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February 4, 2003

Ms. Blanca S. Bayo, Director
Division of Commission Clerk
and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

FPSC-COMMISSION CLERK
03 FEB -4 PM 12:47

Re: Docket No. 981834-TP
Petition of Competitive Carriers for Commission Action to Support Local Competition in BellSouth Telecommunications Inc.'s Service Territory

Docket No. 990321-TP
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

Dear Ms. Bayo:

Please find enclosed for filing an original and 15 copies of the Direct Testimonies of Barbara K. Ellis, Allen E. Sovereign and James H. Vander Weide on behalf of Verizon Florida Inc. in the above matters. Exhibits BKE-1 and BKE-2 to Ms. Ellis' testimony are Verizon's proprietary and confidential cost studies and will be filed under separate cover. Service has been made as indicated on the Certificate of Service. If there are any questions regarding this filing, please contact me at 813-483-2617.

Sincerely,

Kimberly Caswell

Enclosures

AUS
CAF
CMP Fulwood
COM 5 Original
CTR
ECR
GCL 1
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SEC 1
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ELLIS
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SOVEREIGN
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VANDER WEIDE
DOCUMENT NUMBER-DATE
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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that copies of the Direct Testimonies of Barbara K. Ellis, Allen E. Sovereign and James H. Vander Weide on behalf of Verizon Florida Inc. in Docket Nos. 981834-TP and 990321-TP were sent via U. S. mail on February 4, 2003 to the parties on the attached list.

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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

DIRECT TESTIMONY OF

BARBARA K. ELLIS

ON BEHALF OF

VERIZON FLORIDA INC.

FEBRUARY 4, 2003

DIRECT TESTIMONY OF BARBARA K. ELLIS

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Barbara K. Ellis. My business address is 600 Hidden Ridge, Irving, Texas 75038.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Verizon Communications as a Senior Staff Consultant. In this proceeding I am representing Verizon Florida Inc. ("Verizon FL" or the "Company").

Q. PLEASE DESCRIBE YOUR EDUCATION AND WORK EXPERIENCE.

A. I have a Bachelor's Degree in Business Administration from Cameron University in Lawton, Oklahoma and a Master of Science Degree in Economics from the University of North Texas in Denton, Texas. I have been employed at Verizon (formerly, GTE) in my current position since 1997. In this capacity, I am responsible for supporting Verizon's cost studies used for pricing retail and wholesale services. Prior to my employment at Verizon I was employed at Texas New Mexico Power Company (TNP), and was involved in retail and wholesale rate setting, demand forecasting, and resource planning. Prior to my employment in the electric industry, I was an adjunct professor in the Economics Department at the University of North Texas.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY STATE OR FEDERAL REGULATORY COMMISSIONS?

A. Yes. I have testified on behalf of Verizon on cost issues before the state regulatory commissions of Illinois, Indiana, New Mexico, North Carolina, Washington, and Wisconsin. I also testified before state regulatory bodies in New Mexico and Texas, and before the Federal Energy Regulatory Commission during my employment in the electric industry. As a witness in the electric industry, I gave testimony concerning retail rate design and revenue requirements, purchased power price forecasting and cost model policy, and input development.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony discusses Verizon FL's Expanded Interconnection Services Cost Study and rate development ("EIS cost study" or "collocation cost study") and its Dedicated Transit Service Cost Study and rate development ("DTS Study"), which together address all of the forms of collocation included in Verizon FL's Facilities for Intrastate Access Tariff. My testimony also addresses Pricing Issues 9 and 10 designated for resolution in this docket.

Q. HOW IS THIS TESTIMONY ORGANIZED?

A. My testimony consists of a general explanation of the types of collocation offered in Verizon FL's Intrastate Access Tariff and in use in Florida, the methodology used in developing Verizon FL's cost study, the cost elements generated by that study, and the corresponding rate

elements. It also discusses typical Florida collocation arrangements.

Attached to my testimony are the following exhibits:

- Confidential Verizon FL Exhibit BKE-1, which contains a cost study (with supporting workpapers) for all of Verizon FL's proposed collocation rate elements except for the DTS elements;
- Confidential Verizon FL Exhibit BKE-2, which contains a Dedicated Transport Service cost study (with supporting workpapers) for Verizon FL's proposed DTS elements;
- Verizon FL Exhibit BKE-3, which lists Verizon FL's proposed rate elements and associated rates;
- Verizon FL Exhibit BKE-4, which presents an explanation of the cost elements, rate elements, and associated terms and conditons;
- Verizon FL Exhibit BKE-5, which provides an example of a typical Florida caged collocation arrangement;
- Verizon FL Exhibit BKE-6, which provides an example of a typical Florida cageless collocation arrangement; and
- Verizon FL Exhibit BKE-7, which provides an example of a typical Florida virtual collocation arrangement.

Q. BRIEFLY DESCRIBE HOW CONFIDENTIAL VERIZON FL EXHIBIT BKE-1 IS ORGANIZED.

A. Confidential Verizon FL Exhibit BKE-1 is the collocation cost study for the state of Florida. The study includes:

- a narrative that describes the development of costs (pages 1-37);
- a rate summary that lists the 148 rate elements that the Commission should set in this proceeding (pages 38-43);
- a summary of the cost elements (pages 44-48);
- collocation drawings (pages 49-69);
- a glossary of elements (pages 70-85);
- a list of acronyms used in the study (pages 86-89); and
- the supporting workpapers for the cost study (pages 90-235).

Q. WHAT IS INCLUDED IN THE WORKPAPERS?

A. The workpapers contain the development of the non-recurring rate elements (pages 90-149), the monthly recurring rate elements (pages 150-228), and the common inputs such as annual cost factors, Verizon FL labor rates, and Single Source Provider ("SSP") labor rates (pages 229-235). All workpapers identify (1) the source(s) of data, (2) how the data are used in the collocation cost study to develop cost elements, (3) how those cost data are used to develop rate elements, and (4) to which form(s) of collocation each element applies. Workpapers ending with a "CS" suffix are cost support workpapers, whereas workpapers ending with a "PS" suffix are price support workpapers.

Q. PLEASE IDENTIFY WHAT IS INCLUDED IN CONFIDENTIAL VERIZON FL EXHIBIT BKE-2.

A. Confidential Verizon FL Exhibit BKE-2 is the Dedicated Transit Service

("DTS") study for the state of Florida. The study includes:

- a narrative that describes the development of costs (pages 4-6);
- a rate summary that lists the DTS rate elements that the Commission should set in this proceeding (pages 7-9);
- a summary of ordering costs and their supporting workpapers (pages 13-37);
- a summary of provisioning costs and their supporting workpapers (pages 38-52);
- a summary of field work costs and their supporting workpapers (pages 53-62); and
- the loaded labor rates used in the study (pages 63-67).

Q. PLEASE IDENTIFY WHAT IS INCLUDED IN VERIZON FL EXHIBITS BKE-3 AND BKE-4.

A. Verizon FL Exhibit BKE-3 provides a rate summary that lists and describes the application of the 148 rate elements that the Commission should set in this proceeding. This exhibit is identical to the rate summary included as a part of the cost study in Confidential Verizon FL Exhibit BKE-1 on pages 38-43. It is provided in a separate exhibit so that it can be separated from the remainder of the cost study and offered as a non-confidential exhibit.

Verizon FL Exhibit BKE-4 provides a definition for each collocation element and lists each element's associated terms and conditions. The

exhibit includes the following information about each element:

- a brief description of the costs included in the element;
- an explanation of how the proposed rate was derived; and
- a cross-reference to the terms and conditions applicable to the rate element in Verizon FL's Facilities for Intrastate Access Tariff.

Q. HOW DO THESE EXHIBITS CORRESPOND TO THE PRICING ISSUES THAT THE COMMISSION HAS DESIGNATED FOR RESOLUTION?

A. Verizon FL Exhibits BKE-1, BKE-2, and BKE-3 address Issues 9A ("For which collocation elements should rates be set for each ILEC?") and 9B ("For those collocation elements for which rates should be set, what is the proper rate and the appropriate application of those rates?"). Verizon FL Exhibit BKE- 4 addresses Issue 10 ("What are the appropriate definitions, and associated terms and conditions for the collocation elements to be determined by the Commission?").

II. TYPES OF COLLOCATION

Q. WHAT FORMS OF COLLOCATION ARE INCLUDED IN VERIZON FL's COLLOCATION COST STUDY?

A. Verizon FL offers a wide range of collocation options, allowing each ALEC to choose the option for each central office in which it collocates that best suits the needs of its business, given the availability of space in each central office. The offerings available in Verizon FL's tariff are:

- caged collocation (rate elements 1-50[1] and 96-121[2]);
- cageless collocation (rate elements 1-50);
- virtual collocation (rate elements 1-50);
- adjacent on-site collocation (rate elements 51-95);
- microwave collocation (rate elements 98, 99, 118, 122, and 123); and
- Dedicated Transit Service ("DTS") (rate elements 124-148).

I describe each of these offerings briefly in my testimony. The terms and conditions applicable to each form of collocation are explained in more detail in John Ries's Direct Testimony in this docket and the Verizon FL Facilities for Intrastate Access Tariff attached thereto.

Q. BRIEFLY EXPLAIN THE DIFFERENT FORMS OF CAGED COLLOCATION AVAILABLE TO ALECS.

A. Verizon Florida offers three caged collocation arrangement options: single, shared, and subleased. A single caged arrangement provides the ALEC with dedicated, caged floor space in various square footage increments and offers the ALEC direct access to the cage to install, maintain, or repair its equipment. A shared collocation arrangement is a dedicated, caged collocation space shared by two or more ALECs, each of which has direct access to the cage. One of the collocators is designated the Host collocator ("HC") and every other collocator sharing the same area is referred to as a Guest collocator ("GC"). The HC is responsible for ordering and remitting payment for all shared cage services requested from Verizon FL, but each ALEC has a separate

Local Service Request ("LSR") account with Verizon FL for ordering UNEs. The final form of caged collocation, sublease collocation, occurs when an existing collocator sublets surplus space in its contracted cage to another ALEC.

Q. PLEASE DESCRIBE THE CAGELESS FORM OF COLLOCATION AVAILABLE TO ALECS.

A. A cageless arrangement is very similar to a single caged arrangement without the cage, providing the ALEC with space in single bay or cabinet increments. Cageless arrangements do not provide the same level of security as caged arrangements, but ALECs can opt to have their equipment contained in locking cabinets. Typically, cageless arrangements are located in an area that is separate from Verizon FL's equipment. An ALEC with a cageless arrangement has direct access to the cageless collocation area to install, maintain, or repair its equipment.

Q. PLEASE DESCRIBE VIRTUAL COLLOCATION AND HOW IT DIFFERS FROM CAGED OR CAGELESS ARRANGEMENTS.

A. With virtual collocation, the ALEC acquires the equipment it wishes to use and then leases that equipment to Verizon FL for a nominal amount. The equipment remains dedicated to the ALEC's use, but Verizon FL is responsible for its installation and maintenance. The ALEC therefore neither needs nor is allowed access to the equipment; thus, virtual arrangements do not require separation from the equipment Verizon FL itself uses to provide telecommunications services. This allows Verizon

FL to maximize efficiency by placing virtually collocated equipment within Verizon FL equipment line-ups, as appropriate.

Q. WHAT IS ADJACENT ON-SITE COLLOCATION AND WHEN IT IS AVAILABLE TO AN ALEC?

A. Adjacent on-site collocation is available only when physical collocation space in a Verizon FL central office is exhausted. It has not been necessary to use this form of collocation in any Verizon FL central office. Nonetheless, Verizon FL has developed terms and conditions for adjacent on-site collocation.

With adjacent on-site collocation, the ALEC would be required to construct a separate building on Verizon FL's property in which the ALEC would install, repair, and maintain its equipment. ALEC entrance facilities would terminate in the separate building, rather than in Verizon FL's central office. The ALEC would have direct access to its equipment, but would neither need nor be allowed access to the Verizon FL central office because all of the collocator's equipment would be located and interconnected to Verizon FL's central office within the adjacent building. Likewise, Verizon FL would not have access to the adjacent building housing the ALEC equipment, except in emergencies.

Q. BRIEFLY EXPLAIN THE MICROWAVE COLLOCATION AVAILABLE TO ALECS.

A. Microwave collocation provides for the interconnection of ALEC-

provided facilities, equipment, and support structures located on the roof of a Verizon FL central office. An ALEC is required to have an existing physical (caged or cageless) or virtual collocation arrangement in the central office in order to request microwave collocation. Microwave collocation may not be available at all central offices due to space limitations or technical constraints.

Q. HOW MANY OF EACH TYPE OF COLLOCATION ARRANGEMENT ARE ALECS USING?

A. The following table presents the type and quantity of collocation arrangements ordered out of Verizon FL's state tariff and in use in Verizon FL's central offices as of November 2002.

Collocation Type	Quantity	% of Total
Physical/Caged	49	32%
Cageless	98	65%
Virtual	4	3%
Adjacent	0	0%
Microwave	0	0%
Total	151	

As the table above shows, no ALECs currently take advantage of Verizon FL's adjacent or microwave collocation offerings, but caged and cageless collocation arrangements are fairly common and virtual arrangements exist.

Q. BRIEFLY EXPLAIN VERIZON FL'S DEDICATED TRANSIT SERVICE.

A. Dedicated transit service ("DTS") allows an ALEC to interconnect its facilities and equipment with another ALEC's facilities and equipment. Such connections may use a dedicated facility at the DS0, DS1, or DS3 transmission level, or occur via dark fiber. DTS connections may be made only within a single Verizon FL central office and the ALEC must provide the connecting facility assignments.

III. COST STUDY METHODOLOGY

Q. HOW WAS VERIZON FL'S COLLOCATION COST STUDY DEVELOPED?

A. Verizon FL developed its costs using cost methods that are consistent with the Federal Communications Commission's ("FCC") Total Element Long-Run Incremental Cost ("TELRIC") construct. Verizon FL's costs are based on the costs of labor and materials needed to offer collocation to the ALECs. Specifically, Verizon FL's analyses utilize general contractor invoices for collocation projects, materials costs available to Verizon FL, and estimated work times and expenses from the various work groups involved in provisioning collocation arrangements.

Q. DOES THE COLLOCATION COST STUDY CORRECTLY MEASURE THE COST ELEMENTS REQUIRED TO PROVIDE COLLOCATION?

A. Yes. All Verizon FL work activities and equipment requirements associated with the types of collocation addressed by the EIS cost study are identified and organized into cost elements. The EIS cost study

breaks costs down into appropriate unit measurements for each element, such as linear feet of cable or square feet of floor space, and presents cost results on a "per unit" basis. This approach allows Verizon FL the flexibility to develop rate elements responsive to customer needs. Rate elements are priced on either a recurring or nonrecurring basis, as appropriate, to meet the needs of the ALECs and to provide a reasonable opportunity for cost recovery by Verizon FL.

Q. PLEASE EXPLAIN THE METHODOLOGY VERIZON FL USED TO DEVELOP ITS MONTHLY RECURRING RATE ELEMENTS.

A. To develop its monthly recurring rate elements, Verizon FL first identified the investments and expenses associated with providing each particular facility or service. Those investments were annualized through the application of the appropriate annual cost factor ("ACF"). The ACFs, which are listed on page 231 of Confidential Verizon FL Exhibit BKE-1, provide for a return on and recovery of capital (i.e., return and depreciation) and for taxes. The rate of return and the depreciation rates are endorsed and explained by Verizon FL witnesses Vander Weide and Sovereign, respectively. Those annualized expense and investment recovery figures were then divided by 12 to produce the TELRIC component of the monthly recurring rates. Verizon FL then used the fixed allocator of 14.09%, proposed in its Florida UNE Docket 990649-TP filing and on appeal, to assign reasonable shares of wholesale related common costs to the monthly recurring figures.

Q. WHAT COSTS FORM THE INPUTS IN VERIZON FL'S EIS COST STUDY?

A. The EIS cost study takes into account the most significant costs Verizon FL incurs to provide an ALEC with collocation: labor, materials, heating, ventilation, and air conditioning ("HVAC"), maintenance, and power. Of these, labor and materials are the largest component of Verizon FL's costs.

a. Labor Costs

Q. HOW DID VERIZON FL DETERMINE APPROPRIATE LABOR COSTS?

A. Determining appropriate labor costs requires looking at both Verizon FL employee labor costs and outside contractor rates, because Verizon FL relies on both in-house and outside labor to provision collocation. Verizon's 2000 loaded labor rates for Florida were used to determine the costs associated with collocation-related activities performed by Verizon FL employees. To determine appropriate contractor labor rates, Verizon FL uses a competitive bidding process known as "Single Source Provider" or "SSP."

Q. WHAT DO VERIZON'S LOADED LABOR RATES INCLUDE AND HOW ARE THEY DETERMINED?

A. The loaded labor rates include the direct costs associated with employee work activities, such as benefits, overtime, support and supervision, and overhead (e.g., motor vehicles and tools). The loaded

labor rates are market-based and reflect Verizon's economies of scale. Additional detail related to these Verizon-specific labor rates is presented on pages 233 and 234 of Verizon FL's cost study, attached hereto as Confidential Verizon FL Exhibit BKE-1.

Q. PLEASE EXPLAIN THE SINGLE SOURCE PROVIDER CONTRACTOR BIDDING SYSTEM.

A. SSP labor costs are derived from current Florida rates for laborers with the specific job skills necessary to perform the work required. The SSP is a competitive bidding system, repeated biannually, whereby Verizon FL solicits bids from various contractors in different geographical zones that meet Verizon FL's quality and insurance requirements. These bids are then used to develop unit rates for the labor costs used in Verizon FL's collocation cost study. The SSP rates used in the cost study are presented on page 232 of Confidential Verizon FL Exhibit BKE-1.

Q. HOW DO THE SSP LABOR RATES COMPARE TO THE RATES AVAILABLE TO VERIZON FL FOR COMPARABLE WORK IN THE PROVISION OF SERVICE TO ITS RETAIL CUSTOMERS?

A. The SSP labor rates are the same rates available to Verizon FL in its provision of retail services. The collocation cost study labor rates therefore include the economies of scale associated with Verizon FL's purchasing power.

b. Materials Costs

Q. HOW DID VERIZON FL DETERMINE APPROPRIATE MATERIALS COSTS?

A. Materials costs were obtained from Verizon FL's materials records. They contain prices based on invoiced costs for items Verizon FL currently has in inventory and on current price quotes from third party vendors for those items not in Verizon FL's inventory. Materials costs also include appropriate shipping and handling, sales tax, minor materials, and other supply provisioning costs.

Q. HOW DOES VERIZON FL TRACK THESE MATERIALS COSTS?

A. GTE Advanced Materials System ("GTEAMS") is the materials management system used by Verizon to perform inventory planning, accounting, purchasing, and materials management functions for its operating companies. The database provides two types of materials cost information: (1) the actual prices paid for materials that are in Verizon FL's inventory; and (2) current and effective price quotes for materials that are not or may not be in Verizon FL's inventory.

Q. HOW DOES THE MATERIALS COST DATA USED IN THE EIS STUDY COMPARE TO THE PRICES AVAILABLE TO VERIZON FL WHEN ORDERING MATERIALS FOR ITSELF?

A. The prices used in the EIS cost study are the same as the prices that Verizon FL pays for equivalent materials. Thus, the materials costs included in the EIS cost study reflect Verizon's economies of scale.

Additionally, this development of materials inputs and installation costs is consistent with the process the Company uses to estimate costs for internal Verizon FL projects and retail product offerings.

Q. WHY DOES VERIZON FL USE CURRENT MATERIALS AND LABOR COSTS IN ITS COST STUDY?

A. The use of current materials and labor costs and activity times is appropriate in estimating future collocation costs in Florida because the provisioning of collocation services is labor and materials (and not technology) intensive. Thus, general technological advances are not likely to lead to "future efficiency gains" in the provisioning of collocation services.

c. Engineer, Furnish & Install ("EF&I") Factors

Q. WHAT PURPOSE DO EF&I FACTORS SERVE IN THE COST STUDY?

A. EF&I Factors translate base year, materials-only investment into installed investment by accounting for items such as vendor engineering, Verizon FL engineering, transportation, warehousing, hoisting, vendor installation, Verizon FL installation (including acceptance testing and/or other plant labor), and interest during construction.

Q. HOW ARE EF&I FACTORS USED IN THE COST STUDY?

A. EF&I Factors, which are provided on page 235 of Confidential Verizon

FL Exhibit BKE-1, are used to develop the full installation costs associated with digital circuit and power equipment. For example, the EF&I Factor for digital circuit equipment is used to develop the full installed cost of innerduct, facilitiy terminations, and building integrated timing system ("BITS") equipment. The EF&I Factor for power installation is used in the development of monthly recurring DC Power rates.

Q. HOW WERE THE EF&I FACTORS DEVELOPED?

A. The factors were developed using data contained in the Company's Detailed Continuing Property Record ("DCPR") and Central Office Equipment Property ("COEP") databases. They were calculated by dividing the total installed investment for hardwired and plug-in equipment placed in calendar years 1999 and 2000 by the total materials-only investment for the same equipment in the same years. Company-wide data covering a two-year period was used in order to minimize anomalies that might be present in a specific market or in a specific year with respect to a particular piece of equipment.

Q. ARE VERIZON FL'S EF&I FACTORS FORWARD-LOOKING?

A. Yes. Although the equipment costs used in the EF&I calculations are from the years 1999 and 2000, the factors are forward-looking because those data are used as the basis for estimating the *relationship* of installed investment to materials-only investment. Because there is no reason why such ratios should change in the foreseeable future, they

are appropriately used in forward-looking studies.

IV. CAGED, CAGELESS AND VIRTUAL COST ELEMENTS

Q. PLEASE DESCRIBE THE CONTENT OF THIS SECTION OF TESTIMONY.

A. This section of testimony discusses the major cost elements associated with providing caged, cageless, and virtual collocation. Additional information about each element can be found in the description of that element in Verizon FL Exhibit BKE-4.

a. Central Office Costs

Q. PLEASE DESCRIBE HOW THE CENTRAL OFFICE IS MODELED IN VERIZON FL'S COST STUDY.

A. The EIS cost study assumes that collocation will be requested in central offices that exist today in Florida. The same central office buildings that once supported mechanical and electronic switching equipment have been updated to support the digital technology being deployed by Verizon FL today. These buildings were not originally designed or built to accommodate ALEC collocation. As a result, significant modifications are often required to meet ALECs' collocation requests. The EIS cost study identifies the costs of these modifications.

Q. HOW DOES VERIZON FL PROPOSE TO RECOVER GENERAL CENTRAL OFFICE COSTS?

A. Verizon FL proposes two rate elements to capture appropriate shares of

the costs incurred in building and modifying the central offices: "average floor space cost" to account for the initial construction and "building modification" to account for building modifications necessary to meet ALEC collocation requests.

Q. HOW WAS THE AVERAGE FLOOR SPACE COST ELEMENT DERIVED?

A. The average floor space cost is based on building and land investment and maintenance costs and utility costs. The actual sizes (in square feet) of Verizon FL's existing central offices, and the costs incurred in building and maintaining those central offices, are used as a starting point.

Q. ARE BUILDING AND LAND INVESTMENT VALUED ACCORDING TO THEIR HISTORICAL COSTS?

A. No. The central office building investment data are not included at historical investment costs, but rather are updated to current dollars by adjusting for inflation through the use of the R.S. Means Index.[3] Land investment is included at its original investment value — despite Florida's increasing real estate values — because Verizon FL has not yet identified an appropriate index to develop current land values.

Q. HOW ARE THESE COSTS USED TO DEVELOP THE AVERAGE FLOOR SPACE COST RATE ELEMENT?

A. Investments for land and buildings are annualized and combined with

average annual maintenance and utility costs to develop an annual total floor space cost. That total cost is divided by the total square footage of Verizon FL central offices to develop the average floor space cost per square foot rate element. The derivation of the average floor space cost is presented on page 162 of the collocation cost study, attached as Confidential Verizon FL Exhibit BKE-1.

Q. HOW IS THE AVERAGE FLOOR SPACE RATE ELEMENT USED IN VERIZON FL'S CHARGES?

A. The cost of floor space is included in the monthly recurring charges for collocation arrangements. With respect to caged arrangements, the average floor space rate element (rate element 36) is applied per square foot of cage space. For a cageless arrangement, the collocator has the option of placing its equipment on a relay rack (rate element 37) or in a cabinet (rate element 38). The dimensions of the relay rack or cabinet, plus 18 inches of aisle access in front of and behind the rack or cabinet, is the footprint used to assess floor space costs. The square foot cost developed for caged collocation is converted to a per linear foot cost that is applied to the footprint of the rack or cabinet. Floor space costs for virtual collocation arrangements are calculated on a quarter rack basis (which is determined by dividing the floor space cost per linear foot applied to the width of the rack by four), and are included in the virtual equipment maintenance rate element (rate element 50). Collocators using microwave rooftop space are charged for floor space (rate element 118) on a per square foot basis.

Q. WHAT COSTS ARE INCLUDED IN THE BUILDING MODIFICATION RATE ELEMENT?

A. The monthly recurring building modification rate element includes site modification costs associated with construction work, minor HVAC work, dust partition installation, and security.

Q. HOW WERE THOSE COSTS CALCULATED?

A. Verizon FL determined the costs associated with building modification by examining actual central office modifications undertaken to provision caged and cageless collocation. This review allowed Verizon FL to determine the actual work activities required for a typical building modification. Verizon FL's labor and materials costs were then applied to the identified work activities to determine the building modification costs. Additional detail associated with the development of the building modification rate element is included in Verizon FL Exhibit BKE-4, in the discussion of rate element 34.

Q. HOW DOES VERIZON FL PROPOSE TO RECOVER THESE BUILDING MODIFICATION COSTS?

A. Logically, building modification costs should be recovered as non-recurring charges assessed at the time that the (one-time) modification costs are incurred. However, in response to ALEC concerns about being forced to incur steep upfront charges, Verizon FL has proposed to recover building modification costs in monthly recurring charges over the expected life of the building. This recovery method obviously exposes

Verizon FL to additional risks with regard to cost recovery because collocators have no term obligations in their interconnection agreements.

b. HVAC

Q. HOW ARE HVAC COSTS INCLUDED IN THE STUDY?

A. HVAC costs are included in the study in two cost elements — costs to provide overall heating and cooling to the central office and costs specific to heating and cooling particular equipment.

Q. HOW DOES THE COST STUDY ACCOUNT FOR HVAC COSTS ASSOCIATED WITH THE BUILDING SHELL?

A. The HVAC costs required to generally heat and cool the entire building and its contents — which are driven by weather conditions, internal lighting systems, etc. — are recovered in the applicable floor space rate element. This makes sense because general heating and cooling of the building shell is a common necessity that should be paid for by Verizon FL and all of the ALECs collocated in the central office in pro rata shares.

Q. ARE THOSE COSTS RECOVERED ACCORDING TO THEIR HISTORICAL INVESTMENTS?

A. No, they are recovered based on what heating and cooling the same area would cost using today's technology. To accomplish this forward-looking adjustment, Verizon FL first subtracts 16% of its historical

building investment costs from the building investment cost element. Then, Verizon FL adds back into the building investment cost element the cost of providing HVAC to an equivalent area using today's technology.

Q. HOW WERE CURRENT HVAC COSTS DETERMINED?

A. Current HVAC shell costs are based on R.S. Means estimates. Those estimates price one ton of HVAC at $2,525.16. Verizon's Subject Matter Experts ("SMEs") have determined that one ton of HVAC will heat and cool 432 square feet of building space. Therefore, for a hypothetical central office size of 20,000 square feet, 46.3 tons of HVAC would be required to provide the necessary heating and cooling for the building shell. For such an office, $116,914 ($2,525.16 times 46.3) would be added back into the central office investment to represent the cost of providing the HVAC required to heat and cool the building shell using today's technology. Additional details are provided in the cost study workpapers, included in Confidential Verizon FL Exhibit BKE-1, on pages 165-167.

Q. HOW DOES THE STUDY ACCOUNT FOR HVAC COSTS REQUIRED TO COOL SPECIFIC PIECES OF TELECOMMUNICATIONS EQUIPMENT?

A. The EIS cost study develops two types of cost elements to account for HVAC costs required to provide a suitable environment for the ALECs' telecommunications equipment. First, minor duct work costs are

included in the building modification rate element (rate element 34) as "minor HVAC." Second, the HVAC costs required to cool specific pieces of telecommunications equipment are captured by the environmental conditioning rate element (rate element 35).

Q. PLEASE DESCRIBE WHAT COSTS ARE CAPTURED BY "MINOR HVAC."

A. Minor HVAC costs include the minor ductwork or diffuser rearrangements necessary to provide cool air directly to the location where the ALEC has placed its equipment.

Q. PLEASE DESCRIBE WHAT COSTS ARE CAPTURED BY THE ENVIRONMENTAL CONDITIONING RATE ELEMENT.

A. The environmental conditioning rate element captures the incremental HVAC costs incurred to cool ALEC equipment and maintain it at a constant temperature. The rate element is based on the number of amps ordered by the ALEC because power used is a good proxy for heat generated, and thus for cooling required.

c. Engineering

Q. WHAT ENGINEERING COSTS ARE ADDRESSED IN THE COST STUDY?

A. The collocation cost study estimates (i) the engineering costs required to engineer and plan a collocator's space and (ii) the engineering costs associated with the installation of facilities for collocation.

Q. HOW WERE ENGINEERING COSTS ASSOCIATED WITH PLANNING AN ALEC'S COLLOCATION ARRANGEMENT IDENTIFIED?

A. Verizon FL's cost study identifies the engineering planning costs associated with each form of collocation. For example, engineering costs associated with a new caged or cageless collocation arrangement are identifed in the engineering – major augment rate (rate element 1). Engineering costs associated with a new caged or cageless collocation area can vary depending on whether the area into which the newly ordered arrangement is to be installed already has existing collocation arrangements. Therefore, the engineering – major augment rate element includes a weighting of engineering costs associated with a new arrangement in (i) an area that does not have any existing caged or cageless collocation (29%) and (ii) an area that already has existing caged or cageless collocation (71%). Engineering costs associated with virtual, adjacent, and microwave collocation arrangements are identified separately (rate elements 33, 51, and 98, respectively) to reflect the different engineering tasks required for those various forms of collocation. Cost support for each of these engineering costs is presented on page 93 of Confidential Verizon FL Exhibit BKE-1.

Q. WHAT TYPE OF ENGINEERING ACTIVITIES ARE INCLUDED IN THESE ENGINEERING COSTS?

A. The engineering costs include the costs of having Verizon FL personnel — including the Central Office Equipment Engineer, the Land &

Buildings Engineer, and the Outside Plant Engineer — meet at the central office to identify what needs to be done to provide collocation as requested by an ALEC. The evaluation process includes planning the future use of space within the central office and determining the best location for the collocation arrangement. Once the planning phase is complete, the engineers must work on the actual provisioning of space to accommodate the collocation request. Status meetings are held throughout the engineering process as necessary and appropriate to discuss the progress of the collocation activity.

Q. HOW ARE ENGINEERING COSTS ASSOCIATED WITH THE INSTALLATION OF FACILITIES ADDRESSED IN THE STUDY?

A. The study includes engineering costs required to provision specific aspects of a collocation project, such as a facility pull – engineering (rate element 12), which entails provisioning facilities from the collocation arrangement to the main distribution frame ("MDF"), digital cross-connect bay ("DSX"), or fiber distribution panel, as appropriate. The engineering costs associated with these specific activities are either included in the costs associated with the activity (e.g., a cable splice, rate element 41 or 42) or are identified as separate rate elements (e.g., the facility pull, rate element 12). This treatment of engineering costs follows the basic costing principle that assigns costs to specific activities where possible.

Q. HOW WERE THE ENGINEERING ACTIVITIES REQUIRED FOR PLANNING AND INSTALLING FACILITIES DETERMINED?

A. The activity times required to perform specific aspects of planning collocation arrangements or installing facilities were provided by SMEs actually involved in the work effort. The SMEs identified the typical activities performed in planning the different types of collocation arrangments or installing various facilities and then determined the time required to perform those activities as well as the type of engineer required to do the work. Those activity times were then applied to the appropriate labor rates for the specific labor groups that would perform the activity to develop the cost estimates.

d. DC Power

Q. PLEASE EXPLAIN HOW THE COST STUDY ACCOUNTS FOR THE COSTS OF PROVIDING DC POWER TO COLLOCATORS' ARRANGEMENTS.

A. The cost study develops both the recurring and nonrecurring cost elements associated with providing DC power to collocators' arrangements.

Q. WHAT COSTS ARE CONSIDERED NONRECURRING?

A. The nonrecurring costs are incurred in the initial provisioning of power to the collocator and include the engineering time associated with planning the power arrangement (rate element 27), the costs associated with performing the power cable pull and termination (rate element 28), and

the cost of the ground wire (rate element 29).

Q. WHAT COSTS ARE RECOVERED IN THE MONTHLY RECURRING CHARGE?

A. The monthly recurring rate element (rate element 46) recovers the costs of distributing DC power to the ALECs from Verizon FL's power plant. For example, the element includes such materials as batteries, rectifiers, emergency generators, main fuse panels, and electrical connections to the main power source. It also captures the costs of extending power from the power plant to the collocation area battery distribution fuse bay ("BDFB"), including materials and labor costs associated with the required power cable, fuse panels, relay racks, and distribution bays. The monthly recurring rate also includes electric utility costs associated with the AC power that is converted to DC power in the power plant.

e. Fiber Cable Pulls

Q. WHAT IS THE FIBER CABLE PULL RATE ELEMENT?

A. The fiber cable pull is the placement of fiber cable from the designated manhole outside the cable vault, through the cable vault and conduit system, to the ALEC's collocation arrangement. From the cable vault to the collocation arrangement, the fiber is protected by innerduct, which Verizon FL also places as part of this element.

Q. WHAT ACTIVITIES ARE ASSOCIATED WITH FIBER CABLE PULL?

A. Before the installation can begin, an Outside Plant Engineer must visit

the location and determine the subduct assignment from the manhole to the cable vault. The actual installation activity includes the time required to set up at the manhole and the cable vault, prepare for the cable pull, and actually pull the cable through the manhole, cable vault, and conduit system and to the ALEC's collocation arrangement.

V. RATE ELEMENTS SPECIFIC TO VIRTUAL COLLOCATION

Q. PLEASE EXPLAIN THE VIRTUAL EQUIPMENT INSTALLATION RATE ELEMENT.

A. The virtual equipment installation rate element includes the activities associated with installing virtual collocation equipment. The rate is based on installation costs weighted by the frequency with which specific pieces of virtual collocation equipment have been installed in Verizon FL's central offices. (Verizon FL has identified no reason to suggest that the virtual collocation equipment distribution will change markedly going forward.) To provide ALECs with the option of requesting less than a full rack of equipment, the virtual equipment installation rate element is charged in quarter rack increments.

Q. PLEASE EXPLAIN THE VIRTUAL SOFTWARE UPGRADES RATE ELEMENT.

A. Verizon FL updates or upgrades the software installed on ALECs' virtually collocated equipment as requested by the ALECs. The virtual software upgrades rate element accounts for the time it takes a Central Office Equipment Installer to install the software upgrades. As with the

virtual equipment installation rate element, upgrade costs are weighted by current frequency, which serves as a proxy for expected future frequency. The rate element is charged per upgrade, per base unit being upgraded.

Q. PLEASE EXPLAIN THE VIRTUAL CARD INSTALLATION RATE ELEMENT.

A. The virtual card installation rate element captures the time the central office equipment engineer spends engineering the installation of the card as well as the time spent by a central office equipment installer to install the card. The actual costs of installing virtual cards vary somewhat with the type of equipment into which the cards are being installed. A single weighted virtual card installation rate has been developed to account for this variance. The virtual card installation rate is applied to any card installed in the collocator's virtual equipment.

Q. WHAT COST ELEMENTS ARE INCLUDED IN THE MONTHLY RECURRING VIRTUAL EQUIPMENT MAINTENANCE RATE ELEMENT?

A. The virtual equipment maintenance rate element includes the cost of maintaining both the ALEC's actual virtual equipment and the frame space utilized by that equipment.

Q. WHAT COSTS ARE INCLUDED IN EQUIPMENT MAINTENANCE COSTS IN A VIRTUAL ARRANGEMENT?

A. Equipment maintenance costs include both routine and trouble maintenance activities.

Q. HOW WERE THE VIRTUAL EQUIPMENT MAINTENANCE COSTS ASCERTAINED?

A. The virtual equipment maintenance costs are based on SME estimates provided by Verizon's National Operations Center ("NOC") managers and central office technicians responsible for maintaining ALEC virtual equipment.

Q. HOW ARE THESE MAINTENANCE COSTS RECOVERED?

A. Maintenance costs are recovered on a per quarter rack basis in the same manner as the virtual equipment installation rate element.

Q. WHAT COSTS ARE INCLUDED IN THE FRAME SPACE COST ELEMENT?

A. The frame space cost element includes the costs of both the ALEC's relay rack and the floor space that the relay rack occupies. The frame space cost element is based per quarter rack, in the same manner as the maintenance costs that are included in this rate element. A quarter rack of frame space is the typical increment required for a virtual collocation arrangement. The floor space rate for frame space is charged at the same rate developed for caged and cageless collocation arrangements. The costs associated with engineering and installing a standard eight-foot relay rack are developed on pages 146 and 147 of

Confidential Verizon FL Exhibit BKE-1.

VI. MICROWAVE COLLOCATION ELEMENTS

Q. WHICH RATE ELEMENTS ARE SPECIFIC TO MICROWAVE COLLOCATION?

A. Rate elements specific to microwave collocation include a nonrecurring engineering charge (rate element 98), a charge for the labor associated with a facility pull (rate element 99), and a monthly recurring charge associated with the rooftop space occupied by the microwave equipment (rate element 118).

Q. ARE THERE ANY OTHER ELEMENTS ASSOCIATED WITH PLACING A MICROWAVE ARRANGEMENT?

A. Yes. There are two additional rate elements specific to microwave collocation: building penetration (rate element 122) and special work (rate element 123). Building penetration is necessary to secure the microwave equipment and for cable entry; special work captures the microwave collocation costs that are not identified in the other microwave rate elements I have just described. Because Verizon does not have much experience with the processes, equipment, and personnel required to provision microwave collocation, both of these rate elements are currently provided on an individual case basis ("ICB").

Q. ARE THERE ANY ASPECTS OF MICROWAVE COLLOCATION THAT THE ALEC IS REQUIRED TO PROVISION ITSELF?

A. Yes. The ALEC is responsible for installing, maintaining, and repairing all of its microwave equipment. The ALEC must also obtain, at its sole cost, all permits, licenses, and variances required by local and state governments to install the equipment. A biannual inspection of the entire structure by a licensed engineer specializing in such inspections is also required and must be paid for by the ALEC. Verizon FL does not propose to perform any of these activities, and thus has not developed rate elements for them.

VII. ADJACENT ON-SITE COLLOCATION

Q. ARE THERE ANY COST ELEMENTS UNIQUELY APPLICABLE TO ADJACENT ON-SITE COLLOCATION?

A. Yes, but not many. The only cost elements unique to adjacent on-site collocation are engineering costs associated with provisioning adjacent on-site collocation, costs associated with providing cross connects to the adjacent on-site arrangements, and additional fiber related elements that are not required for physical or virtual collocation. A detailed description of each of the elements required for adjacent on-site collocation is provided in Verizon FL Exhibit BKE-4.

Q. ARE SOME ADJACENT ON-SITE COLLOCATION RATE ELEMENTS EQUIVALENT TO THOSE USED FOR CAGED OR CAGELESS COLLOCATION?

A. Yes. In fact, while there are numerous rate elements listed for adjacent on-site collocation, the cost bases for the majority of those elements do

not differ from the cost bases used for caged or cageless collocation. For example, the facility pull – engineering (i.e., cross connect) rate element associated with adjacent on-site collocation (rate element 52) is essentially the same as for a caged or cageless arrangement (rate element 12).[4] Additionally, certain space cost elements, such as conduit space, are developed in the same manner in both physical and adjacent collocation, with the only difference in the rate element being attributable to the size of the cable being placed.

Q. PLEASE EXPLAIN HOW THE CABLE PULL ACTIVITIES DIFFER FROM THE FACILITY PULL ACTIVITIES IN THE ADJACENT ON-SITE COLLOCATION CONTEXT.

A. Essentially, the cable pull is the main cross connect activity that will occur with any active adjacent collocator, while the facility pull is an activity that will occur only if the ALEC has both an adjacent arrangement and a physical (caged or cageless) arrangement, and wants to connect the two. The cable pull involves provisioning facilities between the adjacent arrangement and the cable vault, where the cable is spliced to Verizon FL's central office cable (stub). The central office cable (stub) runs back to the main distribution frame ("MDF"), where it is connected to a protector (to mitigate the dangers posed by stray voltage) mounted to the vertical side of the frame.

The facility pull elements capture the engineering and labor costs incurred in provisioning the ALEC facilities from MDF back to the

ALEC's on-premises collocation arrangement, and are essentially the same as the facility pull elements associated specifically with caged and cageless collocation arrangements, as I explained above.

Although the adjacent cable pull is more properly considered a complex cross-connect procedure than an entrance facility pull, essentially the same engineering and labor activities are required for the cable pull here as for the fiber pull. An Outside Plant Engineer must visit the cable vault and manhole to determine the cable duct to use. The pulling crew must then set up equipment at the manhole and cable vault in order to pull the cable. As with fiber pull, the cable pull rate is based on Florida-specific SSP rates for the size of cable being pulled.

Q. DOES VERIZON FL'S COST STUDY INCLUDE COST ELEMENTS ASSOCIATED WITH THE CONSTRUCTION OF ADJACENT ON-SITE COLLOCATION BUILDINGS.

A. No. The collocator is responsible for the construction of its adjacent on-site building and for the provision of its own DC power and HVAC. Therefore, Verizon FL did not develop cost or rate elements associated with those activities. Likewise, Verizon FL did not develop cost or rate elements associated with terminating entrance facilities in an adjacent on-site collocation arrangement because that activity is performed entirely by the ALEC.

Q. DOES THE EIS COST STUDY INCLUDE A COST ELEMENT FOR THE LAND REQUIRED TO PROVIDE ADJACENT ON-SITE COLLOCATION?

A. No. Because land costs can vary considerably between central office locations, even within in the same city, land costs for adjacent on-site collocation are assessed on an individual case basis.

VIII. DEDICATED TRANSIT SERVICE ("DTS")

Q. WHAT TYPE OF COSTS ARE INVOLVED IN PROVIDING DTS SERVICES TO REQUESTING ALECS?

A. Verizon FL will incur three types of costs associated with providing DTS services to requesting ALECs: ordering costs, provisioning costs, and connecting and disconnecting costs. Specifically, Verizon FL will incur costs associated with the access service requests ("ASR") ALECs use to order DTS services. Verizon FL's provisioning of DTS services includes the costs associated with the work centers involved in the provisioning process. And Verizon FL will incur costs associated with connecting and/or disconnecting the service in the central office (referred to as "central office wiring activities"). These costs are incurred in the context of provisioning DS0 (rate elements 124 – 131), DS1/DS3 (rate elements 132-140), and dark fiber (rate elements 141 – 148) based DTS requests.

Q. PLEASE EXPLAIN THE ORDERING PROCESS FOR DTS.

A. An ALEC will place its order for DTS via the ASR process, which will be

handled by Verizon's National Access Contact Center ("NACC"), located in Durham, North Carolina. The NACC service consultants who will handle ALEC requests for DTS are also responsible for processing the Inter-Exchange Carrier ("IXC") ASRs. The NACC has been in existence for approximately 20 years and has a great deal of experience in processing IXC requests for both switched and special access services. The NACC's processes and systems for IXCs are closely aligned with those required for processing DTS requests.

Q. HOW DOES THE ALEC SUBMIT ASRS FOR DTS SERVICE AND HOW ARE THEY HANDLED AT THE NACC?

A. The ALEC has the option of sending the ASR to the NACC electronically or manually. Electronic transmission of the ASR requires use of the EXACT system, whereas manual ordering can be done via fax or mail. Once the NACC receives the ASR, it is checked for completeness and accuracy. The NACC then releases the order into Verizon's access order processing system, which routes it to the appropriate provisioning and central office installation work groups.

Q. HOW WERE THE COSTS OF ASR ORDERING ACTIVITIES DEVELOPED FOR DTS?

A. Verizon conducted time and motion studies of the activities performed by the Service Consultants in the NACC to establish the work times associated with the various types of orders handled there. DTS orders are expected to be processed in the same manner as dedicated non-

switched transport orders. To derive the costs associated with DS0, DS1, and DS3 DTS ordering, the work times for non-switched dedicated transport "change" orders were multiplied by the loaded labor rate of the NACC Service Consultants. To derive the costs associated with dark fiber ordering, the work times for dark fiber "new" orders were multiplied by the loaded labor rate of the NACC Service Consultants. The development of these costs can be found on pages 12-37 of Confidential Verizon FL Exhibit BKE-2.

Q. WHAT ARE THE PROVISIONING ACTIVITIES ASSOCIATED WITH DTS REQUESTS?

A. The Business Response Provisioning Centers ("BRPC") or the Assignment Provisioning Center/Recent Change Mechanized Assignment Centers ("APC/RCMAC") will receive the DTS order from the NACC. They in turn will verify that the order is correct and is entered into the facility administration system (Telecom Business Solutions or "TBS"), and will route the order to the required work groups by means of a distribution code. The BRPC or APC/RCMAC access the facility records in their inventory database, change the records to identify the configuration requested by the ALEC, and create updated circuit and design layout reports.

Q. HOW WERE COSTS DEVELOPED FOR THE PROVISIONING ACTIVITIES REQUIRED FOR DTS SERVICES?

A. Information from the TBS database was used to determine the number

and type of orders or lines worked by each group in the BRPC. The BRPC productive hours were used to develop the time required per ASR, which was applied to the appropriate loaded labor rate. The costs of provisioning DS0, DS1, DS3, and dark fiber DTS services are presented on pages 40-52 of Confidential Verizon FL Exhibit BKE-2.

Q. WHAT CENTRAL OFFICE WIRING ACTIVITIES ARE ASSOCIATED WITH DTS REQUESTS?

A. Central office wiring includes two cost components — the central office labor to install the jumper and the jumper materials costs. The central office technician receives the required provisioning information from the BRPC and installs the jumpers to connect the two ALEC facilities. For DS0 services, the jumper will be a one pair metallic jumper. For the DS1 and DS3 services, two metallic jumpers — one for transit and one for receiving — will be placed to connect these types of facilities. For dark fiber requests, a fiber optic patchcord will be installed to connect the ALEC facilities.

Q. HOW WERE THE CENTRAL OFFICE WIRING COSTS FOR DTS DEVELOPED?

A. For central office work, "jumper running" studies were conducted to develop the time required to install or remove one jumper. The time per jumper was multiplied by the central office technician loaded labor rate to develop the cost per jumper.

The costs of jumper materials are based on the costs of jumper materials calculated by GTEAMS, and include materials loadings for freight, sales tax, and provisioning. The lengths of jumpers were based on average lengths of jumpers to span cross connect panels used for connecting facilities. The jumper lengths used in the study were 25 feet for DS0 and DS1 jumpers, and 28 feet for DS3 jumpers. Dark fiber is provided in ten meter increments. The development of these costs can be found on pages 55-62 of Confidential Verizon FL Exhibit BKE-2.

Q. PLEASE DESCRIBE THE DISCONNECT ACTIVITIES ASSOCIATED WITH DTS REQUESTS.

A. The disconnect activities are similar to the ordering, provisioning, and central office activities for an installation request. An order to disconnect the service will be prepared by the ALEC and transmitted to the NACC via an electronic or manual method. The NACC will check the order for completeness and accuracy and send it to the appropriate work groups to disconnect the service. The BRPC will remove the information from the facility database and send a disconnect order to the central office. The central office technician will then remove the jumpers from the appropriate equipment. A completion notice will then be sent to confirm disconnnect.

Q. HOW WERE THE DISCONNECT COSTS DEVELOPED FOR DTS?

A. The disconnect ordering costs are based on time and motion studies conducted in the NACC for order processing. The provisioning costs

are based on the time required in the BRPC for processing the order and issuing a disconnect order to the central office technician to physically remove the jumpers. As with the provisioning of DTS, the BRPC time is based on a breakdown of work groups, number of orders worked, and time worked in the BRPC. The central office work is based on the time to remove the jumpers in the central office according to the jumper running time and motion study. The development of these costs can be found on pages 55-62 of Confidential Verizon FL Exhibit BKE-2.

IX. TYPICAL COLLOCATION ARRANGEMENT

Q. WHAT IS A TYPICAL COLLOCATION ARRANGEMENT?

A. A typical collocation arrangement is a hypothetical arrangement designed to include the elements (and the quantities of those elements) that a typical Florida ALEC could be expected to order when collocating in a Verizon FL central office.

Q. WHY ARE TYPICAL COLLOCATION ARRANGEMENTS IMPORTANT TOOLS FOR THE COMMISSION'S EVALUATION OF VERIZON FL'S PROPOSED RATE ELEMENTS AND TERMS AND CONDITIONS?

A. Verizon FL offers 148 rate elements in its collocation tariff, but only a few are ordered in the process of establishing most arrangements. And not all of those elements that are commonly ordered are ordered in similar quantities. The depiction of typical collocation arrangements makes it easier for the Commission to identify the most significant rate elements. The presentation of a typical collocation arrangement can

also provide an example of Verizon FL's terms and conditions as they apply to ordering and billing.

Q. BRIEFLY EXPLAIN HOW VERIZON FL DEVELOPED THE TYPICAL COLLOCATION ARRANGEMENTS ATTACHED TO YOUR TESTIMONY.

A. Verizon FL developed a typical collocation arrangement for each form of collocation that has actually been ordered in Florida (i.e., caged, cageless, and virtual), using the entire universe of actual collocation arrangements in Florida as the starting point. Verizon FL's product management group used billing data to determine the rate elements in use for each form of collocation to develop an "average" arrangement of each type. Those "average" arrangements were then modified to the extent necessary to develop arrangements that make sense. For example, ALECs have the option of providing their own cables, but Verizon FL actually pulls and terminates the cable. Therefore, raw "average" data will reflect more cable being pulled and terminated than cable purchased from Verizon FL. The typical collocation arrangement deals with this inconsistency by assuming that the typical collocator provides its own cable to Verizon FL. The result is a typical arrangement for each form of collocation that Verizon FL could expect to be ordered by an ALEC.

Q. HOW ARE THE TYPICAL COLLOCATION ARRANGEMENTS PRESENTED?

A. The typical arrangements are presented in Verizon FL Exhibit BKE-5 (caged), Verizon FL Exhibit BKE-6 (cageless), and Verizon FL Exhibit BKE-7 (virtual). The exhibits are organized in a similar fashion, with each presenting the typical non-recurring and monthly recurring rate elements purchased, the typical quantity of elements purchased, the rate for each element, and the total price for each element and the collocation arrangement.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

END NOTES

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[1] All rate elements referred to in this testimony can be found in the Rate Summary attached as Verizon FL Exhibit BKE-3, as well as in the explanation of rate elements attached as Verizon FL Exhibit BKE-4.

[2] Rate Elements 96-121 are miscellaneous rate elements that may apply to the various forms of collocation. The Rate Elements that are expressly identified as "microwave related," though, apply only to microwave collocation arrangements.

[3] R.S. Means, Building Construction Cost Data 2001, 59th Annual Edition, page 125.

[4] Similar relationships exist between the following pairs or groups of rate elements for caged or cageless arrangements and adjacent on-site arrangements, respectively: elements 15 & 54, 16 & 56, 17 & 58, 18 & 59, 19 & 60, 21-24 & 62-65, 21 & 66, 25 & 68 and 71, 26 & 72, 39 & 74, 40 & 75, 47-49 & 78-80, 41-43 & 89-91, and 45 & 94.

MRC FIXED ALLOCATOR: **14.09%**

	Rate Element	NRC/MRC	Increment		Rate
	Caged, Cageless, Shared, Subleased & Virtual NRC Rate Elements				
1	Engineering/Major Augment - Caged/Cageless	NRC	per occurrence	$	1,380.25
2	Minor Augment	NRC	per occurrence	$	256.69
3	Access Card Administration	NRC	per card	$	31.64
4	Cage Enclosure 25-100 SF	NRC	per cage	$	4,352.70
5	Cage Enclosure 101-200 SF	NRC	per cage	$	5,645.40
6	Cage Enclosure 201-300 SF	NRC	per cage	$	6,938.10
7	Cage Enclosure 301-400 SF	NRC	per cage	$	8,239.14
8	Cage Enclosure 401-500 SF	NRC	per cage	$	9,531.84
9	Cage Enclosure Augment	NRC	per square foot	$	11.81
10	Cage Grounding Bar	NRC	per bar	$	1,423.65
11	Overhead Superstructure	NRC	per project	$	1,247.53
12	Facility Pull - Engineering (Metallic & Fiber Optic Patchcord)	NRC	per project	$	83.61
13	Facility Pull - Labor (Metallic)	NRC	per cable run	$	128.80
14	Fiber Optic Patchcord Pull - Labor	NRC	per cable run	$	212.75
15	DS0 Cable Termination (Connectorized)	NRC	per 100 pair	$	4.60
16	DS1 Cable Termination (Connectorized)	NRC	per 28 pair	$	1.15
17	DS3 Coaxial Cable Termination (Preconnectorized)	NRC	per coaxial cable	$	1.15
18	DS3 Coaxial Cable Termination (Unconnectorized)	NRC	per coaxial cable	$	11.49
19	Category 5 Cable Termination (Connectorized)	NRC	per 25 pair	$	1.15
20	Fiber Optic Patchcord Termination	NRC	per termination	$	1.15
21	Fiber Cable Pull - Engineering	NRC	per project	$	1,371.12
22	Fiber Cable Pull - Place Innerduct	NRC	per innerduct ft	$	0.73
23	Fiber Cable Pull - Labor	NRC	per linear ft	$	0.49
24	Fiber Cable Pull - Cable Fire Retardant	NRC	per occurrence	$	45.98
25	Fiber Cable Splice - Engineering	NRC	per splicing project	$	68.56
26	Fiber Cable Splice	NRC	per fiber strand	$	41.03
27	DC Power - Engineering	NRC	per project	$	83.61
28	DC Power - Cable Pull/Termination	NRC	per cable	$	838.79
29	DC Power - Ground Wire	NRC	per wire	$	9.38

MRC FIXED ALLOCATOR: **14.09%**

	Rate Element	NRC/MRC	Increment		Rate
30	Virtual Equipment Installation	NRC	per quarter rack	$	3,693.59
31	Virtual Software Upgrades	NRC	per base unit	$	98.62
32	Virtual Card Installation	NRC	per card	$	238.54
33	Engineering/Major Augment - Virtual	NRC	per occurrence	$	756.67
	Caged, Cageless, Shared, Subleased & Virtual MRC Rate Elements				
34	Building Modification	MRC	per request	$	237.96
35	Environmental Conditioning	MRC	per 1 amp	$	3.21
36	Caged Floor Space	MRC	per square ft	$	3.83
37	Relay Rack Floor Space	MRC	per linear ft	$	16.29
38	Cabinet Floor Space	MRC	per linear ft	$	22.04
39	Cable Subduct Space - Manhole	MRC	per subduct	$	7.71
40	Cable Subduct Space	MRC	per linear ft	$	0.05
41	Fiber Cable Vault Splice - 48 Fiber-Material	MRC	per splice closure	$	11.95
42	Fiber Cable Vault Splice - 96 Fiber-Material	MRC	per splice closure	$	36.96
43	Cable Vault Space - Fiber	MRC	per innerduct	$	1.40
44	Cable Rack Shared Space - Metallic	MRC	per cable run	$	0.18
45	Cable Rack Shared Space - Fiber	MRC	per innerduct ft	$	0.006
46	DC Power	MRC	per 1 amp	$	25.45
47	Facility Termination - DS0	MRC	per 100 pair	$	3.21
48	Facility Termination - DS1	MRC	per 28 pair	$	10.47
49	Facility Termination - DS3	MRC	per coaxial cable	$	25.11
50	Virtual Equipment Maintenance	MRC	per quarter rack	$	77.23
	Adjacent On-Site NRC Rate Elements				
51	Engineering - Adjacent On Site	NRC	per occurrence	$	1,292.21
52	Adjacent Metallic Facility Pull-Engineering	NRC	per project	$	83.61
53	Adjacent Metallic Facility Pull - Labor	NRC	per linear ft	$	1.15
54	Adjacent DSO Cable Termination (Connectorized)	NRC	per 100 pair	$	4.60
55	Adjacent DSO Cable Termination (Unconnectorized)	NRC	per 100 pair	$	45.98

MRC FIXED ALLOCATOR: **14.09%**

	Rate Element	NRC/MRC	Increment		Rate
56	Adjacent DS1 Cable Termination (Connectorized)	NRC	per 28 pair	$	1.15
57	Adjacent DS1 Cable Termination (Unconnectorized)	NRC	per 28 pair	$	34.48
58	Adjacent DS3 Coaxial Termination (Connectorized)	NRC	per coaxial cable	$	1.15
59	Adjacent DS3 Coaxial Termination (Unconnectorized)	NRC	per coaxial cable	$	11.49
60	Adjacent Category 5 Cable Termination (Connectorized)	NRC	per 25 pair	$	1.15
61	Adjacent Fiber Cable Termination	NRC	per fiber term	$	41.03
62	Adjacent Fiber Cable Pull-Engineering	NRC	per project	$	1,371.12
63	Adjacent Fiber Cable Pull-Place Innerduct	NRC	per innerduct ft	$	0.73
64	Adjacent Fiber Cable Pull - Labor	NRC	per linear ft	$	0.49
65	Adjacent-Cable Fire Retardant	NRC	per occurrence	$	45.98
66	Adjacent Metallic Cable Pull-Engineering	NRC	per project	$	1,371.12
67	Adjacent Metallic Cable Pull - Labor	NRC	per linear ft	$	0.60
68	Adjacent Metallic Cable Splice-Engineering	NRC	per splicing project	$	68.56
69	Adjacent Metallic Cable Splicing (greater than 200 pair)	NRC	per pair	$	0.65
70	Adjacent Metallic Cable Splicing (less than 200 pair)	NRC	per pair	$	1.20
71	Adjacent Fiber Cable Splicing-Engineering	NRC	per splicing project	$	68.56
72	Adjacent Fiber Cable Splicing (48 fiber cable or less)	NRC	per fiber strand	$	41.03
73	Adjacent Fiber Cable Splicing (greater than 48 fiber)	NRC	per fiber strand	$	38.64
	Adjacent On-Site MRC Rate Elements				
74	Adjacent Subduct Space-Manhole	MRC	per subduct	$	7.71
75	Adjacent Subduct Space	MRC	per linear ft	$	0.05
76	Adjacent Conduit Space (4" Duct)-Metallic-Manhole	MRC	per conduit	$	14.64
77	Adjacent Conduit Space (4" Duct)-Metallic Cable	MRC	per linear ft	$	0.07
78	Adjacent Facility Termination DSO Cable-Material	MRC	per 100 pair	$	3.21
79	Adjacent Facility Termination DS1 Cable-Material	MRC	per 28 pair	$	10.47
80	Adjacent Facility Termination DS3 Cable-Material	MRC	per coaxial cable	$	25.11
81	Adjacent Cable Vault Splice (per 1200 pr)-Material	MRC	per splice closure	$	593.08
82	Adjacent Cable Vault Space (per 1200 pr)	MRC	per cable	$	5.45
83	Adjacent Cable Vault Splice (per 900 pr)-Material	MRC	per splice closure	$	432.26
84	Adjacent Cable Vault Space (per 900 pr)	MRC	per cable	$	4.20

MRC FIXED ALLOCATOR: **14.09%**

	Rate Element	NRC/MRC	Increment		Rate
85	Adjacent Cable Vault Splice (per 600 pr)-Material	MRC	per splice closure	$	287.46
86	Adjacent Cable Vault Space (per 600 pr)	MRC	per cable	$	3.00
87	Adjacent Cable Vault Splice (per 100 pr) - Material	MRC	per splice closure	$	60.76
88	Adjacent Cable Vault Space (per 100 pr)	MRC	per cable	$	0.68
89	Adjacent Cable Vault Splice (48 fiber)-Material	MRC	per splice closure	$	11.95
90	Adjacent Cable Vault Splice (96 fiber)-Material	MRC	per splice closure	$	36.96
91	Adjacent Cable Vault Space (fiber)	MRC	per subduct	$	1.40
92	Adjacent Cable Rack Shared Space - Metallic DSO	MRC	per linear ft	$	0.004
93	Adjacent Cable Rack Shared Space - Metallic DS1	MRC	per linear ft	$	0.002
94	Adjacent Cable Rack Shared Space - Fiber	MRC	per innerduct ft	$	0.006
95	Adjacent Cable Rack Shared Space - Coaxial	MRC	per linear ft	$	0.010
	Miscellaneous NRC Rate Elements				
96	BITS Timing	NRC	per project	$	209.66
97	Collocation Premise Space Report - Optional	NRC	per co request	$	1,354.56
98	Engineering/Major Augment - Microwave	NRC	per occurrence	$	1,091.17
99	Microwave Facility Pull - Labor	NRC	per linear ft	$	1.15
100	Facility Cable-DS0 Cable (Connectorized) 100 pair	NRC	per cable run	$	265.43
101	Facility Cable-DS1 Cable (Connectorized)	NRC	per cable run	$	121.70
102	Facility Cable-DS3 Coaxial Cable	NRC	per cable run	$	36.12
103	Facility Cable-Category 5 Connectorized	NRC	per linear ft	$	1.14
104	Power Cable-Wire Power 1/0	NRC	per cable run	$	32.83
105	Power Cable-Wire Power 2/0	NRC	per cable run	$	40.20
106	Power Cable-Wire Power 3/0	NRC	per cable run	$	49.58
107	Power Cable-Wire Power 4/0	NRC	per cable run	$	62.98
108	Power Cable-Wire Power 350 MCM	NRC	per cable run	$	111.89
109	Power Cable-Wire Power 500 MCM	NRC	per cable run	$	219.09
110	Power Cable-Wire Power 750 MCM	NRC	per cable run	$	337.68
111	Fiber Optic Patchcord-24 Fiber (Connectorized)	NRC	per cable run	$	775.15
112	Misc Svcs-Labor-Basic Bus Day-First 1/2 Hr	NRC	per technician	$	48.31
113	Misc Svcs-Labor-Basic Bus Day-Each Additional 1/2 Hr	NRC	per technician	$	24.15

MRC FIXED ALLOCATOR: **14.09%**

	Rate Element	NRC/MRC	Increment		Rate
114	Misc Svcs-Labor-OT Non-Bus Day - First 1/2 Hr	NRC	per technician	$	100.00
115	Misc Svcs-Labor-OT Non-Bus Day - Each Addt'l 1/2 Hr	NRC	per technician	$	75.00
116	Misc Svcs-Labor-Premium Non-Bus Day - First 1/2 Hr	NRC	per technician	$	150.00
117	Misc Svcs-Labor-Premium Non-Bus Day - Each Addt'l 1/2 Hr	NRC	per technician	$	125.00
	Miscellaneous MRC Rate Elements				
118	Microwave Rooftop Space	MRC	per sq ft	$	3.83
119	BITS Timing	MRC	per port	$	10.28
120	Facility Termination - Fiber Optic Patchcord	MRC	per connector	$	0.47
121	Cable Duct Space - Fiber Optic Patchcord	MRC	per fiber strand	$	0.14
	ICBs for Microwave Collocation				
122	Building Penetration for Cable				
123	Special Work				
	Dedicated Transit Service - DSO				
124	Service Order-Semi-Mechanized	NRC	per order	$	42.46
125	Service Order-Manual	NRC	per order	$	74.99
126	Service Connection-CO Wiring	NRC	per circuit	$	18.24
127	Service Connection-Provisioning	NRC	per order	$	133.60
128	Service Order-Disconnect-Semi-Mechanized	NRC	per order	$	38.01
129	Service Order-Disconnect-Manual	NRC	per order	$	67.58
130	Service Connection-Disconnect-Provisioning	NRC	per order	$	46.67
131	Service Connection-Disconnect-CO Wiring	NRC	per circuit	$	2.94
	Dedicated Transit Service - DS1/DS3				
132	Service Order-Semi-Mechanized	NRC	per order	$	42.46
133	Service Order-Manual	NRC	per order	$	74.99
134	Service Connection-CO Wiring - DS1	NRC	per circuit	$	19.29
135	Service Connection-CO Wiring - DS3	NRC	per circuit	$	65.59

MRC FIXED ALLOCATOR: **14.09%**

	Rate Element	NRC/MRC	Increment		Rate
136	Service Connection-Provisioning	NRC	per order	$	132.73
137	Service Order-Disconnect-Semi-Mechanized	NRC	per order	$	40.30
138	Service Order-Disconnect-Manual	NRC	per order	$	69.87
139	Service Connection-Disconnect-Provisioning	NRC	per order	$	46.67
140	Service Connection-Disconnect-CO Wiring	NRC	per circuit	$	2.94
	Dedicated Transit Service - Dark Fiber				
141	Service Order-Semi-Mechanized	NRC	per order	$	71.47
142	Service Order-Manual	NRC	per order	$	74.43
143	Service Connection-CO Wiring	NRC	per circuit	$	60.29
144	Service Connection-Provisioning	NRC	per order	$	36.20
145	Service Order-Disconnect-Semi-Mechanized	NRC	per order	$	39.53
146	Service Order-Disconnect-Manual	NRC	per order	$	39.53
147	Service Connection-Disconnect-Provisioning	NRC	per order	$	36.20
148	Service Connection-Disconnect-CO Wiring	NRC	per circuit	$	2.94

Caged, Cageless, Shared, Subleased & Virtual Rate Elements

Nonrecurring Rates

1. Engineering/Major Augment – Caged/Cageless

Cost Element

Engineering costs include time spent by Verizon Florida Inc. ("Verizon FL" or "Company") personnel planning and engineering a specific collocator's initial project or major augment. Major Augments are those requests that require power, add equipment that generates more BTUs of heat, or require an increase in the caged or cageless floor space dedicated to the ALEC. Various engineering personnel, including the Central Office ("CO") Equipment Engineer, the Outside Plant ("OSP") Engineer, and the Land and Building Engineer, are involved in this process, and have used their experience with planning collocation arrangements to identify the typical activities and associated activity times associated with caged or cageless arrangements. The costs for the CO Equipment Engineer and OSP Engineer include the time spent on the initial site audit, the project kickoff meeting, and the project status meetings. The cost for the Land and Building Engineer includes all of the time required by the engineer to complete the entire project. Please refer to page 93 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, and pages 8 and 9 of the cost study narrative, contained in the same exhibit, for additional detail.

