cross-Connect		\$34.43	NA
AEH	Additional Engineering Fee (Note 5)	Per request, First half hour/Add'l Half hour		First /Add'l Basic Time - \$31.00/\$22.00 Overtime - \$37.00/\$26.00
PE1BT	Security Escort Basic Time	Per 1/2 hour/Additional	NA	\$41.00/\$25.00
PE1OT	Overtime	Half-hour	NA	\$48.00/\$30.00
PE1PT	Premium Time		NA	\$55.00/\$35.00

**EXHIBIT A: BELLSOUTH/CLEC 1 Covad RATES - GEORGIA
PHYSICAL COLLOCATION (cont.)**

Note(s)

N/A refers to rate elements which do not have a negotiated rate.

- (1) **Space Preparation Fee:** The Space Preparation Fee is a one-time fee, assessed per arrangement, per location. It recovers the costs associated with the shared physical collocation area within a Central Office, which include survey, engineering, design and modification costs for network, building and support systems. In the event Covad opts for non-enclosed space, the space preparation fee will be assessed based on the total floor space dedicated to Covad as prescribed in Section 7 of the Collocation Attachment.
- (2) **Space Enclosure:** For cages requested prior to June 1, 1999, the Space Enclosure Construction Fee is a monthly recurring fee, assessed per enclosure, per location with a one-hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, materials, and installation costs. The cost for additional square feet is applicable only when ordered with the first 100 square feet and must be requested in fifty (50) square foot increments. Covad may, at its option, arrange with a BellSouth certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In this event, the contractor shall directly bill Covad for the space enclosure, and this fee shall not be applicable.
- (3) **Cross Connects:** The charges for cross connects are for orders placed electronically. Cross connect elements may also be ordered manually for which there is an additional charge per element.

		Disconnect Charges
	First / Additional	First / Additional
2-wire	\$34.03 / \$32.67	\$14.48 / \$13.11
4-wire	\$34.28 / \$32.85	\$14.55 / \$13.12
DS-1	\$64.08 / \$44.98	\$14.58 / \$13.23
DS-3	\$61.07 / \$43.08	\$16.66 / \$13.49

- (4) **Co-Carrier Cross-Connect:** As stated in Section 1.2 of the Collocation Attachment, Covad may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the co-carrier cross connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-carrier cross connection requested, the recurring charges as stated in this Exhibit A shall apply.
- (5) **Additional Engineering Fee:** BellSouth's additional engineering, and other labor costs associated with handling Covad-requested modifications to requests in progress or augmentations to existing arrangements shall be recovered as Additional Engineering charges, under provisions in BellSouth's F.C.C. Number 1 Tariff, Sections 13.1 and 13.2. Should Additional Engineering rates not be included, Covad agrees not to make changes to collocation arrangement after a Bona Fide Order is submitted.

N/A refers to rate elements which do not have a negotiated rate.

- (1) **Subsequent Application Fee:** BellSouth requires the submission of an Application Fee for modifications to an existing arrangement. However, when the modifications do not require BellSouth to expend capital, BellSouth will assess the Subsequent Application Fee in lieu of the Application Fee. Proposed modifications that could result in assessment of a Subsequent Application Fee would cause BellSouth to analyze the following but are not limited to: floor loading changes, changes to HVAC requirements, power requirement changes which may result in a power plant upgrade, environmental or safety requirements, or equipment relocation. Should the Subsequent Application Fee not be

~~included as part of this Attachment, CLEC 1 will be assessed the full Application Fee for all subsequent activity for completed arrangements.~~

- ~~(2) **Space Preparation Fee.** The Space Preparation Fee is a one time fee, assessed per arrangement, per location. It recovers a portion of costs associated with the shared physical collocation area within a Central Office, which include survey, engineering, design and modification costs for network, building and support systems. This is a set fee of \$100 per square foot as established by the Georgia Public Service Commission Order in Docket No. 7061-U. In the event CLEC 1 opts for non-enclosed space, the space preparation fee will be assessed based on the total floor space dedicated to CLEC 1 as prescribed in Section 7 of the Collocation Attachment.~~
- ~~(3) **Space Enclosure Fee.** For cages requested prior to June 1, 1998, the Space Enclosure Construction Fee is a one time fee, assessed per enclosure, per location with a one hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, materials, and installation costs. The cost for additional square foot is applicable only when ordered with the first 100 square feet and must be requested in fifty (50) square foot increments. CLEC 1 may, at its option, arrange with a BellSouth certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In this event, the contractor shall directly bill CLEC 1 for the space enclosure, and this fee shall not be applicable.~~
- ~~(4) **Co-Carrier Cross-Connect.** As stated in Section 5 of the Collocation Attachment, CLEC 1 may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the co-Carrier cross connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-Carrier cross connection requested, the recurring charges as stated in this Exhibit A shall apply.~~
- ~~(5) **Additional Engineering Fee.** BellSouth's additional engineering, and other labor costs associated with handling CLEC 1 requested modifications to requests in progress or augmentations to existing arrangements shall be recovered as Additional Engineering charges, under provisions in BellSouth's F.C.C. Number 1 Tariff, Sections 13.1 and 13.2. Should Additional Engineering rates not be included, CLEC 1 agrees not to make changes to collocation arrangement after a Bona Fide Firm Order is submitted.~~

EXHIBIT A: BELLSOUTH/CLEC-4Covad RATES - KENTUCKY
PHYSICAL COLLOCATION

Rates marked with an asterisk (*) are interim and are subject to true-up.

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1BB	Flat-Rate Space Preparation Fee* (Note 2)			
	Two-Bay Cageless Space			\$10,000.00
	Four-Bay Cageless Space			\$15,000.00
	Six-Bay Cageless Space			\$25,000.00
	Space Enclosure (Note 3) Prior to 6/1/99			
PE1BW	Welded Wire-mesh	Per first 100 sq. ft.	\$201.02	NA
PE1CW	Welded Wire-mesh	Per add'l 50 sq. ft.	\$20.42	NA
PE1PJ	Floor Space	Per square foot	\$5.00	NA
PE1BD	Cable Installation	Per Cable	NA	\$2,327.08
PE1PM	Cable Support Structure	Per entrance cable	\$24.23	NA
PE1PL	Power			
	-48V DC Power	Per amp	\$7.68	ICB
	120V AC Power single phase*	Per breaker amp	\$5.50	ICB
	240V AC Power single phase*	Per breaker amp	\$11.00	ICB
	120V AC Power three phase*	Per breaker amp	\$16.50	ICB
	277V AC Power three phase*	Per breaker amp	\$38.20	ICB

EXHIBIT A: BELL SOUTH/CLEC-1 Covad RATES - KENTUCKY
PHYSICAL COLLOCATION (cont.)

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1P2	Cross Connects 2-wire	Per Cross Connect	\$.31	First / Additional \$54.21/\$51.07
PE1P4	4-wire		\$.62	\$54.23/\$50.96
PE1P1	DS-1		\$1.92	\$99.23/\$69.15
PE1P3	DS-3		\$39.94	\$97.48/\$66.90
PE1F2	2-fiber		\$13.28	\$73.00/\$52.00
PE1F4	4-fiber		\$23.87	\$88.00/\$67.00
	Co-Carrier Cross-Connect (Note 5)			
PE1ES Fiber	Fiber Arrangement Cable Support Structure	Per linear foot (existing)	\$0.06	NA
PE1DS Copper	Copper or Coaxial Arrangement	Per linear foot (existing)	\$0.03	NA
TBD	Cable Support Structure Construction	Per new construction	NA	ICB
PE1A1	Security Access System Security system New Access Card Activation Administrative change, existing card Replace lost or stolen card	Per Central Office Per Card Per Card Per Card	\$52.00	 \$55.00 \$35.00 \$250.00
TBD	Space Availability Report	Per Central Office Requested	NA	\$550.00
	POT Bay Arrangements Prior to 6/1/99	Per Cross Connect		
PE1PE	2 Wire Cross-Connect		\$0.06	NA
PE1PF	4 Wire Cross-Connect		\$0.15	NA
PE1PG	DS1 Cross-Connect		\$0.58	NA
PE1PH	DS3 Cross-Connect		\$4.51	NA
PE1B2	2 Fiber Cross-Connect		\$32.94	NA
PE1B4	4 Fiber Cross-Connect		\$44.42	NA
PE1BT PE1OT PE1PT	Security Escort Basic Time Overtime Premium Time	Per 1/2 hour/Additional Half-hour	NA NA NA	\$56.09/\$31.99 \$67.75/\$39.00 \$79.41/\$46.01

EXHIBIT A: BELLSOUTH/CLEC-4 Covad RATES - KENTUCKY
PHYSICAL COLLOCATION (cont.)

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
AEH	Additional Engineering Fee (Note 5)	Per request, First half hour/Add'l Half hour		First /Add'l Basic Time - \$31.00/\$22.00 Overtime - \$37.00/\$26.00

Note(s):

N/A refers to rate elements which do not have a negotiated rate.

(1) **Space Preparation Fee:** The Space Preparation Fee is a one-time fee, assessed per arrangement per location. It recovers the costs associated with the shared physical collocation area within a Central Office, which include survey, engineering, design and modification costs for network, building and support systems. In the event Covad opts for non-enclosed space, the space preparation fee will be assessed based on the total floor space dedicated to Covad as prescribed in Section 7 of the Collocation Attachment.

(2) **Space Enclosure:** For cages requested prior to June 1, 1999, the Space Enclosure Construction Fee is a monthly recurring fee, assessed per enclosure, per location with a one-hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, materials, and installation costs. The cost for additional square feet is applicable only when ordered with the first 100 square feet and must be requested in fifty (50) square foot increments. Covad may, at its option, arrange with a BellSouth certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In this event, the contractor shall directly bill Covad for the space enclosure, and this fee shall not be applicable.

(3) **Cross Connects:** The charges for cross connects are for orders placed electronically. Cross connect elements may also be ordered manually for which there is an additional charge per element.

	Disconnect Charges	
	First / Additional	First / Additional
2-wire	\$34.03 / \$32.67	\$14.48 / \$13.11
4-wire	\$34.28 / \$32.85	\$14.55 / \$13.12
DS-1	\$64.08 / \$44.98	\$14.58 / \$13.23
DS-3	\$61.07 / \$43.08	\$16.66 / \$13.49

(4) **Co-Carrier Cross-Connect:** As stated in Section 1.2 of the Collocation Attachment, Covad may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the co-Carrier cross connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-Carrier cross connection requested, the recurring charges as stated in this Exhibit A shall apply.

(5) **Additional Engineering Fee:** BellSouth's additional engineering, and other labor costs associated with handling Covad-requested modifications to requests in progress or augmentations to existing arrangements shall be recovered as Additional Engineering charges, under provisions in BellSouth's F.C.C. Number 1 Tariff, Sections 13.1 and 13.2. Should Additional Engineering rates not be included, Covad agrees not to make changes to collocation arrangement after a Bona Fide Order is submitted.

N/A refers to rate elements which do not have a negotiated rate.

- (1) ~~Subsequent Application Fee: BellSouth requires the submission of an Application Fee for modifications to an existing arrangement. However, when the modifications do not require BellSouth to expand capital, BellSouth will assess the Subsequent Application Fee in lieu of the Application Fee. Proposed modifications that could result in assessment of a Subsequent Application Fee would cause BellSouth to analyze the following but are not limited to: floor loading changes, changes to HVAC requirements, power requirement changes which may result in a power plant upgrade, environmental or safety requirements, or equipment relocation. Should the Subsequent Application Fee not be included as part of this Attachment, CLLEC 1 will be assessed the full Application Fee for all subsequent activity for completed arrangements.~~
- (2) ~~Space Preparation Fee: The Space Preparation Fee is a one time fee, assessed per arrangement, per location. It recovers the costs associated with the shared physical collocation area within a Central Office, which include survey, engineering, design and modification costs for network, building and support systems. In the event CLLEC 1 opts for non-enclosed space, the space preparation fee will be assessed based on the total floor space dedicated to CLLEC 1 as prescribed in Section 7 of the Collocation Attachment.~~
- (3) ~~Space Enclosure Fee: For cages requested prior to June 1, 1999, the Space Enclosure Construction Fee is a one time fee, assessed per enclosure, per location with a one hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, material and installation costs. The cost for additional square foot is applicable only when ordered with the first 100 square foot and must be requested in fifty (50) square foot increments. CLLEC 1 may, at its option, arrange with a BellSouth certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In the event, the contractor shall directly bill CLLEC 1 for the space enclosure, and this fee shall not be applicable.~~
- (4) ~~Co Carrier Cross Connect: As stated in Section 5 of the Collocation Attachment, CLLEC 1 may connect to other CLLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the co-carrier cross connection, connection charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-carrier cross connection requested, the recurring charges as stated in this Exhibit A shall apply.~~
- (5) ~~Additional Engineering Fee: BellSouth's additional engineering, and other labor costs associated with handling CLLEC 1 requested modifications to requests in progress or augmentations to existing arrangements shall be recovered as Additional Engineering charges, under provisions in BellSouth's F.C.C. Number 1 Tariff, Sections 13.1 and 13.2. Should Additional Engineering rates not be included, CLLEC 1 agrees not to make changes to collocation arrangement after a Bona Fide Firm Order is submitted.~~

**EXHIBIT A: BELL SOUTH/CLEC-4Covad RATES – LOUISIANA
PHYSICAL COLLOCATION**

Rates marked with an asterisk (*) are interim and are subject to true-up.

