

<b>Item</b>	<b>Estimated Cost</b>
Upgrade Fiber Backbone, Materials	\$10,662.66
Upgrade Fiber Backbone, Prevailing wage labor	\$12,222.34
Network	\$292,255.50
SMARTnet year 1	\$12,700.10
Installation and configuration services	\$35,135.00
<b>Total</b>	<b>\$362,975.59</b>

### Fiber Cabling Worksheet

QNTY		<u>MATERIAL</u>
120	EA	Fast-Cure Adhesive Connector, LC (Aqua) 50/125um Multimode OM3
10	EA	LC-LC Fiber Patch Cord, 3 meter 50mm, OM3
1	EA	Opt-X Ultra 2RU Fiber Enclosure, sliding tray, accepts 6 adapter plates
5	EA	Opt-X Ultra 1RU Fiber Enclosure, sliding tray, accepts 3 adapter plates
10	EA	Optical Fiber Adapter- 12 Fiber LC 50mm, OM3, Aqua
1900	EA	12-strand PVC Fiber Cable 50/125, OM3
8	EA	Fire Rated UL Putty - sleeve 22Cu Inches
1	EA	T BAR WIRE, SCREWS, ANCHORS
1	EA	4 Post Rack
		<u>Labor</u>
		Pathway Discovery
		Cad drawings to show proposed pathways
		Installation of mule tape
		Installation of 12 strand SM fiber to exiting IDF's
		Dressing of hand holes
		New LC fiber bulkheads to minimize space
		New 4 post rack and installation
		Termination of fiber on LC connectors
		Certification of fiber backbone
		Project management time

#### Break-down

<b>material</b>	\$9,366		
<b>9.5% tax</b>	\$890		\$10,255
<b>shipping</b>	\$407		
<b>Subtotal</b>	\$10,663		
<b>labor</b>	\$12,222		
<b>Total</b>	\$22,885		

IDF #	4510 Proposed Chassis	4507 Proposed Chassis	3650-48-POE Proposed Switch	POE Blades 48p	SUPs	Uplink Transceivers (Access)	Uplink Transceivers (Core)	10G Fiber Module (Core)
<b>Main Campus</b>								
MDF 1st floor Rm 006	Existing 6513		Existing Extreme	Existing 11	Exist 2			
IDF Rm 206	1			8	2	2		
IDF Rm 306	1			8	2	2		
IDF Rm 406			3			2		
IDF Rm 506	1			7	2	2		
<b>South Campus</b>								
IDF 1			1					
IDF 2			1					
<b>Core</b>								
Spares			1	2	1	8	16	4
<b>Total</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>25</b>	<b>7</b>	<b>16</b>	<b>16</b>	<b>4</b>

Tax Chart	
266,900.00	subtotal products
292,255.50	Product with 9.5% tax
12,700.10	subtotal SMARTnet
571,855.60	total with SMARTnet and tax

NPS Core & Access			
Hours	Task	Rate	Price
44	Project Manager	150	\$6,600.00
33	Sr. Engineer (CCIE)	195	\$6,435.00
65	Onsite Engineer (CCNP)	170	\$11,050.00
65	Onsite Engineer (CCNP)	170	\$11,050.00
<b>NPS Total</b>			<b>\$35,135.00</b>