Rate Element: ***NRC***

The Engineering/Major Augment fee applies for each initial Caged or Cageless collocation request and major augment requests for existing Caged or Cageless collocation arrangements. Due to the fact that less work is required after the first collocation arrangement is built in a collocation area, the engineering costs that are associated with (1) the first collocation application received in a specific central office and (2) subsequent applications received in that central office are weighted (29% and 71%, respectively) to determine the rate. Please refer to page 90 of the study, attached as Confidential Verizon FL Exhibit BKE-1, for additional detail.

Terms and Conditions Reference

Facilities for Intrastate Access Tariff, section 19.3.5

2. Minor Augment

Cost Element
Engineering costs include time spent by Verizon FL personnel planning and engineering a specific collocator's project. Minor augments are those requests that require the Company to perform a service or function on behalf of the CLEC that does not require additional power infrastructure. Less engineering time is included in the Minor Augment rate due to the nature of the work performed. Please refer to page 93 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional detail.

Rate Element: ***NRC***
This rate is applied for each minor augment requested. Because minor augments can occur only in central offices that already have existing collocation, a weighted rate is not needed.

Terms and Conditions Reference
Section 19.3.5.

3. Access Card Administration

Cost Element
An administrative cost is associated with providing access cards to collocators to gain access to Verizon FL central offices. The card cost includes the time required to order, assign, file, program, distribute, program, replace, and change cards. The activity times to perform these activities are provided by SMEs in Verizon's Security Group. Please refer to page 95 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***NRC***
The costs associated with providing the access card, as well as the costs of making changes to the card, are summed to develop the access card administration rate element. The rate is applied on a per card basis.

Terms and Conditions Reference
Section 19.4.6(B).

4-8. Cage Enclosure

Cost Element
This element includes the vendor's labor and materials costs associated with constructing the fencing and gate for the collocation arrangement. This element also includes costs for a Cage Grounding Bar, element number 10, which is required to ground the collocator's equipment to the floor ground bar. Costs are based on actual vendor charges incurred by Verizon FL in the construction of collocation cages. Please refer to pages 102-105 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Terms and Conditions Reference
Sections 19.4.2(A) and 19.5.2.

4. 25-100 SF

Rate Element: ***NRC***
The rate for a cage enclosure sized between 25 and 100 square feet is based on the use of 289 square feet of fencing materials plus materials and labor costs associated with the cage gate and cage grounding bar.

The area of fencing materials for each cage size is based on the typical area of fencing required to construct cages of that size. Actual vendor charges and cage design were used to develop the area of fencing materials required for each cage size element.

5. 101 - 200 SF

Rate Element: ***NRC***
The rate for a cage enclosure sized between 101 and 200 square feet is based on the use of 444 square feet of fencing materials plus materials and labor costs associated with the cage gate and cage grounding bar.

6. 201 - 300 SF

Rate Element: ***NRC***
The rate for a cage enclosure sized between 201 and 300 square feet is based on the use of 599 square feet of fencing materials plus materials and labor costs associated with the cage gate and cage grounding bar.

7. 301 - 400 SF

Rate Element: ***NRC***
The rate for a cage enclosure sized between 301 and 400 square feet is based on the use of 755 square feet of fencing materials plus materials and labor costs associated with the cage gate and cage grounding bar.

8. 401 - 500 SF

Rate Element: ***NRC***
The rate for a cage enclosure sized between 401 and 500 square feet is based on the use of 910 square feet of fencing materials plus materials and labor costs associated with the cage gate and cage grounding bar.

9. Cage Enclosure Augment

Cost Element
This element is based on the cage fencing costs associated with increasing the size of the cage. Please refer to pages 101-103 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***NRC***
The rate for a cage enclosure augment is charged per square foot of fencing added to the initial arrangement.

Terms and Conditions Reference
Sections 19.4.2(A) Section 19.5.2.

10. Cage Grounding Bar

Cost Element
This element captures the cost of placing a cage grounding bar inside the collocator's cage. The cage grounding bar is connected to the floor grounding bar and is intended to ground the collocator's equipment to the central office ground. The cost element includes the materials and labor costs associated with placing the cable from the floor grounding bar to the cage grounding bar and the cost of the cage grounding bar. Materials costs are provided by GTE Advanced Materials System ("GTEAMS") and activity times are subject matter expert ("SME")

estimates. Please refer to page 105 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***NRC***
The rate is applied per cage grounding bar and applies when the ALEC makes arrangements to install its own cage enclosure. (When Verizon FL installs the cage enclosure, this rate is subsumed as part of rate 4-8, as appropriate.)

Terms and Conditions Reference
Section 19.15.1(AS).

11. Overhead Superstructure

Cost Element
Overhead superstructure is required to extend the existing cable racking system in the central office to the collocation area and to a specific collocator's site. This element includes all engineering, labor, and materials costs required for overhead superstructure installation in a Verizon FL central office. Materials costs are provided by GTEAMS and activity times are SME estimates. Please refer to pages 107 and 108 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support

Rate Element: ***NRC***
The rate for dedicated overhead superstructure is applied per project for each initial caged and cageless collocation application. The rate element is determined by applying the per linear foot cost of materials and installation to the average linear footage of overhead superstructure used in collocation arrangements in Florida. Please refer to page 106 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional information.

Terms and Conditions Reference
Section 19.4.2(B).

12. Facility Pull – Engineering (Metallic & Fiber Optic Patchcord)

Cost Element
The Facility Pull Engineering cost element includes the average number of hours required by Verizon FL central office engineers to develop the plans associated with pulling metallic or fiber optic patchcord cables from the collocation arrangement to the Main Distribution Frame block, DSX panel, or fiber distribution panel, as appropriate. This includes the time

to draw the plans, write the work orders, order any necessary equipment, perform record updates, and close the work order once the project is completed. Travel time for the central office engineer is also included. Activity times are provided by the SMEs who are involved in the process. Please refer to pages 113 and 114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***NRC***
This rate element is applied per collocation arrangement requested.

Terms and Conditions Reference
Sections 19.4.3(C), (D).

13. Facility Pull – Labor (Metallic)

Cost Element
The Facility Pull element includes the labor cost of running the metallic cable from the collocation cage to the block or panel. This cost element is developed in one-foot increments. Activity times are provided by the SMEs who are involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***NRC***
The cost per linear foot is applied to the average DS0, DS1, and DS3 cable lengths to calculate the per-cable run rate for metallic cable. Please refer to page 110 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional detail.

Terms and Conditions Reference
Sections 19.4.3 (C), (D).

14. Fiber Optic Patchcord Pull – Labor

Cost Element
The Facility Pull for fiber optic patchcord element includes the labor cost of running the patchcord from the collocation cage to the block or panel. This cost element is developed in one-foot increments. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***NRC***
The cost per linear foot is applied to the average fiber optic patchcord ordered over the past two years to arrive at the per cable run rate for metallic cable. Please refer to page 110 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional detail.

Terms and Conditions Reference
Sections 19.4.3 (C), (D).

15. DS0 Cable Termination (Connectorized)

Cost Element
The DSO cable termination cost element includes the costs associated with terminating a 100 pair DS0 connectorized cable. It is developed using engineering time estimates applied to the equipment installer's labor rate. Activity times are provided by SMEs involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is applied per 100 pair cable.

Terms and Conditions Reference
Section 19.4.3(F).

16. DS1 Cable Termination (Connectorized)

Cost Element
The DS1 cable termination cost element includes the costs associated with terminating a 28 pair DS1 connectorized cable. It is developed using engineering time estimates applied to the equipment installer's labor rate. Activity times are provided by SMEs involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is applied per 28 pair cable.

Terms and Conditions Reference
Section 19.4.3(F).

17. DS3 Coaxial Cable Termination (Preconnectorized)

Cost Element
The DS3 cable coaxial termination cost element includes the costs associated with terminating a DS3 preconnectorized cable. It is developed using engineering time estimates applied to the equipment installer's labor rate. Activity times are provided by SMEs involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is applied per coaxial cable.

Terms and Conditions Reference
Section 19.4.3(F).

18. DS3 Coaxial Cable Termination (Unconnectorized)

Cost Element
The DS3 coaxial cable termination cost element includes the costs associated with terminating a DS3 coaxial unconnectorized cable. It is developed using engineering time estimates applied to the equipment installer's labor rate. Activity times are provided by SMEs involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is applied per coaxial cable.

Terms and Conditions Reference
Section 19.4.3(F).

19. Category 5 Cable Termination (Connectorized)

Cost Element
The Category 5 Cable Termination cost element includes the costs associated with terminating a 25 pair Category 5 connectorized cable. It is developed using engineering time estimates applied to the equipment installer's labor rate. Activity times are provided by SMEs involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is applied per 25 pair cable.

Terms and Conditions Reference
Section 19.4.3(F).

20. Fiber Optic Patchcord Termination

Cost Element
The Fiber Optic Patchcord cable termination cost element includes the costs associated with the labor cost of terminating Fiber Optic Patch Cord cable from the collocation cage or relay rack to the designated Fiber Optic Distribution Panel. It is developed using engineering time estimates applied to the equipment installer's labor rate. Activity times are provided by SMEs involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is applied per termination.

Terms and Conditions Reference
Section 19.4.3(F).

21. Fiber Cable Pull – Engineering

Cost Element
The Fiber Cable Pull – Engineering cost element includes the engineering costs associated with pulling the ALEC's fiber cable, when necessary, into the Company's central office. This includes preparing the Outside Plant work order, determining the activities required to pull the fiber cable from the manhole to the collocation arrangement, assigning the subduct that the fiber will be placed in, distributing the work orders to affected departments, and updating the records. The Outside Plant Engineer's labor rate is applied to the engineer's activity time, as determined by SMEs involved in the process, to calculate the engineering cost associated with a fiber cable pull. Please refer to page 116 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is applied per project.

Terms and Conditions Reference
Section 19.4.3(D).

22. Fiber Cable Pull – Place Innerduct

Cost Element
The cost associated with innerduct placement for fiber cable is comprised of the materials and installation costs associated with placing innerduct between the cable vault and the collocation arrangement. Cost is determined on a per innerduct foot basis. Installation costs are based on the use of an EFI factor applied to the materials costs. Activity times are provided by SMEs involved in the process. Please refer to page 116 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is applied per innerduct foot.

Terms and Conditions Reference
Section 19.4.3(D).

23. Fiber Cable Pull – Labor

Cost Element
The labor cost to pull fiber cable from the designated manhole (or equivalent) to the collocation arrangement is based on Verizon FL's Single Source Provider ("SSP") contract in Florida. The cost element is stated per linear foot, based on the SSP rates in the contract. Please refer to page 116 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is applied per linear foot.

Terms and Conditions Reference
Section 19.4.3(D).

24. Fiber Cable Pull – Cable Fire Retardant

Cost Element
Cable fire retardant activity is associated with filling the space around cables with non-flammable material. This activity is required when DC power cable or transmission cable is run between floors or through a wall. The retardant prevents fire from spreading from one room or floor to another. The cost included for this activity is the labor rate of the CO Equipment Installer applied to the time required to perform this function. Activity times are provided by SMEs involved in the process. The cost element is calculated on a per occurrence basis. Please refer to page 116 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is applied per occurrence.

Terms and Conditions Reference
Section 19.4.3(D).

25. Fiber Cable Splice – Engineering

Cost Element
This cost element includes the labor costs for an Outside Plant Engineer to engineer the splicing of the cable, and includes writing a work order, providing instructions for the splicing, and updating the records. This element is applied if the collocator requests Verizon FL to splice the fiber cable pulled into the central office. The Outside Plant Engineer's labor rate is applied to engineer's time, as determined by SMEs involved in the process, to calculate the engineering cost associated with a fiber cable splice. Please refer to page 118 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is applied per splicing project.

Terms and Conditions Reference
Section 19.4.3(E).

26. Fiber Cable Splice

Cost Element
This element is applied if the collocator requests Verizon FL to splice the fiber cable pulled into the central office. The splice may take place in the cable vault or in the collocator's cage. The costs are based on the Single Source Provider's Florida rates for splicing fiber cable. Please refer to page 118 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is applied per fiber strand.

Terms and Conditions Reference
Section 19.4.3(E).

27. DC Power – Engineering

Cost Element
The engineer's time associated with provisioning power for an ALEC's collocation arrangement includes: checking power requirements for available power, drafting a work order, ordering equipment and materials, updating records, and closing the work order once the work activity has been completed. The engineer's labor rate is applied to this time estimate. The cost estimate also includes travel time for the CO Equipment Installer who will pull and terminate the cable. Activity times are provided by the SMEs who are involved in the process. Please refer to page 114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is applied per project.

Terms and Conditions Reference
Section 19.4.2(C).

28. DC Power – Cable Pull/Termination

Cost Element
This cost element includes the pulling of the power cable from the Battery Distribution Fuse Bay ("BDFB") to the collocator's collocation arrangement. The cost of pulling the power cable is calculated per linear

foot of cable pulled. In order to terminate the power cable, a connector tap must be placed on each end of the cable. The termination cost includes the cost of the connector tap and the time required to place the tap. Activity times are provided by the SMEs who are involved in the process and materials costs are taken from GTEAMS. Please refer to page 114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is calculated by combining the cost to pull the cable and the termination cost per cable run. The average distance for power cable pulls in Florida central offices with collocation is 67 feet. The cost per cable run to pull power cable is the product of the labor cost per foot and the average distance. The rate element is applied per cable run. It takes two cable runs (battery and return) to complete the circuit. Please refer to page 119 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1,for more rate detail.

Terms and Conditions Reference
Section 19.4.2(C).

29. DC Power – Ground Wire

Cost Element
This cost element includes the materials costs of ground wire. The materials costs include the ground wire, freight, sales tax, and provisioning. Materials costs are obtained from GTEAMS. The cost element is presented on a per linear foot basis. Please refer to page 121 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate element is developed by applying the per linear foot cost of ground wire to the average distance for power cable of 67 feet. The rate element is applied per wire.

Terms and Conditions Reference
Section 19.4.2(C).

30. Virtual Equipment Installation

Cost Element
The Virtual Equipment Installation cost element includes the activities associated with installing the virtual collocation equipment. A weighted cost, based on the type and frequency of the specific virtual collocation equipment placed in Verizon's central offices in virtual arrangements, is used to develop an average engineering and installation cost. Verizon Network Planning subject matter experts develop the engineering and installation times associated with each type of equipment placed in virtual arrangements. These activity times are applied to current engineering labor rates to produce the total engineered and installed cost for each specific type of equipment. The average number of units that can fit on a rack is then determined for each equipment type based on the dimensions of the equipment. Using a frequency analysis based on the occurrence of equipment used in virtual collocation arrangements, a weighted cost per rack of equipment is calculated. Please refer to pages 123 and 124 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
To provide collocators with the option to request less than a full rack of equipment, the Virtual Equipment Installation rate element is based on a per quarter rack (or per bay) cost.

Terms and Conditions Reference
Section 19.12(D).

31. Virtual Software Updates

Cost Element
The Virtual Software Upgrades cost element accounts for the costs associated with a CO Equipment Installer's time required to install software upgrades. Software updates are performed as requested by the collocator. As with installation, these costs are based on a weighting of the types of virtual collocation equipment that have software upgrades installed. The rate for this element is based on a per upgrade basis and applies per base unit being upgraded. Activity times are provided by the SMEs who are involved in the process. Please refer to pages 126 and 127 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate for this element is applied on a per upgrade basis and applies per base unit being upgraded.

Terms and Conditions Reference
Section 19.12(D).

32. Virtual Card Installation

Cost Element
The Virtual Card Installation cost element captures the time that the Central Office Equipment Engineer spends engineering the installation of the card as well as the time spent by a Central Office Equipment Installer to install the card. The average installation cost per card is determined by including only the equipment that requires card installation, and determining the frequency with which the card installations are performed on such pieces of equipment. Activity times are provided by the SMEs who are involved in the process. Please refer to pages 129 and 130 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate for this element is applied on a per card basis.

Terms and Conditions Reference
Sections 19.12 (D), (E).

Monthly Recurring Rates

33. Engineering/Major Augment Virtual

Cost Element
This element captures the time spent by the Building Engineer, the Outside Plant Engineer and, the CO Equipment Engineer to evaluate and process a new request for virtual collocation or for a major augment of an existing virtual arrangement. The engineers determine if virtual collocation space is available and where the equipment is best located, identify the cabling requirements, and generally engineer and oversee the project. The costs and tasks included in this rate element reflect only the engineering activities associated with planning and managing the implementation of the virtual arrangement. Activity times are provided by the SMEs who are involved in the process. Please refer to page 132 of

the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
The rate for this element is applied on a per occurrence basis.

Terms and Conditions Reference
Section 19.12(D).

34. Building Modification

Cost Element
The Building Modification charge is associated with provisioning the following items in the Company's central office: security, dust partition, ventilation ducts, site work, lighting, outlets, and the floor ground bar. Costs are based on typical building modifications to provision the ALEC's requested arrangement in a Verizon FL central office. The cost estimates are based on actual invoices for projects in Texas and California, adjusted to be state specific using the National Construction Estimator.[1]

Costs are stated per collocator, requiring the development of per collocator costs for the Security Access, Site Work, and Floor Grounding Bar components of this element. For example, the costs of the card reader and controller are spread among the average number of collocators per central offices with collocation plus Verizon FL, which also uses this equipment to gain access to the central office. The Site Work and Floor Grounding Bar costs, however, are shared only among the average number of collocators per central offices with collocation. Please refer to pages 151-156 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***MRC***
The costs *per collocator* for each of the cost components included in the Building Modification element are summed to arrive at the total investment costs. The monthly rate for building modification is developed by applying an Annual Cost Factor ("ACF") and dividing by 12. A fixed allocator, designed to recover Verizon FL's common costs, is applied to the monthly cost to develop the rate element. The rate for this element is applied for each caged or cageless collocation arrangement request. Please refer to page 150 of the cost study, attached as

[1] 2001 National Construction Estimator, 49th Edition, Edited by Dave Ogershok (Craftsman Book Company, Carlsbad CA), Page 12.

Confidential Verizon FL Exhibit BKE-1, for additional rate development detail.

Terms and Conditions Reference
Sections 19.4.1 and 19.4.2(B).

35. Environmental Conditioning

Cost Element
The Environmental Conditioning cost element captures the costs associated with providing heating, ventilation, and air conditioning systems ("HVAC") for ALEC equipment in Verizon FL's central office. Costs are stated on a per amp basis, allowing Verizon FL to provide environmental conditioning on the basis of the ALEC's requested power requirements. Please refer to pages 158-161 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***MRC***
The Environmental Conditioning rate per amp is developed by taking the monthly cost per amp and applying the fixed allocator, which is designed to recover Verizon FL's common costs.

Terms and Conditions Reference
Section 19.4.2(B).

36. Caged Floor Space

Cost Element
The Caged Floor Space cost element includes the cost of providing caged floor space to the ALEC. The cost estimate includes only those investments that relate directly to the land and building space itself, plus annual maintenance and utility costs. HVAC investment included in the floor space costs is limited to that required to heat and cool the building shell. (HVAC investment that is associated with heating and cooling the telecommunications equipment in the central office is included in the Environmental Conditioning rate element.) Costs are developed on a per square foot basis. Please refer to pages 163-167 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
Verizon FL's fixed allocator is applied to the per square foot cost of floor space to develop this rate. The rate is applied to the square footage of the cage space requested by the ALEC.

Terms and Conditions Reference
Section 19.5.2.

37. Relay Rack Space

Cost Element
The Relay Rack Space element captures the cost of the central office floor space that the relay rack will occupy. Verizon FL uses a standard relay rack (24 15/16 inches wide with 15-inch guard rails on each side) and assumes that 18 inches of space is required both in front of and behind the rack to access the equipment in the rack. These dimensions are used to determine the total square footage occupied by a relay rack, which is then converted to a cost per linear foot. Materials costs are drawn from GTEAMS. Please refer to pages 163-167 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The Relay Rack Space rate element is applicable to cageless collocation arrangements on a per linear foot basis. The cost of relay rack floor space is adjusted to include common costs through the use of the fixed allocator.

Terms and Conditions Reference
Section 19.5.2.

38. Cabinet Floor Space

Cost Element
The Cabinet Floor Space element captures the central office floor space cost that an ALEC's telecommunications cabinet occupies. Included in the Cabinet Floor Space cost is the floor space cost associated with a standard sized cabinet (29 by 33 inches) plus 18 inches each in front of and behind the cabinet for access. The square footage is then converted into a per linear foot basis to develop the cost element. Materials costs are drawn from GTEAMS. Please refer to pages 163-167 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The Cabinet Floor Space rate element is applicable in a cageless collocation arrangement in which the ALEC elects to use a cabinet to

house its telecommunications equipment. The cost of cabinet floor space is adjusted to include common costs through the use of the fixed allocator.

Terms and Conditions Reference
Section 19.5.2.

39. Cable Subduct Space – Manhole

Cost Element
This element includes the cost of the space that the outside plant fiber occupies within the manhole, and includes the materials and installation costs of the manhole on a per subduct basis. The manhole is comprised of 32 ducts, each of which contains 3 subducts (each manhole contains a total of 96 subducts). Materials costs are drawn from GTEAMS and installation costs are based on Verizon FL's SSP contracts. Please refer to pages 169-171 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The Cable Subduct Space – Manhole element is applicable to ALECs who elect to bring fiber cable into Verizon FL's central office. Verizon FL's fixed allocator is applied to the monthly cost per subduct of the manhole to develop the rate element.

Terms and Conditions Reference
Section 19.4.3(E).

40. Cable Subduct Space

Cost Element
The Cable Subduct Space element includes the cost of the subduct space that the outside plant fiber occupies. This includes the materials and labor cost associated with the conduit and subduct. Materials costs are drawn from GTEAMS and installation costs are based on Verizon FL's SSP contracts. Please refer to pages 169-171 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The element applies on a per linear foot basis from the manhole (or equivalent) to the cable vault.

Terms and Conditions Reference
Section 19.4.3(D).

41. Fiber Cable Vault Splice – 48 Fiber Material

42. Fiber Cable Vault Splice – 96 Fiber Material

Cost Element
The Fiber Cable Vault Splice cost element includes the materials costs associated with the ALEC's fiber cable splice within the cable vault. Materials include the splice closure and the tray appropriately sized for each fiber cable size. Please refer to pages 173-178 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The fiber cable vault splice closure is applicable when a fiber splice is performed inside the cable vault. Materials costs are drawn from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates. The rate element is applied on a per splice closure basis closure, as appropriate (i.e., per 48 and 96 fiber cable).

Terms and Conditions Reference
19.4.3(E).

43. Cable Vault Space – Fiber

Cost Element
The Cable Vault Space – Fiber element includes the cost of the space that the ALEC's fiber cable utilizes in the cable vault. The cost of the cable vault and the outside diameter of the subduct are used to develop the cost per innerduct for fiber cable. Materials costs are drawn from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates. Please refer to pages 181-187 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The Cable Vault Space – Fiber rate element is applied per innerduct used in the cable vault.

Terms and Conditions Reference
Section 19.4.3(D).

44. Cable Rack Shared Space – Metallic

Cost Element
This cost element includes the space utilization costs of the ALEC's metallic and coaxial cable within the Company's cable rack system. The respective diameters of DS0, DS1, and DS3 cables are used to determine the amount of space occupied by each cable on a foot of cable rack. Materials costs are drawn from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates. Please refer to pages 190 and 191 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The Cable Rack Shared Space – Metallic rate element is applied for each DSO, DS1, and DS3 cable run (e.g., from the cage or cageless arrangement to the Main Distribution Frame or equivalent). For each metallic cable type, the shared space cost is converted to a "per cable run" basis by determining the average footage of rack space used by an ALEC in a collocation arrangement. A weighted rate is developed by assuming that each type of metallic cable is used equally on the rack.

Terms and Conditions Reference
Section 19.4.3(D).

45. Cable Rack Shared Space – Fiber

Cost Element
The Cable Rack Shared Space – Fiber cost includes the space utilization costs of the ALEC's fiber cable within the Company's cable rack system from the cage or cageless arrangement to the Fiber Distribution Panel. The outside diameter of the innerduct is used to determine the space used by fiber cable on the cable rack. Materials costs are drawn from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates. Please refer to pages 190 and 191 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The Cable Rack Shared Space cost for fiber is converted to a monthly rate by applying the appropriate annual cost factor to the investment and dividing by 12. The rate is applied per innerduct foot.

Terms and Conditions Reference
Section 19.4.3(D).

46. DC Power

Cost Element
The DC Power cost element includes the materials and installation costs required to provide DC power to the battery distribution fuse bay ("BDFB"). Costs include power cable to extend power from the power plant to the BDFB, fuse panels, relay racks, distribution bays, and a portion of the existing power plant. This cost element also includes the utility costs of AC Power acquisition.

Power cable costs include the cost of 125 feet of 750-mcm power cable and two connector taps, as well as the cost of pulling the power cable. The cost per amp is calculated by summing the power cable related costs and dividing by the engineering capacity of the BDFB (480 amps). Materials costs are derived from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates.

Development of this cost element begins with the cost of a 600 amp BDFB, which also includes the cost of the relay rack, common equipment, and fuse panels. The model BDFB is provisioned for both "A" and "B" power feeds. Costs are then calculated on a per amp basis, assuming the maximum engineering capacity (80% or 480 amps) of the BDFB. The use of the net capacity of 480 amps puts the cost per amp on a per amp load basis. The BDFB equipment investment per amp is then multiplied by the power installation factor to come up with a total installed investment cost for a BDFB on a per amp basis. An annual cost factor is then applied to calculate an annual cost and divided by twelve for the monthly recurring cost.

The power plant consists of batteries, rectifiers, main fuse panels, electrical connections, and backup generators to the main power source. The cost is expressed on a per amp basis.

The utility costs associated with DC Power represent the monthly utility expense to power the termination equipment. This cost is determined by estimating a set amperage rating of equipment and a voltage rating of

equipment used by collocators. By multiplying the amp rating by the volt rating and dividing by 1000, a total equipment power requirement is calculated.

The power output voltage is calculated using the type of rectifier that would be purchased by Verizon FL today rather than using equipment found in an existing Verizon central office. For example, power engineers used a Lorain model V200D50 Rectifier in calculating the input-output ratios and efficiency factors for a current power facility. This has the effect of lowering the ratio of input to output power and reducing the overall cost of this element.

The cost of commercial electricity is determined from actual electricity costs and kilowatt-hours used in Verizon FL facilities in 1999.

Please refer to pages 193-200 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The monthly recurring charge for DC Power is applied on a per load amp basis according to the power loads requested by the ALEC. The per-amp costs associated with the items included in this rate element are added to a contribution for common costs to arrive at the final per amp rate for DC Power.

Terms and Conditions Reference
Section 19.4.2(C).

47. Facility Termination – DS0

Cost Element
The Facility Termination cost element for a DS0 includes the total materials and installation costs for establishing a DS0 (100 pair) interconnection. It includes the costs of the cross connect panels and termination blocks, and a space occupation cost for those blocks and panels. Materials costs are derived from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates. Please refer to pages 202-207 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

For a DS0 interconnection, the cost of a 100 pair termination block is used and the cost of the Main Distribution Frame ("MDF") is calculated on a 100 pair, DS0 basis. The study includes DS0s only up to their point of termination on the MDF and does not include the cross connections to

Verizon FL's unbundled network elements or services. Therefore, only one half of the cost of the MDF is included in Verizon FL's collocation study. The installation cost of establishing a facility termination includes both engineering and installation activities. Verizon FL's digital circuit installation factor is applied to the materials investment amount to calculate the total installed investment amount. An annual cost factor is applied to the total installed investment for the facility termination to annualize the cost, and is divided by 12 to arrive at a monthly cost.

Rate Element: ***MRC***
The rate per 100 pair DS0 is comprised of the monthly costs for the DS0 facility termination plus a contribution to common costs that is derived using the fixed allocator.

Terms and Conditions Reference
Section 19.4.3(F).

48. Facility Termination – DS1

Cost Element
The DS1 facility termination cost element includes the cost of a 56 circuit DSX panel on a cost per circuit basis. The panel is fully utilized when deploying four cables (two Transmitting and two Receiving), each with 28 pairs. The facility termination element also includes costs associated with the space used by the DSX panel on the relay rack and the associated floor space costs. Materials costs are derived from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates. Please refer to pages 202-207 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The rate per 28 pair is comprised of the monthly costs for the DS1 facility termination plus a contribution to common costs that is derived using the fixed allocator.

Terms and Conditions Reference
Section 19.4.3(F).

49. Facility Termination – DS3

Cost Element
The DS3 facility termination cost element includes the cost of a 20 circuit DSX chassis (calculated on a per circuit basis) and a DS3 module. The panel is fully utilized when deploying all 20 modules. The facility termination element also includes costs associated with the space used by the DSX chassis on the relay rack and the associated floor space costs. Materials costs are derived from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates. Please refer to pages 202-207 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The rate per coaxial cable is comprised of the monthly costs for the DS3 facility termination plus a contribution to common costs that is derived using the fixed allocator.

Terms and Conditions Reference
Section 19.4.3(F).

50. Virtual Equipment Maintenance

Cost Element
The Virtual Equipment Maintenance cost element for powered equipment includes costs associated with routine maintenance, trouble maintenance, and floor space occupied by the frame in which the collocators' virtual equipment resides. Materials costs are derived from GTEAMS. Please refer to pages 219-223 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Typical routine maintenance, as recommended by the respective equipment manufacturer, generally includes such tasks as cleaning the fans, performing visual checks, and testing cards.

Trouble maintenance involves resolving trouble tickets, restoring the circuit, and/or replacing cards from the collocator's inventory.

The activity time for virtual equipment maintenance are provided by the subject matter experts and the central office technicians that perform the maintenance.

Rate Element: ***MRC***
The Virtual Equipment Maintenance charge is applied on a per quarter rack (or per bay) basis. This charge applies to the maintenance of equipment including, but not limited to, ATM, DSLAM, frame relay, routers, OC3, OC12, OC24, OC48, and NGDLC.

The weighted average cost per quarter rack is based on the estimated frequency of each type of equipment that is collocated, and the average number of base units that fit into a standard Verizon FL relay rack.

Terms and Conditions Reference
Sections 19.12(E), (I), (J).

Adjacent On-Site Rate Elements

Nonrecurring Rates

Terms and conditions for adjacent collocation are summarized in Section 19.2.5 of the Facilities for Intrastate Access Tariff.

51. Engineering – Adjacent On-Site

Cost Element

The Adjacent On-Site Engineering cost element includes costs for the initial activities of the Central Office Equipment Engineer, the Land & Building Engineer, and the Outside Plant Engineer associated with determining the capabilities of providing Adjacent On-Site collocation. Labor charges include an on-site visit, a preliminary investigation of the manhole/conduit systems, wire center and property, and contacting governmental agencies that could have to approve the provisioning of adjacent collocation. Please refer to page 135 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***NRC***
This rate element applies for each initial Adjacent On-site Collocation request.

52. Adjacent Metallic Facility Pull – Engineering

Cost Element
The Facility Pull Engineering cost element includes labor costs, based on the average number of hours required by Verizon FL central office engineers to develop the plans to pull metallic or fiber optic patchcord cables from the Main Distribution Frame to the collocator's physical (caged or cageless) collocation arrangement. This includes the time to draw the plans, write the work orders, order any necessary equipment, perform record updates, and close the work order once the project is completed. Travel time for the central office engineer is also included. Activity times are provided by the SMEs who are involved in the process. Please refer to pages 112 and 113 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***NRC***
This element is applied to each adjacent on-site collocation request.

53. Adjacent Metallic Facility Pull – Labor

Cost Element
This element includes the labor of running the interconnection wire (cable) from the main distribution frame connector to the collocator's physical (caged or cageless) collocation arrangement. Activity times are provided by the SMEs who are involved in the process and are applied according to the labor rates for the technicians performing the work. This cost element is developed in one-foot increments. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support

Rate Element: ***NRC***
This rate element is applied per linear foot required.

54. Adjacent DS0 Cable Termination (Connectorized)

Cost Element
The adjacent DSO cable termination cost element includes the costs associated with terminating a 100 pair DS0 connectorized cable. It is developed using engineering time estimates applied to the equipment installer's labor rate. Activity times are provided by SMEs involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per 100 pair cable.

55. Adjacent DS0 Cable Termination (Unconnectorized)

Cost Element
The adjacent DSO cable termination cost element includes the costs associated with terminating a 100 pair DS0 unconnectorized cable. It is developed using engineering time estimates applied to the equipment installer's labor rate. Activity times are provided by SMEs involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per 100 pair cable.

56. Adjacent DS1 Cable Termination (Connectorized)

Cost Element
The adjacent DS1 cable termination cost element includes the costs associated with terminating a 28 pair DS1 connectorized cable. It is developed using engineering time estimates applied to the equipment installer's labor rate. Activity times are provided by SMEs involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per 28 pair cable.

57. Adjacent DS1 Cable Termination (Unconnectorized)

Cost Element
The adjacent DS1 cable termination cost element includes the costs associated with terminating a 28 pair DS1 unconnectorized cable. It is developed using engineering time estimates applied to the equipment installer's labor rate. Activity times are provided by SMEs involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per 28 pair cable.

58. Adjacent DS3 Coaxial Termination (Connectorized)

Cost Element
The adjacent DS3 coaxial cable termination cost element includes the costs associated with terminating a DS3 connectorized cable. It is developed using engineering time estimates applied to the equipment installer's labor rate. Activity times are provided by SMEs involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per coaxial cable.

59. Adjacent DS3 Coaxial Termination (Unconnectorized)

Cost Element
The adjacent DS3 coaxial cable termination cost element includes the costs associated with terminating a DS3 coaxial unconnectorized cable. It is developed using engineering time estimates applied to the equipment installer's labor rate. Activity times are provided by SMEs involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per coaxial cable.

60. Adjacent Category 5 Cable Termination (Connectorized)

Cost Element
The adjacent Category 5 Cable Termination cost element covers the costs associated with terminating a 25 pair Category 5 connectorized cable. It is developed using engineering time estimates applied to the equipment installer's labor rate. Activity times are provided by SMEs involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per 25 pair cable.

61. Adjacent Fiber Cable Termination

Cost Element
This cost element covers the labor of terminating fiber cable for adjacent collocation to the fiber distribution panel. It is calculated on a per fiber strand basis. It is developed using engineering time estimates applied to the equipment installer's labor rate. Activity times are provided by SMEs involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per fiber termination.

62. Adjacent Fiber Cable Pull – Engineering

Cost Element
The Adjacent Fiber Cable Pull – Engineering element captures the engineering costs associated with pulling the ALEC's fiber cable into the Company's central office. The costs include preparing the Outside Plant work order, determining the activities required to pull the fiber cable from the manhole to the collocation arrangement, assigning the subduct that the fiber will be placed in, distributing the work orders to affected departments, and updating the records. The engineer's activity time multiplied by the Outside Plant Engineer's labor rate determines the engineering cost. Activity times are provided by SMEs involved in the process. Please refer to page 116 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per project.

63. Adjacent Fiber Cable Pull – Place Innerduct

Cost Element
The cost element associated with innerduct placement for fiber cable is comprised of the materials and installation costs associated with placing innerduct between the cable vault and the collocation arrangement. Cost

is determined on a per innerduct foot basis. Installation costs are based on the use of an EFI factor applied to the materials costs. Activity times are provided by SMEs involved in the process. Please refer to page 116 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per innerduct foot.

64. Adjacent Fiber Cable Pull – Labor

Cost Element
The labor cost to pull fiber cable from the designated manhole (or equivalent) to the collocation arrangement is based on Verizon FL's Single Source Provider ("SSP") contract in Florida. The cost element is calculated per linear foot, based on the SSP rates in the contract. Please refer to page 116 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per linear foot.

65. Adjacent Cable Fire Retardant

Cost Element
The adjacent cable fire retardant cost element includes the costs associated with filling the space around cables with non-flammable material. This activity is required when DC power cable or transmission cable is run between floors or through a wall. The retardant prevents fire from spreading from one room or floor to another. The cost included for this activity is the labor rate of the CO Equipment Installer applied to the time required to perform this function. Activity times are provided by the SMEs who are involved in the process. The cost element is calculated on a per occurrence basis. Please refer to page 116 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per occurrence.

66. Adjacent Metallic Cable Pull – Engineering

Cost Element
This charge covers the engineering costs of provisioning the facilities from the cable vault, out of the central office, and into the adjacent building. 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. This activity includes preparing the Outside Plant work order, determining the activities required to provision the facilities, distributing the work orders to affected departments, and updating the records. The Outside Plant Engineer's labor rate is applied to the engineer's activity time, as determined by SMEs involved in the process, to calculate the engineering cost. Please refer to page 140 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per project.

67. Adjacent Metallic Cable Pull – Labor

Cost Element
This cost element, which is calculated per linear foot, captures the labor costs of provisioning the facilities from the cable vault, out of the central office, and into the adjacent building. Costs are based on Verizon FL's SSP rates. Please refer to page 140 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per linear foot.

68. Adjacent Metallic Cable Splice – Engineering

Cost Element
This cost element includes the outside plant engineering costs for cable splice projects associated with an adjacent collocation arrangement. Activity times are provided by engineering SMEs and are applied to the Outside Plant Engineer's loaded labor rate. Please refer to page 118 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per project.

69. Adjacent Metallic Cable Splicing – (greater than 200 pair)

Cost Element
This cost element is associated with the labor required to splice metallic cables greater than 200 pair and is calculated per pair spliced. Costs are based on Verizon FL's SSP rates. Please refer to page 118 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per pair.

70. Adjacent Metallic Cable Splicing – (less than 200 pair)

Cost Element
This cost element is associated with the labor required to splice metallic cables less than 200 pair and is calculated per pair spliced. Costs are based on Verizon FL's SSP rates. Please refer to page 118 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per pair.

71. Adjacent Fiber Cable Splicing – Engineering

Cost Element
This cost element includes the outside plant engineering costs for cable splice projects associated with an adjacent collocation arrangement. Activity times are provided by engineering SMEs and are applied to the Outside Plant Engineer's loaded labor rate. Please refer to page 118 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate is applied per splicing project.

72. Adjacent Fiber Cable Splicing (48 fiber cable or less)

Cost Element
This element is applied if the collocator requests Verizon FL to splice the fiber cable pulled into the central office. The splice may take place in the cable vault or in the collocator's cage. The costs are based on the Single Source Provider's Florida rates for splicing fiber cable. Please refer to page 118 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per fiber strand.

73. Adjacent Fiber Cable Splicing (greater than 48 fiber)

Cost Element
This element is applied if the collocator requests Verizon FL to splice the fiber cable pulled into the central office. The splice may take place in the cable vault or in the collocator's cage. The costs are based on the Single Source Provider's Florida rates for splicing fiber cable. Please refer to page 118 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost detail.

Rate Element: ***NRC***
This rate element is applied per fiber strand.

Monthly Recurring Rates

74. Adjacent Subduct Space – Manhole

Cost Element
This element includes the cost of the space that the outside plant fiber occupies within the manhole, and includes the materials and installation costs of the manhole on a per subduct basis. The manhole is comprised of 32 ducts, each of which contains 3 subducts (each manhole contains a total of 96 subducts). Materials costs are derived from GTEAMS and installation costs are based on Verizon's SSP contracts. Please refer to page 169 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The Adjacent Subduct Space – Manhole rate element is applicable to ALECs who elect to bring fiber cable into Verizon FL's central office. The rate element is developed by applying Verizon FL's fixed allocator to the monthly cost per subduct of the manhole.

75. Adjacent Subduct Space

Cost Element
The Adjacent Subduct Space element includes the cost of the subduct space that the outside plant fiber occupies within the conduit system. This includes the materials and labor costs associated with the conduit and subduct. Materials costs are derived from GTEAMS and installation costs are based on Verizon FL's SSP contracts. Please refer to page 169 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
This element applies on a per linear foot basis.

76. Adjacent Conduit Space (4" Duct) – Metallic – Manhole

Cost Element
This cost element includes the costs of the space utilized by the outside plant metallic cable within the manhole and includes the materials and installation costs of the manhole on a per conduit basis. Materials costs are derived from GTEAMS and installation costs are based on Verizon FL's SSP contracts. Please refer to page 169 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The rate element is applied per conduit. The rate element is developed by applying Verizon FL's fixed allocator to the monthly cost per subduct of the manhole.

77. Adjacent Conduit Space (4" Duct) – Metallic – Cable

Cost Element
This cost element includes the cost of the conduit space that the metallic cable occupies. This includes the materials and labor costs associated with the conduit. Materials costs are derived from GTEAMS and

installation costs are based on Verizon FL's SSP contracts. Please refer to page 169 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
This element applies on a per linear foot basis from the manhole (or equivalent) to the cable vault.

78. Adjacent Facility Termination DS0 Cable – Materials

Cost Element
The Adjacent Facility Termination cost for a DS0 includes the total materials and installation costs of establishing a DS0 (100 pair) interconnection. It includes the costs of the cross connect panels and termination blocks, and a space occupation cost of those blocks and panels. Materials costs are derived from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates. Please refer to pages 202-203 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

For a DS0 interconnection, the cost of a 100 pair termination block is used and the cost of the MDF is calculated on a 100 pair, DS0 basis. The study includes DS0s only up to the point of their termination on the MDF and does not include the cross connections to Verizon FL's unbundled network elements or services. Therefore, only one half of the cost of the MDF is included in Verizon FL's collocation study.

The installation cost of establishing a facility termination includes both engineering and installation activities. Verizon FL's digital circuit installation factor is applied to the materials investment amount to calculate the total installed investment amount. An annual cost factor is applied to the total installed investment for the facility termination to annualize the cost, and is divided by 12 to arrive at a monthly cost.

Rate Element: ***MRC***
The rate per 100 pair DS0 is comprised of the monthly costs of the DS0 facility termination plus a contribution to common costs that is derived using the fixed allocator.

79. Adjacent Facility Termination DS1 Cable – Materials

Cost Element
The DS1 facility termination cost element includes the costs of a 56 circuit DSX panel on a cost per circuit basis. The panel is fully utilized

when deploying four cables (two Transmitting and two Receiving), each with 28 pairs. The facility termination element also includes costs associated with the space used by the DSX panel on the relay rack and the associated floor space costs. Materials costs are derived from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates. Please refer to pages 204-205 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The rate per 28 pair is comprised of the monthly costs of the DS1 facility termination plus a contribution to common costs that is derived using the fixed allocator.

80. Adjacent Facility Termination DS3 Cable – Materials

Cost Element
The DS3 facility termination cost element includes the costs of a 20 circuit DSX chassis (calculated on a per circuit basis) and a DS3 module. The panel is fully utilized when deploying all 20 modules. The facility termination element also includes costs associated with the space used by the DSX chassis on the relay rack and the associated floor space costs. Materials costs are derived from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates. Please refer to pages 206-207 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The rate per coaxial cable is comprised of the monthly costs for the DS3 facility termination plus a contribution to common costs that is derived using the fixed allocator.

81. Adjacent Cable Vault Splice (per 1200 pair) – Materials

Cost Element
The Adjacent Cable Vault Splice cost element is calculated per splice enclosure (i.e., per 1200 pair cable) and covers the costs associated with the ALEC's cable splice closure within the cable vault. Please refer to pages 173-179 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
This rate element applies per splice closure.

82. Adjacent Cable Vault Space (per 1200 pair)

Cost Element
The Adjacent Cable Vault Space cost element is calculated per cable for metallic cable and includes the costs of the space that the ALEC's cable utilizes in the cable vault. Please refer to pages 181-187 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
This rate element applies per cable.

83. Adjacent Cable Vault Splice (per 900 pair) – Materials

Cost Element
The Adjacent Cable Vault Splice cost element is calculated per splice enclosure (i.e., per 900 pair cable) and covers the costs associated with the ALEC's cable splice closure within the cable vault. Please refer to pages 173-179 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
This rate element applies per splice closure.

84. Adjacent Cable Vault Space (per 900 pair)

Cost Element
The Adjacent Cable Vault Space cost element is calculated per cable for metallic cable and the costs of the space that the ALEC's cable utilizes in the cable vault. Please refer to pages 181-187 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
This rate element applies per cable.

85. Adjacent Cable Vault Splice (per 600 pair) – Materials

Cost Element
The Adjacent Cable Vault Splice cost element is calculated per splice enclosure (i.e., per 600 pair cable) and covers the costs associated with the ALEC's cable splice closure within the cable vault. Please refer to pages 173-179 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
This rate element applies per splice closure.

86. Adjacent Cable Vault Space (per 600 pair)

Cost Element
The Adjacent Cable Vault Space cost element is calculated per cable for metallic cable and recovers the costs of the space that the ALEC's cable utilizes in the cable vault. Please refer to pages 181-187 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
This rate element applies per cable.

87. Adjacent Cable Vault Splice (per 100 pair) – Materials

Cost Element
The Adjacent Cable Vault Splice cost element is calculated per splice enclosure (i.e., per 100 pair cable) and covers the costs associated with the ALEC's cable splice closure within the cable vault. Please refer to pages 173-179 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
This rate element applies per splice closure.

88. Adjacent Cable Vault Space (per 100 pair)

Cost Element
The Adjacent Cable Vault Space cost element is calculated per cable for metallic cable and includes the costs of the space that the ALEC's cable

utilizes in the cable vault. Please refer to pages 181-187 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
This rate element applies per cable.

89. Adjacent Cable Vault Splice (48 fiber) – Materials

90. Adjacent Cable Vault Splice (96 fiber) – Materials

Cost Element
The Fiber Cable Vault Splice cost element includes the materials costs associated with the ALEC's fiber cable splice within the cable vault. Materials include the splice closure and the tray appropriately sized for each fiber cable size. Please refer to pages 173-179 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The fiber cable vault splice charge is applicable when a fiber splice is performed inside the cable vault. Materials costs are derived from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates. The rate element is applied on a per splice closure basis closure (i.e., per 48 and 96 fiber cable).

91. Adjacent Cable Vault Space – Fiber

Cost Element
The Cable Vault Space – Fiber element includes the costs of the space that the ALEC's fiber cable utilizes in the cable vault. The cost of the cable vault and the outside diameter of the subduct are used to develop the cost per innerduct for fiber cable. Materials costs are derived from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates. Please refer to pages 181-187 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The Cable Vault Space – Fiber rate element is applied per subduct used in the cable vault.

92. Adjacent Cable Rack Shared Space – Metallic DS0

Cost Element
This cost element includes the space utilization costs of the ALEC's metallic DS0 cable residing within the Company's cable rack system. The diameter of the DS0 cable is used to determine the amount of space occupied by each cable on a foot of cable rack. Materials costs are derived from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL's labor rates. Please refer to pages 190-191 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The Cable Rack Shared Space – Metallic rate element is applied per linear foot occupied.

93. Adjacent Cable Rack Shared Space – Metallic DS1

Cost Element
The cost element includes the space utilization costs of the ALEC's metallic DS1 cable residing within the Company's cable rack system. The diameter of the DS1 cable is used to determine the amount of space occupied by each cable on a foot of cable rack. Materials costs are derived from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL's labor rates. Please refer to pages 190-191 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element : ***MRC***
The Cable Rack Shared Space – Metallic rate element is applied per linear foot occupied.

94. Adjacent Cable Rack Shared Space – Fiber

Cost Element
The cost element includes the space utilization costs of the ALEC's fiber cable residing within the Company's cable rack system. The diameter of the innerduct is used to determine the amount of space occupied by each cable on a foot of cable rack. Materials costs are derived from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL's labor rates. Please refer to pages

190-191 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The Cable Rack Shared Space – Fiber rate element is applied per innerduct foot occupied.

95. Adjacent Cable Rack Shared Space – Coaxial

Cost Element
The cost element includes the space utilization costs of the ALEC's metallic coax cable residing within the Company's cable rack system. The diameter of the coax cable is used to determine the amount of space occupied by each cable on a foot of cable rack. Materials costs are derived from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates. Please refer to pages 190-191 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***MRC***
The Cable Rack Shared Space – Metallic rate element is applied per linear foot occupied.

Miscellaneous NRC Rate Elements

96. BITS Timing

Cost Element
Building Integrated Timing Supply ("BITS") is the central office timing system that provides a common source for the frequency and phase synchronization necessary for any digital transmission network. The cost included in this element is the installation of a shielded cable from the port card access to the collocator's equipment. Materials costs are derived from GTEAMS. The engineering time is based on SME estimates to engineer a port for BITS timing. Installation costs are based on SME estimates of activity times and applicable Verizon FL labor rates. The costs of these functions are provided on pages 112, 113, and 121 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1.

Rate Element: ***NRC***
This rate element is applied per project. Additional rate development detail is provided on page 133 of Confidential Verizon FL Exhibit BKE-1.

Terms and Conditions Reference
Section 19.15.1(F).

97. Collocation Premise Space Report – Optional

Cost Element
The costs included in this element are associated with engineers visiting the central office and creating a detailed report indicating the available collocation space. The costs of these functions are provided on page 144 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1.

Rate Element: ***NRC***
This is an optional rate element, and is only applicable if an ALEC requests and Collocation Premise Space Report.

Terms and Conditions Reference
Section 19.5.5.

98. Engineering/Major Augment – Microwave

Cost Element
This element includes the costs of the initial walkthrough to determine if there is sufficient space, where the microwave antennae and other exterior facilities would best be located, whether and what building modifications would be necessary, and if sufficient support facilities exist in the premises to accommodate the microwave antennae and other exterior facilities. This element also includes the total time for the Building Services Engineer to coordinate the entire project. The costs of these functions are provided on page 93 of Confidential Verizon FL Exhibit BKE-1.

Rate Element: ***NRC***
The Engineering/Major Augment element for Microwave applies for each initial Microwave collocation request and each major augment request of an existing Microwave arrangement. The element is applied per occurrence.

Terms and Conditions Reference
Section 19.13(A).

99. Microwave Facility Pull – Labor

Cost Element
This element includes the labor cost of pulling transmission cable from the microwave facilities to the collocation cage or relay rack. This cost element is developed in one-foot increments. Activity times are provided by the SMEs who are involved in the process. Please refer to pages 112-114 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1, for additional cost support.

Rate Element: ***NRC***
The Facility Pull element is applied per linear foot.

Terms and Conditions Reference
Section 19.13(D).

100-111. Cable Materials Elements

Cost Element
Verizon FL will sell transmission cables to ALECs upon request. The materials costs of these cables are derived from GTEAMS and are adjusted to included materials loadings such as freight, taxes, and provisioning. The costs of the cables are provided on page 121 of Confidential Verizon FL Exhibit BKE-1.

Rate Element: ***NRC***
The cable materials rate elements are all applied on a per cable run basis, with the exception of element 103, which is applied on a per-linear foot basis. The rate elements for cable materials prices are developed by applying average distance requirements to the per foot material costs. Average distances are Florida-specific.

Data do not exist in the proper format to isolate Verizon FL's use of Category 5 cable strictly for purposes of collocation. Therefore, it is not possible to determine the average distance for Category 5 cable and it is offered on a per-linear foot basis.

Terms and Conditions References:
100. Facility Cable – DS0 Cable (Connectorized) 100 pair
Sections 19.4.3(C), (D).
101. Facility Cable – DS1 Cable (Connectorized)
Sections 19.4.3(C), (D).

102. Facility Cable – DS3 Coaxial Cable
Sections 19.4.3(C), (D).

103. Facility Cable – Category 5 Connectorized
Sections 19.4.3(C), (D).

104. Power Cable – Wire Power 1/0
Section 19.4.3(C).

105. Power Cable – Wire Power 2/0
Section 19.4.3(C).

106. Power Cable – Wire Power 3/0
Section 19.4.3(C).

107. Power Cable – Wire Power 4/0
Section 19.4.3(C).

108. Power Cable – Wire Power 350 MCM
Section 19.4.3(C).

109. Power Cable – Wire Power 500 MCM
Section 19.4.3(C).

110. Power Cable – Wire Power 750 MCM
Section 19.4.3(C).

111. Fiber Optic Patchcord – 24 fiber (Connectorized)
Sections 19.4.3(C), (D).

112. Miscellaneous Services – Labor Basic Business Day – First Half Hour

113. Miscellaneous Services – Labor Basic Business Day – Each Additional Half Hour

Cost Element
These Miscellaneous Service-Labor non-recurring elements cover the additional cost of labor, if required by the ALEC, to complete a collocation request during regular business hours. Costs are based on the loaded labor rate of the technician, for the first half hour (element 112) and each additional half hour (element 113). Additional cost support is provided on pages 145 and 233 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1.

Rate Element: ***NRC***
These rates are charged per half hour.

Terms and Conditions Reference
Sections 19.4.1, 19.13(H), and 19.15.1(AK).

114. Miscellaneous Services – Labor – Overtime Non-Business Day – First Half Hour

115. Miscellaneous Services – Labor – Overtime Non-Business Day – Each Additional Half Hour

Cost Element
These Miscellaneous Service-Labor non-recurring elements cover the additional cost of labor, if required by the ALEC, to complete a collocation request during non-business hours of business days and daytime hours of non-business days. Costs are from Verizon's FCC Tariff #1, Section 6, page 226 and are presented for the first half hour (element 114) and each additional half hour (element 115). Additional cost support is provided on pages 145 and 233 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1.

Rate Element: ***NRC***
These rates are charged per half hour.

Terms and Conditions Reference
Sections 19.4.1, 19.13(H), and 19.15.1(AK).

116. Miscellaneous Services – Labor Premium Non-Business Day – First Half Hour

117. Miscellaneous Services – Labor Premium Non-Business Day – Additional Half Hour

Cost Element
These Miscellaneous Service-Labor non-recurring elements cover the additional cost of labor, if required by the ALEC, to complete a collocation request during nighttime hours of non-business days. Costs are from Verizon's FCC Tariff #1, Section 6, page 226 and are presented for the first half hour (element 116) and each additional half hour (element 117). Additional cost support is provided on pages 145 and 233 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1.

Rate Element: ***NRC***
These rates are charged per half hour.

Terms and Conditions Reference
Sections 19.4.1, 19.13(H), and 19.15.1(AK).

Miscellaneous MRC Rate Elements

118. Microwave Rooftop Space

Cost Element
The Microwave Rooftop Space element captures the cost per square foot of rooftop space for microwave antennae and other exterior facilities. The element includes only those costs directly related to the land and building space itself. Additional cost support is provided on pages 163-167 of the cost study, attached as Confidential Verizon FL Exhibit BKE-1.

Rate Element: ***MRC***
The Microwave Rooftop Space element is applied on a per-square foot basis for the microwave arrangement's footprint on the central office rooftop.

Terms and Conditions Reference
Sections 19.13(A), (D), (F).

119. BITS Timing

Cost Element
The BITS Timing element includes the materials and installation costs of the equipment required to provide synchronized timing for electronic communications equipment. Additional cost support is provided on pages 209 and 210 of Confidential Verizon FL Exhibit BKE-1.

Rate Element: ***MRC***
This rate is applied per port.

Terms and Conditions Reference
Section 19.15.1(F).

120. Facility Termination – Fiber Optic Patchcord

Cost Element
The Facility Termination cost for fiber optic patchcord includes the labor and materials costs of the optical termination. Additional cost support is provided on pages 212 and 213 of Confidential Verizon FL Exhibit BKE-1.

Rate Element: ***MRC***
This element applies per optical connector terminated.

Terms and Conditions Reference
Section 19.4.3(J).

121. Cable Duct Space – Fiber Optic Patchcord

Cost Element
The costs associated with the fiber optic duct system are the materials, engineering, and installation of the trays and associated materials to create a path to hold the fiber optic patch cords en route to the fiber distribution panel. These costs are used to determine a cost per patch cord. These costs are provided on pages 215-217 in Confidential Verizon FL Exhibit BKE-1.

Rate Element: ***MRC***
This rate element is applied per fiber strand.

Terms and Conditions Reference
Section 19.4.3(J).

ICBs for Microwave Collocation

122. Building Penetration for Cable

Cost Element
This element includes the costs to penetrate buildings for microwave cable routing.

Rate Element:
Because Verizon does not have much experience with the processes, equipment, and personnel required to provision microwave collocation, these rate elements are currently provided on an individual case basis ("ICB").

Terms and Conditions Reference
Sections 19.3.1(B) and 19.13(D).

123. Special Work

Cost Element
This element captures the costs incurred by the Company for installation of ALECs' microwave collocation equipment that are not recovered via other microwave rate elements. It is determined and applied on an individual case basis.

Rate Element
Because Verizon does not have much experience with the processes, equipment, and personnel required to provision microwave collocation, these rate elements are currently provided on an individual case basis ("ICB").

Terms and Conditions Reference
Sections 19.3.1(B) and 19.13(G).

Dedicated Transit Services – DS0

124. Service Order – Semi-Mechanized

Cost Element
This element includes the DTS order placement and issuance costs when the semi-mechanized ordering interface, EXACT, is utilized. The time spent by NACC personnel processing the order is identified through a time and motion study and is applied to the appropriate labor rates of the employee groups involved in the process. Specifically, the costs associated with DS0 DTS ordering are developed using the work times for non-switched dedicated transport "change" orders. These times are multiplied by the loaded labor rate of the NACC Service Consultants.