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1BB	Flat-Rate Space Preparation Fee* (Note 2)			
	Two-Bay Cageless Space			\$10,000.00
	Four-Bay Cageless Space			\$15,000.00
	Six-Bay Cageless Space			\$25,000.00
PE1BW	Space Enclosure (Note 3) Prior to 6/1/99			
PE1CW	Welded Wire-mesh	Per first 100 sq. ft.	\$197.55	NA
	Welded Wire-mesh	Per add'l 50 sq. ft.	\$20.07	NA
PE1PJ	Floor Space	Per square foot	\$4.01	NA
PE1BD	Cable Installation	Per Cable	NA	\$1,706.00 Disconnect charge \$36.00
PE1PM	Cable Support Structure	Per entrance cable	\$24.05	NA
PE1PL	Power			
	-48V DC Power	Per amp	\$7.15	ICB
	120V AC Power single phase*	Per breaker amp	\$5.50	ICB
	240V AC Power single phase*	Per breaker amp	\$11.00	ICB
	120V AC Power three phase*	Per breaker amp	\$16.50	ICB
	277V AC Power three phase*	Per breaker amp	\$38.20	ICB

EXHIBIT A: BELLSOUTH/CLEC ~~4~~Covad RATES - LOUISIANA
PHYSICAL COLLOCATION (cont.)

Rates marked with an asterisk (*) are interim and are subject to true-up.

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1P2	Cross Connects (Note 4) 2-wire	Per Cross Connect	\$.26	First / Additional \$23.04/\$22.11
PE1P4	4-wire		\$.52	\$23.23/\$22.24
PE1P1	DS-1		\$2.03	\$43.61/\$30.60
PE1P3	DS-3		\$36.27	\$41.46/\$29.20
PE1F2	2-fiber		\$10.20	\$73.00/\$52.00
PE1F4	4-fiber		\$18.34	\$88.00/\$67.00
	2-wire			Disconnect charges First / Additional \$9.48/\$8.54
	4-wire			\$9.53/\$8.55
	DS-1			\$9.56/\$8.63
	DS-3			\$11.06/\$8.86
	Co-Carrier Cross-Connect (Note 5)			
PE1ES Fiber	Fiber Arrangement Cable Support Structure	Per linear foot (existing)	\$0.06	NA
PE1DS Copper	Copper or Coaxial Arrangement	Per linear foot (existing)	\$0.03	NA
TBD	Cable Support Structure Construction	Per new construction	NA	ICB
PE1A1	Security Access System Security system* New Access Card Activation* Administrative change, existing card* Replace lost or stolen card	Per Central Office Per Card Per Card Per Card	\$52.00	 \$55.00 \$35.00 \$250.00
TBD	Space Availability Report*	Per Central Office Requested		\$550.00

EXHIBIT A: BELLSOUTH/CLEC-4-Covad RATES - LOUISIANA
PHYSICAL COLLOCATION (cont.)

Rates marked with an asterisk (*) are interim and are subject to true-up.

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
	POT Bay Arrangements Prior to 6/1/99	Per Cross Connect		
PE1PE	2 Wire Cross-Connect		\$0.0776	NA
PE1PF	4 Wire Cross-Connect		\$0.1552	NA
PE1PG	DS1 Cross-Connect		\$0.6406	NA
PE1PH	DS3 Cross-Connect		\$4.75	NA
PE1B2	2 Fiber Cross-Connect		\$25.30	NA
PE1B4	4 Fiber Cross-Connect		\$34.12	NA
	Security Escort			
PE1BT	Basic Time	Per 1/2	NA	\$32.35/\$19.95
PE1OT	Overtime	hour/Additional	NA	\$40.50/\$25.00
PE1PT	Premium Time	Half-hour	NA	\$48.66/\$30.05
	Additional Engineering Fee (Note 6)	Per request, First half hour/Add'l Half hour		First /Add'l Basic Time - \$31.00/\$22.00 Overtime - \$37.00/\$26.00

Note(s):

N/A refers to rate elements which do not have a negotiated rate.

- (1) **Space Preparation Fee:** The Space Preparation Fee is a one-time fee, assessed per arrangement, per location. It recovers the costs associated with the shared physical collocation area within a Central Office, which include survey, engineering, design and modification costs for network, building and support systems. In the event Covad opts for non-enclosed space, the space preparation fee will be assessed based on the total floor space dedicated to Covad as prescribed in Section 7 of the Collocation Attachment.
 - (2) **Space Enclosure:** For cages requested prior to June 1, 1999, the Space Enclosure Construction Fee is a monthly recurring fee, assessed per enclosure, per location with a one-hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, materials and installation costs. The cost for additional square feet is applicable only when ordered with the first 100 square feet and must be requested in fifty (50) square foot increments. Covad may, at its option, arrange with a BellSouth certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In this event, the contractor shall directly bill Covad for the space enclosure, and this fee shall not be applicable.
 - (3) **Cross Connects:** The charges for cross connects are for orders placed electronically. Cross connect elements may also be ordered manually for which there is an additional charge per element.
- Disconnect Charges

	First / Additional	First / Additional
2-wire	\$34.03 / \$32.67	\$14.48 / \$13.11
4-wire	\$34.28 / \$32.85	\$14.55 / \$13.12
DS-1	\$64.08 / \$44.98	\$14.58 / \$13.23
DS-3	\$61.07 / \$43.08	\$16.66 / \$13.49

- (4) **Co-Carrier Cross-Connect:** As stated in Section 1.2 of the Collocation Attachment, Covad may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the co-Carrier cross connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-Carrier cross connection requested, the recurring charges as stated in this Exhibit A shall apply.
- (5) **Additional Engineering Fee:** BellSouth's additional engineering, and other labor costs associated with handling Covad-requested modifications to requests in progress or augmentations to existing arrangements shall be recovered as Additional Engineering charges, under provisions in BellSouth's F.C.C. Number 1 Tariff, Sections 13.1 and 13.2. Should Additional Engineering rates not be included, Covad agrees not to make changes to collocation arrangement after a Bona Fide Order is submitted.

N/A refers to rate elements which do not have a negotiated rate.

- (1) **Subsequent Application Fee:** BellSouth requires the submission of an Application Fee for modifications to an existing arrangement. However, when the modifications do not require BellSouth to expend capital, BellSouth will assess the Subsequent Application Fee in lieu of the Application Fee. Proposed modifications that could result in assessment of a Subsequent Application Fee would cause BellSouth to analyze the following but are not limited to: floor loading changes, changes to HVAC requirements, power requirement changes which may result in a power plant upgrade, environmental or safety requirements, or equipment relocation. Should the Subsequent Application Fee not be included as part of this Attachment, CLEC-1 will be assessed the full Application Fee for all subsequent activity for completed arrangements.
- (2) **Space Preparation Fee:** The Space Preparation Fee is a one-time fee, assessed per arrangement, per location. It recovers the costs associated with the shared physical collocation area within a Central Office, which include survey, engineering, design and modification costs for network, building and support systems. In the event CLEC-1 opts for non-enclosed space, the space preparation fee will be assessed based on the total floor space dedicated to CLEC-1 as prescribed in Section 7 of the Collocation Attachment.

~~EXHIBIT A: BELL SOUTH/CLEC 1 RATES - LOUISIANA
PHYSICAL COLLOCATION (cont.)~~

~~(3) Space Enclosure Fee:~~ For cages requested prior to June 1, 1999, the Space Enclosure Construction Fee is a monthly recurring fee, assessed per enclosure, per location with a one hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, materials, and installation costs. The cost for additional square feet is applicable only when ordered with the first 100 square feet and must be requested in fifty (50) square foot increments. CLEC 1 may, at its option, arrange with a BellSouth certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In this event, the contractor shall directly bill CLEC 1 for the space enclosure, and this fee shall not be applicable.

~~(4) Cross Connects:~~ The charges for cross connects are for orders placed electronically. Cross connect elements may also be ordered manually for which there is an additional charge per element.

		Disconnect Charges	
	First / Additional	First / Additional	
2-wire	\$24.92/\$23.99	\$10.56/\$9.62	
4-wire	\$25.11/\$24.12	\$10.61/\$9.63	
DS-1	\$45.49/\$32.48	\$10.64/\$9.71	
DS-3	\$43.34/\$31.08	\$12.14/\$9.94	

~~(5) Co-Carrier Cross Connect:~~ As stated in Section 5 of the Collocation Attachment, CLEC 1 may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the co-carrier cross connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-carrier cross connection requested, the recurring charges as stated in this Exhibit A shall apply.

~~(6) Additional Engineering Fee:~~ BellSouth's additional engineering, and other labor costs associated with handling CLEC 1 requested modifications to requests in progress or augmentations to existing arrangements shall be recovered as Additional Engineering charges, under provisions in BellSouth's F.C.C. Number 1 Tariff, Sections 13.1 and 13.2. Should Additional Engineering rates not be included, CLEC 1 agrees not to make changes to collocation arrangement after a Bona Fide Firm Order is submitted.

EXHIBIT A: BELL SOUTH/CLEC 4Covad RATES – MISSISSIPPI
PHYSICAL COLLOCATION

Rates marked with an asterisk (*) are interim and are subject to true-up.

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1BB	Flat-Rate Space Preparation Fee* (Note 2)			
	Two-Bay Cageless Space			\$10,000.00
	Four-Bay Cageless Space			\$15,000.00
	Six-Bay Cageless Space			\$25,000.00
PE1BW	Space Enclosure (Note 3) Prior to 6/1/99			
	Welded Wire-mesh	Per first 100 sq. ft.	\$205.08	NA
PE1CW	Welded Wire-mesh	Per add'l 50 sq. ft.	\$20.83	NA
PE1PJ	Floor Space	Per square foot	\$3.45	Disconnect charge \$53.24
PE1BD	Cable Installation	Per Cable	NA	\$2,419.00
PE1PM	Cable Support Structure	Per entrance cable	\$22.90	NA
PE1PL	Power			
	-48V DC Power	Per amp	\$6.93	ICB
	120V AC Power single phase*	Per breaker amp	\$5.50	ICB
	240V AC Power single phase*	Per breaker amp	\$11.00	ICB
	120V AC Power three phase*	Per breaker amp	\$16.50	ICB
	277V AC Power three phase*	Per breaker amp	\$38.20	ICB

EXHIBIT A: BELLSOUTH/CLEC-1Covad RATES - MISSISSIPPI
PHYSICAL COLLOCATION (cont.)

Rates marked with an asterisk (*) are interim and are subject to true-up.

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1P2 PE1P4 PE1P1 PE1P3 PE1F2 PE1F4	Cross Connects (Note 4) 2-wire 4-wire DS-1 DS-3 2-fiber 4-fiber	Per Cross Connect	\$.3996 \$.7992 \$2.90 \$53.31 \$15.82 \$28.43	First / Additional \$30.93/\$29.59 \$31.17/\$29.77 \$60.42/\$41.68 \$57.45/\$39.81 \$73.00/\$52.00 \$88.00/\$67.00
	2-wire 4-wire DS-1 DS-3			Disconnect Charges First / Additional \$12.76/\$11.43 \$12.83/\$11.43 \$12.87/\$11.54 \$14.92/\$11.80
PE1ES Fiber	Co-Carrier Cross-Connect (Note 5) Fiber Arrangement Cable Support Structure	Per linear foot (existing)	\$0.06	NA
PE1DS Copper	Copper or Coaxial Arrangement	Per linear foot (existing)	\$0.03	NA
TBD	Cable Support Structure Construction	Per new construction	NA	ICB
PE1A1	Security Access System Security system* New Access Card Activation* Administrative change, existing card* Replace lost or stolen card	Per Central Office Per Card Per Card Per Card	\$52.00	\$55.00 \$35.00 \$250.00
TBD	Space Availability Report*	Per Central Office Requested		\$550.00

EXHIBIT A: BELLSOUTH/CLEC-1Covad RATES - MISSISSIPPI
PHYSICAL COLLOCATION (cont.)

Rates marked with an asterisk (*) are interim and are subject to true-up.

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
	POT Bay Arrangements Prior to 6/1/99	Per Cross Connect		
PE1PE	2 Wire Cross-Connect		\$0.1195	NA
PE1PF	4 Wire Cross-Connect		\$0.2389	NA
PE1PG	DS1 Cross-Connect		\$0.9862	NA
PE1PH	DS3 Cross-Connect		\$5.81	NA
PE1B2	2 Fiber Cross-Connect		\$39.23	NA
PE1B4	4 Fiber Cross-Connect		\$52.91	NA
AEH	Additional Engineering Fee (Note 6)	Per request, First half hour/Add'l Half hour		First /Add'l Basic Time - \$31.00/\$22.00 Overtime - \$37.00/\$26.00
	Security Escort			
PE1BT	Basic Time	Per 1/2	NA	\$42.87/\$25.54
PE1OT	Overtime	hour/Additional	NA	\$54.43/\$32.41
PE1PT	Premium Time	Half-hour	NA	\$65.99/\$39.28

Note(s):

N/A refers to rate elements which do not have a negotiated rate

- (1) **Space Preparation Fee:** The Space Preparation Fee is a one-time fee, assessed per arrangement, per location. It recovers the costs associated with the shared physical collocation area within a Central Office, which include survey, engineering, design and modification costs for network, building and support systems. In the event Covad opts for non-enclosed space, the space preparation fee will be assessed based on the total floor space dedicated to Covad as prescribed in Section 7 of the Collocation Attachment.
- (2) **Space Enclosure:** For cages requested prior to June 1, 1999, the Space Enclosure Construction Fee is a monthly recurring fee, assessed per enclosure, per location with a one-hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, materials, and installation costs. The cost for additional square feet is applicable only when ordered with the first 100 square feet and must be requested in fifty (50) square foot increments. Covad may, at its option, arrange with a BellSouth certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In this event, the contractor shall directly bill Covad for the space enclosure, and this fee shall not be applicable.
- (3) **Cross Connects:** The charges for cross connects are for orders placed electronically. Cross connect elements may also be ordered manually for which there is an additional charge per element.

