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Sprint

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February 4, 2003

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

RE: Docket Nos. 981834 & 990321-TP

Dear Ms. Bayo':

Enclosed for filing are the original and 15 copies of the following:

1. Direct Testimony of Jimmy R. Davis 01148-03
2. Direct Testimony of Edward Fox, including Exhibits EBF-1 & EBF-2 01149-03
3. Sprint's Request for Confidential Classification 01150-03

In addition, pursuant to staff's direction, Sprint is filing the following:

4. Two redacted hard copies of Exhibit JRD-2 and one CD-ROM containing the redacted Exhibit JRD-2. 01151-03

Hard copies and CD-ROMs containing the nonredacted version of Exhibit JRD-2 (Collocation Cost Study) are being transmitted separately under seal this same day. Copies are being served on the parties in this docket, pursuant to the attached Certificate of Service. Parties that have executed a nondisclosure agreement will receive nonredacted versions of Exhibit JRD-2. All other parties will receive redacted versions.

Please acknowledge receipt of this filing by stamping and initialing a copy of this letter and returning same to the courier. If you have any questions, please do not hesitate to call me at 850/599-1560.

Sincerely,

Susan S. Masterton

Susan S. Masterton

Enclosures

AUS ___
CAF ___
CMP Fulwood
COM Stlori
CTR ___
ECR ___
GCL 1
OPC ___
MMS ___
SEC 1
OTH ___

CERTIFICATE OF SERVICE
DOCKET NO. 981834-TP & 990321-TP

I HEREBY CERTIFY that a true and correct copy of the Redacted or Non-redacted+ Exhibit JRD-2 (Collocation Cost Study) was served by U.S. Mail or Hand Delivery* this 4th day of February, 2003 to the following:

Wayne Knight, Esq.* +
Division of Legal Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
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Susan S. Masterton

Susan S. Masterton

+ Non-redacted copies will be provided up execution of the appropriate non-disclosure agreement.

REDACTED

COLLOCATION COST STUDY

Sprint – Florida, Incorporated

February 4, 2003

NON-PROPRIETARY

COLLOCATION COST STUDY

Table of Contents

Section I: Summary

Collocation is required for the Competitive Local Exchange Carrier (CLEC) to interconnect or to access unbundled network elements (UNEs) such as local loops. In CFR 47 §51.5, the FCC defines Physical Collocation and Virtual Collocation as:

Physical Collocation is an offering by an incumbent LEC that enables a requesting telecommunications carrier to:

(1) Place its own equipment to be used for interconnection or access to unbundled network elements within or upon an incumbent LEC's premises;
(2) Use such equipment to interconnect with an incumbent LEC's network facilities for the transmission and routing of telephone exchange service, exchange access service, or both, or to gain access to an incumbent LEC's unbundled network elements for the provision of telecommunication services;
(3) Enter those premises, subject to reasonable terms and conditions, to install, maintain, and repair equipment necessary for interconnection to access to unbundled elements; and
(4) Obtain reasonable amounts of space in an incumbent LEC's premises as provided in this part, for the equipment necessary for interconnection or access to unbundled elements, allocated on a first-come, first served basis.

Virtual collocation is an offering by an incumbent LEC that enables a requesting telecommunications carrier to:

(1) Designate or specify equipment to be used for interconnection or access to unbundled network elements to be located within or upon an incumbent LEC's premises, and dedicated to such telecommunication carriers use;
(2) Use such equipment to interconnect with an incumbent LEC's network facilities for the transmission and transmission and routing of telephone exchange service, exchange access service, or both, or for access to an incumbent LEC's unbundled network elements for the provision of telecommunication service; and
(3) Electronically monitor and control its communications channels terminating in such equipment.

Physical and virtual are the two types of collocation considered in this cost study. Physical collocation is defined as elements that the CLEC purchases from the Incumbent Local Exchange Carrier (ILEC) for use on the ILEC premises. Under physical collocation, the CLEC is responsible for maintenance of its own equipment. Physical collocation is further categorized as either caged or cageless. In the caged arrangement, the ILEC installs a chain link fence or similar enclosure around the CLEC's equipment in order to provide a secured equipment environment. The CLEC pays for the amount of floor space within this enclosure.

In a cageless arrangement, the CLEC equipment bays are co-mingled with other CLEC bays in the CLEC-designated area of the central office.

Virtual collocation is the same as cageless collocation with the exception that the equipment may be co-mingled with the ILEC equipment and the ILEC is responsible for maintenance of the equipment.

Adjacent on-site and remote terminal collocation are other types of collocation available to CLECs. Adjacent on-site collocation is available when there is no room left in the central office. In these instances the FCC allows for the CLP to place a hut or similar housing unit on the ILEC premises. With remote terminal collocation, the CLEC has access to subloops at the Digital Loop Carrier locations.

Sprint prices adjacent on-site and remote terminal collocation on an Individual Case Basis (ICB) because it has had no experience in provisioning these services and due to the number of variables that may be encountered in provisioning these services. ICB pricing is required for adjacent on-site and remote terminal collocation due to the varying circumstances, such as zoning codes, placement (above ground or underground), distance from central office, and construction methods (cut and restore pavement), that are required to provide adjacent or remote terminal collocation. Thus Sprint cannot accurately predict the cost of such services.

The other elements required to provision physical or virtual collocation are Application Fees, Augment Fees, Engineering & Project Management Fees, DC power, DC power cabling, Cross Connect Cabling, AC outlets, Overhead lighting, Internal Cable Space and Internal Cabling. Sprint's collocation study treats these elements as universal and they are to be applied to both physical and virtual collocation. These rate elements are discussed in further detail in their individual sections.

Annual charge factors were determined based on the capital structure, debt and equity costs and tax rates ordered for Sprint by the Florida Public Service Commision on January 8, 2003 in Docket No. 990649B-TP.

Where possible, costs in this study were determined based on analysis of recent collocation work activities. The following rate elements are either partially or totally supported by work activities: transmission engineering fees, cage engineering and construction cost, connections to power plant 30, 60 and 100-amps, AC outlet, overhead lighting, cross-connects and internal cable.

Other costs are supported by vendor quotes. Vendor quotes either partially or totally support the DC power consumption element and connections to power plant 100 and 200-amps.

Floor space cost is supported by building construction cost data from the 2003 version of RS Means Costworks software.

Manhole and conduit costs included in the internal cable space element were taken from structure studies in Sprint's UNE study in Docket No. 990649B-TP.

Where work activity data was not available, subject matter expert (SME) data was used to support cost. SME data supports application fees, augment fees and project management fees.

Section II: Rate List - Physical and Virtual Collocation Elements

Line	Element	Source	NRC	MRC
	Administrative, Engineering and Project Management Fees			
1	New Collocation - Application Fee	Pg 9, Ex 1, Ln 14	$ 2,758.17	
2	New Collocation - Admin., Transm. Engr. & Project Management Fee	Pg 10, Ex 1.1, Ln 11	$ 5,700.28	
3	Minor Augment Fee	Pg 11, Ex 1.2, Ln 9	$ 801.43	
4	Minor Augment - Administrative & Project Management Fee	Pg 12, Ex 1.3, Ln 10	$ 715.30	
5	Minor Augment - Transmission Engineering Fee	Pg 12, Ex 1.3, Ln 14	$ 569.49	
6	Major Augment Fee	Pg 11, Ex 1.2, Ln 20	$ 1,613.29	
7	Major Augment - Administrative & Project Management Fee	Pg 12, Ex 1.3, Ln 24	$ 1,843.66	
8	Major Augment - Transmission Engineering Fee	Pg 12, Ex 1.3, Ln 28	$ 1,672.88	
9	Space Report (per wire center)	Pg 14, Ex 2 Ln 9	$ 857.94	
	Security Cage Construction			
10	Security Cage - Engineering	Pg 16, Ex 3, Ln 4	$ 688.54	
11	Security Cage - Construction (Cost per Linear Foot)	Pg 16, Ex 3, Ln 8	$ 48.68	
	Floor Space			
12	Floor Space (Per Square Foot)	Pg 20, Ex 4, Ln 7		$ 9.65
	DC Power			
13	Power Costs - Per Load Ampere Ordered	Pg 24, Ex 5.0, Ln 10		$ 16.14
14	Power Costs - Connection to Power Plant up to 30 Amps	Pg 25, Ex 5.1, Ln 14 and Ln 13	$ 1,650.12	$ 23.38
15	Power Costs - Connection to Power Plant 35-60 Amps	Pg 26, Ex 5.2, Ln 14 and Ln 13	$ 2,707.34	$ 37.05
16	Power Costs - Connection to Power Plant 70-100 Amps	Pg 27, Ex 5.3, Ln 14 and Ln 13	$ 8,784.79	$ 111.25
17	Add Per Foot Over 110 Linear Feet	Pg 27, Ex 5.3, Ln 14 and Ln 13	$ 169.09	$ 2.05
18				
	Power Costs - Connection to Power Plant 125-200 Amps	Pg 28, Ex 5.4, Ln 14 and Ln 13	$ 19,320.65	$ 241.48
19	Add Per Foot Over 110 Linear Feet	Pg 28, Ex 5.4, Ln 14 and Ln 13	$ 319.53	$ 3.88
	AC Power			
20	Cost per AC Outlet Installation (per outlet 20 amps)	Pg 31, Ex 6, Ln 4	$ 1,106.54	
21	Cost per Set of Overhead Lights	Pg 31, Ex 6, Ln 8	$ 1,620.53	
	Cross Connect Facilities			
22	DS0 Switchboard Cable Per 100-Pr	Pg 35, Ex 7, Ln 7		$ 30.11
23	DS0 Co-Carrier Switchboard Cable Per 100 Pr.	Pg 36, Ex 7.1, Ln 14 & Ln 13	$ 697.42	$ 7.68
24	DS1 Cross Connect (Per 28 DS1s)	Pg 38, Ex 8, Ln 7		$ 42.01
25	DS1 Co-Carrier Cross Connect (Per 28 DS1s)	Pg 39, Ex 8.1, Ln 14 & Ln 13	$ 630.65	$ 8.34
26	DS3 Cross Connect (Per 12 DS3s)	Pg 41, Ex 9, Ln 7		$ 210.55
27	DS3 Co-Carrier Cross Connect (Per 12 DS3s)	Pg 42, Ex 9.1, Ln 14 & Ln 13	$ 1,967.92	$ 18.41
28	Optical Cross-Connect Per 4 Fibers	Pg 44, Ex 9.2, Ln 7		$ 16.18
29	Optical Cross-Connect Co-Carrier Per 4 Fibers	Pg 45, Ex 9.3, Ln 14 & Ln 13	$ 238.75	$ 10.26
30	Internal Cable Space - Per 48 Fiber Cable	Pg 53, Ex 10 Ln 34		$ 31.97
31	Internal Cable Space - Per 100 Pr Copper Stub Cable	Pg 53, Ex 10 Ln 34		$ 21.27
32	Internal Cable - 48 Fiber	Pg 58, Ex 13 Ln 13 and 8	$ 1,074.69	$ 40.70
33	Internal Cable - Per 100-Pr Copper Stub Cable	Pg 58, Ex 13 Ln 13 and 8	$ 185.30	$ 43.56
	Security Card			
34	Security Card - Per Card	SME	$ 15.00	
	Additional Labor Charges (Virtual or Physical)			
35	Additional Labor 1/4 hour CO Technician - Regular	Pg 106, Input Sheet Ln 2 / 4	$ 17.48	
36	Additional Labor 1/4 hour CO Technician - Overtime	Pg 106, Input Sheet Ln 2 / 4 * 1 5	$ 26 22	
37	Additional Labor 1/4 hour CO Technician - Premium	Pg 106, Input Sheet Ln 2 / 4 * 2	$ 34.96	
38	Additional Labor 1/4 hour CO Engineer	Pg 106, Input Sheet Ln 1 / 4	$ 15.66	
39	Additional Labor 1/4 hour OSP Technician - Regular	Pg 106, Input Sheet Ln 19 / 4	$ 14.55	
40	Additional Labor 1/4 hour OSP Technician - Overtime	Pg 106, Input Sheet Ln 19 / 4 *	$ 21.83	
41	Additional Labor 1/4 hour OSP Technician - Premium	Pg 106, Input Sheet Ln 19 / 4 * 2	$ 29.10	
42	Additional Labor 1/4 hour OSP Engineer	Pg 106, Input Sheet Ln 18 / 4	$ 12.28	
43	**Adjacent On-Site Collocation**		ICB	
44	**Remote Terminal Collocation**		ICB	

Section III: Administrative, Engineering and Project Management Fees

A. Purpose

There are three types of fees costed in this section. The first type, Application and Augment fees (Minor and Major), cover the cost to administer and evaluate initial and subsequent applications for collocation services. The second type, Administrative & Project Management Fees (New Collocation, Minor Augment and Major Augment), cover the costs of administering and project managing installations of new and augmented collocations after firm order commitment. The third type, Transmission Engineering Fee, covers the cost of engineering for cross connects and the more common (60 amps or less) power cables. For new collocations, the Administrative & Project Management Fee and the Transmission Engineering Fees are combined into one.

B. Application and Augment Fees

The Application Fee is collected each time a CLEC enters a new central office (CO) or orders space in the sam central office. Augment Fees are collected each time a CLEC orders changes or additions to an existing arrangement, excluding requests for additional space. The rates cover administration of the application form, engineering evaluation of the feasibility of providing service and preparing a price quote. The following workgroups are involved in new collocation applications and augment applications

Field Service Manager(FSM) - Business & Wholesale Markets (BWM) -Primary customer contact; sends, explains & answers questions about the application; receives application and fee from customer, communicates with the customer about obvious omissions on the application; reviews price quote before sending to custome and receives firm order commitment (FOC).

Applications Engineer(AE) - BWM - Interface between BWM and Engineering; reviews application in detail, questions customer about application, accepts customer revisions to application; tracks progress of application process; discusses customer specifications with the Network Project Manager (NPM); and creates price quote.

Network Sales Manager(NSM) - BWM - Assists in administration of application; researches policy or regulatory questions that arise during the course of the application process.

Network Project Manager(NPM) - Network Engineering (NE) - Project manages work of all engineering personnel involved in evaluating feasibility of serving the customer; coordinates communication among engineering groups in conference calls, meetings, site visits; summarizes engineering findings to assist in making price quote.

Regional Transmission Engineer(RTE) - NE - Reviews CO drawings; locates floor space in uncrowded COs. verifies that requested space exists on main distribution frame (MDF), DSX panels, fiber patch panels, BDFB (for power runs of 60 amps or less), cable racks; also verifies that DC power plant has adequate capacity to serve customer.

Outside Plant Engineer(OSP) - Customer Service Operations (CSO) - Responsible for evaluating entrance cable requirements; Reviews CO drawings; verifies space exists in first manhole, conduits, fiber patch panels, cable racking, fiber guttering.

Power Engineer (PE) - NE - Verifies that requested space exists on main power board (for power runs greater than 60 amps), cable racks; also verifies that DC power plant has adequate capacity to serve customer.

Land & Buildings Engineer(LB) - NE - Verifies air conditioning capacity exists to serve customer equipment, and that adequate AC electric capacity exists to serve customer.

Attorney (AT) - Legal - Writes and reviews interconnection agreement language pertaining to collocation. Participates in interconnection agreement negotiations with customer.

National Accounts Manager- BWM - Assists in writing and reviewing of interconnection agreement language pertaining to collocation. Participates in interconnection agreement negotiations with customer

There are two levels of augments, minor and major. Minor augments include things such as DC power fuse changes or extensions of AC electric circuits for occasional use outlets and lights where sufficient circuit capacity is available. Major augments include things such as additions or removals of cross connect cables, power cables and entrance cables.

Augment fee worktimes for the Applications Engineer and the Field Service Manager are less than those in the new collocation application because there are no floor space issues to be discussed. Also, there are fewer application errors and omissions for augment applications as opposed to new applications. No legal and contract administration time is included in the augment fees. All contract work is assumed to be finished as CLECs begin filing applications for new collocation. For augment applications, the Network Project Manager, Regional Transmission Engineer, Outside Plant Engineer, Power Engineer and Land & Buildings Engineer time is reduced vs. applications for new collocation, reflecting lesser time requirements for evaluating additions and changes to existing collocation arrangements.

Time requirements for each of the workgroups listed for new and augment applications are based on SME inpu SMEs provided times for worksteps performed by each workgroup, as well as the percentage of the time worksteps would occur in the process. Worktimes for each workstep are determined by multiplying SM provided worktimes by the percent of occurrence of each workstep. Final times appearing in the application ar augment cost studies were determined by summing times for all worksteps to arrive at the total time required f a workgroup. Worktimes in the studies were then multiplied by current labor rates for each workgroup. Common cost has been added to the total cost of all workgroups.

C. Administrative and Project Management Fees

Administrative and Project Management Fees apply after FOC and covers the work of the Applications Engineer, Field Service Manager, Network Sales Manager, billing group, Network Project Manager, and Regional Transmission Engineer (for new collocations only). There are three fees. First is the Administrative, Engineering and Project Management Fee-New Collocation Second is the Administrative and Project Management Fee-Minor Augment. And, third is the Administrative and Project Management Fee-Major Augment. The following workgroups are involved in new collocation and augment provisioning.

Field Service Manager(FSM) - BWM - Receives FOC and partial payment of nonrecurring charges from the customer and notifies the AE of FOC; then coordinates security access and identification badge process. Once collocation is complete, the FSM reviews the billing advisory form (BAF), which authorizes the commencement of billing to the customer; sends the billing advisory form to the Carrier Ops billing department; and closes the project tracking system.

Applications Engineer(AE) - BWM - Notifies the NPM of FOC and creates the billing advisory form; involved i communicating with the NPM, engineers and customer when further questions arise during the buildout of the arrangement.

Network Sales Manager(NSM) - BWM - Researches policy or regulatory questions that arise after FOC.

Network Project Manager(NPM) - NE - Project manages work of all engineering personnel involved in buildin out the collocation arrangement; coordinates communication among engineering groups, the customer and installation supervisors in conference calls, meetings, site visits; conducts the walk-thru with the customer, arranges for changes to the arrangement persuant to the walk-thru, and completes forms documenting the results of the walk-thru; and tracks the progress of the project.

CPR/Drafting Clerk- (CPR Drafting) - NE - Updates continuing property records and CO drawings after projects have been placed in service.

Carrier Operations Associate- (Carrier Ops Assoc) - BWM - Assigns USOCs, loads billing tables and enters the billing advisory form information into the customer record.

Regional Transmission Engineer(RTE) - NE - Does engineering work for cross connects, cable racks, relay racks, and power runs of 60 amps or less; communicates with NPM and installation supervisors; creates and closes transmission equipment workorder; orders materials; makes specifications and drawings for installation supervisors; updates the circuit assignment system; and, tracks the progress of the transmission equipment portion of the collocation arrangement.

All the above workgroups (except the RTE) worktimes were gathered from SMEs in the collocation provisioning process. To support the worktimes of the Regional Transmission Engineers, a sample of recent work activities for new collocations was studied. For all other workgroups, SMEs provided times for worksteps performed by each workgroup, as well as the percentage of the time worksteps would occur in the process. Worktimes for each workstep are determined by multiplying SME provided worktimes by the percent of occurrence of each workstep. Final times were determined by summing times for all worksteps to arrive at the total time require for a workgroup. Final worktimes in the studies were then multiplied by current labor rates for each workgroup. Common cost has been added to the total cost of all workgroups.

D. Transmission Engineering Fees

Transmission Engineering Fees apply to minor and major augments after FOC for any collocation order that involves cross-connects, power runs of 60-amps or less, cable racks, relay racks, DS1/DS3 panels or fiber panels. See above for a description of the types of work done by a Transmission Engineer.

To support the worktimes of the Regional Transmission Engineers, samples of collocation work activities were studied for both new and augment collocation arrangements. Average worktimes developed from those samples were used in the costing of the Transmission Engineering Fees. Regional Transmission Engineer wo time for minor augments is based on SME data.

Worktimes in the studies were then multiplied by current labor rates for each workgroup Common cost has been added to the total cost of all workgroups.