*Rate Element: **NRC***
The Service Order – Semi-Mechanized rate is applied per DTS order submitted via EXACT.

Terms and Conditions Reference
Section 19.4.3(I).

125. Service Order – Manual

Cost Element
This element includes the DTS order placement and issuance costs when the order is placed via fax or mail. The time spent by NACC personnel processing the order is identified through a time and motion study and is applied to the appropriate labor rates of the employee groups involved in the process. Specifically, the costs associated with DS0 DTS ordering are developed using the work times for non-switched dedicated transport "change" orders. These times are multiplied by the loaded labor rate of the NACC Service Consultants.

Rate Element: ***NRC***
The Service Order-Manual element is applied per DTS order submitted via a manual ordering method.

Terms and Conditions Reference
Section 19.4.3(I).

126. Service Connection – CO Wiring

Cost Element
This element includes the DTS jumper materials, wiring, and service turn-up for DS0 circuits that are required to connect the ALEC's requested service. Time and motion studies are conducted to develop the time required to install or remove one jumper, which is multiplied by the central office technician loaded labor rate to develop the cost per jumper. The costs of jumper materials are derived from GTEAMS. The jumper lengths for DS0 circuits used in the study are 25 feet.

Rate Element: ***NRC***
The Service Connection – CO Wiring rate is applied per DTS circuit.

Terms and Conditions Reference
Section 19.4.3(I).

127. Service Connection – Provisioning

Cost Element
This element includes circuit design and labor costs associated with the provisioning of DS0 circuits for DTS. Information from the TBS database is used to determine the number and type of orders or lines worked by

each group in the Business Response Provisioning Centers ("BRPC"). The BRPC productive hours are used to develop the time required per ASR, which is applied to the appropriate loaded labor rate.

Rate Element: ***NRC***
The Service Connection – Provisioning rate is applied per DTS order.

Terms and Conditions Reference
Section 19.4.3(I).

128. Service Order – Disconnect – Semi-Mechanized

Cost Element
This element includes the DTS disconnect order placement and issuance costs when the semi-mechanized ordering interface, EXACT, is utilized. The time spent by NACC personnel processing disconnect orders is identified through a time and motion study and is applied to the appropriate labor rates of the employee groups involved in the process. Specifically, the costs associated with DS0 DTS disconnect orders are developed using the work times for non-switched dedicated transport "change" orders. These times are multiplied by the loaded labor rate of the NACC Service Consultants.

Rate Element: ***NRC***
This element is applied to those DTS disconnect orders placed using a semi-mechanized ordering method.

Terms and Conditions Reference
Section 19.4.3(I).

129. Service Order – Disconnect – Manual

Cost Element
This element includes the DTS disconnect order placement and issuance costs when the order is placed via fax or mail. The time spent by NACC personnel processing disconnect orders is identified through a time and motion study and is applied to the appropriate labor rates of the employee groups involved in the process. Specifically, the costs associated with DS0 DTS disconnect orders are developed using the work times for non-switched dedicated transport "change" orders. These times are multiplied by the loaded labor rate of the NACC Service Consultants.

Rate Element: ***NRC***
This element is applied per DTS disconnect order placed using a manual method.

Terms and Conditions Reference
Section 19.4.3(I).

130. Service Connection – Disconnect – Provisioning

Cost Element
This element includes the labor costs associated with the disconnection of DS0 circuits from DTS. The provisioning costs are based on the time required in the BRPC for processing the order and issuing a disconnect order to the central office technician to physically remove the jumpers. Information from the TBS database is used to determine the number and type of disconnect orders or lines worked by each group in the Business Response Provisioning Centers ("BRPC"). The BRPC productive hours are used to develop the time required per ASR, which is applied to the appropriate loaded labor rate.

Rate Element: ***NRC***
The Service Connection – Disconnect – Provisioning rate is applied per DTS disconnect order.

Terms and Conditions Reference
Section 19.4.3(I).

131. Service Connection – Disconnect – CO Wiring

Cost Element
The central office work associated with disconnecting a DS0 circuit is based on the time to remove the jumpers in the central office according to the time and motion study regarding jumper running.

Rate Element: ***NRC***
The Service Connection – Disconnect – CO Wiring rate is applied per DTS circuit.

Terms and Conditions Reference
Section 19.4.3(I).

Dedicated Transit Services – DS1/DS3

132. Service Order – Semi-Mechanized

Cost Element
This element includes the DTS order placement and issuance costs when the semi-mechanized ordering interface, EXACT, is utilized. The time spent by NACC personnel processing the order is identified through a time and motion study and is applied to the appropriate labor rates of the employee groups involved in the process. Specifically, the costs associated with DS1/DS3 DTS ordering are developed using the work times for non-switched dedicated transport "change" orders. These times are multiplied by the loaded labor rate of the NACC Service Consultants.

Rate Element: ***NRC***
The Service Order-Semi-Mechanized rate is applied per DTS order submitted via EXACT.

Terms and Conditions Reference
Section 19.4.3(I).

133. Service Order – Manual

Cost Element
This element includes the DTS order placement and issuance costs when the order is placed via fax or mail. The time spent by NACC personnel processing the order is identified through a time and motion study and is applied to the appropriate labor rates of the employee groups involved in the process. Specifically, the costs associated with DS1/DS3 DTS orders are developed using the work times for non-switched dedicated transport "change" orders. These times are multiplied by the loaded labor rate of the NACC Service Consultants.

Rate Element: ***NRC***
The Service Order-Manual element is applied per DTS order submitted via a manual ordering method.

Terms and Conditions Reference
Section 19.4.3(I).

134. Service Connection – CO Wiring – DS1

Cost Element
This element includes the DTS jumper materials, wiring, and service turn-up for DS1 circuits that are required to connect the ALEC's requested service. Time and motion studies are conducted to develop the time required to install or remove one jumper, which is multiplied by the central office technician loaded labor rate to develop the cost per jumper. The costs of jumper materials are derived from GTEAMS. The jumper lengths for DS1 circuits used in the study are 25 feet.

Rate Element: ***NRC***
The Service Connection – CO Wiring rate is applied per DTS circuit.

Terms and Conditions Reference
Section 19.4.3(I).

135. Service Connection – CO Wiring – DS3

Cost Element
This element includes the DTS jumper materials, wiring, and service turn-up for DS3 circuits that are required to connect the ALEC's requested service. Time and motion studies are conducted to develop the time required to install or remove one jumper, which is multiplied by the central office technician loaded labor rate to develop the cost per jumper. The costs of jumper materials are derived from GTEAMS. The jumper lengths for DS3 circuits used in the study are 28 feet.

Rate Element: ***NRC***
The Service Connection – CO Wiring rate is applied per DTS circuit.

Terms and Conditions Reference
Section 19.4.3(I).

136. Service Connection – Provisioning

Cost Element
This element includes circuit design and labor costs associated with the provisioning of DS0 circuits for DTS. Information from the TBS database is used to determine the number and type of orders or lines worked by each group in the Business Response Provisioning Centers ("BRPC"). The BRPC productive hours are used to develop the time required per ASR, which is applied to the appropriate loaded labor rate.

Rate Element: ***NRC***
The Service Connection – Provisioning rate is applied per DTS order.

Terms and Conditions Reference
Section 19.4.3(I).

137. Service Order – Disconnect – Semi-Mechanized

Cost Element
This element includes the DTS disconnect order placement and issuance costs when the semi-mechanized ordering interface, EXACT, is utilized. The time spent by NACC personnel processing disconnect orders is identified through a time and motion study and is applied to the appropriate labor rates of the employee groups involved in the process. Specifically, the costs associated with DS1/DS3 DTS disconnect orders are developed using the work times for non-switched dedicated transport "change" orders. These times are multiplied by the loaded labor rate of the NACC Service Consultants.

Rate Element: ***NRC***
The Service Order – Disconnect – Semi-Mechanized rate is applied per DTS disconnect order submitted via EXACT.

Terms and Conditions Reference
Section 19.4.3(I).

138. Service Order – Disconnect – Manual

Cost Element
This element includes the DTS disconnect order placement and issuance costs when a manual ordering method such as fax or mail is used. The time spent by NACC personnel processing disconnect orders is identified through a time and motion study and is applied to the appropriate labor rates of the employee groups involved in the process. Specifically, the costs associated with DS1/DS3 DTS disconnect orders are developed using the work times for non-switched dedicated transport "change" orders. These times are multiplied by the loaded labor rate of the NACC Service Consultants.

Rate Element: ***NRC***
The Service Order – Disconnect – Semi-Mechanized rate is applied per DTS disconnect order submitted via a manual ordering method.

Terms and Conditions Reference
Section 19.4.3(I).

139. Service Connection – Disconnect – Provisioning

Cost Element
This element includes the labor costs associated with the disconnection of DS1/DS3 circuits from DTS. The provisioning costs are based on the time required in the BRPC for processing the order and issuing a disconnect order to the central office technician to physically remove the jumpers. Information from the TBS database is used to determine the number and type of disconnect orders or lines worked by each group in the Business Response Provisioning Centers ("BRPC"). The BRPC productive hours are used to develop the time required per ASR, which is applied to the appropriate loaded labor rate.

Rate Element: ***NRC***
The Service Connection – Disconnect – Provisioning rate is applied per DTS disconnect order.

Terms and Conditions Reference
Section 19.4.3(I).

140. Service Connection – Disconnect – CO Wiring

Cost Element
The central office work associated with disconnecting a DS1/DS3 circuit is based on the time to remove the jumpers in the central office, as identified by the jumper running time and motion study.

Rate Element: ***NRC***
The Service Connection – Disconnect – CO Wiring rate is applied per DTS circuit.

Terms and Conditions Reference
Section 19.4.3(I).

Dedicated Transit Service – Dark Fiber

141. Service Order – Semi-Mechanized

Cost Element
This element includes the DTS order placement and issuance costs when the semi-mechanized ordering interface, EXACT, is utilized. The time spent by NACC personnel processing the order is identified through a time and motion study and is applied to the appropriate labor rates of the employee groups involved in the process. Specifically, the costs associated with dark fiber DTS orders include the work times for dark fiber "new" orders multiplied by the loaded labor rate of the NACC Service Consultants.

Rate Element: ***NRC***
The Service Order – Semi-Mechanized rate is applied per DTS order submitted via EXACT.

Terms and Conditions Reference
Section 19.4.3(I).

142. Service Order – Manual

Cost Element
This element includes the DTS order placement and issuance costs when the order is placed via fax or mail. The time spent by NACC personnel processing the order is identified through a time and motion study and is applied to the appropriate labor rates of the employee groups involved in the process. Specifically, the costs associated with dark fiber DTS orders include the work times for dark fiber "new" orders multiplied by the loaded labor rate of the NACC Service Consultants.

Rate Element: ***NRC***
The Service Order-Manual element is applied per DTS order submitted via a manual ordering method.

Terms and Conditions Reference
Section 19.4.3(I).

143. Service Connection – CO Wiring

Cost Element
This element includes the DTS jumper materials, wiring, and service turn-up for dark fiber required to connect the ALEC's requested service. Time and motion studies are conducted to develop the time required to install or remove one jumper, which is multiplied by the central office technician loaded labor rate to develop the cost per jumper. The costs of jumper materials are derived from GTEAMS. The jumper lengths used in the study for dark fiber circuits are 10 meters.

Rate Element: ***NRC***
The Service Connection – CO Wiring rate is applied per DTS circuit.

Terms and Conditions Reference
Section 19.4.3(I).

144. Service Connection – Provisioning

Cost Element
This element includes circuit design and labor costs associated with the provisioning of DS0 circuits for DTS. Information from the TBS database is used to determine the number and type of orders or lines worked by each group in the Business Response Provisioning Centers ("BRPC"). The BRPC productive hours are used to develop the time required per ASR, which is applied to the appropriate loaded labor rate.

Rate Element: ***NRC***
The Service Connection – Provisioning rate is applied per DTS order.

Terms and Conditions Reference
Section 19.4.3(I).

145. Service Order – Disconnect – Semi-Mechanized

Cost Element
This element includes the DTS disconnect order placement and issuance costs when the semi-mechanized ordering interface, EXACT, is utilized. The time spent by NACC personnel processing disconnect orders is identified through a time and motion study and is applied to the appropriate labor rates of the employee groups involved in the process. Specifically, the costs associated with dark fiber DTS orders include the work times for dark fiber "new" orders multiplied by the loaded labor rate of the NACC Service Consultants.

Rate Element: ***NRC***
This element is applied to those DTS disconnect orders placed using a semi-mechanized ordering method.

Terms and Conditions Reference
Section 19.4.3(I).

146. Service Order – Disconnect – Manual

Cost Element
This element includes the DTS disconnect order placement and issuance costs when the order is placed via fax or mail. The time spent by NACC personnel processing disconnect orders is identified through a time and motion study and is applied to the appropriate labor rates of the employee groups involved in the process. Specifically, the costs associated with dark fiber DTS disconnect orders include the work times for dark fiber "new" orders multiplied by the loaded labor rate of the NACC Service Consultants.

Rate Element: ***NRC***
The Service Order – Disconnect Manual element is applied per DTS disconnect order submitted via a manual ordering method.

Terms and Conditions Reference
Section 19.4.3(I).

147. Service Connection – Disconnect – Provisioning

Cost Element
This element includes the labor costs associated with the disconnection of dark fiber circuits from DTS. The provisioning costs are based on the time required in the BRPC for processing disconnect orders and issuing a disconnect order to the central office technician to physically remove the jumpers. Information from the TBS database is used to determine the number and type of disconnect orders or lines worked by each group in the Business Response Provisioning Centers ("BRPC"). The BRPC productive hours are used to develop the time required per ASR, which is applied to the appropriate loaded labor rate.

Rate Element: ***NRC***
The Service Connection – Disconnect – Provisioning rate is applied per DTS disconnect order.

Terms and Conditions Reference
Section 19.4.3(I).

148. Service Connection – Disconnect – CO Wiring

Cost Element
The central office work associated with disconnecting a dark fiber circuit is based on the time to remove the jumpers in the central office according to the jumper running time and motion study.

Rate Element: ***NRC***
The Service Connection – Disconnect – CO Wiring rate is applied per DTS circuit.

Terms and Conditions Reference
Section 19.4.3(I).

Typical Caged Collocation Arrangement
Florida

Line / Column	Element Number (a)	Non-Recurring Elements (b)	Increment (c)	Proposed Rates (d)	Qty/Ft (e)	Frequency (Note 1) (f)	Total Price (g) = (d)(e)(f)
1	1	Engineering/Major Augment	per occurrence	1,380.25	1	1	$ 1,380.25
2	3	Access Card Administration	per card	31.64	6	1	$ 189.84
3	4	Cage Enclosure 25-100 SF	per cage	4,352.70	1	1	$ 4,352.70
4	11	Overhead Superstructure	per project	1,247.53	1	1	$ 1,247.53
5	12	Facility Pull -- Engineering	per project	83.61	1	1	$ 83.61
6	13	Facility Pull -- Labor (DS0 cable)	per cable run	128.80	20	1	$ 2,576.00
7	13	Facility Pull -- Labor (DS1 cable)	per cable run	128.80	2	1	$ 257.60
8	13	Facility Pull -- Labor (DS3 cable)	per cable run	128.80	8	1	$ 1,030.40
9	15	DS0 Cable Termination (Connectorized)	per 100 pair	4.60	20	1	$ 92.00
10	16	DS1 Cable Termination (Connectorized)	per 28 pair	1.15	2	1	$ 2.30
11	17	DS3 Cable Termination (Connectorized)	per coaxial cable	1.15	8	1	$ 9.20
12	21	Fiber Cable Pull -- Engineering	per project	1,371.12	1	0.20	$ 274.22
13	22	Fiber Cable Pull -- Place Innerduct	per innerduct foot	0.73	200	0.20	$ 29.20
14	23	Fiber Cable Pull -- Labor	per linear foot	0.49	450	0.20	$ 44.10
15	24	Fiber Cable Pull -- Cable Fire Retardant	per occurrence	45.98	1	0.20	$ 9.20
16	27	DC Power -- Engineering	per project	83.61	1	1	$ 83.61
17	28	DC Power -- Cable Pull/Termination	per cable	838.79	4	1	$ 3,355.16
18	29	DC Power -- Ground Wire	per wire	9.38	1	1	$ 9.38
19	96	BITS Timing	per project	209.66	1	0.25	$ 52.42
20		**Total Non-Recurring Charges**					**$ 15,078.72**

Line / Column	Element Number (a)	Monthly Recurring Elements (b)	Increment (c)	Proposed Rates (d)	Qty/Ft (e)	Frequency (Note 1) (f)	Total Price (g) = (d)(e)(f)
21	34	Building Modification	per request	237.96	1	1	$ 237 96
22	35	Environmental Conditioning	per amp	3.21	40	1	$ 128.40
23	36	Caged Floor Space	per square foot	3.83	100	1	$ 383.00
24	39	Cable Subduct Space -- Manhole	per subduct	7.71	1	0.20	$ 1.54
25	40	Cable Subduct Space	per linear foot	0.05	250	0.20	$ 2.50
26	41	Fiber Cable Vault Splice -- 48-fiber	per splice closure	11.95	1	0.20	$ 2.39
27	42	Fiber Cable Vault Splice -- 96-fiber	per splice closure	36.96	1	0.20	$ 7.39
28	43	Cable Vault Space -- Fiber	per innerduct	1.40	1	0.20	$ 0.28
29	44	Cable Rack Shared Space -- Metallic	per cable run				$ -
30	44	For DS0 Cable		0.18	20	1	$ 3.60
31	44	For DS1 Cable		0.18	2	1	$ 0.36
32	44	For DS3 Cable		0.18	8	1	$ 1.44
33	45	Cable Rack Shared Space -- Fiber	per innerduct foot	0.006	200	0.20	$ 0.24
34	46	DC Power	per amp	25.45	40	1	$ 1,018.00
35	47	Facility Termination -- DS0	per 100 pair	3.21	20	1	$ 64.20
36	48	Facility Termination -- DS1	per 28 pair	10.47	2	1	$ 20.94
37	49	Facility Termination -- DS3	per coaxial	25.11	8	1	$ 200.88
38	119	BITS Timing	per port	10.28	1	0 25	$ 2.57
39	120	Facility Termination -- Fiber Optic Patchcord	per connector	0.47	1	1	$ 0.47
40	121	Cable Duct Space -- Fiber Optic Patchcord	per fiber strand	0.14	1	1	$ 0.14
41		**Total Monthly Recurring Charges**					**$ 2,076.30**

Note 1: Frequency is a multiplier used to realistically account for those elements that should neither be fully a part of nor fully excluded from a "typical" arrangement. One example is the utilization of fiber entrance facilities, which are used in 20% of Florida caged collocation arrangements

Typical Cageless Collocation Arrangement
Florida

Line / Column	Element Number (a)	Non-Recurring Elements (b)	Increment (c)	Proposed Rates (d)	Qty/Ft (e)	Frequency (Note 1) (f)	Total Price (g) = (d)(e)(f)
1	1	Engineering/Major Augment	per occurrence	1,380.25	1	1	$ 1,380.25
2	3	Access Card Administration	per card	31.64	6	1	$ 189.84
3	11	Overhead Superstructure	per project	1,247.53	1	1	$ 1,247.53
4	12	Facility Pull -- Engineering	per project	83.61	1	1	$ 83.61
5	13	Facility Pull -- Labor (DS0 cable)	per cable run	128.80	20	1	$ 2,576.00
6	13	Facility Pull -- Labor (DS1 cable)	per cable run	128.80	2	1	$ 257.60
7	13	Facility Pull -- Labor (DS3 cable)	per cable run	128.80	8	1	$ 1,030.40
8	15	DS0 Cable Termination (Connectorized)	per 100 pair	4.60	20	1	$ 92.00
9	16	DS1 Cable Termination (Connectorized)	per 28 pair	1.15	2	1	$ 2.30
10	17	DS3 Cable Termination (Connectorized)	per coaxial cable	1.15	8	1	$ 9.20
11	21	Fiber Cable Pull -- Engineering	per project	1,371.12	1	0.20	$ 274.22
12	22	Fiber Cable Pull -- Place Innerduct	per innerduct foot	0.73	200	0.20	$ 29.20
13	23	Fiber Cable Pull -- Labor	per linear foot	0.49	450	0.20	$ 44.10
14	24	Fiber Cable Pull -- Cable Fire Retardant	per occurrence	45.98	1	0.20	$ 9.20
15	27	DC Power -- Engineering	per project	83.61	1	1	$ 83.61
16	28	DC Power -- Cable Pull/Termination	per cable	838.79	4	1	$ 3,355.16
17	29	DC Power -- Ground Wire	per wire	9.38	1	1	$ 9.38
18	96	BITS Timing	per project	209.66	1	0.25	$ 52.42
19		**Total Non-Recurring Charges**					**$ 10,726.02**

Line / Column	Element Number (a)	Monthly Recurring Elements (b)	Increment (c)	Proposed Rates (d)	Qty/Ft (e)	Frequency (Note 1) (f)	Total Price (g) = (d)(e)(f)
20	34	Building Modification	per request	237.96	1	1	$ 237.96
21	35	Environmental Conditioning	per amp	3.21	40	1	$ 128.40
22	37	Relay Rack Floor Space	per linear foot	16.29	8	1	$ 130.32
23	39	Cable Subduct Space -- Manhole	per subduct	7.71	1	0.20	$ 1.54
24	40	Cable Subduct Space	per linear foot	0.05	250	0.20	$ 2.50
25	41	Fiber Cable Vault Splice -- 48-fiber	per splice closure	11.95	1	0.20	$ 2.39
26	42	Fiber Cable Vault Splice -- 96-fiber	per splice closure	36.96	1	0.20	$ 7.39
27	43	Cable Vault Space -- Fiber	per innerduct	1.40	1	0.20	$ 0.28
28	44	Cable Rack Shared Space -- Metallic	per cable run				$ -
29		For DS0 Cable		0.18	20	1	$ 3.60
30		For DS1 Cable		0.18	2	1	$ 0.36
31		For DS3 Cable		0.18	8	1	$ 1.44
32	45	Cable Rack Shared Space -- Fiber	per innerduct foot	0.006	200	0.20	$ 0.24
33	46	DC Power	per amp	25.45	40	1	$ 1,018.00
34	47	Facility Termination -- DS0	per 100 pair	3.21	20	1	$ 64.20
35	48	Facility Termination -- DS1	per 28 pair	10.47	2	1	$ 20.94
36	49	Facility Termination -- DS3	per coaxial	25.11	8	1	$ 200.88
37	96	BITS Timing	per project	10.28	1	0.25	$ 2.57
38	120	Facility Termination -- Fiber Optic Patchcord	per connector	0.47	1	1	$ 0.47
39	121	Cable Duct Space -- Fiber Optic Patchcord	per fiber strand	0.14	1	1	$ 0.14
40		**Total Monthly Recurring Charges**					**$ 1,823.62**

Note 1: Frequency is a multiplier used to realistically account for those elements that should neither be fully a part of nor fully excluded from a "typical" arrangement. One example is the utilization of fiber entrance facilities, which are used in 20% of Florida cageless collocation arrangements.

Typical Virtual Collocation Arrangement
Florida

Line / Column	Element Number (a)	Non-Recurring Elements (b)	Increment (c)	Proposed Rates (d)	Qty/Ft (e)	Frequency (Note 1) (f)	Total Price (g) = (d)(e)(f)
1	12	Facility Pull -- Engineering	per project	83.61	1	1	$ 83.61
2	13	Facility Pull -- Labor (DS0 cable)	per cable run	128.80	20	1	$ 2,576.00
3	13	Facility Pull -- Labor (DS1 cable)	per cable run	128.80	2	1	$ 257.60
4	13	Facility Pull -- Labor (DS3 cable)	per cable run	128.80	8	1	$ 1,030.40
5	15	DS0 Cable Termination (Connectorized)	per 100 pair	4.60	20	1	$ 92.00
6	16	DS1 Cable Termination (Connectorized)	per 28 pair	1.15	2	1	$ 2.30
7	17	DS3 Cable Termination (Connectorized)	per coaxial cable	1.15	8	1	$ 9.20
8	21	Fiber Cable Pull -- Engineering	per project	1,371.12	1	0.20	$ 274.22
9	22	Fiber Cable Pull -- Place Innerduct	per innerduct foot	0.73	200	0.20	$ 29.20
10	23	Fiber Cable Pull -- Labor	per linear foot	0.49	450	0.20	$ 44.10
11	24	Fiber Cable Pull -- Cable Fire Retardant	per occurrence	45.98	1	0.20	$ 9.20
12	27	DC Power -- Engineering	per project	83.61	1	1	$ 83.61
13	28	DC Power -- Cable Pull/Termination	per cable	838.79	4	1	$ 3,355.16
14	29	DC Power -- Ground Wire	per wire	9.38	1	1	$ 9.38
15	30	Virtual Equipment Installation	per quarter rack	3,693.59	2	1	$ 7,387.18
16	31	Virtual Software Upgrades	per base unit	98.62			$ -
17	32	Virtual Card Installation	per card	238.54	1	1	$ 238.54
18	33	Engineering/Major Augment - Virtual	per occurrence	756.67	1	1	$ 756.67
19	96	BITS Timing	per project	209.66	1	0.25	$ 52.42
20		**Total Non-Recurring Charges**					**$ 16,290.79**

Line / Column	Element Number (a)	Monthly Recurring Elements (b)	Increment (c)	Proposed Rates (d)	Qty/Ft (e)	Frequency (Note 1) (f)	Total Price (g) = (d)(e)(f)
21	39	Cable Subduct Space -- Manhole	per subduct	7.71	1	0.20	$ 1.54
22	40	Cable Subduct Space	per linear foot	0.05	250	0.20	$ 2.50
23	41	Fiber Cable Vault Splice -- 48-fiber	per splice closure	11.95	1	0.20	$ 2.39
24	42	Fiber Cable Vault Splice -- 96-fiber	per splice closure	36.96	1	0.20	$ 7.39
25	43	Cable Vault Space -- Fiber	per innerduct	1.40	1	0.20	$ 0.28
26	44	Cable Rack Shared Space -- Metallic	per cable run				
27		For DS0 Cable		0.18	20	1	$ 3.60
28		For DS1 Cable		0.18	2	1	$ 0.36
29		For DS3 Cable		0.18	8	1	$ 1.44
30	45	Cable Rack Shared Space -- Fiber	per innerduct foot	0.006	200	0.20	$ 0.24
31	46	DC Power	per amp	25.45	40	1	$ 1,018.00
32	47	Facility Termination -- DS0	per 100 pair	3.21	20	1	$ 64.20
33	48	Facility Termination -- DS1	per 28 pair	10.47	2	1	$ 20.94
34	49	Facility Termination -- DS3	per coaxial	25.11	8	1	$ 200.88
35	50	Virtual Equipment Maintenance	per quarter rack	77.23	2	1.00	$ 154.46
36	119	BITS Timing	per port	10.28	1	0.25	$ 2.57
37	120	Facility Termination -- Fiber Optic Patchcord	per connector	0.47	1	1	$ 0.47
38	121	Cable Duct Space -- Fiber Optic Patchcord	per fiber strand	0.14	1	1	$ 0.14
39		**Total Monthly Recurring Charges**					**$ 1,481.40**

Note 1: Frequency is a multiplier used to realistically account for those elements that should neither be fully a part of nor fully excluded from a "typical" arrangement. One example is the utilization of fiber entrance facilities, which are used in 20% of Florida virtual collocation arrangements

VERIZON

EXPANDED INTERCONNECTION SERVICES

Florida

SUMMARY & DEVELOPMENT OF COSTS AND RATES

PUBLIC VERSION

VERIZON REDACTION REASONS
COLLOCATION COST STUDY

1. **The information contained in these files constitutes and is derived from algorithms and/or contractual prices provided to Verizon from third party vendors. Verizon's contractual obligations to those parties include the obligation not to disclose or distribute such proprietary or confidential information. Aside from violating contract terms, disclosure of this information would harm Verizon's future ability to contract for goods and/or services on favorable terms.**

2. **This information is derived from Verizon employee salary and labor rates. Unilateral disclosure of these rates could adversely affect Verizon's ability to compete for talent in the marketplace.**

3. **This information contains the detailed cost components underlying discrete basic collocation design and function. Disclosure of such detailed costs for such small pieces of collocation design would give competitors an advantage in designing their networks and in competing against Verizon in the most efficient manner. The fact that Verizon cannot obtain such knowledge about its competitors exacerbates the unfairness of disclosing this detailed cost information.**

4. **This information contains central office and outside-plant specific data. Disclosure of this information gives competitors an unfair advantage in designing their networks and in competing against Verizon in the most efficient manner. The fact that Verizon cannot obtain such knowledge about its competitors exacerbates the unfairness of disclosing this detailed cost information.**

Verizon Expanded Interconnection Services

Florida

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Verizon Expanded Interconnection Services
Summary of Rates and Costs

Florida

Section 1

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Verizon
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Cost Study

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Overview of Cost Study

Introduction

This document describes the process and methodology used to calculate the costs and rates for Single Cage, Shared Cage, Subleased Cage, Cageless, Adjacent On-Site, Virtual, and Microwave Expanded Interconnection Service (EIS) processes for Verizon's central offices. EIS may also be referred to as "collocation." Both of these terms will be used interchangeably throughout this overview. An Alternative Local Exchange Carrier (ALEC) requesting collocation in a Verizon central office will be referred to as a collocator.

A team of Verizon cost personnel collaborated with a variety of Subject Matter Experts (SME) within Verizon to develop this study. It conforms with the provisions adopted by the Federal Communications Commission (FCC).

Study Results

The results of the collocation cost study represent the forward-looking costs Verizon expects to incur to provision collocation to ALECs. The Rate and Cost Summary results are found at the end of this section (Section 1). The summaries depict the non-recurring and monthly recurring costs and rates for collocation.

Rate Development

The first step in rate development is mapping each cost element to a relevant rate element. The total cost for each rate element is equal to the sum of its constituent cost elements. For example, the Overhead Superstructure rate is comprised of multiple cost elements including cable racking (dedicated) - engineering, which in turn is comprised of engineering costs and travel time. Combining multiple cost elements into a smaller number of rate elements greatly simplifies the rate structure and eases the ordering and administrative functions of collocation.

In the second step of the rate development process, the number of units and their frequency (or the percentage of time that cost element units will be required) are developed and applied to the costs. This results in a reflection of the average usage associated with a particular rate element. For example, the Engineering/Augment Fee is developed by weighting the new collocation site fee by 29% and the existing collocation site fee by 71% to reflect the distribution of occurrences of that rate element Verizon expects going forward.

In the third step, if multiple collocators share a rate element, an occupancy rate is developed to divide the cost between all users. The occupancy rate is based on the average number of collocators in Verizon's central offices with collocation activity. Currently, an average of four collocators occupy Verizon's central offices.

The occupancy rate is applied to share the costs of some Building Modification cost elements, Environmental Conditioning and the Premise Space Report.

As shown in the pricing details, four collocators are used to spread the costs for Storage Security, Demolition and Site Work, and Floor Grounding Bar cost elements. Five users are used to spread the cost for the Security Access - Card Reader & Controller cost element. Verizon included itself as the fifth user of this service.

Verizon's proposed NRC rates equal the proposed costs; no additional common costs are added. The proposed MRC rates include a mark-up of the original cost as a contribution for the recovery of Verizon's common costs.

Description of Collocation Types

Verizon EIS addresses eight types of collocation: Single Cage, Shared Cage, Subleased Cage, Cageless, Adjacent On-Site, Virtual, Microwave and Dedicated Transit Service. (Refer to Collocation Drawing No. 1 for a schematic of the various offerings.)

Single Cage Collocation

Single Cage collocation provides the ALEC with dedicated caged floor space. This enables one collocator to locate their transmission equipment in a segregated, secured area of Verizon's central office. The collocator has direct access to the collocation cage to install, maintain, and repair its equipment.

Shared Collocation

A shared collocation arrangement is a caged collocation space shared by two or more ALECs. One of the collocators is considered the Host collocator (HC) and every other collocator sharing the same area is referred to as a Guest collocator (GC). The Host collocator is responsible for ordering and paying for all shared cage services requested from Verizon. The HC is also responsible for the collection and remittance of payments to Verizon from the GCs for all activity

that takes place within the shared cage area. Each collocator establishes a separate Line Service Request (LSR) account with Verizon for requesting UNEs.

Sublease Collocation

Sublease collocation occurs when an existing collocator determines that it has surplus space in its contracted cage space and chooses to lease the excess space to another ALEC. Verizon must be notified prior to a contract agreement in order to permit the contracting collocator to sublease the surplus space to a third party guest collocator. The host collocator subleases the floor space to the Guest collocator pursuant to terms and conditions agreed to by the two parties.

Cageless Collocation

Cageless collocation is an arrangement in "whole equipment bay/cabinet" increments, utilizing a non-partitioned area in a Verizon central office. The ALEC has direct access to the collocation area in order to install, maintain, and repair its equipment. One or more collocators may jointly occupy the cageless collocation area.

Virtual Collocation

Virtual collocation differs from caged or cageless collocation in that no separate collocation space is established in the Verizon central office. Instead, Verizon leases the equipment from the collocator for a nominal amount and installs, repairs, and maintains the collocator's equipment and cable facilities at Verizon's central office. The collocator's facilities are connected to Verizon's network. The Virtual collocation equipment is provided by the collocator and is dedicated to its exclusive use. However, the collocator does not have access to this equipment.

Adjacent On-Site Collocation

Adjacent On-Site collocation is available only when physical collocation space in a Verizon central office is exhausted. The collocator constructs a separate building on Verizon's property. The ALEC installs, repairs and, maintains its equipment in the separate building. ALEC access to the Verizon central office is not necessary. All of the collocator's equipment is located and interconnected to Verizon's central office within the adjacent building. (Refer to Collocation Drawing No. 19 for additional details.)

Microwave Collocation

Verizon requires that ALECs requesting the installation of microwave equipment have a physical or virtual collocation arrangement in Verizon's central office prior to the installation of microwave equipment. If the ALEC requesting microwave collocation does not have an existing collocation arrangement, one must be requested using Verizon's physical or virtual collocation tariff or the ALEC's interconnection agreement before microwave equipment can be installed.

Verizon offers two elements on an individual case basis (ICB): (1) Building Penetration for Microwave Cable to penetrate buildings for microwave cable routing and (2) Special Work for Microwave for the installation of ALEC's microwave collocation equipment that are not recovered via other microwave rate elements.

Dedicated Transit Service

Dedicated Transit Service (DTS) allows a collocator to interconnect its network and collocated equipment with that of another collocator within the same Central Office. DTS is provided between the collocated arrangements of the same collocated customer or of two different collocated customers. It is available at the DS0, DS1, and DS3 electrical transmission level or via dark fiber.

DTS is ordered through an Access Service Request (ASR) and is provisioned through the same processes as the Wholesale UNE products

Miscellaneous Services

Miscellaneous Services are activities that are included in Verizon's collocation cost study and may have applications associated with any collocation activity or stand-alone service. Miscellaneous Services include:

- BITS Timing;
- Premise Space Report;
- Facility and Power Cable; and
- Fiber Optic Patchcord.

Common Tables

The common tables are used in calculations for various work sheets in the cost study. The tables include:

- Central Office Equipment Installer (COEI) Time Study also referred to as Hours Per Unit (HPU) Study;
- Material Loadings;
- Annual Cost Factors;
- Single Source Provider Rates; and
- Loaded Labor Rates; and
- Engineered Furnished and Installed Factors.

Study Structure

The Verizon cost and rate study is structured as follows:

- Section 1 - Summary of Rates and Costs;
- Section 2 - Workpapers; and
- Section 3 - Common Tables.

Where appropriate, each section is formatted by grouping cost elements by non-recurring and recurring costs.

Non-recurring Cost Study Elements

Introduction

This section of the study explains the development of non-recurring collocation costs of Verizon's operations. Costs are based on collocation provisioning standards currently being used by Verizon and the most recent collocation data available. The relevant cost elements and the methodologies are described below:

Engineering

Engineering costs include time spent by Verizon personnel planning and engineering a specific collocator's project. Various engineering personnel including the Central Office (CO) Equipment Engineer, Outside Plant (OSP) Engineer and Land and Building Engineer are involved in this process. The costs for the CO Equipment Engineer and OSP Engineer include the time spent on the initial site audit, the project kickoff meeting, and project status meetings. The cost for the Land and Building Engineer includes all of the time required by the engineer to complete the entire project.

Additional CO Equipment Engineering and OSP Engineering time incurred during a specific collocation activity are captured in that specific cost element.

Regional Implementation Team

Brief descriptions of the Regional Implementation Team (RIT) meetings scheduled during a collocation project are provided below:

Initial Site Audit

Once a collocator submits an application for collocation, Verizon performs an Initial Site Audit. If the ALEC requests physical collocation, the purpose of the initial walkthrough is to determine the answers to the following questions, among others:

1. What are Verizon's future needs for this office?
2. Is there sufficient space for physical collocation?
3. If sufficient space is available, where is the best location for the collocation area?
4. What building modifications are necessary to provide collocation?

5. Do sufficient DC power facilities exist in the central office to accommodate the collocation request?

If the application indicates a request for virtual collocation, the CO Equipment Engineer visits the site to determine if there is sufficient space for virtual collocation and where the virtual arrangements should be placed.

Project Kickoff Meeting

The project officially begins once Verizon receives one-half of the non-recurring costs of the project from the collocator. Verizon then discusses and coordinates deadlines for completing the project with internal Verizon employees and outside contractors.

Status Meetings

Once the work in the central office has begun, the parties meet for a status meeting. The purpose of the status meeting is to resolve any issues or problems identified on the project. There will always be at least one status meeting per project. Additional status meetings will be scheduled as necessary and appropriate. The amount of interaction between the parties involved will impact the number of status meetings held.

Building Modification

The physical building modification cost element is designed to include all costs associated with modifying the central office to accommodate a collocator. There may be up to two external contractors, an engineering firm and a general contractor, involved in this process.

The engineering firm's purpose is twofold. First, the engineer is responsible for identifying, at a high level, the building modifications necessary to accommodate the collocator. Second, the engineer works with an architect to create blueprints that detail the construction required in the collocation area. The general contractor uses these drawings to plan the actual construction and identify the necessary subcontractors.

The general contractor is responsible for completing the construction for the building modification portion of the project. This includes hiring and coordinating all necessary subcontractors.

Due to the variability of the collocation projects, there are several building modification cost elements presented in this study. Each cost element described is the average cost incurred when the underlying work is completed for a project.

Each cost element is calculated based on prior collocation projects completed in California and Texas. The cost estimates developed from the California and Texas projects are adjusted to a national average using the National Construction Estimator. The national averages are converted to state-specific costs using the National Construction Estimator.

The building modification cost elements are described as follows:

Security Access

Access Card Administration

This element is an administrative cost associated with providing access cards to collocators to gain access to Verizon central offices and includes the time spent for ordering, assignment, filing, programming, distribution, replacing, and changing access cards.

Electrical

Cage Grounding Bar

A cage grounding bar will be placed inside the collocator's cage. It is an extension from the floor grounding bar. The cost includes the materials and labor associated with placing the cable and cage grounding bar in the caged area. (Refer to Collocation Drawing Nos. 4 and 5 for additional details.)

Overhead Superstructure

Overhead superstructure is required to extend the existing cable racking system in the central office to the collocation area and to a specific collocator's site. The costs include all engineering, labor, and materials costs required to install the system in a Verizon central office. Due to the variability of cable racking from one project to another, the cost is calculated in one-foot increments using the typically utilized 24-inch cable racking.

The engineer's cost includes time for drafting the work order, determining what is needed to provide the racking, ordering all equipment, updating the records, and closing the work order once the job is completed. The Central Office

Equipment Installer's loaded labor rate is based on the COEI's hours per unit time to install cable racking. (Refer to Collocation Drawing Nos. 8 and 9 for additional details.)

Cage Enclosure

This element includes the vendor's cage fencing and gate labor and materials costs incurred to construct the collocator's cage. There are five cage enclosure rate elements based on the size of the cage: 1) 25 to 100 square feet; 2) 101 to 200 square feet; 3) 201 to 300 square feet; 4) 301 to 400; and 5) 401 to 500 square feet.

DC Power Cable

This cost includes the pulling of the power cable from the Battery Distribution Fuse Bay (BDFB) to the collocator's specific location. The collocator may purchase the power cable from Verizon or provide the cable for Verizon to install. Separate power cable rates are available if the cable is purchased from Verizon.

In order to terminate the power cable, a connector tap must be placed on each end of the cable. The termination cost includes the cost of the connector tap and the time to place the tap. The placement of the tap is based on the Central Office Equipment Installer's HPUs. The source of the connector tap cost is found in Verizon's materials records (GTEAMS), which reflect invoiced costs for inventoried items and current price quotes from third party vendors.

The engineering time associated with the provisioning of power is based on Verizon's experience. This activity includes checking power requirements for available power, drafting a work order, ordering equipment and materials, updating records, and closing the work order once the work activity has been completed. One hour of travel time for the COE Installer is included in this cost element. (Refer to Collocation Drawing No. 2 for additional details.)

Cable Pull

Fiber Cable Pull

The fiber cable pull cost includes four (4) cost elements:

1. Engineering the cable pull;
2. Placing innerduct within the Verizon CO;
3. Pulling the cable; and
4. Cable Fire Retardant.

The engineering cost for the cable pull element includes the time spent by the Outside Plant Engineer to complete the project. The engineer is responsible for checking and assigning facilities, writing and issuing a work order, directing the work activity, recording updates, processing invoices, and closing the work order at the end of the project.

The cost element for placing innerduct includes the cost to run the innerduct, in which the fiber cable is placed, from the cable vault to the collocator's arrangement. This cost is developed based on Verizon's internal CO Equipment Installer's labor rate and the activity time required to perform the task.

The cost element for pulling the cable captures the cost of pulling the collocator's fiber cable into Verizon's CO vault and through the innerduct to the collocator's area. The rate is based on each foot of cable pulled. In a collocation arrangement, it is the collocator's responsibility to run its cable from its network to the first manhole outside the designated Verizon central office. It is also the collocator's responsibility to provide additional cable for the distance between the manhole and the collocator's cage. Verizon will pull the cable from the manhole to the collocator's cage inside the central office. If there is no manhole outside of the central office, Verizon will determine a point to which the collocator will need to provide the cable to. Verizon will be responsible for pulling the cable from that point to the collocator's cage.

The time estimates for pulling cable are based on Verizon's Single Source Provider (SSP) rates. Because it is the collocator's responsibility to provide the cable, the cost represents only the labor to pull the cable, the innerduct cost, and the placement of the cable. (Refer to the Collocation Drawing No. 11 for additional details.)

Cable fire retardant activity is associated with filling the space around cables with non-flammable material. This activity is required when DC power cable or transmission cable is run between floors or through a wall. The retardant prevents fire from spreading from one room or floor to another. The CO Equipment Installers must first remove the existing cable fire retardant. Once the cable has been pulled through the wall or between floors, the cable fire retardant material must be placed back in and over the hole. The number of hours assigned to perform this task does not vary, regardless of the type of cable or where the hole is drilled.

The cost for cable fire retardant is calculated on the average number of hours required by CO Equipment Installers to secure the holes between rooms with fire

retardant material. This amount is multiplied by the loaded labor rate of the CO Equipment Installers. The labor rates are Verizon's Loaded Labor Rates for the state this cost study represents. (Refer to Collocation Drawing No. 8 for additional details.)

Metallic Cable Pull

The metallic cable pull applies only to adjacent collocation. The cost is incurred for provisioning the facilities from the cable vault, out of the central office, and into the adjacent building. The collocator will provide sufficient cable into the cable vault where a splice will be made to connect it to Verizon 's central office cable. The central office cable (stub) is connected to a protector that will be mounted to the vertical side of the frame. This is required to provide protection to the central office from stray voltage that may be induced on metallic cable.

The pull costs are based on SSP rates for the cable pull and are available in two cable sizes. The rates are based on the diameter size of the cable-- less than or greater than 1.5 inches in diameter.

The Outside Plant Engineer costs include activities to engineer the pull, assign the conduits, estimate lengths, order material, write a work order, arrange for the pull, update records, and close the work order upon completion of the project.

Separate cable fire retardant activities will be required if the cables pass through floors or walls within the central office. (Refer to Collocation Drawing No. 12 for additional details.)

Cable Splice

Fiber Cable Splice

This element is applied if the collocator requests Verizon to splice the fiber cable pulled into the central office. The splice may take place in the cable vault or in the collocator's cage. The costs are based on the SSP rates for splicing fiber cable only. (Refer to Collocation Drawing No. 11 for additional details.)

Metallic Cable Splice

This cost is applied if the collocator requests Verizon to splice cable. The rate is based on the SSP rates for each state.

Metallic Cable splicing is based on the number of pairs in the cable that require splicing. Two options are available--200 pair or less and greater than 200 pair. The rate is offered on a per pair basis.

When metallic cable is introduced into the central office, it must be connected to a protector that is mounted on the vertical side of the main distribution frame. Cables from the protector (stub) are extended to the cable vault and are spliced to the outside plant cable.

This labor element recovers the cost for an Outside Plant Engineer to engineer the splicing of the cable and includes writing a work order, providing instructions for the splicing, and updating the records. (Refer to Collocation Drawing No. 12 for additional details.)

Facility Pull & Terminations

A Facility Pull includes the labor cost of running the interconnection wire from the collocation cage to the block or panel. A separate termination cost is developed for each type of cable: DS0, DS1, or DS3. (Refer to Collocation Drawings No. 1, No. 11 and No. 12 for additional details.)

The length of the wire pull varies among central offices based on the relative proximity of the collocation cage to Verizon's point of termination and the type of interconnection (DS0, DS1, or DS3) requested by the collocator. Verizon's activity-based time estimates are used to determine the time involved in pulling and terminating these cables. Cables supplied by the collocator must be pre-assembled, connectorized cables. (Refer to Collocation Drawing No. 13 for additional details.)

If Verizon must place a connector on the coaxial cable (DS3), the termination cost is greatly increased. The labor time for pulling the lines are obtained from the CO Equipment Installation HPU listing. The cost of pulling each type of cable is provided in one-foot increments.

The final labor component of the facility pull is the engineering cost of the facility cable pull. The consolidated engineering cost is based on the average number of hours required by Verizon central office engineers to develop all facility pulls, draw the plans, write the work orders, order any necessary equipment, perform record updates, and close the work order once the project is completed.

All installation and engineering hours are multiplied by the corresponding loaded labor rate. Verizon's actual labor and overhead costs are the source of the labor rates used.

Relay Rack Installation

A collocator may purchase the relay rack, engineering, and installation from Verizon. The relay rack costs are derived from Verizon's GTEAMS system and includes the costs of any miscellaneous hardware. The engineering costs for the placement of the relay rack is an engineering SME estimate from the Network Design group responsible for engineering this type of equipment. The source of the installation time is found in the COEI HPU table. One hour of travel time is included for the installer. (Refer to Collocation Drawing No. 6 for additional details.)

Additionally, a 10-position fuse panel is available and may be installed in the relay rack on request.

All installation and engineering hours are multiplied by the corresponding loaded labor rate. Verizon's actual labor and overhead costs are the source of labor rates.

Cabinet Installation

Cabinet installation is available on request. Verizon will provide an equipment cabinet as well as the engineering and installation of the cabinet. The telecommunications cabinet is the standard cabinet used by Verizon and the cost is from GTEAMS. Materials loadings are also applied to develop the total materials cost.

Engineering costs are provided by SMEs responsible for engineering this type of equipment. The installation hours used are Verizon's own central office Equipment Installer's time needed to install this type of equipment. The installer's time includes the hours spent to inventory the required equipment, read the engineered prints, and install the cabinet per Verizon's practices for cabinet placement. Two employees are required to assure a safe and proper installation. The cabinet is a bulky item and must be placed in an exact spot. Two hours of travel time (one hour per employee) are included for this activity.

All installation and engineering hours are multiplied by the corresponding loaded labor rate. Verizon's actual labor and overhead costs are the source of the labor rates.

Virtual Equipment

In a virtual collocation arrangement, the collocator provides the equipment and Verizon personnel install it in the central office. This study develops three non-recurring costs, which are specific to the Virtual Collocation arrangement:

- Virtual Equipment Engineering and Installation;
- Virtual Software Upgrades; and
- Virtual Card Installation.

Virtual Equipment Installation

This cost element includes the time incurred by Central Office Equipment Installers to install the collocator's equipment and the CO Equipment Engineer's time spent engineering the project. If the collocator's equipment is not Verizon standard, the collocator will be responsible for training Verizon's central office personnel in the operation of their equipment. The training costs will be recovered as an ICB.

There are several equipment engineering and installation cost elements, depending on the type of equipment the collocator provides to Verizon. The two basic components are engineering and installation, as described below:

The Central Office Equipment Engineer is responsible for the technical planning and engineering of the ALEC order. The engineer must understand the type of equipment the collocator provides Verizon in order to install it properly and determine if any special issues arise (e.g., whether it is necessary for the collocator to provide equipment training for the installers). The Central Office Equipment Engineer must also identify and resolve any issues associated with interconnecting the virtual equipment to Verizon's power facilities and network. Finally, it is the engineer's responsibility to identify and order any minor materials needed to install the equipment.

The CO Equipment Installer is responsible for the actual placement of the equipment in Verizon's central office. First, the installer must inventory the equipment and materials to ensure that tools and materials needed to install the equipment are available. Once the materials are inventoried, the equipment must be mounted in the relay rack. After mounting, the CO Equipment Installer

connects the signal cables to the back of the unit and installs the cards inside the unit. The cost of card installation includes placing the cards in the relay rack and configuring the card software. After the equipment is completely installed and the DC power and signal cables have been run (separate cost elements in the study), the technician will test the collocator's equipment to make sure it is working properly.

A weighted average cost per quarter rack is calculated based on:

- The frequency of each type of equipment collocated; and
- The average number of base units that can fit into a standard Verizon relay rack.

Virtual Software Upgrades

Upon a collocator's request, Verizon will install software upgrades on virtually collocated equipment. The virtual software update cost element includes the time incurred by the CO Equipment Installer to install software upgrades on a per upgrade, per base unit basis. A weighted average cost per software upgrade, per base unit is calculated based on the frequency of each type of equipment collocated.

Virtual Card Installation

A collocator may request the installation or replacement of a card within a base unit. The virtual module engineering and installation cost element includes the time the central office Equipment Engineer spends engineering the installation and the CO Equipment Installers spend installing the card. Engineering time includes such tasks as:

- Determining the location of the base unit where the card is to be installed;
- Determining the appropriate cables, cable lengths and connections;
- Ordering materials required; and
- Creating and closing the work order.

A weighted average cost per card installed is calculated based on the frequency of each type of equipment collocated.

Virtual Equipment Access Request

A collocator may submit a Virtual Equipment Access Request. Verizon will allow an approved contractor to access the specified Central Offices to manually

inventory the collocators' equipment. If the collocator requires identifying relay rack/bay numbers to direct the contractor to the proper relay racks/bays, Verizon will provide this information for a separate charge.

Miscellaneous Services

Engineering/Major Augment Fee (Microwave Only)

The Engineering/Major Augment Fee (Microwave Only) applies when an existing Caged and Cageless collocation arrangement is augmented with newly installed microwave antennae and other exterior facilities. This charge recovers the costs of the initial walkthrough to determine if there is sufficient space for the project, where the microwave antennae and other exterior facilities would best be located, what building modifications are necessary, if any, and if sufficient support facilities exist on the premises to accommodate the microwave antennae and other exterior facilities. This fee also includes the total time for the Building Services Engineer to coordinate the entire project.

Facility Pull (Microwave Only)

The Facility Pull (Microwave Only) element is applied per linear foot and recovers the labor cost of pulling transmission cable from the microwave antennae and other exterior facilities on the rooftop to the transmission equipment in the collocation cage or relay rack.

BITS Synchronized Timing

The non-recurring costs associated with the installation of an access port are based on the time and material required to place shielded cable from the port to the collocator's equipment. Labor time is based on the Central Office Equipment Installer's Hours per Unit and the loaded labor rate for that installer. The engineering costs are based on the engineer's time to make port equipment assignments, create a work order, and update the records when the work order has been completed.

Premise Space Report

At the request of a collocator, Verizon will perform an analysis for caged or cageless types of collocation for a specific central office. The detailed report will provide the requesting collocator with the available collocation space within the specific central office. It also includes information on the existing occupied space

and future requirements for space within the central office. The premise space report fee is assessed on a per request, per central office basis. This report is not required prior to the submission of a collocation application.

Cable Costs

GTEAMS is the source of costs for facility, power and ground cables. Materials loadings, which include freight, sales tax, and supply provisioning, are also included in the cable costs. (Refer to Collocation Drawing No. 18 for additional details.)

Facility Cables

The facility cable cost is applied when an ALEC elects to purchase cables from Verizon rather than providing its own cables. Facility cables are connectorized cables used for plugging into the terminal connecting equipment or blocks. The cables are specific in length and pair size.

The cost for DS3 coaxial cable is based on the GTEAMS cost per linear foot and the materials loadings applied.

The cost for shielded cable (orange jacket) is based on GTEAMS cost per linear foot and materials loadings. Shielded cable is used when a shield is required to eliminate interference on the cables. This type of cable is used when a BITS port is requested.

Power Cables

Power cables are flexible power wire cables that are used in the provisioning of power from the Battery Distribution Fuse Bay to the collocator's individual cage, relay rack, or cabinet location. The cost per linear foot is found in GTEAMS, with the appropriate loadings applied. Power cables are also used, in certain applications, as a ground cable. (Refer to Collocation Drawing No. 18 for additional details.)

Ground Cables

A ground cable is a #6 American Wire Gauge (AWG) ground wire (cageless application) that is used in the grounding of the relay rack or cabinet to the floor ground bar. The source of the cost per linear foot is the GTEAMS database. Appropriate materials loadings are applied.

Fiber Optic Patchcord – 24-Fiber (Connectorized) Cable

The materials cost per linear foot of the fiber optic patch cord cable includes twenty-four fibers per patch cord. Each of the twenty-four fibers has a fiber connector on each end. GTEAMS is the source of the materials cost.

The collocator is responsible for providing the Fiber Optic Patch Cord, in the appropriate length, from the collocator's equipment to Verizon's collocator-designated fiber distribution panel. The collocator has the option of purchasing the fiber patch cord from Verizon.

Fiber Optic Patchcord

The Fiber Optic Patchcord is available to collocated customers who require fiber access to unbundled network elements. The collocation cost study includes the development of the associated non-recurring costs for the fiber optic patch cord between the collocator's cage, cageless, or virtual arrangement and Verizon's collocator-designated fiber distribution panel. (Refer to Collocation Drawing No. 20 for additional details.)

The following costs are developed:

- Labor to place the fiber optic patch cord in a fiber duct system from the physical or virtual collocation arrangement to Verizon's designated collocation fiber distribution panel; and
- Labor to terminate the fiber optic patch cord at Verizon's collocator designated fiber distribution panel.

Engineering Costs

This element represents the cost to engineer the facility termination. The source of the loaded labor rates is the Loaded Labor Rate Tables provided by the Verizon finance group. Hours required to perform the task are SME estimates. The cost calculation is total hours multiplied by the appropriate loaded labor rates.

Fiber Optic Patchcord Pull

This element identifies the cost of the labor to pull the fiber optic patchcord from the collocation cage or the cageless arrangement to Verizon's collocator

designated fiber distribution panel. The cost is developed on a cost per linear foot basis and includes the COEI HPU.

Fiber Optic Patchcord Termination

The termination of the patch cord is the connection of the patchcord to the fiber distribution panel. The time to perform this activity is based on the COEI HPU.

Travel Time

Travel time is the time required for a Central Office Equipment Installer to travel to the central office to perform activities requested by the collocator. The travel time is one hour and based on the COEI HPU.

Monthly Recurring Cost Study Elements

Introduction

This section describes Verizon's collocation process and the cost methodologies used to develop monthly recurring costs. The summary of these costs is found in Section 1. The workpapers are found in Section 2.

Verizon personnel documented the processes based on observations and interviews with Verizon subject matter experts. Consistent with the long-run time horizon of the study, the cost development of these processes has been adjusted to reflect any known and measurable changes in Verizon's collocation policies or changes in technology.

The cost elements and the cost methodologies are described below. The cost elements may be applied to any of the seven types of collocation: Single Cage, Shared Cage, Sublease Cage, Cageless, Virtual, Microwave, and Adjacent On-Site. (Refer to Collocation Drawing No. 1 for additional details.)

Floor Space

The cost to provide environmentally conditioned floor space is based on the average cost per square foot of the central offices included in the study. It includes an amount for shared square feet for the common areas of the central office. Environmentally conditioned space has the proper humidity and temperature controls to house telecommunications equipment. Only costs that relate directly to land and building space are included in the cost studies.

Floor space cost is determined by examining the building investment, square footage, and monthly maintenance/utility expenses of a selected sample of central offices. The Verizon central offices examined are varied by technology and size. Land costs are based on their original investment value.

The selected central offices are used to calculate an average cost per square foot. Each central office is examined with reference to the original building investment, relative to the date of investment. Other incremental investments incurred to date are also analyzed. The investment data are obtained from Verizon's Property Operation's Asset Management Property System (AMPS) database. The original investments are calculated to their present values using the R.S. Means Index Factor. This index is used to convert national average building costs in the past to an approximate building cost in today's dollars. The

total building investment's present value for each central office is divided by the total square footage of the central office to determine the square foot investment. Original land investment costs are used for the same central offices because a present value of land index is not available. Land values are calculated on a square foot basis and added to the square foot building values.

In order to annualize the investment for each central office, the land and building investment amounts are multiplied by the land and building's annual cost factors (ACF). The factors are obtained from Verizon Finance department's calculations. The building investment is adjusted for major Heating, Ventilation and Air Conditioning (HVAC) costs associated with providing HVAC for the building shell. HVAC costs associated with maintaining the appropriate environment for telecommunications equipment are included as a separate cost element "Environmental Conditioning."

The source of the monthly maintenance and utility expenses for each central office is the year-end expense reports obtained from the File Manager Database. The compiled reports summarize expenses in the following categories: Building Maintenance, Recurring Contract Services, Janitorial, and Utilities. The electric expense portion of the Utility Expense is excluded because this cost is calculated separately in the DC Power Utility cost element. The maintenance and remaining utility expenses are combined to arrive at a total maintenance and utility expense for each central office. The expenses are divided by the square footage of the central office to develop the monthly maintenance and utility cost per square foot.

The monthly recurring cost for floor space, per central office is determined by combining the annualized investment cost per square foot and the maintenance and utility expense per square foot for each central office, averaging the annual cost of the central offices, and dividing by twelve (months per year).

The cost per square foot of each of the central offices is analyzed in order to exclude any outlier costs. The mean and standard deviation of the costs are calculated and any cost per square foot that falls outside two standard deviations from the mean are excluded as outliers. Finally, the average cost is calculated (excluding the outliers).

In this study, the average cost per square foot for floor space is used to develop the costs for collocation that require floor space.

A shared access cost is added to the cost per square foot for the use of hallways, rest rooms, break rooms, and staging areas, if appropriate. The shared access area is calculated using actual building prints for sixteen central offices from various Verizon states. The following steps are used to calculate the shared access cost:

Step 1. Estimates of the square footage for the hallway, rest room, break room, and staging area in each of the sixteen central offices are totaled together to calculate the shared access area;

Step 2. The shared access area is divided by the total square footage of the sixteen buildings to calculate a shared access percentage;

Step 3. The shared access percentage is multiplied by the cost per square foot of the central office floor space resulting in a square foot cost for the shared access area;

Step 4. The square foot cost of the shared access area is added to the cost per square foot of the central office floor space resulting in an annual cost per square foot of floor space; and

Step 5. The annual cost per square foot of floor space is divided by twelve to calculate the cost per square foot, per month.

Shared access space is available for all collocators and Verizon personnel to gain access to central office equipment.

Floor Space for Relay Racks

In cageless collocation, the square footage needed for the placement of the relay rack is calculated as follows: The standard rack is 24 15/16 inches wide with 15 inch guard rails on each side. The space in front and in back of the relay rack must be kept open in order to access equipment placed in the rack. The aisles are estimated to be 36 inches wide. Thus, the width of the aisles both in front of and behind the relay rack is 18 inches. The depth of the space is estimated to be:

15 inches for the equipment (guard rail to guard rail);
18 inches in the front of the rack for aisle space; and
18 inches in the rear of the rack for aisle space.

The total is fifty-one (51) inches in depth. The width of the rack is 24 15/16 inches.

These dimensions are used to determine the total square footage occupied by a relay rack. The total is divided by the width footage of the relay rack to provide a square footage per linear foot. Collocators are able to request space on a linear foot basis based on the number and size of the relay racks installed. (Refer to Collocation Drawing No. 6 for additional details.)

Floor Space for Cabinet

For cageless collocation, the collocator may choose to place a telecommunications cabinet in the collocation area to house its telecommunications equipment. Verizon personnel used the standard sized cabinet their own equipment is housed in to estimate the floor space for the cabinet. The dimensions of the cabinet are 29 inches by 33 inches. An aisle must be available in the front and rear of the cabinet, as a passageway and work area. The normal width of an aisle is 36 inches. Again, technicians may work on either side of the aisle, so the aisle width is divided by two.

The following dimensions are used in the calculation of floor space for the cabinet:

29 inch width;
33 inch depth;
18 inches for the front aisle; and
18 inches for the rear aisle.

The square footage is translated to a linear foot basis. The collocator may request linear footage based on the size or number of cabinets it places in the cageless collocation area. If the cabinet requires side ventilation, the floor space can be adjusted to accommodate the additional linear footage needed. (Refer to Collocation Drawing No. 7 for additional details.)