	Disconnect Charges	
	First / Additional	First / Additional
2-wire	\$34.03 / \$32.67	\$14.48 / \$13.11
4-wire	\$34.28 / \$32.85	\$14.55 / \$13.12

- | | | |
|------|-------------------|-------------------|
| DS-1 | \$64.08 / \$44.98 | \$14.58 / \$13.23 |
| DS-2 | \$61.07 / \$43.08 | \$16.66 / \$13.49 |
- (4) **Co-Carrier Cross-Connect:** As stated in Section 1.2 of the Collocation Attachment, Covad may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the co-carrier cross connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-carrier cross connection requested, the recurring charges as stated in this Exhibit A shall apply.
- (5) **Additional Engineering Fee:** BellSouth's additional engineering, and other labor costs associated with handling Covad-requested modifications to requests in progress or augmentations to existing arrangements shall be recovered as Additional Engineering charges, under provisions in BellSouth's F.C.C. Number 1 Tariff, Sections 13.1 and 13.2. Should Additional Engineering rates not be included, Covad agrees not to make changes to collocation arrangement after a Bona Fide Order is submitted.
- N/A refers to rate elements which do not have a negotiated rate.
- (1) **Subsequent Application Fee:** BellSouth requires the submission of an Application Fee for modifications to an existing arrangement. However, when the modifications do not require BellSouth to expend capital, BellSouth will assess the Subsequent Application Fee in lieu of the Application Fee. Proposed modifications that could result in assessment of a Subsequent Application Fee would cause BellSouth to analyze the following but are not limited to: floor loading changes, changes to HVAC requirements, power requirement changes which may result in a power plant upgrade, environmental or safety requirements, or equipment relocation. Should the Subsequent Application Fee not be included as part of this Attachment, CLEC 1 will be assessed the full Application Fee for all subsequent activity for completed arrangements.
- (2) **Space Preparation Fee:** The Space Preparation Fee is a one-time fee, assessed per arrangement, per location. It recovers the costs associated with the shared physical collocation area within a Central Office, which include survey, engineering, design and modification costs for network, building and support systems. In the event CLEC 1 opts for non-enclosed space, the space preparation fee will be assessed based on the total floor space dedicated to CLEC 1 as prescribed in Section 7 of the Collocation Attachment.

~~EXHIBIT A: BELLSOUTH/CLEC 1 RATES - MISSISSIPPI
PHYSICAL COLLOCATION (cont.)~~

~~(3) Space Enclosure Fee:~~ For cages requested prior to June 1, 1999, the Space Enclosure Construction Fee is a monthly recurring fee, assessed per enclosure, per location with a one hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, materials, and installation costs. The cost for additional square feet is applicable only when ordered with the first 100 square feet and must be requested in fifty (50) square foot increments. CLEC 1 may, at its option, arrange with a BellSouth certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In this event, the contractor shall directly bill CLEC 1 for the space enclosure, and this fee shall not be applicable.

~~(4) Cross Connects:~~ The charges for cross connects are for orders placed electronically. Cross connect elements may also be ordered manually for which there is an additional charge per element.

		Disconnect Charges	
	First / Additional	First / Additional	
2 wire	\$33.58 / \$32.24	\$14.27 / \$12.94	
4 wire	\$33.82 / \$32.42	\$14.34 / \$12.94	
DS 1	\$63.07 / \$44.32	\$14.38 / \$13.05	
DS 3	\$60.10 / \$42.46	\$16.43 / \$13.31	

~~(5) Co-Carrier Cross Connect:~~ As stated in Section 5 of the Collocation Attachment, CLEC 1 may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the co-carrier cross connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-carrier cross connection requested, the recurring charges as stated in this Exhibit A shall apply.

~~(6) Additional Engineering Fee:~~ BellSouth's additional engineering and other labor costs associated with handling CLEC 1 requested modifications to requests in progress or augmentations for existing arrangements shall be recovered as Additional Engineering charges, under provisions in BellSouth's F.C.C. Number 1 Tariff, Sections 13.1 and 13.2. Should Additional Engineering rates not be included, CLEC 1 agrees not to make changes to collocation arrangement after a Bona Fide Firm Order is submitted.

EXHIBIT A: BELLSOUTH/CLEC-4Covad RATES – NORTH CAROLINA*
PHYSICAL COLLOCATION

*Rates are interim and subject to true-up.

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1BB	Flat-Rate Space Preparation Fee* (Note 2)			
	Two-Bay Cageless Space			\$10,000.00
	Four-Bay Cageless Space			\$15,000.00
	Six-Bay Cageless Space			\$25,000.00
PE1BW	Space Enclosure (Note 3) Prior to 6/1/99 Welded Wire-mesh	Per first 100 sq. ft.	\$146.80	NA
PE1CW	Welded Wire-mesh	Per add'l 50 sq. ft.	\$14.91	NA
PE1PJ	Floor Space	Per square foot	\$7.50	NA
PE1BD	Cable Installation	Per Cable	NA	\$2,750.00
PE1PM	Cable Support Structure	Per entrance cable	\$13.35	NA
PE1PL	Power			
	-48V DC Power	Per amp	\$5.00	ICB
	120V AC Power single phase	Per breaker amp	\$5.50	ICB
	240V AC Power single phase	Per breaker amp	\$11.00	ICB
	120V AC Power three phase	Per breaker amp	\$16.50	ICB
	277V AC Power three phase	Per breaker amp	\$38.20	ICB

EXHIBIT A: BELLSOUTH/CLEC-1Covad RATES – NORTH CAROLINA*
PHYSICAL COLLOCATION (cont.)

*Rates are interim and subject to true-up.

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1P2	Cross Connects	Per Cross Connect		First / Additional
PE1P4	2-wire		\$.30	\$19.20/\$19.20
PE1P1	4-wire		\$.50	\$19.20/\$19.20
PE1P3	DS-1		\$8.00	\$155.00/\$27.00
PE1F2	DS-3		\$72.00	\$155.00/\$27.00
PE1F4	2-fiber		\$15.90	\$73.00/\$52.00
	4-fiber		\$28.50	\$88.00/\$67.00
	Co-Carrier Cross-Connect (Note 4)			
PE1ES	Fiber Arrangement Cable Support Structure	Per linear foot (existing)	\$0.06	NA
PE1DS	Copper or Coaxial Arrangement	Per linear foot (existing)	\$0.03	NA
TBD	Cable Support Structure Construction	Per new construction	NA	ICB
PE1A1	Security Access System	Per Central Office	\$52.00	
	Security system	Per Card		\$55.00
	New Access Card Activation	Per Card		\$35.00
	Administrative change, existing card	Per Card		\$250.00
	Replace lost or stolen card	Per Card		
TBD	Space Availability Report	Per Central Office Requested		\$550.00
	POT Bay Arrangements Prior to 6/1/99	Per Cross Connect		
PE1PE	2 Wire Cross-Connect		\$0.40	NA
PE1PF	4 Wire Cross-Connect		\$1.20	NA
PE1PG	DS1 Cross-Connect		\$1.20	NA
PE1PH	DS3 Cross-Connect		\$8.00	NA
PE1B2	2 Fiber Cross-Connect		\$39.30	NA
PE1B4	4 Fiber Cross-Connect		\$53.00	NA
	Security Escort			
PE1BT	Basic Time	Per 1/2	NA	\$41.00/\$25.00
PE1OT	Overtime	hour/Additional	NA	\$48.00/\$30.00
PE1PT	Premium Time	Half-hour	NA	\$55.00/\$35.00

**EXHIBIT A: BELL SOUTH/CLEC-4Covad RATES – NORTH CAROLINA
PHYSICAL COLLOCATION (cont.)**

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
AEH	Additional Engineering Fee (Note 5)	Per request, First half hour/Add'l Half hour		First /Add'l Basic Time - \$31.00/\$22.00 Overtime - \$37.00/\$26.00

Note(s):

N/A refers to rate elements which do not have a negotiated rate.

(1) **Space Preparation Fee.** The Space Preparation Fee is a one-time fee, assessed per arrangement, per location. It recovers the costs associated with the shared physical collocation area within a Central Office, which include survey, engineering, design and modification costs for network, building and support systems. In the event Covad opts for non-enclosed space, the space preparation fee will be assessed based on the total floor space dedicated to Covad as prescribed in Section 7 of the Collocation Attachment.

(2) **Space Enclosure.** For cages requested prior to June 1, 1999, the Space Enclosure Construction Fee is a monthly recurring fee, assessed per enclosure, per location with a one-hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, materials, and installation costs. The cost for additional square feet is applicable only when ordered with the first 100 square feet and must be requested in fifty (50) square foot increments. Covad may, at its option, arrange with a BellSouth certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In this event, the contractor shall directly bill Covad for the space enclosure, and this fee shall not be applicable.

(3) **Cross Connects.** The charges for cross connects are for orders placed electronically. Cross connect elements may also be ordered manually for which there is an additional charge per element.

	Disconnect Charges	
	First / Additional	First / Additional
2-wire	\$34.03 / \$32.67	\$14.48 / \$13.11
4-wire	\$34.28 / \$32.85	\$14.55 / \$13.12
DS-1	\$64.08 / \$44.98	\$14.58 / \$13.23
DS-3	\$61.07 / \$43.08	\$16.66 / \$13.49

(4) **Co-Carrier Cross-Connect:** As stated in Section 1.2 of the Collocation Attachment, Covad may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the co-carrier cross connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-carrier cross connection requested, the recurring charges as stated in this Exhibit A shall apply.

(5) **Additional Engineering Fee:** BellSouth's additional engineering, and other labor costs associated with handling Covad-requested modifications to requests in progress or augmentations to existing arrangements shall be recovered as Additional Engineering charges, under provisions in BellSouth's F.C.C. Number 1 Tariff, Sections 13.1 and 13.2. Should Additional Engineering rates not be included, Covad agrees not to make changes to collocation arrangement after a Bona Fide Order is submitted.

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- ~~(4) **Co-Carrier Cross-Connect:** As stated in Section 5 of the Collocation Attachment, CLEC 1 may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the co-carrier cross-connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-carrier cross-connection requested, the recurring charges as stated in this Exhibit A shall apply.~~
- ~~(5) **Additional Engineering Fee:** BellSouth's additional engineering, and other labor costs associated with handling CLEC 1 requested modifications to requests in progress or augmentations for existing arrangements shall be recovered as Additional Engineering charges, under provisions in BellSouth's F.O.C. Number 1 Tariff, Sections 13.1 and 13.2. Should Additional Engineering rates not be included, CLEC 1 agrees not to make changes to collocation arrangement after a Bona Fide Firm Order is submitted.~~

EXHIBIT A: BELL SOUTH/CLEC-1Covad RATES – SOUTH CAROLINA
PHYSICAL COLLOCATION

Rates marked with an asterisk (*) are interim and are subject to true-up.

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1BB	Flat-Rate Space Preparation Fee* (Note 2)			
	Two-Bay Cageless Space			\$10,000.00
	Four-Bay Cageless Space			\$15,000.00
	Six-Bay Cageless Space			\$25,000.00
PE1BW PE1CW	Space Enclosure (Note 3) Prior to 6/1/99 Welded Wire-mesh Welded Wire-mesh	Per first 100 sq. ft. Per add'l 50 sq. ft.	\$224.60 \$22.81	NA NA
PE1PJ	Floor Space	Per square foot	\$3.90	NA
PE1BD	Cable Installation	Per Cable	NA	\$2,217.00
PE1PM	Cable Support Structure	Per entrance cable	\$24.55	NA
PE1PL	Power -48V DC Power 120V AC Power single phase* 240V AC Power single phase* 120V AC Power three phase* 277V AC Power three phase*	Per amp Per breaker amp Per breaker amp Per breaker amp Per breaker amp	\$7.09 \$5.50 \$11.00 \$16.50 \$38.20	ICB ICB ICB ICB ICB

EXHIBIT A: BELL SOUTH/CLEC 1Covad RATES – SOUTH CAROLINA
PHYSICAL COLLOCATION (cont.)

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
	Cross Connects (Note 4)			First / Additional
PE1P2	2-wire	Per Cross Connect	\$.3648	\$41.50/\$38.94
PE1P4	4-wire	Per Cross Connect	\$.7297	\$41.56/\$38.90
PE1P1	DS-1	Per Cross Connect	\$2.70	\$70.79/\$50.78
PE1P3	DS-3	Per Cross Connect	\$49.24	\$69.60/\$49.14
PE1F2	2-fiber	Per Cross Connect	\$13.75	\$73.00/\$52.00
PE1F4	4-fiber	Per Cross Connect	\$24.71	\$88.00/\$67.00
	Co-Carrier Cross-Connect (Note 5)			
PE1ES Fiber	Fiber Arrangement Cable Support Structure	Per linear foot (existing)	\$0.06	NA
PE1DS Copper	Copper or Coaxial Arrangement	Per linear foot (existing)	\$0.03	NA
TBD	Cable Support Structure Construction	Per new construction	NA	ICB
PE1A1	Security Access System Security system* New Access Card Activation* Administrative change, existing card* Replace lost or stolen card	Per Central Office Per Card Per Card Per Card	\$52.00	 \$55.00 \$35.00 \$250.00
TBD	Space Availability Report*	Per Central Office Requested		\$550.00
	POT Bay Arrangements Prior to 6/1/99	Per Cross Connect		
PE1PE	2 Wire Cross-Connect		\$.1091	NA
PE1PF	4 Wire Cross-Connect		\$.2181	NA
PE1PG	DS1 Cross-Connect		\$.9004	NA
PE1PH	DS3 Cross-Connect		\$5.64	NA
PE1B2	2 Fiber Cross-Connect		\$34.09	NA
PE1B4	4 Fiber Cross-Connect		\$45.97	NA
	Security Escort			
PE1BT	Basic Time	Per 1/2	NA	\$43.00/\$25.57
PE1OT	Overtime	hour/Additional	NA	\$54.62/\$32.46
PE1PT	Premium Time	Half-hour	NA	\$66.24/\$39.35

**EXHIBIT A: BELLSOUTH/CLEC 4 Covad RATES – SOUTH CAROLINA
PHYSICAL COLLOCATION (cont.)**

AEH	Additional Engineering Fee (Note 6)	Per request, First half hour/Add'l Half hour		First /Add'l Basic Time - \$31.00/\$22.00 Overtime - \$37.00/\$26.00

Note(s):

N/A refers to rate elements which do not have a negotiated rate.