Rate Element: New Collocation - Application Fee
Exhibit 1: Rate Calculation

A. Investment

Line	Description	Source	Hours	Labor Rate		Cost	
1	Application Engineer	SME & Input Sheet Ln 21	7.00	$	62.82	$	439.74
2	Field Service Manager	SME & Input Sheet Ln 23	1.00	$	70.52	$	70.52
3	Network Sales Manager	SME & Input Sheet Ln 22	0.35	$	70.52	$	24.68
4	Network Project Manager	SME & Input Sheet Ln 24	11.00	$	50.55	$	556.05
5	Regional Transmission Engineer	SME & Input Sheet Ln 1	14.25	$	62.62	$	892.34
6	Outside Plant Engineer	SME & Input Sheet Ln 18	3.00	$	49.11	$	147.33
7	Power Engineer	SME & Input Sheet Ln 25	0.75	$	56.08	$	42.06
8	Land & Building Engineer	SME & Input Sheet Ln 26	1.25	$	75.71	$	94.64
9	Attorney	SME & Input Sheet Ln 20	1.00	$	88.79	$	88.79
10	National Account Manager	SME & Input Sheet Ln 29	1.00	$	70.11	$	70.11
			40.60				
11	Total Labor	Sum (Ln 1 - Ln 10)				$	2,426.25
12	Common Cost Factor	Input Sheet Ln 8					13.68%
13	Common Cost	Ln 11 * Ln 12				$	331.91
	B. Pricing						
14	**Application Fee per Wire Center**	**Ln 11 + Ln 13**				**$**	**2,758.17**

Rate Elements: New Collocation - Administrative, Engineering and Project Management Fee
Exhibit 1.1: Rate Calculation

Line	Description	Source	Hours	Labor Rate	Cost
1	Application Engineer	SME & Input Sheet Ln 21	0.50	$ 62.82	$ 31.41
2	Field Service Manager	SME & Input Sheet Ln 23	1.25	$ 70.52	$ 88.15
3	Network Sales Manager	SME & Input Sheet Ln 22	0.25	$ 70.52	$ 17.63
4	Billing	SME & Input Sheet Ln 28	0.50	$ 36.74	$ 18.37
5	Network Project Manager	SME & Input Sheet Ln 24	44.50	$ 50.55	$ 2,249.48
6	Regional Transmission Engineer	Work Activity Study & Input Sheet Ln 1	38.50	$ 62.62	$ 2,410.87
7	CPR/Drafting	SME & Input Sheet Ln 27	6.00	$ 33.07	$ 198.42
8	Total Labor	Sum (Ln 1 - Ln 7)			$ 5,014.33
9	Common Cost Factor	Input Sheet Ln 8			13.68%
10	Common Cost	Ln 8 * Ln 9			$ 685.96
11	**Engineering & Project Management Fee per Wire Center**	**Ln 8 + Ln 10**			**$ 5,700.28**

Rate Element: Augmentation Fees
Exhibit 1.2: Rate Calculation

Minor Augment Fee
A. Investment

Line	Description	Source	Hours	Labor Rate	Cost
1	Application Engineer	SME & Input Sheet Ln 21	5.50	$ 62.82	$ 345.51
2	Field Service Manager	SME & Input Sheet Ln 23	0.75	$ 70.52	$ 52.89
3	Network Sales Manager	SME & Input Sheet Ln 22	0.25	$ 70.52	$ 17.63
4	Network Project Manager	SME & Input Sheet Ln 24	2.00	$ 50.55	$ 101.10
5	Regional Transmission Engineer	SME & Input Sheet Ln 1	3.00	$ 62.62	$ 187.86
6	Total Labor	Sum (Ln 1 - Ln 5)			$ 704.99
7	Common Cost Factor	Input Sheet Ln 8			13.68%
8	Common Cost	Ln 6 * Ln 7			$ 96.44
	B. Pricing				
9	**Minor Augment Fee per Wire Center**	**Ln 6 + Ln 8**			**$ 801.43**

Major Augment Fee
A. Investment

Line	Description	Source	Hours	Labor Rate	Cost
10	Application Engineer	SME & Input Sheet Ln 21	5.50	$ 62.82	$ 345.51
11	Field Service Manager	SME & Input Sheet Ln 23	0.75	$ 70.52	$ 52.89
12	Network Sales Manager	SME & Input Sheet Ln 22	0.25	$ 70.52	$ 17.63
13	Network Project Manager	SME & Input Sheet Ln 24	6.75	$ 50.55	$ 341.21
14	Regional Transmission Engineer	SME & Input Sheet Ln 1	8.75	$ 62.62	$ 547.93
15	Outside Plant Engineer	SME & Input Sheet Ln 18	1.75	$ 49.11	$ 85.94
16	Power Engineer	SME & Input Sheet Ln 25	0.50	$ 56.08	$ 28.04
17	Total Labor	Sum (Ln 10 - Ln 16)			$ 1,419.15
18	Common Cost Factor	Input Sheet Ln 8			13.68%
19	Common Cost	Ln 17 * Ln 18			$ 194.14
	B. Pricing				
20	**Major Augment Fee per Wire Center**	**Ln 17 + Ln 19**			**$ 1,613.29**

Rate Element: Augments - Administrative & Project Management Fee
Exhibit 1.3: Rate Calculation

Minor Augment - Administrative & Project Management Fee

Line	Description	Source	Hours	Labor Rate	Cost
1	Application Engineer	SME & Input Sheet Ln 21	0.50	$ 62.82	$ 31.41
2	Field Service Manager	SME & Input Sheet Ln 23	0.75	$ 70.52	$ 52.89
3	Network Sales Manager	SME & Input Sheet Ln 22	0.25	$ 70.52	$ 17.63
4	Billing	SME & Input Sheet Ln 28	0.50	$ 36.74	$ 18.37
5	Network Project Manager	SME & Input Sheet Ln 24	9.25	$ 50.55	$ 467.59
6	CPR/Drafting	SME & Input Sheet Ln 27	1.25	$ 33.07	$ 41.34
7	Total Labor	Sum (Ln 1 - Ln 6)			$ 629.23
8	Common Cost Factor	Input Sheet Ln 8			13.68%
9	Common Cost	Ln 7 * Ln 8			$ 86.08
10	**Minor Engineering and Project Management Augmentation Cost**	**Ln 7 + Ln 9**			**$ 715.30**

Minor Augment - Transmission Engineering Fee

Line	Description	Source	Hours	Labor Rate	Cost
11	Regional Transmission Engineer	SME & Input Sheet Ln 1	8.00	$ 62.62	$ 500.96
12	Common Cost Factor	Input Sheet Ln 8			13.68%
13	Common Cost	Ln 11 * Ln 12			$ 68.53
14	**Minor Augment - Transmission Engineering Cost**	**Ln 11 + Ln 13**			**$ 569.49**

Major Augment - Administrative & Project Management Fee

Line	Description	Source	Hours	Labor Rate	Cost
15	Application Engineer	SME & Input Sheet Ln 21	0.50	$ 62.82	$ 31.41
16	Field Service Manager	SME & Input Sheet Ln 23	0.75	$ 70.52	$ 52.89
17	Network Sales Manager	SME & Input Sheet Ln 22	0.25	$ 70.52	$ 17.63
18	Billing	SME & Input Sheet Ln 28	0.50	$ 36.74	$ 18.37
19	Network Project Manager	SME & Input Sheet Ln 24	27.25	$ 50.55	$ 1,377.49
20	CPR/Drafting	SME & Input Sheet Ln 27	3.75	$ 33.07	$ 124.01
21	Total Labor	Sum (Ln 15 - Ln 20)			$ 1,621.80
22	Common Cost Factor	Input Sheet Ln 8			13.68%
23	Common Cost	Ln 21 * Ln 22			$ 221.86
24	**Major Engineering and Project Management Augmentation Fee**	**Ln 21 + Ln 23**			**$ 1,843.66**

Major Augment - Transmission Engineering Fee

Line	Description	Source	Hours	Labor Rate	Cost
25	Regional Transmission Engineer	Work Activity Study & Input Sheet Ln 1	23.50	$ 62.62	$ 1,471.57
26	Common Cost Factor	Input Sheet Ln 8			13.68%
27	Common Cost	Ln 25 * Ln 26			$ 201.31
28	**Major Augment - Transmission Engineering Cost**	**Ln 25 + Ln 27**			**$ 1,672.88**

Section IV: Space Report

A. Purpose

In accordance with the FCC's 4th Report & Order, 47CFR Sec. 51.321 (h), upon request, an incumbent LEC must submit to the requesting carrier within ten days a report describing in detail the space that is available for collocation in a particular incumbent LEC premises. The purpose of the Premises Space Report study is to determine Sprint's cost of providing such a report.

B. Introduction

The premises space report rate recovers the costs incurred to satisfy the regulatory requirements of preparing the report describing in detail the space that is available for collocation in a particular Sprint premises. This involves labor time for the Field Service Manager (FSM), Applications Engineer (AE), Network Project Manager (NPM) and Drafter. The rate for the report is applied per wire center per request.

Sprint will provide six items of information in its Premises Space Report:
1) Square footage available for collocation
2) Number of other collocators in the central office (CO) (company names are not provided)
3) Modifications in the use of space since the last space report
4) Measures being taken to make additional space available
5) Average distance to the main distribution frame (MDF)
6) Average distance to the power source

The FSM takes the request and the payment from the CLEC; communicates with the AE, NPM and the CLEC when questions arise; and presents and discusses the final report with the CLEC.

The AE coordinates completion of the report with the NPM; and communicates with the FSM, NPM and the CLEC when questions arise.

The NP views network drawings to identify the areas within the CO where CLECs are or could be located, and to identify the nearest power source; works with the Drafter to calculate square footage available for collocation, and average distances to the MDF and power source; views network drawings and other CO records to determine the number of other collocators in the office and changes in the use of space since the last report; consults with Land & Buildings Engineers to determine measures being taken to make additional space available; communicates with the FSM, AE and the CLEC when questions arise; assembles the results of their work into a report for presentation to the CLEC; and, routes the report back to the AE.

The Drafter uses the AutoCAD system to calculate square footage available for collocation, and average distances to the MDF and power source.

C. Assumptions

The worktimes were developed by SMEs based on their experience in completing space reports.

D. Methodology

The total cost for the space report was developed by multiplying the worktimes by each applicable labor rate. The sum of the labor cost was increased by the common cost factor, resulting in the total space report cost.

Rate Element: Space Report
Exhibit 2: Rate Calculation

A. Investment

Line	Description	Source	Hours	Labor Rate	Cost
1	Field Service Manager	SME & Input Sheet Ln 23	2.00	$ 70.52	$ 141.04
2	Applications Engineer	SME & Input Sheet Ln 21	2.00	$ 62.82	$ 125.64
3	Network Project Manager	SME & Input Sheet Ln 24	9.00	$ 50.55	$ 454.95
4	Drafter	SME & Input Sheet Ln 27	1.00	$ 33.07	$ 33.07
5	Total Labor	Sum of Lns. 1-4	14.00		$ 754.70
6	Common Cost Factor	Inputs Ln 8			13.68%
7	Common Cost	Ln 5 * Ln 6			$ 103.24
8	Total Space Report Cost	Ln 5 + Ln 7			$ 857.94
9	**Space Report Fee per Wire Center**	**Ln 8**			**$ 857.94**

Section V: Security Cage

A. Purpose

The purpose of this cost study is to determine the cost of providing a security enclosure to a CLEC in a caged collocation scenario.

B. Introduction

The security enclosure allows the CLEC to segregate its equipment from other CLECs. The enclosure typically consists of an 8 foot tall chain link fence with a roll gate. For safety purposes, the cage must be grounded via a ground bar. The cost of running ground wire from the cage to the ground bar is included in the cost per linear foot.

C. Methodology

A sample of recent work activities was studied to determine the cost of basic cage construction per linear foot. An engineering charge is also applied as a fixed fee. Engineering was also determined from the cage construction work activity sample. Following is a description of the work done by engineers for cage construction:

Land & Buildings Engineer (LB) - NE - Does engineering work for cage construction; communicates with NPM and building contractors; creates and closes buildings workorder; makes specifications and drawings for contractors; seeks contractor bids; supervises work of contractors; and, tracks the progress of the buildings portion of the collocation arrangement.

The total work activity costs of cage construction including grounding was divided by the total linear feet of cages constructed in the work activity sample to determine a construction cost per linear foot. Common cost was added to both the fixed engineering fee and the per linear foot construction cost.

Rate Element: Security Cage
Exhibit 3: Rate Calculation

A. Fixed Cost - Engineering

Line		Source	Investment
1	Engineering Labor	Wp 3, Ln 1	$ 605.68
2	Common Cost Factor	Input Sheet Ln 8	13.68%
3	Common Cost	Ln 1 * Ln 2	$ 82.86
4	**Total Fixed Cost - Engineering**	Ln 1 + Ln 3	**$ 688.54**

B. Variable Costs - Construction

Line		Source	Investment
5	Cost per Linear Foot	Wp 3, Ln 2	$ 42.82
6	Common Cost Factor	Input Sheet Ln 8	13.68%
7	Common Cost	Ln 5 * Ln 6	$ 5.86
8	**Total Variable Cost - Construction**	**Ln 5 + Ln 7**	**$ 48.68**

Section VI: Floor Space

A. Purpose

The purpose of this cost study is to determine the cost of providing central office (CO) transmission floor space to CLECs. The floor space may either be located in an enclosure such as a wire cage, or it may be cageless or virtual.

B. Introduction

The floor space element represents the actual footprint enclosed within a cage or, for cageless or virtual collocation, upon which the equipment is installed. The smallest increment of floor space provided is for a single bay of equipment. There is no difference in the cost per foot of physical, cageless or virtual collocation floor space.

The chargeable floor space footprint for cageless or virtual collocation will be determined on the basis of a measurement of the width of the relay rack housing the equipment, and the depth of the largest piece of equipment to be housed within that rack plus 18 inches of access space added to both the front and back of the equipment.

The floor space rate recovers the cost of the building including electrical and mechanical sub-systems and security arrangements. The floor space rate recovers the costs to run the environmental control systems, commonly referred to as HVAC (Heating, Ventilation and Air Conditioning). Also, the cost of the land where the building is located is recovered in this rate. Some space in the CO is either shared support space, upon which no switching or transmission gear rests, or space reserved for the future growth of both Sprint and CLEC operations. Accordingly, the cost of assignable transmission space has been increased to include a proportionate share of shared support and growth space in order that Sprint may recover its full investment in CO land and buildings shared by CLECs. Shared support space includes areas such as stairways, elevators, hallways, aisle space around equipment racks, restrooms, loading docks, staging areas and air conditioning rooms. Floor space charges are recovered on a monthly basis.

Sprint's floor space rate is determined on a TELRIC basis. Building investment, including architectural and engineering fees and construction project management fees, are determined based on recent RS Means data for telephone exchange buildings. Investments are determined as though CO buildings that house conditioned transmission space are newly constructed all at one time. For this reason, Sprint assesses no additional charges for routine site preparation.

However, this methodology does not preclude Sprint from imposing modification charges in special circumstances. In buildings where Sprint houses both a CO and administration or warehousing space and the CO is determined to be full, a CLEC may request that the non-CO (administration or warehouse) space be modified for transmission area use.

In these circumstances, Sprint is allowed to recover "make ready" costs. Make ready costs are large-scale investments in the HVAC and structural systems to allow CO equipment to be used. The environmental requirements for CO equipment are much more demanding than for example, a call center and thus, require more HVAC and structural support.

With the addition of CLECs into Sprint's COs, additional security arrangements were added. The FCC allows for the recovery of the additional security cost per the First Report and Order (FCC 99-48) as follows:

We (FCC) expect that state commissions will permit incumbent LECs to recover the costs of implementing these security measures from collocating carriers in a reasonable manner.

The additional security arrangements that Sprint is proposing vary by CO. In general, these arrangements are electronic locks and security access card readers.

C. Methodology

The first step was to develop the per square foot investment of the building. The building investment is determined by using Means Cost Works, a software product from RS Means.

About R.S. Means (www.rsmeans.com/about):

R.S. Means is North America's leading supplier of construction cost information. As a member of the Construction Market Data Group, Means provides accurate and up-to-date cost information that helps owners developers, architects, engineers, contractors and others to carefully and precisely project and control the cost of both new building construction and renovation projects. In addition to its collection of annual construction cost data books, Means also offers construction estimating and facilities management seminars, electronic cost databases and software, reference books, and consulting services. Means also has a number of product solutions for construction professionals who focus on construction in Canada, Mexico and Russia.

This software allows the user to enter the first three digits of a zip code to determine the local area specific construction investment of a building. A statewide investment per foot was calculated by weighting the investment per foot for each CO by the access lines for each CO. Architectural, engineering and construction project management fees are then added to construction investment per square foot. (RS Means construction investment per square foot does not include those items.) RS Means software expresses these fees as percentage additions to construction investment. Investment per square foot for architectural, engineering and construction project management fees was determined by applying the appropriate percentage to the statewide construction investment.

Security investment was then added to the statewide average investment per foot. A sample of security additions was studied to determine the security investment additive. Studied security additions were for access card reader systems. The security addition for each CO was divided by the square footage of that CO resulting in a security investment per foot. The average of these security additions were calculated and added to floor space investment per square foot.

The land investment is determined by taking a ratio of the land account to the buildings account per the state general ledger, times the total of construction, architect, engineering, and project management investment.

The total of land and building investment is then grossed-up to include a proportionate amount of shared support and growth space in the CO. The shared support and growth space factor was determined by analyzing floor plan drawings for five Sprint COs. The COs represent a cross section of small, medium and large sized COs. Detail measurements were taken of the CO drawings and all space was categorized as transmission, shared support and growth square footage. The sum of shared support and growth square footage was divided over the total square footage to arrive at the percentage of shared support and growth space. Shared support and growth factors were weighted by the total square footage for each of the five COs.

The remaining item included in floor space investment is the ground bar, which is used for grounding cages and equipment racks. The grounding connection investment per square foot includes the CLEC area ground bar, cabling to the CO main ground bar, installation and engineering. Ground bar investment is based on a recent contractor quote for the installed cost of a ground bar. Ground bar engineering was based on SME data. Grounding cost is added to other floor space investment to determine a total floor space investment per assignable square foot of transmission space.

Floor space investment is then multiplied by the buildings annual charge factor to arrive at an annual cost. Annual cost is divided by twelve months, and common cost is then added to arrive at the floor space rate.

Rate Element: Floor Space
Exhibit 4: Rate Calculation

Line		Source	Investment
	A. Investment		
1	Building Investment per Sq. Ft.	Wp 4, Ln 16	$ 418.78
	B. Annual Cost		
2	Annual Charge Factor - Land and Buildings	Input Sheet Ln 4	24.31%
3	Direct Cost	Ln 1 * Ln 2	$ 101.81
4	Common Cost Factor	Input Sheet Ln 8	13.68%
5	Common Cost	Ln 3 * Ln 4	$ 13.93
6	Total Annual Cost	Ln 3 + Ln 5	$ 115.74
	C. Pricing		
7	**Monthly Rate per Square Foot**	**Ln 6 / 12**	**$ 9.65**

Section VII: DC Power

A. Purpose

The purpose of this cost study is to determine the cost of providing direct current (DC) power to CLECs. Studies in this section cover both DC power consumption, and the DC power connection from the Sprint power source to the CLEC's equipment.

B. Introduction

DC power is the power supply that runs telecommunications equipment. Two components of cost are recovered through the monthly recurring charge (MRC) for DC power consumption. The first is the recovery of annual costs related to the DC power plant itself. The second component is the cost of the commercial AC power consumed in the DC power plant. These items are recovered through a MRC per load amp ordered. Costs for cabling, miscellaneous materials and installation labor to connect the CLEC's collocation to the power supply are recovered in a nonrecurring charge (NRC). Also, an MRC is assessed to cover recurring expenses related to the power cable connection.

AC power comes from the commercial electric utility, or in cases of power failure, from a backup generator. The AC power travels through a power distribution service cabinet to the rectifiers, which convert AC power into DC power. The number of rectifiers are determined by the power requirements of the CO with one spare for smaller offices and two spares for larger offices. The rectifiers are constantly recharging the batteries. Batteries are used to ensure that the telephone network stays operational even if commercial AC power is lost.

The power from either the rectifiers or the batteries then travels to the main power boards. The main power board distributes the power to the CLEC's collocation area (in smaller offices) or battery distribution fuse boards (BDFB) in larger offices. From the BDFB, the power is sent to the CLEC's collocation area. From the back-up generator to the BDFB is considered DC power plant investment.

The monthly rate for DC power consumption is billed on the basis of total load amps ordered.

The CLEC connection to the power source is priced in four size increments: up to 30, 35 to 60, 70 to 100 and 125 to 200 fused amps. Sprint makes the decision on what size to choose based upon how many load amps the CLEC orders.

C. Assumptions

Different sizes of central offices, as measured by access lines, require different sizes of power plants measured by amps. The more access lines served, the larger the power plant requirement. Sprint calculates costs for six sizes of power plants: 200, 400, 600, 1000, 2000 and 4000-amp plants.

The cost of the DC power plant is determined on a TELRIC basis. That is, it is a forward-looking cost, determined using current technology, equipment prices, installation costs and assumes that the power plant is built all at one time. This allows for economies of scale as it relates to labor charges.

Average usage of the DC power plant is approximately 80% of capacity based on design criteria.

D. Methodology

Power Plant Charges

The first step was to determine the investment in the equipment used in each of the six different power plants other than the power generator. Sprint Power Engineers provided specifications for the six DC power plant sizes. A large national vendor of turnkey DC power plant installations provided price quotes that included the following components: rectifiers, batteries, power boards, battery distribution fuse boards, power monitoring equipment, cabling and cable racking between power plant components, miscellaneous materials, grounding, freight, contractor engineering and installation. Sales tax was added to all materials charges.

Generator, transfer switch and related equipment costs were determined from price lists of another national vendor. Generator sizes were determined by examining engineering records of generators in service and correlating generator and power plant sizes. Engineering, installation labor and overheads for generators was determined from a study of recently closed generator work activities.

The installed cost of the AC power distribution service cabinet was provided by a vendor of AC power equipment.

Company engineering requirements for determining specifications, writing work activities, updating drawings and conducting acceptance testing were provided by Sprint Power Engineers. And, overhead charges for components other than generators were determined from a study of recently closed switching and power work activities.

The total power plant investment is then divided by the average power plant output to derive an investment per amp. Power plant investments per amp are then assigned to each CO based upon the access lines served from each CO. A statewide average investment per amp is then calculated based upon the access lines served from each central office.

An annual charge factor is applied to the statewide investment resulting in an annual cost per amp.

The cost of commercial AC power per DC amp are determined from the ILEC's recently paid utility bills for powering central offices, which are recorded in FCC Account 6531. The sum of the bills' total charges are divided by the bills' total kilowatt-hours (kwh) to yield an average cost per kwh. The average cost per kwh can then be converted by formula to an average commercial power cost per DC amp. The formula shows that for each DC amp used, a total of 44.728 kwh are used monthly. The 44.728 kwh is multiplied by the average cost per kwh to arrive at the AC power cost of one amp of DC power.

Total DC power consumption cost per load amp is determined by adding the per amp cost of the power plant to the per amp cost of commercial AC power. Last, the sum of power plant and commercial AC power cost is increased by an allocation of common costs.

Connection Charges

Power cable connection charges recover the costs of cabling that terminate at the CLEC's collocation arrangement. The Up to 30 and 35 to 60-amp options are sourced from the BDFB. The 70 to 100 and 125 to 200-amp options are sourced from the main power board. Power cable prices include the cost of shared cable racking.

Pricing for 100 and 200-amp options does not include building modification costs such as core drilling, asbestos removal or dedicated cable racking, etc. that could possibly be necessary in a cable run from the main power board to a collocation arrangement. In the event that any modifications are necessary, they would be costed and billed on an individual case basis.

All components of power cable connection cost were determined based on recent actual work activities and contractor quote data. A miscellaneous materials additive was also determined from a study of recent work activities for power installations. Standard power cable distances from the power source to the collocation arrangement were determined from a study of actual distances from a sample of central offices.