Cable Space

Cable space is the materials cost that accounts for the occupation of the cable within the manhole/conduit system. All materials costs are obtained from the GTEAMS database used to generate actual costs. Labor costs are calculated by multiplying time estimates from the Broadgauge unit's file by the appropriate Verizon loaded labor rate. Rates from the SSP file are used in determining the costs associated with activities that vendors may provide. The overall cost is determined by calculating the manhole, conduit materials and installation costs for the cable space. The manhole materials costs are calculated from the original

cost of a manhole, calculated as a cost per conduit and a cost per subduct. This calculation estimates three (3) subducts per conduit.

Manhole installation costs are calculated using the average time and labor rate required to install the manhole. Also included are the costs per conduit, per subduct labor, and per core drilling, resulting in the total manhole installation cost per conduit and per subduct.

The conduit material cost is calculated on a cost per foot, per duct basis. The total cost is calculated on a per subduct basis. The distance from the manhole to the central office can differ greatly between central offices. Therefore, the materials cost for the conduit and subduct is based on a cost per foot.

Conduit installation costs are determined by including the costs for trenching, concrete, and restoration costs per conduit, on a per foot basis. These costs are obtained from current SSP rates for each state. A typical installation of conduit is used to generate this cost and is calculated on a per subduct basis.

A materials loading factor is applied to the cable space materials cost in order to account for other relevant costs. The source of the factor is Verizon's Fact Finder System. Materials loading factors include costs for sales tax, supply provisioning, and other minor materials costs. The materials loadings are added to the cable space materials and labor costs to arrive at a total cable space cost. The Annual Cost Factor (ACF) is applied to the total cost in order to calculate the annual recurring cost for cable space. The annual recurring cost is divided by twelve to calculate the monthly cost. (Refer to Collocation Drawing Nos. 11 and No. 12 for additional details.)

DC Power Facility

DC Power Facility is the materials and installation cost to provide DC power to the collocator's area. Costs include power cable to extend power from the power plant to the collocator's area, fuse panels, relay racks, distribution bays, and a portion of the existing power plant. The power plant consists of batteries, rectifiers, main fuse panels, electrical connections, and backup generators to the main power source.

Central office power plant costs are calculated using current estimates for power plant equipment investments for CO base units by line size multiplied by the power installation factor. The individual state exchanges are identified by line size and used as weighted percentages to the line size in the power plant

calculation. This calculation is used to determine the cost of the equipment and labor on a per amp basis. The rate is specific to each state.

Power Cable refers to the cable that is needed to extend power from the main power distribution panel to a battery distribution fuse bay in the collocation area. (Refer to Collocation Drawing No. 2 and No. 3 for additional details.)

The cost of pulling the power cable is based on the central office equipment investment, multiplied by the power installation factor, and an estimated footage of 125 feet. Cost of the connector taps and a 750-mcm power cable are found in Verizon's GTEAMS system and are used to calculate the power cable costs. Each cable requires a connector tap on each end for termination. These costs are divided by the engineering capacity of the BDFB that the power cable feeds (480 amps).

The cost of a battery distribution fuse bay is based on a RELTEC model 1293B2 equipped for 600 amps. The cost includes the relay rack, common equipment, metering panels, and fuse panels. This model is provisioned for both "A" and "B" power feeds. The costs are calculated on a cost per amp based on the engineering maximum capacity (80%) of the BDFB (480 amps). The BDFB equipment investment per amp is then multiplied by the power installation factor to come up with a total installed investment cost for a BDFB on a per amp basis. An ACF is then applied to calculate an annual cost and divided by twelve for the monthly recurring cost.

When provisioning power, the distance from the main power source is a critical measurement due to power loss incurred in the cables. In some cases an ICB-Core Drill may be required to reach the collocation area via the best and shortest route.

In addition, the cable fire retardant cost element will apply for each core drill made through a wall or floor.

DC Power Utility

The DC Power Utility represents the monthly utility expense to power the termination equipment. This cost is determined by estimating a set amperage rating of equipment and a voltage rating of equipment used by collocators. By multiplying the amp rating by the volt rating and dividing by 1000, a total equipment power requirement is calculated.

Power engineers used a Lorain model V200D50 Rectifier in calculating the input-output ratios and efficiency factors for a current power facility. The power output voltage is calculated using the type of rectifier that would be purchased by Verizon today rather than using equipment found in an existing Verizon central office. This has the effect of lowering the ratio of input to output power and reducing the overall cost of this element.

The cost of commercial electricity is determined from actual electricity costs and kilowatt-hours used in Verizon's facilities throughout 2001 and is state-specific. The hourly cost to power the equipment is calculated by multiplying the cost of commercial electricity by the equipment power requirement. The hourly cost is multiplied by the efficiency and heat loss factor (ratio of input power to output power) in determining the monthly recurring cost for DC power utility.

Facility Termination

A Facility Termination includes the installation and materials costs of the Main Distribution Frame (MDF), a 100 pair termination block, and the DSX facility termination panel. Facility termination can be a DS0, DS1, or DS3. A separate cost is developed for each termination. (Refer to Collocation Drawing No. 15 for additional details.)

This cost is determined by calculating the total materials and installation cost for establishing a DS0 (100 pair), DS1 (28 pair), or DS3 coaxial interconnection. It includes the costs of the cross connect panels and termination blocks, and a space occupation cost of those blocks and panels.

For each type of interconnection, a materials cost is established. All materials costs are obtained from GTEAMS. For the DS0 interconnection, the cost of a 100 pair termination block is used. Additionally, the cost of the MDF is calculated on a 100 pair, DS0 basis. The study includes DS0s only up to the point of their termination on the MDF and does not include the cross connections to Verizon's unbundled network elements or services. Therefore, only one half of the cost of the MDF is included in Verizon's collocation study.

The DS1 interconnection cost is a 56 circuit DSX panel, calculated on a cost per circuit. The panel is fully utilized when deploying four cables, each with 28 pairs (2 Transmitting and 2 Receiving). The costs used for a DS3 includes a 20 circuit DSX chassis (calculated on a per circuit basis) and a DS3 module. The panel is fully utilized when deploying all 20 modules.

The installation cost for establishing facility termination includes both engineering and installation activities. Verizon's digital circuit installation factor is multiplied by the materials investment amount to calculate the total installed investment amount. Annual cost factors are applied to the total installed investment for each type of facility termination to annualize the cost. The annual cost is divided by twelve to calculate the monthly recurring cost.

Building Modification Costs

Security Access

Security Access provides Verizon the ability to install locks on Verizon's existing equipment and file cabinets. The costs are based on estimates from contractors who perform this type of activity. The placement of locking hasps or bars are based on 20 cabinets per central office. The cost for providing a chain type (bicycle) lock is also used for those pieces of equipment that can be locked in a shelf area.

Card Reader

For physical collocation arrangements, it may be necessary to install a card reader/controller, or a card reader to provide the collocator with secured access to the central office facility. These costs are presented on an equipment type basis. (Refer to Collocation Drawing No. 10 for additional details.)

Site Modification

Site Preparation

The Site Preparation element represents the costs to prepare the collocation space for collocation. The cost to clean up any associated debris caused by the site preparation is also included.

Dust Partition

The dust partition element comprises the cost to place a temporary dust curtain around the construction area. The curtain protects the existing equipment from dust and debris produced during construction projects.

HVAC - Minor (Ventilation Ducts)

The ventilation ducts element includes the cost of making minor duct modifications. (Refer to Collocation Drawing No. 16 for additional details.)

Electrical

Lighting

The lighting element includes the cost of installing a single four-foot long electrical light, materials, and labor. A manual switch or a motion detector can control the light.

Electrical Outlet

The electrical outlet cost includes the materials and labor to install a single courtesy AC electrical outlet inside a collocator's access area.

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 grounding bar is grounded to the central office's grounding source. The cost includes all materials and labor required to pull a cable from the main ground source to the collocation area. PVC conduit is used to enclose the ground wire. (Refer to Collocation Drawing Nos. 4 and 5 for additional details.)

Environmental Conditioning

Environment conditioning includes the costs necessary to provide conditioned space within the central office where the collocator's equipment will be placed.

Cable Vault Splice Elements

Fiber Cable Vault Splice

The fiber cable vault splice closure is available when a fiber splice is performed inside the cable vault. The closures are based on the size of the fiber cable being spliced. One splice closure can hold 48 fibers and the other up to 96 fibers. The closure costs are found in Verizon's GTEAMS system and are the same type of

closures currently used by Verizon personnel. Materials loadings and an ACF are added to the materials cost. The total cost is divided by twelve to calculate the cost per month. (Refer to Collocation Drawing No. 11 for additional details.)

Metallic Cable Vault Splice

The Metallic Cable Vault Splice closure is used to splice metallic cable inside the cable vault. A splice is required when metallic cable is provisioned between the Verizon CO and an adjacent collocation arrangement. The outside plant cable is spliced to the central office cable and protection is placed on the vertical side of the main distribution frame. Protection is required to ensure that stray voltage does not enter the central office via the metallic cable.

The cost is based on a Cook type C-388 connector which Verizon personnel currently install on Verizon's own equipment. The protector modules transmit analog or digital signals. The cost for this equipment is found in GTEAMS. The space the connector occupies on the main distribution frame is calculated on a per 100 pair basis. It is calculated by summing the cost of the frame, the associated labor and the number of metallic cable pairs terminated on the vertical side of the frame.

Materials loadings are calculated for the materials used and an ACF is applied to develop the total annual cost. The annual cost is divided by twelve to calculate the cost per month.

Various cable costs are calculated for the different sized cables that may be utilized in the central office by a collocator. (Refer to Collocation Drawing No. 12 for additional details.)

Cable Vault Space

The cable vault space is the area that a collocator's cable occupies inside the central office vault. Costs are based on the diameter of the collocator's cable. The diameters of the various cables are obtained from the manufacturer's specifications for the pair size of metallic cable used. For fiber cable, the outside diameter of the subduct is used to determine the cable vault space needed.

First, the cost of a cable vault space is determined. Second, the area within the vault that the cable occupies is estimated using the size of the cable. Third, the

vault and cable occupancy is calculated on a cubic foot basis. (Refer to Collocation Drawing No. 14 for additional details.)

Cable Rack Shared Space

The cable rack shared space element comprises the area a collocator's cable will occupy when connected from the central office superstructure to the MDF or DSX panel or from collocator to collocator. The Network Design engineering group estimated the quantity of cables that could be placed on a 24-inch cable rack. The diameter of the central office cable is used to determine the amount of space occupied by the cable on a foot of cable rack. The DS0 and DSX cable space occupied are calculated based on the diameter of the cables. The outside diameter of the innerduct is used to calculate fiber cable. This cost is calculated as a monthly rate and based on the total length of the cable. (Refer to Collocation Drawing Nos. 9 and 14 for additional details.)

Virtual Frame

The virtual frame element includes the cost to provide shelving space for a virtual collocator's equipment. The cost includes the frame, materials, and labor costs of installing the frame for the shelf space that the collocator's equipment will occupy within the relay rack. All costs are calculated on a per shelf basis.

The cost is obtained by calculating the materials and labor expenses associated with the virtual frame. Only the materials cost of the frame, using GTEAMS as the source, is included. Additionally, the labor used to engineer, install, and ground the frame is added.

The amount of space occupied by the virtual collocator may vary greatly between sites. Therefore, Verizon offers the frame space cost on a per shelf basis. Verizon estimated 8 feet as the average height of a frame and 24 inches as its width. Depth is considered to be 15 inches. Additionally, the required 36 inches in front of and behind the frame is used as the dedicated space for equipment access. It is assumed that other frames will share some of the space in front and behind the virtual collocators. Thus, Verizon reduced the dedicated space to 18 inches in front of and another 18 inches behind the equipment. The costs associated with the virtual frame include the materials cost of the frame, installation, grounding, and the square footage occupied by the frame. The cost per square foot is obtained from the floor space element calculation.

Virtual Maintenance

The virtual maintenance cost for powered equipment includes:

- Routine maintenance;
- Trouble maintenance; and
- Floor space occupied by the frame in which the collocators' equipment resides.

Routine maintenance recommended by the equipment manufacturer includes cleaning fans, performing visual checks, and testing cards.

Trouble maintenance includes the labor hours that the central office technician will require to resolve trouble tickets, restore the circuit and/or replace cards from the collocator's inventory.

Time estimates for individual tasks are provided by subject matter experts' estimates, including conversations with the central office technicians. All loaded labor rates used are Verizon's actual labor and overhead rates.

A weighted average cost per quarter rack is calculated based on:

- The frequency that each type of equipment is estimated to be collocated; and
- The average number of base units that fit into a standard Verizon relay rack.

Microwave Collocation

Verizon offers one microwave specific monthly recurring element:

The Microwave Rooftop Space element is the cost per square foot to provide rooftop space to the ALEC for microwave antennae and other exterior facilities. Only costs that relate directly to the land and building space are included.

Miscellaneous Services

BITS Timing

Building Integrated Timing Supply (BITS) is a central office timing system that provides a common source for the frequency and phase synchronization necessary in any digital transmission network. BITS clocks are used to provide timing and synchronization information to the equipment elements for a digital

transmission system or network. The clocks are embedded within switching or transport equipment or in stand-alone synchronization equipment such as Timing Signal Generators (TSG) or Primary Reference Sources (PRS). The BITS timing system is simple to administer and trouble-shoot a network of clocks for known quality and performance characteristics. The BITS system ensures that network synchronization, if correctly installed, provides the necessary level of performance demanded by a growing digital network.

The BITS concept requires that all digital equipment in a physical structure receive timing from the BITS/TSG clock. This clock is the most accurate and stable clock in the structure and the only clock that receives timing from another PRS office. The BITS clock receives primary (A) and secondary (B) timing references from another office of higher or stratum levels. These timing references must be and are traceable to a PRS. The primary timing reference serves as the active timing reference; the secondary timing reference is the alternate timing reference if the active reference fails.

The cost is determined by calculating the total material and installation costs of establishing BITS within a central office. It includes the common control equipment and associated port cards. Port cards are available for DS1 or Composite Clock (CC) signal delivery. Because the system is installed with 100 ports for connectivity, the cost is developed as a cost per port. ACFs are applied to the total investment, resulting in an annual cost. The annual cost is divided by twelve to calculate the cost per month, per port.

The standard Verizon BITS unit, Telcom Solution 's DCD-519/2E, is used to determine equipment and installation costs. It comes equipped with a GPS system. (Refer to Collocation Drawing No. 17 for additional details.)

Fiber Optic Patch Cord

The fiber optic patch cord is available to collocated customers who require fiber access to Verizon's unbundled network elements. This section of the collocation cost study presents the development of the recurring costs of the fiber optic patch cord between the collocator's cage, cageless or virtual arrangement and the Verizon fiber distribution panel designated for collocators. (Refer to Collocation Drawing No. 20 for details.)

The following costs are developed:

- The materials costs of the fiber distribution panel on a per port basis; and

- The cost of the fiber duct system calculated on a per foot basis, which is used to determine an occupancy factor.

Chassis, Relay Rack and Floor Space

This element includes the cost of the materials, labor, and floor space for the framework used to mount the fiber distribution panel designated for collocators. The cost is based on a "cost per connector" basis.

Materials

The materials costs for the fiber distribution panel chassis and the optical cross-connect modules are found in GTEAMS. The fiber distribution panel can house 12 modules and each module has six ports. The chassis cost is divided by 12 modules per chassis to derive a chassis and module cost. The cost per port is calculated by dividing the chassis and module cost by six, the number of ports required.

The materials cost for the relay rack is also found in GTEAMS. The average relay rack has the capacity of mounting seven optical cross-connect chassis or fiber distribution panels. The cost of the relay rack is divided by the number of chassis per rack and the number of modules per chassis to calculate the "subtotal relay rack cost per module." The "total material cost" is the sum of the "subtotal chassis and module cost" and the "subtotal relay rack cost per module cost."

Floor Space

The "floor space cost per relay rack" is calculated by multiplying the relay rack floor space cost per linear foot by the width of the relay rack. The cost of the "floor space per relay rack" is divided by the number of chassis per rack and the number of modules per chassis to calculate the "subtotal floor space cost per relay rack per module." Each module has six connectors. The "subtotal floor space cost per relay rack, per module" is divided by six connectors, resulting in the "floor space cost per connector."

Installation

The total installation cost is calculated by multiplying the "total materials cost" per connector to the digital circuit installation factor.

The "monthly cost per connector" is finalized by combining the materials, installation, and floor space costs. This number is then multiplied by the appropriate ACF to derive the total annual cost. Dividing the total annual cost by 12 and adding the "floor space cost per connector" results in the monthly cost.

Fiber Guide Duct System

The fiber guide duct system element includes the materials, engineering, and installation costs for the fiber guide duct system. The system is used to protect, support, and route the fiber patch cord between the collocator's equipment and Verizon's designated collocators fiber distribution panel. The rate is offered on a "per foot" basis.

Materials

To determine the average cost per foot of the fiber guide duct system, 100 linear feet of duct is used. The components required to construct a 100 linear foot duct system is developed from GTEAMS costs. The total cost for a 100-foot duct system is divided by 100 linear feet to develop a cost per foot.

Installation

Subject matter experts provide the estimated hours for the central office equipment engineer and the equipment installer. The individual installation costs are calculated by multiplying the digital circuit installation factor by the equipment investment.

Total Investment

Total investment is the sum of the equipment material and the installation costs. A duct system has a capacity of 250 patch cords. The total investment (materials plus installation) is divided by 250 patch cords to derive an occupancy cost per fiber optic patch cord. This number is multiplied by the appropriate ACF to derive the total annual cost. The monthly cost is calculated by dividing the total annual cost by 12.

MRC FIXED ALLOCATOR: 14.09%

	Rate Element	NRC/MRC	Increment		Rate	Source	Page #
	Caged, Cageless, Shared, Subleased & Virtual NRC Rate Elements						
1	Engineering/Major Augment - Caged/Cageless	NRC	per occurrence	$	1,380.25	Engineering - Major Aug-PS	90
2	Minor Augment	NRC	per occurrence	$	256.69	Engineering - Minor Aug-PS	91
3	Access Card Administration	NRC	per card	$	31.64	Access Card Admin-PS	94
4	Cage Enclosure 25-100 SF	NRC	per cage	$	4,352.70	Cage Enclosure 1-PS	96
5	Cage Enclosure 101-200 SF	NRC	per cage	$	5,645.40	Cage Enclosure 2-PS	97
6	Cage Enclosure 201-300 SF	NRC	per cage	$	6,938.10	Cage Enclosure 3-PS	98
7	Cage Enclosure 301-400 SF	NRC	per cage	$	8,239.14	Cage Enclosure 4-PS	99
8	Cage Enclosure 401-500 SF	NRC	per cage	$	9,531.84	Cage Enclosure 5-PS	100
9	Cage Enclosure Augment	NRC	per square foot	$	11.81	Cage Enclosure 6-PS	101
10	Cage Grounding Bar	NRC	per bar	$	1,423.65	Cage Grounding Bar-PS	104
11	Overhead Superstructure	NRC	per project	$	1,247.53	Overhead Superstructure-PS	106
12	Facility Pull - Engineering (Metallic & Fiber Optic Patchcord)	NRC	per project	$	83.61	Facility Pull - Eng-PS	109
13	Facility Pull - Labor (Metallic)	NRC	per cable run	$	128.80	Facility Pull-PS	110
14	Fiber Optic Patchcord Pull - Labor	NRC	per cable run	$	212.75	Facility Pull-PS	110
15	DS0 Cable Termination (Connectorized)	NRC	per 100 pair	$	4.60	NRC Facility Term-PS	111
16	DS1 Cable Termination (Connectorized)	NRC	per 28 pair	$	1.15	NRC Facility Term-PS	111
17	DS3 Coaxial Cable Termination (Preconnectorized)	NRC	per coaxial cable	$	1.15	NRC Facility Term-PS	111
18	DS3 Coaxial Cable Termination (Unconnectorized)	NRC	per coaxial cable	$	11.49	NRC Facility Term-PS	111
19	Category 5 Cable Termination (Connectorized)	NRC	per 25 pair	$	1.15	NRC Facility Term-PS	111
20	Fiber Optic Patchcord Termination	NRC	per termination	$	1.15	NRC Facility Term-PS	111
21	Fiber Cable Pull - Engineering	NRC	per project	$	1,371.12	Fiber Cable Pull-PS	115
22	Fiber Cable Pull - Place Innerduct	NRC	per innerduct ft	$	0.73	Fiber Cable Pull-PS	115
23	Fiber Cable Pull - Labor	NRC	per linear ft	$	0.49	Fiber Cable Pull-PS	115
24	Fiber Cable Pull - Cable Fire Retardant	NRC	per occurrence	$	45.98	Fiber Cable Pull-PS	115
25	Fiber Cable Splice - Engineering	NRC	per splicing project	$	68.56	Fiber Cable Splice-PS	117
26	Fiber Cable Splice	NRC	per fiber strand	$	41.03	Fiber Cable Splice-PS	117
27	DC Power - Engineering	NRC	per project	$	83.61	DC Power Cable-PS	119
28	DC Power - Cable Pull/Termination	NRC	per cable	$	838.79	DC Power Cable-PS	119
29	DC Power - Ground Wire	NRC	per wire	$	9.38	DC Power Cable-PS	119
30	Virtual Equipment Installation	NRC	per quarter rack	$	3,693.59	Virtual Equip Install-PS	122

MRC FIXED ALLOCATOR: 14.09%

	Rate Element	NRC/MRC	Increment		Rate	Source	Page #
31	Virtual Software Upgrades	NRC	per base unit	$	98.62	Virtual Software-PS	125
32	Virtual Card Installation	NRC	per card	$	238.54	Virtual Card Install-PS	128
33	Engineering/Major Augment - Virtual	NRC	per occurrence	$	756.67	Engineering - Virtual-PS	131
	Caged, Cageless, Shared, Subleased & Virtual MRC Rate Elements						
34	Building Modification	MRC	per request	$	237.96	Building Mod-PS	150
35	Environmental Conditioning	MRC	per 1 amp	$	3.21	Environmental Conditioning 1-PS	157
36	Caged Floor Space	MRC	per square ft	$	3.83	Floor Space-PS	162
37	Relay Rack Floor Space	MRC	per linear ft	$	16.29	Floor Space-PS	162
38	Cabinet Floor Space	MRC	per linear ft	$	22.04	Floor Space-PS	162
39	Cable Subduct Space - Manhole	MRC	per subduct	$	7.71	Cable Subduct Space-PS	168
40	Cable Subduct Space	MRC	per linear ft	$	0.05	Cable Subduct Space-PS	168
41	Fiber Cable Vault Splice - 48 Fiber-Material	MRC	per splice closure	$	11.95	Fiber Vault Splice-PS	172
42	Fiber Cable Vault Splice - 96 Fiber-Material	MRC	per splice closure	$	36.96	Fiber Vault Splice-PS	172
43	Cable Vault Space - Fiber	MRC	per innerduct	$	1.40	Cable Vault Space -PS	180
44	Cable Rack Shared Space - Metallic	MRC	per cable run	$	0.18	Cable Rack Space - Metallic-PS	188
45	Cable Rack Shared Space - Fiber	MRC	per innerduct ft	$	0.006	Cable Rack Space - Fiber-PS	189
46	DC Power	MRC	per 1 amp	$	25.45	DC Power-PS	192
47	Facility Termination - DS0	MRC	per 100 pair	$	3.21	Facility Term-PS	201
48	Facility Termination - DS1	MRC	per 28 pair	$	10.47	Facility Term-PS	201
49	Facility Termination - DS3	MRC	per coaxial cable	$	25.11	Facility Term-PS	201
50	Virtual Equipment Maintenance	MRC	per quarter rack	$	77.23	Virtual Equip Maint-PS	218
	Adjacent On-Site NRC Rate Elements						
51	Engineering - Adjacent On Site	NRC	per occurrence	$	1,292.21	Engineering - On-Site-PS	134
52	Adjacent Metallic Facility Pull-Engineering	NRC	per project	$	83.61	On-Site Facility Pull-PS	136
53	Adjacent Metallic Facility Pull - Labor	NRC	per linear ft	$	1.15	On-Site Facility Pull-PS	136
54	Adjacent DSO Cable Termination (Connectorized)	NRC	per 100 pair	$	4.60	NRC On-Site Facility Term-PS	137
55	Adjacent DSO Cable Termination (Unconnectorized)	NRC	per 100 pair	$	45.98	NRC On-Site Facility Term-PS	137
56	Adjacent DS1 Cable Termination (Connectorized)	NRC	per 28 pair	$	1.15	NRC On-Site Facility Term-PS	137
57	Adjacent DS1 Cable Termination (Unconnectorized)	NRC	per 28 pair	$	34.48	NRC On-Site Facility Term-PS	137

MRC FIXED ALLOCATOR: **14.09%**

	Rate Element	NRC/MRC	Increment		Rate	Source	Page #
58	Adjacent DS3 Coaxial Termination (Connectorized)	NRC	per coaxial cable	$	1.15	NRC On-Site Facility Term-PS	137
59	Adjacent DS3 Coaxial Termination (Unconnectorized)	NRC	per coaxial cable	$	11.49	NRC On-Site Facility Term-PS	137
60	Adjacent Category 5 Cable Termination (Connectorized)	NRC	per 25 pair	$	1.15	NRC On-Site Facility Term-PS	137
61	Adjacent Fiber Cable Termination	NRC	per fiber term	$	41.03	NRC On-Site Facility Term-PS	137
62	Adjacent Fiber Cable Pull-Engineering	NRC	per project	$	1,371.12	On-Site Fiber Cable Pull-PS	138
63	Adjacent Fiber Cable Pull-Place Innerduct	NRC	per innerduct ft	$	0.73	On-Site Fiber Cable Pull-PS	138
64	Adjacent Fiber Cable Pull - Labor	NRC	per linear ft	$	0.49	On-Site Fiber Cable Pull-PS	138
65	Adjacent-Cable Fire Retardant	NRC	per occurrence	$	45.98	On-Site Fiber Cable Pull-PS	138
66	Adjacent Metallic Cable Pull-Engineering	NRC	per project	$	1,371.12	On-Site Metallic Cable Pull-PS	139
67	Adjacent Metallic Cable Pull - Labor	NRC	per linear ft	$	0.60	On-Site Metallic Cable Pull-PS	139
68	Adjacent Metallic Cable Splice-Engineering	NRC	per splicing project	$	68.56	On-Site Metallic Cable Splice-PS	141
69	Adjacent Metallic Cable Splicing (greater than 200 pair)	NRC	per pair	$	0.65	On-Site Metallic Cable Splice-PS	141
70	Adjacent Metallic Cable Splicing (less than 200 pair)	NRC	per pair	$	1.20	On-Site Metallic Cable Splice-PS	141
71	Adjacent Fiber Cable Splicing-Engineering	NRC	per splicing project	$	68.56	On-Site Fiber Cable Splice-PS	142
72	Adjacent Fiber Cable Splicing (48 fiber cable or less)	NRC	per fiber strand	$	41.03	On-Site Fiber Cable Splice-PS	142
73	Adjacent Fiber Cable Splicing (greater than 48 fiber)	NRC	per fiber strand	$	38.64	On-Site Fiber Cable Splice-PS	142
	Adjacent On-Site MRC Rate Elements						
74	Adjacent Subduct Space-Manhole	MRC	per subduct	$	7.71	On-Site Subduct Space-PS	224
75	Adjacent Subduct Space	MRC	per linear ft	$	0.05	On-Site Subduct Space-PS	224
76	Adjacent Conduit Space (4" Duct)-Metallic-Manhole	MRC	per conduit	$	14.64	On-Site Conduit Space-PS	225
77	Adjacent Conduit Space (4" Duct)-Metallic Cable	MRC	per linear ft	$	0.07	On-Site Conduit Space-PS	225
78	Adjacent Facility Termination DSO Cable-Material	MRC	per 100 pair	$	3.21	On-Site Facility Term-PS	226
79	Adjacent Facility Termination DS1 Cable-Material	MRC	per 28 pair	$	10.47	On-Site Facility Term-PS	226
80	Adjacent Facility Termination DS3 Cable-Material	MRC	per coaxial cable	$	25.11	On-Site Facility Term-PS	226
81	Adjacent Cable Vault Splice (per 1200 pr)-Material	MRC	per splice closure	$	593.08	On-Site Cable Vault Splice-PS	227
82	Adjacent Cable Vault Space (per 1200 pr)	MRC	per cable	$	5.45	Cable Vault Space-PS	180
83	Adjacent Cable Vault Splice (per 900 pr)-Material	MRC	per splice closure	$	432.26	On-Site Cable Vault Splice-PS	227
84	Adjacent Cable Vault Space (per 900 pr)	MRC	per cable	$	4.20	Cable Vault Space-PS	178
85	Adjacent Cable Vault Splice (per 600 pr)-Material	MRC	per splice closure	$	287.46	On-Site Cable Vault Splice-PS	227
86	Adjacent Cable Vault Space (per 600 pr)	MRC	per cable	$	3.00	Cable Vault Space-PS	180

MRC FIXED ALLOCATOR: **14.09%**

	Rate Element	NRC/MRC	Increment		Rate	Source	Page #
87	Adjacent Cable Vault Splice (per 100 pr) - Material	MRC	per splice closure	$	60.76	On-Site Cable Vault Splice-PS	227
88	Adjacent Cable Vault Space (per 100 pr)	MRC	per cable	$	0.68	Cable Vault Space-PS	180
89	Adjacent Cable Vault Splice (48 fiber)-Material	MRC	per splice closure	$	11.95	On-Site Cable Vault Splice-PS	227
90	Adjacent Cable Vault Splice (96 fiber)-Material	MRC	per splice closure	$	36.96	On-Site Cable Vault Splice-PS	227
91	Adjacent Cable Vault Space (fiber)	MRC	per subduct	$	1.40	Cable Vault Space-PS	180
92	Adjacent Cable Rack Shared Space - Metallic DSO	MRC	per linear ft	$	0.004	On-Site Cable Rack Space-PS	228
93	Adjacent Cable Rack Shared Space - Metallic DS1	MRC	per linear ft	$	0.002	On-Site Cable Rack Space-PS	228
94	Adjacent Cable Rack Shared Space - Fiber	MRC	per innerduct ft	$	0.006	On-Site Cable Rack Space-PS	228
95	Adjacent Cable Rack Shared Space - Coaxial	MRC	per linear ft	$	0.010	On-Site Cable Rack Space-PS	228
	Miscellaneous NRC Rate Elements						
96	BITS Timing	NRC	per project	$	209.66	NRC BITS Timing-PS	133
97	Collocation Premise Space Report - Optional	NRC	per co request	$	1,354.56	Premise Space Report-PS	143
98	Engineering/Major Augment - Microwave	NRC	per occurrence	$	1,091.17	Engineering - Microwave-PS	92
99	Microwave Facility Pull - Labor	NRC	per linear ft	$	1.15	Facility Pull-PS	110
100	Facility Cable-DS0 Cable (Connectorized) 100 pair	NRC	per cable run	$	265.43	Cable-PS	120
101	Facility Cable-DS1 Cable (Connectorized)	NRC	per cable run	$	121.70	Cable-PS	120
102	Facility Cable-DS3 Coaxial Cable	NRC	per cable run	$	36.12	Cable-PS	120
103	Facility Cable-Category 5 Connectorized	NRC	per linear ft	$	1.14	Cable-PS	120
104	Power Cable-Wire Power 1/0	NRC	per cable run	$	32.83	Cable-PS	120
105	Power Cable-Wire Power 2/0	NRC	per cable run	$	40.20	Cable-PS	120
106	Power Cable-Wire Power 3/0	NRC	per cable run	$	49.58	Cable-PS	120
107	Power Cable-Wire Power 4/0	NRC	per cable run	$	62.98	Cable-PS	120
108	Power Cable-Wire Power 350 MCM	NRC	per cable run	$	111.89	Cable-PS	120
109	Power Cable-Wire Power 500 MCM	NRC	per cable run	$	219.09	Cable-PS	120
110	Power Cable-Wire Power 750 MCM	NRC	per cable run	$	337.68	Cable-PS	120
111	Fiber Optic Patchcord-24 Fiber (Connectorized)	NRC	per cable run	$	775.15	Cable-PS	120
112	Misc Svcs-Labor-Basic Bus Day-First 1/2 Hr	NRC	per technician	$	48.31	Labor-PS	145
113	Misc Svcs-Labor-Basic Bus Day-Each Additional 1/2 Hr	NRC	per technician	$	24.15	Labor-PS	145
114	Misc Svcs-Labor-OT Non-Bus Day - First 1/2 Hr	NRC	per technician	$	100.00	Labor-PS	145
115	Misc Svcs-Labor-OT Non-Bus Day - Each Addt'l 1/2 Hr	NRC	per technician	$	75.00	Labor-PS	145
116	Misc Svcs-Labor-Premium Non-Bus Day - First 1/2 Hr	NRC	per technician	$	150.00	Labor-PS	145
117	Misc Svcs-Labor-Premium Non-Bus Day - Each Addt'l 1/2 Hr	NRC	per technician	$	125.00	Labor-PS	145

MRC FIXED ALLOCATOR: 14.09%

	Rate Element	NRC/MRC	Increment		Rate	Source	Page #
	Miscellaneous MRC Rate Elements						
118	Microwave Rooftop Space	MRC	per sq ft	$	3.83	Floor Space-PS	162
119	BITS Timing	MRC	per port	$	10.28	BITS Timing-PS	208
120	Facility Termination - Fiber Optic Patchcord	MRC	per connector	$	0.47	Fac Term - Fiber Optic-PS	211
121	Cable Duct Space - Fiber Optic Patchcord	MRC	per fiber strand	$	0.14	Duct Space - Fiber Optic-PS	214
	ICBs for Microwave Collocation						
122	Building Penetration for Cable						
123	Special Work						
	Dedicated Transit Service - DSO						
124	Service Order-Semi-Mechanized	NRC	per order	$	42.46	Wholesale NRC Study-Rate Summary-Section 1	4
125	Service Order-Manual	NRC	per order	$	74.99	Wholesale NRC Study-Rate Summary-Section 1	4
126	Service Connection-CO Wiring	NRC	per circuit	$	18.24	Wholesale NRC Study-Rate Summary-Section 1	4
127	Service Connection-Provisioning	NRC	per order	$	133.60	Wholesale NRC Study-Rate Summary-Section 1	4
128	Service Order-Disconnect-Semi-Mechanized	NRC	per order	$	38.01	Wholesale NRC Study-Rate Summary-Section 1	4
129	Service Order-Disconnect-Manual	NRC	per order	$	67.58	Wholesale NRC Study-Rate Summary-Section 1	4
130	Service Connection-Disconnect-Provisioning	NRC	per order	$	46.67	Wholesale NRC Study-Rate Summary-Section 1	4
131	Service Connection-Disconnect-CO Wiring	NRC	per circuit	$	2.94	Wholesale NRC Study-Rate Summary-Section 1	4
	Dedicated Transit Service - DS1/DS3						
132	Service Order-Semi-Mechanized	NRC	per order	$	42.46	Wholesale NRC Study-Rate Summary-Section 1	4
133	Service Order-Manual	NRC	per order	$	74.99	Wholesale NRC Study-Rate Summary-Section 1	4
134	Service Connection-CO Wiring - DS1	NRC	per circuit	$	19.29	Wholesale NRC Study-Rate Summary-Section 1	4
135	Service Connection-CO Wiring - DS3	NRC	per circuit	$	65.59	Wholesale NRC Study-Rate Summary-Section 1	4
136	Service Connection-Provisioning	NRC	per order	$	132.73	Wholesale NRC Study-Rate Summary-Section 1	4
137	Service Order-Disconnect-Semi-Mechanized	NRC	per order	$	40.30	Wholesale NRC Study-Rate Summary-Section 1	4
138	Service Order-Disconnect-Manual	NRC	per order	$	69.87	Wholesale NRC Study-Rate Summary-Section 1	4
139	Service Connection-Disconnect-Provisioning	NRC	per order	$	46.67	Wholesale NRC Study-Rate Summary-Section 1	4
140	Service Connection-Disconnect-CO Wiring	NRC	per circuit	$	2.94	Wholesale NRC Study-Rate Summary-Section 1	4

MRC FIXED ALLOCATOR: **14.09%**

	Rate Element	NRC/MRC	Increment		Rate	Source	Page #
	Dedicated Transit Service - Dark Fiber						
141	Service Order-Semi-Mechanized	NRC	per order	$	71.47	Wholesale NRC Study-Rate Summary-Section 1	4
142	Service Order-Manual	NRC	per order	$	74.43	Wholesale NRC Study-Rate Summary-Section 1	4
143	Service Connection-CO Wiring	NRC	per circuit	$	60.29	Wholesale NRC Study-Rate Summary-Section 1	4
144	Service Connection-Provisioning	NRC	per order	$	36.20	Wholesale NRC Study-Rate Summary-Section 1	4
145	Service Order-Disconnect-Semi-Mechanized	NRC	per order	$	39.53	Wholesale NRC Study-Rate Summary-Section 1	4
146	Service Order-Disconnect-Manual	NRC	per order	$	39.53	Wholesale NRC Study-Rate Summary-Section 1	4
147	Service Connection-Disconnect-Provisioning	NRC	per order	$	36.20	Wholesale NRC Study-Rate Summary-Section 1	4
148	Service Connection-Disconnect-CO Wiring	NRC	per circuit	$	2.94	Wholesale NRC Study-Rate Summary-Section 1	4

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Cost Summary

Cost Elements	Increm't	Single/Shared/ Sublease Cage NRC	Single/Shared/ Sublease Cage MRC	Cageless NRC	Cageless MRC	Adjacent On-Site NRC	Adjacent On-Site MRC	Virtual NRC	Virtual MRC	Miscellaneous Services NRC	Miscellaneous Services MRC	Source
Non-recurring Costs												
Engineering/Major Augment												
Initial C.O. Collocation Site	per occ	$ 1,584 46		$ 1,584.46								Engineering-CS
Additional Collocation Site	per occ	$ 1,296.84		$ 1,296.84								Engineering-CS
Engineering/Minor Augment	per occ	$ 256.69		$ 256.69								Engineering-CS
Engineering Microwave	per occ									$ 1,091 17		Engineering-CS
Engineering Adjacent On-Site	per occ					$ 1,292.21						Engineering - On Site-CS
Engineering Virtual	per occ							$ 756.67				Engineering - Virtual-CS
Building Modification												
Access Card Administration												
New/Replacement	per card	$ 27.75		$ 27 75								Access Card Admin-CS
Change	per card	$ 3.89		$ 3 89								Access Card Admin-CS
Cage Enclosure												
Cage Fencing												
100 and Over square feet Floor Space	1SF fencing	$ 8.34										Cage Enclosure 1-CS
75 - 99 square feet Floor Space	1SF fencing	$ 8.88										Cage Enclosure 1-CS
50 - 74 square feet Floor Space	1SF fencing	$ 9.78										Cage Enclosure 1-CS
25 - 49 square feet Floor Space	1SF fencing	$ 11.81										Cage Enclosure 1-CS
Cage Gate	per gate	$ 518.79										Cage Enclosure 1-CS
Cage Grounding Bar	per bar	$ 1,423.65										Cage Grounding Bar-CS
Overhead Superstructure												
Installation	1 lin ft	$ 31.99		$ 31.99								Overhead Superstructure 1-CS
Materials - Racking	1 lin ft	$ 21.84		$ 21.84								Overhead Superstructure 1-CS
Facility Pull												
Engineering	per project	$ 37.63		$ 37.63		$ 37.63		$ 37.63		$ 37.63		Facility Pull & Term-CS
Travel Time for Installer	per project	$ 45 98		$ 45.98		$ 45.98		$ 45.98				Facility Pull & Term-CS
Per DSO Cable												
Per Foot Pull (labor)	1 lin ft	$ 1.15		$ 1.15		$ 1.15		$ 1.15				Facility Pull & Term-CS
Per Termination (C)	per 100 pr	$ 4.60		$ 4 60		$ 4 60		$ 4.60				Facility Pull & Term-CS
Per Termination (UC)	per 100 pr					$ 45.98						Facility Pull & Term-CS
Per DS1 Cable												
Per Foot Pull (labor)	1 lin ft	$ 1 15		$ 1.15		$ 1.15		$ 1.15				Facility Pull & Term-CS
Per Termination (C)	per 28 pr	$ 1.15		$ 1.15		$ 1 15		$ 1.15				Facility Pull & Term-CS
Per Termination (UC)	per 28 pr					$ 34.48						Facility Pull & Term-CS
Per DS3 (coaxial)												
Per Foot Pull (labor)	1 lin ft	$ 1 15		$ 1.15		$ 1 15		$ 1.15				Facility Pull & Term-CS
Per Termination (Preconnectorized)	per term	$ 1 15		$ 1 15		$ 1 15		$ 1 15				Facility Pull & Term-CS
Per Termination (Unconnectorized)	per term	$ 11 49		$ 11 49		$ 11 49		$ 11 49				Facility Pull & Term-CS

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Cost Summary

Cost Elements	Increm't	Single/Shared/ Sublease Cage NRC	Single/Shared/ Sublease Cage MRC	Cageless NRC	Cageless MRC	Adjacent On-Site NRC	Adjacent On-Site MRC	Virtual NRC	Virtual MRC	Miscellaneous Services NRC	Miscellaneous Services MRC	Source
Non-recurring Costs												
Per Fiber Cable												
Per Termination (48 fiber cable or less)	per fiber					$ 41.03						Facility Pull & Term-CS
Per Termination (greater than 48 fiber cable	per fiber					$ 38.64						Facility Pull & Term-CS
Fiber Optic Patchcord												
Per Foot Pull (labor)	1 lin ft	$ 1.15		$ 1.15				$ 1.15				Facility Pull & Term-CS
Per Termination	per term	$ 1.15		$ 1.15				$ 1.15				Facility Pull & Term-CS
Category 5 Cable												
Per Foot Pull (labor)	1 lin ft	$ 1.15		$ 1.15		$ 1.15		$ 1.15				Facility Pull & Term-CS
Per Termination	per 25 pr	$ 1.15		$ 1.15		$ 1.15		$ 1.15				Facility Pull & Term-CS
Per DS3 (coaxial)-Microwave												
Per Foot Pull (labor)	1 lin ft									$ 1.15		Facility Pull & Term-CS
Fiber Cable Pull												
Engineering	per project	$ 1,371.12		$ 1,371.12		$ 1,371.12		$ 1,371.12				Fiber Cable Pull-CS
Place Innerduct	1 lin ft	$ 0.73		$ 0.73		$ 0.73		$ 0.73				Fiber Cable Pull-CS
Labor	1 lin ft	$ 0.49		$ 0.49		$ 0.49		$ 0.49				Fiber Cable Pull-CS
Cable Fire Retardant	per occ	$ 45.98		$ 45.98		$ 45.98		$ 45.98				Fiber Cable Pull-CS
Metallic Cable Pull												
Engineering	per project					$ 1,371.12						Metallic Cable Pull-CS
Labor (< 1.5" Dia.)	1 lin ft					$ 0.60						Metallic Cable Pull-CS
Labor (> 1.5" Dia.)	1 lin ft					$ 0.60						Metallic Cable Pull-CS
Cable Fire Retardant	per occ					$ 45.98						Metallic Cable Pull-CS
Cable Splice												
Metallic												
Engineering	per splicing project					$ 68.56						Cable Splice-CS
Splicing (greater than 200 pair)	per pair					$ 0.65						Cable Splice-CS
Splicing (200 pair or less)	per pair					$ 1.20						Cable Splice-CS
Fiber												
Engineering	per splicing project	$ 68.56		$ 68.56		$ 68.56		$ 68.56				Cable Splice-CS
Splicing (48 fiber cable or less)	per fiber strand	$ 41.03		$ 41.03		$ 41.03		$ 41.03				Cable Splice-CS
Splicing (greater than 48 fiber cable)	per fiber strand	$ 38.64		$ 38.64		$ 38.64		$ 38.64				Cable Splice-CS
DC Power Cable												
Termination	per pwr run	$ 68.96		$ 68.96				$ 68.96				Cable Run Labor-CS
Power Cable Pull - Labor	1 lin ft	$ 11.49		$ 11.49				$ 11.49				Cable Run Labor-CS
Engineering	per project	$ 37.63		$ 37.63				$ 37.63				Cable Run Labor-CS
Wire Ground #6	1 lin ft	$ 0.14		$ 0.14				$ 0.14				Cable-CS
Travel Time	per project	$ 45.98		$ 45.98				$ 45.98				Cable Run Labor-CS

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Cost Summary

Cost Elements	Increm't	Single/Shared/ Sublease Cage NRC	Single/Shared/ Sublease Cage MRC	Cageless NRC	Cageless MRC	Adjacent On-Site NRC	Adjacent On-Site MRC	Virtual NRC	Virtual MRC	Miscellaneous Services NRC	Miscellaneous Services MRC	Source
Non-recurring Costs												
Cable												
Facility Cable												
DS-0 Cable (Connectorized) 100 pair	100 ft									$ 155.22		Cable-CS
DS-1 Cable (Connectorized)	100 ft									$ 154.05		Cable-CS
DS-3 Coax Cable	1 lin ft									$ 0.42		Cable-CS
Shielded Cable (Orange jacket)	1 lin ft									$ 0.15		Cable-CS
Category 5 Connectorized (per100 feet)	100 ft									$ 116.52		Cable-CS
Category 5 Connectorized (per150 feet)	150 ft									$ 169.80		Cable-CS
Category 5 Connectorized (per200 feet)	200 ft									$ 223.09		Cable-CS
Power Cable												
Wire Power 1/0	1 lin ft									$ 0.49		Cable-CS
Wire Power 2/0	1 lin ft									$ 0.60		Cable-CS
Wire Power 3/0	1 lin ft									$ 0.74		Cable-CS
Wire Power 4/0	1 lin ft									$ 0.94		Cable-CS
Wire Power 350 MCM	1 lin ft									$ 1.67		Cable-CS
Wire Power 500 MCM	1 lin ft									$ 3.27		Cable-CS
Wire Power 750 MCM	1 lin ft									$ 5.04		Cable-CS
Ground Cable												
Wire Ground #6	1 lin ft									$ 0.14		Cable-CS
Fiber Optic Patchcord												
24 Fiber Strands (Connectorized)	1 lin ft									$ 4.19		Cable-CS
Virtual Equipment Installation	per quarter rack							$ 3,693.59				Virtual Equip Blended-CS
Software Upgrades (per upgrade)	per base unit							$ 98.62				Virtual Software Blended-CS
Card Installation	per card							$ 238.54				Virtual Card Install Blended-CS
BITS Timing												
Engineering	per project									$ 37.63		Cable Run Labor-CS
Pull Shielded Cable	1 lin ft									$ 1.15		Cable Run Labor-CS
Terminate Shielded Cable	per term									$ 1.15		Cable Run Labor-CS
Material Cost (orange shielded cable)	1 lin ft									$ 0.15		Cable-CS
Premise Space Report												
Comprehensive Evaluation	per project									$ 6,020.26		Premise Space Report-CS
Annual Evaluation	per project									$ 4,816.21		Premise Space Report-CS

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Cost Summary

Cost Elements	Increm't	Single/Shared/ Sublease Cage NRC	Single/Shared/ Sublease Cage MRC	Cageless NRC	Cageless MRC	Adjacent On-Site NRC	Adjacent On-Site MRC	Virtual NRC	Virtual MRC	Miscellaneous Services NRC	Miscellaneous Services MRC	Source
Monthly Recurring Costs												
Building Modification												
Storage Security	per collo office		$ 61.82		$ 61.82							Storage Security-CS
Security Access												
Card Reader	per reader		$ 176.18		$ 176.18							Carder Reader-CS
Controller	per controller		$ 73.81		$ 73.81							Carder Reader-CS
Site Modifications												
Site Preparation	per request		$ 29.47		$ 29.47							Site Mod-CS
Dust Partition	per request		$ 44.50		$ 44.50							Site Mod-CS
HVAC - Minor (Heating, Ventilating,& Air Condit'g)	per occ		$ 36.46		$ 36.46							Site Mod-CS
Electrical												
Light	per unit		$ 21.74		$ 21.74							Lighting Fixture-CS
Electrical Outlet	per outlet		$ 19 51		$ 19.51							Elect Outlet-CS
Floor Ground Bar	per bar		$ 54.14		$ 54.14							Floor Ground Bar-CS
Environmental Conditioning	per 1 amp		$ 2.81		$ 2.81				$ 2.81			Environmental Conditioning 1-C
Floor Space												
Caged Floor Space	1 sq ft		$ 3.36									Floor Space 1-CS
Microwave Rooftop Space	1 sq ft										$ 3.36	Floor Space 1-CS
Relay Rack Floor Space	1 lin ft				$ 14.28							Floor Space 1-CS
Cabinet Floor Space	1 lin ft				$ 19.32							Floor Space 1-CS
Cable Space												
Subduct												
Manhole	per subduct		$ 6.76		$ 6.76		$ 6.76		$ 6.76			Cable Space 1-CS
Subduct	1 lin ft		$ 0.04		$ 0.04		$ 0.04		$ 0.04			Cable Space 1-CS
Conduit Space - 4" Duct - Metallic Cable												
Manhole	per conduit						$ 12 83					Cable Space 1-CS
Conduit	1 lin ft						$ 0.06					Cable Space 1-CS
Cable Vault Splice												
Metallic Cable per 1200 pair												
Material	per splice closure						$ 519.83					Cable Vault Splice 1-CS
Utilization Factor in Cable Vault	per cable						$ 4.78					Cable Vault Space 1-CS
Metallic Cable per 900 pair												
Material	per splice closure						$ 378.87					Cable Vault Splice 1-CS
Utilization Factor in Cable Vault	per cable						$ 3.68					Cable Vault Space 1-CS
Metallic Cable per 600 pair												
Material	per splice closure						$ 251.95					Cable Vault Splice 1-CS
Utilization Factor in Cable Vault	per cable						$ 2.63					Cable Vault Space 1-CS
Metallic Cable per 100 pair												
Material	per splice closure						$ 53 25					Cable Vault Splice 1-CS
Utilization Factor in Cable Vault	per cable						$ 0.60					Cable Vault Space 1-CS
Fiber - 48 fiber strand cable												
Material	per splice closure		$ 10 48		$ 10.48		$ 10.48		$ 10.48			Cable Vault Splice 1-CS

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Cost Summary

Cost Elements	Increm't	Single/Shared/ Sublease Cage NRC	Single/Shared/ Sublease Cage MRC	Cageless NRC	Cageless MRC	Adjacent On-Site NRC	Adjacent On-Site MRC	Virtual NRC	Virtual MRC	Miscellaneous Services NRC	Miscellaneous Services MRC	Source
Utilization Factor in Cable Vault	per innerduct		$ 1.23		$ 1.23		$ 1.23		$ 1.23			Cable Vault Space 1-CS
Fiber - 96 fiber strand cable												
Material	per splice closure		$ 32.39		$ 32.39		$ 32.39		$ 32.39			Cable Vault Splice 1-CS
Utilization Factor in Cable Vault	per innerduct		$ 1.23		$ 1.23		$ 1.23		$ 1.23			Cable Vault Space 1-CS
Monthly Recurring Costs												
Cable Rack Shared Space												
Metallic DSO Cable	per LF		$ 0.004		$ 0.004		$ 0.004		$ 0.004			Cable Rack Space 1-CS
Metallic DS1 Cable	per LF		$ 0.002		$ 0.002		$ 0.002		$ 0.002			Cable Rack Space 1-CS
Fiber Cable	per LF innerduct		$ 0.005		$ 0.005		$ 0.005		$ 0.005			Cable Rack Space 1-CS
Coaxial Cable	per LF		$ 0.001		$ 0.001		$ 0.001		$ 0.001			Cable Rack Space 1-CS
DC Power Facility												
Power Supply	1 amps		$ 17.69		$ 17.69				$ 17.69			DC Power Fac 1-CS
Fuses and Fuse Panels (BDFB)	1 amps		$ 0.38		$ 0.38				$ 0.38			DC Power Fac 1-CS
Power Cable Pull - Labor	1 amps		$ 1.22		$ 1.22				$ 1.22			DC Power Fac 1-CS
DC Power Utility	1 amps		$ 3.02		$ 3.02				$ 3.02			DC Power Util 1-CS
Facility Termination												
DSO Cable - Material	per 100 pr		$ 2.81		$ 2.81		$ 2.81		$ 2.81			Fac Term 1-CS
DS1 Cable - Material	per 28		$ 9.18		$ 9.18		$ 9.18		$ 9.18			Fac Term 3-CS
DS3 Cable - Material	per coaxial		$ 22.01		$ 22.01		$ 22.01		$ 22.01			Fac Term 5-CS
BITS Timing												
BITS Timing - Material and Labor	per port										$ 9.01	BITS Timing 1-CS
Facility Termination - Fiber ptic atcl co											$	Term Op
Duct Space - d p	per strand											Fiber Opti
Virtual Frame Space and Maintenance												
Virtual Frame Space	per quarter rack								$ 9.07			Virtual Frame Space 1-CS
Virtual Equipment Maintenance	per base unit								$ 58.62			Virtual Equip Maint Blended-CS

Verizon Expanded Interconnection Services
Collocation Drawings

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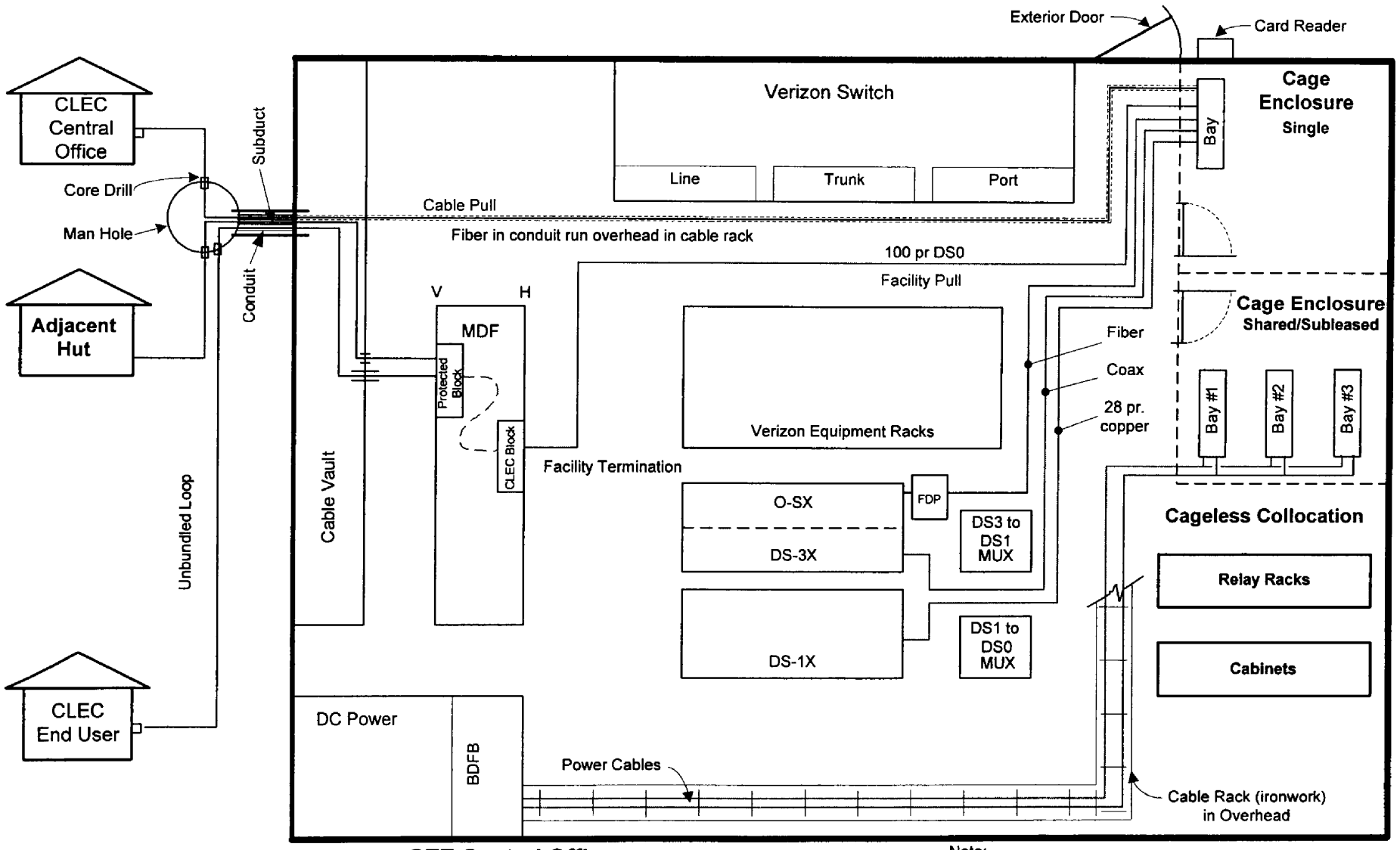


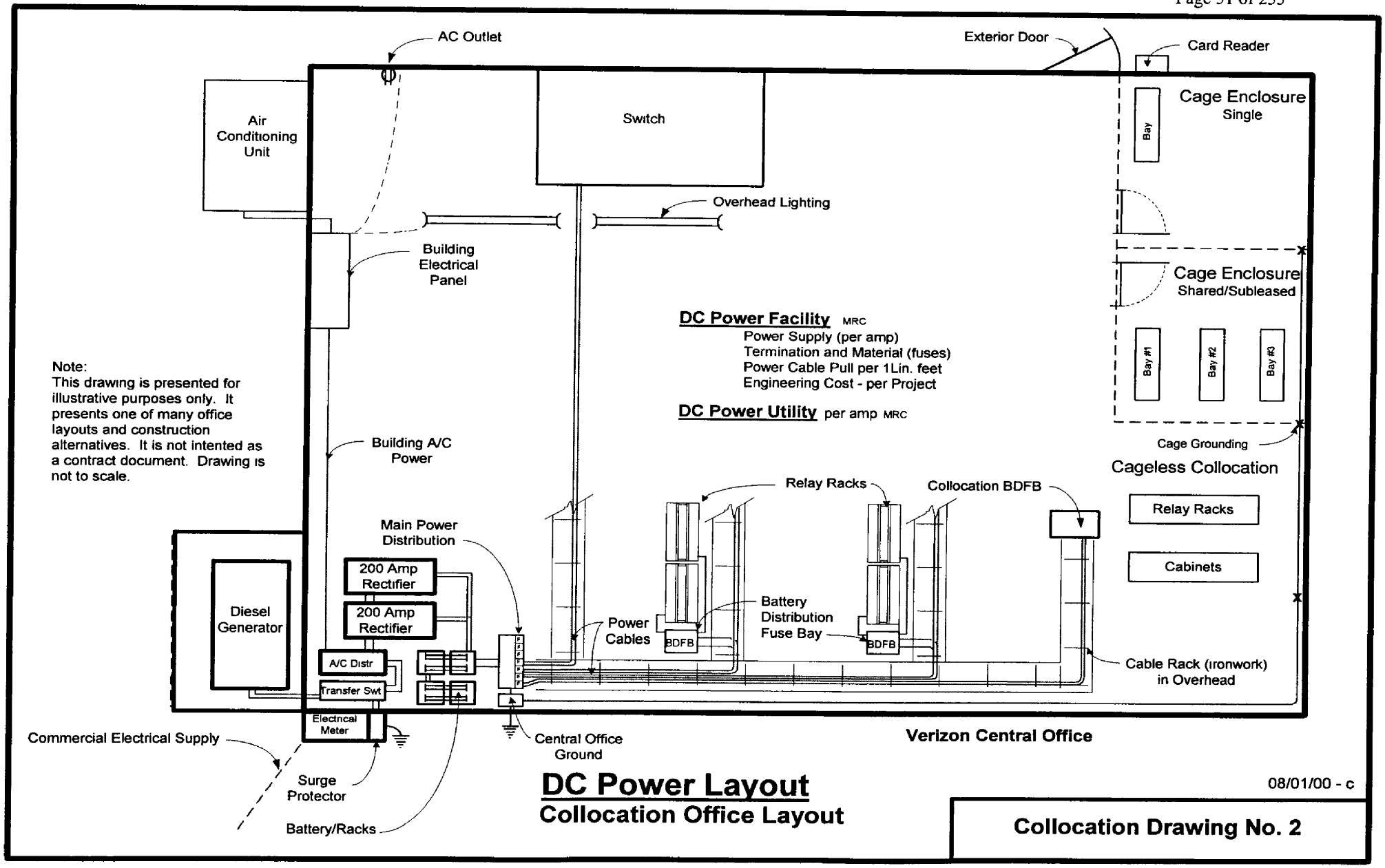
GTE Central Office

Note:
This drawing is presented for illustrative purposes only. It presents one of many office layouts and construction alternatives. It is not intented as a contract document. Drawing is not to scale.