- (1) **Space Preparation Fee:** The Space Preparation Fee is a one-time fee, assessed per arrangement, per location. It recovers the costs associated with the shared physical collocation area within a Central Office, which include survey, engineering, design and modification costs for network, building and support systems. In the event Covad opts for non-enclosed space, the space preparation fee will be assessed based on the total floor space dedicated to Covad as prescribed in Section 7 of the Collocation Attachment.
- (2) **Space Enclosure:** For cages requested prior to June 1, 1999, the Space Enclosure Construction Fee is a monthly recurring fee, assessed per enclosure, per location with a one-hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, materials, and installation costs. The cost for additional square feet is applicable only when ordered with the first 100 square feet and must be requested in fifty (50) square foot increments. Covad may, at its option, arrange with a BellSouth certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In this event, the contractor shall directly bill Covad for the space enclosure, and this fee shall not be applicable.
- (3) **Cross Connects:** The charges for cross connects are for orders placed electronically. Cross connect elements may also be ordered manually for which there is an additional charge per element.

	Disconnect Charges	
	First / Additional	First / Additional
2-wire	\$34.03 / \$32.67	\$14.48 / \$13.11
4-wire	\$34.28 / \$32.85	\$14.55 / \$13.12
DS-1	\$64.08 / \$44.98	\$14.58 / \$13.23
DS-3	\$61.07 / \$43.08	\$16.66 / \$13.49

- (4) **Co-Carrier Cross-Connect:** As stated in Section 1.2 of the Collocation Attachment, Covad may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the co-Carrier cross connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-Carrier cross connection requested, the recurring charges as stated in this Exhibit A shall apply.
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- (3) ~~Space Enclosure Fee:~~ For cages requested prior to June 1, 1999, the Space Enclosure Construction Fee is a monthly recurring fee, assessed per enclosure, per location with a one-hundred (100) square foot minimum enclosure. It recovers costs associated with providing an optional equipment arrangement enclosure, which include architectural and engineering fees, materials, and installation costs. The cost for additional square foot is applicable only when ordered with the first 100 square foot and must be requested in fifty (50) square foot increments. CLEC 1 may, at its option, arrange with a BellSouth-certified contractor to construct the space enclosure in accordance with BellSouth's guidelines and specifications. In this event, the contractor shall directly bill CLEC 1 for the space enclosure, and this fee shall not be applicable.
- (4) ~~Cross Connects:~~ The charges for cross connects are for orders placed electronically. Cross connect elements may also be ordered manually for which there is an additional charge per element.

	<u>First / Additional</u>
2-wire	\$46.66 / \$44.10
4-wire	\$46.68 / \$44.02
DS-1	\$75.98 / \$56.87
DS-3	\$74.60 / \$54.23

- (5) ~~Co-Carrier Cross Connect:~~ As stated in Section 5 of the Collocation Attachment, CLEC 1 may connect to other CLECs within the designated Central Office in addition to, and not in lieu of, interconnection to BellSouth services and facilities. Where BellSouth must construct a cable rack structure to house the co-carrier cross connection, construction charges will be applied on an individual case basis. BellSouth shall provide an estimate of these charges in the Application Response. Where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-carrier cross connection requested, the recurring charges as stated in this Exhibit A shall apply.

~~EXHIBIT A: BELL SOUTH/CLEC 1 RATES - SOUTH CAROLINA
PHYSICAL COLLOCATION (cont.)~~

~~(6) Additional Engineering Fee - BellSouth's additional engineering, and other labor costs associated with handling CLEC 1 requested modifications to requests in progress or augmentations to existing arrangements shall be recovered as Additional Engineering charges under provisions in BellSouth's F.C.C. Number 1 Tariff, Sections 13.1 and 13.2. Should Additional Engineering rates not be included, CLEC 1 agrees not to make changes to collocation arrangement after a Bona Fide Firm Order is submitted.~~

EXHIBIT A: BELL SOUTH/CLEC-4Covad RATES – TENNESSEE*
PHYSICAL COLLOCATION

*All Rates are interim and subject to true-up.

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1BB	Flat-Rate Space Preparation Fee (Note 2)			
	Two-Bay Cageless Space			\$10,000.00
	Four-Bay Cageless Space			\$15,000.00
	Six-Bay Cageless Space			\$25,000.00
PE1BW PE1CW	Space Enclosure (Note 3) Prior to 6/1/99 Welded Wire-mesh Welded Wire-mesh	Per first 100 sq. ft. Per add'l 50 sq. ft.	\$190.79 \$19.38	NA NA
PE1PJ	Floor Space	Per square foot	\$7.50	NA
PE1BD	Cable Installation	Per Cable	NA	\$2,750.00
PE1PM	Cable Support Structure	Per entrance cable	\$13.35	NA
PE1PL	Power			
	-48V DC Power	Per amp	\$5.00	ICB
	120V AC Power single phase	Per breaker amp	\$5.50	ICB
	240V AC Power single phase	Per breaker amp	\$11.00	ICB
	120V AC Power three phase	Per breaker amp	\$16.50	ICB
	277V AC Power three phase	Per breaker amp	\$38.20	ICB

EXHIBIT A: BELLSOUTH/CLEC ~~LEG 1~~ Covad RATES – TENNESSEE*
PHYSICAL COLLOCATION (cont.)

*Rates are interim and subject to true-up.

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
	Cross Connects	Per Cross Connect		First / Additional
PE1P2	2-wire		\$.30	\$19.20/\$19.20
PE1P4	4-wire		\$.50	\$19.20/\$19.20
PE1P1	DS-1		\$8.00	\$155.00/\$27.00
PE1P3	DS-3		\$72.00	\$155.00/\$27.00
PE1F2	2-fiber		\$15.90	\$73.00/\$52.00
PE1F4	4-fiber		\$28.50	\$88.00/\$67.00
	Co-Carrier Cross-Connect (Note 4)			
PE1ES Fiber	Fiber cable support structure, existing	Per linear foot	\$0.06	NA
PE1DS Copper	Copper or Coaxial cable support structure, existing	Per linear foot	\$0.03	NA
TBD	Cable Support Structure Construction (new)	Per new construction	NA	ICB
PE1A1	Security Access System Security system New Access Card Activation Administrative change, existing card Replace lost or stolen card	Per Central Office Per Card Per Card Per Card	\$52.00	 \$55.00 \$35.00 \$250.00
TBD	Space Availability Report	Per Central Office Requested		\$550.00
	POT Bay Arrangements Prior to 6/1/99			
PE1PE	2 Wire Cross-Connect	Per Cross Connect	\$0.40	NA
PE1PF	4 Wire Cross-Connect	Per Cross Connect	\$1.20	NA
PE1PG	DS1 Cross-Connect	Per Cross Connect	\$1.20	NA
PE1PH	DS3 Cross-Connect	Per Cross Connect	\$8.00	NA
PE1B2	2 Fiber Cross-Connect	Per Cross Connect	\$39.30	NA
PE1B4	4 Fiber Cross-Connect	Per Cross Connect	\$53.00	NA

EXHIBIT A: BELLSOUTH/CLEC + Covad RATES – TENNESSEE*
PHYSICAL COLLOCATION (cont.)

*Rates are interim and subject to true-up.

USOC	Rate Element Description	Unit	Recurring Rate (RC)	Non-Recurring Rate (NRC)
PE1BT PE1OT PE1PT	Security Escort Basic Time Overtime Premium Time	Per 1/2 hour/Additional Half-hour	NA NA NA	\$41.00/\$25.00 \$48.00/\$30.00 \$55.00/\$35.00
AEH	Additional Engineering Fee (Note 5)	Per request, First half hour/Add'l Half hour		First /Add'l Basic Time - \$31.00/\$22.00 Overtime - \$37.00/\$26.00

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accommodate the co-Carrier cross connection requested, the recurring charges as stated in this Exhibit A shall apply.

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~~EXHIBIT A: BELL SOUTH/CLEC 1 RATES - TENNESSEE*~~
~~PHYSICAL COLLOCATION (cont.)~~

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ENVIRONMENTAL AND SAFETY PRINCIPLES

The following principles provide basic guidance on environmental and safety issues when applying for and establishing Physical Collocation arrangements.

1. GENERAL PRINCIPLES

1.1 Compliance with Applicable Law. BellSouth and ~~CLEC-4Covad~~ agree to comply with applicable federal, state, and local environmental and safety laws and regulations including U.S. Environmental Protection Agency (USEPA) regulations issued under the Clean Air Act (CAA), Clean Water Act (CWA), Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Superfund Amendments and Reauthorization Act (SARA), the Toxic Substances Control Act (TSCA), and OSHA regulations issued under the Occupational Safety and Health Act of 1970, as amended and NFPA and National Electrical Codes (NEC) and the NESC ("Applicable Laws"). Each party shall notify the other if compliance inspections are conducted by regulatory agencies and/or citations are issued that relate to any aspect of this agreement.

1.2 Notice. BellSouth and ~~CLEC-4Covad~~ shall provide notice to the other, including Material Safety Data Sheets (MSDSs), of known and recognized physical hazards or Hazardous Chemicals existing on site or brought on site. Each party is required to provide specific notice for known potential Imminent Danger conditions. ~~CLEC-4Covad~~ should contact 1-800-743-6737 for BellSouth MSDS sheets.

1.3 Practices/Procedures. BellSouth may make available additional environmental control procedures for ~~CLEC-4Covad~~ to follow when working at a BellSouth Premises (See Section 2, below). These practices/procedures will represent the regular work practices required to be followed by the employees and contractors of BellSouth for environmental protection. ~~CLEC-4Covad~~ will require its contractors, agents and others accessing the BellSouth Premises to comply with these practices. Section 2 lists the Environmental categories where BST practices should be followed by CLEC when operating in the BellSouth Premises.

1.4 Environmental and Safety Inspections. BellSouth reserves the right to inspect the ~~CLEC-4Covad~~ space with proper notification. BellSouth reserves the right to stop any ~~CLEC-4Covad~~ work operation that imposes Imminent Danger to the environment, employees or other persons in the area or Facility.

1.5 Hazardous Materials Brought On Site. Any hazardous materials brought into, used, stored or abandoned at the BellSouth Premises by ~~CLEC-4Covad~~ are owned by ~~CLEC-4Covad~~. ~~CLEC-4Covad~~ will indemnify BellSouth for claims, lawsuits or damages to persons or property caused by these materials. Without prior written BellSouth approval, no substantial new safety or environmental hazards can be created by ~~CLEC-4Covad~~ or different hazardous

materials used by ~~CLEC-4Covad~~ at BellSouth Facility. ~~CLEC-4Covad~~ must demonstrate adequate emergency response capabilities for its materials used or remaining at the BellSouth Facility.

1.6 Spills and Releases. When contamination is discovered at a BellSouth Premises, the party discovering the condition must notify BellSouth. All Spills or Releases of regulated materials will immediately be reported by ~~CLEC-4Covad~~ to BellSouth.

1.7 Coordinated Environmental Plans and Permits. BellSouth and ~~CLEC-4Covad~~ will coordinate plans, permits or information required to be submitted to government agencies, such as emergency response plans, spill prevention control and countermeasures (SPCC) plans and community reporting. If fees are associated with filing, BellSouth and ~~CLEC-4Covad~~ will develop a cost sharing procedure. If BellSouth's permit or EPA identification number must be used, ~~CLEC-4Covad~~ must comply with all of BellSouth's permit conditions and environmental processes, including environmental "best management practices (BMP)" (see Section 2, below) and/or selection of BST disposition vendors and disposal sites.

1.8 Environmental and Safety Indemnification. BellSouth and ~~CLEC-4Covad~~ shall indemnify, defend and hold harmless the other party from and against any claims (including, without limitation, third-party claims for personal injury or death or real or personal property damage), judgments, damages, (including direct and indirect damages, and punitive damages), penalties, fines, forfeitures, costs, liabilities, interest and losses arising in connection with the violation or alleged violation of any Applicable Law or contractual obligation or the presence or alleged presence of contamination arising out of the acts or omissions of the indemnifying party, its agents, contractors, or employees concerning its operations at the Facility.

2. CATEGORIES FOR CONSIDERATION OF ENVIRONMENTAL ISSUES

When performing functions that fall under the following Environmental categories on BellSouth's Premises, ~~CLEC-4Covad~~ agrees to comply with the applicable sections of the current issue of BellSouth's Environmental and Safety Methods and Procedures (M&Ps), incorporated herein by this reference. ~~CLEC-4Covad~~ further agrees to cooperate with BellSouth to ensure that ~~CLEC-4Covad~~'s employees, agents, and/or subcontractors are knowledgeable of and satisfy those provisions of BellSouth's Environmental M&Ps which apply to the specific Environmental function being performed by ~~CLEC-4Covad~~, its employees, agents and/or subcontractors.

The most current version of reference documentation must be requested from BellSouth.

2. Categories for Consideration of Environmental Issues (cont.)

ENVIRONMENTAL CATEGORIES	ENVIRONMENTAL ISSUES	ADDRESSED BY THE FOLLOWING DOCUMENTATION
Disposal of hazardous material or other regulated material (e.g., batteries, fluorescent tubes, solvents & cleaning materials)	Pollution liability insurance EVET approval of contractor	Std T&C 450 GU-BTEN-001BT, Chapter 4 Std T&C 660-3 GU-BTEN-001BT, Chapter 10
Emergency response	Hazmat/waste release/spill firesafety emergency	GU-BTEN-001BT, Chapter Building Emergency Operations Plan (EOP) (specific to Premises)
Contract labor/outsourcing for services with environmental implications to be performed on BellSouth Premises (e.g., disposition of hazardous material/waste; maintenance of storage tanks)	Performance of services in accordance with BST's environmental M&Ps Insurance	Std T&C 450 Std T&C 450-B (Contact E/S or your DEC/LDEC for copy of appropriate E/S M&Ps.) Std T&C 660
Transportation of hazardous material	Pollution liability insurance EVET approval of contractor	Std T&C 450 GU-BTEN-001BT, Chapter 4 Std T&C 660-3 GU-BTEN-001BT, Chapter 10
Maintenance/operations work which may produce a waste	Protection of BST employees and equipment	Std T&C 450 GU-BTEN-001BT, Chapter 10

Other maintenance work		29CFR 1910.147 29CFR 1910 Subpart O
Janitorial services	<p>All waste removal and disposal must conform to all applicable federal, state and local regulations</p> <p>All HazMat & Waste Asbestos notification protection of BST employees and equipment</p>	<p>P&SM Manager - Procurement</p> <p>GU-BTEN-001BT, Chapter 4,</p> <p>GU-BTEN-001BT, Chapter 3</p> <p>BSP 010-170-001BS (Hazcom)</p>
Manhole cleaning	<p>Pollution liability insurance</p> <p>Manhole entry requirements</p> <p>EVET approval of contractor</p>	<p>Std T&C 450</p> <p>Std T&C 660-3</p> <p>BSP 620-145-011PR</p> <p>Issue A, August 1996</p> <p>GU-BTEN-001BT, Chapter 10</p> <p>RL9706008BT</p>
Removing or disturbing building materials that may contain asbestos	Asbestos work practices	GU-BTEN-001BT, Chapter 3

3. DEFINITIONS

Generator. Under RCRA, the person whose act produces a Hazardous Waste, as defined in 40 CFR 261, or whose act first causes a Hazardous Waste to become subject to regulation. The Generator is legally responsible for the proper management and disposal of Hazardous Wastes in accordance with regulations.