Because power cable runs to the main power board can be very lengthy, Sprint has provided incremental pricing for the 70 to 100-amp and 125 to 200-amp cable runs in excess of the standard lengths. Sprint power engineering developed a work activity costing based on data from power contractors for 350 foot length power cable runs for 100 and 200-amp cabling options. An incremental cost per linear foot was developed by subtracting the standard distance 100 and 200-amp costs from the corresponding 350 foot costs. The cost differences were then divided by the difference between 350 feet and the standard run length to arrive at an incremental cost per foot.

An engineering charge is also added to 100 and 200-amp power cable NRCs. (Engineering for 30 and 60-amp cables is done by Transmission Engineers.) Engineering was also determined from Sprint power engineering's development of work activity costing for 100 and 200-amp cabling options. Following is a description of the work done by engineers for power cabling:

Power Engineer (PE) - Does engineering work for power runs greater than 60 amps; communicates with NPM and power contractors; creates and closes power workorder; seeks contractor bids; supervises work of contractors; assigns fuse to customer; and tracks the progress of the power portion of the collocation arrangement.

An ongoing expense charge was also calculated for power cables. This monthly recurring charge recovers maintenance, property tax and other recurring costs associated with power cables.

Common costs were added to all power cable NRCs and MRCs.

Rate Element: DC Power Cost - Per Load Ampere Ordered
Exhibit 5.0: Rate Calculation

Line		Source	Investment
	A. Investment		
1	DC Power Investment	Wp 4.1, Ln CC2	$ 463.00
	B. Annual Cost		
2	Annual Charge Factor - DC Power	Input Sheet Ln 9	29.03%
3	Direct Cost - DC Power Plant	Ln 1 * Ln 2	$ 134.41
4	Cost per Amp for Commercial AC Power Usage	Wp 5.8, Ln 3	$ 3.00
5	Annual Cost for Commercial AC Power per Amp	Ln 4 * 12	$ 36.01
6	Total Direct Cost + Commercial AC Power	Ln 3 + Ln 5	$ 170.42
7	Common Cost Factor	Input Sheet Ln 8	13.68%
8	Common Cost	Ln 6 * Ln 7	$ 23.31
9	Total Annual Cost	Ln 6 + Ln 8	$ 193.74
	C. Pricing		
10	**Monthly Rate per Load Amp**	**Ln 9 / 12**	**$ 16.14**

Rate Element: Connection to Power Plant 30 Amps (for feeds up to 30 Amps)
Exhibit 5.1: Rate Calculation - 30 amp

Line		Source	Investment
	A. Investment		
1	DC Power Investment	Wp 5.9, Ln 8	$ 1,451.55
2	Cable Racking	Wp 12, Ln 7*4	$ 148.53
	B. Annual Cost		
3	DC Power Maintenance Factor	Input Sheet Ln 10	14.03%
4	Direct Cost - DC Power Investment	Ln 1 * Ln 3	$ 203.65
5	Common Cost Factor	Input Sheet Ln 8	13.68%
6	Common Cost	Ln 4 * Ln 5	$ 27.86
7	Total Annual Cost Cabling	Ln 4 + Ln 6	$ 231.51
8	DC Power Annual Charge Factor	Input Sheet Ln 9	29.03%
9	Direct Cost - Shared Cable Racking	Ln 2 * Ln 8	$ 43.12
10	Common Cost Factor	Input Sheet Ln 8	13.68%
11	Common Cost	Ln 9 * Ln 10	$ 5.90
12	Total Annual Cost Cable Racking	Ln 9 + Ln 11	$ 49.02
	C. Rates		
13	**Monthly Recurring Charge**	**(Ln 7 + Ln 12) / 12**	**$ 23.38**
14	**Non-Recurring Rate for Power Delivery "A" and "B" feed 30 Amp Feed**	**Ln 1 * (1+ Ln 5)**	**$ 1,650.12**

Rate Element: Connection to Power Plant 60 Amps (for feeds from 35 to 60 Amps)
Exhibit 5.2: Rate Calculation - 60 amp

Line		Source	Investment
	A. Investment		
1	DC Power Investment	Wp 5.10, Ln 8	$ 2,381.54
2	Cable Racking	Wp 12, Ln 8*4	$ 196.27
	B. Annual Cost		
3	DC Power Maintenance Factor	Input Sheet Ln 10	14.03%
4	Direct Cost - DC Power Investment	Ln 1 * Ln 3	$ 334.13
5	Common Cost Factor	Input Sheet Ln 8	13.68%
6	Common Cost	Ln 4 * Ln 5	$ 45.71
7	Total Annual Cost Cabling	Ln 4 + Ln 6	$ 379.84
8	DC Power Annual Charge Factor	Input Sheet Ln 9	29.03%
9	Direct Cost - Shared Cable Racking	Ln 2 * Ln 8	$ 56.98
10	Common Cost Factor	Input Sheet Ln 8	13.68%
11	Common Cost	Ln 9 * Ln 10	$ 7.79
12	Total Annual Cost Cable Racking	Ln 9 + Ln 11	$ 64.77
	C. Pricing		
13	**Monthly Recurring Charge**	**(Ln 7 + Ln 12) / 12**	**$ 37.05**
14	**Non-Recurring Rate for Power Delivery "A" and "B" feed 60 Amp Feed**	**Ln 1 * (1+ Ln 5)**	**$ 2,707.34**

Rate Element: Connection to Power Plant 100 Amps (for feeds from 70 to 100 Amps)
Exhibit 5.3: Rate Calculation - 100 amp

Line		Source	Base Charge	Incremental Per Foot > 110 Feet
	A. Investment			
1	DC Power Cable Investment	Wp 5.11, Ln 7 & Ln 17	$ 7,727.65	$ 148.74
2	Cable Racking	Wp 12, Ln 9*4, & Ln 11*4	$ 310.53	$ 2.82
	B. Annual Cost			
3	DC Power Maintenance Factor	Input Sheet Ln 10	14.03%	14.03%
4	Direct Cost - DC Power Cable	Ln 1 * Ln 3	$ 1,084.19	$ 20.87
5	Common Cost Factor	Input Sheet Ln 8	13.68%	13.68%
6	Common Cost	Ln 4 * Ln 5	$ 148.32	$ 2.86
7	Total Annual Cost Cabling	Ln 4 + Ln 6	$ 1,232.51	$ 23.73
8	DC Power Annual Charge Factor	Input Sheet Ln 9	29.03%	29.03%
9	Direct Cost - Shared Cable Racking	Ln 2 * Ln 8	$ 90.15	$ 0.82
10	Common Cost Factor	Input Sheet Ln 8	13.68%	13.68%
11	Common Cost	Ln 9 * Ln 10	$ 12.33	$ 0.11
12	Total Annual Cost Cable Racking	Ln 9 + Ln 11	$ 102.48	$ 0.93
	C. Pricing			
13	**Monthly Recurring Charge**	**(Ln 7 + Ln 12) / 12**	**$ 111.25**	**$ 2.05**
14	**Non-Recurring Rate for Power Delivery "A" and "B" feed 100 Amp Feed**	**Ln 1 * (1+ Ln 5)**	**$ 8,784.79**	**$ 169.09**

Rate Element: Connection to Power Plant 200 Amps (for feeds from 125 to 200 Amps)
Exhibit 5.4: Rate Calculation

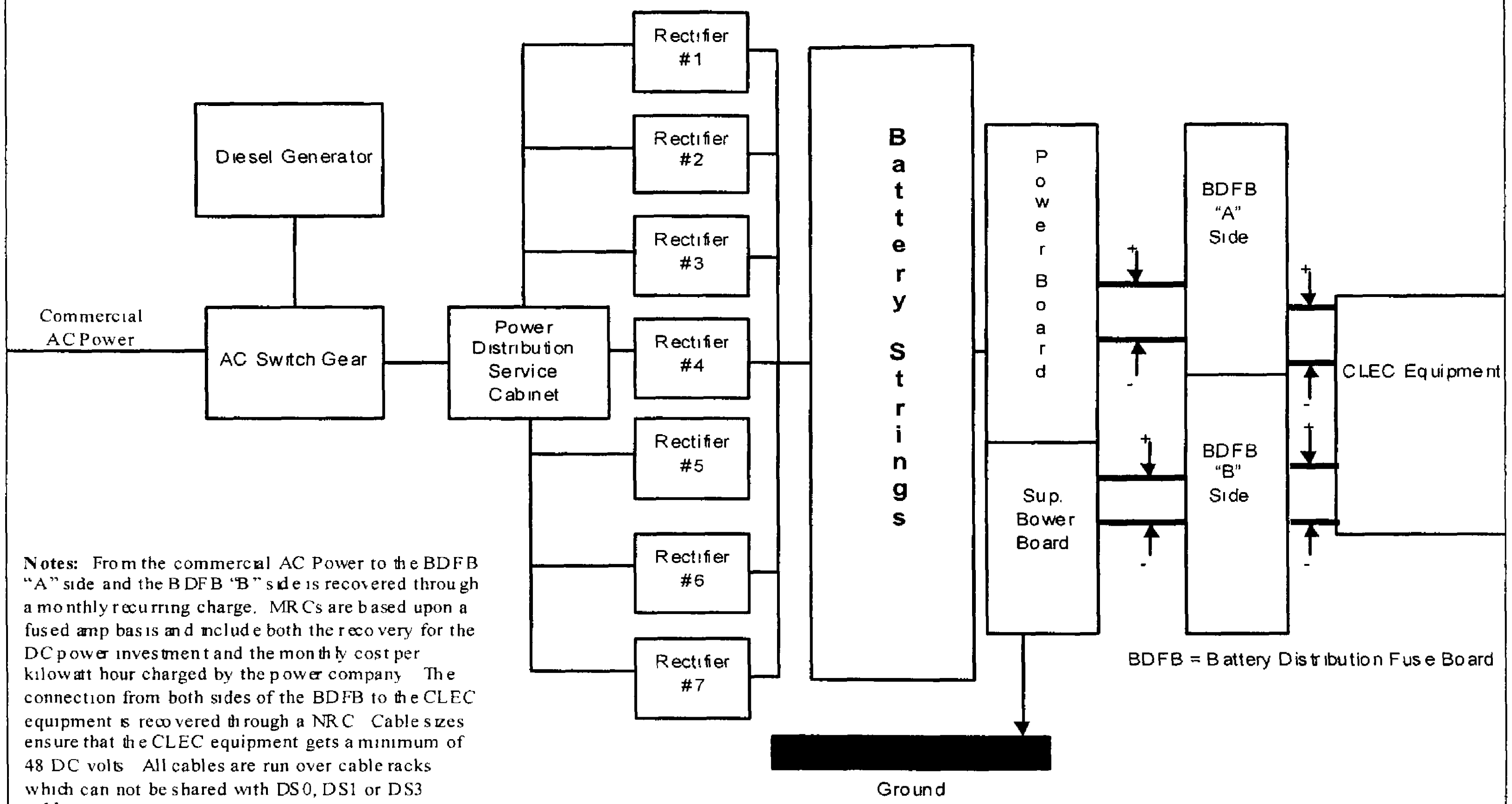
A. Investment

Line		Source	Base Charge	Incremental Per Foot > 110 Feet
1	DC Power Investment	Wp 5.12, Ln 7 & 17	$ 16,995.65	$ 281.08
2	Cable Racking	Wp 12, Ln 10*4	$ 566.72	$ 5.15
	B. Annual Cost			
3	DC Power Maintenance Factor	Input Sheet Ln 10	14.03%	14.03%
4	Direct Cost - DC Power Cable	Ln 1 * Ln 3	$ 2,384.49	$ 39.44
5	Common Cost Factor	Input Sheet Ln 8	13.68%	13.68%
6	Common Cost	Ln 4 * Ln 5	$ 326.20	$ 5.40
7	Total Annual Cost Cabling	Ln 4 + Ln 6	$ 2,710.69	$ 44.84
8	DC Power Annual Charge Factor	Input Sheet Ln 9	29.03%	29.03%
9	Direct Cost - Shared Cable Racking	Ln 2 * Ln 8	$ 164.52	$ 1.50
10	Common Cost Factor	Input Sheet Ln 8	13.68%	13.68%
11	Common Cost	Ln 9 * Ln 10	$ 22.51	$ 0.20
12	Total Annual Cost Cable Racking	Ln 9 + Ln 11	$ 187.03	$ 1.70
	C. Pricing			
13	**Monthly Recurring Charge**	**(Ln 7 + Ln 12) / 12**	**$ 241.48**	**$ 3.88**
14	**Non-Recurring Rate for Power Delivery "A" and "B" feed 200 Amp Feed**	**Ln 1 * (1+ Ln 5)**	**$ 19,320.65**	**$ 319.53**

DC Power Cost Study
System Drawing

DC Power

(2,000 amp office shown)



Notes: From the commercial AC Power to the BDFB "A" side and the BDFB "B" side is recovered through a monthly recurring charge. MRCs are based upon a fused amp basis and include both the recovery for the DC power investment and the monthly cost per kilowatt hour charged by the power company. The connection from both sides of the BDFB to the CLEC equipment is recovered through a NRC. Cable sizes ensure that the CLEC equipment gets a minimum of 48 DC volts. All cables are run over cable racks which can not be shared with DS0, DS1 or DS3 cables

Section VIII: AC Power - Outlets and Overhead Lighting

A. Purpose

The purpose of this cost study is to determine the cost of providing AC electric outlets and overhead lighting. The AC electric outlet is for occasional use by CLEC technicians for testing and repair of CLEC equipment. AC electric outlets costed in this study are not for powering of CLEC telecommunications equipment.

Sprint provides NRC rate elements for installing AC electric outlets and overhead lights. Each outlet and light requested is billed at rates calculated in this study.

B. Methodology

All costs of providing AC electric outlets and overhead lighting were determined based on recent work activity data. Contractor costs determined from recent work activity data include materials, installation labor and overheads. Sprint engineering was also determined from that same work activity data. Following is a description of work performed by engineers:

Land & Buildings Engineer - Does engineering work for AC electric requirements; communicates with NPM and building contractors; creates and closes buildings workorder; makes specifications and drawings for contractors; seeks contractor bids; supervises work of contractors; and, tracks the progress of the buildings portion of the collocation arrangement.

Common cost was added to both AC electric outlet and overhead lighting elements.

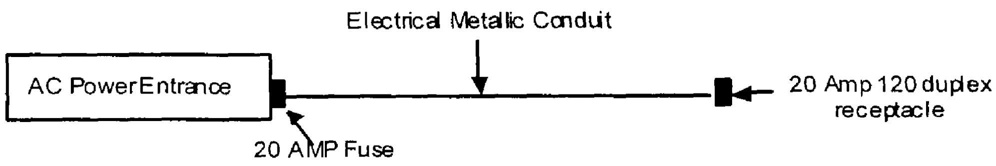
Rate Element: AC Power - Outlets & Overhead Lights
Exhibit 6: Rate Calculation

A. Non-Recurring Charge

Line		Source	Investment
1	Installation of an Outlet	Wp 6, Ln 3	$ 973.38
2	Common Cost Factor	Input Sheet Ln 8	13.68%
3	Common Cost	Ln 1 * Ln 2	$ 133.16
4	**Cost per AC Outlet Installation**	**Ln 1 + Ln 3**	**$ 1,106.54**
5	Installation of Overhead Lighting	Wp 6, Ln 6	$ 1,425.52
6	Common Cost Factor	Input Sheet Ln 8	13.68%
7	Common Cost	Ln 5 * Ln 6	$ 195.01
8	**Cost per Set of Overhead Lights**	**Ln 5 + Ln 7**	**$ 1,620.53**

AC Outlet Cost Study
System Drawing

AC Outlet



Section IX: Cross-Connect

A. Purpose

The purpose of this cost study is to determine the cost of providing Electronic Cross-Connects (ECC) and Optical Cross-Connects (OCC) between Sprint equipment and the CLEC collocation arrangement. In the case of CLEC-CLEC cross-connects (CCXC), the cross-connects run between two CLEC collocation arrangements.

B. Introduction

ECCs come in six offerings: DS0, DS0 CCXC, DS1, DS1 CCXC, DS3 and DS3 CCXC. A DS0 cross connect is a connection from the main distribution frame (MDF) to the collocation cage and is priced in 100 pair increments. A DS1 cross connect is a connection from a DSX-1 patch panel to the collocation cage and is priced per 28 DS1s. A DS3 cross connect is a connection from a DSX-3 patch panel to the collocation cage and is priced per 12 DS3s. OCC is a four fiber connection from the fiber patch panel to the collocation area and is priced individually. DS0, DS1, DS3 and OCC CCXC's run direct from one CLEC collocation arrangement to another non-contiguous CLEC collocation arrangement with no panel in between. Sprint-CLEC cross-connect cost includes cabling, MDF block or an allocated portion of Sprint panels and relay rack, and termination of the cable at the MDF or panel. CLEC-CLEC cross connect cost includes only the cost of the cabling. No Sprint relay rack, MDF or panels are included in CLEC-CLEC costs. A portion of shared cable racking cost is allocated to all cross-connect elements.

C. Assumptions

It is assumed that cross-connects between contiguously located CLECs will be self-provisioned by the CLECs. For new collocations, engineering for cross-connects is included in the New Collocation - Admin., Transm. Engr. & Project Management Fee. For major augments, engineering for cross-connects is included in the Major Augment - Transmission Engineering Fee.

D. Methodology

Components required for each of the three ECCs options and the OCC (except for fiber jumpers) were determined from examination of recent actual work activities. Fiber jumper materials were determined by Sprint Engineering. Cable run distances for each type of cross-connect were taken from a study of actual collocation cable distances existing in Sprint COs. Once equipment requirements were determined, a vendor price was obtained for each piece of equipment. Sales tax and freight was added to material prices. Installation time required for each ECC was also obtained from recent work activities. Installation time for OCCs were determined by Sprint engineers. Usage factors were applied to DS1, DS3 and the 4-fiber OCC to reflect unused capacity typically provisioned in cable, panels and relay racks. The material cost, labor cost, freight and taxes were added together to determine the investment for each ECC / OCC.

Cable racking investment was then allocated to each cable type. Sprint uses a 12 inch wide cable rack in its cost studies. This rack has usable space of 10.5 inches wide and 10 inches deep. DS0 cable used in the study is 0.67 inches in diameter indicating that a total of 156 cables

(10" *10.5"/0.67") can fit on one rack. Racks leading back to the CLEC's collocation area are assumed to be 50% full. Cable carrying capacity for the other types of cross-connect cabling was similarly calculated. Cable rack distance was computed based on the linear distance of each cable run.

Optical cross-connects require fiber guttering rather than cable racks. Sprint engineers determined components and installation time for fiber guttering. Fiber guttering runs from the Optical Patch Panel to the CLEC bay normally under the cable racks.

The allocated cable rack and the installed cost of the cable and patch panels were added together to determine total investment. For DS1s, DS3s and OCCs terminating at Sprint panels, a share of a bay frame is also included as part of the investment.

For cross-connects terminating at the Sprint MDF or panels, an annual charge factor was then applied to the investment resulting in an annual cost. The common factor is also applied. These cross-connects are priced as MRCs.

Co-carrier cross-connects are priced as NRCs with an MRC for annual recurring expenses. The common factor is also applied.

