



Utility Committee Meeting

AGENDA

February 6, 2018
City Hall

-
- I. **CALL TO ORDER**
 - II. **MATTERS BEFORE COMMITTEE**
 - 1. IP Transport Change
 - 2. Cisco Edge Routers Purchase
 - 3. Fiber Blower Purchase
 - 4. FTTX Pricing
 - III. **ADJOURN**



Utility Committee Meeting

AGENDA

February 6, 2018

Item:

Approval - Change of IP Transport to GPW

Department:

Additional Information:

Financial Impact:

Budgeted Item:

Recommendation / Request:

Viewing Attachments Requires Adobe Acrobat. [Click here](#) to download.

Attachments / click to download

 [IP Transport Info](#)



To: City Council, Committee, City Administrator
From: Brian Thompson
Department: Telecom
Date: 2/6/2018
Description: Approval is being sought to change our complete IP transport to GPW

Budget Account: Cost of Service Internet

Funding Source:

Budget Allocation:

\$ 175,400.00

Budget Available:

\$ 160,783.40

Requested Expense:

\$ 10,900.00 MRC

Company of Purchase: GPW

Recommendation:

Staff recommends the APPROVAL of this request based on the information provided.

Background: Attached

Attachment(s):

Request – 1 page

Background-1 page

Quotes-



Changes to The IP Back Haul Network

The Internet is delivered to Monroe's City Hall from 56 Marietta St. (56M) over optical fiber wavelengths via Athens and Covington over fiber controlled by Georgia Public Web (GPW). We have facilities consisting of a cabinet and switchgear in 56M that manages our IP traffic and interconnects to other carriers. The original redundancy plan has always included two delivery points one at City Hall and one at the Headend located at 420 N Broad. Negotiations with GPW up until December of last year included Monroe paying for the installation of a new delivery point at the HE along with placing equipment at 55 Marietta St (55M). This configuration would create two FULLY independent sources for IP traffic, which. GPW's leadership changed recently and with direction from their board they have changed the focus of the organization. During final stages of negotiations GPW made a totally different offer to Monroe that not only meets our long-term network planning needs but also saves Monroe in monthly IP and capital infrastructure cost. I will describe the options below.

Option One

Retain our presence at 56M and acquire space at 55M with the Athens link terminating in 56M and the Covington Link terminating in 55M. Each link would start at 4Gbps but would be scalable to 10Gbps. Purchase three Cisco ASR Routers that will handle switching/routing between Monroe and the data centers. At a future date pay GPW for a second delivery point at the HE and purchase another ASR Router. Interconnect with Level 3 as a second IP provider, this increases capacity and creates redundancy.

- | | | |
|----|-------------------|------------------------------------|
| 1. | Monthly Recurring | \$10,699.00 to \$13,600.00 |
| 2. | Link Capacity | Two links 4Gbps scalable to 10Gbps |
| 3. | IP Capacity | 4Gbps with 10Gbps to the TIE |
| 4. | Capital Cost | \$139,168.24 plus GPW access point |

Option Two

Accept GPW's new offer and move our network edge to Monroe. GPW would become our IP transport supplier but we would retain the capacity to interconnect agreements with carriers to retain our flexibility. A light wave from the HE would travel both links and terminate in 55M and a light wave from City Hall would travel both links and terminate at 56M. This creates two 10Gbps for each site with an aggregate of 40Gbps total. GPW would install the optical equipment at our HE, at their cost. Purchase two Cisco ASR Routers that would handle switching/routing between our switches and GPW's optical delivery points. Interconnect with Level 3 as a second IP provider, this increases capacity and creates redundancy.

1. Monthly Recurring	\$10,900.00 to GPW
2. Link Capacity	Four 10Gbps total of 40Gbps
3. IP Capacity	4Gbps with 10Gbps TIE
4. Direct links	10Gbps to Google and Netflix
5. Capital cost	\$69,584.12

Our engineering staff and myself have fully vetted the two options. The robust redundancy and 40Gbps-aggregated capacity along with the dual delivery points of option two are a game changer for our network. The ability to expand our CMTS deployments and fiber servers to two sites by itself, make this the winning option. This option allows use to increase redundancy/capacity, stay within budget, and save or redirect capital cost.