Hazardous Chemical. As defined in the U.S. Occupational Safety and Health (OSHA) hazard communication standard (29 CFR 1910.1200), any chemical which is a health hazard or physical hazard.

Hazardous Waste. As defined in section 1004 of RCRA.

Imminent Danger. Any conditions or practices at a facility which are such that a danger exists which could reasonably be expected to cause immediate death or serious harm to people or immediate significant damage to the environment or natural resources.

Spill or Release. As defined in Section 101 of CERCLA.

4. ACRONYMS

DEC/LDEC - Department Environmental Coordinator/Local Department Environmental Coordinator

GU-BTEN-001BT - BellSouth Environmental Methods and Procedures

EVET - Environmental Vendor Evaluation Team

P&SM - Property & Services Management

Std. T&C - Standard Terms & Conditions

NESC - National Electrical Safety Codes

THE SOUTH FLORIDA BUILDING CODE

CHANGE OF ADDRESS

In order to receive Amendments to this Code, office (954) 765-4500 must be notified of new address and codebook identified by number shown below.

1996 BROWARD COUNTY EDITION
Effective date: October 1, 1996

N°

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Board of Rules and Appeals
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**PART XI
ELECTRICAL
CHAPTER 45
ELECTRICAL**

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4504 ELECTRICAL MATERIALS AND TYPES OF CONSTRUCTION

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4508 BRANCH CIRCUITS

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4511 TEMPORARY WIRING

4512 LOW VOLTAGE WIRING

4513 SPECIAL REQUIREMENTS

4514 SIGN INSTALLATIONS

4515 CLARIFICATIONS

4501 ADMINISTRATION

4501.1 TITLE: This Chapter shall be known as "The South Florida Electrical Code," and may be cited as such, or as the "Electrical Code."

4501.2 INTRODUCTION:

(a) **SCOPE:** This Chapter prescribes standards for materials used in the design and installation of electrical systems, equipment and wiring for construction as defined in Sub-section 4503.8 and regulated by this Code.

(b) **PURPOSE:** The purpose of this Electrical Code is to provide certain uniform minimum standards, regulations and requirements for safe and stable design, methods of construction and uses of materials in electrical wiring, apparatus or equipment used for all light, heat, power and low voltage systems and to secure the expressed intent for reasons of public safety.

(c) **APPLICATION:** Any work on electrical installations and every electrical system or device installed in new or existing construction shall conform to the requirements of this Code.

(1) Additions, alterations or repairs to existing electrical systems, apparatus or equipment in existing construction shall conform to the requirements of this Chapter to the extent required by Section 104 of this Code.

(2) A previously issued lawful electrical permit shall be valid under the terms of the Electrical Code under which it was issued.

(d) **MAINTENANCE OR REPAIR:** Electrical wiring, apparatus and equipment, and all installations for light, heat, power or low voltage systems as are required and/or regulated in this Electrical Code, shall be maintained in a safe condition and all devices and safeguards maintained in good working order.

Maintenance or repair that complies to Chapter 301(b)(2) shall be defined as the repair or replacement of

existing defective utilization equipment such as lighting fixtures, branch circuit devices, appliances and motors where the equipment is of the same current, power and voltage ratings. Branch circuit wiring between the utilization equipment and the required disconnecting means, within sight of the equipment; but not exceeding six feet in length between wiring devices shall be considered maintenance/repair, where the wiring method does not change.

Maintenance or repair work shall conform to the requirements of this Code. While it is not the intent of this Section to require a complete circuit to be changed to meet this Code, in no case shall maintenance or repair work be performed on any part of the circuit without insuring that the circuit provides for safety to both life and property. Any alteration or extension of the wiring system is not considered to be maintenance or repair.

All work shall be performed by qualified personnel, as defined by the Broward County Central Examining Board of Electricians.

4501.3 ELECTRICAL INSPECTORS:

(a) CHIEF ELECTRICAL INSPECTOR: APPOINTMENT, POWERS AND DUTIES:

(1) There shall be appointed by the appointing authority a person qualified to be certified in accordance with Sub-section 201.3 of this Code, and such person shall be herein termed Chief Electrical Inspector, construed to mean the Chief or Head of the Electrical Division.

(2) The Chief Electrical Inspector shall have the power to delegate powers and assignments to subordinate employees working under his authority.

(3) **RIGHT OF ENTRY:** Upon presentation of proper credentials, the Chief Electrical Inspector may enter, at any reasonable time, any building, structure or premises for the purpose of inspection or to prevent violations of this Electrical Code.

(4) **STOP-WORK ORDERS:** Whenever any electrical work is being done in violation of the provisions of this Electrical Code or is being installed in a manner that it would create a hazard to life or property, the Chief Electrical Inspector may order such work stopped or may order the violation corrected within a reasonable period of time, by notice in writing served on the person or persons engaged in the doing or causing of such work to be done. Such persons shall immediately stop such work until provisions have been made with the Chief Electrical Inspector to bring such work into compliance with this Electrical Code, at which time the Chief Electrical Inspector may allow the work to proceed.

(5) **CONCEALED WORK:** The Chief Electrical Inspector may order portions of a building structure to be exposed for inspection when, in his opinion, there is a good reason to believe that wiring or equipment concealed therein is in an unsafe condition, or that there is willful negligent concealment of a violation of this Electrical Code.

(6) **OCCUPANCY:** Whenever any building or portion thereof is being used or occupied contrary to the provisions of this Electrical Code, the Chief Electrical Inspector shall report such violation to the Building Official and the Building Official shall order such use or occupancy discontinued and the building or portion thereof vacated as set forth in Sub-paragraph 4501.3(a)(4) of this Code.

(b) ELECTRICAL PLANS EXAMINER, POWERS AND DUTIES:

(1) The powers and duties of the Electrical Plans Examiner shall be subject to the powers vested in the Board of Rules and Appeals as set forth in Sub-section 201.3 of this Code.

(c) POWERS AND DUTIES OF ELECTRICAL INSPECTOR:

(1) It shall be the duty of the Electrical Inspector to inspect all wiring, apparatus and equipment, and all installations for light, heat, power and low voltage systems and to enforce all the laws, rules and regulations relating thereto in the area of jurisdiction and to enforce all the provisions of this Electrical Code.

(2) The Electrical Inspector shall issue an Approval for all installations of light, heat, power and low voltage systems that comply with the rules and regulations of this Electrical Code. If defects, omissions or violations exist on any other part of the wiring system relating to work for which approval is requested, the issuance of the Approval shall be withheld until corrections have been made to the defective portion of the wiring system, and the same are made to comply with this Electrical Code.

(3) A 30-day temporary electrical service connection shall be approved by the Electrical Inspector, where the need for electrical power exists, if the wiring installation, apparatus or equipment is found to be in a safe operating condition. Under these circumstances, an application for temporary service shall be made in writing by the electrical contractor, firm, corporation, or owner requesting a temporary service connection to the public utility system or isolated generating plant.

(4) The Electrical Inspector is hereby empowered to inspect or reinspect any wiring, equipment or apparatus used in the installation of light, heat, power or low voltage systems and if this wiring, equipment, apparatus or low voltage system is found to be unsafe to life or property, the Electrical Inspector shall serve notice to the owner and/or operator, in writing, that the hazardous wiring or equipment exists and shall be corrected within a reasonable period of time.

(5) The Electrical Inspector is hereby given the power to disconnect extension cords, temporary wiring, branch circuits, feeder conductors or the main service supplying electrical energy to any portion of an electrical wiring system in buildings, or on premises, if this wiring is in the opinion of the Electrical Inspector, considered to be hazardous to life or property. Any person, firm or corporation supplying current, shall disconnect service from the source of supply upon instructions from the Chief Electrical Inspector where hazards are deemed to exist, after receiving written notice from the Electrical Inspector.

(6) The power and duties of the Electrical Inspector shall be subject to the powers vested in the Board of Rules and Appeals as set forth in Sub-section 201.3 of this Code.

4502 DEFINITIONS

4502.1 ELECTRICAL CONSTRUCTION: Shall be held to include and govern all work and materials used in installing, maintaining and/or extending a system of electrical wiring for the use of light, heat, power or low voltage systems, and all appurtenances, apparatus, or equipment used in connection therewith, inside of or attached to any building or structure, lot or premises.

4502.2 ELECTRICIAN: Shall be held to mean a person who is engaged in the trade or business of electrical construction, and who is qualified in accordance with the ordinance providing for the qualification and certification of construction tradespeople and maintenance personnel.

4502.3 LOW VOLTAGE SYSTEMS: Shall include fiber optics, telephone, television, communications, fire alarms, burglar alarms, computer systems, central vacuums and all other systems 77 volts and less, that are governed by Sections 402 and 4503 of this Code.

4503 STANDARDS

The following Standards are hereby adopted as set forth in Section 402 of this Code:

4503.1 Broward County Central Examining Board of Electricians, Jobsite Personnel, and Supervisory Requirements, Regulation 83-1.

4503.2 NATIONAL FIRE PROTECTION ASSOCIATION:

(a) Installation of Centrifugal Fire Pumps, N.F.P.A. 20.

(b) The National Electrical Code, N.F.P.A. 70 (NEC)

(c) Electrical Safety Requirements for Employee Workplaces, N.F.P.A. 70E.

(d) National Fire Alarm Code, N.F.P.A. 72.

- (e) Electrical Standard for Industrial Machinery, N.F.P.A. 79
- (f) Standard for Health Care Facilities, N.F.P.A. 99.
- (g) Standard for Emergency and Standby Power Systems, N.F.P.A. 110.
- (h) Stored Electrical Energy Emergency and Standby Power Systems, N.F.P.A. 111.
- (i) Standard on Aircraft Hangers N.F.P.A. 409.
- (j) Classification of Class I Hazardous Locations for Electrical Installations in Chemical, Process Areas, N.F.P.A. 497A.
- (k) Recommended Practice for the Classification of Class II Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas, N.F.P.A. 497B.
- (l) Classification of Gases, Vapors and Dusts for Electrical Equipment in Hazardous (Classified) Locations, N.F.P.A. 497M.
- (m) Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities, N.F.P.A. 501A.
- (n) Recreational Vehicle Parks and Campgrounds, N.F.P.A. 501D.
- (o) Installation of Lightning Protection Systems, N.F.P.A. 780.

4503.3 NATIONALLY RECOGNIZED TESTING LABORATORIES:

- (a) American Gas Association. (AGA)
- (b) Canadian Standards Association, (C.S.A.).
- (c) ETL Testing Laboratories.
- (d) Met Laboratories, Inc., Directory of Listed and Labeled Products.
- (e) Underwriters Laboratories, Inc. (U.L.).
 - (1) U.L. Automotive, Burglary Protection, Mechanical Equipment Directory.
 - (2) U.L. Building Fire Resistive Directory.
 - (3) U.L. Building Materials Directory.
 - (4) U.L. Electrical Appliance and Utilization Equipment Directory.
 - (5) U.L. Electrical Construction Materials Directory.
 - (6) U.L. Fire Protection Equipment Directory.
 - (7) U.L. Gas and Oil Equipment Directory.
 - (8) U.L. Hazardous Location Equipment Directory.
 - (9) U.L. Marine Products Directory.
 - (10) Standard for Safety, Electric Signs, U.L. 48.
 - (11) Standard for Safety, Installation Requirements for Lightning Protection System, U.L. 96A.
 - (12) Standard for Safety, Portable Electric Lamps, U.L. 153.
 - (13) Standard for Safety, Household, Electric Storage Tank Water Heaters, U.L. 174.
 - (14) Standard for Safety, Manufactured Wiring Systems, U.L. 183.
 - (15) Standard for Safety, Single and Multiple Station Smoke Detectors, U.L. 217.
 - (16) Standard for Safety, Smoke Detectors, Photoelectric, U.L. 268.
 - (17) Standard for Safety, Smoke Detectors for Duct Application, U.L. 268A.
 - (18) Standard for Safety, Grounding and Bonding, U.L. 467.

- (19) Standard for Safety, Heat Detectors for Fire Protective Signaling Systems, U.L. 521.
- (20) Standard for Safety, Single and Multiple Station Heat Detectors, U.L. 539.
- (21) Standard for Safety, Household Fire Warning Systems Units, U.L. 985.
- (22) Standard for Safety, Fluorescent Lighting Fixtures, U.L. 1570.
- (23) Standard for Safety, Incandescent Lighting Fixtures, U.L. 1571.
- (24) Standard for Safety, High-Intensity Discharge Lighting Fixtures, U.L. 1572.
- (25) Standard for Safety, Stage and Studio Lighting Units, U.L. 1573.
- (26) Standard for Safety, Track Lighting Systems, U.L. 1574.
- (27) Standard for Safety, Smoke Detector Monitors and Accessories for Individual Living Units of Multifamily Residences and Hotel/Motel Rooms, U.L. 1730.
- (28) Standard for Safety, Low Voltage Landscape Lighting Systems, U.L. 1838.
- (29) Standard for Safety, Single and Multiple Carbon Monoxide Detectors, U.L. 2034.