Rate Element: DS0 Switchboard Cable per 100 Pr.
Exhibit 7: Rate Calculation

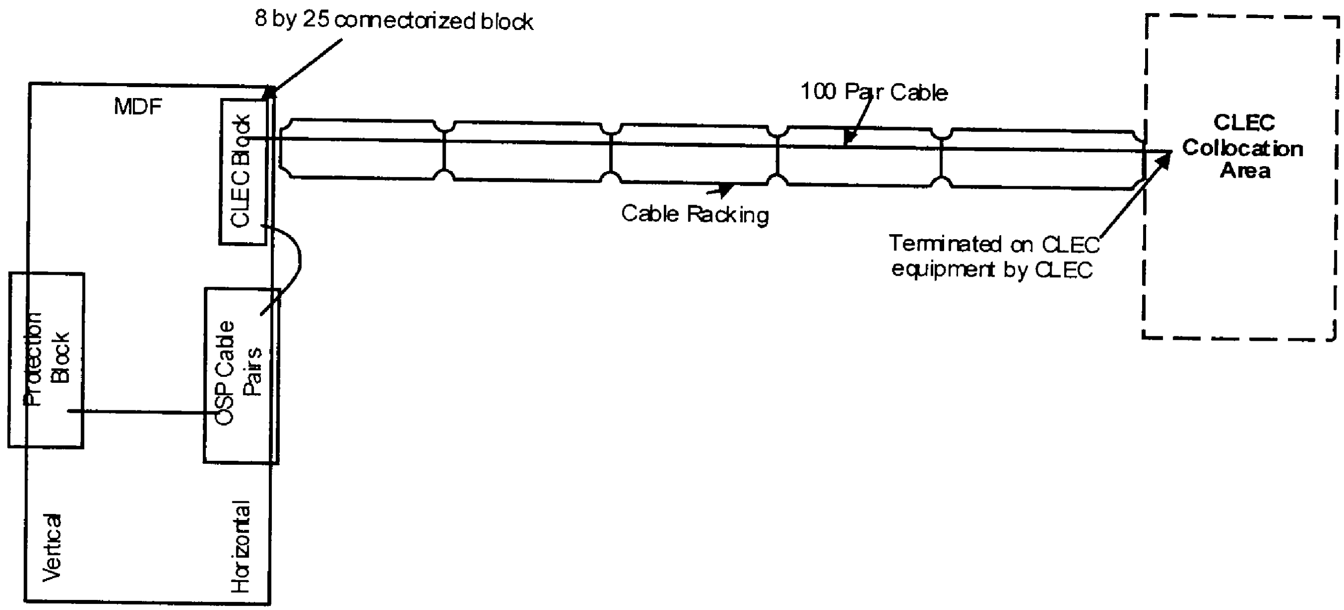
Line		Source		
	A. Investment			
1	Total Investment	Wp 7, Ln 18		$1,103.06
	B. Annual Cost			
2	Digital Circuit ACF	Input Sheet Ln 5		28.81%
3	Annual Cost of Investment before Common	Ln 1 * Ln 2	$	317.79
4	Common Cost Factor	Input Sheet Ln 8		13.68%
5	Common Cost	Ln 3 * Ln 4	$	43.47
6	Total Annual Cost	Ln 3 + Ln 5	$	361.26
	C. Pricing			
7	**Total Monthly Rate per 100 Pair**	**Ln 6 / 12**	**$**	**30.11**

Rate Element: DS0 Co-Carrier Switchboard Cable 100 Pr.
Exhibit 7.1: Rate Calculation

Line		Source	Investment
	A. Investment		
1	Switchboard Cable Investment	Wp 7.1, Ln 6	$ 613.49
2	Cable Rack Investment	Wp 7.1, Ln 1	$ 99.08
	B. Annual Cost		
3	Digital Circuit Recurring Expense Factor	Input Sheet Ln 33	8.57%
4	Direct Cost	Ln 1 * Ln 3	$ 52.58
5	Common Cost Factor	Input Sheet Ln 8	13.68%
6	Common Cost	Ln 4 * Ln 5	$ 7.19
7	Total Annual Cost Cabling	Ln 4 + Ln 6	$ 59.77
8	Digital Circuit Annual Charge Factor	Input Sheet Ln 5	28.81%
9	Direct Cost	Ln 2 * Ln 8	$ 28.54
10	Common Cost Factor	Input Sheet Ln 8	13.68%
11	Common Cost	Ln 9 * Ln 10	$ 3.90
12	Total Annual Cost Cable Racking	Ln 9 + Ln 11	$ 32.44
	C. Pricing		
13	**Monthly Recurring Charge for Co-Carrier Switchboard Cable**	**(Ln 7 + Ln 12) / 12**	**$ 7.68**
14	**Non-Recurring Charge for Co-Carrier Switchboard Cable**	**Ln 1 * (1+ Ln 5)**	**$ 697.42**

Cross Connect Cost Study
System Drawing

DS0 Cross Connect (To Sprint MDF)



Rate Element: DS1 Cross Connect (Per 28 DS1s)
Exhibit 8: Rate Calculation

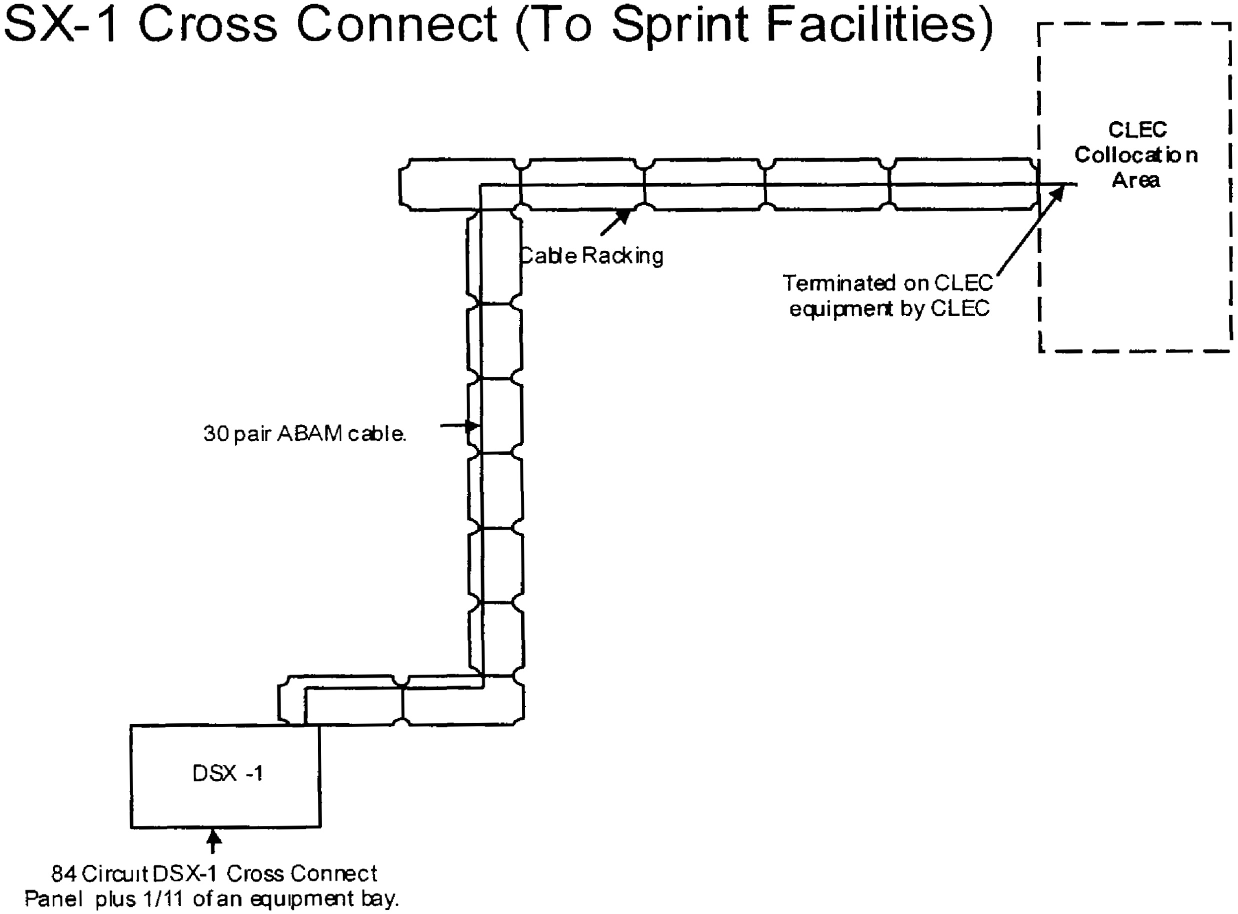
Line		Source		
	A. Investment			
1	Total Investment - per 28 DS1s	Wp 8, Ln 22	$	1,539.30
	B. Annual Cost			
2	Digital Circuit ACF	Input Sheet Ln 5		28.81%
3	Annual Cost of Investment before Common	Ln 1 * Ln 2	$	443.47
4	Common Cost Factor	Input Sheet Ln 8		13.68%
5	Common Cost	Ln 3 * Ln 4	$	60.67
6	Total Annual Cost	Ln 3 + Ln 5	$	504.14
	C. Pricing			
7	**Total Monthly Rate per 28 DS1s**	**Ln 6 / 12**	**$**	**42.01**

Rate Element: DS1 Co-Carrier Cross Connect (Per 28 DS1s)
Exhibit 8.1: Rate Calculation

Line		Source	Investment
	A. Investment		
1	DS1 Cable Investment	Wp 8.1, Ln 8	$ 554.76
2	Cable Rack Investment	Wp 8.1, Ln 2	$ 140.51
	B. Annual Cost		
3	Digital Circuit Recurring Expense Factor	Input Sheet Ln 33	8.57%
4	Direct Cost	Ln 1 * Ln 3	$ 47.54
5	Common Cost Factor	Input Sheet Ln 8	13.68%
6	Common Cost	Ln 4 * Ln 5	$ 6.50
7	Total Annual Cost Cabling	Ln 4 + Ln 6	$ 54.04
8	Digital Circuit Annual Charge Factor	Input Sheet Ln 5	28.81%
9	Direct Cost	Ln 2 * Ln 8	$ 40.48
10	Common Cost Factor	Input Sheet Ln 8	13.68%
11	Common Cost	Ln 9 * Ln 10	$ 5.54
12	Total Annual Cost Cable Racking	Ln 9 + Ln 11	$ 46.02
	C. Pricing		
13	Monthly Recurring Charge for Co-Carrier Cable per 28 DS1s	(Ln 7 + Ln 12) / 12	$ 8.34
14	Non-Recurring Charge for Co-Carrier Cable per 28 DS1s	Ln 1 * (1+ Ln 5)	$ 630.65

Cross Connect Cost Study
System Drawing

DSX-1 Cross Connect (To Sprint Facilities)



Rate Element: DS3 Cross Connect (Per 12 DS3s)
Exhibit 9: Rate Calculation

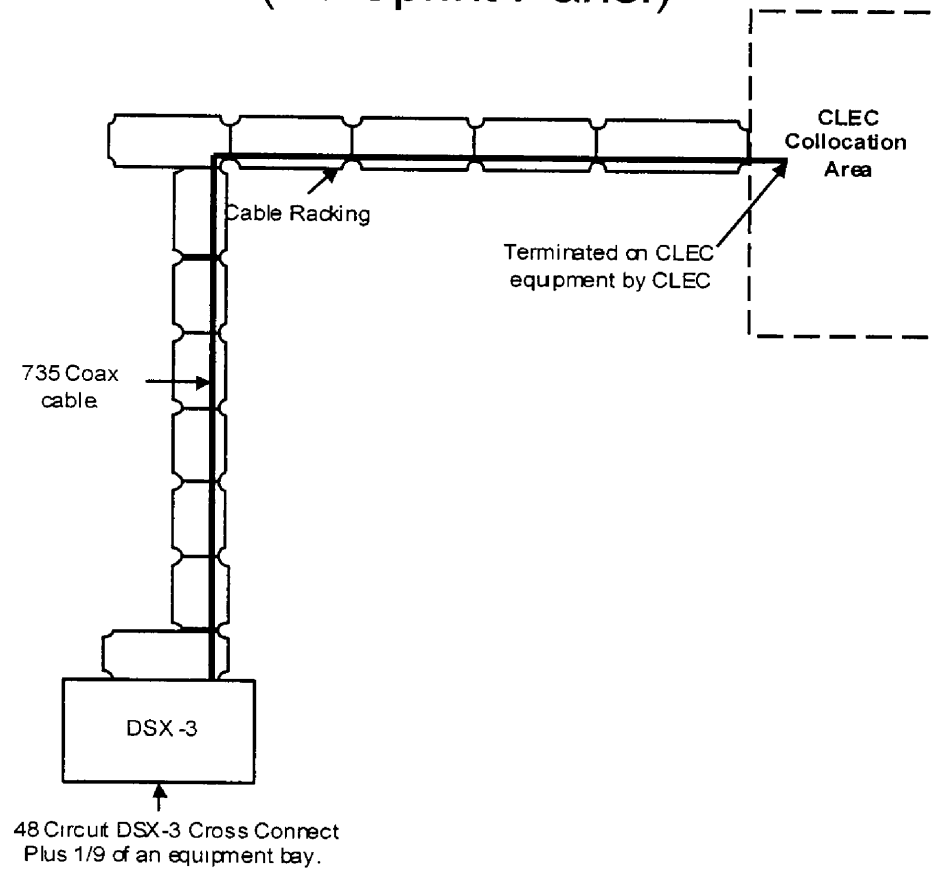
Line		Source		
	A. Investment			
1	Total Investment per 12 DS3s	Wp 9, Ln 24	$	7,714.59
	B. Annual Cost			
2	Digital Circuit ACF	Input Sheet Ln 5		28.81%
3	Annual Cost of Investment before Common	Ln 1 * Ln 2	$	2,222.57
4	Common Cost Factor	Input Sheet Ln 8		13.68%
5	Common Cost	Ln 3 * Ln 4	$	304.05
6	Total Annual Cost	Ln 3 + Ln 5	$	2,526.62
	C. Pricing			
7	**Total Monthly Rate per 12 DS3s**	**Ln 6 / 12**	**$**	**210.55**

Rate Element: DS3 Co-Carrier Cross Connect (Per 12 DS3s)
Exhibit 9.1: Rate Calculation

Line		Source	Investment
	A. Investment		
1	DS3 Cable Investment	Wp 9.1, Ln 9	$ 1,731.11
2	Cable Rack Investment	Wp 9.1, Ln 2	$ 159.64
	B. Annual Cost		
3	Digital Circuit Recurring Expense Factor	Input Sheet Ln 33	8.57%
4	Direct Cost	Ln 1 * Ln 3	$ 148.36
5	Common Cost Factor	Input Sheet Ln 8	13.68%
6	Common Cost	Ln 4 * Ln 5	$ 20.30
7	Total Annual Cost Cabling	Ln 4 + Ln 6	$ 168.66
8	Digital Circuit Annual Charge Factor	Input Sheet Ln 5	28.81%
9	Direct Cost	Ln 2 * Ln 8	$ 45.99
10	Common Cost Factor	Input Sheet Ln 8	13.68%
11	Common Cost	Ln 9 * Ln 10	$ 6.29
12	Total Annual Cost Cable Racking	Ln 9 + Ln 11	$ 52.28
	C. Pricing		
13	**Monthly Recurring Charge for Co-Carrier Cable per 12 DS3s**	**(Ln 7 + Ln 12) / 12**	**$ 18.41**
14	**Non-Recurring Charge for Co-Carrier Cable per 12 DS3s**	**Ln 1 * (1+ Ln 5)**	**$ 1,967.92**

Cross Connect Cost Study
System Drawing

DSX-3 Cross Connect (To Sprint Panel)



Rate Element: Optical Cross Connect Per 4 Fibers
Exhibit 9.2: Rate Calculation

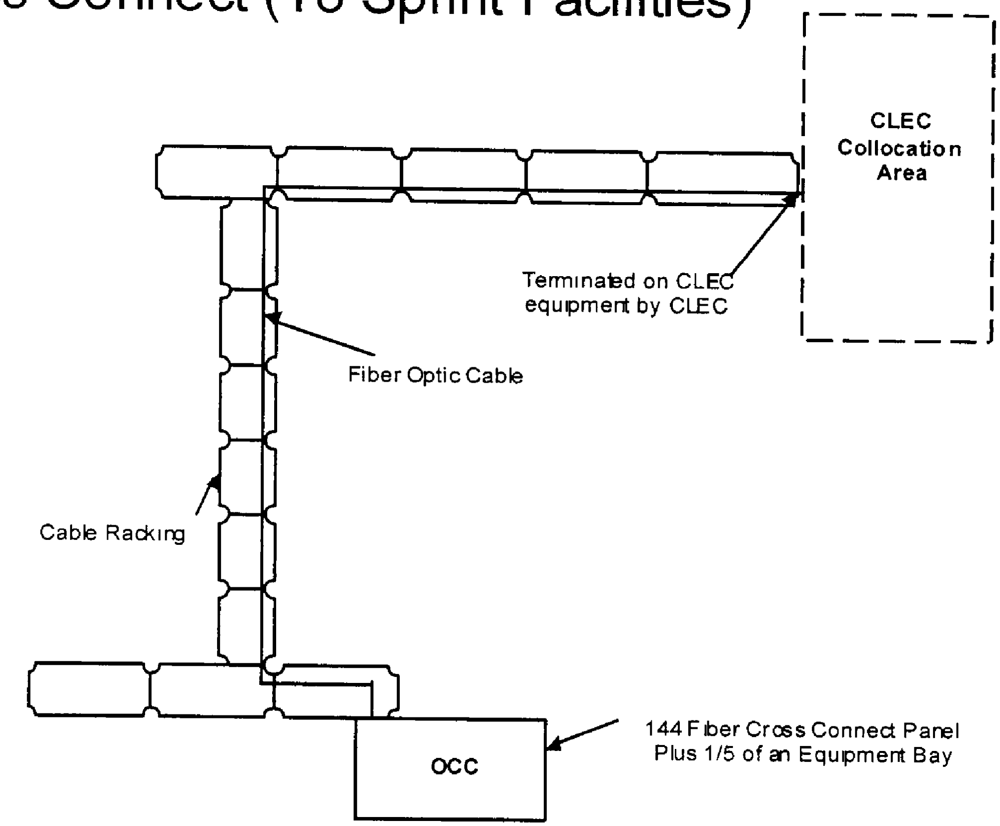
Line		Source		
	A. Investment			
1	Total Investment per 4 fibers	Wp 10, Ln 20	$	592.98
	B. Annual Cost			
2	Digital Circuit ACF	Input Sheet Ln 5		28.81%
3	Annual Cost of Investment before Common	Ln 1 * Ln 2	$	170.84
4	Common Cost Factor	Input Sheet Ln 8		13.68%
5	Common Cost	Ln 3 * Ln 4	$	23.37
6	Total Annual Cost	Ln 3 + Ln 5	$	194.21
	C. Pricing			
7	**Total Monthly Rate per 4 Fibers**	**Ln 6 / 12**	**$**	**16.18**

Rate Element: Optical Cross Connect Co-Carrier Per 4 Fibers
Exhibit 9.3: Rate Calculation

Line		Source	Investment
	A. Investment		
1	OCC 4-Fiber Jumper Investment	Wp 10.1, Ln 9	$ 210.02
2	Fiber Gutter Investment	Wp 10.1, Ln 4	$ 313.48
	B. Annual Cost		
3	Digital Circuit Recurring Expense Factor	Input Sheet Ln 33	8.57%
4	Direct Cost	Ln 1 * Ln 3	$ 18.00
5	Common Cost Factor	Input Sheet Ln 8	13.68%
6	Common Cost	Ln 4 * Ln 5	$ 2.46
7	Total Annual Cost Fiber Jumpers	Ln 4 + Ln 6	$ 20.46
8	Digital Circuit Annual Charge Factor	Input Sheet Ln 5	28.81%
9	Direct Cost	Ln 2 * Ln 8	$ 90.31
10	Common Cost Factor	Input Sheet Ln 8	13.68%
11	Common Cost	Ln 9 * Ln 10	$ 12.35
12	Total Annual Cost Fiber Gutter	Ln 9 + Ln 11	$ 102.66
	C. Pricing		
13	**Monthly Recurring Charge for Co-Carrier OCC 4-Fibers**	**(Ln 7 + Ln 12) / 12**	**$ 10.26**
14	**Non-Recurring Charge for Co-Carrier OCC 4-Fibers**	**Ln 1 * (1+ Ln 5)**	**$ 238.75**

Cross Connect Cost Study
System Drawing

Optical Cross Connect (To Sprint Facilities)



Section X: Internal Cable Space - Fiber and 100-Pair Copper

A. Purpose

This study determines the cost of providing Internal Cable Space to a CLEC collocation area. Internal Cable Space consists of the combination of riser space, vault access and conduit space to accomodate entrance cabling.

B. Introduction

Internal cable space is applied on a per fiber cable basis or on a per 100-pair copper cable basis. Internal cable space is necessary for a CLEC to connect to interoffice cables outside Sprint's premises. For example, a CLEC will run a fiber cable from its switch located in another premises to the first manhole of the ILEC central office. From the first manhole, the fiber then enters the cable vault and then travels along the riser to the CLEC collocation area. This does not include the cost of pulling the cable, which the CLEC would self provision by using a Sprint approved contractor.

Riser space is defined as the space on the cable racking where the entrance cable is placed and core drilling (holes in the floor) for the cable to pass through from the cable vault to the main levels of the CO where the collocation areas are located.

The cable vault is a transition point between the outside plant and inside cabling. The cable vault is generally located in the basement or below ground so that the cables can enter the building under ground. Cables enter the vault from the outside via conduit openings in the walls and exit through the ceiling to the riser space.

The conduit space element runs from the first manhole outside of the central office to the conduit opening in the cable vault.

C. Assumptions

Based on subject matter expert observations, the study uses a distance of 95 feet from the first manhole to the cable vault and 175 feet from the vault to the collocation arrangement.

D. Methodology

<u>Riser Space</u>

There are two investments included in the cost of fiber riser space. The first is the cable hole and the second is the cost of the cable rack. For copper riser space, only the cost of the cable hole is included in riser investment. The cost of drilling a cable hole in the floor was determined from RS Means data. For fiber, the cost of the hole is then added to the cost of conduit and subduct which allows for three 1.25 inch cables to be installed in one core drill. For copper, no conduit or subduct is used in riser space. Because this hole reduces the amount of usable floor space by one square foot, the cost of a square foot of central office space is added (see floor space study for the development of this cost). For fiber riser space, the total investment is divided by three to allocate the cost on a per cable basis (the maximum cable is 1.25 inches in diameter). For copper riser, the total investment is divided by 6, the number of 100-pair copper cables that can be carried in a four inch cable hole.

The second investment included in fiber riser space is cable racking from the vault to the collocation space. Cable rack cost per foot is based on an examination of actual cable rack installations. A cable rack run of 175 feet was used from the vault to the collocation space. The cable rack cost for a 175 foot run is then apportioned over the number of fiber cables carried by a rack.

The cable hole and the cable rack investments are presented on the basis of a total cost per cable. The buildings annual charge factor is then applied to the cable hole investment, and the digital circuit equipment annual charge factor is applied to the cable racking investment, resulting in an annual cost. The common factor is also applied. This results in a rate for the riser space component of the internal cable space element.

Vault Access

The vault cost was determined from a sample of 6 actual vault installations. The vaults averaged 791 square feet per location and 48 conduits per vault. The vault investment was developed by multiplying the cost of a square foot of vault space (see floor space study for the development of this cost) multiplied times the average square feet per vault location (791). For fiber vault access, this product was then divided by 48 conduits and 3 innerducts per conduit. For copper cable vault access, this product was then divided by 48 conduits and by 6 100-pair copper tip cable equivalents than can be carried in one conduit. The buildings annual charge factor is then applied to the vault access investment resulting in an annual cost. The common factor is also applied. This results in a rate for the vault access component of the internal cable space element.

Conduit Space

For fiber cable, there are 32 4-inch conduits leaving the manhole with each conduit capable of housing three 1.25 inch subducts for a total of 96 subducts. Subducts are large enough to allow the fiber cable to be pulled. For copper cable, no subducts are used. There are 95 feet between the cable vault and the first manhole.

For fiber cable, the cost of a manhole was determined from a Sprint cable structure study, which included current materials and placement costs. This investment was then divided by 96 (the number of subducts), resulting in a cost per subduct. For copper cable, the manhole investment was divided by 32, the number of ducts in the manhole.

The per foot installed cost of the conduit was also obtained from Sprint's structure study. The per foot conduit cost is multiplied by 95 feet. For fiber cable, the resulting cost is divided by 3 subducts per conduit. For fiber cable, the cost for subduct was obtained from vendor quotes, and is multiplied by 95 feet. Then, conduit, manhole and subduct investments were summed for fiber cable. For copper cable, the sum of manhole and conduit investment was divided by 6 100-pair copper tip cable equivalents than can be carried in one conduit. The conduit annual charge factor was then applied to the total investments, resulting in an annual cost. The common factor is also applied. This results in a rate for the conduit space component of the internal cable space element.

