

AGENDA
NELSON COUNTY BROADBAND AUTHORITY
January 12, 2016

**THE MEETING CONVENES AT 1:00 P.M. IN THE
GENERAL DISTRICT COURTROOM, OF THE COURTHOUSE, LOVINGSTON**

- I. Call to Order**
- II. Public Comments**
- III. Reorganization, Election of Officers, and 2016 Meeting Schedule**
 - A. Chair
 - B. Vice Chair
 - C. Secretary
 - D. Treasurer
 - E. 2016 Meeting Schedule
- IV. Consent Agenda**
 - A. Resolution – R2016-01** Minutes for Approval
- V. New/Unfinished Business**
 - A. Network Operator Report - Blue Ridge Internetworks
 - B. Treasurer's Report
 - C. Comprehensive County Broadband Plan
- VI. Other Business**
 - A. County Administrator's Report
- VII. Adjournment**

BYLAWS OF THE
NELSON COUNTY BROADBAND AUTHORITY
A VIRGINIA NONSTOCK CORPORATION

ARTICLE I
OFFICES

The principal office of the Nelson County Broadband Authority (the “Authority”) will be located at the office of the County Administrator, Nelson County, 84 Courthouse Square, Lovingson, Virginia 22949. The authority may have such other offices as the Authority Board (the “Authority Board”) may determine from time to time.

ARTICLE 2
AUTHORITY BOARD

The Authority Board will have five (5) members.

The initial members of the Authority Board shall be the members of the Board of Supervisors, whose terms of office shall be concurrent. The terms of office of the initial members will begin on the date the Certificate of Incorporation or Charter is issued by the State Corporation Commission and will continue for one (1) year.

Henceforth, The Authority shall be comprised of five (5) members appointed by the Board of Supervisors and there shall be one (1) appointee from each election district. Each succeeding member appointed by the Board of Supervisors, shall serve from July 1 until four (4) years hence on June 30 when their term shall expire. Any person appointed to fill a vacancy shall serve the unexpired term of the member being replaced. Board members shall continue to sit beyond the expiration of their term until such time as their successor may be appointed; however, the successor's term shall not be extended by such delay.

ARTICLE 3
GENERAL POWERS AND MEETINGS

- 3.1 GENERAL POWERS. The affairs of the Authority will be managed by the Authority Board, who will conduct its business in public meetings as provided by state law, the Authority’s Articles of the Incorporation, and these Bylaws.
- 3.2 REGULAR MEETINGS. At the Authority Board’s first meeting, it will establish a time, place and location of its meetings. The members of the Authority Board may provide, by motion and recorded vote, the time and place for holding additional regular meetings.

Additional regular meetings will be held at the principal office of the Authority or at such other place as may be designated by the Authority Board.

- 3.3 SPECIAL MEETINGS. Special meetings of the Authority Board may be called by or at the request of the Chairman or any two (2) members and will be held at the principal office of the Authority or at such other place as the members may determine.
- 3.4 NOTICE OF SPECIAL MEETINGS. All notices for special meetings shall be in accord with the provisions of the Virginia Freedom of Information Act (“VFOIA”) at such time, as well as any other applicable state law.
- 3.5 QUORUM. A majority of the members of the Authority Board will constitute a quorum for the transaction of business at any meeting of the Authority Board, but if less than a majority of the members are present at any meeting, then a majority of the members present may adjourn the meeting from time to time without further notice.
- 3.6 BOARD DECISIONS. An act of majority of the members of the Authority Board present at a meeting in which a quorum is present will be an act of the Authority, unless the act of a greater number is required by law or by these Bylaws.
- 3.7 COMPENSATION. Members of the Authority Board as such will not receive any stated salaries for their services, but will receive such compensation as may be fixed from time to time by resolution of the Board of Supervisors and will be reimbursed for any actual expenses necessarily incurred in the performance of their duties. Nothing in these Bylaws will be construed to preclude any member of the Authority Board from serving the Authority in any other capacity and receiving compensation for serving in that capacity, unless the service and compensation violates the law.
- 3.8 VACANCIES. No vacancy in the membership of the Authority Board will impair the right of a quorum to exercise all the rights and perform all the duties of the Authority. If a vacancy on the Authority Board occurs by reason of the death, disqualification or resignation of a board member, then the Nelson County Board of Supervisors will appoint a successor to fill the unexpired term.
- 3.9 ABSENCES. If an Authority Board member should miss three consecutive Board meetings, or five such meetings at any time in a calendar year, then he shall have been deemed to have resigned and the seat shall be vacant until filled by the Board of Supervisors.
- 3.10 MEETINGS OF AUTHORITY BOARD AND COMMITTEES. The Authority Board and all committees of the Authority Board are subject to the requirement of the VFOIA.