Utility Committee Meeting

AGENDA

February 6, 2018

Item:

Purchase - Cisco Edge Routers

Department:

Additional Information:

Financial Impact:

Budgeted Item:

Recommendation / Request:

Viewing Attachments Requires Adobe Acrobat. [Click here](#) to download.

Attachments / click to download

 [Router Info](#)



To: City Council, Committee, City Administrator
From: Brian Thompson
Department: Telecom
Date: 2/6/2018
Description: Approval is being sought to purchase two cisco ASR 9001 edge routers

Budget Account:

Funding Source: CIP

Budget Allocation:

\$225,000.00

Budget Available:

\$225,000.00

Requested Expense:

\$69,584.00

Company of Purchase: MegaHertz

Recommendation:

Staff recommends the APPROVAL of this request based on the information provided.

Background: Attached

Attachment(s):

Request – 1 page

Background-1 page

Quotes- 1 page



Cisco ASR 9000

The Cisco Aggregation Services Router will be the cornerstone of our IP network. These routers are designed grow with our network needs. They are extremely scalable from 10Gbps up to 240Gbps of total throughput. These units come with Cisco IOS XR, which is a highly secure routing platform that will allow us to deliver sophisticated routing protocols across our networks. Cisco SmartNet is also included with these two routers. SmartNet is Cisco's engineering services package that gives us access to Cisco engineers for the installation and management of the routers.

Part	Description	Quantity	CentricsIT Unit Price	CentricsIT Extended Price	MegaHertz Unit Price	MegaHertz Extended Price	
ASR-9001	ASR-9001 Chassis	2	\$22,512.00	\$45,024.00	\$20,178.82	\$40,357.64	
XR-A9K-PXK9-0.601	PXK9 IOS-XR 6.01	2	\$6,300.00	\$12,600.00	\$5,647.06	\$11,294.12	
A9K-750W-AC	ASR-9001 750W AC	4	\$756.00	\$3,024.00	\$677.65	\$2,710.60	
ASR-9001-FAN	ASR-9001 Fans	2	\$1,176.00	\$2,352.00	\$1,054.12	\$2,108.24	
SFP-10G-LR-S	10GBase-LR SFP+	6	\$650.00	\$3,900.00	\$752.94	\$4,517.64	
SFP-10G-SR-S	10Gbase-SR SFP+	6	\$225.00	\$1,350.00	\$263.53	\$1,581.18	
CON-SNT-ASR90012	SmartNet ASR-9001	2	\$2,862.00	\$5,724.00	\$2,805.88	\$5,611.76	
CON-SNT-XRA9KPRP	SmartNet IOS-XR	2	\$716.00	\$1,432.00	\$701.47	\$1,402.94	
Total:				\$75,406.00	Total:		\$69,584.12



Utility Committee Meeting

AGENDA

February 6, 2018

Item:

Purchase - Fiber Blower

Department:

Additional Information:

Financial Impact:

Budgeted Item:

Recommendation / Request:

Viewing Attachments Requires Adobe Acrobat. [Click here](#) to download.

Attachments / click to download

 [Fiber Blower Info](#)



To: City Council, Committee, City Administrator
From: Brian Thompson
Department: Telecom
Date: 2/6/2018
Description: Approval is being sought to purchase a fiber blower to facilitate the installation of micro fiber.

Budget Account:

Funding Source: CIP

Budget Allocation:

\$ 44,000.00

Budget Available:

\$ 44,000.00

Requested Expense:

\$ 36,665.50

Company of Purchase: Greenlee

Recommendation:

Staff recommends the APPROVAL of this request based on the information provided.

Background: Attached

Attachment(s):

Request – 1 page

Background-1 page

Quotes- 2



Quotation

Ship To

CITY OF MONROE
215 NORTH BROAD ST
MONROE GA 30655

Sold To

CITY OF MONROE
215 NORTH BROAD ST
MONROE GA 30655

Quotation No. / Date 20364396 01/23/2018	Customer Reference No. S + R Quote
Customer Number 100035	Quote Valid To 02/23/2018

We reserve the right to invoice at prices in effect at the time the order is entered. In addition, we reserve the right to substitute products of equal or greater value without notice. All orders are subject to a \$150 USD minimum order requirement. Greenlee Textron reserves the right to select freight carrier. Freight charges will be determined at time of shipment. Thank you.