Final Rate

To derive the final rate for the internal cable space element, the rates for the riser space, vault access and conduit components are summed.

Internal Cable Space - Fiber & Copper
Exhibit 10

Riser Space

A. Investment

Line		Source	Fiber	Copper
1	Riser Investment - Fiber	Wp 15, Ln 7	$ 158.14	
2	Riser Investment - Copper	Wp 16, Ln 6		$ 77.88
	B. Annual Cost			
3	Annual Charge Factor - Land and Buildings	Input Sheet Ln 4	24.31%	24.31%
4	Direct Cost	Ln 1 * Ln 3 & Ln 2 * Ln 3	$ 38.44	$ 18.93
5	Common Cost Factor	Input Sheet Ln 8	13.68%	13.68%
6	Common Cost	Ln 4 * Ln 5	$ 5.26	$ 2.59
7	Total Annual Cost	Ln 4 + Ln 6	$ 43.70	$ 21.52
	C. Pricing			
8	Rate per Fiber Cable Entrance/100 Pr. Copper	Ln 7 / 12	$ 3.64	$ 1.79

Internal Cable Space - Fiber & Copper
Exhibit 10

Cable Rack

A. Investment

9	Fiber Entrance Investment per Cable (57/rack)	Wp 15, Ln 8	$ 107.83	N/A
	B. Annual Cost			
10	Annual Charge Factor - Digital Circuit	Input Sheet Ln 5	28.81%	
11	Direct Cost	Ln 9 * Ln 10	$ 31.07	
12	Common Cost Factor	Input Sheet Ln 8	13.68%	
13	Common Cost	Ln 11 * Ln 12	$ 4.25	
14	Total Annual Cost	Ln 11 + Ln 13	$ 35.32	N/A
	C. Pricing			
15	Rate per Fiber Cable Entrance/100 Pr. Copper	Ln 14 / 12	$ 2.94	N/A

Internal Cable Space - Fiber & Copper
Exhibit 10

Vault Space

A. Investment

Line		Source	Fiber	Copper
16	Vault Investment Fiber	Wp 15, Ln 13	$ 898.17	
17	Vault Investment Copper	Wp 16, Ln 12		$ 449.09
	B. Annual Cost			
18	Annual Charge Factor - Land and Buildings	Input Sheet Ln 4	24.31%	24.31%
19	Direct Cost	Ln 16*Ln 18 & Ln 17*Ln 18	$ 218.35	$ 109.17
20	Common Cost Factor	Input Sheet Ln 8	13.68%	13.68%
21	Common Cost	Ln 19 * Ln 20	$ 29.87	$ 14.93
22	Total Annual Cost	Ln 19 + Ln 21	$ 248.22	$ 124.10
	C. Pricing			
23	Rate per Fiber Cable Entrance/100 Pr. Copper	Ln 22 / 12	$ 20.69	$ 10.34

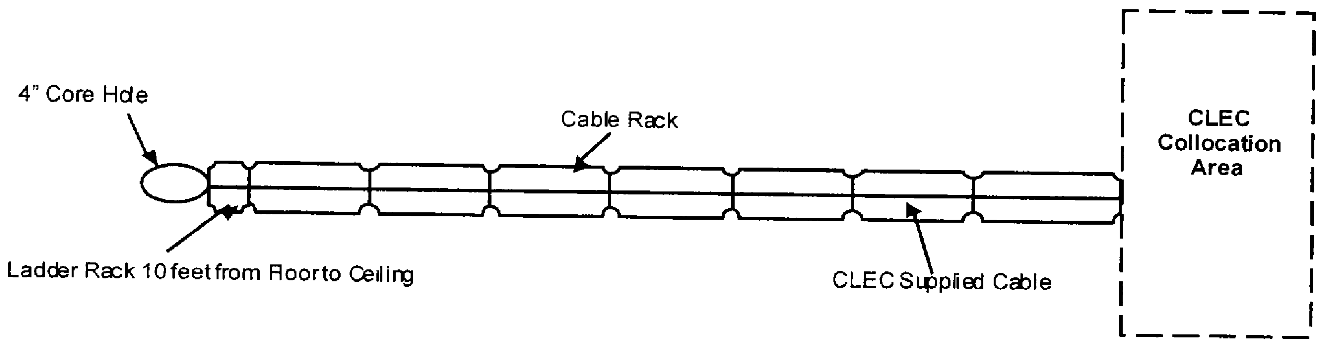
Internal Cable Space - Fiber & Copper
Exhibit 10

Conduit Space

Line		Source	Fiber	Copper
	A. Investment			
24	Innerduct Investment Fiber	Wp 15, Ln 22	$ 313.49	
25	Conduit Cost per 100 Pr. Copper	Wp 16, Ln 19		$ 141.32
	B. Annual Cost			
26	Annual Charge Factor - Conduit	Input Sheet Ln 7	15.83%	15.83%
27	Direct Cost	Ln 24*Ln 26 & Ln 25*Ln 26	$ 49.63	$ 22.37
28	Common Cost Factor	Input Sheet Ln 8	13.68%	13.68%
29	Common Cost	Ln 27 * Ln 28	$ 6.79	$ 3.06
30	Total Annual Cost	Ln 27 + Ln 29	$ 56.42	$ 25.43
	C. Pricing			
31	Rate per Fiber Cable Entrance/100 Pr. Copper	Ln 30 / 12	**$ 4.70**	**$ 2.12**
32	Rate per Fiber Cable Entrance/100 Pr. Copper	Ln 8+Ln 15+ Ln 23+ Ln 31	$ 31.97	$ 14.25
33	Usage Factor - Copper			67%
34	**Monthly Rate per Fiber Cable Entrance/100 Pr. Copper**	**Fiber Ln 32; Copper Ln 32 / Ln 33**	**$ 31.97**	**$ 21.27**

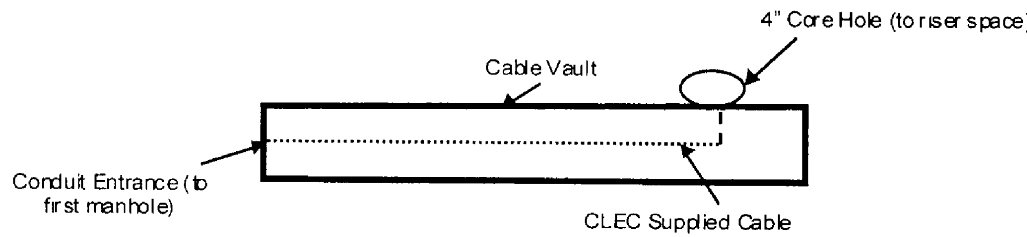
Riser Space Cost Study
System Drawing

Riser Space



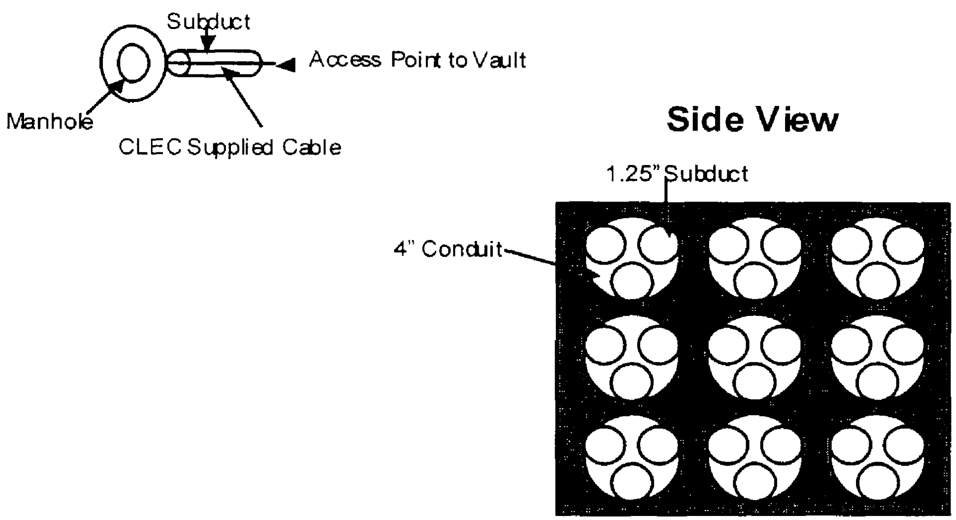
Vault Access Cost Study
System Drawing

Vault Access



Conduit Space Cost Study
System Drawing

Conduit Space



Section XI: Internal Cable - 48 Fiber and 100-Pair Copper Stub Cable

A. Purpose

The purpose of this cost study is to determine the cost of fiber and copper internal cabling.

B. Introduction

Internal cabling is used in cases where the CLEC would like to lease cable to the first manhole instead of installing their own. This is generally used in coordination with virtual collocation.

C. Assumptions

For fiber cable, there is 175 feet from the optical patch panel to the vault. There is 50 feet to transverse the vault. From the first manhole to the vault is 95 feet. The total distance is 320 feet. These costs do not include any riser space, vault or conduit costs which are included in the Internal Cable Space element. A 48 fiber cable is installed.

For copper cable, 100 foot stub cable, protector modules and contract labor for installation and splicing of the stub cables are included in the rate. Copper cable from the first manhole into the vault is placed by the CLEC. The stub cable passes through a core drill in the floor of the MDF area. The cable then terminates on the vertical side of the MDF at a protection block.

D. Methodology

For fiber cabling, a vendor quote was obtained for the cost of the cable. A SME then determined the time to install the cable. The optical patch panel costs were obtained from the optical cross connect study.

For copper cable, material and installation requirements were determined from recent copper stub cable work activities.

Sprint engineering requirements were determined from recent internal cabling work activities. Following is a description of work done by engineers:

Outside Plant Engineer (OSP) - NE - Does engineering work for entrance cables; communicates with NPM and installation supervisors; creates and closes OSP workorder; orders materials; makes specifications and drawings for installation supervisors; updates the circuit assignment system and the customer line assignment system; and, tracks the progress of the OSP portion of the collocation arrangement.

The digital circuit equipment annual charge factor was applied to investment to determine an annual cost. Common costs were also added. The monthly rate is applied per fiber cable or per 100-pair copper cable placed.

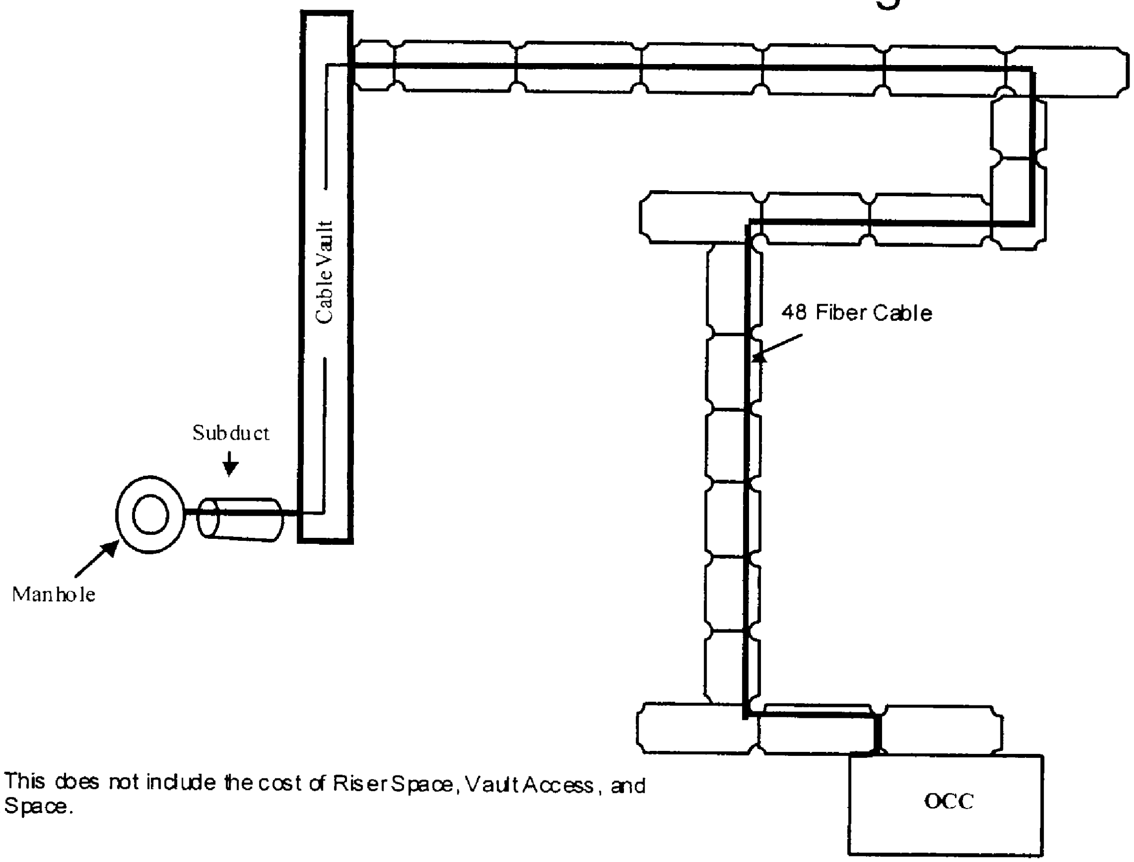
Rate Element: Internal Cable - 48 Fiber & 100-Pr. Copper
Exhibit 13: Rate Calculation

Monthly Recurring Charge

Line		Source	Investment-Fiber	Investment-Copper
1	Investment - 48 Fiber Cable	Wp 17, Ln 11	$ 1,491.24	
2	Investment - Copper Cable - 100 pair	Wp 18, Ln 5		$ 1,596.07
	Annual Cost			
3	Annual Expense Factor Digital Circuit	Input Sheet Ln 5	28.81%	28.81%
4	Annual Costs Before Common	Ln 1 * Ln 3 & Ln 2 * Ln 3	$ 429.63	$ 459.83
5	Common Cost Factor	Input Sheet Ln 8	13.68%	13.68%
6	Common Cost	Ln 4 * Ln 5	$ 58.77	$ 62.90
7	Total Annual Cost	Ln 4 + Ln 6	$ 488.40	$ 522.73
	Pricing			
8	**Monthly Rate per 48 Fibers/100 Copper Pr (Tip cables)**	**Ln 7 / 12**	**$ 40.70**	**$ 43.56**
	Nonrecurring Charge			
9	Engineering - 48 Fiber Cable	Wp 17, Ln 12	$ 945.37	
10	Engineering - Copper Cable - 100 pair	Wp 18, Ln 6		$ 163.00
11	Common Cost Factor	Input Sheet Ln 8	13.68%	13.68%
12	Common Cost	Ln 9 * Ln 11 & Ln 10 * 11	$ 129.33	$ 22.30
13	**Total Nonrecurring Charge**	**Ln 9 + Ln 12 & Ln 10 + Ln 12**	**$ 1,074.69**	**$ 185.30**

Internal Cabling Cost Study
System Drawing

Internal Cabling



Notes: This does not include the cost of Riser Space, Vault Access, and Conduit Space.

COLLOCATION COST STUDY

Section XII: Workpapers

Sprint – Florida, Incorporated

February 4, 2003

Security Cage Investment
Workpaper 3

Line	Item Description	Source	Qty	Unit Price	Total Price
	Fixed Cost - Engineering				
1	Engineering Time	WA Study / Input Sheet Ln 26	8	$ 75.71	$ 605.68
	Variable Cost - Cage Construction				
2	Materials, Labor & Overheads	WA Study			$ 42.82

Floor Space Investment
Workpaper 4

Line	Description	Source	Cost per Square Foot
1	Average Cost per Gross Square Feet	Wp 4.1, Ln BB2	$ 126.00
2	Architect and Engineering Fee	Input sheet Ln 30 * Ln 1	$ 20.16
3	Security Additive	Wp 4.2, Ln 49	$ 2.92
4	Building subtotal	Ln 1 + Ln 2 + Ln 3	$ 149.08
5	Land to Building Ratio	Wp 4.3, Ln 3	9.68%
6	Land Cost per Square Foot	L 4 * L 5	$ 14.43
7	Cost per square foot for land, building and security	Ln 4 + Ln 6	$ 163.51
8	Assignable Transmission Space to Total	Input sheet Ln 14	40%
9	Investment per Assignable Square Foot	Ln 7 / Ln 8	$ 408.78
10	Ground Bar Investment Per Square Foot	Wp 4.4, Ln 8	$ 10.00
11	**Total Shared, Growth and Egress Investment Per Assignable Square Foot**	**Ln 9 + Ln 10**	**$ 418.78**

Weighted Building and Power Plant Investment
Workpaper 4.1

Summary								
Line			Access Lines AA		Weighted Average Cost per Foot BB		Weighted Average Cost per DC Amp CC
1	Totals	*Sum Col C*	2,189,311	*Sum Col E*	275,753,257	*Sum Col H*	1,013,465,612
2	Weighted Averages			*BB1 / AA1*	$ 126	*CC1 / AA1*	$ 463

A CLLI	B ZIP Code	C Dec 2000 Access Lines	D RS Means Cost per Foot	E Weighted Average	F Amps Required	G Cost per Amp	H Weighted Average
ALFRFLXARS0	32420	1,797	112	201,264	200	$962	1,728,616
ALSPFLXADS0	32701	51,474	132	6,794,568	2,000	$390	20,065,567
ALVAFLXARS1	33920	1,766	123	217,218	200	$962	1,698,796
APPKFLXADS1	32703	34,183	132	4,512,156	2,000	$390	13,325,199
ARCDFLXADS0	33821	15,696	126	1,977,696	1,000	$463	7,272,062
ASTRFLXARS0	32102	1,528	135	206,280	200	$962	1,469,853
AVPKFLXADS0	33825	12,313	126	1,551,438	1,000	$463	5,704,695
BAKRFLXADS0	32531	2,893	128	370,304	200	$962	2,782,908
BCGRFLXARS0	33921	3,164	123	389,172	200	$962	3,043,596
BLVWFLXADS0	34420	24,358	127	3,093,466	1,000	$463	11,285,224
BNFYFLXARS0	32425	5,469	112	612,528	400	$684	3,741,645
BNSPFLXADS1	33923	51,697	123	6,358,731	2,000	$390	20,152,497
BSHNFLXADS0	33513	12,483	127	1,585,341	1,000	$463	5,783,457
BVHLFLXADS0	32665	15,943	127	2,024,761	1,000	$463	7,386,498
BWLGFLXARS0	33834	1,710	126	215,460	200	$962	1,644,927
CFVLFLXADS0	32327	7,720	120	926,400	1,000	$463	3,576,728
CHLKFLXARS0	32340	1,426	120	171,120	200	$962	1,371,734
CHSWFLXARS0	32647	4,655	127	591,185	400	$684	3,184,743
CLMTFLXADS0	32711	25,454	132	3,359,928	1,000	$463	11,793,008

Weighted Building and Power Plant Investment
Workpaper 4.1

Summary							
Line			Access Lines AA		Weighted Average Cost per Foot BB		Weighted Average Cost per DC Amp CC
1	Totals	*Sum Col C*	2,189,311	*Sum Col E*	275,753,257	*Sum Col H*	1,013,465,612
2	Weighted Averages			*BB1 / AA1*	$ **126**	*CC1 / AA1*	$ **463**

A	B	C	D	E	F	G	H
CLLI	ZIP Code	Dec 2000 Access Lines	RS Means Cost per Foot	Weighted Average	Amps Required	Cost per Amp	Weighted Average
CLTNFLXARS0	33440	9,560	130	1,242,800	400	$684	6,540,525
CPCRFLXADS0	33904	36,043	123	4,433,289	1,000	$463	16,698,962
CPCRFLXBDS1	33990	31,513	123	3,876,099	1,000	$463	14,600,183
CPHZFLXADS0	33946	12,799	123	1,574,277	1,000	$463	5,929,862
CRRVFLXADS0	34429	16,324	127	2,073,148	1,000	$463	7,563,018
CRVWFLXADS0	32536	18,875	128	2,416,000	1,000	$463	8,744,913
CSLBFLXADS1	32707	20,557	132	2,713,524	1,000	$463	9,524,195
CTDLFLXARS0	32431	1,475	112	165,200	200	$962	1,418,870
CYLKFLXADS0	33907	44,884	123	5,520,732	2,000	$390	17,496,657
CYLKFLXBRS0	33913	44,828	123	5,513,844	2,000	$390	17,474,827
DDCYFLXADS1	33525	13,702	127	1,740,154	1,000	$463	6,348,228
DESTFLXADS0	32541	25,009	128	3,201,152	1,000	$463	11,586,837
DFSPFLXADS0	32433	9,991	112	1,118,992	1,000	$463	4,628,897
ESTSFLXARS0	32726	19,855	132	2,620,860	2,000	$390	7,739,865
EVRGFLXARS0	34139	1,774	123	218,202	200	$962	1,706,491
FRPTFLXARS0	32439	3,290	112	368,480	200	$962	3,164,801
FTMBFLXARS0	33931	12,290	123	1,511,670	1,000	$463	5,694,039
FTMDFLXARS0	33841	3,452	126	434,952	200	$962	3,320,636
FTMYFLXADS0	33901	24,678	123	3,035,394	4,000	$362	8,937,830

Weighted Building and Power Plant Investment
Workpaper 4.1

Summary							
Line			Access Lines AA		Weighted Average Cost per Foot BB		Weighted Average Cost per DC Amp CC
1	Totals	*Sum Col C*	2,189,311	*Sum Col E*	275,753,257	*Sum Col H*	1,013,465,612
2	Weighted Averages			*BB1 / AA1*	$ **126**	*CC1 / AA1*	$ **463**