09/27/00 - d

Types of Collocation
Collocation Office Layout

Collocation Drawing No. 1



DC Power Layout

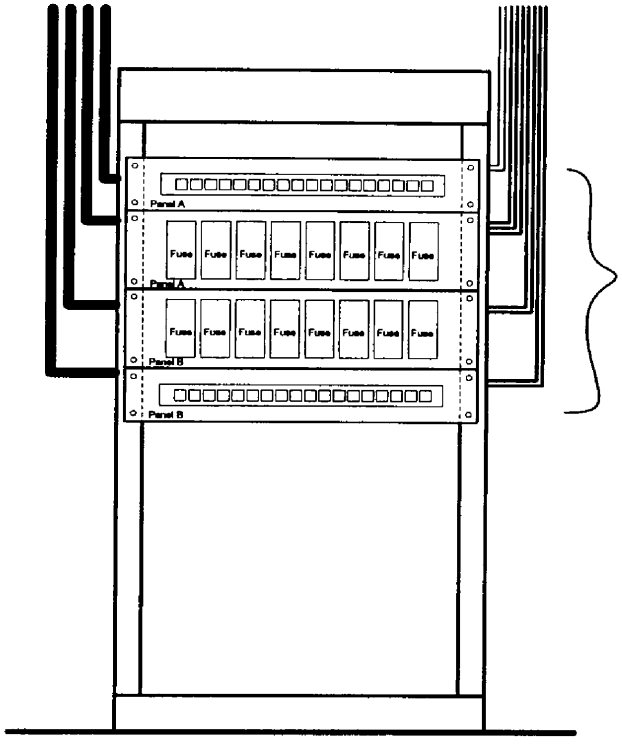
Collocation Office Layout

08/01/00 - c

Collocation Drawing No. 2

750 MCM Power Cables from Main Power Distribution

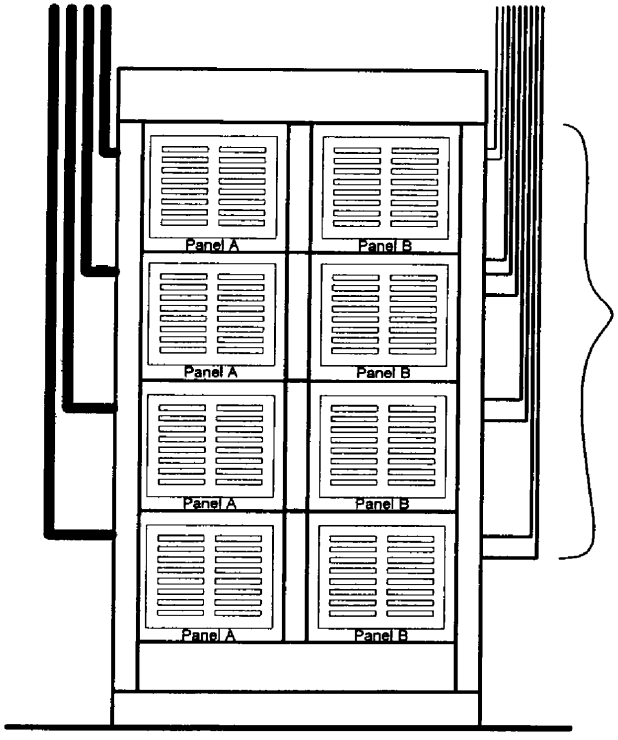
Power Cables to Equipment Based on Amps



Output to Equipment is Based on per amp Increments

750 MCM Power Cables from Main Power Distribution

Power Cables to Equipment Based on Amps



Output to Equipment is Based on per amp Increments

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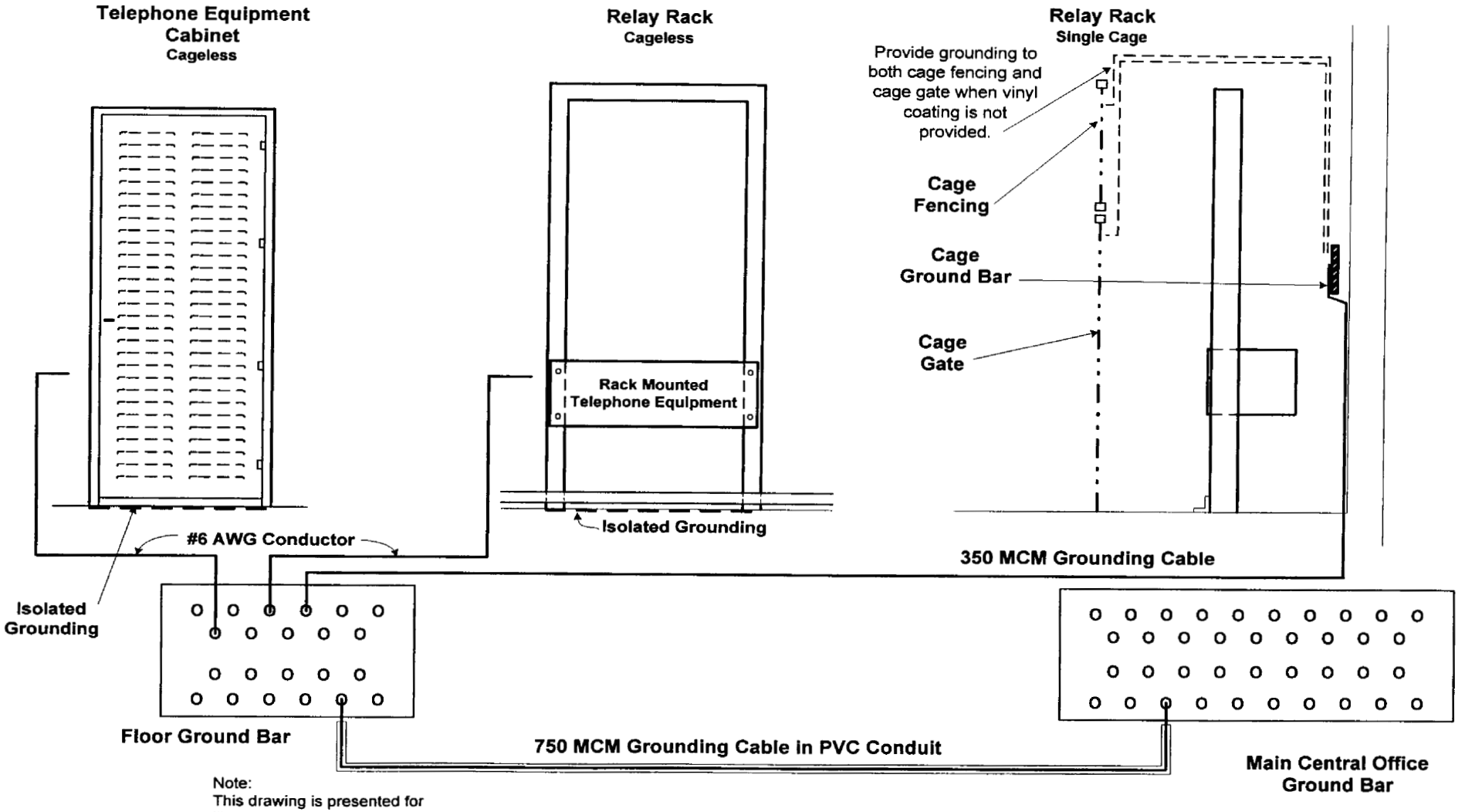
08/01/00 - c

Battery Distribution Fuse Bay

Collocation Office Layout

Collocation Drawing No. 3



Note:
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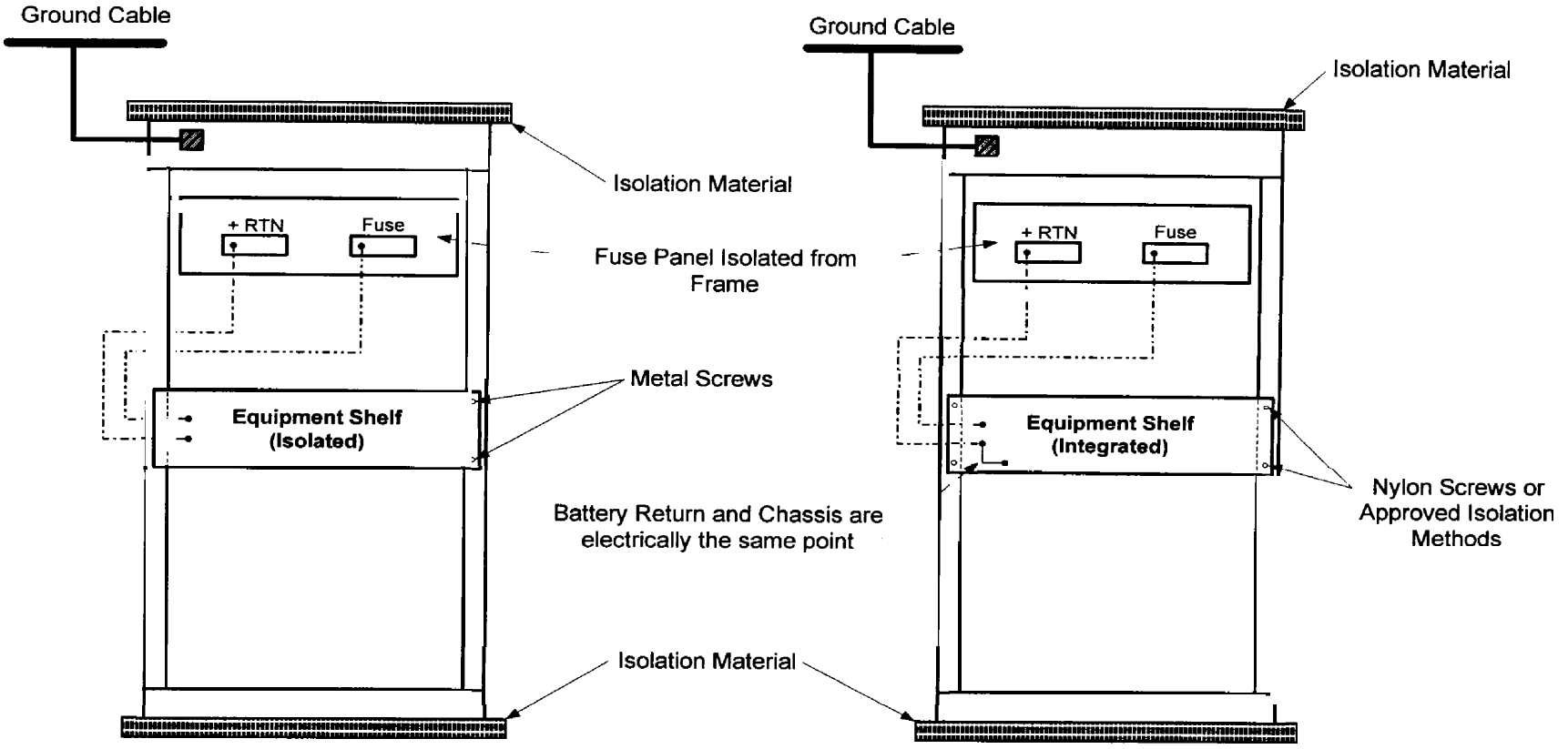
Collocation Grounding System

Collocation Office Layout

08/01/00 - d

Collocation Drawing No. 4



Isolated Gounding
in a Single Point Grounded Relay Rack

Integrated Gounding
in a Single Point Grounded Relay Rack

Note:
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08/01/00 - b

Types of Grounding

Collocation Office Layout

Collocation Drawing No. 5

Note:
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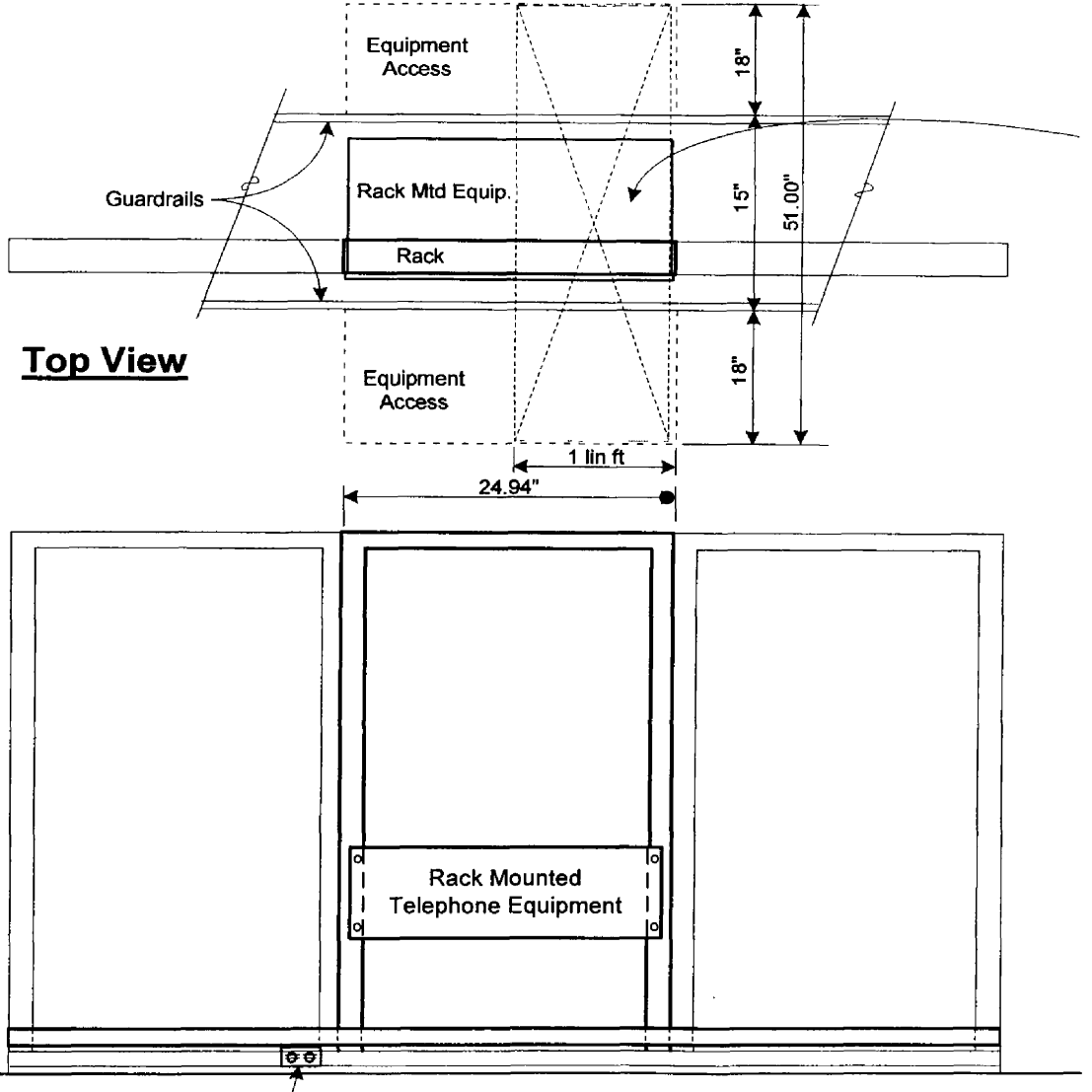
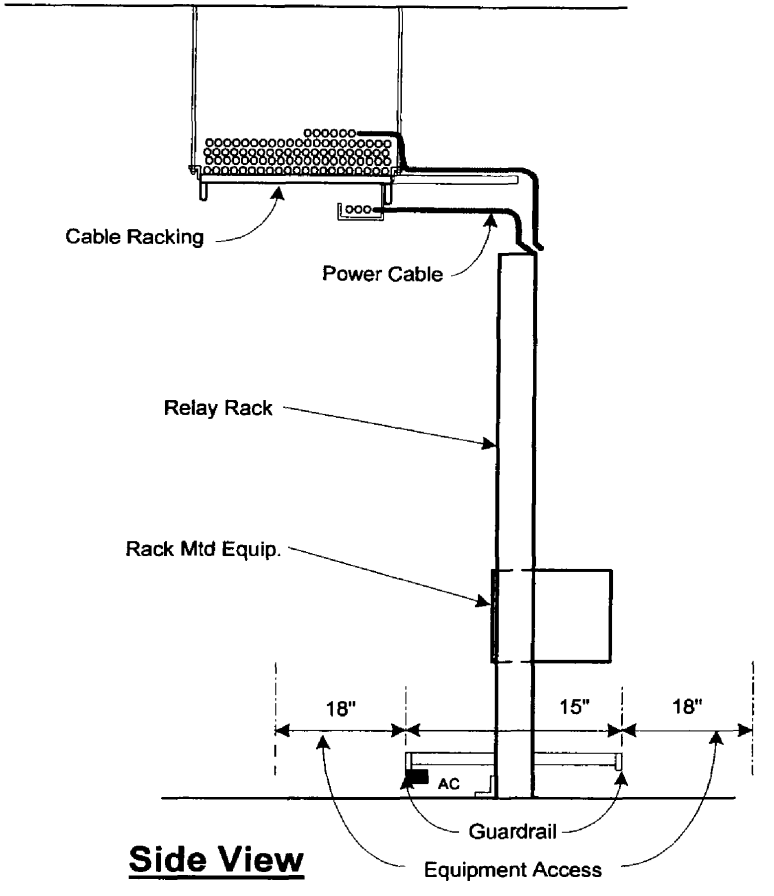
Relay Rack Floor Space is calculated based on a 12" by 51" area basis. This equates to 4.25 square feet per linear foot.



Top View

Front View



Side View

Cageless - Relay Rack

Collocation Typical Office Layout

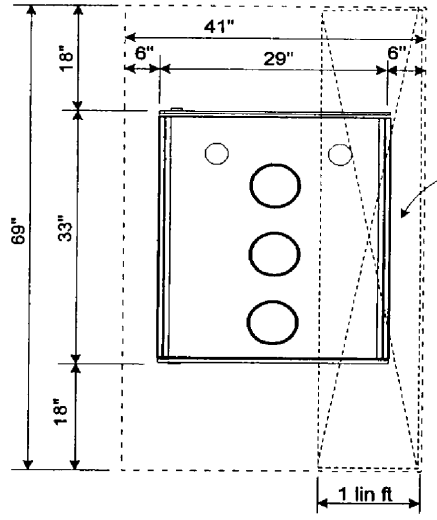
09/01/99

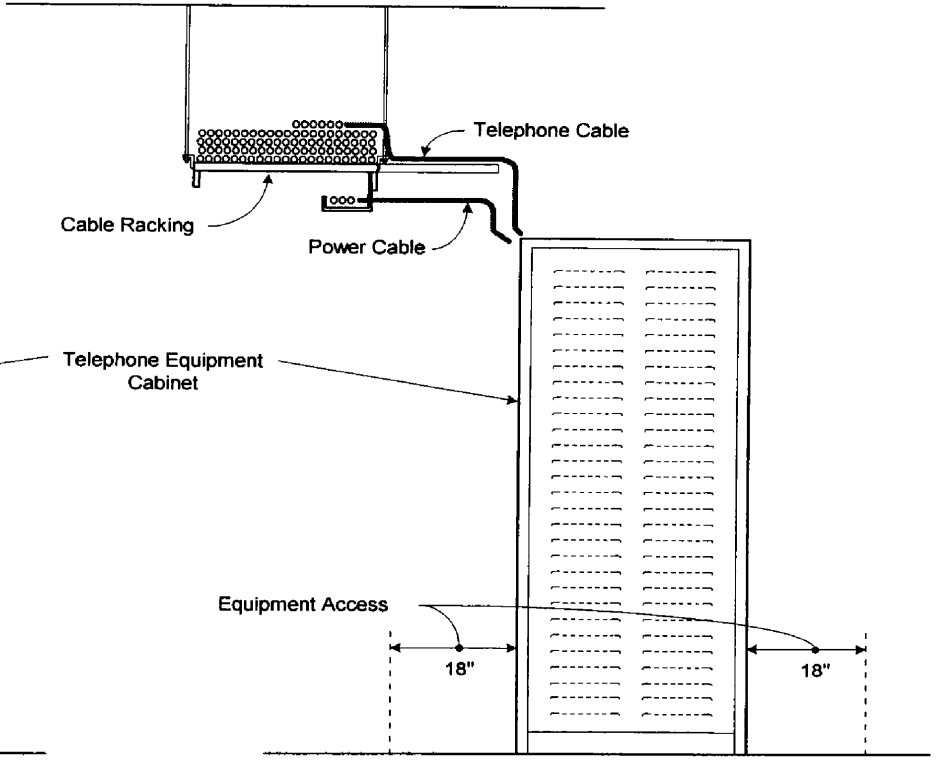
Collocation Drawing No. 6

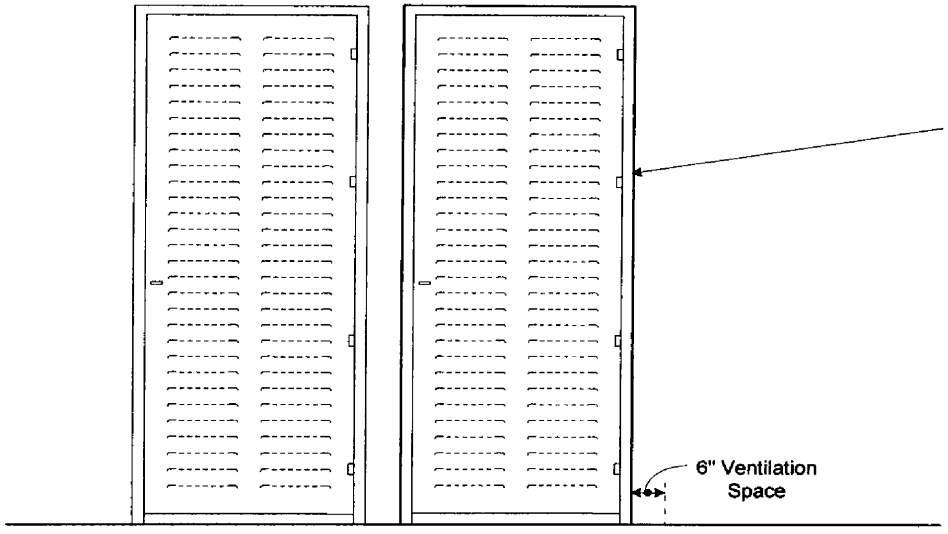
Note:
This drawing is presented for illustrative purposes only. It presents one of many office layouts and construction alternatives. It is not intented as a contract document
Drawing is not to scale.

Cabinet Floor Space is calculated based on a 12" by 69" area basis. This equates to 5.75 square feet per linear foot.

Top View







Front View

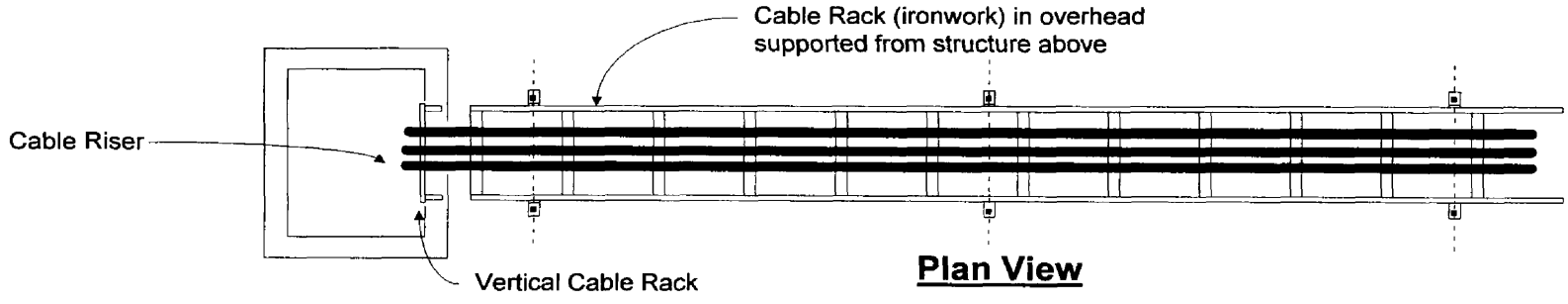
Side View

Cageless - Telephone Equipment Cabinet

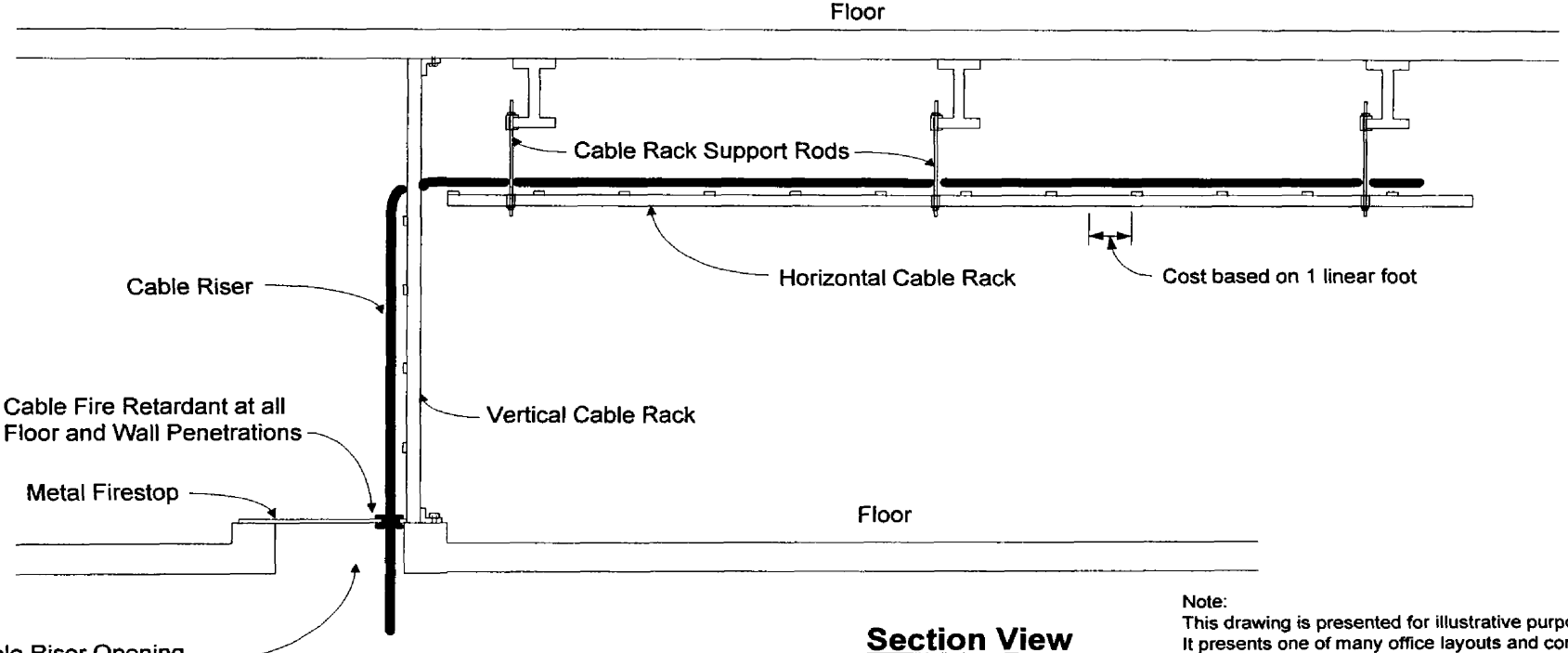
Collocation Office Layout

08/01/00 - b

Collocation Drawing No. 7



Plan View



Section View

Note:
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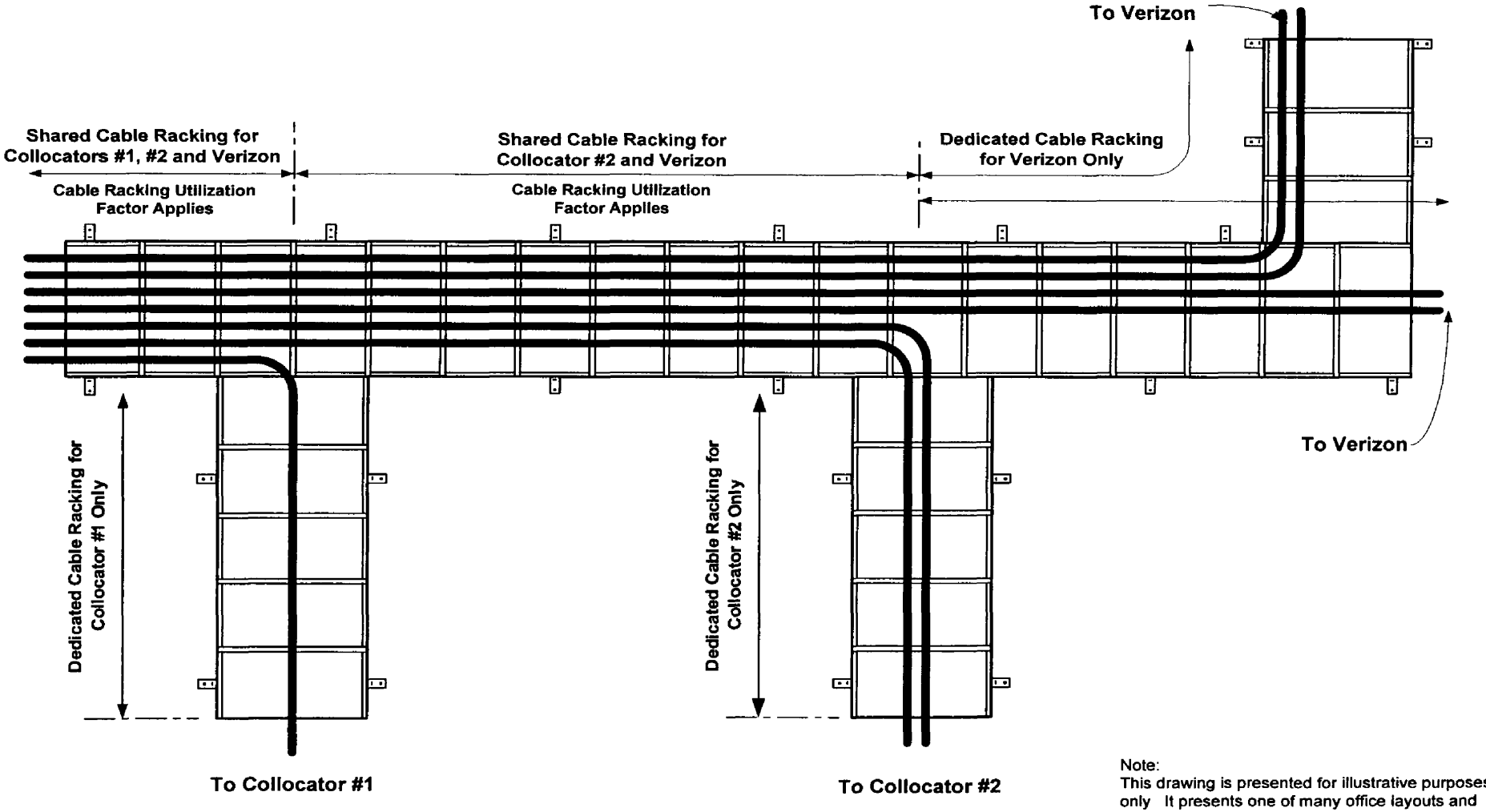
08/01/00 - c

Overhead Superstructure Detail
Collocation Office Layout

Collocation Drawing No. 8



Note:
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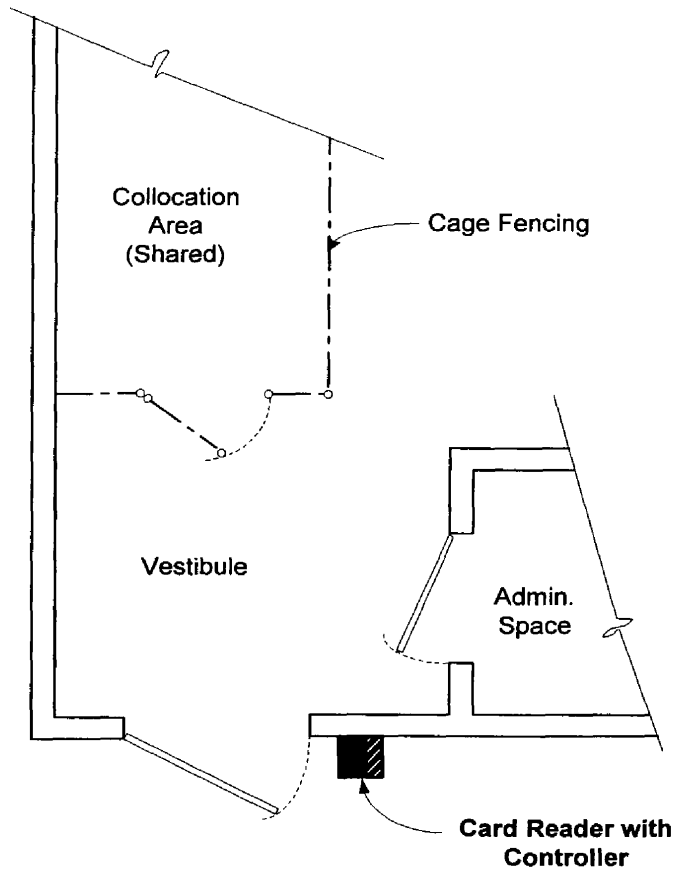
08/01/00 - b

Shared - Dedicated Cable Racking

Collocation Office Layout

Collocation Drawing No. 9



Note:
This drawing is presented for illustrative purposes only. It presents one of many office layouts and construction alternatives. It is not intented as a contract document Drawing is not to scale.

Card Reader with Controller

Security Access
Collocation Office Layout

08/01/00 - c

Collocation Drawing No. 10

Note:
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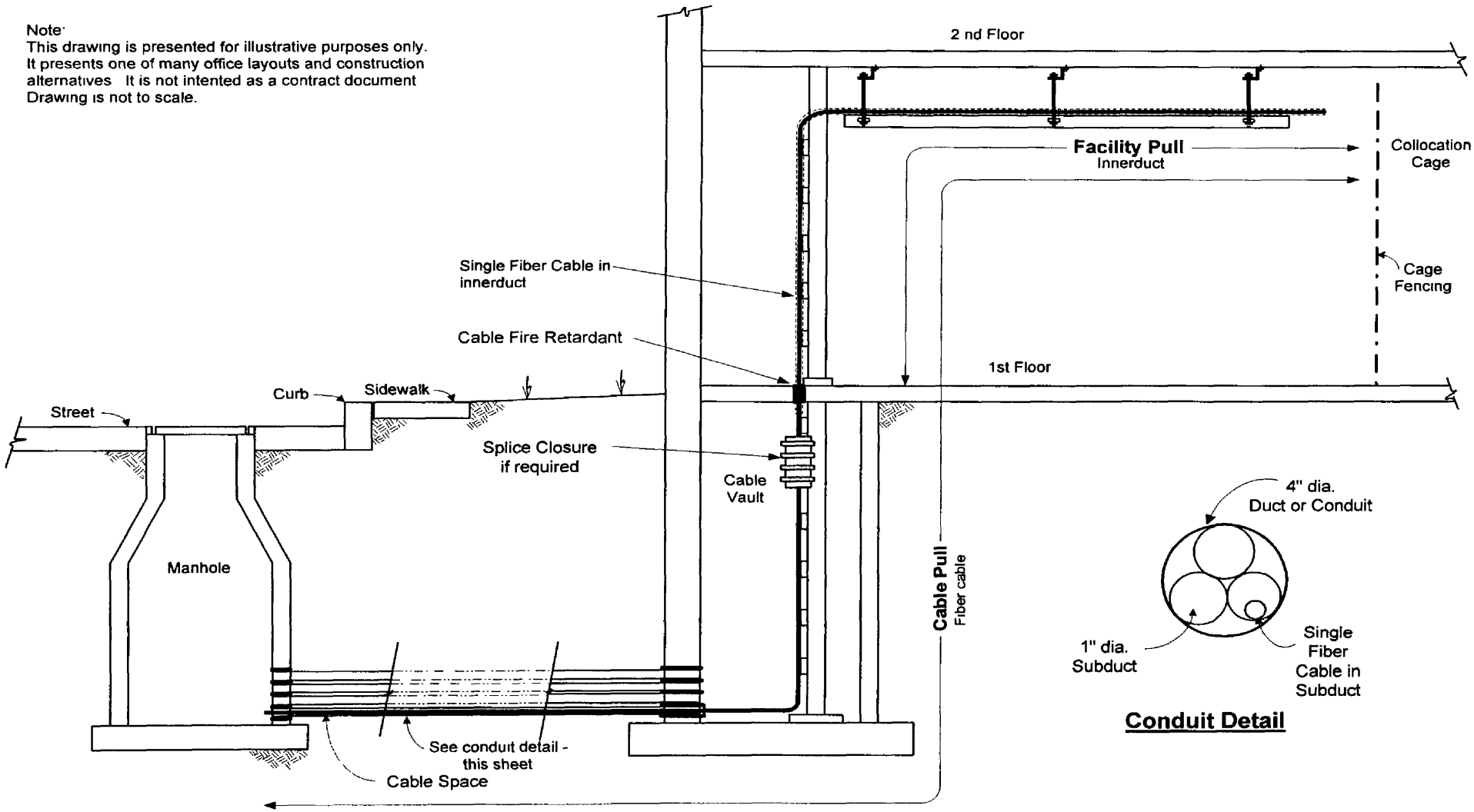
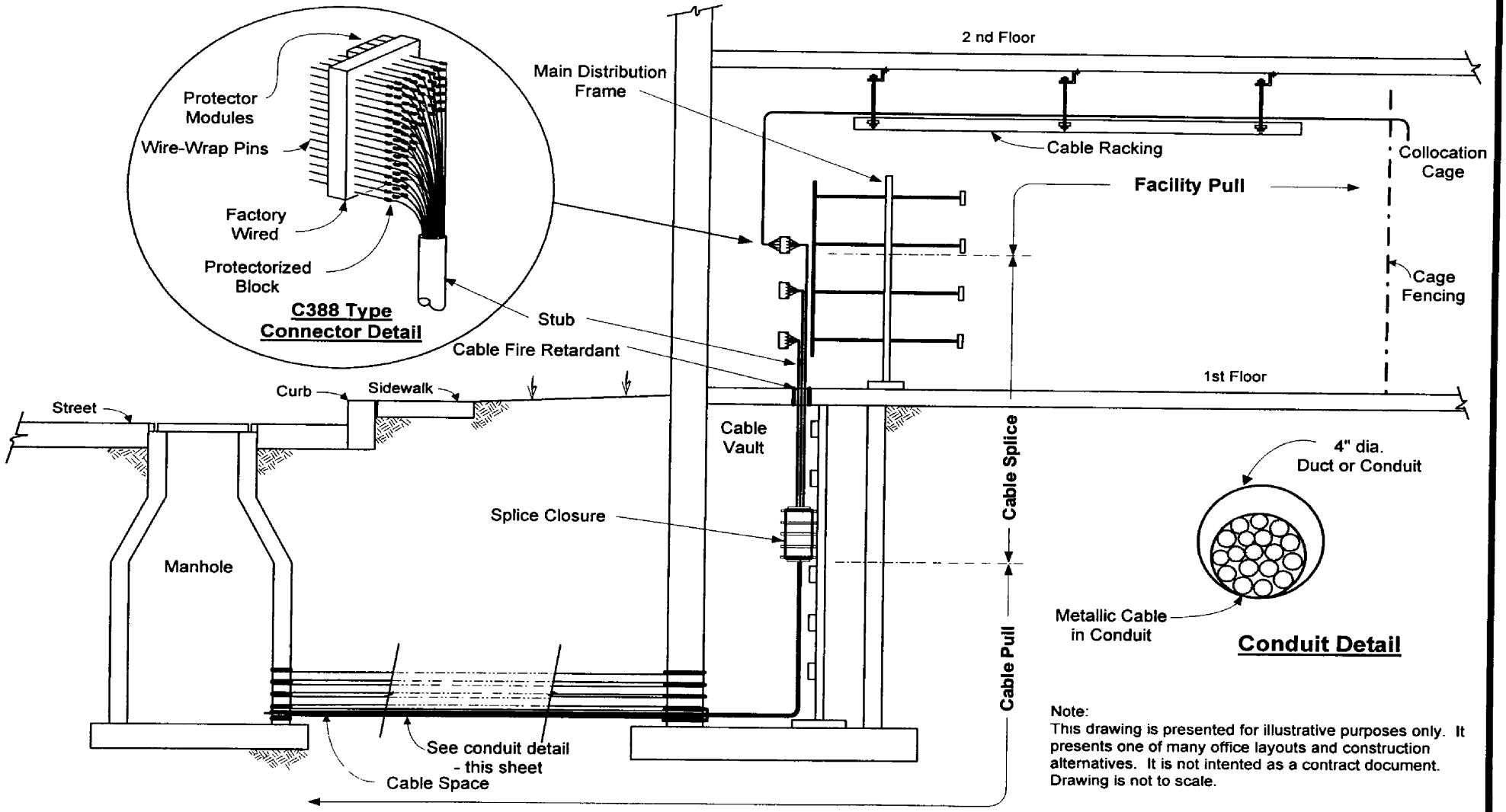


Fiber - Cable Pull, Cable Facility & Cable Space

Collocation Office Layout

08/01/00 - c

Collocation Drawing No. 11

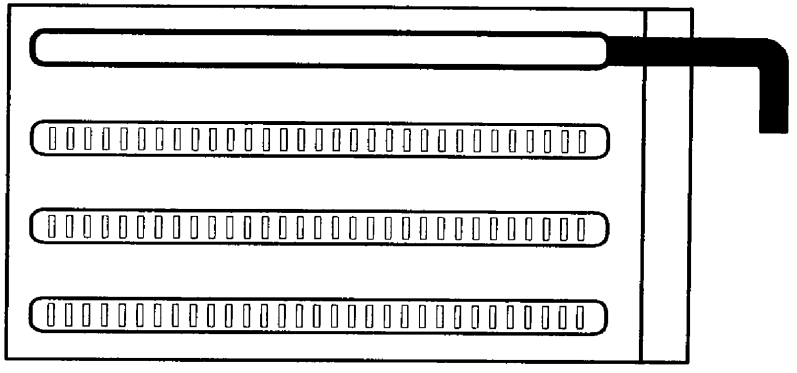


Metallic - Cable Pull, Cable Facility & Cable Space

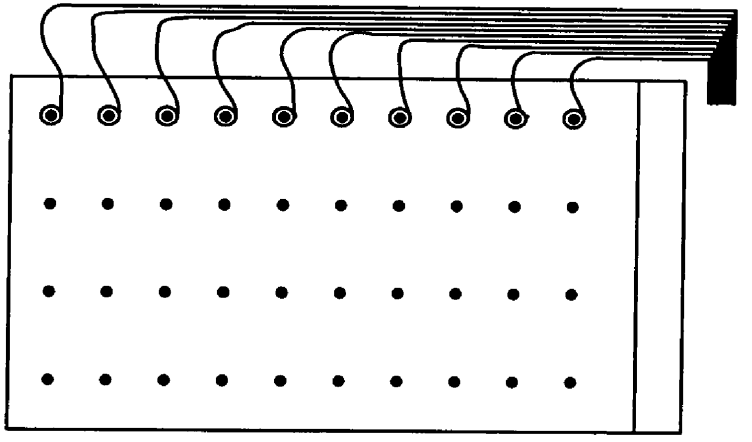
08/01/00 - d

Collocation Office Layout

Collocation Drawing No. 12

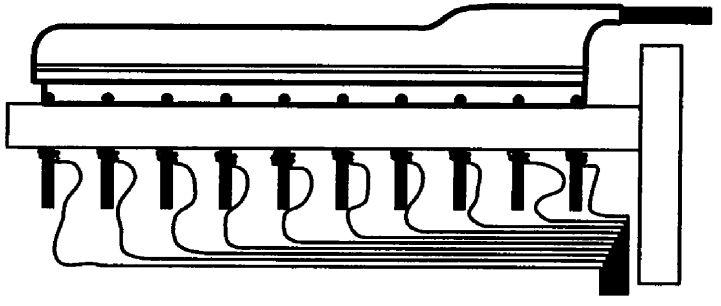


Top View



Top View

Wire-wrapped Connections



Side View

Connectorized

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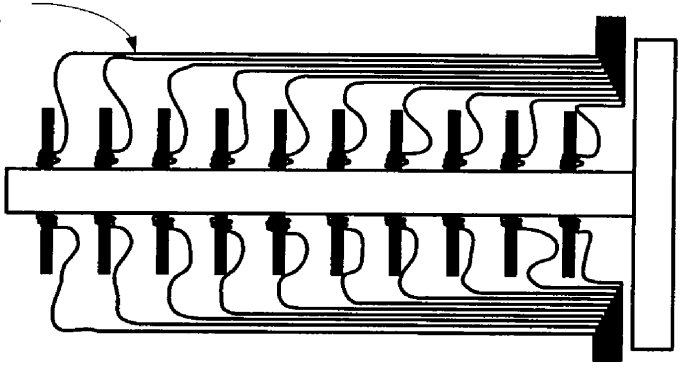


Side View

Unconnectorized

Connectorized and Unconnectorized Connections

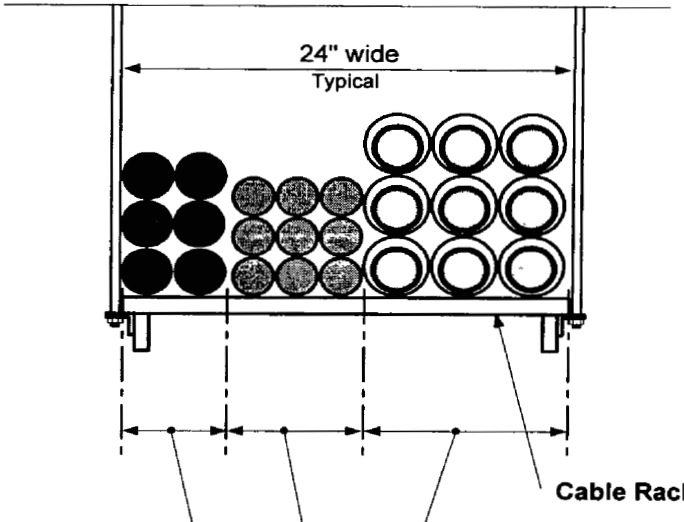
Collocation Office Layout

08/01/00 - b

Collocation Drawing No. 13

Cable Racking Utilization

Cable Racking Utilization is based on the cable capacity (number of cables) for a 24" wide cable rack for the following cable types:



Rack Capacity

Fiber Cable in innerduct: Capacity based on innerduct encasing fiber cable. 145 Innerducts at 1.66" diameter each

DS1 Metallic Cable: 324 28-pair cables at .74" diameter each

DSO Metallic Cable: 200 100-pair cables at 1.20" diameter each

Cable Vault Utilization

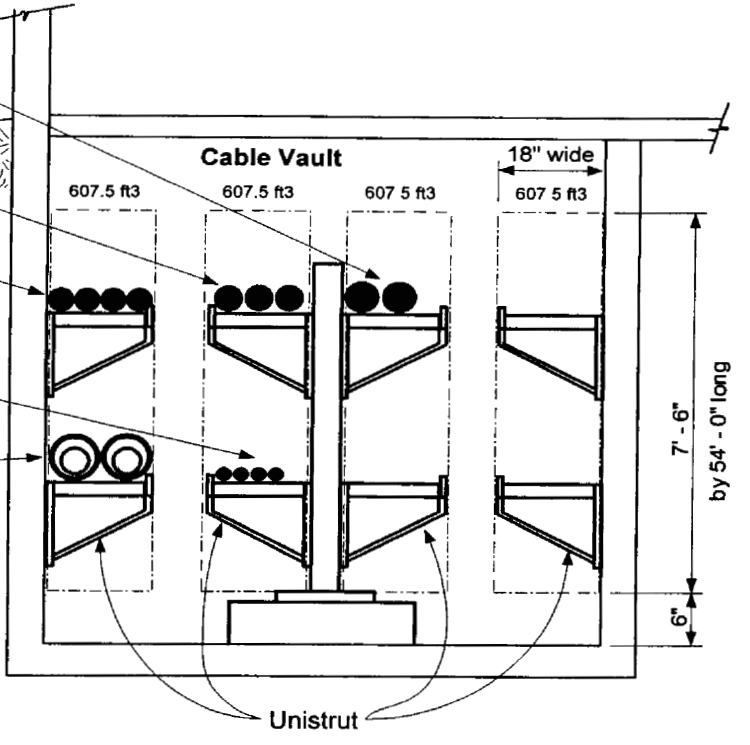
DS0 Metallic 1200 pr. Cable: 2.50" diameter each

DS0 Metallic 900 pr. Cable: 2.38" diameter each

DS0 Metallic 600 pr. Cable: 2.01" diameter each

DS1 Metallic 100 pr. Cable: .96" diameter each

Fiber Cable in Subduct: Subduct = 1.30" dia. each



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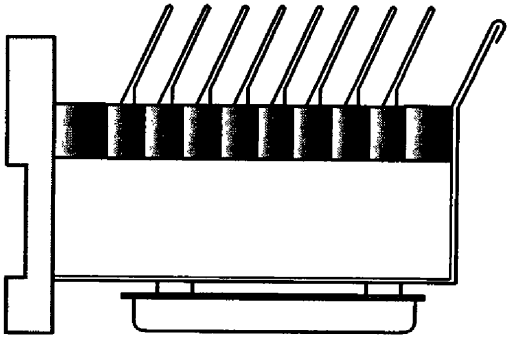
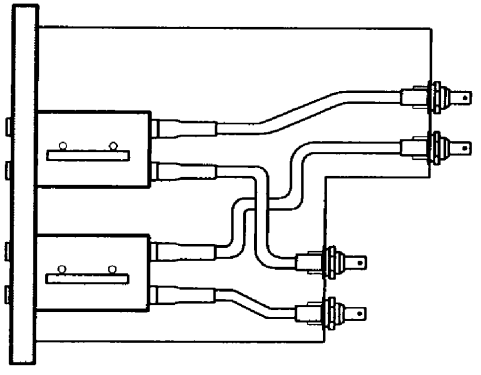
Utilization Factors
Collocation Office Layout

08/01/00 - b

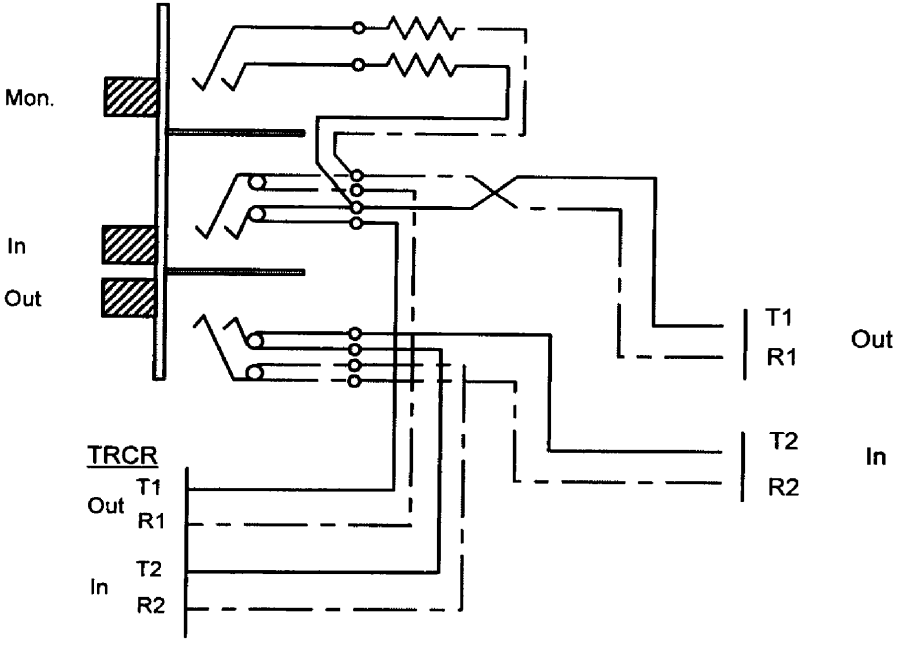
Collocation Drawing No. 14



DSO Telzon (CTB) Terminal Block



DS3 Cross-Connect Panel



DS1 Cross-Connect Panel

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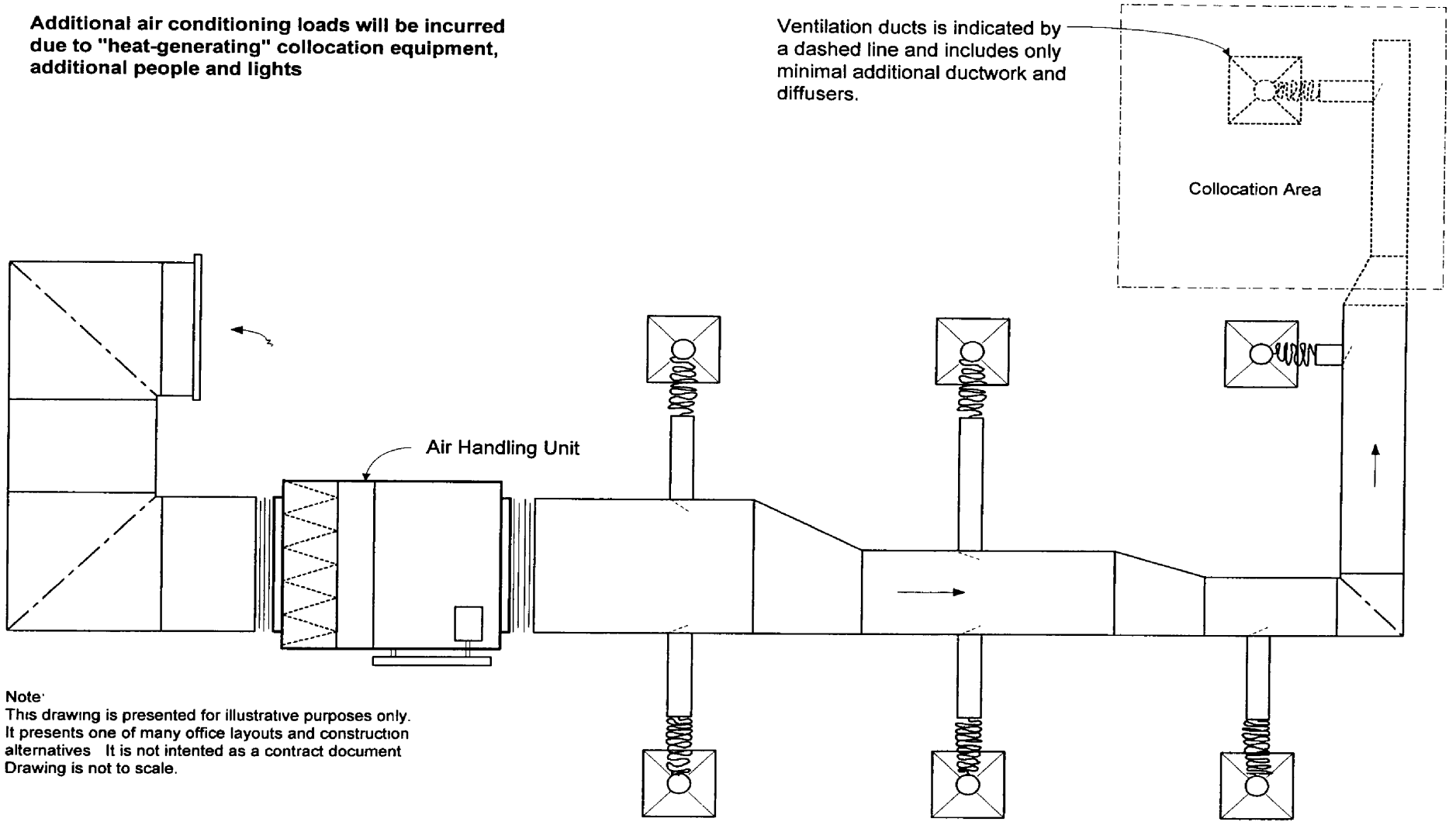
08/01/00 - b

Cable Terminations
Collocation Office Layout

Collocation Drawing No. 15

Additional air conditioning loads will be incurred due to "heat-generating" collocation equipment, additional people and lights

Ventilation ducts is indicated by a dashed line and includes only minimal additional ductwork and diffusers.