(f) Wyle Laboratories

4503.4 Regulations for Grounding of Portable Electric Equipment, F.I.C. 8AS-2.

4503.5 STATE OF FLORIDA:

(a) Agency For Health Care Administration (A.H.C.A.)

- (1) Ambulatory Surgical Centers, Rules 59A-5
- (2) Hospitals, Rules 59A-3
- (3) Nursing Homes, Rules 59A-4

(b) Hotel and Restaurant Commission regulations applicable to emergency lighting, Florida Statutes 509.221(5)(g) and 509.221(b).

(c) Energy Efficiency Code for Building Construction.

4503.6 TESTING LABORATORIES, (APPROVED S.F.B.C. ONLY)

(a) Applied Research Laboratories.

4504 ELECTRICAL MATERIALS AND TYPES OF CONSTRUCTION

4504.1 No electrical materials, devices or appliances designed for attachment to, or installation in any electrical circuit nor any system for light, heat, power or low voltage shall be installed, used, sold, or offered for sale in the area of the jurisdiction of this Electrical Code, unless they are in conformity with the approved methods of construction for safety to life and property required by this Electrical Code.

4504.2 Conformity of electrical materials, devices or appliances with the Standards of Underwriters Laboratories, Inc. shall be held to mean that these materials are included in a published list of electrical materials or equipment distributed by Underwriters Laboratories, Inc. and complying with the Standards approved by the American National Standards Institute. (ANSI).

4504.3 Electrical material, devices, appliances and equipment that are sold or offered for sale or use in the area of jurisdiction of this Electrical Code shall bear all markings that are required by the Standards set forth in Section 4503 of this Electrical Code.

4504.4 The types of construction, materials or methods of design referred to in this Electrical Code shall be considered as Standards of Quality. New types of construction, materials or methods of design shall be at least equal to these Standards for the corresponding use intended.

4504.5 Any person desiring to use a type of construction, material(s) or method(s) of design not specifically

mentioned in this Electrical Code shall file with the Chief Electrical Inspector authentic proof in support of claims that may be made regarding the sufficiency, and request approval and permission for use. The Chief Electrical Inspector shall approve such alternate(s) if it is clear that the Standards of the Electrical Code are at least equaled. If, in the opinion of the Chief Electrical Inspector, the Standards of this Electrical Code will not be satisfied by the requested alternate, the Chief Electrical Inspector shall refuse approval.

4504.6 The provisions of this Electrical Code are not intended to prevent the use of type of construction, materials or methods of design as an alternate to the Standards herein set forth, but such alternates shall be offered for approval, and their consideration shall be as set forth in Section 4504 of this Code.

4504.7 Any person whose request for alternate types of construction, material(s) or method(s) of design has been refused by the Chief Electrical Inspector, or any person who believes the Electrical Inspector is incorrect in approving or disapproving any electrical installation under this Electrical Code may appeal to the Board of Rules and Appeals. This request shall be in writing and shall be transmitted to the Secretary of the Board of Rules and Appeals.

4504.8 Assemblies of Materials/Equipment such as custom made equipment and wiring without a recognized label shall consist of listed components. They shall be wired and assembled in accordance with the applicable codes and they may be inspected for compliance with the minimum code as certified by a Registered Professional Engineer.

4505 PERMITS AND INSPECTIONS

4505.1 GENERAL:

(a) PERMITS REQUIRED: It shall be unlawful to perform or commence any installation of light, heat, power or low voltage systems either permanent or temporary wiring, or to make extensions and/or changes to existing installations of light, heat, power or low voltage systems, upon premises, inside, outside and/or attached to buildings or structures of any character without having filed an application and obtained an electrical permit therefore from the appropriate Electrical Division.

(b) APPLICATIONS: Applications for permit will be accepted only from qualified persons or firms. Qualifications of persons or firms shall be in accordance with separate ordinance providing for qualification and certification of construction tradespeople.

(c) SPECIAL CONDITIONS: GROUP APPLICATIONS for permit will be accepted only from qualified persons or firms. Qualifications of persons or firms shall be in accordance with separate ordinance providing for qualification and certification of construction tradespeople. This group application shall be used for utility owned equipment. (i.e. FP&L ON CALL PROGRAM)

(1) The number of jobs shall be stated on group application to the inspecting authority, not to exceed 25. The inspecting authority has the right to refuse group applications if their current workload cannot cope with additional demand.

(aa) Group application to inspecting authority shall provide the following information: Name, address and telephone number of customer.

(2) Within 15 days the electrical contractor shall submit to the inspecting authority a list of customer's jobs installed and ready for inspection, which shall include the following:

(aa) Name, address and telephone number of customer.

(bb) Type of work to be inspected. (i.e. FP&L ON CALL PROGRAM — Water Heater)

(cc) Certificate of Competency number for journeyman electrician or employee number. If employee number is used, a master list with employee numbers and Certificate of Competency number for journeyman electricians shall be filed with the Chief Electrical Inspector of the inspecting authority.

4505.2 PLANS AND SPECIFICATIONS:

(a) GENERAL REQUIREMENTS

(1) Plans and specifications completely describing all proposed electrical work shall be submitted to the Electrical Plans Examiner at the same time application is made for a building permit. Plans shall be mechanically reproduced prints on substantial paper, drawn to scale except that an isometric or riser diagram need not be to scale. Designated Electrical Equipment Rooms and Meter Rooms shall be drawn at a minimum scale of $\frac{1}{4}" = 1'-0"$.

(2) DESIGN OF POWER SYSTEMS:

(aa) Electrical documents applicable to power systems shall at a minimum indicate the following:

- (1) System Riser Diagram
- (2) Conductor sizes and insulation type
- (3) Protective devices and interrupting capability
- (4) Main and distribution panelboard locations and sizes
- (5) Circuitry of all outlets and devices
- (6) Short circuit analysis
- (7) Load computations
- (8) Electrical legend
- (9) Grounding and bonding
- (10) Instrumentation control
- (11) Load schedule for each panel

(3) DESIGN OF LIGHTING SYSTEMS:

(aa) Electrical documents applicable to lighting systems shall, at a minimum indicate the following:

- (1) Lighting fixture performance specifications and arrangements
- (2) Emergency Lighting
- (3) Exit Lighting
- (4) Lighting control and circuiting

(4) DESIGN OF GROUNDING SYSTEMS:

(aa) Electrical documents applicable to grounding systems shall indicate at a minimum the following:

- (1) Type and location of grounding electrodes
- (2) Bonding requirements
- (3) Testing requirements
- (4) Conductor material type, size and protection requirements
- (5) Separate grounding systems, properly bonded, per Code and use requirements.

(b) PROFESSIONAL DESIGN REQUIREMENTS

(1) Plans and specifications for new construction requiring an aggregate service capacity of more than 600 amperes or more than 240 volts on residential or more than 800 amperes or more than 240 volts on commercial or industrial or an electrical system having a value greater than \$50,000.00 or any electrical system(s) for an assembly area having an area greater than 5,000 square feet or a fire alarm and/or security alarm system(s) which cost more than \$5,000.00 shall be prepared by and signed, dated and bear the impress seal of a

Professional Engineer who is competent in this field of expertise.

(2) Plans and specifications for construction requiring an aggregate service capacity not over 600 amperes at a maximum of 240 volts phase to phase, either single or three phase on residential or not over 800 amperes at a maximum of 240 volts phase to phase, single phase or three phase on commercial or industrial or an electrical system having a value of \$50,000.00 or less or any electrical system(s) for an assembly area having an area of 5,000 square feet or less or a fire alarm system(s) with a cost of \$5,000 or less may be designed by a Master Electrician, licensed in Broward County or certified by the State of Florida, provided the plans and specifications prepared by the Master Electrician bear the certificate of competency number and the notarized signature of the license holder, or by an Architect or Professional Engineer. All plans and specifications prepared by an Architect or a Professional Engineer pursuant to the requirements of this Chapter shall be signed, dated and sealed by the respective Architect or Professional Engineer who prepared such plans and specifications.

(c) **APPROVAL:** The Electrical Plans Examiner shall examine all plans and, if the proposed electrical work shown thereon complies with the Electrical Code, he shall mark the plans "Approved".

4505.3 PERMIT FEES: Any person desiring an electrical permit to be issued shall, in addition to filing an application therefore, and before such permit is issued, pay a permit fee if required.

4505.4 CONDITIONS OF PERMIT: The installation of the wiring, apparatus or equipment for light, heat, power or low voltage systems within or attached to any building or premises, whether for private or public use shall be done in accordance with the approved plans and specifications. Any changes or omissions in the wiring system from that shown on the approved plans prepared by an Electrical Contractor shall be approved by the Electrical Plans Examiner and the request for approval of such change shall be made by the permit holder, approved by the owner or his representative, in the form of plan revisions submitted to the Electrical Plans Examiner setting forth the changes and accepting the responsibilities for the changes.

Any changes or omissions in the wiring system from that shown on the approved plans prepared by an Architect and/or Professional Engineer shall be approved by the Electrical Plans Examiner and the request for approval of such changes shall be made by the permit holder, approved by the Architect of Record and/or Professional Engineer of Record, in the form of plans revisions submitted to the Electrical Plans Examiner setting forth the changes and accepting responsibility for the changes.

These changes shall be submitted and approved before the next mandatory inspection request is made.

4505.5 INSPECTIONS:

(a) Requests for all inspections required in Paragraph 305.2(a) Electrical of this Code shall be made to the appropriate Electrical Division at least one day prior to the required inspection. The request for inspection shall be made by the person, firm or corporation installing the wiring. Failure to request such inspections constitutes a violation of this Electrical Code.

It is assumed that the qualifying agent or the Electrician for the qualifying agent, as defined in Sub-section 4502.2 of this Code, has already inspected this job for Electrical Code and plans compliance before requesting an inspection. It is the responsibility of the permit holder to insure that the job is accessible for all requested inspections. Failure to provide for this access shall constitute a violation of this Electrical Code.

(b) The Electrical Inspector shall inspect all work for which a request for inspection is made and shall, after inspection, either approve by signing the appropriate sections of the building permit card or inspection record or disapprove the work and notify the permit holder of the discrepancies found and order corrections within a reasonable period of time. Violations shall be written and posted at the job site stating the Electrical Code Section(s), Sub-section(s), Paragraph(s) and/or Sub-paragraph(s) that have been violated.

(c) Any person, firm or corporation who fails to correct defective work within ten days after having been duly notified of such defects shall not be issued any further permits by the Electrical Division. Permits will resume after the defects have been corrected, inspected and approved or upon the filing of an appeal with the Board of

Rules and Appeals.

(d) It shall be unlawful for any person, firm or corporation, or their agents or employees, to cover or conceal any wiring for light, heat, power or low voltage systems until the appropriate Sections of the building permit card and/or inspection record are signed, signifying that the wiring has been inspected and approved.

(e) Inspections for special conditions Sub-section 4505.1(c) Electrical Contractor shall be responsible to notify customer with card furnished by utility of record.

(1) Customer card shall have permit number, jobsite address and telephone number of inspecting authority.

(2) Customer upon receiving customer card shall be responsible for calling the inspecting authority and scheduling an electrical inspection within 15 days from time of completion of work performed.

(3) All jobs shall be inspected by inspecting authority that issued the permit. Upon approval of work performed Electrical Inspector shall sign permit card.

4505.6 ENERGIZING SYSTEMS: It shall be unlawful for any person, firm or corporation to energize any wiring system or portion thereof until the electrical work has been inspected and approved and the responsible person, firm or corporation is authorized by the appropriate administrative authority to energize the system.

4506 SERVICES, METER ROOMS AND EQUIPMENT ROOMS

4506.1 SERVICES:

(a) SERVICE DROPS:

(1) Service drop conductors or other overhead wiring shall not be installed over any part of any screened roof.

(2) No overhead service drop shall be within 10 feet horizontally of the water's edge of the swimming pool.

(b) SERVICE MASTS:

(1) The minimum size of rigid steel conduit or intermediate metal conduit (I.M.C.) used for a service mast shall be 2" in diameter and shall extend not less than 2' above the roof and not more than 38" above the last point of support. Where the mast extends to a clearance of more than 38" above the roof, adequate supports shall be provided.

(2) There shall be no coupling above the last point of support.

(3) Where service masts or other electrical conduits penetrate a roof, these penetrations shall be sealed as required by Paragraph 3407.9(a) of this Code.

(c) TEMPORARY SERVICES:

(1) Temporary services for construction shall be installed on a substantially erected pole, braced or guyed to withstand the strain of the service-drop cable.

(2) Where permission is obtained from the Chief Electrical Inspector, for construction of single family dwellings, a temporary service may be mounted on the building that it serves. It shall also be permitted to use the permanent service for temporary power providing the interior panel feeders have been disconnected at the service and ground fault protected receptacles are installed for temporary construction.

(3) Electrical Inspectors are empowered to disconnect immediately and without notice any temporary service used to supply ungrounded equipment or equipment without the proper overcurrent protection.

(d) **STORES AND WAREHOUSE SPACES:** The raceway for the service of a store or warehouse space shall not be less than one and one-quarter inch trade size.

(e) **GROUNDING ELECTRODES:** For all new construction, a grounding electrode as defined by the NEC,

N.F.P.A. 70, Section 250-81(c) shall be made available by installing steel reinforcing bars in the foundation so that it is available for connection to the grounding electrode conductor. The grounding electrode conductor shall be installed from the service equipment to a supplemental ground rod and finally terminate at the foundation steel. The grounding electrode connection to the foundation steel shall be inspected before the foundation is poured.

(f) DISCONNECTING MEANS: Dwelling units without Meter Rooms or Electrical Equipment Enclosures shall have outside disconnecting means.

(g) TRANSFER SWITCHES: Buildings with separate services, but that share a common emergency system, shall be served with transfer switches that conform to NFPA-70 (NEC).