Terms		Weight		
Payment	Credit Card Payment	Gross Weight	281.555 LB	127.714 KG
		Net Weight	251.555 LB	114.106 KG
Delivery	FEDEX GROUND			
Currency	USD			

Notes

Item	Material Description Item Notes	UPC No.	Catalog No.	HTS	COO	Quantity	UOM	Unit Weight LB Ext. Weight LB	Unit Price	Ext. Price	Est. Ship Date
000010	PSA, MINIJET, P01, NEW, MODIFIED	62564	601932	8479896500	CH	1	EA	93.000 93.000	26,985.00	26,985.00	01/25/2018
000020	PSA, CABLE INSERT, 6-8MM, SET, SEALING	62037	509656	8479909496	CH	1	EA	0.361 0.361	415.00	415.00	01/25/2018
000030	PSA, CABLE INSERT, 9-12MM, SET, SEALING	62493	600753	8479909496	CH	1	EA	0.275 0.275	415.00	415.00	01/25/2018
000040	PSA, CABLE SEALS, 6MM	62071	550072	4016935010	FR	1	EA	0.008 0.008	85.00	85.00	02/02/2018
000050	PSA, CABLE SEALS, 7MM- MICROJET	62289	552973	4016935010	CH	1	EA	0.007 0.007	65.00	65.00	01/25/2018

000060	52069206	62225	552103	4016935010	CN	1	EA	0.006 0.006	85.00	85.00	01/25/2018
	PSA, CABLE SEALS, 8MM										
000070	52069124	62143	551028	4016935010	CN	1	EA	0.006 0.006	75.00	75.00	02/02/2018
	PSA, CABLE SEALS, 8.5MM										
000080	52069339	62358	553976	4016935010	CH	1	EA	0.028 0.028	85.00	85.00	01/25/2018
	PSA, CABLE SEALS, 10MM X 22										
000090	52069315	62334	553649	4016935010	CH	1	EA	0.022 0.022	75.00	75.00	01/25/2018
	PSA, CABLE SEALS, 12MM X 22										
000100	52069477	62496	600756	8479909496	CH	1	EA	0.500 0.500	595.00	595.00	01/25/2018
	PSA, DUCT INSERT, 10MM OD										
000110	52069006	62038	509657	8479909496	CH	1	EA	0.498 0.498	595.00	595.00	01/25/2018
	PSA, DUCT INSERT, 12MM OD										
000120	52069007	62039	509658	8479909496	CH	1	EA	0.492 0.492	595.00	595.00	01/25/2018
	PSA, DUCT INSERT, 12.7										
000130	52082076	07438	N274168			1	EA	0.450 0.450	595.00	595.00	01/25/2018
	PSA, DUCT INSERT, 22MM OD										
000140	52069481	62500	600760	8479909496	CH	1	EA	0.300 0.300	595.00	595.00	01/25/2018
	PSA, DUCT INSERT, 32MM OD										
000150	52069453	62472	559496	8479909496	CH	1	EA	0.096 0.096	595.00	595.00	01/25/2018
	PSA, DUCT INSERT, 42MM, MINIJET										
000160	52069123	62142	551009	4016935010	CH	1	EA	0.019 0.019	18.00	18.00	01/25/2018
	PSA, O-RING, 12MM										

000170	52082174	07439	N274167		CH	1	EA	0.020 0.020	18.00	18.00	01/25/2018
O-RINGS, SET OF 22X4											
000180	52069491	62510	600771	4016935010		1	EA	0.030 0.030	18.00	18.00	01/25/2018
PSA, O-RING, 32MM (6/BG)											
000190	52069355	62374	554233	8479909496	US	1	EA	0.037 0.037	23.50	23.50	01/25/2018
MICRODUCT SPREADERS 12MM											
000200	52069354	62373	554230	3926909996	US	1	EA	0.150 0.150	16.00	16.00	01/25/2018
JETCOAT SPREADERS FOR .75" - 1.25"											
000210	52069427	62446	555466	3926909996	US	1	EA	0.250 0.250	17.00	17.00	01/25/2018
JETCOAT SPREADERS FOR 1.25" - 1.50"											
000220	52069579	62598	700045	8419505000	US	1	EA	155.000 155.000	4,700.00	4,700.00	04/23/2018
JET, AIR COOLER, AC-10, NEW											