Note:
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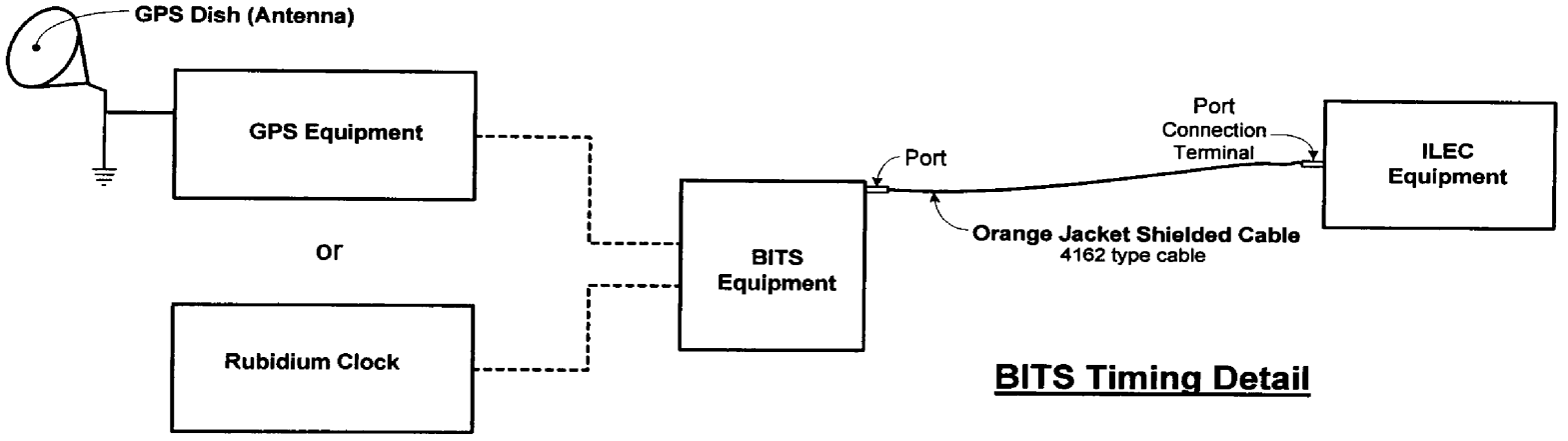
Ventilation Ducts HVAC - Minor

Collocation Office Layout

08/01/00 - e

Collocation Drawing No. 16



BITS Timing Detail

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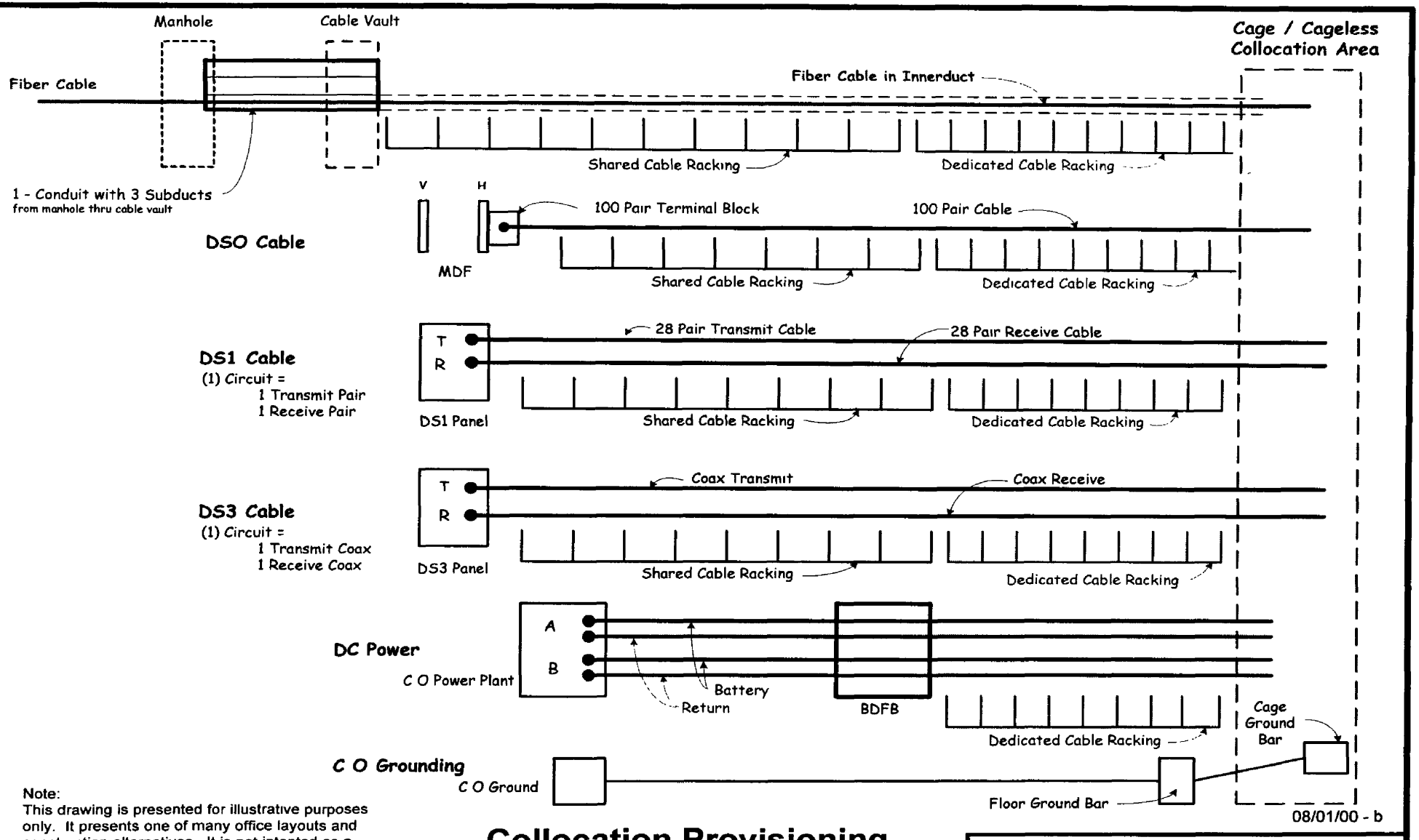
08/01/00 - b

BITS Timing

Collocation Office Layout

Collocation Drawing No. 17



Note:
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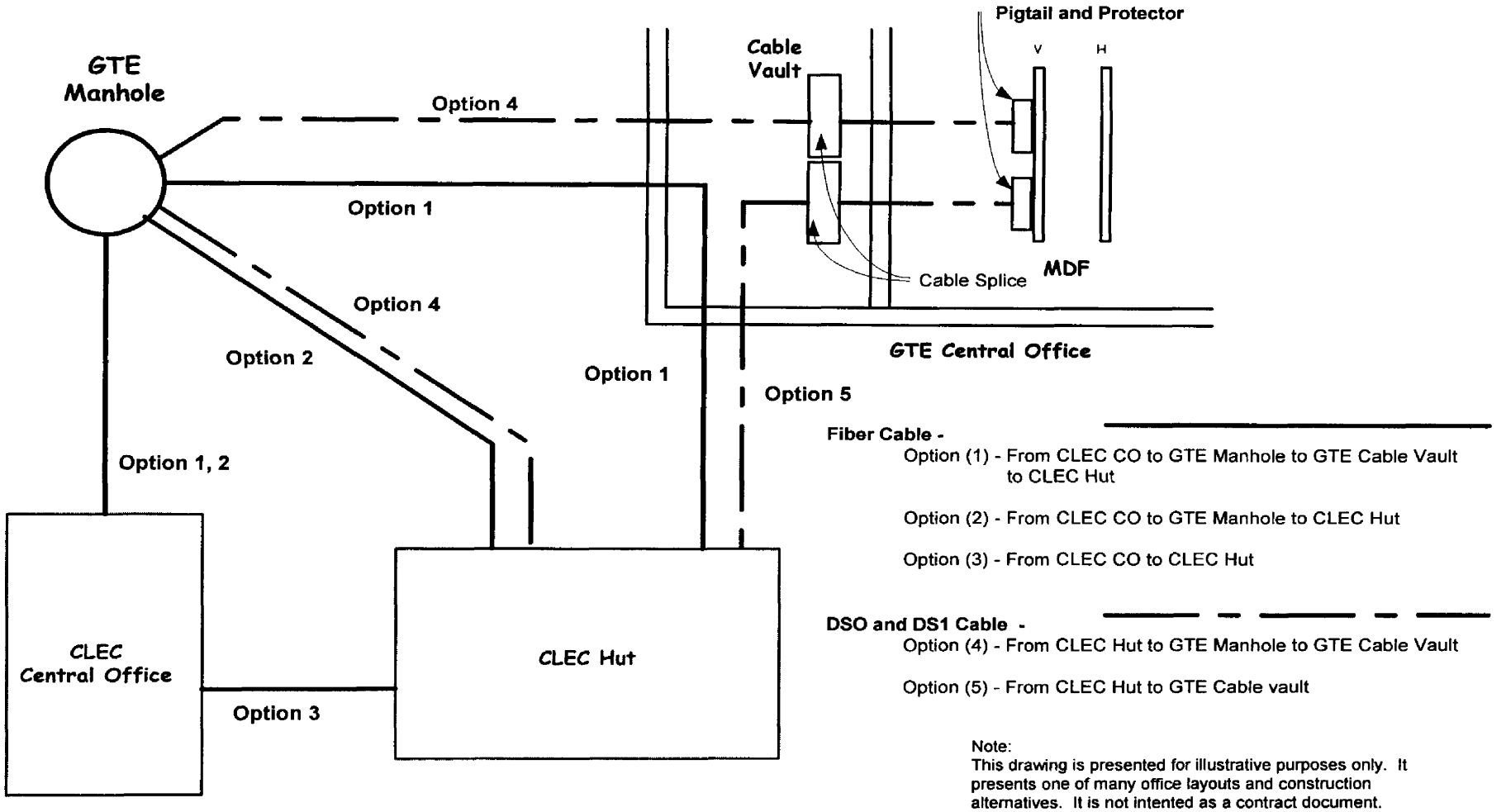
Collocation Provisioning
Collocation Office Layout

Collocation Drawing No. 18

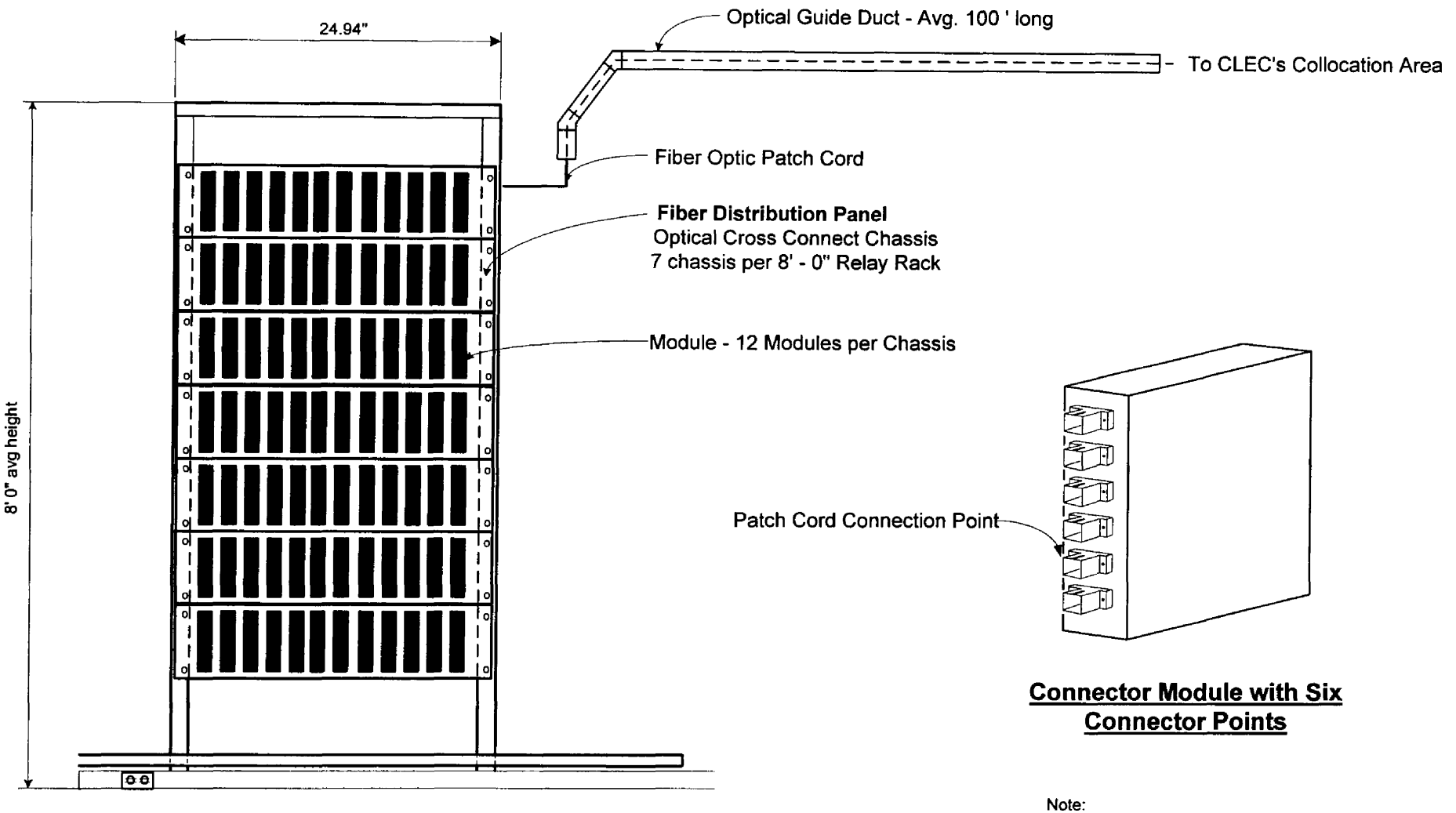


Adjacent On-Site Provisioning

Collocation Typical Office Layout

02/20/00

Collocation Drawing No. 19



Connector Module with Six Connector Points

Note:
This drawing is presented for illustrative purposes only. It presents one of many office layouts and construction alternatives. It is not intented as a contract document. Drawing is not to scale

Fiber Optic Patch Cord

Collocation Office Layout

08/18/00 - a

Collocation Drawing No. 20

Expanded Interconnection Services
Glossary of Elements

NON-RECURRING CHARGES

(1) Engineering/Major Augment Fee – Caged/Cageless

The Engineering/Major Augment Fee applies for each initial Caged or Cageless collocation request and major augment requests for existing Caged or Cageless collocation arrangements. This charge recovers the costs of the initial walkthrough to determine if there is sufficient collocation space, the best location for the collocation area, what building modifications are necessary to provide collocation, and if sufficient DC power facilities exist in the premises 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. Major Augments are those requests that require power, add equipment that generates more BTUs of heat, or require an increase in the caged or cageless floor space, over what the ALEC 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.

(2) Minor Augment Fee

The Minor Augment Fee applies for each minor augment request of an Existing Caged, Cageless, Virtual, or Microwave collocation arrangement that does not require additional power systems, HVAC system upgrades, or additional cage space.

(3) Access Card Administration

The Access Card Administration rate covers activities associated with the issuance and management of premises access cards. The rate is applied on a per card basis.

(4-8) Cage Enclosure

The Cage Enclosure rate is applied per caged arrangement. This rate includes the labor and materials to recover the costs incurred in constructing the ALEC's cage, cage gate, and grounding bar. There are five caged enclosure rate elements based on the size of the cage: 25 to 100 square feet; 101 to 200 square feet; 201 to 300 square feet; 301 to 400 square feet; and 401 to 500 square feet.

Expanded Interconnection Services
Glossary of Elements

(9) Cage Enclosure Augment

The Cage Enclosure Augment rate is applied per square foot of fencing when a ALEC requests additional fencing for an existing caged arrangement.

(10) Cage Grounding Bar

The Cage Grounding Bar charge applies in situations where the ALEC makes arrangements to install its own cage enclosure. The charge applied per cage enclosure and recovers the material and labor costs to install the grounding bar, including necessary grounding wire.

(11) Overhead Superstructure

The Overhead Superstructure charge is applied for each initial caged and cageless collocation application. The Overhead Superstructure charge is designed to recover the Company's engineering, material, and installation costs for extending dedicated overhead superstructure.

(12) Facility Pull – Engineering

The Facility Pull Engineering charge is applied per project to recover the engineering costs of pulling metallic or fiber optic patchcord cables from the collocation cage or relay rack to the Main Distribution Frame block, DSX panel or fiber distribution panel. The charge would also apply per project to recover the engineering costs of pulling transmission cable from microwave antennae facilities on the rooftop to the collocation cage or relay rack.

(13-14) Facility Pull – Labor

The Facility Pull charge is applied per cable run and recovers the labor cost of pulling the metallic or fiber optic patchcord cables from the collocation cage or relay rack to the Main Distribution Frame block, DSX panel, or fiber distribution panel.

(15) DSO Cable Termination (Connectorized)

The DSO Cable Termination non-recurring charge is applied per 100 pair DSO cable terminated and is designed to recover the labor cost of

Expanded Interconnection Services
Glossary of Elements

terminating preconnectorized DSO cable from the collocation cage or relay rack to the Main Distribution Frame block or DSX panel.

(16) DS1 Cable Termination (Connectorized)

The DS1 Cable Termination non-recurring charge is applied per 28 pair DS1 cable terminated and is designed to recover the labor cost of terminating preconnectorized DS1 cable from the collocation cage or relay rack to the DSX panel.

(17) DS3 Coaxial Cable Termination (Preconnectorized)

The DS3 Coaxial Cable Termination (Preconnectorized) non-recurring charge is applied per termination to recover the labor cost of terminating preconnectorized DS3 cable from the collocation cage or relay rack to the DSX panel.

(18) DS3 Coaxial Cable Termination (Unconnectorized)

The DS3 Coaxial Cable Termination (Unconnectorized) non-recurring charge is applied per termination to recover the labor cost of terminating unconnectorized DS3 cable from the collocation cage or relay rack to the DSX panel.

(19) Category 5 Cable Termination (Connectorized)

The Category 5 Cable Termination (Connectorized) non-recurring charge is applied per termination to recover the labor cost of terminating connectorized Category 5 cable from the collocation cage or relay rack to the DSX panel.

(20) Fiber Optic Patchcord Termination

The Fiber Optic Patch Cord Termination non-recurring cost includes the labor cost of terminating Fiber Optic Patch Cord cable from the collocation cage or relay rack to the designated Fiber Optic Distribution Panel. This fee is applied on a per termination basis.

Expanded Interconnection Services
Glossary of Elements

(21) Fiber Cable Pull-Engineering

The Fiber Cable Pull-Engineering charge is applied per project to cover the engineering costs for pulling the ALEC's fiber cable, when necessary, into the Company's central office.

(22) Fiber Cable Pull-Place Innerduct

The Fiber Cable Pull-Place Innerduct charge is applied per linear foot to cover the cost of placing innerduct between the cable vault and the

collocation arrangement. Innerduct is the split plastic duct placed from the cable vault to the ALEC's equipment area through which the ALEC's fiber cable is pulled.

(23) Fiber Cable Pull-Labor

This charge is applied per linear foot and covers the labor costs of pulling the ALEC's fiber cable from the closest manhole (or equivalent) to the collocation arrangement.

(24) Fiber Cable Pull-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.

(25) Fiber Cable Splice-Engineering

The Fiber Splice-Engineering charge is applied per splicing project and covers the engineering costs for fiber cable splicing projects.

(26) Fiber Cable Splice

The Fiber Splice charge is applied per fiber cable strand and recovers the labor cost associated with the splicing.

(27) DC Power-Engineering

The DC Power-Engineering charge is applied per project for each caged, cageless, and virtual collocation application. This charge recovers the

Expanded Interconnection Services
Glossary of Elements

Company's engineering costs for providing and terminating DC power runs to the collocation area.

(28) DC Power Cable Pull/Termination

The DC Power Cable Pull/Termination charge is applied per cable run for each caged, cageless, and virtual collocation application. This charge recovers the Company's installation costs for providing and terminating DC power runs to the collocation area.

(29) DC Power Ground Wire

The DC Power Ground Wire charge is applied per wire for each caged, cageless, and virtual collocation application. This charge recovers the Company's material costs for providing and terminating DC power runs to the collocation area.

(30) Virtual Equipment Installation

The Virtual Equipment Installation charge is applied on a per quarter rack (or quarter bay) basis and recovers the costs incurred by the Company for engineering and installation of the virtual collocation equipment. This charge would apply to the installation of powered equipment including but not limited to ATM, DSLAM, frame relay, routers, OC3, OC12, OC24, OC48, and NGDLC.

(31) Virtual Software Upgrades

The Virtual Software Upgrade is applied per base unit when the Company, upon ALEC request, installs software to upgrade equipment for an existing Virtual Collocation arrangement.

(32) Virtual Card Installation

The Virtual Card Installation charge is applied per card when the Company, upon ALEC request, installs additional cards for an existing Virtual Collocation arrangement.

Expanded Interconnection Services
Glossary of Elements

(33) Engineering/Major Augment Fee – Virtual

The Engineering/Major Augment Fee applies for each initial Virtual collocation request and major augment requests for existing Virtual collocation arrangements. This charge recovers the costs of the initial walkthrough to determine if there is sufficient collocation space, the best location for the collocation area and if sufficient DC power facilities exist in the premises 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.

Major Augments are those requests that require AC or DC power, add equipment that generates more BTUs of heat over what the ALEC requested in its original application. A complete application and Engineering Fee will be required when submitting a virtual collocation request that requires a major augment.

MONTHLY RECURRING CHARGES

(34) Building Modification

The Building Modification charge is applied to each caged and cageless arrangement and is associated with provisioning the following items in the Company's premises: security, dust partition, ventilation ducts, demolition/site work, lighting, outlets, and grounding equipment.

(35) Environmental Conditioning

The Environmental Conditioning charge is applied to each caged and cageless arrangement on a per 40 amp increment based on the ALEC's DC Power requirements. This charge is associated with the provisioning of heating, ventilation, and air conditioning systems for the ALEC's equipment in the Company's premises.

(36) Caged Floor Space

The Caged Floor Space is the cost per square foot to provide environmentally conditioned caged floor space to the ALEC. Environmentally conditioned space is that which has proper humidification and temperature controls to house telecommunications equipment. The

Expanded Interconnection Services
Glossary of Elements

cost includes only that which relates directly to the land and building space itself.

(37) 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.

(38) 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.

(39) Cable Subduct Space–Manhole

This charge applies per subduct and recovers the cost of the space that the outside plant fiber occupies within the manhole.

(40) 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 from the manhole (or equivalent) to the cable vault.

(41-43) Fiber Cable Vault Splice and Space

The Fiber Cable Vault Splice charge applies per fiber splice closure (i.e., per 48 and 96 fiber cable) and covers the material cost associated with the ALEC's fiber cable splice within the cable vault. The Fiber Cable Vault utilization monthly charge applies per subduct and covers the space that the ALEC's fiber cable utilizes in the cable vault.

(44) Cable Rack Shared Space-Metallic

The Cable Rack Space–Metallic charge is applied for each DSO, DS1, and DS3 cable run (e.g. from the cage or cageless arrangement to the Main Distribution Frame or equivalent). The charge is designed to recover the space utilization cost that the ALEC's metallic and coaxial cable occupies within the Company's cable rack system.

Expanded Interconnection Services
Glossary of Elements

(45) Cable Rack Shared Space-Fiber

The Cable Rack Space-Fiber charge per innerduct foot recovers the space utilization cost that the ALEC's fiber cable occupies within the Company's cable rack system (e.g., from the vault to the cage or cageless arrangement; from the cage or cageless arrangement to the Fiber Distribution Panel).

(46) DC Power

The DC Power charge is applied on a per 40 amp (load) basis. This charge is designed to recover the monthly facility and utility expense to power the collocation equipment.

(47) 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.

(48) 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.

(49) 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.

(50) Virtual Equipment Maintenance

The Virtual Equipment Maintenance charge is applied on a per quarter rack (or bay) basis and recovers the costs incurred by the Company for maintenance of the ALEC's virtual collocation equipment. This charge would apply to the maintenance of equipment including, but not limited to, ATM, DSLAM, frame relay, routers, OC3, OC12, OC24, OC48 and NGDLC.

Expanded Interconnection Services
Glossary of Elements

ADJACENT NON-RECURRING CHARGES

(51) 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.

(52) Adjacent Metallic 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.

(53) Adjacent Metallic 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.

(54-55) 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 equivalent.

(56-57) 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 DSX panel.

Expanded Interconnection Services
Glossary of Elements

(58-59) 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 DSX panel.

(60) Adjacent Category 5 Cable Termination (Connectorized)

These charges cover the labor cost of terminating this type of interconnection wire (cable) for adjacent collocation to the DSX panel

(61) Adjacent Fiber Cable Termination

This charge covers the labor of terminating fiber cable, per fiber strand, for adjacent collocation to the fiber distribution panel.

(62) Adjacent Fiber Cable Pull-Engineering

The Adjacent Fiber Cable Pull-Engineering fee provides for engineering associated with pulling the ALEC'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.

(63) Adjacent Fiber Cable Pull-Place Innerduct

This charge covers the cost for innerduct on a per linear foot basis from the cable vault to the ALEC's equipment area through which the ALEC's fiber is pulled.

(64) Adjacent Fiber Cable Pull - Labor

This charge covers the labor costs for pulling ALEC fiber cable for an adjacent collocation arrangement. Refer to Adjacent Fiber Cable Pull-Engineering above.

Expanded Interconnection Services
Glossary of Elements

(65) 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.

(66) Adjacent Metallic Cable Pull-Engineering

This charge 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.

(67) Adjacent Metallic Cable Pull - Labor

This charge per linear foot covers the labor costs of pulling metallic cable for Adjacent collocation into the Company wire center.

(68) Adjacent Metallic Cable Splice-Engineering

This charge covers the outside plant engineering costs for cable splice projects associated with an Adjacent collocation arrangement.

(69) Adjacent Metallic Cable Splicing (greater than 200 pair)

This charge is for the labor to splice metallic cables and is based on a per pair spliced.

(70) Adjacent Metallic Cable Splicing (less than 200 pair)

This charge is for the labor to splice metallic cables and is based on a per pair spliced.

(71) Adjacent Fiber Cable Splicing-Engineering

This charge covers the outside plant engineering costs for cable splice projects associated with an Adjacent collocation arrangement.

Expanded Interconnection Services
Glossary of Elements

(72) Adjacent Fiber Cable Splicing (48 fiber cable or less)

This charge per fiber strand covers the labor to splice fiber cables.

(73) Adjacent Fiber Cable Splice (greater than 48 fiber)

This charge per fiber stand covers the labor to splice fiber cables.

ADJACENT MONTHLY RECURRING CHARGES

(74) Adjacent Subduct Space–Manhole

This charge per subduct covers the space utilization cost that the outside plant fiber cable occupies within the manhole.

(75) Adjacent Subduct Space

This charge per linear foot covers the space utilization cost of the subduct that the outside plant fiber cable occupies within the conduit system.

(76) Adjacent Conduit Space (4" Duct)-Metallic-Manhole

This charge covers the space utilization cost that the outside plant metallic cable occupies within the manhole.

(77) Adjacent Conduit Space (4" Duct)-Metallic Cable

This charge covers the space utilization cost that the outside plant metallic cable occupies within the conduit system.

(78) Adjacent Facility Termination DS0 Cable-Material

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.

(79) Adjacent Facility Termination DS1 Cable-Material

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.

Expanded Interconnection Services
Glossary of Elements

(80) Adjacent Facility Termination DS3 Cable-Material

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.

(81-91) Adjacent Cable Vault Splice and Space

The Adjacent Cable Vault Splice applies per splice enclosure (e.g., per 1200 pair cable) and covers the cost associated with the ALEC's cable splice closure within the cable vault. The Adjacent Cable Vault Space charge applies per cable for metallic cable and per subduct for fiber cable, and covers the space that the ALEC's cable utilizes in the cable vault.

(92-95) Adjacent Cable Rack Shared-Space

This charges cover the space utilization cost that the ALEC's fiber, metallic or coaxial cables occupies within the cable rack system. The charge is based on the linear feet occupied.

MISCELLANEOUS NON-RECURRING CHARGES

(96) BITS Timing

The charge for BITS Timing includes engineering, materials, and labor costs to wire a BITS port to the ALEC's equipment. If requested, it is applied on a per project basis.

(97) Collocation Premise Space Report - Optional

When requested by a ALEC, the Company will submit a report that indicates the Company's available collocation space in particular premises. The report will be issued within ten calendar 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.

Expanded Interconnection Services
Glossary of Elements

(98) Engineering/Major Augment Fee – Microwave

The Engineering for Microwave Collocation applies when an existing Caged and Cageless collocation arrangement is augmented with newly installed microwave antennae and other exterior facilities. This charge recovers the costs of the initial walkthrough to determine if there is sufficient space, the best location for the microwave antennae and other exterior facilities, what building modifications are necessary, if any, and if sufficient support facilities exist in the premises to accommodate the microwave antennae and other exterior facilities. This fee also includes the total time for the Building Services Engineer to coordinate the entire project.

(99) Facility Pull (Microwave) - Labor

The charge applies on a per linear foot basis to recover the facility pull costs of pulling transmission cable from microwave antennae facilities on the rooftop to the collocation cage or relay rack for microwave collocation arrangements.

(100-111) Cable Material Charges

The ALEC has the option of providing its own cable or the Company may, at the ALEC's request, provide the necessary transmission and power cables. If the Company provides these cables, the applicable Cable Material Charge will be charged.

(112-117) Miscellaneous Services-Labor

These Miscellaneous Service-Labor non-recurring charges cover the additional cost of labor, if required by the ALEC, to complete a collocation request.

MISCELLANEOUS MONTHLY RECURRING CHARGES

(118) Microwave Rooftop Space

Microwave Rooftop Space is the cost per square foot to provide rooftop space to the ALEC for microwave antennae and other exterior facilities. The cost includes only that which relates directly to the land and building space itself.

Expanded Interconnection Services
Glossary of Elements

(119) BITS Timing

The BITS Timing monthly charge per port is designed to recover the equipment and installation cost of provide synchronized timing for electronic communications equipment.

(120) Facility Termination – Fiber Optic Patchcord

The Facility Termination (Optical) charge is applied per optical connector terminated. This charge recovers the labor and material cost of the optical termination.

(121) Cable Duct Space - Fiber Optic Patchcord

The Cable Duct Space (Optical) charge is applied per fiber strand. This charge is for the material, engineering and installation cost for the fiber guide duct system material used to protect, support and route the fiber patch cord between the collocators equipment and the Verizon's designated collocators Fiber Distribution Panel.

ICBs for Microwave Collocation

(122) Building Penetration for Cable

The reasonable costs to penetrate buildings for microwave cable to connect microwave antennae facilities and other exterior facilities to the transmission equipment in the collocation cage or relay rack will be determined and applied on an individual case basis, where technically feasible, as determined by the initial and subsequent Engineering surveys.

(123) Special Work

The costs incurred by the Company for installation of ALEC's microwave antennae and other exterior facilities that are not recovered via other microwave rate elements will be determined and applied on an individual case basis.

Expanded Interconnection Services
Glossary of Elements

DEDICATED TRANSIT SERVICE NON-RECURRING CHARGES

(124, 132, 141) Service Order-Semi-Mechanized

The Service Order-Semi-mechanized rate is applied per DTS order to the requesting ALEC for the recovery of DTS order placement and issuance costs when the semi-mechanized ordering interface is utilized.

(125, 133, 142) Service Order-Manual

The Service Order-Manual rate is applied per DTS order to the requesting ALEC for the recovery of DTS order placement and issuance costs when the semi-mechanized ordering interface is not utilized.

(126, 134-135, 143) Service Connection-CO Wiring

The Service Connection-CO Wiring rate is applied per DTS circuit to the requesting ALEC for recovery of DTS jumper material, wiring, and service turn-up for DS0, DS1, DS3 and dark fiber circuits.

(128-131,137-140,145-148) Service Order/Service Connection-Disconnect

The Service Order-Disconnect and Service Connection-Disconnect rates are applied per DTS order or circuit, as necessary, to the requesting ALEC for the recovery of DTS disconnect costs for DS0, DS1, DS3 and dark fiber.

(127, 136, 144) Service Connection-Provisioning

The Service Connection-Provisioning rate is applied per DTS order to the requesting ALEC for recovery of circuit design and labor costs associated with the provisioning of DS0, DS1, DS3 and dark fiber circuits for DTS.

Expanded Interconnection Services Cost Study Acronyms

A	
AC	Alternating Current
ACF	Annual Cost Factors
ACTL	Access Carrier Location (CLLI)
AMPS	Asset Management Property Systems
amps	Amperage
ASR	Access Service Request

B	
BDFB	Battery Distribution Fuse Bay
BITS	Building Integrated Timing System
BRPC	Business Response Provisioning Center
BZT	Business Zone Technician

C	
CC	Composite Clock
CKT	Circuit
CLEC	Competitive Local Exchange Carrier
CO	Central Office
COE	Central Office Equipment
COEI	Central Office Equipment Installation
CPE	Customer Premise Equipment
CPMS	Capital Programs Management System
CZT	Customer Zone Technician

D	
DC	Direct Current
DSX	Digital Signal Cross-connect

E	
EIS	Expanded Interconnection Service

Expanded Interconnection Services Cost Study Acronyms

F

FCC	Federal Communications Commission
FOT	Fiber Option Terminal

G

GC	Guest Collocator
GTEAMS	GTE Advanced Materials Systems

H

HC	Host Collocator
HPU	Hours Per Unit
HVAC	Heating, Ventilation and Air Conditioning

I

IC	Interconnect Company (IXC)
ICB	Individual Case Basis
ICM	Incremental Costing Model
ILEC	Incumbent Local Exchange Carrier
IXC	Interexchange Carrier (IC)

J

K

kw	Kilowatts
kwh	Kilowatt Hour

L

L&B	Land and Buildings
LEC	Local Exchange Carrier
Lin ft	Linear Feet

Expanded Interconnection Services Cost Study Acronyms

M

MDF	Main distribution Frame
mh	Manhole
MRC	Monthly Recurring Cost
MCM	Thousand Circular Mils

N

NACC	National Access Contact Center
"N" ASR	New - Access Service Request
NOMC	National Open Market Center
NRC	Non-recurring Cost

O

OMT	Open Market Transition
OSP	Outside Plant

P

POTS	Plain Old Telephone Service
PRS	Primary Reference Source
PUC	Public Utilities Commisssion

Q

R

RIT	Regional Implementation Team

S

SME	Subject Matter Expert
sf	Square Foot
sq ft	Square Foot
SSP	Single Source Provider
SWB	Switchboard

Expanded Interconnection Services Cost Study Acronyms

T

TBL	Trouble
TELRIC	Total Element Long Run Incremental Cost
TSG	Timing Signal Generator
TSLRIC	Total Service Long Run Incremental Cost

U

UC	Unconnectorized

V

W

WM	Wholesale Markets

X, Y, Z

Verizon Expanded Interconnection Services
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Section 2

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Verizon: EIS Study - Florida
Non-recurring Rate Development
Engineering/Major Augment - Caged/Cageless

Ln	Cost Elements	Increment	Source		Cost	Frequency	Units		Subtotal
					(a)	(b)	(c)		(d) = (a)*(b)*(c)
	Engineering Costs								
1	Initial Central Office Collocation Site	per occurrence	Engineering-CS	$	1,584.46	29%	1	$	459.49
2	Additional Central Office Collocation Site	per occurrence	Engineering-CS	$	1,296.84	71%	1	$	920.76
3	**Non-recurring Cost per Unit**		Sum(Ln 1.. Ln 2)					$	1,380.25
4	**Rate Element**		Ln 3					$	1,380.25

Note:
The frequencies for the Engineering/Major Augment Fee NRC are the number of initial collocation applications for a given central office (29%) and the number of applications in central offices where collocation applications have been already received (71%). These percentages are applied to the "Initial" and "Additional" cost elements in order to derive one rate.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Minor Augment

Ln	Cost Elements	Increment	Source	Cost	Units	Subtotal
				(a)	(b)	(c) = (a)*(b)
	Engineering Costs					
1	Minor Augment Fee	per occurrence	Engineering-CS	$ 256.69	1	$ 256.69
2	**Non-recurring Cost per Unit**		Ln 1			$ 256.69
3	**Rate Element**		Ln 2			$ 256.69

Verizon: EIS Study - Florida
Non-recurring Rate Development
Engineering/Major Augment - Microwave

Ln	Cost Elements	Increment	Source	Cost
				(a)
1	Microwave Only	per occurrence	Engineering-CS	1,091.17
2	**Non-recurring Cost per Unit**		Ln 1	1,091.17
3	**Rate Element**		Ln 2	1,091.17

Verizon: EIS Study - Florida
Non-recurring Cost Development
Engineering

		Engineering/Major Augment				Minor Augment			
		Initial C.O. Collocation Site[1]		Additional C.O. Collocation Sites or Major Augment to Current site[2]		Minor Augmentation to Current Service Arrangements[3]		Microwave Collocation Site	
Description	Loaded Labor Rate	Initial Site Hours	Initial Site Cost	Additional or Major Augment Site Hours	Additional or Major Augment Site Cost	Change Site Hours	Change Site Cost	Microwave Site Hours	Microwave Site Cost
	A = LLR-1	B	C = A * B	D	E = A * D	F	G = A * F	H	I = A * H
Pre-Acceptance (Internal Site Audit)									
(Review of CO on initial application from collocator)									
Building Engineer									
CO Equipment Engineer									
Post-Acceptance									
(Collocators final decision to collocate in a specific CO)									
Building Engineer									
Engineers time to oversee construction									
CO Equipment Engineer									
Engineers time for Kick-Off Meeting									
Engineers time for 3 - 30 min. status meetings									
Engineers time for 1- 30 min. status meetings									
Outside Plant Engineering									
Engineers time for Kick-Off Meeting									
Engineers time for 3 - 30 min. status meetings									
Engineers time for 1 - 30 min status meetings									
Total Cost		**$ 1,584.46**		**$ 1,296.84**		**$ 256.69**		**$ 1,091.17**	

Notes:
1) "Initial" site represents a CO in which no previous collocation has taken place.
2) "Major Augment" represents a physical change or modification to an existing collocation site, remodel, expansion, add OSP cable, DC Power or additional new collocator.
"Additional CO Collocation" site represents a new site at a CO with existing collocation.
3) "Minor Augmentation" is a change in current service provisioning for a specific collocator within the central office, specific to blocks, panels, intra-office cables.

Highlighted information is redacted for reason #2. Parties may obtain this information by signing a non-disclosure agreement.

Ln	Cost Elements	Increment	Source	Cost	Units	Subtotal
				(a)	(b)	(c) = (a) *(b)
	Access Card Administration					
1	New/Replacement	per card	Access Card Admin-CS	$ 27.75	1	$ 27.75
2	Change	per card	Access Card Admin-CS	$ 3.89	1	$ 3.89
3	**Non-recurring Cost per Unit**		Ln 1			$ 31.64
4	**Rate Element**		Ln 2			$ 31.64

Verizon: EIS Study - Florida
Non-recurring Cost Development
Access Card Administration

New/Replacement Processing Time Tasks	Process Time (min)	Hours	Loaded Labor Rate	Cost Per Card	Probability	Cost
Request for Card						
Order cards/site						
Receipt for card						
Program card						
Program controller						
Ship CLEC card to Whls Mkts						
Call CLEC/Issue card						
Wholesale Markets Admin						
Ship Sheet to Security						
Receive/Log in/out/file						
Total						

Cards	Cost
Card - each	
Card - Shipping Charges	
Total	

Total New/Replacement Cost	**$**	**27.75**

Change/Add/Del Sites	Process Time (min)	Convert to Hrs.	Loaded Labor Rate	Cost Per Card	Probability	Cost
Request to Wholesale Markets						
Request handled by Security						
Call back when complete						
Total Change Cost						**$ 3.89**

Total Access Card Administration	**$**	**31.64**

Note:
1) Cost, time and probability was provided by SMEs in Verizon's Security Group.
2) Loaded Labor Rates are for Clerk and Management positions.

Highlighted information is redacted for reason #2. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Cage Enclosure 25-100 SF

Ln	Cost Elements	Increment	Source	Cost	Units	Subtotal
				(a)	(b)	(c) = (a) * (b)
1	25 - 100 SF	1 SF fencing	Cage Encls 1-CS	$ 8.34	289	$ 2,410.26
2	Cage Gate	per gate	Cage Encls 1-CS	$ 518.79	1	$ 518.79
3	Cage Grounding Bar	per bar	Cage Ground Bar-CS	$ 1,423.65	1	$ 1,423.65
4	**Non-recurring Cost per Unit**		Sum(Ln 1..Ln 3)			$ 4,352.70
5	**Rate Element**		Ln 4			$ 4,352.70

Note:
The average square feet of fencing required for the cage sizes are based on typical caged arrangements previously provided to various ALECs across Verizon's service areas. Those average lengths by cage size are 289, 444, 599, 755 and 910 respectively.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Cage Enclosure 101-200 SF

Ln	Cost Elements	Increment	Source		Cost	Units		Subtotal
					(a)	(b)		(c) = (a) * (b)
1	101 - 200 SF	1 SF fencing	Cage Encls 1-CS	$	8.34	444	$	3,702.96
2	Cage Gate	per gate	Cage Encls 1-CS	$	518.79	1	$	518.79
3	Cage Grounding Bar	per bar	Cage Ground Bar-CS	$	1,423.65	1	$	1,423.65
4	**Non-recurring Cost per Unit**		Sum(Ln 1..Ln 3)				$	5,645.40
5	**Rate Element**		Ln 4				$	5,645.40

Note:
The average square feet of fencing required for the cage sizes are based on typical caged arrangements previously provided to various ALECs across Verizon's service areas. Those average lengths by cage size are 289, 444, 599, 755 and 910 respectively.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Cage Enclosure 201-300 SF

Ln	Cost Elements	Increment	Source		Cost	Units		Subtotal
					(a)	(b)		(c) = (a) * (b)
1	201 - 300 SF	1 SF fencing	Cage Encls 1-CS	$	8.34	599	$	4,995.66
2	Cage Gate	per gate	Cage Encls 1-CS	$	518.79	1	$	518.79
3	Cage Grounding Bar	per bar	Cage Ground Bar-CS	$	1,423.65	1	$	1,423.65
4	**Non-recurring Cost per Unit**		Sum(Ln 1..Ln 3)				$	6,938.10
5	**Rate Element**		Ln 4				$	6,938.10

Note:
The average square feet of fencing required for the cage sizes are based on typical caged arrangements previously provided to various ALECs across Verizon's service areas. Those average lengths by cage size are 289, 444, 599, 755 and 910 respectively.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Cage Enclosure 301-400 SF

Ln	Cost Elements	Increment	Source		Cost	Units		Subtotal
					(a)	(b)		(c) = (a) * (b)
1	301 - 400 SF	1 SF fencing	Cage Encls 1-CS	$	8.34	755	$	6,296.70
2	Cage Gate	per gate	Cage Encls 1-CS	$	518.79	1	$	518.79
3	Cage Grounding Bar	per bar	Cage Ground Bar-CS	$	1,423.65	1	$	1,423.65
4	**Non-recurring Cost per Unit**		Sum(Ln 1..Ln 3)				$	8,239.14
5	**Rate Element**		Ln 4				$	8,239.14

Note:
The average square feet of fencing required for the cage sizes are based on typical caged arrangements previously provided to various ALECs across Verizon's service areas. Those average lengths by cage size are 289, 444, 599, 755 and 910 respectively.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Cage Enclosure 401-500 SF

Ln	Cost Elements	Increment	Source		Cost	Units		Subtotal
					(a)	(b)		(c) = (a) * (b)
1	401 - 500 SF	1 SF fencing	Cage Encls 1-CS	$	8.34	910	$	7,589.40
2	Cage Gate	per gate	Cage Encls 1-CS	$	518.79	1	$	518.79
3	Cage Grounding Bar	per bar	Cage Ground Bar-CS	$	1,423.65	1	$	1,423.65
4	**Non-recurring Cost per Unit**		Sum(Ln 1..Ln 3)				$	9,531.84
5	**Rate Element**		Ln 4				$	9,531.84

Note:
The average square feet of fencing required for the cage sizes are based on typical caged arrangements previously provided to various ALECs across Verizon's service areas. Those average lengths by cage size are 289, 444, 599, 755 and 910 respectively.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Cage Enclosure Augment

Ln	Cost Elements	Increment	Source	Cost
				(a)
	Cage Enclosure Augment			
1	Cage Fencing	per square foot	Cage Encls 1-CS	$ 11.81
2	**Non-recurring Cost per Unit**		Ln 1	$ 11.81
3	**Rate Element**		Ln 2	$ 11.81

Verizon: EIS Study - Florida
Non-recurring Cost Development
Cage Enclosure

Summary of Cage Fencing Costs.		
Over 100 Square Feet Floor Space (per Square Foot)	$	8.34
75 - 99 Square Feet Floor Space (per Square Foot)	$	8.88
50 - 74 Square Feet Floor Space (per Square Foot)	$	9.78
25 - 49 Square Feet Floor Space (per Square Foot)	$	11.81
Cage Gate	$	518.79

Description	Cage Fencing Sq. Ft Surface (Note 1)	Cage Cost	Gate Cost
California Costs -- Adjusted (Note 2)			
Texas Costs -- Adjusted (Note 3)			
National Average Cost			
Adjustment to Make National Average Specific to Florida (-8%)			
Florida Cost	338.30	$ 2,821.57	$ 518.79

Note.

Highlighted information is redacted for reasons #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Cost Development
Cage Enclosure

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)					
2	Square Root of Cage Floor Space	SQRT Ln 1				
3	Percent of Cage Floor Space	Ln 2 / Ln2A				
4	Average Cage Fencing Area (Square Feet)	Ln 3 * Ln 4A				
5	Cage Cost per Square Foot	Note 1				
6	Average Cage Fencing Area Cost	Ln 4A * Ln 5A				
7	Average Cage Enclosure Cost	Cage Enclosure - 1				
8	Vendor Engineering & Overhead Cost	Ln 7 - Ln 6				
9	Vendor Engineering & Overhead Cost per Square Foot	Ln 8A / Ln 4				
10	Total Cage Enclosure Cost per Square Foot of Fence Surface	Ln 5A + Ln 9	**$ 8.34**	**$ 8.88**	**$ 9.78**	**$ 11.81**

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Cage Grounding Bar

Ln	Cost Elements	Increment	Source		Cost
1	Cage Grounding Bar	per bar	Cage Ground Bar-CS	$	1,423.65
2	**Non-recurring Cost per Unit**		Ln 1	$	1,423.65
3	**Rate Element**		Ln 2	$	1,423.65

Verizon: EIS Study - Florida
Non-recurring Cost Development
Cage Grounding Bar

Collocation Grounding System

Qty	Cost/LF	Footage	Hours	LLR	Total	
						Cage Grounding Bar
						Material
						20" Ground Bar /w Wall Mounting Assy.
						350 MCM Ground Cable
						Connector Lug
						Total Material
						Material Factor
						Material Loadings
						Equipment Investment
						Labor
						Equipment Engineer
						Equipment Installer
						Travel
						Mount Ground Bar
						Run 350 MCM Cable
						Tap Ground Cable (per end)
						Total Labor and Installation
						Total Engineering and Installation Labor
					$ 1,423.65	**Total Collocation Grounding System**

Source: GTE Advanced Materials System.

Highlighted information is redacted for reasons #1, #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Overhead Superstructure

Ln	Cost Elements	Increment	Source	Cost	Units	Subtotal
				(a)	(b)	(c) = (a) * (b)
	Overhead Superstructure					
1	Cable Racking (Dedicated) - Materials	per linear foot	Overhead Superstructure 1-CS	$ 21.84	39	$ 851.91
2	Cable Racking (Dedicated) - Installation	per linear foot	Overhead Superstructure 1-CS	$ 10.14	39	$ 395.63
3	**Non-recurring Cost per Element**		Sum(Ln 1.. Ln 3)			$ 1,247.53
4	**Rate Element**		Ln 4			$ 1,247.53

Verizon: EIS Study - Florida
Non-recurring Cost Development
Overhead Superstructure

Ln	Description	Source	Calculation
	Overhead Superstructure - Materials		
1	Overhead Superstructure and Hardware - per ft. Increments	Overhead Superstructure 2-CS	
	Overhead Superstructure - Installation		
2	Installation Factor	EF&I-CS	
3	Installation Amount	Ln 1 * Ln 2	
4	Total Investment - per ft. Increments	Ln 1 + Ln 3	

Highlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Cost Development
Overhead Superstructure

	Cost	Quantity	Extended Amount
24" Cable Rack			
Cable Rack Junction			
Power & Signal Bracket			
Cable Rack Support			
10' Thread Rod			
10' Aux Frame Bar			
Ceiling Support			
Material Cost			
Material Loading Factor			
Material Loading Cost			
Total Cost for 10' Rack			
Overhead Superstructure and Hardware - per ft. Increments			

1) Source: GTE Advanced Materials System.

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Facility Pull - Engineering (Metallic & Fiber Optic Patchcord)

Ln	Cost Elements	Increment	Source		Cost
1	Facility Cable/Fiber Optic Patchcord - Pull - Engineering	per project	Facility Pull & Term-CS	$	37.63
2	Travel Time	per project	Facility Pull & Term-CS	$	45.98
3	**Non-recurring Cost per Element**		Sum(Ln 1.. Ln 2)	$	83.61
4	**Rate Element**		Ln 3	$	83.61

Verizon: EIS Study - Florida
Non-recurring Rate Development
Facility Pull - Labor/Fiber Optic Patchcord Pull - Labor/Microwave Facility Pull - Labor

Ln	Cost Elements	Increment	Source	Cost	Units	Subtotal
				(a)	(b)	(c) = (a) *(b)
1	Facility Cable - Pull	per cable run	Facility Pull & Term-CS	$ 1.15	112	$ 128.80
2	Fiber Optic Patchcord - Pull	per cable run	Facility Pull & Term-CS	$ 1.15	185	$ 212.75
3	Microwave - Pull	per linear ft	Facility Pull & Term-CS	$ 1.15	1	$ 1.15

Note:
1) The 112 units represent the average DS0, DS1, and DS3 cable lengths for 59 central offices in Florida.
2) The length for Fiber Optic Patchcord was derived from the average number of feet ordered through all central offices for a two year period.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Facility Cable/Fiber Optic Patchcord - Termination

Ln	Cost Elements	Increment	Source		Cost	Units		Total
					(a)	(b)		(c) = (a) *(b)
1	DS0 Cable Termination	per 100 pair	Facility Pull & Term-CS	$	4.60	1	$	4.60
2	Category 5 Cable Termination	per 25 pair	Facility Pull & Term-CS	$	1.15	1	$	1.15
3	DS1 Cable Termination	per 28 pair	Facility Pull & Term-CS	$	1.15	1	$	1.15
4	DS3 Coaxial Cable Termination (Preconnectorized)	per coaxial cable	Facility Pull & Term-CS	$	1.15	1	$	1.15
5	DS3 Coaxial Cable Termination (Unconnectorized)	per coaxial cable	Facility Pull & Term-CS	$	11.49	1	$	11.49
6	Fiber Optic Patchcord Termination	per termination	Facility Pull & Term-CS	$	1.15	1	$	1.15

Verizon: EIS Study - Florida
Non-recurring Cost Development
Facility Cable/Fiber Optic Patchcord/Microwave - Pull and Termination

Ln	Description	Source	Calculation
	Transmission Line DS0 / Voicegrade Level		
1	100 pair DS0 - Facility Pull (per foot) Cost	Cable Run Labor-CS	
2	Termination (100 pair DS0s) Cost (C)	Cable Run Labor-CS	
3	Termination (100 pair DS0s) Cost (UC)	Cable Run Labor-CS	
	Transmission Line DS1		
4	28 pair DS1 - Facility Pull (per foot) Cost	Cable Run Labor-CS	
5	Termination Cost (C)	Cable Run Labor-CS	
6	Termination Cost per 28 pair (UC)	Cable Run Labor-CS	
	Transmission Line DS3/Microwave		
7	Coax DS3 - Facility Pull (per foot)	Cable Run Labor-CS	
8	Termination Cost (C)	Cable Run Labor-CS	
9	Termination Cost (UC)	Cable Run Labor-CS	
	Orange Shielded Cable		
10	Facility Pull (per foot)	Cable Run Labor-CS	
11	Termination (25pr)	Cable Run Labor-CS	
12	Material Cost (per Foot)	Cable-CS	
	Category 5 Cable		
13	Facility Pull (per foot)	Cable Run Labor-CS	
14	Termination (25 pr)	Cable Run Labor-CS	

Highlighted information is redacted for reasons #1 and #2. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Cost Development
Facility Cable/Fiber Optic Patchcord/Microwave - Pull and Termination

Ln	Description	Source	Calculation
	Transmission Line Fiber		
15	Fiber - Facility Pull (per foot)	Cable Run Labor-CS	
16	Termination Cost per Fiber (48 fiber cable or less)	Cable Run Labor-CS	
17	Termination Cost per Fiber (greater than 48 fiber cable)	Cable Run Labor-CS	
	Fiber Optic Patchcord		
18	Fiber Optic Patchcord - Pull (per foot)	Cable Run Labor-CS	
19	Termination Cost per Fiber (C)	Cable Run Labor-CS	
	DS0/DS1/DS3/Shielded/Category 5/Fiber/BITS Timing Facility Pull Engineering		
20	Engineering for Facility Pull (per Collocation Request per CO)	Cable Run Labor-CS	
21	Travel Time for Installer (per Collocation Request per CO)	Cable Run Labor-CS	

Note:
"C" designates the cable with a connector, "UC" designates a cable without a connector.

Highlighted information is redacted for reasons #1 and #2. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Cost Development
Facility Cable/Power Cable/Fiber Optic Patchcord/Microwave - Pull and Termination

Facility Pull - Transmission - Power/Ground Line Run and Installation Details						
Ln	Description	Number of Feet (Ln 1-2) Number of Terms (Ln 3-6, 9-11) A	Hours per Foot (Ln 1-2) Hours per Terms (Ln 3-6, 9-11) B = Note 2	Total Hours C = A * B	Loaded Labor Rate D = Note 1	Cost E = C * D
1	Telecommunications Facility Pull Cost					
2	Power/Ground Cable Pull Cost (Note 5, 7)					
	Termination:					
3	DS-0 (100 pair DS0s) (C) (Note 4)					
4	DS1 (28 pair DS1s) (C) (Note 4)					
5	DS3 (1 DS3) (C) (Note 4)					
6	DS-3 (UC) (Note 4)					
7	Per Fiber (48 fiber cable or less) (Note 6)					
8	Per Fiber (greater than 48 fiber cable) (Note 6)					
9	Power Cable (2 terminations per cable)					
10	Shielded Cable					
11	Category 5 (25 pair) (C)					
12	Fiber Optic Patchcord (C) (Note 4)					
13	Engineering Facility Cable/Fiber Optic Patchcord (Note 3) - Equipment Engineer					
14	Engineering Power (Note 3)					
15	Travel Time - Equipment Installer					
16	DS0 Termination to OSP Connector at MDF (Vertical side) (UC) (Note 8)					
17	DS1 Termination to OSP Connector at MDF (Vertical side) (UC) (Note 8)					

Note

Highlighted information is redacted for reasons #1, #2 , #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Fiber Cable Pull

Ln	Cost Elements	Increment	Source		Cost
1	Fiber Cable Pull-Engineering	per project	Fiber Cable Pull-CS	$	1,371.12
2	Fiber Cable Pull-Place Innerduct	per innerduct foot	Fiber Cable Pull-CS	$	0.73
3	Fiber Cable Pull-Labor	per linear foot	Fiber Cable Pull-CS	$	0.49
4	Fiber Cable Pull-Cable Fire Retardant	per occurrence	Fiber Cable Pull-CS	$	45.98

Verizon: EIS Study - Florida
Non-recurring Cost Development
Fiber Cable Pull

Fiber Cable Pull	
Description	Fiber Cable Placement per Foot (labor) A = Note 1
Fiber Cable Pull	$ 0.49

Innerduct				
Description	Innerduct Material per Foot B = Note 3	EF&I Factor C = EF&I-CS	Innerduct Placement per Foot (Installation Cost) D = B * C	Innerduct - Total installed Cost per Foot E = B + D
Innerduct Placement				$ 0.73

Engineering for Cable Pull			
Description	Hours J = Note 4	Loaded Labor Rate K = LLR-CS	Engineering for Cable Pull Cost L = J * K
OSP Engineer - per Collocation Request per CO			$ 1,371.12

Cable Fire Retardant Costs			
	Total Hours M = Note 5	Loaded Labor Rate N = LLR-CS	Cable Fire Retardant Cost O= M * N
Cable Fire Retardant Cost			$ 45.98

Note:

Highlighted information is redacted for reasons #1, #2, #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Fiber Cable Splice

Ln	Cost Elements	Increment	Source	Cost
1	Fiber Cable Splice - Engineering	per splicing project	Cable Splice-CS	$ 68.56
2	Fiber Cable Splice	per fiber strand	Cable Splice-CS	$ 41.03

Verizon: EIS Study - Florida
Non-recurring Cost Development
Cable Splice

Ln	Description	Source	Cost per Pair/Fiber	Loaded Labor Rate	Hours	Total Cost
	Metallic Cable					
	Labor					
1	Engineering Cable Splice (per Collocation Request per CO)	Note 2				$ **68.56**
2	Splice cost per pair(greater than 200 pair)	Note 1				$ **0.65**
3	Splice cost per pair(200 pair or less)	Note 1				$ **1.20**
	Fiber Cable					
	Labor					
4	OSP Engineer (per Collocation Request per CO)	Note 2				$ **68.56**
5	Splice cost per fiber strand (48 fiber strand cable or less)	Note 1				$ **41.03**
6	Splice cost per fiber strand (greater than 48 fiber strand cable)	Note 1				$ **38.64**

Note:

Highlighted information is redacted for reasons #1, #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Ln	Cost Elements	Increment	Source		Cost	Frequency	Units		Rate Element
					(a)	(b)	(c)		(d) = (a)*(b)*(c)
	DC Power Cable								
1	DC Power Cable - Termination	per power run	Cable Run Labor-CS	$	68.96	1.00	1	$	68.96
2	DC Power Cable - Pull	per linear foot	Cable Run Labor-CS	$	11.49	1.00	67	$	769.83
3	Total DC Power Cable Pull/Termination	per cable						$	838.79
4	DC Power Cable - Engineering/Travel	per project	Cable Run Labor-CS	$	83.61	1.00	1	$	83.61
5	Wire Ground #6	per linear foot	Cable-CS	$	0.14	1.00	67	$	9.38

Note:
The average length from the power source (BDFB) to the collocation arrangement is 67 feet. The units (67) for DC Power-Cable Pull is the average linear feet of power cable pulled for 1 cable run. The Ground Wire units (67) is the average linear feet of Ground Wire for each collocation arrangement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Cable

Ln	Cost Elements	Increment	Source	Cost	Units	Total
				(a)	(b)	(c) = (a) * (b)
	Facility Cable					
1	DS0 Cable (Connectorized/100 feet) 100 pair	per cable run	Cable-CS	$ 155.22	171	$ 265.43
2	DS1 Cable (Connectorized/100 feet)	per cable run	Cable-CS	$ 154.05	79	$ 121.70
3	DS3 Coax Cable	per cable run	Cable-CS	$ 0.42	86	$ 36.12
4	Category 5 Connectorized 100ft	per linear foot	Cable-CS	$ 1.17		
5	Category 5 Connectorized 150ft	per linear foot	Cable-CS	$ 1.13		
6	Category 5 Connectorized 200ft	per linear foot	Cable-CS	$ 1.12		
7	Average Cost per linear foot	per linear foot		$ 1.14	1	$ 1.14
	Power Cable					
8	Wire Power 1/0	per cable run	Cable-CS	$ 0.49	67	$ 32.83
9	Wire Power 2/0	per cable run	Cable-CS	$ 0.60	67	$ 40.20
10	Wire Power 3/0	per cable run	Cable-CS	$ 0.74	67	$ 49.58
11	Wire Power 4/0	per cable run	Cable-CS	$ 0.94	67	$ 62.98
12	Wire Power 350 MCM	per cable run	Cable-CS	$ 1.67	67	$ 111.89
13	Wire Power 500 MCM	per cable run	Cable-CS	$ 3.27	67	$ 219.09
14	Wire Power 750 MCM	per cable run	Cable-CS	$ 5.04	67	$ 337.68
	Fiber Optic Patch Cord					
15	Fiber Optic Patch Cord -24 Fiber (Connectorized)	per cable run	Cable-CS	$ 4.19	185	$ 775.15

Note:
1) The units for DSO, DS1, DS3 and Shielded cables are based on the average linear feet of cable for 59 central offices in Florida.
2) The cost for Category 5 Connectorized cable is the average cost for 100', 150' and 200' cable lengths then divided by the average length of 150' (($116.52 + $169.8 + $223.09) / 3 / 150 ft.).
3) The units for power cables are based on the average linear feet of cable for 59 central offices in Florida. The average length from the BDFB to the collocation arangement is 67 feet.
4) The length for Fiber Optic Patch Cord was derived from the average number of feet ordered in all Verizon central offices over a two year period.

Description	Cost	Mat'l Loadings Factor	Mat'l Loadings Cost	Extended Cost
Facility Cable	A	B	C=A*B	D=C+A
DS0 Cable (Connectorized/100 feet) 100 pair				
DS1 Cable (Connectorized/100 feet)				
DS3 Coax Cable (per foot)				
Orange Shielded Cable (per foot)				
Category 5 Connectorized (per100 feet)				
Category 5 Connectorized (per150 feet)				
Category 5 Connectorized (per200 feet)				
Power Cable				
Wire Power 1/0 (per foot)				
Wire Power 2/0 (per foot)				
Wire Power 3/0 (per foot)				
Wire Power 4/0 (per foot)				
Wire Power 350 MCM (per foot)				
Wire Power 500 MCM (per foot)				
Wire Power 750 MCM (per foot)				
Ground Cable				
Wire Ground #6 (per foot)				
Fiber Optic Patch Cord				
Fiber Optic Patch Cord-24 fiber (connectorized) (per foot)				

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Virtual Equipment Installation

Ln	Cost Elements	Increment	Source	Cost
1	Virtual Equipment Installation	per quarter rack	Virtual Equip Blended-CS	$ 3,693.59
2	**Non-recurring Cost per Unit**		Ln 1	$ 3,693.59
3	**Rate Element**		Ln 2	$ 3,693.59

Verizon: EIS Study - Florida
Non-recurring Cost Development
Virtual Equipment Installation

Ln	Description	Source	Engineering and Installation (E&I) Total E&I Cost per Base Unit	Average # of Base Units per Rack	E&I Cost per Rack	Frequency of Equipment	Weighted E&I Cost per Rack of Equipment
			A	B = Note 1	C=A*B	D	E=C*D
	Circuit Equipment:						
1	ATM	Virtual Equip-CS					
2	DSLAM	Virtual Equip-CS					
3	Frame Relay	Virtual Equip-CS					
4	Routers	Virtual Equip-CS					
5	OC3	Virtual Equip-CS					
6	OC12	Virtual Equip-CS					
7	OC24	Virtual Equip-CS					
8	OC48	Virtual Equip-CS					
9	NGDLC	Virtual Equip-CS					
10	Cost per Rack	Sum(Ln 1..Ln 9)					
11	Engineering & Installation per Quarter Rack	Ln 10 / 4					**$ 3,693.59**

Note:

Highlighted information is redacted for reasons #1, #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Description	Source	Equipment and Installation per Base Unit (E&I)				
		CO Equipment Engineering Hours	CO Equipment Engineering Loaded Labor Rate	CO Equipment Installation Tech Hours	CO Equipment Installation Tech Loaded Labor Rate	Total E&I Cost
		A	B	C	D	E=(A*B)+(C*D)
Equipment (per Base Unit):						
ATM	Note 1, 2					
DSLAM	Note 1, 2					
Frame Relay	Note 1, 2					
Routers	Note 1, 2					
OC3	Note 3					
OC12	Note 3					
OC24	Note 3					
OC48	Note 3					
NGDLC	Note 3					

Note:

Highlighted information is redacted for reasons #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Virtual Software Upgrades

Ln	Cost Elements	Increment	Source	Cost
1	Software Upgrades	per base unit	Virtual Software Blended-CS	$ 98.62
2	**Non-recurring Cost per Unit**		Ln 1	$ 98.62
3	**Rate Element**		Ln 2	$ 98.62

Verizon: EIS Study - Florida
Non-recurring Cost Development
Virtual Software Upgrades

Ln	Description	Source	Software Upgrades: Total Cost	Frequency of Software Upgrade	Weighted Cost per Software Upgrade
			A	B	C = A* B
	Equipment (per Upgrade per Base Unit)				
1	ATM	Virtual Software-CS			
2	DSLAM	Virtual Software-CS			
3	Frame Relay	Virtual Software-CS			
4	Routers	Virtual Software-CS			
5	SMDS	Virtual Software-CS			
6	Cost per Software Upgrade	Sum(Ln 1..Ln 5)		1.000	$ 98.62

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Cost Development
Virtual Software Upgrades

Ln	Description	Source	Loaded Labor Rate	Software Upgrades: Labor Hours per Software Upgrade	Software Upgrades: Labor Cost per Upgrade
			A	B	C=A*B
	Equipment (per Upgrade per Base Unit)				
1	ATM	Note 1, 3			
2	DSLAM	Note 2, 3			
3	Frame Relay	Note 1, 3			
4	Routers	Note 2, 3			
5	SMDS	Note 2, 3			

Note:

Highlighted information is redacted for reasons #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Virtual Card Installation

Ln	Cost Elements	Increment	Source	Cost
1	Card Installation	per card	Virtual Card Install Blended-CS	$ 238.54
2	**Non-recurring Cost per Unit**		Ln 1	$ 238.54
3	**Rate Element**		Ln 2	$ 238.54

Verizon: EIS Study - Florida
Non-recurring Cost Development
Virtual Card Installation

Ln	Description	Source	Virtual Card Installation Total Cost	Virtual Card Installation Frequency of Card Install	Virtual Card Installation Weighted Cost per Card Installed
			A	B	C=A*B
	Module (per Module)				
1	ATM	Virtual Card Install-CS			
2	DSLAM	Virtual Card Install-CS			
3	Frame Relay	Virtual Card Install-CS			
4	Routers	Virtual Card Install-CS			
5	SMDS	Virtual Card Install-CS			
6	DS1	Virtual Card Install-CS			
7	DS3	Virtual Card Install-CS			
8	NGDLC	Virtual Card Install-CS			
9	Cost per Card Installed	Sum (Ln 1..Ln 8)		1.000	$ 238.54

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Description	Source	Module Installation (per Module)				
		CO Equipment Engineering Hours	CO Equipment Engineering Loaded Labor Rate	CO Equipment Installation Tech Hours	CO Equipment Installation Tech Loaded Labor Rate	Total Virtual Card Install Cost
		A	B	C	D	E=(A*B)+(C*D)
Module (per Module)						
ATM	Note 1, 2					
DSLAM	Note 1, 2					
Frame Relay	Note 1, 2					
Routers	Note 1, 2					
SMDS	Note 1, 2					
DS1	Note 1					
DS3	Note 1					
NGDLC	Note 1					

Note:

Highlighted information is redacted for reasons #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Engineering/Major Augment - Virtual

Ln	Cost Elements	Increment	Source	Cost
1	Engineering/Major Augment - Virtual	per occurrence	Engineering - Virtual-CS	$ 756.67
2	**Non-recurring Cost Per Unit**		Ln 1	$ 756.67
3	**Rate Element**		Ln 2	$ 756.67

Verizon: EIS Study - Florida
Non-recurring Cost Development
Engineering/Major Augment - Virtual

Description	Loaded Labor Rate A = LLR-1	Hours B	Cost C = A * B
Pre-Acceptance (Initial Site Audit)			
Building Engineer			
CO Equipment Engineer			
Post-Acceptance			
CO Equipment Engineer (Note 1)			
Outside Plant Engineer (Note 1)			
Total			$ 756.67

Note:

Highlighted information is redacted for reasons #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
BITS Timing

Ln	Cost Elements	Increment	Source	Cost	Frequency	Units	Subtotal
				(a)	(b)	(c)	(d) = (a)*(b)*(c)
	Bits Timing						
1	Engineering	per project	Facility Pull & Term-CS	$ 37.63	1.00	1	$ 37.63
2	Pull Shielded Cable	1 lin ft	Facility Pull & Term-CS	$ 1.15	1.00	131	$ 150.65
3	Material Cost - Orange Shielded Cable	1 lin ft	Cable-CS	$ 0.15	1.00	131	$ 19.65
4	Terminate Shielded Cable	per termination	Facility Pull & Term-CS	$ 1.15	1.50	1	$ 1.73
5	**Non-recurring Cost per Unit**		Sum(Ln 1.. Ln 4)				$ 209.66
6	**Rate Element**		Ln 5				$ 209.66

Note:
The units (131) for Material and Labor is the average length, in feet, from the Main Distribution Frame (MDF) to the Collocation arrangement for 59 central offices in Florida. This information was retrieved from Collocation Engineering Specification worksheets for these arrangements. Since no data was available to calculate an average length of the BITS Clock to the Collocation arrangement, the average MDF to Collocation length is being used as a surrogate. The frequency of 1.5 for the Terminate Shielded Cable cost element is derived from the assumption that there is a 50% probability of having one termination and a 50% probability of having two terminations.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Engineering - Adjacent On-Site

Ln	Cost Elements	Increment	Source	Cost
1	Engineering - Adjacent On-Site	per occurrence	Engineering - On Site-CS	$ 1,292.21
2	**Non-recurring Cost Per Unit**		Ln 1	$ 1,292.21
3	**Rate Element**		Ln 2	**$ 1,292.21**

Verizon: EIS Study - Florida
Non-recurring Cost Development
Engineering - Adjacent On-Site

Description	Loaded Labor Rate	Adjacent On-Site	
		On-Site Hours	On-Site Costs
	A = LLR-1	B	C = A * B
Building Engineer			
Review CO plans for critical on-site locations			
Contact local municipality for codes			
Contact/visit utility companies			
Travel to Site			
Inspect CO premise for hut location			
Obtain soil sample			
Inspect power entrance/transfer switch			
Work up order			
CO Equipment Engineer			
Travel to Site			
Inspect power entrance/transfer switch			
Inspect CO premise for hut location			
Work up order			
OSP Engineer			
Travel to Site			
Inspect vault/manhole conduit system			
Inspect CO premise for hut location			
Work up order			
Total			**$ 1,292.21**

Highlighted information is redacted for reasons #2, #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Adjacent On-Site Metallic Facility Pull

Ln	Cost Elements	Increment	Source		Cost
1	Adjacent Metallic Facility Pull - Engineering	per project	Facility Pull & Term-CS	$	37.63
2	Adjacent Metallic Facility Pull - Travel	per project	Facility Pull & Term-CS	$	45.98
3	Total		Ln 1 + Ln 2	$	83.61
4	Adjacent Metallic Facility Pull - Labor	per linear foot	Facility Pull & Term-CS	$	1.15

Verizon: EIS Study - Florida
Non-recurring Rate Development
Adjacent On-Site - Facility Cable Termination

Ln	Cost Elements	Increment	Source	Cost
1	Adjacent-DSO Cable Termination (Connectorized)	per 100 pair	Facility Pull & Term-CS	$ 4.60
2	Adjacent-DSO Cable Termination (Unconnectorized)	per 100 pair	Facility Pull & Term-CS	$ 45.98
3	Adjacent-Category 5 Cable Termination (Connectorized)	per 25 pair	Facility Pull & Term-CS	$ 1.15
4	Adjacent-DS1 Cable Termination (Connectorized)	per 28 pair	Facility Pull & Term-CS	$ 1.15
5	Adjacent-DS1 Cable Termination (Unconnectorized)	per 28 pair	Facility Pull & Term-CS	$ 34.48
6	Adjacent-DS3 Coaxial Cable Termination (Connectorized)	per coaxial cable	Facility Pull & Term-CS	$ 1.15
7	Adjacent-DS3 Coaxial Cable Termination (Unconnectorized)	per coaxial cable	Facility Pull & Term-CS	$ 11.49
8	Adjacent-Fiber Cable Termination	per fiber termination	Facility Pull & Term-CS	$ 41.03

Verizon: EIS Study - Florida
Non-recurring Rate Development
Adjacent On-Site Fiber Cable Pull

Ln	Cost Elements	Increment	Source	Cost
1	Adjacent Fiber Cable Pull Engineering	per project	Fiber Cable Pull-CS	$ 1,371.12
2	Adjacent Fiber Cable Pull-Place Innerduct	per innerduct foot	Fiber Cable Pull-CS	$ 0.73
3	Adjacent Fiber Cable Pull - Labor	per linear foot	Fiber Cable Pull-CS	$ 0.49
4	Adjacent Cable Fire Retardant	per occurrence	Fiber Cable Pull-CS	$ 45.98

Verizon: EIS Study - Florida
Non-recurring Rate Development
Adjacent On-Site Metallic Cable Pull

Ln	Cost Elements	Increment	Source		Cost
1	Adjacent Metallic Cable Pull - Engineering	per project	Metallic Cable Pull-CS	$	1,371.12
2	Adjacent Metallic Cable Pull - Labor	per linear foot	Metallic Cable Pull-CS	$	0.60

Verizon: EIS Study - Florida
Non-recurring Cost Development
Metallic Cable Pull Cost

Metallic Cable Pull	
Description	Metallic Cable Placement per Foot (labor) A = Note 1
Metallic Cable Pull < 1.5" Dia.	
Metallic Cable Pull > 1.5" Dia.	