4506.2 METER ROOMS — SPECIAL REQUIREMENTS

(a) All buildings equipped with seven or more meters shall be provided with one or more Meter Room(s). For those buildings equipped with less than seven meters, a Meter Room is not required.

(b) Electrical Meter Rooms, where provided, shall be not less than four feet by six feet by seven feet high. These dimensions shall be increased where necessary to provide working clearances as required by the National Electrical Code, NFPA-70 (NEC).

EXCEPTION: In residential occupancies where conditions exist that preclude the use of Meter Rooms as described in Sub-paragraph 4506.2(b), the use of an approved Electrical Equipment Enclosure shall be permitted. However in no case shall this enclosure be of smaller size dimensionally than is required to safely house all electrical equipment intended, with the doors locked open, and maintain proper clearance requirements as set forth elsewhere in this Code.

4506.3 GENERAL REQUIREMENTS FOR ELECTRICAL METER ROOMS, ELECTRICAL EQUIPMENT ROOMS AND ELECTRICAL EQUIPMENT ENCLOSURES: Electrical Meter Rooms, Electrical Equipment Rooms and Electrical Equipment Enclosures where provided, shall be as follows:

(a) All Meter Rooms, Electrical Equipment Rooms and Electrical Equipment Enclosures shall be ventilated as required by NFPA-70 (NEC).

(b) There shall be no storage in a Meter Rooms, Electrical Equipment Rooms or Electrical Equipment Enclosures and a durable, waterproof sign with letters not less than seven-sixteenths of an inch high shall be mounted on the outside of the door reading:

ELECTRICAL ROOM, NO STORAGE PERMITTED

(c) The construction of Meter Rooms, Electrical Equipment Rooms, and Electrical Equipment Enclosures shall be of the same material as that of the buildings served and walls and ceilings shall be of not less than one-hour fire-resistive construction including that part of the wall behind any panelboard, except that for buildings of Type I, II, III and IV construction the walls shall be of incombustible materials.

(d) Each main shall be permanently identified by numbers providing both numerical order and the total number of mains.

(e) Exit doors for the Meter Rooms, Electrical Equipment Rooms and Electrical Equipment Enclosures shall swing out a minimum of 90 degrees and shall have no obstruction in front of the exit.

(f) Separately metered conductors shall not be installed in the same raceway, except in load gutters in the Meter Rooms and Electrical Equipment Enclosures that contain service equipment. Said gutters shall contain only metered conductors.

4507 WIRING METHODS AND MATERIALS

4507.1 Non-metallic-sheathed cable shall be prohibited from all installations other than residential occupancies as permitted by the NFPA-70 (NEC) and temporary wiring for construction.

4507.2 Aluminum conduit, boxes, cabinets, fittings and support hardware may be installed in the earth or in

concrete only where protected by factory-applied P.V.C. coating not less than 40 mils in thickness.

4507.3 Galvanized Electrical Metallic Tubing (E.M.T.) shall not be used outdoors above grade east of the Florida East Coast Railroad Tracks. Electrical Metallic Tubing, where used within the jurisdiction of this Electrical Code, shall not be installed under ground floor slabs, in contact with the earth or utilized for roof penetrations. An approved protective coating shall be provided at all locations where the EMT penetrates the concrete, for a distance of 6 inches on each side of the penetration.

4507.4 Cut-nails shall not be used for securing boxes, panels, or similar items in place.

4507.5 Where 120 volt smoke detectors are installed in residential occupancies, they shall be installed ahead of all switches and shall be connected to bathroom or kitchen lighting circuits. Smoke detectors shall comply with the requirements of Sub-sections 305.2, 3127.1 and 3127.2 of this Code.

EXCEPTION: In existing buildings, smoke detectors may be connected to a lighting circuit or to a general receptacle circuit within the same dwelling unit, provided the smoke detector shall not be subject to loss of power by a switch or switches.

4507.6 ONE AND TWO FAMILY DWELLINGS: One branch circuit panelboard in new construction shall have a minimum of two (2) extra spaces to provide for one (1) 208 or 240 volt fuses or circuit breakers for future use.

4507.7 Each ballast and/or auto-transformer shall be provided with overcurrent protection on the primary side, either self-contained or by any other approved method.

4507.8 Rigid Nonmetallic Conduit (PVC) shall be restricted from use in parking garages as provided in Sub-paragraph 1102.2(c)(6) of this Code.

4507.9 Flexible watertight raceway shall be required for weather-proof flexible conduit where flexibility is needed.

4507.10 Short-radius ells, often referred to as "telephone ells" shall not be used in a run of concealed conduit.

4508 BRANCH CIRCUITS

4508.1 RANGES:

(a) The wiring for all electric ranges over 8 Kilowatt shall be a minimum of 50 amperes to an approved receptacle located within three feet of the range. For ranges of 8 Kilowatt rating or less, conductors shall have an ampacity of at least 40 amperes. When the oven unit is separate from the surface unit, each unit shall be on a supplied by a separate circuit, served with conductors that have an ampacity of not less than 30 amperes. An approved method of connection shall be provided for each unit. A range as referred to above shall be a complete cooking unit, consisting of both oven and surface burners.

(b) Single-family and multiple-unit residential occupancies of 800 square feet or more in area per unit, where electric ranges are to be used, shall be wired for ranges rated at not less than 12 kilowatts.

(c) Where such units are less than 800 square feet in area, range name plates shall be specified on the construction plans.

4508.2 KITCHENS:

(a) Refrigerators and/or freezers of more than 5.0 cubic feet shall each be supplied from an independent circuit in all new construction and alterations to existing construction at the refrigerator and/or freezer location.

4508.3 The wiring for all water heaters shall be with a minimum wire capacity of 20 amperes. Water heaters of 1000 watts or over shall be on a separate circuit. Points of electrical connections for heaters and replacement of elements shall be accessible.

4508.4 The maximum number of 120 volt outlets permitted per circuit in residential occupancies shall not exceed the provisions of TABLE 4508.4.

TABLE 4508.4
MAXIMUM NUMBER OF
OUTLETS PER CIRCUIT FOR RESIDENTIAL OCCUPANCIES

Light outlets	12	11	10	9	8	7	6	5	4	3	2	1	0
Receptacles	0	0	1	1	2	2	3	3	4	4	5	5	6

4508.5 In common or public areas such as, but not limited to, places of assembly, lobbies and parking garages in residential condominium, townhouse and apartment complexes, the minimum size branch circuit conductors shall be not less than 20 amperes.

4508.6 The minimum size of branch circuit conductors for residential condominium, townhouses and apartment complex outdoor parking area illumination shall be not less than 20 amperes.

4508.7 At all areas of commercial or industrial occupancies, a minimum of 20 amperes per branch circuit shall be provided.

4508.8 LAUNDRY:

(a) Where more than one washing machine is required by this Code in Sub-section 4613.19(m) Footnote No. 1, electric outlets shall be provided for clothes dryers based on one dryer per two washing machines or fraction thereof.

(b) When laundry space is provided, a 20 ampere 120 volt, 1500 watt circuit and receptacle for the washing machine and a 30 ampere 120/208 or 120/240 volt 5,000 watt circuit and receptacle for the dryer shall be provided.

4509 FEEDERS:

4509.1 All feeders in inaccessible locations in new construction, shall be in a raceway.

4509.2 Where residential electrical services are changed and there is an existing feeder that consists of Service Entrance Cable without an insulated neutral, the feeder shall be changed out and an approved wiring method used.

4509.3 Raceways for feeders for individual stores or warehouse spaces shall not be less than one and one-quarter inch trade size.

4510 CONDUCTORS FOR WIRING

4510.1 Color coding for all service entrance, feeder and branch circuit conductors shall be as follows:

(a) For 120/208 volt and 120/240 volt systems:

(1) Three-wire systems: one black, one red and one white neutral.

(2) Four-wire systems: one black, one red, one white neutral and one blue.

(b) For 240/480 and 277/480 volt systems:

(1) Three-wire systems: The colors shall be one brown, one yellow, and one gray neutral.

(2) Four wire systems: The colors shall be one brown, one orange, one gray neutral and one yellow.

(c) All conductors of the same color shall be connected to the same phase feeder conductors throughout the electrical system.

EXCEPTION: Switch legs and travelers for three and four way switches.

4510.2 All conductors for circuits rated 60 amperes and less shall be copper or copper-clad aluminum.

4510.3 All aluminum building wire shall be AA 8000 Series Alloy Conductor. All aluminum building wire shall be terminated or spliced with compression-type fittings (screw-type fittings of any type are prohibited).

4511 TEMPORARY WIRING

4511.1 All temporary electrical installations for carnivals, circuses, exhibitions, fairs, shows, tents and the like, regardless of the manner in which the electricity is generated or supplied, shall be maintained in a safe and serviceable condition.

4511.2 A qualified licensed electrician shall be required to patrol these temporary installations where considered necessary by the Chief Electrical Inspector for safety to life or property, or, the disconnect switches, except emergency circuits, may be locked in the "off" position.

4511.3 All stairways and parts of buildings under demolition, erection, or repair shall have adequate lighting, while persons are engaged in work, as set forth in Section 3318 of this Code.

4512 LOW VOLTAGE WIRING

4512.1 All permanent low voltage wiring installed outdoors shall be in an approved raceway.

EXCEPTION: Telephone, cable television and satellite dish lead-in cables.

4512.2 Low voltage systems shall conform to the Standard set forth NFPA-70 (NEC) and where the wiring is inaccessible, said wiring shall be enclosed in raceways.

EXCEPTION: Low voltage wiring in residential occupancies not exceeding three floors above grade shall not require raceways.

4512.3 Swimming Pool Lighting Fixtures: Underwater wet niche and no-niche lighting fixtures shall be of the type for use with 15 volts or less.

4512.4 Fire Alarm or similar systems which are designed and installed for safety to life and property, shall be installed by a qualified person regardless of voltage or amperage, and permits shall be obtained for such installations. Alterations and additions to existing Fire Alarm or similar systems shall comply with this Sub-section of this Electrical Code.

4513 SPECIAL REQUIREMENTS

4513.1 Any ceiling fan installed lower than seven feet from the floor to the bottom of the blades shall be provided with an approved protective guard enclosing such blades.

4513.2 Electrical systems including all light, heat, power and low voltage systems shall not be run through the interior of a Trash Room where the systems would be subject to fire damage.

EXCEPTION 1: Where these systems are enclosed in a two hour chase.

EXCEPTION 2: Those electrical devices which service the Trash Room only.

4513.3 COVES: Construction of coves for indirect light shall provide the following minimum dimensions for installation and maintenance:

(a) Minimum vertical depth, fourteen and one-half inches from ceiling.

(b) Minimum horizontal width for one tube, four and one-half inches (add two inches to width for each additional tube).

(c) Minimum lip or face of cover, four and one-half inches, to provide ten inches of free working space from the top of the lip to ceiling.

4513.4 STRUCTURAL MEMBERS:

(a) Conduit raceway and tubing embedded in concrete shall be as set forth in Sub-section 2507.3 of this Code.

(b) Cutting of holes in pre-cast concrete members shall be limited to the provisions of Sub-section 2509.8 of this Code.

(c) Cutting of holes in steel members shall be limited to holes spaced not less than the depth of the member, not larger than one-sixth of the depth of the member and shall be located in the middle one-third of the member. Chapters 24 and 28 of this Code shall be strictly adhered to.

(d) Notching or boring of wood members shall be limited to the provisions of Chapter 29 of this Code.

(e) Where electric ceiling outlets, or other openings, pierce a ceiling that is part of a fire-resistive assembly, such outlets or other openings shall comply with Sub-section 3703.6 of this Code.

4513.5 ISOLATION OF PIPING: Conduit and tubing shall be isolated from water service and distribution pipe, soil pipe, gas pipe and tubing, process piping and other building materials where electrolysis and damage by friction and abrasion may be anticipated except where electric ground is required by this Code.

4513.6 METAL BUILDINGS: All metal frame and metal clad buildings or portions thereof that may become energized and are subject to personal contact shall be grounded.

4513.7 ELEVATORS: Elevators, where provided, shall be supplied with light and power and arranged for Fire Department emergency use as set forth in Section 3112 and Sub-section 3204.2 of this Code.

4513.8 EXTERIOR INSTALLATIONS: All electrical equipment, piping and conduit shall meet the requirements of Chapter 23 and Section 3409 of this Code as applicable.

EXCEPTION: All permanently mounted rooftop electrical piping or conduit shall be installed with a minimum clearance between the roof surface and the bottom side of the electrical piping or conduit, of three and one-half inches. Maximum horizontal distance of twelve inches shall be maintained for all electrical piping and conduit run adjacent to one piping or conduit. Minimum spacing between racks of piping or conduit shall be three feet.

4513.9 FIRE PUMPS: Electrical installations for fire pumps shall be as set forth in Sub-section 3804.4 and Sections 5108 and 5109 of this Code and with NFPA-20.

4513.10 Illumination of Means of Egress and Emergency Lighting shall be as set forth in Sections 3112 through 3123 of this Code and shall comply with NFPA 101.

4513.11 Exit Signs and Marking of Means of Egress shall be as set forth in Sections 3112 through 3123 of this Code and shall comply with NFPA 101.

4514 SIGN INSTALLATIONS

4514.1 EXTERIOR SIGN INSTALLATIONS:

(a) See Section 4202 of this Code for all required inspections.

(b) (1) Minimum ¼" drain holes shall be provided in transformer enclosures and junction boxes exposed to the weather, and such holes shall be de-burred to prevent accumulation of water within the enclosure.

(2) Transformer enclosures shall be mounted securely to the parapet wall.

(3) Transformer enclosures, racks or frames shall be of sufficient strength to securely hold the weight of the transformer or transformers.

(4) Where transformer enclosures are mounted on the roof they shall be elevated at least eight inches above the roof and the lid shall be placed upward.

(5) Combustible material shall not be used for mounting, supports, or to elevate transformers, or transformer enclosures.

(6) Masonry bricks are acceptable for such support where properly strapped or attached.