Part Number	Description	Service Duration	Unit List Price	Qty	Unit Net Price	Disc(%)	Extended Net Price
ID - UE53425469MK							
WS-C4507R+E	Catalyst4500E 7 slot chassis for	---	6,995.00	1	2,798.00	60.00	2,798.00
CON-SW-C4507R+E	SNTC-NO RMA Catalyst4500E 7 slot	12	2,243.00	1	1,570.10	30.00	1,570.10
S8EUK9-33-1511XO	CAT4500e SUP8e Universal Crypto	---	0.00	1	0.00	60.00	0.00
C4K-SLOT-CVR-E	Catalyst 4500 E-Series Family Slot	---	0.00	5	0.00	60.00	0.00
C4500E-IPB	Paper IP Base License	---	0.00	1	0.00	60.00	0.00
WS-X45-SUP8-E	Catalyst 4500 E-Series Supervisor 8-E	---	19,995.00	1	7,998.00	60.00	7,998.00
WS-X45-SUP8-E/2	Catalyst 4500 E-Series Redundant	---	19,995.00	1	7,998.00	60.00	7,998.00
PWR-C45-1400AC	Catalyst 4500 1400W AC Power	---	1,495.00	1	598.00	60.00	598.00
CAB-AC-2800W-TWLK	U.S. Power Cord, Twist Lock, NEMA 6-	---	0.00	2	0.00	60.00	0.00
PWR-C45-1400AC/2	Catalyst 4500 1400W AC Power	---	1,495.00	1	598.00	60.00	598.00
WS-C4510R+E	Catalyst 4500E 10 slot chassis for	---	9,995.00	3	3,998.00	60.00	11,994.00
CON-SW-C4510R+E	SNTC-NO RMA Catalyst 4500E 10 slot	12	4,266.00	3	2,986.20	30.00	8,958.60
S8EUK9-33-1511XO	CAT4500e SUP8e Universal Crypto	---	0.00	3	0.00	60.00	0.00
C4K-SLOT-CVR-E	Catalyst 4500 E-Series Family Slot	---	0.00	24	0.00	60.00	0.00
C4500E-IPB	Paper IP Base License	---	0.00	3	0.00	60.00	0.00
WS-X45-SUP8-E	Catalyst 4500 E-Series Supervisor 8-E	---	19,995.00	3	7,998.00	60.00	23,994.00
WS-X45-SUP8-E/2	Catalyst 4500 E-Series Redundant	---	19,995.00	3	7,998.00	60.00	23,994.00
PWR-C45-2800ACV	Catalyst 4500 2800W AC Power	---	1,995.00	3	798.00	60.00	2,394.00
CAB-AC-2800W-TWLK	U.S. Power Cord, Twist Lock, NEMA 6-	---	0.00	6	0.00	60.00	0.00
PWR-C45-2800ACV/2	Catalyst 4500 2800W AC Power	---	1,995.00	3	798.00	60.00	2,394.00
WS-C3650-48FD-L	Cisco Catalyst 3650 48 Port Full PoE	---	10,100.00	4	4,040.00	60.00	16,160.00
CON-SW-WS6548FD	SNTC-NO RMA Cisco Catalyst 3650	12	517.00	4	361.90	30.00	1,447.60
S3650UK9-33SE	CAT3650 Universal k9 image	---	0.00	4	0.00	60.00	0.00
PWR-C2-1025WAC	1025W AC Config 2 Power Supply	---	0.00	4	0.00	60.00	0.00
PWR-C2-1025WAC/2	1025W AC Config 2 Secondary Power	---	1,450.00	4	580.00	60.00	2,320.00
CAB-TA-NA	North America AC Type A Power	---	0.00	8	0.00	60.00	0.00
C3650-STACK-KIT	Cisco Catalyst 3650 Stack Module	---	1,650.00	4	660.00	60.00	2,640.00
C3650-STACK	Cisco Catalyst 3650 Stack Module	---	0.00	8	0.00	60.00	0.00
STACK-T2-50CM	50CM Type 2 Stacking Cable	---	0.00	4	0.00	60.00	0.00
WS-X4648-RJ45V+E=	Catalyst 4500 E-Series 48-Port PoE+	---	7,495.00	25	2,998.00	60.00	74,950.00
WS-X4712-SFP+E=	Catalyst 4500 E-Series 12-Port 10GbE	---	26,995.00	4	10,798.00	60.00	43,192.00
SFP-10G-LR-S=	10GBASE-LR SFP Module, Enterprise-	---	1,900.00	32	760.00	60.00	24,320.00
WS-X45-SUP8-E=	Catalyst 4500 E-Series Supervisor 8-E	---	19,995.00	1	7,998.00	60.00	7,998.00
C4500E-IPB-S	Catalyst 4500E IPB license for Spare	---	0.00	1	0.00	60.00	0.00
C4500E-LIC-PAK	PAK license SKU for spare sup	---	0.00	1	0.00	60.00	0.00
WS-C3650-48FD-L	Cisco Catalyst 3650 48 Port Full PoE	---	10,100.00	2	4,040.00	60.00	8,080.00
CON-SW-WS6548FD	SNTC-NO RMA Cisco Catalyst 3650	12	517.00	2	361.90	30.00	723.80
S3650UK9-33SE	CAT3650 Universal k9 image	---	0.00	2	0.00	60.00	0.00
PWR-C2-1025WAC	1025W AC Config 2 Power Supply	---	0.00	2	0.00	60.00	0.00
PWR-C2-1025WAC/2	1025W AC Config 2 Secondary Power	---	1,450.00	2	580.00	60.00	1,160.00

CAB-TA-NA	North America AC Type A Power	---	0.00	4	0.00	60.00	0.00
C3650-STACK-KIT	Cisco Catalyst 3650 Stack Module	---	1,650.00	2	660.00	60.00	1,320.00
C3650-STACK	Cisco Catalyst 3650 Stack Module	---	0.00	4	0.00	60.00	0.00
STACK-T2-50CM	50CM Type 2 Stacking Cable	---	0.00	2	0.00	60.00	0.00

<b>Product/Subscription Total</b>	266,900.00
<b>Service Total :</b>	12,700.10
<b>Total Price:</b>	<b>279,600.10</b>

IDF #	4510 Proposed Chassis	4507 Proposed Chassis	3850-48 Proposed Switch	POE Blades 48p	SUPs	UPS Recommended Migration Path
<b>Main Campus</b>						
MDF 1st floor Rm 006	Existing 2x 6513		Existing Extreme	Existing 11	Exist 2	SM3000RMXL2UTAA + (1)BP48V27-2US
IDF Rm 206	1			8	2	SMART2200CRMXL
IDF Rm 306	1			8	2	SMART2200CRMXL
IDF Rm 406			3			SMART2200CRMXL
IDF Rm 506	1			7	2	SMART2200CRMXL
<b>South Campus</b>						
IDF 1			1			SM1500RMXL2UTAA
IDF 2			1			SM1500RMXL2UTAA
<b>Proposed Totals</b>	<b>3</b>		<b>5</b>	<b>23</b>	<b>6</b>	