Engineering for Cable Pull			
Description	Hours D = Note 2	Loaded Labor Rate E = LLR-CS	Engineering for Cable Pull Cost F = D * E
OSP Engineer - per Collocation Request per CO			$ 1,371.12

Cable Fire Retardant Costs			
	Total Hours G = Note 3	Loaded Labor Rate H = LLR-CS	Cable Fire Retardant Cost I= G * H
Cable Fire Retardant Cost			$ 45.98

Note:

Highlighted information is redacted for reasons #1, #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Adjacent On-Site Metallic Cable Splice

Ln	Cost Elements	Increment	Source	Cost
1	Adjacent Metallic Cable Splice - Engineering	per splicing project	Cable Splice-CS	$ 68.56
2	Adjacent Metallic Cable Splicing (greater than 200 pair)	per pair	Cable Splice-CS	$ 0.65
3	Adjacent Metallic Cable Splicing (less than 200 pair)	per pair	Cable Splice-CS	$ 1.20

Verizon: EIS Study - Florida
Non-recurring Rate Development
Adjacent On-Site Fiber Cable Splice

Ln	Cost Elements	Increment	Source	Cost
1	Adjacent Fiber Cable Splice - Engineering	per splicing project	Cable Splice-CS	$ 68.56
2	Adjacent Fiber Cable Splicing (48 fiber strand cable or less)	per fiber strand	Cable Splice-CS	$ 41.03
3	Adjacent Fiber Cable Splicing (greater than 48 fiber strand)	per fiber strand	Cable Splice-CS	$ 38.64

Verizon: EIS Study - Florida
Non-recurring Rate Development
Collocation Premise Space Report - Optional

Ln	Cost Elements	Increment	Source	Cost	Frequency	Fill Factor	Total
				(a)	(b)	(c)	(d) = (a)*(b)/(c)
1	Comprehensive Evaluation	per CO request	Premise Space Report-CS	$ 6,020.26	50.00%	4	$ 752.53
2	Annual Evaluation	per CO request	Premise Space Report-CS	$ 4,816.21	50.00%	4	$ 602.03
3	**Non-recurring Cost Per Unit**		Sum(Ln 1.. Ln 2)				$ 1,354.56
4	**Rate Element**		Ln 3				$ 1,354.56

Note:
The $6,020.26 represents the cost associated with a Comprehensive Evaluation in Year #1. The $4,816.21 represents the cost associated with an Annual Evaluation in Year #2 and beyond. Each of these two costs are weighted 50% in the algorithm to represent both costs. These costs are then divided by 4 to represent the forecasted ALEC demand for the Space Report on a per CO basis.

Report Description	Network Designer & Building Services	Local Network Designer	Total Hours	Loaded Labor Rate	Total Cost
Comprehensive Evaluation					$ 6,020.26
Limited Evaluation					$ 2,408.10
Annual Evaluation					$ 4,816.21

Note:
See job description of activities in the narrative.

Highlighted information is redacted for reasons #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Rate Development
Misc Svcs-Labor

Ln	Cost Elements	Increment	Source	Cost
1	Misc Svcs-Labor-Basic Bus Day-First 1/2 Hr	per Technician	Loaded Labor Rates 1-CS	$ 48.31
2	Misc Svcs-Labor-Basic Bus Day-Each Additional 1/2 Hr	per Technician	Ln 1 * .50 hr	$ 24.15
3	Misc Svcs-Labor-OT Non-Bus Day - First 1/2 Hr	per Technician	FCC Tariff #1, Section 6, Page 226	$ 100.00
4	Misc Svcs-Labor-OT Non-Bus Day - Each Additional 1/2 Hr	per Technician	FCC Tariff #1, Section 6, Page 226	$ 75.00
5	Misc Svcs-Labor-Premium Non-Bus Day - First 1/2 Hr	per Technician	FCC Tariff #1, Section 6, Page 226	$ 150.00
6	Misc Svcs-Labor-Premium Non-Bus Day - Each Additional 1/2 Hr	per Technician	FCC Tariff #1, Section 6, Page 226	$ 125.00

Verizon: EIS Study - Florida
Non-recurring Cost Development
Relay Rack

Ln	Description	Source	Material
1	Equipment Investment	Relay Rack 2-CS	
2	Material Loadings Factor	Material Loading-CS	
3	Material Loadings	Ln 1 * Ln 2	
4	Equipment Costs	Ln 1 + Ln 3	$ 255.24
5	10 Position Fuse Panel	Relay Rack 2-CS	
6	Material Loadings Factor	Material Loading-CS	
7	Material Loadings	Ln 5 * Ln 6	
8	Equipment Costs	Ln 5 + Ln 7	$ 391.07
9	Engineering Costs	Relay Rack 2-CS	
10	Installation Costs	Relay Rack 2-CS	
11	Travel Time	Relay Rack 2-CS	

Highlighted information is redacted for reasons #1, #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Cost Development
Relay Rack

Material Costs

Item ID	Description	Qty.	Unit Cost	Material Cost
	Average Cost of Relay Rack			
	Relay Rack Total			

Labor Costs	Hours	Loaded Labor Rate	**Labor Cost**
CO Equipment Engineer			
Equipment Installer			
Travel Time			

Note:

Highlighted information is redacted for reasons #1, #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Ln	Description	Source	Material
1	Equipment Investment	Cabinet 2-CS	
2	Material Loadings Factor	Material Loading-CS	
3	Material Loadings	Ln 1 * Ln 2	
	Equipment Costs	Ln 1 + Ln 3	
4	Engineering	Cabinet 2-CS	
5	Installation	Cabinet 2-CS	
6	Travel Time	Cabinet 2-CS	

Highlighted information is redacted for reasons #1, #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Non-recurring Cost Development
Telecommunications Equipment Cabinet

Material Costs

No.	Item ID	Description	Qty.	Unit Cost	Total Cost
1.					

Labor Costs	Hours	Loaded Labor Rate	Total Cost
CO Equipment Engineer			
Equipment Installer			

Travel Time

Note:

Highlighted information is redacted for reasons #1, #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Building Modification

Fixed Allocator: **14.09%**

Ln	Cost Elements	Increment	Source	Cost	Occupancy Rate	Subtotal
				(a)	(b)	(c) = (a) / (b)
	Security Access					
1	Card Reader	per reader	Card Reader-CS	$ 176.18	5	$ 35.24
2	Controller	per controller	Card Reader-CS	$ 73.81	5	$ 14.76
3	Storage Security	per collocation office	Storage Security-CS	$ 61.82	4	$ 15.45
	Site Modifications (for Construction inside Verizon CO only)					
4	Demolition and Site Work	per request	Site Mod-CS	$ 29.47	4	$ 7.37
5	HVAC - Minor	per occurrence	Site Mod-CS	$ 36.46	1	$ 36.46
6	Dust Partition	per request	Site Mod-CS	$ 44.50	1	$ 44.50
	Electrical					
7	Light	per unit	Light Fixture-CS	$ 21.74	1	$ 21.74
8	Electrical Outlet	per outlet	Elect Outlet-CS	$ 19.51	1	$ 19.51
9	Floor Ground Bar	per bar	Floor Ground Bar-CS	$ 54.14	4	$ 13.54
10	**Total Incremental Monthly Cost**		Sum(Ln 1..Ln 9)			$ 208.57
11	**Contribution Amount**		Ln 10 * Fixed Allocator			$ 29.39
12	**Rate Element**		Ln 10 + Ln 11			$ 237.96

Note:
1) Occupancy rate was developed to reflect the average number of collocators expected to share certain rate elements. The occupancy rate was based on the average number of collocators in Verizon central offices that had collocators in them.
2) Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Security Access - Card Reader/Controller

Description	Card Reader with Controller	
	Reader Cost	Controller Cost
California Costs -- Adjusted (Note 2)		
Texas Costs -- Adjusted (Note 3)		
National Average Cost		
Adjustment to Make National Average Specific to Florida (-8%) (Note 1)		
Florida Cost		
Annual Cost Factor (ACFs-CS)		
Total Annual Costs		
Monthly Costs	**$ 176.18**	**$ 73.81**

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Storage Security

Storage Cabinet Security							
	Description	Source	Cost Per Cabinet	Cabinets Per CO	Hasp Lock	Bar-Type Lock	Core Lock	Cost
Equipment								
1		Note 1						
2		Note 1						
3					Subtotal Storage Cabinet Security			
Labor								
4		Note 1						

Rack Storage Security						
	Description	Source	Cost Per Cabinet	Cable Locks Per CO	Core Lock	Cost
Equipment						
5		Note 1				
6		Ln 3 + Ln 4 + Ln 5		Total Storage Security per CO		
7	Annual Cost Factor (ACFs-CS)					
8	Total Annual Cost					
9	Monthly Cost					$ 61.82

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Site Modifications

Sites	Site Preparation	Dust Partition	Minor HVAC
California Costs -- Adjusted (Note 2&3)			
Texas Costs -- Adjusted (Note 2&4)			
National Average Cost			
Adjustment to Make National Average Specific to Florida (-8%) (Note 2)			
Florida Cost			
Annual Cost Factor (ACFs-CS)			
Total Annual Cost			
Monthly Cost	**$ 29.47**	**$ 44.50**	**$ 36.46**

Note:

Highlighted information is redacted for reasons #1, #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Electrical Outlet

Individual AC Electrical Outlet

Qty	Material	Labor	Contractor Markup	Total
	per LF	per LF		
	per LF	per LF		
				$ 19.51 Monthly Costs

Note·

Highlighted information is redacted for reasons #1, #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Light Fixture

Individual Lighting Fixture

Qty	Material	Labor	Contractor Markup	Total
	per LF	per LF		
	per LF	per LF		
				$ 21.74 Monthly Costs

Note:

Highlighted information is redacted for reasons #1, #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Floor Ground Bar

Caged/Shared/Sublease Collocation Grounding System

Qty	Material	Labor	Contractor Markup	Total	
				$ 54.14	Monthly Costs

Note:

Highlighted information is redacted for reasons #1, #2, #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Environmental Conditioning

Fixed Allocator: **14.09%**

Ln	Cost Elements	Increment	Source	Cost (a)
1	Environmental Conditioning	per 1 amp	Environmental Conditioning 1-CS	$ 2.81
2	**Total Incremental Monthly Cost**		Ln 1	$ 2.81
3	**Contribution Amount**		Ln 2 * Fixed Allocator	$ 0.40
4	**Rate Element**		Ln 2 + Ln 3	$ 3.21

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Environmental Conditioning

Description	Cost
Average Cost of HVAC per Amp	
Adjustment to Make National Average Specific to Florida (-8%)	
Florida Cost	
Annual Cost Factor (ACFs-CS)	
Total Annual Cost per Amp	
Monthly Cost per Amp	
Monthly Cost per 1 Amp	$ 2.81

Highlighted information is redacted for reasons #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Environmental Conditioning

Calculation of HVAC Investment per DC Amp

Engineering Assumptions

A	BTU/hr equivalent of one ton of air conditioning	BTU/hr	
B	BTU/hr equivalent of one Watt of power	BTU/hr	
C	Conversion of one nominal ton of air conditioning to watt equivalent	watts	C= A / B
D	Battery Float Voltage	volts DC	
E	Conversion of one nominal ton of air conditioning to amperage equivalent	amps	E= C / D
F	Sensible Cooling Capacity to Nominal Cooling Capacity Factor		
G	Conversion of one nominal ton air conditioning to one sensible ton	amps	G = E * F

Investment Calculation

H	Cost of one ton of air conditioning	
I	Cost of one amp equivalent of air conditioning	I = H / G

Highlighted information is redacted for reasons #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Environmental Conditioning

HVAC Cost Estimate

Item	Description	Unit	$/ Unit	Quantity	Cost
1					
2					
3					
4					
5					
6					
7					
8					
9					
	Electrical Subtotal				
10					
11					
12					
13					
14					
15					
16					
17					
	Mechanical Subtotal				
	Total Cost Without Factors				
	Factors				
	General Conditions				
	Engineering Fees				
	Total National Cost				
	Cost per ton				

Highlighted information is redacted for reasons #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Environmental Conditioning - HVAC Costs

Assumptions.
1
2
3
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8
9
10
11

12

Heat Generation due to Electrical Equipment

Item	Watts

Heat Loads

Highlighted information is redacted for reasons #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Floor Space

Fixed Allocator (FA): **14.09%**

Ln	Cost Elements	Increment	Source	Cost	Contribution Amount	Rate Element
				(a)	(b) = (a) * FA	(c) = (a)+(b)
1	Caged Floor Space	per square foot	Floor Space 1-CS	$ 3.36	$ 0.47	$ 3.83
2	Microwave Rooftop Space	per square foot	Floor Space 1-CS	$ 3.36	$ 0.47	$ 3.83
3	Relay Rack Floor Space	per linear foot	Floor Space 1-CS	$ 14.28	$ 2.01	$ 16.29
4	Cabinet Floor Space	per linear foot	Floor Space 1-CS	$ 19.32	$ 2.72	$ 22.04

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Floor Space - Square Footage Calculation

Ln	Description		Source	Width in inches	Depth in inches
				A	B
	Floor Space for Relay Rack Calculation				
1	Front of Rack (24 15/16" wide)		Note 1		
2	Inside Distance of Rack (guardrail to guardrail)		Note 1		
3	Front Half-Distance Between Aisles (guardrail to guardrail)		Note 1		
4	Rear Half-Distance Between Aisles (guardrail to guardrail)		Note 1		
5		Width and Depth in Inches	Sum(Ln 1:Ln 4)		
6		Conversion to Feet	Ln 5/12		
7	Square Feet per Linear Foot		Ln 6		
8	CO Floor Space Cost per Square Feet per year		Floor Space 2-CS		
9	Shared Access Additive Cost per Square Foot per year		Floor Space 3-CS		
10		Annual Cost for Floor Space per Square Foot	Ln 8 + Ln 9		
11		Monthly Rate for Floor Space per Square Foot	Ln 10 / 12		
12	Cost of Floor Space incl.Shared Access Area (per linear foot)		Ln 7 * Ln 11		
13	Cost of Floor Space incl.Shared Access Area (per relay rack)		Ln 6A * Ln 12		

Highlighted information is redacted for reasons #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Floor Space - Square Footage Calculation

Ln	Description		Source	Width in inches	Depth in inches
				A	B
	Floor Space for Cabinet Calculation				
14	Front of Cabinet		Note 1		
15	Side of Cabinet		Note 1		
16	Front Access Area		Note 1		
17	Rear Access Area		Note 1		
18		Width and Depth in Inches	Sum(Ln 14:Ln 17)		
19		Conversion to Feet	Ln 18 / 12		
20	Square Feet per Linear Foot		Ln 19		
21	CO Floor Space Cost per Square Foot per year		Floor Space 2-CS		
22	Shared Access Additive Cost per Square Foot per year		Floor Space 3-CS		
23		Annual Cost for Floor Space per Square Foot	Ln 21 +Ln 22		
24		Monthly Rate for Floor Space per Square Foot	Ln 23 / 12		
25	Cost of Floor Space incl.Shared Access Area (per linear foot)		Ln 20 * Ln 24		
26	Cost of Floor Space incl.Shared Access Area (per cabinet)		Ln 19A * Ln 25		

Highlighted information is redacted for reasons #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Floor Space

CO Name	CLLI	State	Annual Cost Factor		Square Feet	Investment Present Value		Annual Maint & Utility		Annual Cost/sf		Subtotal Annual Cost/ sf	Total Annual Cost/ sf
			Land	Building		Land	Building	Cost	Cost/ sf	Land	Building		
			A=ACFs-1	B=ACFs-1	C=Note 1	D=Note 1	E=HVAC Shell Cost - 1	F=Note 1	G=F/C	H=D/C*A	I=E/C*B	J=G+H+I	K=Note 1
		FL											
		FL											
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Average Cost (Mean) per Square Foot **(Destination for Column K is Floor Space - 1)**

Highlighted information is redacted for reasons #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Two Standard Deviations

Note:

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Floor Space - Shared Access Area

No.	State	Total Square Feet	Square Root of Total	3'-0" Walkway	Restroom	Staging Area	Break room	Total Shared	Source
(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	

18	Percentage of Shared Access Floor Space to Total Floor Space		Ln 17h / Ln 17b
19	Cost per Square Foot of Central Office Floor Space		Floor Space 2-CS
20	Annual Cost per Square Foot of Central Office Floor Space with Shared Access added		Ln 19 / (1 - Ln 18)
21	Shared Access Additive Cost per Square Foot per year		Ln 20 - Ln 19
22	Monthly Cost per Square Foot		Ln 20 / 12

Highlighted information is redacted for reasons #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Floor Space -- HVAC Shell Cost Computation

CO Name	CLLI	State	Square Feet	Investment Present Value					
				Land	Building	Amount of Total Building Investment for HVAC	Tons of HVAC per Bldg Sq. Ft. (Shell Costs)	HVAC Shell Cost	Total Bldg Investment
			C=Floor Space 3-CS	D=Floor Space 3-CS	E=Note 2				I=E-F+H
		FL							
		FL							
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Average Cost (Mean) per Square Foot (Destination for Column I is Floor Space - 2)									

Highlighted information is redacted for reasons #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Note.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Cable Subduct Space

Fixed Allocator (FA): **14.09%**

Ln	Cost Elements	Increment	Source	Incremental Cost	Contribution Amount	Rate Element
				(a)	(b) = (a) * FA	(c) = (a) + (b)
1	Cable Subduct Space - Manhole	per subduct	Cable Space 1-CS	$ 6.76	$ 0.95	$ 7.71
2	Cable Subduct Space	per linear foot	Cable Space 1-CS	$ 0.04	$ 0.006	$ 0.05

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Space

Subduct and Conduit Cost Calculation				
Ln	Description	Source	Subduct Calculation per subduct	4" Conduit Calculation per conduit
1	Equipment Investment	Cable Space 3-CS		
2	Material Loadings Factor	Material Loading-CS		
3	Material Loadings	Ln 1 * Ln 2		
4	Installation	Cable Space 3-CS		
5	Total Investment	Ln 1 + Ln 3 + Ln 4		
6	Annual Cost Factor	ACFs-CS		
7	Total Annual Costs	Ln 5 * Ln 6		
8	Monthly Cost per foot	Ln 7 / 12	$ 0.04	$ 0.06

Manhole Cost Calculation				
Ln	Description	Source	Subduct Calculation per subduct	4" Conduit Calculation per conduit
1	Equipment Investment	Cable Space 2-CS		
2	Material Loadings Factor	Material Loading-CS		
3	Material Loadings	Ln 1 * Ln 2		
4	Installation	Cable Space 2-CS		
5	Total Investment	Ln 1 + Ln 3 + Ln 4		
6	Annual Cost Factor	ACFs-CS		
7	Total Annual Costs	Ln 5 * Ln 6		
8	Monthly Cost per Subduct or Conduit	Ln 7 / 12	$ 6.76	$ 12.83

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Space

Ln	Description	Subduct Calculation Source	Subduct Calculation (a)	4" Conduit Calculation (b)	Conduit Calculation Source
	Manhole Cost per Subduct				
	Manhole Cost - Material				
1	Manhole Material	Note 1			Note 1
2	Number of Ducts	Note 4			
3	Number of Subducts	Note 4			
4	Capital Cost per subduct or conduit - Material	Ln 1(a)/ Ln 2(a)/ Ln 3(a)	$ 37.47	$ 112.41	Ln 1A/ Ln 2A
	Manhole Cost - Installation				
5	Manhole Installation	Note 2			Note 2
6	Core Drilling per core drill	Note 3			Note 3
7	Number of Ducts	Note 4			
8	Number of Subducts	Note 4			
9	Capital Cost per subduct or conduit - Installation	(Ln 5(a)/ Ln 7(a)/ Ln 8(a)) + Ln 6(a)	$ 204.53	$ 289.75	(Ln 5A/Ln 7A) + Ln 6A

Note:

Highlighted information is redacted for reasons #1, #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Space

Ln	Description	Subduct Calculation Source	Subduct Calculation (a)	4" Conduit Calculation (b)	Conduit Calculation Source
	Conduit Cost per Foot				
	Conduit Cost - Material				
1	Conduit Material per Foot per Conduit	Note 1			
2	Number of Subducts	Cable Space 2-CS; Note 4			
3	Capital Cost per subduct - Material	Ln 1(a) / Ln 2(a)			
	Conduit Cost - Installation				
4	Conduit Installation per Foot per Conduit	Note 2			
5	Number of Subducts	Cable Space 2-CS; Note 4			
6	Capital Cost per subduct- Installation	Ln 4(a) / Ln 5(a)			
	Subduct Cost - Material				
7	Subduct Material per Foot per Subduct	Note 1			
8	Number of Subducts				
9	Capital Cost per subduct - Material	Ln 7(a) / Ln 8(a)			
	Subduct Cost - Installation				
10	Subduct Installation per Foot per Subduct	Note 2			
11	Number of Subducts				
12	Capital Cost per subduct- Installation	Ln 10(a)/ Ln 11(a)			
	Subduct Costs per Subduct				
13	Total Material Capital Cost for Cable Space	Ln 3a+ Ln 9a			
14	Total Installation Capital Cost for Cable Space	Ln 6a+ Ln 12a			
	Conduit Costs per Conduit				
15	Total Material Capital Cost for Cable Space				Ln 1b
16	Total Installation Capital Cost for Cable Space				Ln 4b

Note:

Highlighted information is redacted for reasons #1, #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Fiber Cable Vault Splice

Fixed Allocator (FA): **14.09%**

Ln	Cost Elements	Increment	Source	Cost	Contribution Amount	Rate Element
				(a)	(b) = (a) * FA	(c) = (a) + (b)
1	Fiber Cable Vault Splice-48 Fiber-Material	per splice closure	Cable Vault Splice 3-CS	$ 10.48	$ 1.48	$ 11.95
2	Fiber Cable Vault Splice-96 Fiber-Material	per splice closure	Cable Vault Splice 3-CS	$ 32.39	$ 4.56	$ 36.96

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Vault Splice

DS0 1200 pair			
Ln	Description	Source	Material
1	Equipment Investment	Cable Vault Splice 4-CS	
2	Material Loadings Factor	Material Loading-CS	
3	Material Loadings	Ln 1 * Ln 2	
4	Total Equipment Investment	Ln 1 + Ln 3	
5	MDF Engineer & Installation Labor	Cable Vault Splice 4-CS	
6	Total Equipment and MDF Investment	Ln 4 + Ln 5	
7	Annual Cost Factor	ACFs-CS	
8	Total Annual Cost	Ln 6 * Ln 7	
9	Monthly Cost per DS0 Cable Splice Closure	Ln 8 / 12	**$ 519.83**

DS0 900 pair			
Ln	Description	Source	Material
10	Equipment Investment	Cable Vault Splice 4-CS	
11	Material Loadings Factor	Material Loading-CS	
12	Material Loadings	Ln 10 * Ln 11	
13	Total Equipment Investment	Ln 10 + Ln 12	
14	MDF Engineer & Installation Labor	Cable Vault Splice 4-CS	
15	Total Equipment and MDF Investment	Ln 13 + Ln 14	
16	Annual Cost Factor	ACFs-CS	
17	Total Annual Cost	Ln 15 * Ln 16	
18	Monthly Cost per DS0 Cable Splice Closure	Ln 17 / 12	**$ 378.87**

Highlighted information is redacted for reasons #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Vault Splice

DS0 600 pair			
Ln	Description	Source	Material
1	Equipment Investment	Cable Vault Splice 4-CS	
2	Material Loadings Factor	Material Loading-CS	
3	Material Loadings	Ln 1 * Ln 2	
4	Total Equipment Investment	Ln 1 + Ln 3	
5	MDF Engineer & Installation Labor	Cable Vault Splice 4-CS	
6	Total Equipment and MDF Investment	Ln 4 + Ln 5	
7	Annual Cost Factor	ACFs-CS	
8	Total Annual Cost	Ln 6 * Ln 7	
9	Monthly Cost per DS0 Cable Splice Closure	Ln 8 / 12	$ 251.95

DS1 100 pair			
Ln	Description	Source	Material
10	Equipment Investment	Cable Vault Splice 5-CS	
11	Material Loadings Factor	Material Loading-CS	
12	Material Loadings	Ln 10 * Ln 11	
13	Total Equipment Investment	Ln 10 + Ln 12	
14	MDF Engineer & Installation Labor	Cable Vault Splice 5-CS	
15	Total MDF Investment	Ln 13 + Ln 14	
16	Annual Cost Factor	ACFs-CS	
17	Total Annual Cost	Ln 15 * Ln 16	
18	Monthly Cost per DS1 Cable Splice Closure	Ln 17 / 12	$ 53.25

Highlighted information is redacted for reasons #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Vault Splice

Fiber Cable - 48 fiber				
Ln	Description	Source	Material	
1	Equipment Investment	Cable Vault Splice 5-CS		
2	Material Loadings Factor	Material Loading-CS		
3	Material Loadings	Ln 1 * Ln 2		
4	Total Investment	Ln 1 + Ln 3		
5	Annual Cost Factor	ACFs-CS		
6	Total Annual Cost	Ln 4 * Ln 5		
7	Monthly Cost per Fiber Cable Splice Closure	Ln 6 / 12	$	10.48

Fiber Cable - 96 fiber				
Ln	Description	Source	Material	
8	Equipment Investment	Cable Vault Splice 5-CS		
9	Material Loadings Factor	Material Loading-CS		
10	Material Loadings	Ln 8 * Ln 9		
11	Total Investment	Ln 8 + Ln 10		
12	Annual Cost Factor	ACFs-CS		
13	Total Annual Cost	Ln 11 * Ln 12		
14	Monthly Cost per Fiber Cable Splice Closure	Ln 13 / 12	$	32.39

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Vault Splice

Ln	Description	Source	Cost per Pair/Fiber	Cost per 100pair	Total Cost
	DSO Cable - 1200 pair				
	Equipment				
1					
2					
3					
4					
5					
6					
7	Total Equipment	Sum(Ln 1:Ln 6)			
8					
	DSO Cable - 900 pair				
	Equipment				
9					
10					
11					
12					
13					
14					
15	Total Equipment	Sum(Ln 9:Ln 14)			
16					
	DSO Cable - 600 pair				
	Equipment				
17					
18					
19					
20					
21					
22					
23		Sum(Ln 17:Ln 22)			
24					

Note:

Highlighted information is redacted for reasons #1, #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Vault Splice

Ln	Description	Source	Cost per Pair/Fiber	Cost per 100pair	Total Cost
	DS1 Cable - 100 pair				
	Equipment				
1					
2					
3					
4					
5					
6					
7	Total Equipment	Sum(Ln 1:Ln 6)			
8					
	Fiber Cable - 48 fiber				
	Equipment				
9					
10					
11					
12		Ln 10 * Ln 11			
13	Total Equipment	Ln 9 + Ln 12			
	Fiber Cable - 96 fiber				
	Equipment				
14					
15					
16					
17	Total Tray Splice	Ln 15 * Ln 16			
18	Total Equipment	Ln 14 + Ln 17			

Note:

Highlighted information is redacted for reasons #1, #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Vault Splice

Frame Cost Calculation

Ln	Description	Per Increment	Loaded Labor Rates	Hours	Total Cost
1					
2					
3					
4					

	NO Loadings Equipment Only	Eng & Install Only
5		
6		
7		
8		
9		
10		
11		
12		

Highlighted information is redacted for reasons #1, #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

MDF

Material Codes	Description	Base Cost	Quantity	Total Cost
	Total MDF			
	MDF Cost per Line (Total MDF/7000)			

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Cable Vault Space

Fixed Allocator (FA): **14.09%**

Ln	Cost Elements	Increment	Source	Incremental Cost (a)	Contribution Amount (b) = (a) * FA	Rate Element (c) = (a)+(b)
1	Adjacent Cable Vault Space (per 1200 pr)	per cable	Cable Vault Space 1-CS	$ 4.78	$ 0.67	$ 5.45
2	Adjacent Cable Vault Space (per 900 pr)	per cable	Cable Vault Space 1-CS	$ 3.68	$ 0.52	$ 4.20
3	Adjacent Cable Vault Space (per 600 pr)	per cable	Cable Vault Space 1-CS	$ 2.63	$ 0.37	$ 3.00
4	Adjacent Cable Vault Space (per 100 pr)	per cable	Cable Vault Space 1-CS	$ 0.60	$ 0.08	$ 0.68
5	Cable Vault Space (fiber)	per subduct	Cable Vault Space 1-CS	$ 1.23	$ 0.17	$ 1.40

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Vault Space

Cable Vault Space				
Ln	Description	Source	Diameter In Inches	Monthly Cost Per Cable
1	Metallic DS0 Cable - 1200 pair	Note 1		
2	Metallic DS0 Cable - 900 pair	Note 1		
3	Metallic DS0 Cable - 600 pair	Note 1		
4	Metallic DS1 Cable	Note 1		
5	Fiber Cable	Note 1, 2		

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Vault Space

Cable Vault Space Calculations - Metallic DS0 Cable - 1200 pair

Ln	Description	Source	Unit	Hours per Unit
	Cubic Feet Utilized			
1	Diameter of Cable	Note 1	Inches	
2	Diameter of Cable (in Feet)	Ln 1 / 12	Feet	
3	Length of Cable Vault	Note 2	Feet	
4	Radius of Cable	Ln 2 / 2	Feet	
5	Area of Width of Cable	Pi * (Ln 4)^2	Feet	
6	Volume of Cable	Ln 3 * Ln 5	Cubic Feet	
	Cost per Cubic Foot			
7	Cost of Cable Vault		Note 3	
8	Cubic Feet for Unistrut / Extenders	Cable Vault Space 7-CS	Cubic Feet	
9	Cost per Cubic Foot			
	Cost for Cable Vault Space Utilized			
10	Cost per Cubic Foot		Cost per Cubic Foot	
11	Volume of Cable		Cubic Ft per Cable	
12	Cost for Cable Vault Space Utilized per Cable		Cost per Cable	
13	Annual Cost Factor - #212100		ACFs	
14	Total Annual Cost		Ln 12 * Ln 13	
15	Monthly Cost for Cable Vault Space Utilized per Cable		Ln 14 / 12	$ 4.78

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Vault Space

Cable Vault Space Calculations - Metallic DS0 Cable - 900 pair

Ln	Description	Source	Unit	Hours per Unit	
	Cubic Feet Utilized				
1	Diameter of Cable	Note 1	Inches		
2	Diameter of Cable (in Feet)	Ln 1 / 12	Feet		
3	Length of Cable Vault	Note 2	Feet		
4	Radius of Cable	Ln 2 / 2	Feet		
5	Area of Width of Cable	Pi * $(Ln 4)^2$	Feet		
6	Volume of Cable	Ln 3 * Ln 5	Cubic Feet		
	Cost per Cubic Foot				
7	Cost of Cable Vault		Note 3		
8	Cubic Feet for Unistrut / Extenders	Cable Vault Space 7-CS	Cubic Feet		
9	Cost per Cubic Foot				
	Cost for Cable Vault Space Utilized				
10	Cost per Cubic Foot		Cost per Cubic Foot		
11	Volume of Cable		Cubic Ft per Cable		
12	Cost for Cable Vault Space Utilized per Cable		Cost per Cable		
13	Annual Cost Factor - #212100		ACFs		
14	Total Annual Cost		Ln 12 * Ln 13		
15	Monthly Cost for Cable Vault Space Utilized per Cable		Ln 14 / 12	$	3.68

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Vault Space

Cable Vault Space Calculations - Metallic DS0 Cable - 600 pair

Ln	Description	Source	Unit	Hours per Unit	
	Cubic Feet Utilized				
1	Diameter of Cable	Note 1	Inches		
2	Diameter of Cable (in Feet)	Ln 1 / 12	Feet		
3	Length of Cable Vault	Note 2	Feet		
4	Radius of Cable	Ln 2 / 2	Feet		
5	Area of Width of Cable	Pi * (Ln 4)^2	Feet		
6	Volume of Cable	Ln 3 * Ln 5	Cubic Feet		
	Cost per Cubic Foot				
7	Cost of Cable Vault		Note 3		
8	Cubic Feet for Unistrut / Extenders	Cable Vault Space 7-CS	Cubic Feet		
9	Cost per Cubic Foot				
	Cost for Cable Vault Space Utilized				
10	Cost per Cubic Foot		Cost per Cubic Foot		
11	Volume of Cable		Cubic Ft per Cable		
12	Cost for Cable Vault Space Utilized per Cable		Cost per Cable		
13	Annual Cost Factor - #212100		ACFs		
14	Total Annual Cost		Ln 12 * Ln 13		
15	Monthly Cost for Cable Vault Space Utilized per Cable		Ln 14 / 12	$	2.63

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Vault Space

Cable Vault Space Calculations - Metallic DS1 Cable - 100 pair

Ln	Description	Source	Unit	Hours per Unit
	Cubic Feet Utilized			
1	Diameter of Cable	Note 1	Inches	
2	Diameter of Cable (in Feet)	Ln 1 / 12	Feet	
3	Length of Cable Vault	Note 2	Feet	
4	Radius of Cable	Ln 2 / 2	Feet	
5	Area of Width of Cable	Pi * (Ln 4)^2	Feet	
6	Volume of Cable	Ln 3 * Ln 5	Cubic Feet	
	Cost per Cubic Foot			
7	Cost of Cable Vault		Note 3	
8	Cubic Feet for Unistrut / Extenders	Cable Vault Space 7-CS	Cubic Feet	
9	Cost per Cubic Foot			
	Cost for Cable Vault Space Utilized			
10	Cost per Cubic Foot		Cost per Cubic Foot	
11	Volume of Cable		Cubic Ft per Cable	
12	Cost for Cable Vault Space Utilized per Cable		Cost per Cable	
13	Annual Cost Factor - #212100		ACFs	
14	Total Annual Cost		Ln 12 * Ln 13	
15	Monthly Cost for Cable Vault Space Utilized per Cable		Ln 14 / 12	$ 0.60

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Vault Space

Cable Vault Space Calculations - Fiber Cable					
Ln	Description	Source	Unit	Hours per Unit	
	Cubic Feet Utilized				
1	Diameter of Cable	Note 1	Inches		
2	Diameter of Cable (in Feet)	Ln 1 / 12	Feet		
3	Length of Cable Vault	Note 2	Feet		
4	Radius of Cable	Ln 2 / 2	Feet		
5	Area of Width of Cable	Pi * $(Ln 4)^2$	Feet		
6	Volume of Cable	Ln 3 * Ln 5	Cubic Feet		
	Cost per Cubic Foot				
7	Cost of Cable Vault		Note 3		
8	Cubic Feet for Unistrut / Extenders	Cable Vault Space 7-CS	Cubic Feet		
9	Cost per Cubic Foot				
	Cost for Cable Vault Space Utilized				
10	Cost per Cubic Foot		Cost per Cubic Foot		
11	Volume of Cable		Cubic Ft per Cable		
12	Cost for Cable Vault Space Utilized per Cable		Cost per Cable		
13	Annual Cost Factor - #212100		ACFs		
14	Total Annual Cost		Ln 12 * Ln 13		
15	Monthly Cost for Cable Vault Space Utilized per Cable		Ln 14 / 12	$	1.23

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Vault Space

Cable Vault Space Calculations - Unistrut and Extenders				
Ln	Description	Source	Unit	Hours per Unit
Cubic Feet Occupied by Unistrut / Extenders				
1	Width of Extenders	Note 1	Feet	
2	Height of Unistrut	Note 2	Feet	
3	Length of Cable Vault	Note 3	Feet	
4	Number of Unistruts	Note 4		
5	Cubic Feet for Unistrut / Extenders	Ln 1 * Ln 2 * Ln 3 * Ln 4		

Highlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Cable Rack Shared Space - Metallic

Fixed Allocator: **14.09%**

Ln	Cost Elements	Increment	Source	Cost	Units	Frequency	Subtotal
				(a)	(b)	(c)	(d) = (a)*(b)*(c)
	Cable Rack Shared Space						
1	Cable Rack Shared Space-DS0	per cable run	Cable Rack Space 1-CS	$ 0.0035	73	0.33	$ 0.09
2	Cable Rack Shared Space-DS1	per cable run	Cable Rack Space 1-CS	$ 0.0022	73	0.33	$ 0.05
3	Cable Rack Shared Space-Coaxial	per cable run	Cable Rack Space 1-CS	$ 0.0007	73	0.33	$ 0.02
4	**Total Incremental Monthly Cost**		Sum(Ln 1.. Ln 3)				$ 0.15
5	**Contribution Amount**		Ln 4 * Fixed Allocator				$ 0.02
6	**Rate Element**		Ln 4 + Ln 5				$ 0.18

Note:
1) The units for DS0, DS1 and DS3 cables are based on the average linear feet of cable for 59 central offices less 39 linear feet used in the Overhead Superstructure calculation.
2) Frequency was developed to reflect the weighting of these three costs into one rate element.
3) Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Cable Rack Shared Space - Fiber

Fixed Allocator: **14.09%**

Ln	Cost Elements	Increment	Source		Cost
1	**Cable Rack Shared Space-Fiber**	per innerduct ft	Cable Rack Space 1-CS	$	0.0049
2	**Total Incremental Monthly Cost**		Ln 1	$	0.0049
3	**Contribution Amount**		Ln 2 * Fixed Allocator	$	0.0007
4	**Rate Element**		Ln 2 + Ln 3	$	0.0056

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Rack Shared Space

Cable Rack Shared Space				
Ln	Description	Source	Unit	Costs
1	Annual Cost per 100-pair cable	Cable Rack Space 2-CS	Foot	
2	Monthly Cost per 100-pair cable	Ln 1 / 12	Foot	
3	Annual Cost per 28-pair cable	Cable Rack Space 2-CS	Foot	
4	Monthly Cost per 28-pair cable	Ln 3 / 12	Foot	
5	Annual Cost per Fiber cable	Cable Rack Space 2-CS	Foot	
6	Monthly Cost per Fiber cable	Ln 5 / 12	Foot	
7	Annual Cost per Coaxial cable	Cable Rack Space 2-CS	Foot	
8	Monthly Cost per Coaxial cable	Ln 7 / 12	Foot	

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Rack Shared Space

Cable Rack Shared Space Calculations				
Ln	Description	Source	Unit	Dimensions/Costs
		Cubic Feet Utilized		
1	Diameter of 100-pair cable	Note 1	Inches	
2	# of 100-pair cable in 24" cable rack	Note 1	100-pair cable	
3	Diameter of 28-pair cable	Note 2	Inches	
4	# of 28-pair cable in 24 " cable rack	(Ln 1/Ln 3) * Ln 2	28-pair cable	
5	Diameter of Fiber cable	Note 2	Inches	
6	# of innerduct in 24 " cable rack	(Ln 1/Ln 5) * Ln 2	Innerduct	
7	Diameter of Coaxial cable	Note 2	Inches	
8	# of coaxial cable in 24 " cable rack	(Ln 1/Ln 7) * Ln 2	Coaxial cable	
		Cost per Foot for Cable Rack Shared Space		
9	Cable Rack - Equipment	NRC Overhead Superstructure 1-CS	Feet	
10	Cable Rack - Installation	NRC Overhead Superstructure 1-CS	Feet	
11	Cost per Foot	Sum (Ln 9 : Ln10)		
12	Annual Cost Factor	ACFs - 1		
13	Total Annual Cost per foot	Ln 13 * Ln 14		
		Annual Cost for Cable Rack Shared Space		
14	Annual Cost per 100-pair cable	Ln 15 / Ln 2	Foot	
15	Annual Cost per 28-pair cable	Ln 15 / Ln 4	Foot	
16	Annual Cost per Fiber cable	Ln 15 / Ln 6	Foot	
17	Annual Cost per Coaxial cable	Ln 15 / Ln 8	Foot	

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
DC Power

Fixed Allocator: **14.09%**

Ln	Cost Elements	Increment	Source		Cost
	DC Power				
1	DC Power - Power Supply	per 1 amps	DC Power Fac 1-CS	$	17.69
2	DC Power - Fuses and Fuse Panels (BDFB)	per 1 amps	DC Power Fac 1-CS	$	0.38
3	DC Power - Power Cable Pull - Labor	per 1 amps	DC Power Fac 1-CS	$	1.22
4	DC Power Utility	per 1 amps	DC Power Util 1-CS	$	3.02
5	**Total Incremental Monthly Cost**		Sum(Ln 1.. Ln 4)	$	22.31
6	**Contribution Amount**		Ln 5 * Fixed Allocator	$	3.14
7	**Rate Element**		Ln 5 + Ln 6	$	25.45

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
DC Power Facility

Ln	Description	Source	Power Supply Cost (per 1 amps) (a)	BDFB Fuses and Fuses Panels (per 1 amps) (b)	Power Cable Pull (per 1 amps) (c)
1	Equipment Investment	DC Power Fac 3,2-CS			
2	Installation Factor	EF&I-CS			
3	Installation Amount	DC Power Fac 3, Ln 1 * Ln 2			
4	Total Investment	Ln 1 + Ln 3			
5	Annual Cost Factor	ACFs-CS			
6	Total Annual Costs	Ln 4 * Ln 5			
7	Floor Space Cost per BDFB	DC Power Fac 2-CS			
8	Monthly Cost	Ln 6 / 12 + Ln 7	**$ 17.69**	**$ 0.38**	**$ 1.22**

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
DC Power BDFB Material/Labor Cost

Ln	Description	Source	Hours	Rate	Total Cost	Unit Cost (a) = Note 1	Quantity (b) = Note 1	Calculation (c)= (a)*(b)
	BDFB Material							
	Fuse and Fuse Position	DC Power Fac 5-CS				per amp	1 amps	
	Floor Space Cost per Relay Rack							
	Two BDFBs per Relay Rack							
	Floor Space Cost per BDFB					per amp	1 amps	
	Power Cable Costs	DC Power Fac 5-CS				per amp	1 amps	
	Connector Taps	DC Power Fac 5-CS				per amp	1 amps	
	Total							

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
DC Power Facility - Equipment and Labor Costs

Description			Power Equipment		Power Install	
CO Line Sizes	Amps	Line %	Power Equipment Cost	Cost per Amp	Power Install Cost	Cost per Amp
	(a)	(b)	(c)	(d)=(c)/(a)*(b)	(e)	(f)=(e)/(a)*(b)

Total per Amp

1 Amp Total

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
DC Power Facility - Equipment and Labor Costs

Verizon Engineering Planning Guidelines

		Line Size	Power Equipment						Total	Installation Factor	Installation Amount	Total Inv Amount	Per Line
			Generator	Rectifier	Batteries	Pwr Bd	Misc	Inverter					
Small Switch													
	Up to:												
Medium Switch													
	Up to:												
Large Switch													
	Up to:												
Remotes													
Small	Up to:												
Large	Up to:												

Power Investment Per Cost Study Line Size

Base/Host				Remote				
Size	Pwr Eqpt	Pwr Install	Total EF&I	Size	Pwr Eqpt	Pwr Install	Total EF&I	Mapping Criteria
								Small Sw
								Small Sw
								Small Sw
								Small Sw
								Medium Sw
								Large Sw
								Large Sw+add'l rect/batt
								Large Sw+add'l rect/batt +add'l pwr bd

Note.

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
DC Power Facility - Equipment and Labor Costs

Power Cost for Provisioning BDFB

Ln	Description	Quantity	Cost	Total Cost	Cost/AMP Based on 480
	Battery Distribution Fuse Bay				
	RELTEC 1293B2				
1	Dual Load Common Equipment				
2	Analog meter panel				
3	DC/600A Analog metering				
4	Distribution Fuse Panel				
5	E/W (8) 31-60A Fuse Positions 2 Panels "A" and 2 Panels "B"				
6	**Total Equipment**				

	Cable Costs	Quantity		
		Feet	Runs	Cost/ft
7	750 MCM Flexible Power Cable Based on 125' runs from Main Power			
8	Connector Taps 750MCM			

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
DC Power Utility

Ln	Description	Source	Calculation
1	Amperage Rating of Equipment (AMPS)		
2	Voltage Rating of Equipment (Volts)	DC Power Util 2-Cs	
3	Equipment Power Requirement	(Ln 1 * Ln 2) / 1000	
4	Florida Cost of Commercial Electricity ($/KWH)	DC Power Util 3-CS	
5	Hourly Cost to Power Equipment	Ln 3 * Ln 4	
6	Hours per Day		
7	Days per Year		
8	Annual Cost to Power Equipment	Ln 5 * Ln 6 * Ln 7	
9	Efficiency and Heat Loss Factor	DC Power Util 2-Cs	
10	Annual Power Cost Corrected for Power Loss	Ln 8 * Ln 9	
11	Monthly Power Cost	Ln 10/12	**$ 3.02**

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
DC Power Utility

DC Power Engineering Calculations:

Power In (PI) Power Factor (PF) Power Out (PO)

Rectifier Amps
Rectifier Voltage

Efficiency & Heat Loss Factor

Ratio Formula: Power In divided by Power Out (PI/PO)

Power In Power Out

Ratio

Highlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cost per Kilo Watt Hour

State	2001 Cost Per kwh
AL	
AZ	
CA	
CT	
DC	
DE	
FL	
HI	
ID	
IL	
IN	
KY	
MA	
MD	
ME	
MI	
MO	
NC	
NH	
NJ	
NY	
NV	
OH	
OR	
PA	
RI	
SC	
TX	
VA	
VT	
WA	
WI	
WV	

Note:

Highlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Facility Termination

Fixed Allocator (FA): **14.09%**

Ln	Cost Elements	Increment	Source	Cost	Contribution Amount	Rate Element
				(a)	(b) = (a) * FA	(c) = (a)+(b)
1	Facility Termination-DS0	per 100 pr	Facility Term 1-CS	$ 2.81	$ 0.40	$ 3.21
2	Facility Termination-DS1	per 28 pr	Facility Term 3-CS	$ 9.18	$ 1.29	$ 10.47
3	Facility Termination-DS3	per coaxial cable	Facility Term 5-CS	$ 22.01	$ 3.10	$ 25.11

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Facility Termination: DS0

		DS0		
Ln	Description	Source	Material	
1	Equipment Investment	Fac Term 2-CS		
2	Installation Factor	EF&I-CS		
3	Installation Amount	Ln 1 * Ln 2		
4	Total Investment	Ln 1 + Ln 3		
5	Annual Cost Factor	ACFs-CS		
6	Total Annual Costs	Ln 4 * Ln 5		
7	Monthly Cost per 100 pair DS0 Cable	Ln 6 / 12	$	**2.81**

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Facility Termination: DS0

Ln	Description	Source	Loaded Labor Rate	Hours	Calculation
	Material				
1	Block Connector 100 Pair Cost	Note 1			
2	Main Distribution Frame (Per DS0 Pair) Cost	Cable Vault Splice 6-CS			
3	Number of DS0 Pairs				
4	MDF Cost for 100 Pair DS0	Ln 2 * Ln 3			
5	Total Material Cost	Ln 1 + Ln 4			**$ 86.92**

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Facility Termination: DS1

Ln	Description	DS1 Source	DS1 Material
1	Equipment Investment	Fac Term 4-CS	
2	Installation Factor	EF&I-CS	
3	Installation Amount	Ln 1 * Ln 2	
4	Total Investment	Ln 1 + Ln 3	
5	Annual Cost Factor	ACFs-CS	
6	Total Annual Costs	Ln 4 * Ln 5	
7	Floor Space Cost per Relay Rack per DS1	Fac Term 4-CS	
8	Monthly Cost	Ln 6 / 12 + Ln 7	**$ 9.18**

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Facility Termination: DS1

Ln	Description	Source	Loaded Labor Rate	Hours	Calculation
	Material				
1	56 Circuit DSX1 Panel Cost	Note 1			
2	Number of 28 pair DS1s in 56 DSX Panel				
3	DSX Panel Cost per DS1	Ln 1 / Ln 2			
4	Relay Rack				
5	Total Relay Rack Cost	Relay Rack 2-CS			
6	Number of DSX Panels per Rack				
7	Number of 28 pair DS1s in 56 DSX Panel				
8	Total Relay Rack Cost per 28 pair DS1	Ln 5 / Ln 6 / Ln 7			
9	Total Material per 28 pair DS1 Cost	Ln 3 + Ln 8			**$ 245.71**
10	Floor Space Cost per Relay Rack				
11	Floor Space Cost per Relay Rack	Note 2			
12	Number of DSX Panels per Rack				
13	Number of 28 pair DS1s in 56 DSX Panel				
14	Total Floor Space Cost per Relay Rack per DS1	Ln 11 / Ln 12 / Ln 13			**$ 1.24**

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Facility Termination: DS3

Ln	Description	DS3 Source	DS3 Material
1	Equipment Investment	Fac Term 6-CS	
2	Installation Factor	EF&I-CS	
3	Installation Amount	Ln 1 * Ln 2	
4	Total Investment	Ln 1 + Ln 3	
5	Annual Cost Factor	ACFs-CS	
6	Total Annual Costs	Ln 4 * Ln 5	
7	Floor Space Cost per Relay Rack per DS3	Fac Term 6-CS	
8	Monthly Cost	Ln 6 / 12 + Ln 7	**$ 22.01**

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Facility Termination: DS3

Ln	Description	Source	Loaded Labor Rate	Hours	Calculation
	Material				
1	DS3 Cross Connect Chassis Cost	Note 1			
2	Number of Slots per Chassis				
3	DS3 Cross Connect Cost per Slot	Ln 1 / Ln 2			
4	DS3 Cross Connect - Module (Each DS3 Circuit)	Note 1			
5	Subtotal Chassis Slot and Module Cost	Ln 3 + Ln 4			
6	Number of DS3 per Module				
7	Subtotal Chassis and Module Cost per DS3	Ln 5 * Ln 6			
8	Relay Rack				
9	Total Relay Rack Cost	Relay Rack 2-CS			
10	Number of Chassis per Rack				
11	Number of DS3s per Chassis				
12	Subtotal Relay Rack Cost per DS3	Ln 9 / Ln 10 / Ln 11			
13	Total Material	Ln 7 + Ln 12			
14	Floor Space Cost per Relay Rack				
15	Floor Space Cost per Relay Rack	Floor Space 1-CS			
16	Number of Chassis per Rack				
17	Number of DS3s per Chassis				
18	Subtotal Floor Space Cost per Relay Rack per DS3	Ln 15 / Ln 16 / Ln 17			

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Fixed Allocator: **14.09%**

Ln	Cost Elements	Increment	Source	Cost
1	BITS Timing	per port	BITS Timing 1-CS	$ 9.01
2	**Total Incremental Monthly Cost**		Ln 1	$ 9.01
3	**Contribution Amount**		Ln 2 * Fixed Allocator	$ 1.27
4	**Rate Element**		Ln 3 + Ln 2	$ 10.28

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
BITS Timing

BITS Timing per Port			
Ln	**Description**	**Source**	**Calculation**
1	Equipment Investment	BITS Timing 2-CS	
2	Installation Factor	EF&I-CS	
3	Installation Amount	Ln 1 * Ln 2	
4	Total Investment	Ln 1 + Ln 3	
5	Annual Cost Factor	ACFs-CS	
6	Total Annual Costs	Ln 4 * Ln 5	
7	Monthly Cost per port	Ln 6 / 12	**$ 9.01**

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Bits Timing Equipment

		Bits Timing Cost Calculation - Material			
Ln	Description	Quantity (a)	Unit Price (b)	Source (c)	Total Cost (d) = (a)*(b)
	Material				
1	Shelf Master DCD-519 e/w WW PNL				
2	Shelf EXP DCD-519 e/w WW Panel				
3	Unit Clock Input (CI)				
4	Clock ST2E				
5	Controller Matrix (MCA 5)				
6	Interface Maintenance RS-232				
7	Interface Sys Alarm (SAI)				
8	Unit Output Automatic (TOCA)				
9	Unit T1 Output Automatic (TOTA)				
10	Shelf DCD-LPRS				
11	Kit GPS Timing T1 Verizon				
12	Cables 2 Fiber w/Conn, 200'				
13	Cable GPS Power, 200'				
14	Unit Blank LPR				
15	KIT Isolation Module				
16	Total Material Cost				
17	Number of ports per system				
	Material Cost per Port			Ln 16D / Ln 17A	$ 278.75

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Facility Termination - Fiber Optic Patchcord

Fixed Allocator: **14.09%**

Ln	Cost Elements	Increment	Source		Cost
1	Fiber Optic Patchcord - Termination	per connector	Fac Term - Fiber Optic 1-CS	$	0.41
2	**Total Incremental Monthly Cost**		Ln 1	$	0.41
3	**Contribution Amount**		Ln 2 * Fixed Allocator	$	0.06
4	**Rate Element**		Ln 2 + Ln 3	$	0.47

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Facility Termination - Fiber Optic Patchcord

Ln	Description	Source	Material
1	Equipment Investment per Connector	Fac Term - Fiber Optic 2-CS	
2	Installation Factor	EF&I-CS	
3	Installation Amount	Ln 1 * Ln 2	
4	Total Investment per Connector	Ln 1 + Ln 3	
5	Annual Cost Factor	ACFs-CS	
6	Total Annual Costs	Ln 4 * Ln 5	
7	Floor Space Cost per Connector	Fac Term - Fiber Optic 2-CS	
8	Monthly Cost per Connector	Ln 6 / 12 + Ln 7	

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Facility Termination - Fiber Optic Patchcord

Ln	Description	Source	Loaded Labor Rate	Hours	Calculation	
	Material					
1	Optical Cross Connect Chassis Cost	Note 1				
2	Number of Cards per Chassis	Note 1				
3	Optical Cross Connect Chassis Cost per Card	Ln 1 / Ln 2				
4	Optical Cross Connect Card Cost	Note 1				
5	Subtotal Chassis and Card Cost	Ln 3 + Ln 4				
	Relay Rack					
6	Total Relay Rack Cost	Relay Rack 2-CS				
7	Number of Chassis per Rack	Note 2				
8	Number of Cards per Chassis	Note 1				
9	Subtotal Relay Rack Cost per Card	Ln 6 / Ln 7 / Ln 8				
10	Total Material	Ln 5 + Ln 9				
11	Number of Connectors per Card	Note 1				
12	Material Cost per Connector	Ln 10 / Ln 11			$	**10.85**
	Floor Space					
13	Floor Space Cost per Relay Rack					
14	Floor Space Cost per Relay Rack	Floor Space 1-CS				
15	Number of Chassis per Rack	Note 2				
16	Number of Cards per Chassis	Note 1				
17	Subtotal Floor Space Cost per Relay Rack per Card	Ln 14 / Ln 15 / Ln 16				
18	Number of Connectors per Card	Note 1				
19	Floor Space Cost per Connector	Ln 17 / Ln 18			$	**0.06**

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Cable Duct Space - Fiber Optic Patchcord

Fixed Allocator: **14.09%**

Ln	Cost Elements	Increment	Source	Cost	Units	Subtotal
				(a)	(b)	(c) = (a)*(b)
1	Cable Duct Space - Fiber Optic Patchcord	per fiber strand	Duct Space - Fiber Optic 1-CS	$ 0.0006	185	$ 0.12
2	**Total Incremental Monthly Cost**		Ln 1			$ 0.12
3	**Contribution Amount**		Ln 2 * Fixed Allocator			$ 0.02
4	**Rate Element**		Ln 2 + Ln 3			$ 0.14

Note:
1) Fixed Allocator is a method used by Verizon to recover common costs.
2) The length for Fiber Optic Patchcord was derived from the average number of feet ordered through all central offices for a two year period.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Duct Space - Fiber Optic Patchcord

Ln	Description	Source	Cost
1	Equipment Investment	Duct Space - Fiber Optic 2-CS	
2	Installation Factor	EF&I-CS	
3	Installation Amount	Ln 1 * Ln 2	
4	Total Investment	Ln 1 + Ln 3	
5	Number of 2mm Patch Cords in 2" Duct System		
6	Fiber Guide Duct System Cost per ft. per Fiber Optic Patchcord	Ln 4 / Ln 5	
7	Annual Cost Factor	ACFs-CS	
8	Total Annual Costs	Ln 6 * Ln 7	
9	Monthly Cost per ft. per Fiber Optic Patchcord	Ln 8 / 12	**$ 0.0006**

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Duct Space - Fiber Optic Patchcord

Ln	Description	Source	Loaded Labor Rate	Hours	Calculation
	Material				
	Fiber Guide Duct System				
1	Seventeen (17), Horizontal Straight Sections w/ Cover - 2" x 6'	Duct Space - Fiber Optic 3-CS			
2	Two (2), 45-degree down elbows - 2"	Duct Space - Fiber Optic 3-CS			
3	Sixteen (16), Junction Kit - 2"	Duct Space - Fiber Optic 3-CS			
4	Subtotal Fiber Guide Duct System	Ln 1 + Ln 2 + Ln 3			
5	Number of Feet in Fiber Duct System	Note 1			
6	Fiber Guide Duct System Cost per Foot	Ln 4 / Ln 5			$ 5.02

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Cable Duct Space - Fiber Optic Patchcord

Item #	Description	Cost	Quantity	Extension

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Virtual Equipment Maintenance