(c) Tubulation glass and No. 14 bare wire shall not be used except as follows:

(1) Short jumpers between neon units on wall signs and channel letters and on flat wall signs where the use of conduit or electric metallic tubing would disfigure the face of the building.

(2) Insulators shall be all glass and at least one and one-half inches long, spaced not more than 24 inches

apart, minimum 2 per neon unit.

(3) (aa) Open conductors and tubing of sign shall not be installed on any wood or combustible surfaces.

(bb) Open conductors and tubing of the sign shall not be installed on the roof side of the parapet or on top of any roof or parapet.

(4) Conductors and neon tubing shall maintain a height of at least eight feet from the ground, and shall not be installed on walls where they can be reached from platforms, balconies, fire-escapes or through windows, doors or other similar openings. Neon below 8' shall be enclosed to prevent direct contact with neon tube.

EXCEPTION: Where outdoor signs are totally enclosed so that ready accessibility is prevented and signs that totally insulate all connecting terminals, the eight foot height requirement shall not apply.

(d) All metal raceways shall be grounded in a manner which complies with the grounding regulations contained in the Standard set forth in Paragraph 4503.2(b) herein.

(e) (1) Each sign shall have a disconnect switch located visibly on the exterior of the sign as well as 1 disconnect switch mounted on transformer can when installed in a remote location. A minimum of 1 disconnect switch for each circuit.

(2) The rating of such switches shall comply with the Standard set forth in Sub-section 4503.8 herein.

(f) Metal boxes shall be bonded together so they will be suitably and properly grounded when used to house electrodes, transformers or other apparatus used in connection with both primary and secondary circuits for neon lighting.

(g) Lighting of signs shall also comply with Sections 4209 and 4210.

4514.2 HIGH VOLTAGE WIRE:

(a) (1) All isolated runs of electric metallic tubing enclosing high-voltage wiring shall be grounded regardless of length.

(2) Conductors which run from the grounded mid-point terminal of a neon transformer shall be 15,000 volt GTO wire.

(3) Wire from the mid-point of transformers shall be installed in metallic raceway, liquidtight, approved non-metallic raceway with a bonding wire or other approved raceways.

4514.3 NEON TRANSFORMERS:

(a) When tubes are removed for repairs, jumpers shall be installed in high-voltage wire, supported with the same clearance as tube, but the jumpers must be removed within seven days.

(b) Only window-type and portable transformers may be plugged in and all other transformers shall be permanently connected with an approved method of wiring.

4514.4 INTERIOR WINDOW SIGNS AND WINDOW-BORDER LIGHTING:

(a) Window-type sign-transformers shall be especially designed for use with window signs unless such signs are installed in compliance with this Sub-section.

(b)(1) Such signs shall be designed and installed to form a complete unit and so that the frame carries the entire weight of the sign.

(2) Such frames shall be fastened to the sill or other part of the window so that the neon tubing carries none of the weight of the sign. Frames shall have a minimum of 2 safety bumpers with a minimum length of 3 inches.

(c)(1) Transformer wires feeding window signs shall be in an approved raceway from transformer enclosure to the bottom of the ceiling.

(2) Electrodes on window signs which connect to the transformer wires shall be designed and placed so that such wires drop straight and may be readily covered by straight glass sleeves of sufficient size, and that jumps from one electrode to another electrode shall be of one piece construction without splices.

(d) Transformer wires shall not be supported by or in contact with any combustible material.

(e) (1) Secondary wiring systems shall be installed in metallic raceway, liquidtight, approved non-metallic raceway with a bonding wire or other approved raceways.

(2) Other approved means may be used where special permission is obtained from the Chief Electrical Inspector.

(f) (1) Neon window borders below 8' from grade will require a minimum of 3/16" polycarbonate (i.e. LEXAN) cover eliminating the possibility of direct contact with neon.

(2) Neon borders installed on metallic mullions shall be bonded.

(g) Approved type of connectors or solder must be used on all secondary connections.

4514.5 INTERIOR NEON OR COLD CATHODE LIGHTING:

(a) Approved housings and fittings shall be used on all interior series neon or cold cathode lighting and interior window border lighting, regardless of the milliamperage rating of the transformer or color of the tubing.

(b) Neon transformers with a rating over 60-milliamperes are not approved for exposed exterior neon or cold-cathode tubing.

(c) (1) Transformers, cans, shall be clearly marked with voltage, amperes and manufacturer.

(2) Transformers, cans, shall be clearly marked danger high voltage in 1" high red letters.

(3) Minimum residential height of 8' or in an accessible cove space.

4515 CLARIFICATIONS

4515.1 Columns having a diameter of 2 feet or more (610mm or more) wide shall be considered wall space in dwelling units. Therefore, receptacle outlet shall be required.

4515.2 The requirements for a permanently installed swimming pool and spa combination need not be more restrictive than those of a swimming pool, when the permanently installed spa which has common filtered water from the shell area encompassing both the swimming pool and spa.

4515.3 The use of galvanized tie-wire is only to secure not support, the running of raceways in construction. Example, above and below bar-joists.

4515.4 The State Accessibility Code requires the height of essential switches and controls to be located between 42 and 52 inches from the floor.

The height of fire alarm pull stations falls under this category, and therefore, must be between 42 and 52 inches from the floor.

4515.5 When junction boxes for future paddle fans, or lights, do not have a fan or a light mounted on same, a blank cover is permissible. No fixture of any kind will be required to cover these junction boxes.

4515.6 Inspectors utilizing correction notices ("red tags"), for violations or corrections to work in progress, shall indicate, on the tag, the item to be corrected and the Section of South Florida Building Code in violation.

Violation notices issued without indication of the Code Sections will not be considered valid by the Broward County Board of Rules and Appeals.

4515.7 Doors, without an exterior locking mechanism, at entrances, are not required to comply with NEC Article 210-70 for wall switch controlled interior lighting outlet.

4515.8 Plans and Specifications: The following is Explanatory Material

(a) Power systems convey or distribute electrical energy. Items to be included in the design and analysis of these systems are: steady state and transient loads, short circuit protection, load flow, voltage drop, harmonics, and protective device coordination.

(b) Lighting systems convert electrical energy into light. Items to be included in the lighting design and analysis are: Average illuminance, Equivalent spherical illuminance, Uniformity ratio, Visual comfort probability, special purpose lighting, and the requirements of the Florida Energy Efficiency Code, Part IX, Chapter 553, Florida Statutes.

(c) Grounding Systems are passive systems used to establish an electrical potential reference point in an electrical system for the proper dissipation of energy in case of abnormal or transient conditions.

4515.9 In reference to National Electrical Code 1996, Article 300-11 (a)(2) Exception. A maximum of two (2)-one-inch conduits and boxes may be suspended in the ceiling fixed to the hanger wires supporting the ceiling.



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23

Christopher V. Goodpastor
Regional Counsel

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email: cgoodpas@covad.com

January 10, 2000

Ms. Kimberly Caswell
Florida Region Counsel
GTE Service Corporation
One Tampa City Center
201 North Franklin Street
PO Box 110, FLTC0007
Tampa, FL 33601-0110

Via Facsimile and US Mail

Re: Docket No. 981834-TP — Petition of Competitive Carriers for Commission action to support local competition in BellSouth service territory

Docket No. 90321-TP — Petition of ACI Corp. d/b/a Accelerated Connections, Inc. for Generic Investigation into Terms and Conditions of Physical Collocation

Dear Ms. Caswell:

Enclosed please find documents produced in response to GTE Florida, Inc.'s First Request for Production to Covad Communications Company, labeled COVD 00001 - 00002.

Very truly yours,

Christopher V. Goodpastor

Cc: Beth Keating
Staff, Florida Public Service Commission

Catherine Boone
Covad Communications Company

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 981834-TP
NO. 990321-TP EXHIBIT NO. 23
COMPANY/
WITNESS: Mancoske
DATE 1-14-2000

Tampa

Elapsed days	Total days
113	2009
134	2009
64	1559
92	1681
92	1681
64	1559
90	1709
120	2009
90	1709
95	1834
92	1681
113	2009
134	2009
92	1681
113	2009
134	2009
120	2009
134	2009
95	1834
64	1559
113	2009
90	1709
95	1834

Tampa

CO Name	CLLI	App Fee	Fee Sent	PQ rec'd	Appl days	Deposit \$ Amt.	Date Dep Sent	PQ Amount	CAGE Turnover
Cageless	REDACTED	2,500.00	6/4/99	9/8/99	96	\$ 15,100.13	9/16/99	\$ 27,700.25	7-Jan-00
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	28-Jan-00
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	19-Nov-99
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	17-Dec-99
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	17-Dec-99
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	19-Nov-99
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	15-Dec-99
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	14-Jan-00
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	15-Dec-99
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	20-Dec-99
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	17-Dec-99
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	7-Jan-00
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	28-Jan-00
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	17-Dec-99
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	7-Jan-00
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	28-Jan-00
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	14-Jan-00
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	28-Jan-00
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	20-Dec-99
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	19-Nov-99
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	7-Jan-00
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	15-Dec-99
		2,500.00	6/4/99	9/1/99	89	\$ 9,723.50	9/16/99	\$ 16,947.13	20-Dec-99
		GTE did not begin to process cageless applications until 8/1/99.							

COVD 00001

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

CY: AB
KS (how)

In re: Petition of Competitive Carriers for
Commission Action to support local
competition in BellSouth
Telecommunications, Inc.'s territory

§ Docket Nos. 981834-TP and 990321-TL
§ (Consolidated)
§
§
§

In re: Petition of Rhythms Links, Inc. for
generic investigation to ensure that
BellSouth Telecommunications, Inc.,
Sprint-Florida, Inc., and GTE Florida Inc.,
comply with obligation to provide
alternative local exchange carriers with
flexible, timely, and cost-efficient
collocation

§
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§ Filed: January 7, 2000

RECEIVED

JAN 10 2000

Hopping, Green, Sams & Smith

**OBJECTIONS AND RESPONSES OF COVAD COMMUNICATIONS
COMPANY TO GTE FLORIDA INC.'S FIRST SET OF INTERROGATORIES**

Pursuant to Rule 28-106.206 of the Florida Administrative Code, and Rule 1.340 of the Florida Rules of Civil Procedure, Covad Communications Company ("Covad") serves its objections and responses to GTE Florida Inc.'s First Set of Interrogatories ("First Set").

General Objections

1. Covad objects to these interrogatories to the extent they seek to impose obligations other than those imposed by the Florida Administrative Code or the Florida Rules of Civil Procedures.

2. Covad objects to these interrogatories to the extent they seek trade secrets and/or confidential proprietary information, or information that is protected from disclosure by privilege or immunity, including but not limited to, the attorney-client privilege and work product doctrine.

3. Covad objects to these interrogatories to the extent they seek information from any entity other than Covad Communications Company, information

that is publicly available, or information within the possession custody or control of GTE Florida, Inc.

4. Covad objects to providing a privilege log as defined by these interrogatories. Covad agrees to comply with the Florida Rules of Civil Procedure, the Florida Administrative Code, and the Rules of the Florida Public Service Commission regarding claims of privilege.

5. Covad's investigation of this matter is continuing. Covad, therefore, reserves the right to supplement its responses and to assert additional objections to these interrogatories, if necessary.

6. Covad incorporates each of these General Objections into its responses to individual interrogatories provided below.

Responses to Individual Interrogatories

INTERROGATORY NO. 1: At page 4, lines 16-19 of Covad witness Moscaritolo's Direct Testimony in this Docket, Mr. Moscaritolo states that "GTE Florida provides collocation space to Covad in a median interval of 184 calendar days in Florida, i.e., over 6 months." Please explain the factual basis for this statement, including explaining what event Covad believes triggers the start of the collocation provisioning interval and what event terminates the interval.

RESPONSE: Subject to and without waiver of its General Objections, Covad responds as follows:


The referenced testimony relies upon data gathered by Covad regarding 23 applications for collocation submitted to GTE Florida, Inc. for central offices in the Tampa, Florida metropolitan area. The collocation interval consists of the sum of (1) the interval between the date of the submission of a collocation application by Covad and the date of the return of a price quote by GTE Florida, Inc., ("Application Interval"), and (2) the interval between the date of submission of the required deposit by Covad and the date that GTE Florida, Inc. delivered or intends to deliver the requested collocation space

("Provisioning Interval"). The collocation interval does not include the amount of time required by Covad to respond to the price quote provided by GTE Florida, Inc.

RESPONSE PROVIDED BY: Michael Moscaritolo
Expert Witness for Covad Communications Company

Dated: January 7, 2000

Respectfully submitted,


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Regional Counsel

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QUALIFIED REPRESENTATIVE
OF COVAD COMMUNICATIONS
COMPANY

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing was served via facsimile/U.S. Mail this 7th day of January, 2000 to the following:

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Charles J. Pellegrini

**ERRATUM SHEET
FOR REBUTTAL TESTIMONY OF RONALD W. MILLS**

PAGE 3 LINE 15 SPELLING CHANGE TO "COLLOCATION"

PAGE 6 LINE 6 PUNCTUATION PLACE COMMA BETWEEN "FLOOR, AISLE"

**PAGE 6 LINE 18 CHANGE WORDING The 30 calendar days should read "15 calendar days "
This would be consistent with page 5 line 5.**

PAGE 7 LINE 16 GRAMMAR INSERT "TO" BEFORE "PERMIT..."

PAGE 8 LINE 5 GRAMMAR CHANGE "TO" to FOR .

PAGE 10 LINE 5 SPELLING CHANGE "APPROPRIATE TO INAPPROPRIATE

PAGE 11 LINE 7 SPELLING CHANGE " PLACE" to PLACED

**PAGE 14 LINE 5 SHOULD READ AS "ACCURATE APPLICATION AND FEE" INSERT
APPLICATION**

PAGE 16 LINE 8 GRAMMAR CHANGE "FOR" to "WITH"

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET
NO. 981834-9 EXHIBIT NO. 24
COMPANY/ 990331-11
WITNESS: mills
DATE: 1-12-14-2017