<i>Subtotal (Before Charges)</i>	36,665.50
<i>Subtotal (After Charges)</i>	36,665.50
<i>Taxes</i>	2,566.59
<i>Final amount</i>	39,232.09



Quotation

Ship To

CITY OF MONROE
215 NORTH BROAD ST
MONROE GA 30655

Quotation No. / Date		Quote Valid To
PCS 12518	01/25/2018	02/23/2018

Sold To

CITY OF MONROE
215 NORTH BROAD ST
MONROE GA 30655

Terms		Weight		
Payment	Credit Card Payment	Gross Weight	281.555 LB	127.714 KG
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000020	PSA, CABLE INSERT, 6-8MM, SET, SEALING	62037	509656	8479909496	CH	1	EA	0.361 0.361	427.45	427.45	01/25/2018
000030	PSA, CABLE INSERT, 9-12MM, SET, SEALING	62493	600753	8479909496	CH	1	EA	0.275 0.275	427.45	427.45	01/25/2018
000040	PSA, CABLE SEALS, 6MM	62071	550072	4016935010	FR	1	EA	0.008 0.008	87.55	87.55	02/02/2018
000050	PSA, CABLE SEALS, 7MM- MICROJET	62289	552973	4016935010	CH	1	EA	0.007 0.007	66.95	66.95	01/25/2018

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PSA, CABLE SEALS, 12MM X 22											
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PSA, DUCT INSERT, 12.7											
000130	52082076	07438	N274168			1	EA	0.450 0.450	612.85	612.85	01/25/2018
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000220	52069579	62598	700045	8419505000	US	1	EA	155.000 155.000	4,841.00	4,841.00	04/23/2018
JET, AIR COOLER, AC-10, NEW											

<i>Subtotal (Before Charges)</i>	37,765.47
<i>Subtotal (After Charges)</i>	37,765.47
<i>Taxes</i>	2,643.59
<i>Final amount</i>	40,409.06



Utility Committee Meeting

AGENDA

February 6, 2018

Item:

Approval - FTTX Pricing

Department:

Additional Information:

Financial Impact:

Budgeted Item:

Recommendation / Request:

Viewing Attachments Requires Adobe Acrobat. [Click here](#) to download.

Attachments / click to download

 [FTTX Pricing Info](#)



To: City Council, Committee, City Administrator
From: Brian Thompson
Department: Telecom
Date: 2/6/2018
Description: Approval is being sought to create new packages for FTTX

Budget Account: Cost of Service Internet

Funding Source:

Budget Allocation:

\$

Budget Available:

\$

Requested Expense:

\$

Company of Purchase:

Recommendation:

Staff recommends the APPROVAL of this request based on the information provided.

Background: Attached

Attachment(s):

Request – 1 page
Background-1 page
Quotes-



Standard Non-SLA Fiber Pricing

We need a standard Non-SLA price structure to take advantage of our FTTX project available speed. We already deploy 1Gbps circuits to customers with a service level agreement (SLA). These circuits are for customers that demand 99.9999% circuit availability and are custom priced depending on circuit length and possible construction cost. Now with the FTTX project we need standard non-SLA 1Gbps and 500Mbps that we can market in FTTX areas once deployed. FTTX customers can subscribe to any of our existing Cable Modem packages if they wish but the FTTX platform can do much more. In the future we may need to change some of our existing plans to meet customers needs. We looked at our market and Acceptable Use Policy as compared to other providers in and around our market and developed the pricing below.

- | | | |
|----|-----------------------------|----------|
| 1. | 1Gbps Bidirectional Non-SLA | \$299.00 |
| 2. | 500Mbps Non-SLA | \$199.00 |