A CLLI	B ZIP Code	C Dec 2000 Access Lines	D RS Means Cost per Foot	E Weighted Average	F Amps Required	G Cost per Amp	H Weighted Average
FTMYFLXBRS0	33905	16,342	123	2,010,066	1,000	$463	7,571,358
FTMYFLXCDS2	33907	38,568	123	4,743,864	2,000	$390	15,034,557
FTWBFLXADS0	32548	24,322	128	3,113,216	2,000	$390	9,481,189
FTWBFLXBDS0	32547	20,196	128	2,585,088	1,000	$463	9,356,942
FTWBFLXCRS0	32569	4,494	128	575,232	200	$962	4,322,983
GDRGFLXADS0	32442	2,434	112	272,608	200	$962	2,341,375
GLDLFLXARS0	32433	882	112	98,784	200	$962	848,436
GLGCFLXADS0	33999	38,336	123	4,715,328	1,000	$463	17,761,325
GLRDFLXADS0	32733	46,528	132	6,141,696	2,000	$390	18,137,520
GNVLFLXARS0	32331	1,485	120	178,200	200	$962	1,428,489
GNWDFLXARS0	32443	928	112	103,936	200	$962	892,685
GVLDFLXARS0	34736	6,291	132	830,412	200	$962	6,051,599
HMSPFLXARS0	34448	10,597	127	1,345,819	400	$684	7,249,994
HOWYFLXARS0	34737	1,939	132	255,948	200	$962	1,865,212
IMKLFLXARS0	33934	7,243	123	890,889	600	$481	3,484,841
INVRFLXADS1	32650	29,640	127	3,764,280	2,000	$390	11,554,249
KGLKFLXARS0	32091	327	129	42,183	200	$962	314,556
KNVLFLXARS0	32739	726	124	90,024	200	$962	698,372
KSSMFLXADS0	34741	48,996	132	6,467,472	4,000	$362	17,745,275

Weighted Building and Power Plant Investment
Workpaper 4.1

Summary

Line			Access Lines AA		Weighted Average Cost per Foot BB		Weighted Average Cost per DC Amp CC
1	Totals	*Sum Col C*	2,189,311	*Sum Col E*	275,753,257	*Sum Col H*	1,013,465,612
2	Weighted Averages			*BB1 / AA1*	$ **126**	*CC1 / AA1*	$ **463**

A CLLI	B ZIP Code	C Dec 2000 Access Lines	D RS Means Cost per Foot	E Weighted Average	F Amps Required	G Cost per Amp	H Weighted Average
KSSMFLXBDS1	34746	25,152	132	3,320,064	1,000	$463	11,653,089
KSSMFLXCRS1	34747	-	132	-	200	$962	-
KSSMFLXDRS0	34744	15,049	132	1,986,468	400	$684	10,295,853
LBLLFLXADS0	33935	9,771	123	1,201,833	600	$481	4,701,143
LDLKFLXARS0	32159	27,326	135	3,689,010	600	$481	13,147,420
LEE FLXARS0	32059	1,233	129	159,057	200	$962	1,186,079
LHACFLXADS0	33936	18,297	123	2,250,531	1,000	$463	8,477,122
LKBRFLXADS1	32714	42,998	132	5,675,736	2,000	$390	16,761,457
LKHLFLXARS0	32744	2,114	132	279,048	200	$962	2,033,553
LKPCFLXARS0	33852	13,965	126	1,759,590	400	$684	9,554,229
LSBGFLXADS1	32749	36,551	132	4,824,732	2,000	$390	14,248,291
LWTYFLXARS0	32058	1,264	129	163,056	200	$962	1,215,899
MALNFLXARS0	32445	1,397	112	156,464	200	$962	1,343,838
MDSNFLXADS0	32340	5,499	120	659,880	1,000	$463	2,547,723
MNTIFLXADS0	32344	7,417	120	890,040	1,000	$463	3,436,346
MOISFLXADS1	34145	24,315	123	2,990,745	1,000	$463	11,265,302
MRHNFLXARS0	33471	3,070	130	399,100	200	$962	2,953,173
MRNNFLXADS0	32446	12,418	112	1,390,816	1,000	$463	5,753,342
MTDRFLXARS0	32757	17,118	132	2,259,576	1,000	$463	7,930,884

Weighted Building and Power Plant Investment
Workpaper 4.1

Summary

Line			Access Lines AA		Weighted Average Cost per Foot BB		Weighted Average Cost per DC Amp CC
1	Totals	*Sum Col C*	2,189,311	*Sum Col E*	275,753,257	*Sum Col H*	1,013,465,612
2	Weighted Averages			*BB1 / AA1*	$ **126**	*CC1 / AA1*	$ **463**

A CLLI	B ZIP Code	C Dec 2000 Access Lines	D RS Means Cost per Foot	E Weighted Average	F Amps Required	G Cost per Amp	H Weighted Average
MTLDFLXADS1	32751	13,891	132	1,833,612	2,000	$390	5,414,982
MTVRFLXARS0	32756	1,925	132	254,100	200	$962	1,851,745
NFMYFLXADS0	33903	17,549	123	2,158,527	1,000	$463	8,130,569
NFMYFLXBDS0	33903	18,732	123	2,304,036	200	$962	18,019,163
NNPLFLXADS1	33963	66,961	123	8,236,203	2,000	$390	26,102,701
NPLSFLXCDS0	33962	39,159	123	4,816,557	2,000	$390	15,264,940
NPLSFLXDDS0	33940	62,968	123	7,745,064	2,000	$390	24,546,152
OCALFLXADS0	34471	64,532	127	8,195,564	4,000	$362	23,372,073
OCALFLXBDS0	34474	34,020	127	4,320,540	1,000	$463	15,761,693
OCALFLXCRS0	32671	6,226	127	790,702	400	$684	4,259,551
OCNFFLXARS0	32688	6,073	127	771,271	400	$684	4,154,875
OKCBFLXADS1	33472	23,786	130	3,092,180	2,000	$390	9,272,246
OKLWFLXADS0	32679	4,431	127	562,737	400	$684	3,031,492
ORCYFLXADS0	32763	13,807	132	1,822,524	1,000	$463	6,396,875
ORCYFLXCRS0	32738	15,374	132	2,029,368	600	$481	7,396,927
PANCFLXARS0	32346	1,160	120	139,200	200	$962	1,115,857
PNGRFLXADS1	33950	28,961	123	3,562,203	2,000	$390	11,289,562
PNISFLXADS0	33922	10,105	123	1,242,915	1,000	$463	4,681,714
PNLNFLXARS0	32455	1,309	112	146,608	200	$962	1,259,187

Weighted Building and Power Plant Investment
Workpaper 4.1

Summary

Line			Access Lines AA		Weighted Average Cost per Foot BB		Weighted Average Cost per DC Amp CC
1	Totals	*Sum Col C*	2,189,311	*Sum Col E*	275,753,257	*Sum Col H*	1,013,465,612
2	Weighted Averages			*BB1 / AA1*	$ **126**	*CC1 / AA1*	$ **463**

A CLLI	B ZIP Code	C Dec 2000 Access Lines	D RS Means Cost per Foot	E Weighted Average	F Amps Required	G Cost per Amp	H Weighted Average
PTCTFLXADS0	33952	57,106	123	7,024,038	2,000	$390	22,261,030
RYHLFLXARS0	32426	1,576	112	176,512	200	$962	1,516,026
SBNGFLXADS1	33870	30,235	126	3,809,610	2,000	$390	11,786,191
SGBHFLXARS0	32458	6,762	112	757,344	200	$962	6,504,675
SHLMFLXADS0	32579	9,582	128	1,226,496	1,000	$463	4,439,405
SLHLFLXARS0	33870	5,548	120	665,760	200	$962	5,336,874
SNANFLXARS0	33576	4,397	127	558,419	200	$962	4,229,674
SNDSFLXARS0	32460	2,051	112	229,712	200	$962	1,972,950
SNISFLXADS0	33957	13,101	123	1,611,423	1,000	$463	6,069,781
SNRSFLXARS0	32459	6,872	112	769,664	200	$962	6,610,489
SPCPFLXARL0		1,158	115	133,170	200	$962	1,113,933
SSPRFLXARS0	32134	1,736	135	234,360	200	$962	1,669,937
STCDFLXARS0	34769	23,557	132	3,109,524	1,000	$463	10,914,115
STMKFLXARS0	32355	781	120	93,720	200	$962	751,279
STRKFLXADS0	32091	7,970	129	1,028,130	400	$684	5,452,718
SVSPFLXARS0	34488	5,806	127	737,362	400	$684	3,972,206
SVSSFLXARS0	34472	7,884	127	1,001,268	400	$684	5,393,880
TLCHFLXARS0	33537	3,985	127	506,095	200	$962	3,833,353
TLHSFLXADS0	32301	72,353	120	8,682,360	4,000	$362	26,204,668

Weighted Building and Power Plant Investment
Workpaper 4.1

Summary

Line			Access Lines AA		Weighted Average Cost per Foot BB		Weighted Average Cost per DC Amp CC
1	Totals	*Sum Col C*	2,189,311	*Sum Col E*	275,753,257	*Sum Col H*	1,013,465,612
2	Weighted Averages			*BB1 / AA1*	$ **126**	*CC1 / AA1*	$ **463**

A CLLI	B ZIP Code	C Dec 2000 Access Lines	D RS Means Cost per Foot	E Weighted Average	F Amps Required	G Cost per Amp	H Weighted Average
TLHSFLXBDS0	32303	25,047	120	3,005,640	2,000	$390	9,763,808
TLHSFLXCDS0	32304	25,775	120	3,093,000	2,000	$390	10,047,597
TLHSFLXDDS0	32301	43,102	120	5,172,240	2,000	$390	16,801,999
TLHSFLXEDS0	32304	11,170	120	1,340,400	400	$684	7,642,015
TLHSFLXFDS0	32312	26,682	120	3,201,840	2,000	$390	10,401,163
TLHSFLXGDS0	32311	4,877	120	585,240	200	$962	4,691,408
TLHSFLXHDS0	32303	11,567	120	1,388,040	1,000	$463	5,359,068
TVRSFLXADS0	32778	16,028	132	2,115,696	1,000	$463	7,425,879
UMTLFLXARS0	32784	8,509	132	1,123,188	400	$684	5,821,477
VLPRFLXADS0	32580	13,399	128	1,715,072	1,000	$463	6,207,846
VLPRFLXBRS0	32578	7,183	128	919,424	400	$684	4,914,288
WCHLFLXADS0	33872	7,683	126	968,058	600	$481	3,696,539
WLSTFLXARS0	32696	6,925	127	879,475	400	$684	4,737,775
WLWDFLXARS0	34785	8,601	132	1,135,332	400	$684	5,884,420
WNDRFLXARS0	34786	10,453	132	1,379,796	400	$684	7,151,475
WNGRFLXADS0	32787	26,661	132	3,519,252	2,000	$390	10,392,977
WNPKFLXADS1	32789	46,775	132	6,174,300	4,000	$362	16,940,878
WSTVFLXARS0	32464	886	112	99,232	200	$962	852,284
ZLSPFLXARS0	33890	2,703	126	340,578	200	$962	2,600,139

Security Investment per Foot
Workpaper 4.2

Line	State	City	Bid Amount	Sales Tax Rate	Bid Including Sales Tax	CO Square Footage	Investment Per Sq Foot
	A	B	C	D	E=C*(1+D)	F	G=E/F
1	FL	Altamonte Springs	$ 6,792	7.00%	$ 7,267	13,402	$ 0.54
2	FL	Apopka	$ 17,477	7.00%	$ 18,700	4,828	$ 3.87
3	MN	Osseo	$ 12,779	7.25%	$ 13,705	15,000	$ 0.91
4	MO	Jefferson City	$ 6,997	6.48%	$ 7,450	18,528	$ 0.40
5	MO	Rolla	$ 20,691	6.48%	$ 22,032	10,006	$ 2.20
6	NC	Asheboro	$ 28,776	6.25%	$ 30,575	9,090	$ 3.36
7	NC	Dunn	$ 21,083	6.25%	$ 22,401	8,721	$ 2.57
8	NC	Fayetteville	$ 33,443	6.25%	$ 35,533	6,839	$ 5.20
9	NC	Fayetteville	$ 17,189	6.25%	$ 18,263	8,770	$ 2.08
10	NC	Fayetteville	$ 26,237	6.25%	$ 27,877	8,602	$ 3.24
11	NC	Fuquay-Varina	$ 22,071	6.25%	$ 23,450	3,081	$ 7.61
12	NC	Greenville	$ 15,946	6.25%	$ 16,943	3,562	$ 4.76
13	NC	Havelock	$ 16,670	6.25%	$ 17,712	5,073	$ 3.49
14	NC	Hickory	$ 17,025	6.25%	$ 18,089	13,122	$ 1.38
15	NC	Hillsborough	$ 21,560	6.25%	$ 22,908	3,475	$ 6.59
16	NC	Jacksonville	$ 32,128	6.25%	$ 34,136	17,132	$ 1.99
17	NC	Jacksonville	$ 26,571	6.25%	$ 28,232	4,393	$ 6.43
18	NC	Kernersville	$ 18,402	6.25%	$ 19,552	4,956	$ 3.95
19	NC	Morehead City	$ 16,290	6.25%	$ 17,308	6,785	$ 2.55
20	NC	Raeford	$ 21,374	6.25%	$ 22,710	1,560	$ 14.56
21	NC	Rockymount	$ 23,583	6.25%	$ 25,057	1,740	$ 14.40
22	NC	Rockymount	$ 69,963	6.25%	$ 74,336	24,838	$ 2.99
23	NC	Tarboro	$ 16,042	6.25%	$ 17,045	4,844	$ 3.52
24	NC	Wake Forest	$ 10,790	6.25%	$ 11,464	4,883	$ 2.35
25	TN	Blountville	$ 22,885	7.88%	$ 24,688	3,770	$ 6.55
26	TN	Bristol	$ 18,215	7.88%	$ 19,650	7,193	$ 2.73
27	TN	Elizabethton	$ 27,035	7.88%	$ 29,165	5,820	$ 5.01
28	TN	Greenville	$ 33,800	7.88%	$ 36,463	8,526	$ 4.28
29	TN	Johnson City	$ 34,320	7.88%	$ 37,024	15,410	$ 2.40
30	TN	Johnson City	$ 33,125	7.88%	$ 35,735	9,070	$ 3.94
31	TN	Jonesborough	$ 17,975	7.88%	$ 19,391	2,558	$ 7.58

Security Investment per Foot
Workpaper 4.2

Line	State	City	Bid Amount	Sales Tax Rate	Bid Including Sales Tax	CO Square Footage	Investment Per Sq Foot
	A	B	C	D	E=C*(1+D)	F	G=E/F
32	TN	Kingsport	$ 27,880	7.88%	$ 30,077	13,614	$ 2.21
33	TN	Kingsport	$ 13,795	7.88%	$ 14,882	2,444	$ 6.09
34	TN	Mountain City	$ 17,875	7.88%	$ 19,284	3,244	$ 5.94
35	TX	Athens	$ 8,734	7.50%	$ 9,389	5,508	$ 1.70
36	TX	Copperas Cove	$ 4,729	7.50%	$ 5,084	2,665	$ 1.91
37	TX	Decatur	$ 15,486	7.50%	$ 16,647	6,303	$ 2.64
38	TX	Gun Barrel City	$ 11,770	7.50%	$ 12,653	3,180	$ 3.98
39	TX	Harker Heights	$ 16,234	7.50%	$ 17,452	5,320	$ 3.28
40	TX	Kaufman	$ 15,989	7.50%	$ 17,188	1,803	$ 9.53
41	TX	Killeen	$ 7,696	7.50%	$ 8,273	14,904	$ 0.56
42	TX	Palestine	$ 21,356	7.50%	$ 22,958	2,174	$ 10.56
43	TX	Stephenville	$ 11,455	7.50%	$ 12,314	7,374	$ 1.67
44	VA	Abingdon	$ 15,545	0.00%	$ 15,545	2,370	$ 6.56
45	VA	Charlottesville	$ 31,305	0.00%	$ 31,305	19,265	$ 1.62
46	VA	Charlottesville	$ 10,245	0.00%	$ 10,245	3,591	$ 2.85
47	VA	Galax	$ 21,980	0.00%	$ 21,980	4,513	$ 4.87
48	VA	Independence	$ 18,035	0.00%	$ 18,035	1,773	$ 10.17
49	**Total**		**$ 977,343**		**$ 1,038,174**	**355,622**	**$ 2.92**

Land To Building Ratio
Workpaper 4.3

Line	Description	Source	Calculation
1	Land Investment	General Ledger	17,389,708
2	Building Investment	General Ledger	179,650,811
3	**Land to Building Ratio**	**Ln 1 / Ln 2**	**9.68%**

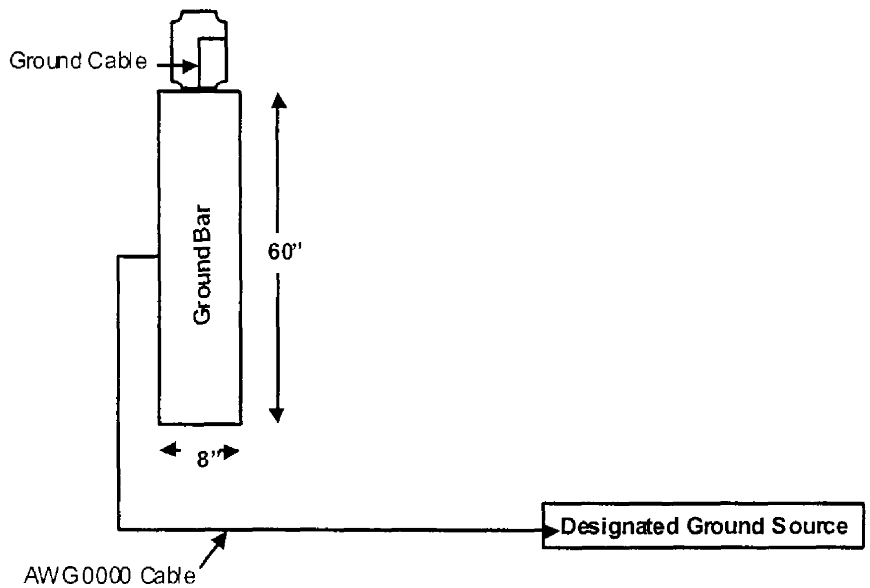
Grounding Connection - Floor Space
Workpaper 4.4

Line	Description	Source	Qty	Unit Price	Material Price
1	Ground Bar Connection Investment (1)	Input Sheet Ln 32	1	$ 3,000.00	$ 3,000.00
2	Power Engineering Hours	SME / Input Sheet Ln 1	16	$ 62.62	$ 1,001.92
3	Total Ground Bar Connection Investment	Ln 1 + Ln 2			$ 4,001.92
4	**Ground Bar Investment per Sq. Ft.**	**Ln 3 / 400 Sq Ft**	**400**		**$ 10.00**

Notes:
(1) Each Ground Bar is capable of serving 400 sq. ft.

Ground Bar Cost Study
System Drawing

Ground Bar



Notes: The ground bar is located 100' from the ground plane in the Central Office. Each ground bar is capable of serving 400 sq. ft.

DC Power Plant Investment
Workpaper 5.0

Line	Power Plant Cost Component	Source	200	400	600	1000	2000	4000
			Amperage Capacity of Power Plant					
1	AC Power Distribution Service Cabinet	Wp 5.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	Rectifiers	Wp 5.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	Battery Plant	Wp 5.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	Power Boards	Wp 5.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	Battery Distribution Fuse Bays	Wp 5.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	Power Monitoring Equipment	Vendor quote	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	Contract Engineering	Vendor quote	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	Contract Labor	Vendor quote	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	Cable & Other Materials	Vendor quote	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	Contract Total	Sum (1 thru 9)	$ 66,489	$106,910	$ 115,436	$ 222,909	$ 399,828	$ 674,343
11	Contract Total With Sales Tax (Ln 10 * Ln 11)	6.8%	$ 70,977	$114,126	$ 123,228	$ 237,956	$ 426,817	$ 719,861
12	Freight	Vendor quote	3,631	4,944	5,888	12,556	23,969	52,813
13	Company Engineering	Wp 5.6	4,509	4,509	6,012	7,514	7,514	10,019
14	Overheads (As Percent of Lns 11 to13)	4.03%	3,188	4,980	5,446	10,398	18,469	31,543
15	Generator Cost	Wp 5.7 Ln 17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	Total Power Plant Cost	Sum (11 thru 15)	$ 153,911	$ 218,930	$ 230,943	$ 370,645	$ 623,711	$ 1,158,970
17	Power Plant Average Use Factor	SME	80%	80%	80%	80%	80%	80%
18	Total Power Plant Cost Grossed Up By Average Use Factor	Ln 16 / Ln 17	$192,389	$273,662	$ 288,679	$ 463,307	$ 779,639	$ 1,448,712
19	**DC Power Cost Per Amp**	**Ln 18 / Amp Capacity**	**$962**	**$684**	**$481**	**$463**	**$390**	**$362**

Power Investment Analysis
Power Distribution Service Cabinet
Workpaper 5.1

			Office Size by Amp					
Line	**Description**	**Source**	**200**	**400**	**600**	**1000**	**2000**	**4000**
1	Switch Board Size		250	400	400	1000	2000	4000
2	Panel Cost (Including Breakers)	Contractor Quote	$ 1,500	$ 1,500	$ 2,100	$ 2,400	$ 3,600	$ 6,000
3	Instrumentation	Contractor Quote	$ 1,000	$ 1,000	$ 1,500	$ 1,500	$ 2,400	$ 3,000
4	AC Power Cable Run to Rectifiers	SME	$ 450	$ 450	$ 450	$ 1,125	$ 1,125	$ 1,125
5	**Total PDSC Installed Cost**	**Ln 2 + Ln 3 + Ln 4**	**$ 2,950**	**$ 2,950**	**$ 4,050**	**$ 5,025**	**$ 7,125**	**$ 10,125**

Power Investment Analysis
Rectifiers
Workpaper 5.2

Line	Description	Source	200	400	600	1000	2000	4000
			Office Size by Amp					
1	Rectifier Size (In Amps)	SME	50	200	400	400	400	400
2	Rectifiers Required	SME	5	3	3	4	7	12
3	Cost per Rectifier	Equipment List						
4	**Total Rectifier Cost**	**Ln 2 * Ln 3**						

Power Investment Analysis
Battery Cost
Workpaper 5.3

			Office Size by Amp					
Line	**Description**	**Source**	**200**	**400**	**600**	**1000**	**2000**	**4000**
1	Battery Required - C&D Technologies	SME	LCT-1344	LCT-1344	MCTII - 4000	MCTII - 4000	MCTII - 4000	MCTII - 4000
2	Battery Strings Required	SME	1	2	1	2	4	7
3	Cost per Battery String	Equipment List						
4	Battery Before Mounting	Ln 2 * Ln 3						
5	Battery Rack	Equipment List						
6	Rack Mounted Battery Shunt	Equipment List						
7	**Total Battery & Mounting**	**Ln 4 + Ln 5 + Ln 6**						