Fixed Allocator (FA): **14.09%**

Ln	Cost Elements	Increment	Source	Cost	Units	Subtotal
				(a)	(b)	(c) = (a)*(b)
1	Virtual Equipment Maintenance	per base unit	Virtual Equip Maint Blended-CS	$ 58.62	1	$ 58.62
2	Virtual Frame Space	per quarter rack	Virtual Frame Space 1-CS	$ 9.07	1	$ 9.07
3	**Total Incremental Monthly Cost**		Ln 1 + Ln 2			$ 67.69
4	**Contribution Amount**		Ln 3 * Fixed Allocator			$ 9.54
5	**Rate Element**		Ln 4 + Ln 3			$ 77.23

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Virtual Equipment Maintenance

Ln	Description	Source	Maintenance Costs per Base Unit A	Average # of Base Units per Rack B = Note 1	Cost per Rack C=A*B	Frequency of Maintenance D=Note 2	Weighted Cost of Maintenance per Rack E=C*D
	Circuit Equipment						
1	ATM	Virtual Equip Maint 1-CS					
2	DSLAM	Virtual Equip Maint 1-CS					
3	Frame Relay	Virtual Equip Maint 1-CS					
4	Routers	Virtual Equip Maint 1-CS					
5	SMDS	Virtual Equip Maint 1-CS					
6	OC3	Virtual Equip Maint 1-CS					
7	OC12	Virtual Equip Maint 1-CS					
8	OC24	Virtual Equip Maint 1-CS					
9	OC48	Virtual Equip Maint 1-CS					
10	NGDLC	Virtual Equip Maint 1-CS					
11	Maintenance Cost per Equipment	Sum(Ln 1..Ln 10)				1.000	
12	Maint Cost for Equip per Quarter Rack	Ln 11 / 4					$ 58.62

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Virtual Equipment Maintenance

Ln	Description	Source	Loaded Labor Rate A	Trouble and Routine Maintenance Labor Hours B	Annual Calculation C=A*B	Monthly Calculation D=C/12
	Circuit Equipment					
1	ATM	Virtual Equip Maint 2-CS				
2	DSLAM	Virtual Equip Maint 2-CS				
3	Frame Relay	Virtual Equip Maint 2-CS				
4	Routers	Virtual Equip Maint 2-CS				
5	SMDS	Virtual Equip Maint 2-CS				
6	OC3	Virtual Equip Maint 2-CS				
7	OC12	Virtual Equip Maint 2-CS				
8	OC24	Virtual Equip Maint 2-CS				
9	OC48	Virtual Equip Maint 2-CS				
10	NGDLC	Virtual Equip Maint 2-CS				

Note:

Highlighted information is redacted for reasons #2 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Virtual Equipment Maintenance

Ln	Description	Source	Type of Advanced Data Services Equipment: ATM	DSLAM	Frame Relay	Routers	SMDS	OC3 / OC48	NGDLC
	Trouble Maintenance								
1	Circuit Equipment Labor (per trouble ticket)								
2	Circuit Equipment - Troubleshooting	Note 1							
3	Circuit Equipment - Restoration	Note 1							
4	Total Trouble Maintenance per Trouble Ticket	Ln 1 + Ln 2							
5	Average Trouble Tickets per Base Unit per Year	Note 2							
6	Trouble Maintenance Labor per Year	Ln 4 * Ln 5							
	Routine Maintenance								
7	Routine Maint Labor per Base Unit per Year	Note 1							
8	Total Trouble and Routine Maintenance per Base Unit per Year	Ln 6 + Ln 7							

Note:

Highlighted information is redacted for reasons #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Virtual Frame Space

Ln	Description	Source	Calculation
Per Quarter Rack			
1	Equipment Investment (per quarter rack)	Virtual Frame Space 2-CS	
2	Installation Cost (per quarter rack)	Virtual Frame Space 2-CS	
3	Total Investment (per quarter rack)	Ln 1 + Ln 2	
4	Annual Cost Factor	ACFs-CS	
5	Total Frame Cost (per quarter rack)	Ln 3 * Ln 4	
6	Floor Space Cost (per quarter rack)	Virtual Frame Space 2-CS	
7	Monthly Cost (per quarter rack)	Ln 5 / 12 + Ln 6	$ 9.07
Per Shelf			
8	Equipment Investment (per shelf)	Virtual Frame Space 2-CS	
9	Installation Cost (per shelf)	EF&I-CS	
10	Total Investment (per shelf)	Ln 8 + Ln 9	
11	Annual Cost Factor	ACFs-CS	
12	Total Frame Cost (per shelf)	Ln 10 * Ln 11	
13	Floor Space Cost (per shelf)	Virtual Frame Space 2-CS	
14	Monthly Cost (per shelf)	Ln 12 / 12 + Ln 13	$ 2.27

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Cost Development
Virtual Frame Space

Ln	Description	Source	Calculation
1	Frame/Relay Rack	Relay Rack-CS	
2	Floor Space Cost per Frame	Floor Space 1-CS	
	Installation and Grounding of Relay Rack		
3	Installation Factor	EF&I-CS	
4	Installation Cost	Ln 1 * Ln 3	
5	Number of quarter racks per Relay Rack		
6	Number of shelves per Relay Rack		
7	Material Cost per quarter rack	Ln 1 / Ln 5	
8	Installation Cost per quarter rack	Ln 4 / Ln 5	
9	Floor Space Cost per Frame per quarter rack	Ln 2 / Ln 5	
10	Material Cost per shelf	Ln 1 / Ln 6	
11	Installation Cost per shelf	Ln 4 / Ln 6	
12	Floor Space Cost per Frame per shelf	Ln 2 / Ln 6	

Note:

Highlighted information is redacted for reasons #1 and #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Adjacent On-Site - Subduct Space

Fixed Allocator (FA): **14.09%**

Ln	Cost Elements	Increment	Source	Incremental Cost	Contribution Amount	Rate Element
				(a)	(b) = (a) * FA	(c) = (a)+(b)
1	Adjacent Subduct Space - Manhole	per subduct	Cable Space 1-CS	$ 6.76	$ 0.95	$ 7.71
2	Adjacent Subduct Space	per linear foot	Cable Space 1-CS	$ 0.04	$ 0.01	$ 0.05

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Adjacent On-Site - Conduit Space

Fixed Allocator (FA): **14.09%**

Ln	Cost Elements	Increment	Source	Incremental Cost	Contribution Amount	Rate Element
				(a)	(b) = (a) * FA	(c) = (a)+(b)
1	Adjacent Conduit Space - (4" Duct) Metallic - Manhole	per conduit	Cable Space 1-CS	$ 12.83	$ 1.81	$ 14.64
2	Adjacent Conduit Space - (4" Duct) Metallic Cable	per linear foot	Cable Space 1-CS	$ 0.06	$ 0.01	$ 0.07

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Adjacent On-Site - Facility Termination

Fixed Allocator (FA): **14.09%**

Ln	Cost Elements	Increment	Source	Incremental Cost	Contribution Amount	Rate Element
				(a)	(b) = (a) * FA	(c) = (a)+(b)
1	Adjacent Facility Termination DSO Cable - Material	per 100 pr	Facility Term 1-CS	$ 2.81	$ 0.40	$ 3.21
2	Adjacent Facility Termination DS1 Cable - Material	per 28 pr	Facility Term 3-CS	$ 9.18	$ 1.29	$ 10.47
3	Adjacent Facility Termination DS3 Cable - Material	per coaxial cable	Facility Term 5-CS	$ 22.01	$ 3.10	$ 25.11

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Adjacent On-Site - Cable Vault Splice

Fixed Allocator (FA): **14.09%**

Ln	Cost Elements	Increment	Source	Incremental Cost (a)	Contribution Amount (b) = (a) * FA	Rate Element (c) = (a)+(b)
1	Adjacent Cable Vault Splice (per 1200 pr) Material	per splice closure	Cable Vault Splice 1-CS	$ 519.83	$ 73.26	$ 593.08
2	Adjacent Cable Vault Splice (per 900 pr) Material	per splice closure	Cable Vault Splice 1-CS	$ 378.87	$ 53.39	$ 432.26
3	Adjacent Cable Vault Splice (per 600 pr) Material	per splice closure	Cable Vault Splice 2-CS	$ 251.95	$ 35.51	$ 287.46
4	Adjacent Cable Vault Splice (per 100 pr) Material	per splice closure	Cable Vault Splice 2-CS	$ 53.25	$ 7.50	$ 60.76
5	Adjacent Cable Vault Splice (48 fiber) Material	per splice closure	Cable Vault Splice 3-CS	$ 10.48	$ 1.48	$ 11.95
6	Adjacent Cable Vault Splice (96 fiber) Material	per splice closure	Cable Vault Splice 3-CS	$ 32.39	$ 4.56	$ 36.96

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon: EIS Study - Florida
Monthly Recurring Rate Development
Adjacent On-Site - Cable Rack Space

Fixed Allocator (FA): **14.09%**

Ln	Cost Elements	Increment	Source	Incremental Cost (a)	Contribution Amount (b) = (a) * FA	Rate Element (c) = (a)+(b)
1	Adjacent Cable Rack Space - Metallic DSO	per linear foot	Cable Rack Space 1-CS	$ 0.0035	$ 0.0005	$ 0.0040
2	Adjacent Cable Rack Space - Metallic DS1	per linear foot	Cable Rack Space 1-CS	$ 0.0022	$ 0.0003	$ 0.0025
3	Adjacent Cable Rack Space - Fiber	per innerduct foot	Cable Rack Space 1-CS	$ 0.0049	$ 0.0007	$ 0.0056
4	Adjacent Cable Rack Space - Coaxial	per linear foot	Cable Rack Space 1-CS	$ 0.0007	$ 0.0001	$ 0.0100

Note:
Fixed Allocator is a method used by Verizon to recover common costs.

Verizon Expanded Interconnection Services
Common Tables

Florida

Section 3

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Description	HPU	Labor Group

TERMINATE SWB CABLE (.025 PER END)
RUN & SECURE SWB/SHIELD/COAX CA/INNERDUCT (.025/FT)
TERMINATE SHIELD/COAX CA. (.25 PER END)
RUN & SECURE PWR CA 250 TO 1000 (.25 PER FT)
TERM PWR CA 250 TO 1000 (.75 HRS PER TAP)
ERECT RELAY RACK (3 HRS/RACK)
ERECT SUPER STRUCTURE (.3 HRS/FT.)
TRAVEL TIME - INSTALLATION

Highlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

MATERIAL LOADING FACTORS

State		Description	Supply	Minormat	Matload
FL1G	CKT	Circuit			
FL1G	COE	Central Office Equipment			
FL1G	FIBC	Fiber Cable			
FL1G	METC	Metallic Cable			

State		Description	Freight	Sales tax	Provisioning
FL1G	CKT	Circuit			
FL1G	COE	Central Office Equipment			
FL1G	FIBC	Fiber Cable			
FL1G	METC	Metallic Cable			

Highlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Monthly Recurring Costs
Annual Cost Factors (ACFs)
Rate of Return = 18.36%

Account	Description	Capital Recovery	Composite Tax	Pool Factor	Property Tax	Total ACF
211100	Land					
212100	Buildings					
221200	Digital Electronic Switching					
223200	Circuit Equipment					
242210	Underground Cable-Metallic					
242220	Underground Cable-Fiber					
244100	Conduit Systems					

Highlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
SSP Rate

OUTSIDE PLANT ACTIVITIES	Average Cost per foot
P43C (Place fiber in Conduit)	
P43D (Place metallic cable up to < 1.5" Dia.)	
P43E (Place metallic cable > 1.5" Dia.)	
S50A (Cable Splice - per Fiber, 48 Fiber Cable or Less)	
S50B (Cable Splice - per Fiber, Greater than 48 Fiber Cable)	
S02C (Cable Splice - Metallic > 200pr)	
S02A (Cable Splice - Metallic < 200pr)	

Highlighted information is redacted for reasons #1, #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Loaded Labor Rates

	DIRECT BASIC	OVERTIME PREMIUM	PAID ABSENT	DIRECT DEPT	DIRECT SUP/SUPV	INDIRECT SUP/SUPV	INDIRECT DEPT	MOTOR VEHICLE	TOOLS	BENEFITS	LOADED RATE
SAP COST POOL	10	10	10	10	20	30	30	40	50	90	
DOC TYPE	OA	OB	OB	OB	OC	OD	OD	OF	OG	OE	
LABOR GROUP											
011 - EQUIP ENGR											
011 - LAND & BUILDING ENGR											
021 - OUTSIDE PLANT ENGR											
031 - SALES ENGR											
101 - EQUIP INSTALL											
111 - CONSTR PLACER											
121 - CONSTR SPLICER											
201 - I&R/MAINT SPLICER											
211 - SWITCHING SVC											
221 - PBX INSTAL & MAINT											
231 - COIN COLL/MAINT											

Highlighted information is redacted for reason #2. Parties may obtain this information by signing a non-disclosure agreement.

STATE	JOBTITLE	BASERATE	OT & PD Absence	Indirect Rate	Direct Support	VIP	Labor Rate	BENEFITS	LOADED RATE
FL	Clerk								
FL	5								

Highlighted information is redacted for reason #2. Parties may obtain this information by signing a non-disclosure agreement.

Verizon: EIS Study - Florida
Engineered Furnished and Installed Factor

Description	Account #	Factors
Digital Circuit Installation	2232	
Power Installation	2212	

Highlighted information is redacted for reasons #3 and #4. Parties may obtain this information by signing a non-disclosure agreement.

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Service Costs

Florida

Dedicated Transit Service

Filed – 02-04-2003

PUBLIC VERSION

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Wholesale Non-recurring Study

Florida
Dedicated Transit Service
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Wholesale Non-recurring Study

Florida
Dedicated Transit Service
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Wholesale Non-recurring Study

Florida
Dedicated Transit Service
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Introduction

This study accounts for the activities associated with installation and removal of Dedicated Transit Service. Dedicated Transit Service (DTS) allows a collocator to interconnect its network and collocated equipment with that of another collocator within the same Central Office. DTS is provided between the collocated arrangements of the same collocated customer or of two different collocated customers. DTS is available at the DS0, DS1, and DS3 electrical transmission level or using dark fiber.

DTS is ordered through an Access Service Request (ASR) and provisioned through the same processes as the Wholesale UNE products.

This cost study is a Verizon work product.

Dedicated Transit Service UNE NRC Study Organization

The Dedicated Transit Service UNE NRC study is organized into the following sections:

- Work Group Costs
- Data Inputs

Cost Study Methodology

The Ordering and Service Connections were developed from work sampling studies, time-and-motion studies, and estimates from Subject Matter Experts (SMEs). The most current Loaded Labor Rates for each of the workgroups was used.

The NRC rates reflect the cost of the set of activities required to install and disconnect Dedicated Transit Service. The charge is non-recurring in that the constituent costs are encountered only once, at the time a service is activated or discontinued in response to a CLEC request.

Cost Development

Dedicated Transit NRCs were developed using the following methods of data collection:

- Time and motion studies for the National Accounts Customer Center (NACC).
- SME inputs and database reports for the provisioning activities.
- Time and motion studies for Central Office Installation activities.

The SMEs and cost team collected activity times and determined task probabilities. Using the most current Loaded Labor Rates, the cost team then calculated the costs using the standard non-recurring cost calculation:

Activity Time x Probability x Labor Rate = Cost

Cost Methodology – Dedicated Transit Service

Order Entry

The National Access Customer Center processes all ASRs for the Network Wholesale UNEs.

> NACC - The CLEC sends an ASR to Verizon's NACC Service Representative using the EXACT system, fax or mail. The cost team conducted a time and motion study of the activities required to process ASRs.

The cost team calculated the ordering costs for Dedicated Transit Service on a *per order* basis.

Provisioning

Two work centers are involved in the provisioning process for Dedicated Transit Service orders:

APC/RCMAC - The APC/RCMAC has the responsibility for assignment of central office line equipment and outside plant facilities. SMEs provided the work times.

BRPC - Cost managers used data from the TBS database to determine the number and type of orders or lines, as appropriate, worked by each of the following BRPC groups: SOE, Design and Admin. Only those orders handled by a workgroup during provisioning are included in determining that group's cost per order.

The cost per order for each workgroup is developed separately, based on the number of orders worked by that group, and the group's productive hours spent on those orders.

Field Work

Field Work involves all activities directly related to outside plant connectivity performed in the central office for Dedicated Transit Service.

CO Work - activities involve running jumpers for inter-office access. Jumper studies were used to develop the costs for this workgroup.

Verizon - Florida
Wholesale Non-recurring Study
Rate Summary
Dedicated Transit Service

Description	Ordering		Service Connection	
	100% Manual	Semi-Mech.	Provisioning	CO Wiring
Dedicated Transit Service				
Dedicated Transit Service DS0 - Initial	$74.99	$42.46	$133.60	$18.24
Dedicated Transit Service DS0 - Disconnect	$67.58	$38.01	$46.67	$2.94
Dedicated Transit Service DS1 - Initial	$74.99	$42.46	$132.73	$19.29
Dedicated Transit Service DS1 - Disconnect	$69.87	$40.30	$46.67	$2.94
Dedicated Transit Service DS3 - Initial	$74.99	$42.46	$132.73	$65.59
Dedicated Transit Service DS3 - Disconnect	$69.87	$40.30	$46.67	$2.94
Dedicated Transit Service Dark Fiber - Initial	$74.43	$71.47	$36.20	$60.29
Dedicated Transit Service Dark Fiber - Disconnect	$39.53	$39.53	$36.20	$2.94

Verizon - Florida
Wholesale Non-recurring Study
Rate Development
Dedicated Transit Service

Ln	Description	Source	Ordering		Service Connection - Per Order			Destination
			100% Manual	Semi-Mech.	Provisioning	CO Work	Field Installation	
			A=Source	B=Source	C=PRO	D=FWS	E	
	Dedicated Transit Service							
	DS0							
1	**Disconnect**	ORS	**$67.58**	**$38.01**	**$46.67**	**$2.94**	n/a	RNWE
	Subsequent							
2	Change	ORS	$68.21	$38.64	$133 60	$18.24	n/a	
3	Record Order	RORF	$6.78	$3.82	n/a	n/a	n/a	
4	Total	Ln 2+Ln 3	**$74.99**	**$42.46**	**$133.60**	**$18.24**	n/a	RNWE
	DS1							
5	**Disconnect**	ORS	**$69.87**	**$40.30**	**$46.67**	**$2.94**	n/a	RNWE
	Subsequent							
6	Change	ORS	$68.21	$38.64	$132.73	$19.29	n/a	
7	Record Order	RORF	$6.78	$3.82	n/a	n/a	n/a	
8	Total	Ln 6+Ln 7	**$74.99**	**$42.46**	**$132.73**	**$19.29**	n/a	RNWE
	DS3							
9	**Disconnect**	ORS	**$69.87**	**$40.30**	**$46.67**	**$2.94**	n/a	RNWE
	Subsequent							
10	Change	ORS	$68.21	$38.64	$132 73	$65.59	n/a	
11	Record Order	RORF	$6.78	$3.82	n/a	n/a	n/a	
12	Total	Ln 10+Ln 11	**$74.99**	**$42.46**	**$132.73**	**$65.59**	n/a	RNWE
	Dark Fiber							
13	**Disconnect**	ORS	**$39.53**	**$39.53**	**$36.20**	**$2.94**	n/a	RNWE
	Initial							
14	New	ORS	$67.65	$67.65	$36.20	$60.29	n/a	
15	Record Order	RORF	$6.78	$3.82	n/a	n/a	n/a	
16	Total	Ln 14+Ln 15	**$74.43**	**$71.47**	**$36.20**	**$60.29**	n/a	RNWE

Verizon - Florida
Wholesale Non-recurring Study
Rate Development
Ordering Factors

Ln	Description	Source	Ordering Cost 100% Manual	Ordering Cost Semi-Mech.	Weighting Factor 100% Manual	Weighting Factor Semi-Mech.	Destination
			A=Source	B=Source	C=Source	D=Source	
	Order Weighting						
	Network Wholesale Elements						
1	Record Order	ORS	$67.80	$38.23			
2	Occurrence Rate	Note 1			10%	10%	
3	**Weighted Record Order**	Ln 1*Ln 2	**$6.78**	**$3.82**			RDTS

Note 1: Weighting Factors provided by Product Management.

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Wholesale Non-recurring Study

Florida
Dedicated Transit Service
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Wholesale Non-recurring Study

Florida
Dedicated Transit Service
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Network Wholesale Elements - Project Minutes per Order	AAPO	2-18
Network Wholesale Elements - Trunk Port Orders	AAPV	2-23
Network Wholesale Elements - Quality Check Time per Order - DTS	AAQE	2-14
Network Wholesale Elements - Quality Check Time per Order - Trunk Ports	AAQP	2-13
Network Wholesale Elements - Record Order Minutes per Order	AARD	2-10
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Verizon - Florida
Wholesale Non-recurring Study
Ordering
Summary of Costs

Description	Source	Manual Order	Semi-Mechanized Order	Destination
		A=Source	B=Source	
Unbundled Network Elements (UNEs)				
Dedicated Transit Service				
DS0				
Disconnect	ORD-1			RDTS
Change	ORD-1			RDTS
DS1/DS3				
Disconnect	ORD-2			RDTS
Change	ORD-2			RDTS
Dark Fiber				
New	ORD-2			RDTS
Disconnect	ORD-2			RDTS
Record Order	ORD-2			RORF

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Ordering
Cost Calculations

Ln	Description	Source	LLR per Minute	Manual Order Minutes per Order	Manual Order Cost per Order	Semi-Mechanized Order Minutes per Order	Semi-Mechanized Order Cost per Order	Destination
			A=Source	B=Source	C=A*B	D=Source	E=A*D	
	Unbundled Network Elements (UNEs)							
	Dedicated Transit Service							
	DS0							
	Disconnect							
1	Manual Order Receipt	AOIS-1						
2	Production Order Entry	AOIS-1						
3	Error Correction	AOIS-1						
4	Jeopardies	AOIS-1						
5	Projects	AOIS-1						
6	MOG Order Entry	AOIS-1						
7	Quality Check	AOIS-1						
8	Total	Sum Lns (1..7)						ORS
	DS0							
	Change	AOIS-1						
9	Manual Order Receipt	AOIS-1						
10	Production Order Entry	AOIS-1						
11	Error Correction	AOIS-1						
12	Jeopardies	AOIS-1						
13	Projects	AOIS-1						
14	MOG Order Entry	AOIS-1						
15	Escalations	AOIS-1						
16	Quality Check	AOIS-1						
17	Total	Sum Lns (9 .16)						ORS

Verizon - Florida
Wholesale Non-recurring Study
Ordering
Cost Calculations

Ln	Description	Source	LLR per Minute	Manual Order		Semi-Mechanized Order		Destination
				Minutes per Order	Cost per Order	Minutes per Order	Cost per Order	
			A=Source	B=Source	C=A*B	D=Source	E=A*D	
	Unbundled Network Elements (UNEs)							
	Dedicated Transit Service							
	DS1/DS3							
	Disconnect							
18	Manual Order Receipt	AOIS-1						
19	Production Order Entry	AOIS-2						
20	Error Correction	AOIS-2						
21	Jeopardies	AOIS-2						
22	Projects	AOIS-2						
23	MOG Order Entry	AOIS-2						
24	Quality Check	AOIS-2						
25	Total	Sum Lns (18..24)						ORS
	DS1/DS3							
	Change							
26	Manual Order Receipt	AOIS-1						
27	Production Order Entry	AOIS-2						
28	Error Correction	AOIS-2						
29	Jeopardies	AOIS-2						
30	Projects	AOIS-2						
31	MOG Order Entry	AOIS-2						
32	Escalations	AOIS-2						
33	Quality Check	AOIS-2						
34	Total	Sum Lns (26 .33)						ORS
	Dark Fiber							
35	New	AOIS-2						ORS
36	Disconnect	AOIS-2						ORS
	Record Order							
37	Manual Order Receipt	AOIS-2						
38	Order Processing	AOIS-2						
39	Total	Ln 37+Ln 38						ORS

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Ordering
Appendix Summary

Description	Source	Manual Minutes per Order	Semi-Mechanized Minutes per Order	LLR per Minute	Shared/Fixed Costs	Destination
		A=Source	B=Source	C=AOLR		
Network Wholesale Elements						
Manual Order Additional Order Entry	AAME					ORD-1
Network Wholesale Elements						
Dedicated Transit Service						
DS0						
Disconnect						
Production Order Entry	AIDC-1					ORD-1
Error Correction	AIDC-1					ORD-1
Jeopardies	AIDC-1					ORD-1
Projects	AIDC-1					ORD-1
MOG Order Entry	AIDC-1					ORD-1
Quality Check	AIDC-1					ORD-1
DS0						
Change						
Production Order Entry	AIDC-1					ORD-1
Error Correction	AIDC-1					ORD-1
Jeopardies	AIDC-1					ORD-1
Projects	AIDC-1					ORD-1
MOG Order Entry	AIDC-1					ORD-1
Escalations	AIDC-1					ORD-1
Quality Check	AIDC-1					ORD-1

Verizon - Florida
Wholesale Non-recurring Study
Ordering
Appendix Summary

Description	Source	Manual Minutes per Order	Semi-Mechanized Minutes per Order	LLR per Minute	Shared/Fixed Costs	Destination
		A=Source	B=Source	C=AOLR		
Network Wholesale Elements						
Dedicated Transit Service						
DS1/DS3						
Disconnect						
Production Order Entry	AIDC-2					ORD-2
Error Correction	AIDC-2					ORD-2
Jeopardies	AIDC-2					ORD-2
Projects	AIDC-2					ORD-2
MOG Order Entry	AIDC-2					ORD-2
Quality Check	AIDC-2					ORD-2
DS1/DS3						
Change						
Production Order Entry	AIDC-2					ORD-2
Error Correction	AIDC-2					ORD-2
Jeopardies	AIDC-2					ORD-2
Projects	AIDC-2					ORD-2
MOG Order Entry	AIDC-2					ORD-2
Escalations	AIDC-2					ORD-2
Quality Check	AIDC-2					ORD-2
Dark Fiber	ADFO					ORD-2
New	ADFO					ORD-2
Disconnect						
Record Order	AIDC-2					ORD-2

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Ordering
Weighted Loaded Labor Rates Calculation

Ln	Description	Source	LLR per Minute	Number of Reps	Percent of Reps	Weighted LLR per Minute	Destination
			A=ALLR-1	B=Note 1	C=Source	D=A*C	
	NACC Personnel						
1	North Carolina NACC - Service Consultant	Note 1					AOIS-1, 2
2	North Carolina NACC - Coordinator	Note 1					AOIS-1, 2
3	North Carolina NACC - Senior Administrator	Note 1					AOIS-1, 2

Note 1: There is one job class performing this work, therefore weighting of the LLR per minute is unnecessary and the percent is 100%.

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Ordering
Dark Fiber Order Processing - Minutes per Order

Description	Manual and Semi-Mechanized Minutes per Order	Destination
	A=Note 1	
Dark Fiber		
New		AOIS-2
Disconnect		AOIS-2

Note 1: Data provided by NACC Staff Support personnel.

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements Minute per Order Calculations - DTS

Description	Source	Minutes per Activity	Probability of Occurrence	Manual and Semi Mechanized Minutes per Order	Destination
		A=Source	B=Source	C=A*B	
Network Wholesale Elements					
Dedicated Transit Service					
DS0					
Disconnect					
Production Order Entry	AAEE				AOIS-1
Error Correction	AAEE				AOIS-1
Jeopardies	AAEE				AOIS-1
Projects	AAPO				AOIS-1
MOG Order Entry	AAMO				AOIS-1
Quality Check	AAQE				AOIS-1
Dedicated Transit Service					
DS0					
Change					
Production Order Entry	AAEE				AOIS-1
Error Correction	AAEE				AOIS-1
Jeopardies	AAEE				AOIS-1
Projects	AAPO				AOIS-1
MOG Order Entry	AAMO				AOIS-1
Escalations	AAEU				AOIS-1
Quality Check	AAQE				AOIS-1

Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements Minute per Order Calculations - DTS

Description	Source	Minutes per Activity	Probability of Occurrence	Manual and Semi Mechanized Minutes per Order	Destination
		A=Source	B=Source	C=A*B	
Network Wholesale Elements					
Dedicated Transit Service					
DS1/DS3					
Disconnect					
Production Order Entry	AAEE				AOIS-2
Error Correction	AAEE				AOIS-2
Jeopardies	AAEE				AOIS-2
Projects	AAPO				AOIS-2
MOG Order Entry	AAMO				AOIS-2
Quality Check	AAQE				AOIS-2
DS1/DS3					
Change					
Production Order Entry	AAEE				AOIS-2
Error Correction	AAEE				AOIS-2
Jeopardies	AAEE				AOIS-2
Projects	AAPO				AOIS-2
MOG Order Entry	AAMO				AOIS-2
Escalations	AAEU				AOIS-2
Quality Check	AAQE				AOIS-2
Record Order	AARD				AOIS-2

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Record Order Minutes per Order

Ln	Description	Source	Minutes per Occurrence	Percent Quality Check	Minutes per Order	Total Record Orders	Percent of Record Orders	Weighted Minutes per Order	Destination
			A=Source	B=Source	C=A*B	D=AAEP, AAEE	E=D/D Ln 7	F=C*E	
	Record Order								
	Trunk Ports								
1	Order Entry	AAEP							
2	Quality Check	AAQP							
3	Total Trunk Port	Ln 1 + Ln 2							
	Entrance Facilities								
4	Order Entry	AAEE							
5	Quality Check	AAQE							
6	Total Entrance Facilities	Ln 4 + Ln 5							
7	Total	Ln 3 + Ln 6							AIDC-2

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Order Entry Time per Order - Trunk Ports (SS7)

Ln	Description	Time Index	Orders	Productive Minutes	Time Base Calculation	Trunk Ports Factors	Average Trunk Ports Minutes per Order	Facilities and Trunks Minutes per Order	Trunk Only Minutes per Order	Probability of Occurrence	Destination
		A=AATT-1	B=AAPV-1,2	C=Note 1	D=Note 2	E=AAQP	F=A*D	G=F*E Ln 11	H=F*E Ln 12	I=AAPV-1,2	
	Trunk Ports										
	Production Order Entry										
1	New Orders										AARD
2	Disconnect Orders										AARD
3	Change Orders										AARD
4	Jeopardies										AARD
5	Meetpoints										AARD
6	Error Corrections										AARD
7	Record Orders										AARD
8	Expedites										AARD
9	Productive Minutes										
10	Time Base Factor										
11	Facilities and Trunk Factor										
12	Trunk Only Factor										

Note 1: Resource Management provided the productive minutes.
Note 2: The Time Base Factor is calculated using the following equation: Time Base = C Ln 9/[(A Ln1*B Ln1) +...+ (A Ln 8*B Ln 8)]

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Order Entry Time per Order - DTS

Ln	Description	Time Index	Orders	Productive Minutes	Time Base Calculation	Minutes per Order	Probability of Occurrence	Destination
		A=AATT-2	B=AAEF-1	C=Note 1	D=Note 2	E=A*D	F=AAEF-1,2	
	Basic							
1	New Orders							
2	Disconnect Orders							
3	Change Orders							
	Entrance Facilities							
	DS0							
4	New/Migration Orders							
5	Disconnect Orders							AIDC-1
	DS1/DS3							
6	New Orders							
7	Disconnect Orders							AIDC-2
8	Change Orders							AIDC-1,2
9	Jeopardies							AIDC-1,2
10	Meetpoints							
11	Error Corrections							AIDC-1,2
12	Record Orders							AARD
13	Expedites							
14	Productive Minutes							
15	Time Base Factor							

Note 1: Resource Management provided the productive minutes.
Note 2: The Time Base Factor is calculated using the following equation: Time Base = C Ln 14/[(A Ln1*B Ln1) +...+ (A Ln 13*B Ln 13)]

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Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Quality Check Time per Order - Trunk Ports

Ln	Description	Time Index	Orders	Productive Minutes	Time Base Calculation	Trunk Ports Factors	Average Trunk Ports Minutes per Order	Facilities and Trunks Minutes per Order	Trunk Only Minutes per Order	Probability of Occurrence	Destination
		A=AATQ	B=AAPV-2	C=Note 1	D=Note 2	E=AAMO	F=A*D	G=F*E Ln 7	H=F*E Ln 8	I=AAPV-2	
	Trunk Ports										
1	New Orders										
2	Disconnect Orders										
3	Change Orders										
4	Record Orders										AARD
5	Productive Minutes										
6	Time Base Factor										
7	Facilities and Trunk Factor										AAEP
8	Trunk Only Factor										AAEP

Note 1: Resource Management provided the productive minutes.
Note 2: The Time Base Factor is calculated using the following equation: Time Base = C Ln 5/[(A Ln1*B Ln1) +...+ (A Ln 4*B Ln 4)]

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Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Quality Check Time per Order - DTS

Ln	Description	Time Index	Orders	Productive Minutes	Time Base Calculation	Minutes per Order	Probability of Occurrence	Destination
		A=AATQ	B=AAEF-2	C=Note 1	D=Note 2	E=A*D	F=AAEF-2	
	Entrance Facilities							
1	New Orders							
2	Disconnect Orders							AIDC-1,2
3	Change Orders							AIDC-1,2
4	Record Orders							AARD
5	Productive Minutes							
6	Time Base Factor							

Note 1: Resource Management provided the productive minutes.
Note 2: The Time Base Factor is calculated using the following equation: Time Base = C Ln 5/[(A Ln1*B Ln1) +...+ (A Ln 4*B Ln 4)]

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Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Order Entry Time Study Results

Ln	Description	Source	Time Study Minutes	Time Study Activities	Time Study Minutes per Order	Time Index	Destination
			A=Note 1	B=Note 1	C=A/B	D=Source	
	Trunk Ports						
1	New Orders	C Ln 1/MIN Lns (1..8)					AAEP
2	Disconnect Orders	C Ln 2/MIN Lns (1..8)					AAEP
3	Change Orders	C Ln 3/MIN Lns (1..8)					AAEP
4	Jeopardies	C Ln 4/MIN Lns (1..8)					AAEP
5	Meetpoints	C Ln 5/MIN Lns (1..8)					AAEP
6	Error Corrections	C Ln 6/MIN Lns (1..8)					AAEP
7	Record Orders	C Ln 7/MIN Lns (1..8)					AAEP
8	Expedites	C Ln 8/MIN Lns (1..8)					AAEP

Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Order Entry Time Study Results

Ln	Description	Source	Time Study Minutes	Time Study Activities	Time Study Minutes per Order	Time Index	Destination
			A=Note 1	B=Note 1	C=A/B	D=Source	
	Basic						
9	New Orders	C Ln 9/MIN Lns (9..21)					AAEE
10	Disconnect Orders	C Ln 10/MIN Lns (9..21)					AAEE
11	Change Orders	C Ln 11/MIN Lns (9..21)					AAEE
	Entrance Facilities						
	DS0						
12	New Orders	C Ln 12/MIN Lns (9..21)					AAEE
13	Disconnect Orders	C Ln 13/MIN Lns (9..21)					AAEE
	DS1/ DS3						
14	New Orders	C Ln 14/MIN Lns (9..21)					AAEE
15	Disconnect Orders	C Ln 15/MIN Lns (9..21)					AAEE
16	Change Orders	C Ln 16/MIN Lns (9..21)					AAEE
17	Record Orders	C Ln 17/MIN Lns (9..21)					AAEE
18	Jeopardies	C Ln 18/MIN Lns (9..21)					AAEE
19	Expedites	C Ln 19/MIN Lns (9..21)					AAEE
20	Meetpoints	C Ln 20/MIN Lns (9..21)					AAEE
21	Error Corrections	C Ln 21/MIN Lns (9..21)					AAEE

Note 1: Data obtained through a time and motion study at the NACC.

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Quality Check Time Study Results

Ln	Description	Source	Time Study Minutes	Time Study Orders	Time Study Minutes per Order	Time Index	Destination
			A=Note 1	B=Note 1	C=A/B	D=Source	
	Trunk Ports						
1	New Orders	C Ln 1/MIN Lns (1..4)					AAQP
2	Disconnect Orders	C Ln 2/MIN Lns (1..4)					AAQP
3	Change Orders	C Ln 3/MIN Lns (1..4)					AAQP
4	Record Orders	C Ln 4/MIN Lns (1..4)					AAQP
	Entrance Facilities						
5	New Orders	C Ln 5/MIN Lns (5..8)					AAQE
6	Disconnect Orders	C Ln 6/MIN Lns (5..8)					AAQE
7	Change Orders	C Ln 7/MIN Lns (5..8)					AAQE
8	Record Orders	C Ln 8/MIN Lns (5..8)					AAQE

Note 1: Data obtained through a time and motion study at the NACC.

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Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Project Minutes per Order

Ln	Description	Source	Minutes	Orders	Minutes per Order	Probability of Occurrence	Destination
			A=Note 1	B=Source	C=A/B	D=Source	
	Project Orders						
1	**Trunk Ports**	AAPV-2					
2	New Orders	AAPV-2					
3	Change Orders	AAPV-2					
4	Disconnect Orders	AAPV-2					
5	**Entrance Facilities**	AAEF-2					
6	New Orders	AAEF-2					
7	Change Orders	AAEF-2					AIDC-1,2
8	Disconnect Orders	AAEF-2					AIDC-1,2
9	Total Project	Ln 1+Ln 5					AIDC-1,2

Note 1: Resource Management provided the productive minutes.

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Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - MOG Minutes per Order

Ln	Description	Source	Minutes	Orders	Minutes per Order	Trunk Ports Factors	Facilities and Trunks Minutes per Order	Trunk Only Minutes per Order	Probability of Occurrence	Destination
			A=Note 1	B=Source	C=A/B	D=AATF	E=C*D Ln 10	F=C*D Ln 11	G=Source	
	MOG Orders									
1	**Trunk Ports**	AAPV-1								
2	New Orders	AAPV-1								
3	Change Orders	AAPV-1								
4	Disconnect Orders	AAPV-1								
5	**Entrance Facilities**	AAEF-1								
6	New Orders	AAEF-1								
7	Change Orders	AAEF-1								AIDC-1,2
8	Disconnect Orders	AAEF-1								AIDC-1,2
9	Total MOG	Ln 1 + Ln 5								AIDC-1,2
10	Facilities and Trunk Factor									AAQP
11	Trunk Only Factor									AAQP

Note 1: Resource Management provided the productive minutes.

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Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Escalation and Unguided Usage Minutes per Order

Ln	Description	Source	Minutes	Orders	Minutes per Order	Probability of Occurrence	Destination
			A=Note 1	B=Source	C=A/B	D=Source	
	Escalations						
1	**Trunk Ports**	AAPV-2					
2	**Entrance Facilities**	AAEF-2					AIDC-1,2
3	Total	Ln 1 + Ln 2					AIDC-1,2
4	**Unguided Usage**	AAPV-2					

Note 1: Resource Management provided the productive minutes.

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Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Additional Time per Manual Order

Ln	Description	Source	Minutes per Order	Destination
			A=Source	
	Additional Time per Manual Order			
1	Manual Fax Load	Note 1		
2	FOC Fax	Note 1		
3	Total	Ln 1+Ln 2		AOIS-1

Note 1: Data provided by NACC personnel.

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Relationship of Trunk Only to Facilities and Trunk

Ln	Description	Source	Coefficient	Order Percentages	Trunk Port Factors	Destination
			A=Note 1	B=Note 2	C=Source	
1	Facilities and Trunk to Trunk Only Coefficient					
2	Facilities and Trunk Percent of Orders					
3	Trunk Only Percent of Orders					
4	Facilities and Trunk Factor	1/((1/A* B Ln 3) + B Ln 2)				AAMO
5	Trunk Only Factor	(1 - (C Ln 4 *B Ln 2))/B Ln 3				AAMO

Note 1: A Facilities and Trunk order averages 3.10 time longer to process than a Trunk Only order. The relationship between Trunk Only and Trunk and Facility Order times was developed from work times observed during a NACC time and motion study.
Note 2: Percents provided by NACC personnel.

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Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Trunk Port Orders

Ln	Description	Source	Total Orders	Percent	Production vs. MOG Percent	Destination
			A=Note 1	B=Source	C=Source	
	Production Orders					
1	New Orders	A Ln 1/A Ln 11				AAEP
2	Change Orders	A Ln 2/A Ln 12				AAEP
3	Subtotal	Ln 1+Ln 2				
4	Disconnect Orders	A Ln 4/A Ln 13				AAEP
5	Record Orders					AAEP
6	Subtotal	Sum Lns (3..5)				
	MOG Orders					
7	New Orders	A Ln 7/A Ln 11				AAMO
8	Change Orders	A Ln 8/A Ln 12				AAMO
9	Disconnect Orders	A Ln 9/A Ln 13				AAMO
10	Total MOG	Sum Lns (7..8)				AAMO
	Total Orders					
11	New	Ln 1+Ln 7				
12	Change	Ln 2+Ln 8				
13	Disconnect	Ln 4+Ln 9				
14	Total Orders	Ln 6+Ln 10				

Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Trunk Port Orders

Ln	Description	Source	Total Orders	Percent	Production vs. MOG Percent	Destination
			A=Note 1	B=Source	C=Source	
	Quality Check					
15	New Orders	Note 1				AAQP
16	Disconnect Orders	Note 1				AAQP
17	Change Orders	Note 1				AAQP
18	Record Orders	Note 1				AAQP
19	Jeopardies	A Ln 19/A Ln 14				AAEP
20	Meet Point	Note 2				AAEP
21	Escalations	A Ln 21/A Ln 3				AAEU
22	Projects	A Ln 22/A Ln 6				AAPO
23	New Orders	B Ln 22*C Ln 1				AAPO
24	Change Orders	B Ln 22*C Ln 2				AAPO
25	Disconnect Orders	B Ln 22*C Ln 4				AAPO
26	Unguided Usage	A Ln 26/A Ln 14				AAEU
27	Errors	A Ln 27/A Ln 6				AAEP
28	Expedites					AAEP

Note 1: Data provided by NACC personnel.
Note 2: Verizon Florida does not have any meet points with other Local Exchange Carriers.

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Entrance Facilities Orders

Ln	Description	Source	Basic	DS-0 and Fractional T-1	DS-1 and higher	Other Activities	Total	Percent of Order	Production vs. MOG Percent	Destination
			A=Note 1	B=Note 1	C=Note 1	D=Note 1	E=Sum (A..D)	F=Source	G=Source	
	Production Orders									
1	New Order	E Ln 1/E Ln 11								AAEE
2	Change Order	E Ln 2/E Ln 12								AAEE
3	Subtotal	Ln 1+Ln 2								
4	Disconnect Order	E Ln 4/E Ln 13								AAEE
5	Record Order									AAEE,AARD
6	Subtotal	Sum Lns (3..5)								
	MOG Orders									
7	New Orders	E Ln 7/E Ln 11								AAMO
8	Change Orders	E Ln 8/E Ln 12								AAMO
9	Disconnect Orders	E Ln 9/E Ln 13								AAMO
10	Total MOG	Sum Lns (7..9)								AAMO
	Total Orders									
11	New	Ln 1+Ln 7								
12	Change	Ln 2+Ln 8								
13	Disconnect	Ln 4+Ln 9								
14	Total Orders	Ln 6+Ln 10								

Verizon - Florida
Wholesale Non-recurring Study
Ordering - NACC
Network Wholesale Elements - Entrance Facilities Orders

Ln	Description	Source	Basic	DS-0 and Fractional T-1	DS-1 and higher	Other Activities	Total	Percent of Order	Production vs. MOG Percent	Destination
			A=Note 1	B=Note 1	C=Note 1	D=Note 1	E=Sum (A..D)	F=Source	G=Source	
	Quality Check									
15	New Orders	Note 1								AAQE
16	Disconnect Orders	Note 1								AAQE
17	Change Orders	Note 1								AAQE
18	Record Orders	Note 1								AAQE
19	Jeopardies	E Ln 19/E Ln 14								AAEE
20	Meet Point	Note 2								AAEE
21	Escalations	E Ln 21/E Ln 3								AAEU
22	Projects	E Ln 22/E Ln 6								AAPO
23	New Orders	F Ln 22*G Ln 1								AAPO
24	Change Orders	F Ln 22*G Ln 2								AAPO
25	Disconnect Orders	F Ln 22*G Ln 4								AAPO
26	Errors	E Ln 26/E Ln 6								AAEE
27	Expedite									AAEE

Note 1: Data provided by NACC personnel.
Note 2: Verizon Florida does not have any meet points with other Local Exchange Carriers.

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Wholesale Non-recurring Study

Florida
Dedicated Transit Service
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Wholesale Non-recurring Study

Florida
Dedicated Transit Service
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Verizon - Florida
Wholesale Non-recurring Study
Provisioning
Provisioning Group Summary

Description	Source	SOE	Facility Assign	Design Group	Switch Update	Testing	Admin Group	Total Cost	Destination
		A	B	C	D	E	F	G=Sum (A..F)	
Network Wholesale Elements									
Dedicated Transit Service									
DS0									
Disconnect	PRC								RDTS
Change	PRC								RDTS
DS1/DS3									
Disconnect	PRC								RDTS
Change	PRC								RDTS
Dark Fiber									
New	PRC								RDTS
Disconnect	PRC								RDTS

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Provisioning
Provisioning Calculations

Description	Minutes per Occurrence	Probability of Occurrence	Minutes per Order	LLR per Minute	Cost per Order	Destination
	A=APRI-2	B=APRI-2	C=A*B	D=APRI-1	E=C*D	
Network Wholesale Elements						
Dedicated Transit Service						
DS0						
Disconnect						
Service Order Entry - Non-Message						PRO
Facility Assignment - Local Loop Assignment						PRO
Admin Group - Non-Message						PRO
Change						
Service Order Entry - Non-Message						PRO
Design Group - DS0						PRO
Admin Group - Non-Message						PRO
DS1/DS3						
Disconnect						
Service Order Entry - Non-Message						PRO
Facility Assignment - Local Loop Assignment						PRO
Admin Group - Non-Message						PRO
Change						
Service Order Entry - Non-Message						PRO
Design Group - Hi-Cap						PRO
Admin Group- Non-Message						PRO
Dark Fiber						
Design Group - Hi-Cap						PRO

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Provisioning
Appendix Summary

Description	Source	Minutes per Occurrence	Probability of Occurrence	LLR per Minute	Destination
		A=Source	B=APOP-1, 2	C=Source	
Weighted Loaded Labor Rate					
BRPC					
Service Order Entry					
Non-Message	APLC				PRC
Admin					
Non-Message	AEXP				PRC
Facility Assignment					
Local Loop Assignment	AFLC				PRC
Design Group					
DS0	APLC				PRC
Hi-Cap	APLC				PRC

Verizon - Florida
Wholesale Non-recurring Study
Provisioning
Appendix Summary

Description	Source	Minutes per Occurrence	Probability of Occurrence	LLR per Minute	Destination
		A=Source	B=APOP-1, 2	C=Source	
Unbundled Network Elements (UNEs)					
Design Group					
Hi-Cap					
Complex	APMC				PRC
Network Wholesale Elements					
Service Order Entry					
Non-Message	APMC				PRC
Facility Assignment					
Local Loop Assignment					
Dedicated Transport					
DS0					
Disconnect	ALLA				PRC
Disconnect	ALLA				PRC
Design Group					
Dedicated Transport					
DS0	APMC				PRC
DS1/DS3	APMC				PRC
Admin					
Non-Message	APMC				PRC

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Provisioning
Work Time Calculations

Description	Source	Productive Minutes	Orders	Minutes per Occurrence	Destination
		A=Source	B=Source	C=A/B	
Unbundled Network Elements (UNEs)					
Design Group					
Hi-Cap	APLC-APOC-1				APRI-2
Network Wholesale Elements					
Service Order Entry					
Non-Message	APLC, APOC-1				APRI-2
Design Group					
DS0	APLC, APOC-2				APRI-2
Hi-Cap	APLC, APOC-2				APRI-2
Admin					
Non-Message	AEXP, APOC-2				APRI-2

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Provisioning
Weighted Loaded Labor Rate Calculation

Ln	Description	Source	Productive Minutes	LLR per Minute	Total Productive Cost	Weighted LLR per Minute	Destination
			A=Source	B=ALLR-2, Source	C=A*B	D=C/A	
	Service Order Entry						
	Non-Message						
1	Facility Clerk	Note 1					
2	Design Tech	Note 1					
3	**Total**	Ln 1+Ln 2					APMC, APRI-1
	Design Group						
	DS0						
4	Facility Clerk	Note 1					
5	Admin Support Clerk	Note 1					
6	Design Technician	Note 1					
7	Business Response Specialist	Note 1					
8	**Total**	Sum Lns (4..7)					APMC, APRI-1
	Hi-Cap						
9	Facility Clerk	Note 1					
10	Admin Support Clerk	Note 1					
11	Design Technician	Note 1					
12	Business Response Specialist	Note 1					
13	**Total**	Sum Lns (9..12)					APMC, APRI-1

Note 1: The productive minutes were provided by the BRPC Group Supervisors.

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Provisioning
APC LLR Computation

Ln	Description	Source	Productive Hours	Productive Minutes	LLR per Minute	Extended Group Cost	Weighted LLR per Minute	Destination
			A=Note 1	B=A*60	C=ALLR-2	D=B*C	E=D/B	
	Lakeland, FL							
1	Select Assignment							
2	Admin Support Clerk							
3	APC Total							
	Tampa, FL							
4	Select Assignment							
5	SPAG							
6	OMT							
7	Admin Support Clerk							
8	APC Total							
	Clearwater, FL							
9	Select Assignment							
10	Pending Order Inquiry							
11	SPAG							
12	Admin Support Clerk							
13	APC Total							
	Bradenton, FL							
14	Select Assignment							
15	APC Total							
	APC Total							
16	Lakeland, FL	Ln 3						
17	Tampa, FL	Ln 8						
18	Clearwater, FL	Ln 13						
19	Bradenton, FL	Ln 15						
20	Total	Sum Lns (16..19)						
21	APC LLR	D20/B20						APRI-1

Note 1: APC hours provided by APC senior supervisors.

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Provisioning
Local Loop Assignment Work Times

Ln	Description	Source	Job Title	Work Minutes	Destination
			A	B=Note 1	
	Facility Assignment				
	Local Loop Assignment				
	Advanced/Special Elements				
	Disconnect				
1	Determine disconnect request		Complex Line Assignor		
2	Recover cable pairs, note conditioning		Complex Line Assignor		
3	Total	Ln 1+Ln 2			APRI-2

Note 1: The work times listed were provided by APC and Outside Plant Engineering personnel.

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Provisioning
Admin and DBM-WCC Productive Minutes and LLRs

Ln	Description	Source	Minutes per Expedites	Number of Expedites	Productive Minutes	LLR per Minute	Total Productive Cost	Weighted LLR per Minute	Destination
			A=Source	B=Source	C=Source	D=ALLR-2	E=C*D	F=E/C	
	Admin								
	Non-Message								
1	Facility Clerk	Note 1							
2	Additional Job Title								
3	Subtotal	Ln 1+Ln 2							APRI-I
	Expedites								
4	Minutes per Expedite	Note 2							
5	Number of Expedites	Note 3							
6	Productive Time - Expedites	Ln 4*Ln 5							
7	Total Productive Time less Expedites	Ln 3-Ln 6							APMC

Note 1: The productive minutes were provided by the Group Supervisors.
Note 2: The work times were provided by the Group Supervisor.
Note 3: The expedites counts were extracted from the TBS system.

Higlighted information is redacted for reason #3. Parties may obtain this information by signing a non-disclosure agreement.

Verizon - Florida
Wholesale Non-recurring Study
Provisioning
Orders and Circuits - Percentages

Ln	Description	Source	Circuits	Orders	Probability of Occurrence	Destination
			A=APOC-1	B=APOC-1	B=Source	
	Unbundled Network Elements (UNEs) and UNE-Platforms					
	Design Group					
	DS0					
	Complex					
1	Complex (DS0) circuits requiring Design					
2	Complex (Hi-Cap) circuits requiring Design					
3	Total	Ln 1+Ln 2				
	Hi-Cap					
4	Complex	Note 1				APRI-2
	Network Wholesale Elements					
	Service Order Entry					
	Non-message					
5	Trunk Ports and Dedicated Transport	Note 2				APRI-2

Verizon - Florida
Wholesale Non-recurring Study
Provisioning
Orders and Circuits - Percentages

Ln	Description	Source	Circuits	Orders	Probability of Occurrence	Destination
			A=APOC-1	B=APOC-1	B=Source	
	Unbundled Network Elements (UNEs) and UNE-Platforms					
	Network Wholesale Elements					
	Facility Assignment					
	Local Loop Assignment					
	Dedicated Transport					
	DS0 and Fractional T-1					
6	DS0	Ln 6/Ln 8				
7	Fractional T-1	Ln 7/Ln 8				
8	Total	Ln 6+Ln 7				APRI-2
9	DS1/DS3	Note 3				APRI-2
	Design Group					
	Dedicated Transport					
10	DS0	Note 4				APRI-2
11	DS1/DS3	Note 1				APRI-2
	Admin					
12	Non-Message	Note 5				APRI-2

Note 1: The Hi-Cap designers work all DS1 level Dedicated Transport - IDT/CDT, DS1and higher orders, therefore the percent is 100%.
Note 2: The Service Order Entry clerks work on all service orders.
Note 3: Local Loop Assignment work all Hi-Cap new orders, therefore the percent is 100%
Note 4: The DS0 designers work all Trunk Port New, Change with Engineering Review and Dedicated Transport - IDT/CDT, DS0 and Fractional T-1 orders, therefore the percent is 100%.
Note 5: All Non-message service orders are completed and monitored by the Administration group.

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Verizon - Florida
Wholesale Non-recurring Study
Provisioning
Orders and Circuits - Counts

Ln	Description	Source	Circuits	Orders	Destination
			A=Note 1	B=Note 1	
	Unbundled Network Elements (UNEs) and UNE-Platforms				
	Design Group				
	DS0 and Hi-Cap Design				
	DS0 Circuits (Design Date)				
1	Basic				
2	Complex				APOP-1
3	Total				
4	Total Hi-Cap Circuits (Design Date)				APOP-1, APMC
	Network Wholesale Elements				
	Service Order Entry Group				
	Non-Message Order Entry				
	Non-Message Orders (Issue Date)				
5	Basic DS0				
6	Complex DS0				
7	Hi-Cap				
8	Total	Sum Lns (5..7)			APMC
	Facility Assignment				
	Dedicated Transport-IDT/CDT Orders, DS0 and Fractional T-1 (Issue Date)				
9	Telcordia Code YG (Frame Relay DS0)				APOP-2
10	Telcordia Code DK (Fractional T-1)				APOP-2
11	Total	Ln 9+Ln 10			

Verizon - Florida
Wholesale Non-recurring Study
Provisioning
Orders and Circuits - Counts

Ln	Description	Source	Circuits	Orders	Destination
			A=Note 1	B=Note 1	
	Network Wholesale Elements				
	Design Group				
	DS0 and Hi-Cap Design				
	DS0 Orders (Design Date)				
12	Basic				
13	Complex				
14	Total	Ln 12+Ln 13			APMC
15	Total Hi-Cap Orders (Design Date)				APMC
	Admin				
	Non-Message Clerks				
	Non-Message Orders (Completion Date)				
16	Basic DS0 Orders				
17	Complex DS0 Orders				
18	Complex Hi-Cap Orders				
19	Total	Sum Lns (16..18)			APMC

Note 1: The Circuit and Order counts were extracted from TBS data.

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Wholesale Non-recurring Study

Florida
Dedicated Transit Service
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Wholesale Non-recurring Study

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Dedicated Transit Service
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Verizon - Florida
Wholesale Non-recurring Study
Field Work
Summary - CO Wiring

Description	Jumper Activity Cost	Jumper Material Cost	Total Cost	Destination
	A=CJIS	B=AJMS	C=A+B	
Unbundled Network Elements (UNEs)				
Advanced/Special Products				
Jumper Installation				
DS0				RDTS
DS1				RDTS
DS3				RDTS
Dark Fiber				RDTS
Jumper Break				
DS0/DS1/DS3/Dark Fiber				RDTS

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Verizon - Florida
Wholesale Non-recurring Study
Field Work
Jumper Installation

Description	Minutes	LLR per Minute	Total Cost	Destination
	A=AJDT-1,2	B=ALLR-3	C=A*B	
Network Wholesale Services				
Dedicated Transit Service				
Jumper Installation				
DS0/DS1/DS3/Dark Fiber				FWS
Jumper Break				
DS0/DS1/DS3/Dark Fiber				FWS

Verizon - Florida
Wholesale Non-recurring Study
Field Work
Jumper Study - Summary of Jumper/Drive Time - Central Office Installation

Ln	Description	Source	Average Time per Line/Circuit	Central Office Weighting	Time * Wtg. Factor	Destination
			A=Source	B=Note 2	C=A*B	
	Line/Circuit - "Runs"					
	Exchange					
1	Average Drive Time per Line/Circuit	Note 1				
2	Average Host Time per Line/Circuit	AJSS				
3	Average Remote Time per Line/Circuit	Ln 1+Ln 2				
4	Average Host time per Line/Circuit	AJSS				
5	Average Time per Line/Circuit	Ln 3+Ln 4				
	Advanced/Special Products					
6	Average Drive Time per Line/Circuit	Note 1				
7	Average Host Time per Line/Circuit	AJSS				
8	Average Remote Time per Line/Circuit	Ln 6+Ln 7				
9	Average Host Time per Line/Circuit	AJSS				
10	Average Time per Line/Circuit	Ln 8+Ln 9				CJIS

Verizon - Florida
Wholesale Non-recurring Study
Field Work
Jumper Study - Summary of Jumper/Drive Time - Central Office Installation

Ln	Description	Source	Average Time per Line/Circuit	Central Office Weighting	Time * Wtg. Factor	Destination
			A=Source	B=Note 2	C=A*B	
	Jumper Breaks					
	All Products					
11	Average Drive Time Line/Circuit	Note 1				
12	Average Time for Line/Circuit Break	AJSS				
13	Average Remote Time per Line/Circuit	Ln 11+Ln 12				
14	Average Host Time for Line/Circuit Break	AJSS				
15	Average Time per Line/Circuit	Ln 13+Ln 14				CJIS
	Change CO Connection					
	Exchange Product					
16	Average Drive Time Line/Circuit	Note 1				
17	Average Time for Line/Circuit Run & Break	Ln 2+Ln 12				
18	Average Remote Time per Line/Circuit	Ln 16+Ln 17				
19	Average Time for Line/Circuit Run & Break	Ln 2+Ln 12				
20	Average Time per Line/Circuit	Ln 18+Ln 19				

Note 1: Results taken from Drive Time Study.
Note 2: Weighting based on Host/Remote ratio of state-wide central offices.

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Verizon - Florida
Wholesale Non-recurring Study
Field Work
Jumper Study - Activity Summary Sheet

Description	Jumper Work	Jumper Admin	AAIS Jumper	Program	Resolve Service	Total Minutes	Destination
	A=AAJT	B=AAJT	C=AAJT	D=AAJT	E=AAJT	F=Sum (A..E)	
Jumper Runs							
Exchange Order Minutes per Line							
Advanced/Special Order Minutes per Line							CJIS
Jumper Breaks							
All Services Minutes per Line							CJIS

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Verizon - Florida
Wholesale Non-recurring Study
Field Work
Jumper Study - Other Jumper Activities Calculation

Ln	Description	Source	Lines	Minutes	Minutes per Line	Destination
			A=Source	B=AJIS	C=B/A	
	Jumper Runs					
1	Exchange Orders	AJIS				AJSS
2	Advanced/Special Orders	AJIS				AJSS
	Jumper Breaks					
3	All Services	AJIS				AJSS
	Other Jumper Activities					
4	Jumper Admin	Sum Lns (1..3)				AJSS
5	AAIS Jumper List	Ln 1+Ln 3				AJSS
6	Programming	Ln 2				AJSS
7	Resolve Service Order	Ln 1				AJSS

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Verizon - Florida
Wholesale Non-recurring Study
Field Work
Jumper Study - Appendix Summary

Description	Total Lines	Total Minutes	Destination
	A=Note 1	B=Note 1	
Jumper Runs			
Exchange Orders			AAJT
Advanced/Special Orders			AAJT
Jumper Breaks			
All Services			AAJT
Other Jumper Activities			
Jumper Admin			AAJT
AAIS Jumper List			AAJT
Programming			AAJT
Resolve Service Order			AAJT

Note 1: Data obtained from a Time and Motion study conducted by Arthur Anderson, LLP.

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Verizon - Florida
Wholesale Non-recurring Study
Field Work
Jumper Material

Description	Span Increments	Cost per Increment	Material Loading Factor	Material Loadings Cost	Extended Cost	Destination
	A=Note 1	B=Note 2	C=Note 2	D=B*C	E=B+D	
Network Wholesale Services						
Dedicated Transit Service						
Jumper Required to Span 25 Feet						
Cross Connect Jumper - DS0						RDTS
Cross Connect Jumper - DS1						RDTS
Cross Connect Jumper - DS3						RDTS
Cross Connect Jumper - Dark Fiber						RDTS

Note 1: Increments reflect standard minimum lengths necessary to span the typical jumper distance of 25 feet.
Note 2: Costs obtained from GTEAMS. The Material Loading includes freight, sales tax and provisioning.

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Wholesale Non-recurring Study

Florida
Dedicated Transit Service
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Wholesale Non-recurring Study

Florida
Dedicated Transit Service
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Verizon - Florida
Wholesale Non-recurring Study
Loaded Labor Rates
Ordering

State	Work Center	Job Title	LLR per hour	LLR per minute

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Verizon - Florida
Wholesale Non-recurring Study
Loaded Labor Rates
Provisioning

State	Work Center	Job Title	Job Duties	LLR per hour	LLR per minute

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Verizon - Florida
Wholesale Non-recurring Study
Loaded Labor Rates
Field Work

State	Work Center	Job Title	Job Duties	LLR per hour	LLR per minute
[redacted]					

Note 1: This Weighted LLR reflects the probability of either BZT or CZT performing this function, based on analysis of STAR data.

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