Power Investment Analysis
Power Board Investment
Workpaper 5.4

			Office Size by Amp					
Line	Description	Source	200	400	600	1000	2000	4000
1	Power Board Size	SME	600	1200	1200	3000	3000	5000
2	Supplementary Power Size	SME	0	0	0	0	3000	5000
3	Cost per Primary Board	Equipment List						
4	Cost per Supplementary Board	Equipment List						
5	**Total Power Board Distribution Cost**	**Ln 3 + Ln 4**						

Power Investment Analysis
Battery Distribution Fuse Board
Workpaper 5.5

Line	Description	Source	200	400	600	1000	2000	4000
			Office Size by Amp					
1	Number of Battery Distribution Fuse Boards	SME	------NOT APPLICABLE------			1	2	3
2	Cost per BDFB	Equipment List				[illegible]	[illegible]	[illegible]
3	Total Power Board Distribution Cost	Ln 1 * Ln 2				[illegible]	[illegible]	[illegible]
4	Contract Labor	Vendor Quote				[illegible]	[illegible]	[illegible]
5	Cable & Other Materials	Vendor quote				[illegible]	[illegible]	[illegible]
6	Total BDFB Material & Labor	Sum (Lines 3-5)				[illegible]	[illegible]	[illegible]
7	Percentage of Runs From BDFB	SME				[illegible]	[illegible]	[illegible]
8	**Allocated BDFB cost**	**Ln 6 * Ln 7**	**$0**	**$0**	**$0**	[illegible]	[illegible]	[illegible]

Power Investment Analysis
Company Engineering
Workpaper 5.6

			Office Size by Amp					
Line	Description	Source	200	400	600	1000	2000	4000
1	Engineering Time	SME	72	72	96	120	120	160
2	Labor Cost	Input Sheet Ln 1	$ 62.62	$ 62.62	$ 62.62	$ 62.62	$ 62.62	$ 62.62
3	**Total Power Board Distribution Cost**	**Ln 1 * Ln 2**	**$4,509**	**$4,509**	**$6,012**	**$7,514**	**$7,514**	**$10,019**

Sprint - Florida, Incorporated
Docket Nos. 981834 And 990321-TP
Collocation Cost Study
Davis Exhibit _____ (JRD-2)

February 4, 2003

Power Plant Generator
Workpaper 5.7

	Office Size by Amp	Category as % of Materials Source: Work Order Analysis	200	400	600	1000	2000	4000
1	Generator Size KW		80	150	150	230	350	900
2	Generator Model		DGDA	DGFA	DGFA	DFAB	DFCC	DFHC
3	Generator Price							
4	Transfer Sw Model		OTBAA260	OTPC800	OTPC800	OTPC800	OCPC1000	OCPC800
5	Transfer Sw Quantity		1	1	1	1	1	2
6	Transfer Sw Price							
7	Transfer Sw Total Price							
8	Enclosure Price							
9	Sub Base Tank Price							
10	Total Materials	Sum: Lns. 3, 7, 8 & 9	$ -	-	-	-	-	-
11	Installed Cost Pad & Fencing		$ 4,688	$ 4,688	$ 4,688	$ 4,688	$ 4,688	$ 4,688
12	Engineering	11.61%	$ -	$ -	$ -	$ -	$ -	$ -
13	Installation	83.28%	$ -	$ -	$ -	$ 36,738	$ -	$ -
14	Overheads	13.77%	$ -	$ -	$ -	$ -	$ -	$ -
15	Shipping	5.68%	$ -	$ -	$ -	$ -	$ -	$ -
16	Sales Tax	6.75%	$ -	$ -	$ -	$ -	$ -	$ -
17	**Total Generator Cost**	**Sum: Lns. 10 thru 16**						

DC Power Investment Summary
Workpaper 5.8

Line	Description	Source	Investment per Amp
1	**Average DC Investment per Amp**	**Wp 4.1, Ln CC2**	**$ 463.00**
2	Cost per Kwh	Input sheet Ln 11	0.0671
3	**Monthly Cost per A/C Usage per DC Amp (1)**	**Ln 2 * 44.728**	**$ 3.00**

Notes:
(1) There are 44.728 Kwh per month to generate a DC amp for a month. This is based upon the following formula:

$$\text{Kwh per DC Amp} = \frac{52.08\text{V} * 1\text{ Amp} * 24\text{ hours} * 365\text{ Day}}{.85\text{ efficiency} * 1000\text{W} * 1\text{ Day} * 12\text{ Months}}$$

DC Power Connection 30 Amp Investment (for feeds up to 30 Amps)
Workpaper 5.9

30 Amp power Connection

Line	Description	Source	Qty	Unit Price	Material Price
1	1/0 AWG Cable for Power	Equipment Price List	380	$ 1.24	$ 471.67
2	Other Materials	Work Activity Study		29.47%	$ 139.00
3	Total Material	Ln 1 + Ln 2			$ 610.67
4	Sales Tax	Ln 3 * Ln 4		6.75%	$ 41.22
5	Freight	Ln 3 * Ln 5		5.00%	$ 30.53
6	Installation Hours Cable Run	Work Activity Study * Input sheet Ln 2	11	$ 69.92	$ 769.12
7	Total Investment	Ln 3 + Ln 4 + Ln 5+ Ln 6			$ 1,451.55
8	**Total Investment - 30 Amp**	**Ln 7**			**$ 1,451.55**

Notes: 75 linear feet between BDFB and collocation area with a 10-foot hang on either end, for a total of 95 feet.
Two cables each for both and A and B feeds.

DC Power Connection 60 Amp Investment (for feeds from 35 to 60 Amps)
Workpaper 5.10

60 Amp power Connection

Line	Description	Source	Qty	Unit Price	Material Price
1	4/0 AWG Cable	Equipment Price List	380	$ 2.74	$ 1,041.96
2	Other Materials	Work Activity Study		29.47%	$ 307.07
3	Total Material	Ln 1 + Ln 2			$ 1,349.03
4	Sales Tax	Ln 3 * Ln 4		6.75%	$ 91.06
5	Freight	Ln 3 * Ln 5		5.00%	$ 67.45
6	Installation Hours Cable Run	Work Activity Study * Input sheet Ln 2	12.5	$ 69.92	$ 874.00
7	Total Investment	Ln 3 + Ln 4 + Ln 5+ Ln 6			$ 2,381.54
8	**Total Investment - 60 Amp**	**Ln 7**			**$ 2,381.54**

Notes: 75 linear feet between BDFB and collocation area with a 10-foot hang on either end, for a total of 95 feet.
Two cables each for both and A and B feeds.

DC Power Connection 100 Amp Investment (for feeds from 70 to 100 Amps)
Workpaper 5.11

Standard 100 Amp Power Connection

Line	Description	Source	Qty	Unit Price	Material Price
1	250 MCM Cable (incl. Tax & Freight)	Work Activity Study	520		$ 2,959.00
2	Other Materials (incl. Tax & Freight)	Work Activity Study			$ 1,007.00
3	Sub-total Materials	Ln 1 + Ln 2			$ 3,966.00
4	Engineering & Overheads	Work Activity Study * Input sheet Ln 1	7.5	$62.62	$ 469.65
5	Contract Labor & Overheads	Work Activity Study			$ 3,292.00
6	Total Investment	Sum (Ln 3 thru Ln 5)			$ 7,727.65
7	**Total Investment 110' Linear Distance**	**Ln 6**			**$ 7,727.65**

100 Amp Power Connection - Incremental Price Per Foot (Based on 350' Run)

Line	Description	Source	Qty	Unit Price	Material Price
8	750 MCM Cable (1) (incl. Tax & Freight)	Price Quote	1400		$ 14,579.00
9	Other Materials (incl. Tax & Freight)	Price Quote			$ 677.00
10	Sub-total Materials	Ln 8 + Ln 9			$ 15,256.00
11	Engineering & Overheads	Work Activity Study * Input sheet Ln 1	7.5	$62.62	$ 469.65
12	Contract Labor & Overheads	Price Quote			$ 24,725.00
13	Total Investment	Sum (Ln 10 thru Ln 12)			$ 40,450.65
14	Total Investment 330' Linear Distance	Ln 13			$ 40,450.65
15	Incremental Investment	Ln 14 less Ln 7			$ 32,723.00
16	Incremental Linear Distance	(330 ft .) - (110 ft.)	220		
17	**Incremental Cost Per Foot**	**L 15 / Ln 16**			**$ 148.74**

Note:
(1) Much larger cable due to length of run.

DC Power Connection 200 Amp Investment (for feeds from 125 to 200 Amps)
Workpaper 5.12

Standard 200 Amp power Connection

Line	Description	Source	Qty	Unit Price	Material Price
1	750 MCM Cable (incl. Tax & Freight)	Price Quote	520		$ 5,691.00
2	Other Materials (incl. Tax & Freight)	Price Quote			$ 711.00
3	Sub-total Materials	Ln 1 + Ln 2			$ 6,402.00
4	Engineering & Overheads	Work Activity Study * Input sheet Ln 1	7.5	$62.62	$ 469.65
5	Contract Labor & Overheads	Price Quote			$ 10,124.00
6	Total Investment	Sum (Ln 3 thru Ln 5)			$ 16,995.65
7	**Total Investment 110' Linear Distance**	**Ln 6**			**$ 16,995.65**

200 Amp Power Connection - Incremental Price Per Foot (Based on 350' Run)

Line	Description	Source	Qty	Unit Price	Material Price
8	750 MCM Cable (1) (incl. Tax & Freight)	Price Quote	2800		$ 29,158.00
9	Other Materials (incl. Tax & Freight)	Price Quote			$ 1,354.00
10	Sub-total Materials	Ln 8 + Ln 9			$ 30,512.00
11	Engineering & Overheads	Work Activity Study * Input sheet Ln 1	7.5	$62.62	$ 469.65
12	Contract Labor & Overheads	Price Quote			$ 47,851.00
13	Total Investment	Sum (Ln 10 thru Ln 12)			$ 78,832.65
14	Total Investment 330' Linear Distance	Ln 13			$ 78,832.65
15	Incremental Investment	Ln 14 less Ln 7			$ 61,837.00
16	Incremental Linear Distance	(330 ft .) - (110 ft.)	220		
17	**Incremental Cost Per Foot**	**L 15 / Ln 16**			**$ 281.08**

Note:
(1) Much larger cable due to length of run.

AC Outlet & Overhead Light Investment
Workpaper 6

Line	Description	Source	Unit Cost	Quantity	Total
	AC Outlet				
1	Total Cost per AC Outlet	Work Activity Study			$ 879.45
2	ILEC Engineering	Input Sheet Ln 1/ Work Activity Study	$ 62.62	1.5	$ 93.93
3	**Total Cost per AC Outlet**	**Ln 1 + Ln 2**			**$ 973.38**
	Overhead Lighting				
4	Total Cost per Set of Overhead Lights	Work Activity Study			$ 1,331.59
5	ILEC Engineering	Input Sheet Ln 1/ Work Activity Study	$ 62.62	1.5	$ 93.93
6	**Total Cost per Set of Overhead Lights**	**Ln 4 + Ln 5**			**$ 1,425.52**

DS0 Switchboard Cable per 100 Pair Investment
Workpaper 7

Line	Description	Source	Qty	Unit Price	Material Price
1	Investment - Cable Racking	Wp 12, Ln 2			$ 99.08
2	8x25 Connectorized Block	Equipment Price List	1	$ 83.75	$ 83.75
3	Sales Tax	Input Sheet Ln 3		6.75%	$ 5.65
4	Freight	Input Sheet Ln 17		10.00%	$ 8.37
5	Subtotal Shared Cable Racking & Block Materials With Sales Tax	Sum (Ln 1 - 4)			$ 196.85
6	Installation Hours Block	Work Activity Study * Input sheet Ln 2	0.5	$ 69.92	$ 34.96
7	Subtotal Block & Racking Investment	Ln 5 + Ln 6			$231.81
8	100 Pair Cable	Equipment Price List	170	$ 0.80	$ 136.20
9	Block Designator Label	Equipment Price List	1	$ 4.51	$ 4.51
10	50 Pin (25 pair) Amphenol Connector (Female)	Equipment Price List	4	$ 5.41	$ 21.62
11	Cabling Materials	Sum (Ln 8 - Ln 10)			$ 162.33
12	Sales Tax	Input Sheet Ln 3		6.75%	$ 10.96
13	Freight	Input Sheet Ln 17		10.00%	$ 16.23
14	Subtotal Cabling Materials With Sales Tax & Freight	Sum (Ln 11 - 13)			$ 189.52
15	Installation Hours Terminal (cable conn. and labeling)	Work Activity Study * Input sheet Ln 2	3.25	$ 69.92	$ 227.24
16	Installation Hours Cable	Work Activity Study * Input Sheet Ln 2	6.50	$ 69.92	$ 454.48
17	Subtotal Cabling Investment	Sum (Ln 14 - Ln 16)			$ 871.24
18	**Total Investment - Cable & Connection**	**Sum Ln 7 + Ln 17**			**$1,103.06**

DS0 Co-Carrier Switchboard Cable 100 Pair Investment
Workpaper 7.1

Line	Description	Source	Qty	Unit Price	Material Price
1	**Subtotal Investment - Cable Racking**	**Wp 12, Ln 2**			**$ 99.08**
2	Total Cable Materials - 100 Pr.	Equipment Price List	170	$ 0.80	$ 136.20
3	Sales Tax	Input Sheet Ln 3		6.75%	$ 9.19
4	Freight	Input Sheet Ln 17		10.00%	$ 13.62
5	Installation Hours Cable	Work Activity Study / Input Sheet Ln 2	6.50	$ 69.92	$ 454.48
6	**Subtotal Cable Investment**	**Sum Ln 2 thru Ln 5**			**$ 613.49**

DS1 Cross Connect Investment (Per 28 DS1s)
Workpaper 8

Line	Description	Source	Qty	Unit Price	Material Price
1	Subtotal Investment - Cable Racking per 84 DS1s	Wp 12, Ln 3	6	$ 70.25	$ 421.53
2	Cable Racking Investment per 28 DS1s	Ln 1 / 3			$ 140.51
3	Allocated Portion of Equipment Bay per 84 DS1s	Wp 11, Ln 12	1	$ 77.36	$ 77.36
4	DSX-1 Front X-Conn. Panel Chassis, 84 Port	Equipment Price List	1	$ 1,369.71	$ 1,369.71
5	Sales Tax	Ln 4 * Ln 5		6.75%	$ 92.46
6	Freight	Ln 4 * Ln 6		10.00%	$ 136.97
7	Subtotal Panel Material with Sales Tax & Freight	Sum Ln 3 - Ln 6			$ 1,676.50
8	Installation Hours Panel	Work Activity Study / Input Sheet Ln 2	0.50	$ 69.92	$ 34.96
9	Panel Investment 84 DS1s	Ln 7 + Ln 8			$ 1,711.46
10	Panel Investment per 28 DS1s Before Usage Factor	Ln 9 / 3			$ 570.49
11	Usage Factor	Work Activity Study			87%
12	Panel Investment per 28 DS1s Before Usage Factor	Ln 10 / Ln 11			$ 652.73
13	DS1-ABAM 22 GA Cable 30 Pair (Requires separate send and a receive Cable)	Equipment Price List	6	$ 137.77	$ 826.63
14	DS1-22 GA Connector-Male Str. AMP-2664-001-PKG-2 (1 required per cable)	Equipment Price List	6	$ 4.57	$ 27.42
15	Total Cable Materials (84 DS1 Capacity)	Ln 13 + Ln 14			$ 854.05
16	Sales Tax	Ln 15 * Ln 16		6.75%	$ 57.65
17	Freight	Ln 15 * Ln 17		10.00%	$ 85.40
18	Installation Hours Cable Run	Work Activity Study / Input Sheet Ln 2	10.00	$ 69.92	$ 699.20
19	Installation Hours Cable Connection & Labeling	Work Activity Study / Input Sheet Ln 2	7.75	$ 69.92	$ 541.88
20	Cable Investment 84 DS1s	Sum Ln 15 - Ln 19			$ 2,238.18
21	Investment per 28 DS1s	Ln 20 / 3			$ 746.06
22	**Total Investment per 28 DS1s - Cable & Connection**	**Sum Ln 2+ Ln 12+ Ln 21**			**$ 1,539.30**

DS1 Co-Carrier Cross Connect Investment (Per 28 DS1)
Workpaper 8.1

Line	Description	Source	Qty	Unit Price	Material Price
1	Investment - Cable Racking per 84 DS1s	Wp 12, Ln 3	6	$ 70.25	$421.53
2	**Cable Racking Investment per 28 DS1s**	**Ln 1 / 3**			**$ 140.51**
3	DS1-ABAM 22 GA Cable 30 Pair (Requires a separate send and receive cable)	Equipment Price List	6	$ 137.77	$ 826.63
4	Sales Tax	Ln 3 * Ln 4		6.75%	$ 55.80
5	Freight	Ln 3 * Ln 5		10.00%	$ 82.66
6	Installation Hours Cable Run	Work Activity Study / Input Sheet Ln 2	10.00	$ 69.92	$ 699.20
7	Subtotal Cable Investment 84 DS1s	Sum (Ln 3 - Ln 6)			$ 1,664.28
8	**Cable Investment per 28 DS1**	**Ln 7 / 3**			**$ 554.76**

DS3 Cross Connect Investment (Per 12 DS3s)
Workpaper 9

Line	Description	Source	Qty	Unit Price	Material Price
1	Investment - Cable Racking	Wp 12, Ln 4	8	$ 79.82	$ 638.56
2	Cable Racking Investment per 12 DS3s	Ln 1 / 4			$ 159.64
3	Allocated Portion of Equipment Bay per 48 DS3	Wp 11, Ln 14	1	$ 94.55	$ 94.55
4	DS-3 Broadband Chassis, 48 Module	Equipment Price List	1	$ 448.54	$ 448.54
5	DS-3 Broadband Module, 4 Port	Equipment Price List	48	$ 206.10	$ 9,892.91
6	12FT Mini-WECO to Mini-WECO Coaxial Patch Cord (for testing)	Equipment Price List	2	$ 24.36	$ 48.72
7	Subtotal Panel Materials	Sum (Ln 3 - Ln 6)			$ 10,484.72
8	Sales Tax	Ln 7 * Ln 8		6.75%	$ 707.72
9	Freight	Ln 7 * Ln 9		10.00%	$ 1,048.47
10	Subtotal 48 Panel Materials + Tax and Freight	Sum(Lns 7-9)			$ 12,240.92
11	Installation Hours Panel & 48 Modules	Work Activity Study / Input Sheet Ln 2	11.5	$ 69.92	$ 804.08
12	Panel Investment 48 DS3s	Ln 10 + Ln 11			$ 13,045.00
13	Investment per 12 DS3 Before Usage Factor	Ln 12 / 4			$ 3,261.25
14	Usage Factor	Work Activity Study			57%
15	Panel Investment per 12 DS3s	Ln 13 / Ln 14			$ 5,701.48
16	DS-3 735A 12C COAX CBL 125FT - CA1-0125-X47-735-1	Equipment Price List	8	$ 640.31	$ 5,122.48
17	Total Cable Materials (48 DS3 Capacity)	Ln 16			$ 5,122.48
18	Sales Tax	Ln 17 * Ln 18		6.75%	$ 345.77
19	Freight	Ln 17 * Ln 19		10.00%	$ 512.25
20	Installation Hours Cable Run	Work Activity Study / Input Sheet Ln 2	13.5	$ 69.92	$ 943.92
21	Installation Hours Cable Connection and Labeling	Work Activity Study / Input Sheet Ln 2	7.0	$ 69.92	$ 489.44
22	Subtotal Cabling Investment per 12 DS3s	Ln 17 thru Ln 21			$ 7,413.86
23	Investment per 12 DS3s	Ln 22 / 4			$ 1,853.47
24	**Total Investment - Cable & Connection per DS3**	**Sum Ln 2+ Ln 15+ Ln 23**			**$ 7,714.59**

DS3 Co-Carrier Cross Connect Investment (Per 12 DS3s)
Workpaper 9.1

Line	Description	Source	Qty	Unit Price	Material Price
1	Investment - Cable Racking per 48 DS3s	Wp 12, Ln 4	8	$ 79.82	$638.56
2	**Cable Racking Investment per 12 DS3s**	**Ln 1 / 4**			**$ 159.64**
3	DS3 735A 12C COAX CBL 125FT - CA1-0125-X47-735-1	Equipment Price List	8	$ 640.31	$ 5,122.48
4	Total Cable Materials: (48 DS3 Capacity)	Ln 3			$ 5,122.48
5	Sales Tax	Ln 4 * Ln 5		6.75%	$ 345.77
6	Freight	Ln 4 * Ln 6		10.00%	$ 512.25
7	Installation Hours Cable Run	Work Activity Study / Input Sheet Ln 2	13.5	$ 69.92	$ 943.92
8	Cable Investment 48 DS3s	Sum (Ln 4 - Ln 7)			$ 6,924.42
9	**Cable Investment per 12 DS3s**	**Ln 8 / 4**			**$ 1,731.11**

Optical Cross Connect per 4 Fibers Investment
Workpaper 10

Line	Description	Source	Quantity	Unit Price	Material Price
1	Investment - Fiber Guttering for 144 fibers (per ft.)	Wp 13, Ln 17	95	$ 79.20	$ 7,523.89
2	LDC Connector Module Housing	Equipment Price List	1	$ 396.07	$ 396.07
3	Adapter Panel 12 Ports SC Adptr.	Equipment Price List	12	$ 44.43	$ 533.10
4	Material Cost - Per Panel	Sum (Ln 2 + Ln 3)			$ 929.17
5	Sales Tax	Ln 4 * Ln 5		6.75%	$ 62.72
6	Freight	Ln 4 * Ln 6		10.00%	$ 92.92
7	Total Material Cost - Per 144 Fiber Panel	Sum (Ln 4 - Ln 6)			$ 1,084.81
8	Installation Hours - 144 Fiber Panel	Work Activity Study / Input Sheet Ln 2	0.5	$ 69.92	$ 34.96
9	Fiber Bay Cost per Fiber Panel - 144 Fiber	Wp 11, Ln 16			$ 128.24
10	Total Panel, Bay & Guttering Cost -144 fibers	Sum (Ln 1 + Ln 7 thru Ln 9)			$ 8,771.90
11	Usage Factor	SME			67%
12	Subtotal Panel, Bay & Guttering Investment - 144 Fiber	Ln 10/ Ln 11			$ 13,157.19
13	1-fiber SC-SC Jumper (40 meter)	Equipment Price List	4	$ 30.00	$ 120.00
14	Total Fiber Cable Materials (4 Fiber Capacity)	Ln 13			$ 120.00
15	Sales Tax	Ln 14 * Ln 15		6.75%	$ 8.10
16	Freight	Ln 14 * Ln 16		10.00%	$ 12.00
17	Installation Hours - Jumpers	Work Activity Study / Input Sheet Ln 2	1	$ 69.92	$ 69.92
18	Installation Hours Jumper Connection & Labeling	Work Activity Study / Input Sheet Ln 2	0.25	$ 69.92	$ 17.48
19	Subtotal Cable Investment 4 Fiber	Sum (Ln 14 - Ln 18)			$ 227.50
20	**Total Investment - Cable & Panel per 4 fibers**	**(Ln 12/36) + Ln 19**			**$ 592.98**

Optical Cross Connect Co-Carrier per 4 Fibers Investment
Workpaper 10.1

Line	Description	Source	Quantity	Unit Price	Material Price
1	Investment - Fiber Guttering for 144 fibers (per ft.)	Wp 13, Ln 17	95	$ 79.20	$ 7,523.89
2	Usage Factor				67%
3	Investment - Fiber Guttering After Usage Factor	Ln 1 / Ln 2			$ 11,285.27
4	**Investment - Fiber Guttering Per 4-Fibers**	**Ln 3 / 36**			**$ 313.48**
5	1-fiber SC-SC Jumper (40 meter)	Equipment Price List	4	$ 30.00	$ 120.00
6	Sales Tax	Ln 5 * Ln 6		6.75%	$ 8.10
7	Freight	Ln 5 * Ln 7		10.00%	$ 12.00
8	Installation Hours - Cable Run	SME / Input Sheet Ln 2	1	$ 69.92	$ 69.92
9	**Cable Investment 4 Fiber**	**Sum (Ln 5 to Ln 8)**			**$ 210.02**

Equipment Bay Investment & Allocation
Workpaper 11

Line	Description	Source	Qty	Unit Price	Material Price
1	Double Sided 23" Deep by 7' Tall Rack	Equipment Price List	1	$ 281.14	$ 281.14
2	Rack Installation Kit, Concrete Floor	Equipment Price List	1	$ 11.72	$ 11.72
3	Raised Floor Rack Support, 16"-22" Height	Equipment Price List	1	$ 77.58	$ 77.58
4	Material Cost	Ln 1 + Ln 2 + Ln 3			$ 370.44
5	Sales Tax	Ln 4 * Ln 5		6.75%	$ 25.00
6	Freight	Ln 4 * Ln 6		5.00%	$ 18.52
7	Installation Hours - DS1/DS3 Bay	SME / Input Sheet Ln 2	6.25	$ 69.92	$ 437.00
8	Total Bay Cost - DS1/DS3	Sum (Ln 4 thru Ln 7)			$ 850.97
9	Installation Hours - Fiber Bay	SME / Input Sheet Ln 2	3.25	$ 69.92	$ 227.24
10	Total Bay Cost - Fiber Bay	Sum (Ln 4 thru Ln 6) + Ln 9			$ 641.21
11	DSX - Panels per Bay	Vendor Spec.			11
12	**Cost per 84 Circuit DS1 Panel**	**Ln 8 / Ln 11**			**$ 77.36**
13	DSX-3 - Panels per Bay	Vendor Spec.			9
14	**Cost per 48 Circuit DS3 Panel**	**Ln 8 / Ln 13**			**$ 94.55**
15	OCC Fiber Panels per Bay	Vendor Spec.			5
16	**Cost per 144 Fiber Panel**	**Ln 10 / Ln 15**			**$ 128.24**

Cable Racking Investment
Workpaper 12

Line	Description	Source	Unit Cost	DS0	DS1	DS3	Fiber Entrance	Power ≤ 30 Amps	Power ≤ 60 Amps	Power ≤ 100 Amps	Power ≤ 200 Amps
1	Total Investment per Rack (per ft)	Work Activity Study	$ 51 52	$7,728.00	$6,182 40	$ 5,667.20	$ 9,273 60	$4,121 60	$ 4,121.60	$5,667.20	$ 5,667.20
2	DS0 Investment per Cable (78/rack) (1)	Ln 1 / 78		$ 99 08							
3	DS1 Investment per Cable (88/rack) (1)	Ln 1 / 88			$ 70 25						
4	DS3 Investment per Cable (71/rack) (1)	Ln 1 / 71				$ 79.82					
5	Fiber Entrance Investment per Cable (86/rack) (1)	Ln 1 / 86					$ 107.83				
6											
7	Power ≤ 30 Amps Investment per Cable (111/rack) (1)	Ln 1 / 111						$ 37.13			
8	Power ≤ 60 Amps Investment per Cable (84/rack) (1)	Ln 1 / 84							$ 49.07		
9	Power ≤ 100 Amps Investment per Cable (73/rack) (1)	Ln 1 / 73								$ 77.63	
10	Power > 200 Amps Investment per Cable (40/rack) (1)	Ln 1 / 40									$ 141 68
11	100 And 200-Amp Investment Per Foot Per Cable									$ 0.71	$ 1 29

	Qty 10 ft Sections Required
DS0	15
DS1	12
DS3	11
Fiber Entrance	18
Power Cable ≤ 60 Amps	8
Power Cable > 60 Amps	11

Notes:
(1) Number of cable per rack - Workpaper 14

Optical Cross Connect - Fiber Guttering Investment
Workpaper 13

Line	Description	Source	Quantity	Unit Price	Material Price
1	Individual Links 2" X 2" (3 links per foot)	Equipment Price List	300	$ 5.18	$ 1,553.81
2	"L" Junction for 2 X 2 Channel	Equipment Price List	2	$ 44.23	$ 88.47
3	"T" Drop for 2 X 2 Channel	Equipment Price List	2	$ 49.65	$ 99.30
4	Center Drop for 2 X 2 Channel	Equipment Price List	1	$ 39.72	$ 39.72
5	End Cap for 2 X 2 Channel	Equipment Price List	2	$ 8.12	$ 16.25
6	Universal Bracket	Equipment Price List	10	$ 8.58	$ 85.76
7	Adjustable Bracket	Equipment Price List	2	$ 6.77	$ 13.54
8	Below-Stringer Bracket	Equipment Price List	10	$ 17.15	$ 171.52
9	10' Backbone Support	Equipment Price List	10	$ 21.67	$ 216.65
10	Backbone Mount	Equipment Price List	19	$ 8.12	$ 154.37
11	Backbone Splice	Equipment Price List	19	$ 4.06	$ 77.18
12	Total Material Cost for Fiber Guttering	Sum (Ln 1 - Ln 11)			$ 2,516.56
13	Sales Tax	Ln 12 * Ln 13		6.75%	$ 169.87
14	Freight	Ln 12 * Ln 14		10.00%	$ 251.66
15	Installation Hours	SME / Input Sheet Ln 2	71.25	$ 69.92	$ 4,981.80
16	Total Fiber Guttering Cost - 100 ft.	Sum (Ln 12 - Ln 15)			$ 7,919.89
17	**Fiber Guttering per foot**	**Ln 16 / 100**			**$ 79.20**

Cable Rack Investment Allocation
Workpaper 14

Line	Description	Source	Result
1	Cable Rack Usable Space Width (inches)	Vendor Spec.	10.50
2	Cable Rack Usable Space Depth (inches)	Vendor Spec.	10.00
3	Cable Rack Volume	Ln 2 * Ln 3	105.00
4	**DS0 Cable Size**	Vendor Spec.	0.67
5	Cables per Cable Rack	Ln 3 / Ln 4	156.72
6	Fill Factor	Input Sheet Ln 15	50%
7	Assignable Cables per Rack	Ln 5 * Ln 6	78
8	**DS1 Cable Size**	Vendor Spec.	0.60
9	Cables per Cable Rack	Ln 3 / Ln 8	175.00
10	Fill Factor	Input Sheet Ln 15	50%
11	Assignable Cables per Rack	Ln 9 * Ln 10	88
12	**DS3 Cable Size**	Vendor Spec.	0.74
13	Cables per Cable Rack	Ln 3 / Ln 12	142.86
14	Fill Factor	Input Sheet Ln 15	50%
15	Assignable Cables per Rack	Ln 13 * Ln 14	71
16	**Fiber - 48 Strand**, Single Mode, Plenum Cable (# 513016)	Vendor Spec.	0.61
17	Cables per Cable Rack	Ln 3 / Ln 16	172.13
18	Fill Factor	Input Sheet Ln 15	50%
19	Assignable Cables per Rack	Ln 17 * Ln 18	86

Cable Rack Investment Allocation
Workpaper 14

20	**Fiber - 4 Strand, Single Mode, Plenum Cable**	Vendor Spec.	0.20
21	Cables per Cable Rack	Ln 3 / Ln 20	525.00
22	Fill Factor	Input Sheet Ln 15	50%
23	Assignable Cables per Rack	Ln 21 * Ln 22	263
24	**Power Cables - 1/0 AWG**	Cable size	0.47
25	Cables per Cable Rack - 250 MCM	Ln 3 / Ln 24	221.52
26	Fill Factor	Input Sheet Ln 15	50%
27	Assignable Cables per Rack	Ln 25 * Ln 26	111
28	**Power Cables - 4/0 AWG**	Cable size	0.62
29	Cables per Cable Rack - 250 MCM	Ln 3 / Ln 28	168.27
30	Fill Factor	Input Sheet Ln 15	50%
31	Assignable Cables per Rack	Ln 29 * Ln 30	84
32	**Power Cables - 250 MCM**	Cable size	0.72
33	Cables per Cable Rack - 250 MCM	Ln 3 / Ln 32	145.83
34	Fill Factor	Input Sheet Ln 15	50%
35	Assignable Cables per Rack	Ln 33 * Ln 34	73
36	**Power Cables - 750 MCM**	Cable size	1.30
37	Cables per Cable Rack - 750 MCM	Ln 3 / Ln 36	80.77
38	Fill Factor	Input Sheet Ln 15	50%
39	Assignable Cables per Rack	Ln 37 * Ln 38	40

Internal Cable Space - Fiber Investment
Workpaper 15

Riser Space - Fiber

Line	Description	Source	Qty	Unit Price	Investment
	Core Hole				
1	Core Drilling	RS Means 2003	1	$ 48.50	$ 48.50
2	Conduit	Input Sheet Ln 12	1	$ 6.16	$ 6.16
3	Innerduct	Equipment List Ln 61	3	$ 0.32	$ 0.97
4	Transmission Space Cost per Foot	Wp 4, Ln 11	1	$ 418.78	$ 418.78
5	Total Core Hole per Ft.	Sum (Ln 1 - Ln 4)			$ 474.42
6	Number of Innerducts per Core Hole	3 Innerducts per 4" Hole			3
7	**Cost - per exit through Cable Vault Ceiling**	**Ln 5 / Ln 6**			**$ 158.14**
	Cable Rack				
8	**Fiber Entrance Investment per Cable (86/rack)**	**Wp 12, Ln 5**			**$ 107.83**
	Vault Access - Fiber				
9	Vault Space Cost Per Foot	Wp 4, Ln 7	1	$ 163.51	$ 163.51
10	Average Sq. Ft. per Vault	Vault Study	1		791
11	Number of Conduits per Vault	Vault Study			48
12	Number of Innerducts per Conduit	Actual	3		3
13	**Total Cost per Cable Vault Entrance**	**Ln 9*Ln 10 / Ln 11 / Ln 12**			**$ 898.17**
	Conduit Investment - Fiber				
14	Conduit	Input Sheet Lns. 31 & 12	95	$ 6.16	$ 585.20
15	Innerducts	Actual	3		
16	Cost of Conduit per Innerduct	Ln 14 / 3			$ 195 07
17	Manhole Cost	Input Sheet Ln 13	1	$ 8,407.00	$ 8,407.00
18	Number of Conduits per Manhole	Vault Study			32
19	Innerducts per Conduit	Actual			3
20	Cost per Manhole per Cable Entrance	Ln 17 / Ln 18 / Ln 19			$ 87.57
21	Innerduct	Equipment List Ln 61	95	$ 0.32	$ 30.85
22	**Conduit Investment per Cable Entrance Innerduct**	**Ln 16 + Ln 20 + Ln 21**			**$ 313.49**

Internal Cable Space - Copper Investment
Workpaper 16

Riser Space - Copper

Line	Description	Source	Qty	Unit Price	Investment
	Core Hole				
1	Core Drilling	RS Means 2003	1	$ 48.50	$ 48.50
2	Total Transmission Space Cost per Foot	Wp 4, Ln 11	1	$ 418.78	$ 418.78
3	Total Core Hole	Sum Ln 1 + Ln 2			$ 467.28
4	Divide by Number of 100-pr (Tip) Cables	SME & Observations			6
5					
6	**Core Hole Cost Per 100-Pair Cable**	**Ln 3 / Ln 4**			**$ 77.88**

Vault Access - Copper

Line	Description	Source	Qty	Unit Price	Material Price
7	Total Vault Space Cost per Foot	Wp 4, Ln 7	1	$ 163.51	$ 163.51
8	Average Sq. Ft. per Vault	Vault Study			791
9	Number of Conduits per Vault	Vault Study			48
10	Investment per Conduit	Ln 7 * Ln 8 / Ln 9			$ 2,694.52
11	Divide by Number of 100 Pr increments	SME & Observations			6
12	**Total Cost per 100-Pair Per Sq. Ft.**	**Ln 10 / Ln 11**			**$ 449.09**

Conduit Investment Copper

Line	Description	Source	Qty	Unit Price	Investment
13	Conduit	Input Sheet Lns. 31 & 12	95	$ 6.16	$ 585.20
14	Manhole Cost	Input Sheet Ln 13	1	$ 8,407.00	$ 8,407.00
15	Number of Conduits per Manhole	Vault Study			32
16	Cost for Conduit per Manhole	Ln 14 / Ln 15			$ 262.72
17	Investment per Conduit for 4' Duct	Ln 13 + Ln 16			$ 847.92
18	Divide by Number of 100 Pr Equivalents	SME & Observations			6
19	**Conduit Cost per 100-Pair Equivalent**	**Ln 17 / Ln 18**			**$ 141.32**

Internal Cabling Fiber Investment
Workpaper 17

Monthly Recurring Charge

Line	Description	Source	Qty	Price	Material Price
1	48 Fiber Cable	Equipment Price List	320	$ 1.00	$ 320.00
2	Sales Tax	Ln 1 * Ln 2		6.75%	$ 21.60
3	Freight	Ln 1 * Ln 3		5.00%	$ 16.00
4	Installation Hours - Cable Run & Connectorization (48 fibers)	SME / Input Sheet Ln 2	14.25	$ 69.92	$ 996.36
5	Subtotal Investment - Cost for Cable Run	Sum (Ln 1 thru Ln 4)			$ 1,353.96
6	Total Fiber Optic Bay Cost	48/144 & Wp 10, Ln 7 thru Ln 9	33%	$ 1,248.01	$ 411.84
7	Cross Connects per Bay	Actual			144
8	Cost per Cross Connect	Ln 6 / Ln 7			$ 2.86
9	Fiber per Cable	Ln 1 (Description)			48
10	Subtotal Investment - Bay Cost	Ln 8 * Ln 9			$ 137.28
11	**Total Investment - Internal Fiber Cable**	**Ln 5 + Ln 10**			**$ 1,491.24**
	Nonrecurring Charge				
12	**Outside Plant Engineering**	**WA Study/Input Sheet Ln 18**	**19.25**	**$ 49.11**	**$ 945.37**

Internal Cabling Copper Per 100-Pair Investment
Workpaper 18

Monthly Recurring Charge

Line	Description	Source	Qty	Price	Investment
1	100-Pr Copper Protection Block With Connectorized Cable	Work Activity Analysis	1	$ 733.00	$ 733.00
2	Protector Module	Work Activity Analysis	100	$ 2.73	$ 273.07
3	Other Materials	Work Activity Analysis			$ 34.00
4	Installation Labor	Work Activity Analysis			$ 556.00
5	**Total Investment 100-Pair Copper Internal Cable**	**Sum Ln 1 thru Ln 4**			**$ 1,596.07**
	Nonrecurring Charge				
6	**Engineering Non-recurring Charge**	**Work Activity Analysis**			**$ 163.00**

Collocation Study Inputs

Line	Description		Input	Source
1	Central Office Engineering	$	62.62	Work Activity Study
2	Central Office Labor	$	69.92	Work Activity Study
3	Sales Tax		6.75%	Department of Taxation
4	Building Annual Charge Factor		24.31%	Annual Charge Factor Model
5	Digital Circuit Annual Charge Factor		28.81%	Annual Charge Factor Model
6	Local Switching Factor		29.03%	Annual Charge Factor Model
7	Conduit Factor		15.83%	Annual Charge Factor Model
8	Common Factor		13.68%	Florida UNE Docket No. 990649B-TP
9	DC Power Annual Charge Factor		29.03%	Annual Charge Factor Model
10	DC Power Maintenance Factor		14.03%	Annual Charge Factor Model
11	Cost per KWH	$	0.0671	Annual Charge Factor Model
12	Conduit Cost	$	6.160	Florida UNE Docket No. 990649B-TP
13	Manhole Cost	$	8,407	Florida UNE Docket No. 990649B-TP
14	Assignable Transmission Space to Total		40%	Analysis of CO Drawings
15	Cable Rack Fill Factor		50%	SME Observation
16	Freight - Power Cable -as % of Material		5%	Freight Study
17	Freight - Transmission Equip - as % of Material		10%	Freight Study
18	OSP Engineering	$	49.11	Payroll Data
19	OSP Technician	$	58.21	Payroll Data
20	Legal Labor	$	88.79	Payroll Data
21	Application Engineering	$	62.82	Payroll Data
22	Network Sales Manager	$	70.52	Payroll Data
23	Field Service Manager	$	70.52	Payroll Data
24	Network Project Manager	$	50.55	Payroll Data
25	Power Engineer	$	56.08	Payroll Data
26	Land & Building Engineer	$	75.71	Payroll Data
27	CPR/CAD Technician - Drafting	$	33.07	Payroll Data
28	NASC Service Rep - Billing	$	36.74	Payroll Data
29	Contract Negotiator - National Acct. Manager	$	70.11	Payroll Data
30	Architect, Engineering & Construction Mgt. Fee		16.00%	RS Means Data
31	Distance in ft. from Manhole to Vault		95	SME Observation
32	Installed Cost of Ground Bar	$	3,000	Vendor Quote
33	Digital Circuit Recurring Expense Factor		8.57%	Annual Charge Factor Model

Equipment Prices For Collocation Cost Study

Item	Description	Price Per Unit
020804	BRS-0825-163-B14-1 Connectorized Block (DS0)	$ 83 75
779571	Block Labels for Connectorized Block	$ 4 51
484444	Amphenol 50 Pin Connector for Connectorized Block	$ 5 41
202205	Switchboard Cable 100 Pair 24GA R500 Unshielded Cable	$ 0 80
032827	DSX-1 Front X-Conn Panel Chassis, 84 Port	$ 1,369 71
203102	DS1-ABAM 22 GA Cable 30 Pr 140 feet Kit	$ 137 77
Vendor Quote	DS1-22 GA Connector-Male Str AMP-2664-001-PKG-2 (1 required per cable)	$ 4 57
513184	DS-3 Broadband Chassis, 48 Module	$ 448 54
513183	DS-3 Broadband Module, 4 Port	$ 206 10
966171	12FT Mini-WECO to Mini-WECO Coaxial Patch Cord	$ 24 36
Vendor Quote	DS-3 735A 12C COAX CBL 125FT - CA1-0125-X47-735-1	$ 640 31
961067	Double Sided 23" Deep by 7' Tall Rack	$ 281 14
962084	Rack Installation Kit, Concrete Floor	$ 11 72
Vendor Quote	Raised Floor Rack Support, 16"-22" Height	$ 77 58
321197	1/0 AWG Cable for Power	$ 1 24
512452	4/0 AWG Cable for Power	$ 2 74
Vendor Quote	[illegible]	
Vendor Quote	[illegible]	
Vendor Quote	[illegible]	
Vendor Quote	[illegible]	
Vendor Quote	[illegible]	
Vendor Quote	[illegible]	
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Vendor Quote	[illegible]	
513016	48 Fiber Altos Cable SM 4/3 ARM-Ft	$ 1 00
512609	LDC Connector Module Housing (144 fiber capacity)	$ 396 07
016280	Adapter Panel 12 Ports SC Adptr Zircona SLV	$ 44 43
Vendor Quote	1-fiber SC-SC Jumper (40 Meter)	$ 30 00
513273	Individual Links 2" X 2" (3 Ft Length)	$ 5 18
513279	"L" Junction for 2 X 2 Channel	$ 44 23
025776	"T" Drop for 2 X 2 Channel	$ 49 65
513277	Center Drop for 2 X 2 Channel	$ 39 72
513278	End Cap for 2 X 2 Channel	$ 8 12
025770	Universal Bracket	$ 8 58
513275	Adjustable Bracket	$ 6 77
025763	Below-Stringer Bracket	$ 17.15
025764	10' Backbone Support	$ 21 67
025732	Backbone Mount	$ 8 12
025766	Backbone Splice	$ 4 06
WA Study	C377 TIN BONDED CABLE 24GA 100FT STUB	$ 733 00
568116	PROTECTOR Module SS 300VDC WHT COIL	$ 2 73
168435	1.25" Innerduct RR - per ft.	$ 0.32