ARTICLE 4
OFFICERS

- 4.1 OFFICERS. The officers of the Authority are a Chairman, a Vice Chairman, a Secretary, a Treasurer, and such other officers as may be elected in accordance with this Article 4. No two (2) or more offices may be held by the same person, except the offices of Secretary and Treasurer. Neither the Secretary nor Treasurer need be members of the Authority Board.
- 4.2 ELECTION AND TERM OF OFFICE. The officers of the Authority shall be elected annually by the Authority Board at its annual meeting. If the election of officers is not held at the annual meeting, then the election will be held as soon thereafter as is convenient. New officer positions may be created and filled by the Authority Board by amendment to these Bylaws. Each officer will hold office until his successor has been duly elected and qualifies, even if such term of office extends beyond the date of the annual meeting.
- 4.3 REMOVAL. Any officer elected or appointed by the Authority Board may be removed by the Authority Board whenever in its judgment the best interests of the Authority would be served thereby.
- 4.4 VACANCIES. The Authority Board may fill a vacancy in any office because of death, resignation, removal, disqualifications, or otherwise for the unexpired portion of the term.
- 4.5 POWERS AND DUTIES OF OFFICERS.
- (A) Chairman. The Chairman of the Authority will preside at all meetings of the Authority Board at which he is present. The Chairman also will discharge such other duties as the Authority Board may direct. The Chairman will sign or countersign all instruments that require his signature and will make such reports and perform such other duties incident to his office as required of him by the Authority. Subject to such limitations as the Authority Board may propose, and subject further to the exception of signing or countersigning all instruments that require the Chairman's signature, the duties of the Chairman may be discharged by employees of the Authority except for presiding at meetings of the Authority Board.
- (B) Vice Chairman. In the absence or disability of the Chairman, the Vice Chairman will exercise all of the Chairman's responsibilities and functions.
- (C) Secretary. The Secretary will (i) maintain custody of the corporate seal and books, (ii) issue notices of all meetings of the Authority Board, and (iii) keep the minutes of all meetings of the Authority Board. The Secretary also will keep

proper records of the contracts, deeds, records, publications, and property belonging to the Authority, including the Articles of Incorporation, Charter, Bylaws, and amendments to those documents. The Secretary will sign or countersign to attest to any instruments that so require his signature. The Secretary will make such reports as the Authority Board may require. The Secretary will discharge such limitations as the Authority Board may propose. The duties of the Secretary may be discharged, with the exception of signing or countersigning any instruments, by employees of the Authority acting under his supervision and direction.

- (D) Treasurer. The Treasurer will have the custody of all monies, funds, securities, contracts, mortgages, deeds of trust, leases and deeds of the Authority. He also will keep proper books of account, which books, at all times, will be open to inspection by each member of the Authority Board. The Treasurer will keep proper records of all appropriations and authorizations of expenditures and will maintain itemized and classified accounts of expenditures and pledges made. The Treasurer will deposit the monies and securities of the Authority in such depositories and on such terms as the Authority Board may direct, and as directed by Virginia law, and when so deposited, the Treasurer will not be personally responsible for the safe keeping of the monies and securities.

ARTICLE 5 COMMITTEES

- 5.1 COMMITTEES OF AUTHORITY BOARD. The Authority Board, by a majority vote of the members in office, may designate one (1) or more committees each of which will consist of two (2) or more members of the Authority Board.
- 5.2 MEMBERSHIP OF COMMITTEES. The Chairman will appoint the members of the committees of the Authority Board. The Chairman or the Authority Board, as the case may be, will instruct a committee in its duties.

ARTICLE 6 CONTRACTS, CHECKS, DEPOSITS AND FUNDS

- 6.1 CONTRACTS. The Authority Board may authorize the Chairman or someone acting in his place or stead, to enter into any contract or execute and deliver any instrument in the name and on behalf of the Authority which is proper and legal for the Authority to enter into, and the authorization may be general or may be confined to specific instances.
- 6.2 CHECKS, DRAFTS OR ORDERS. All checks for the payment of money issued in Authority's name will be signed by both the Chairman and the Treasurer. Any notes or other evidences of indebtedness will be signed by the Chairman and attested by the

Secretary, as directed by the Authority Board. Nothing in these Bylaws will prevent Authority Board from adopting a resolution or resolutions permitting the disbursement of funds by other officers or members of the Authority Board or requiring that any funds so disbursed by any approved officer or member of the Authority Board be counter-signed by another officer or member of the Authority Board.

- 6.3 DEPOSITS. All funds of the Authority must be deposited from time to time to the credit of the Authority in a bank that is insured by the Federal Deposit Insurance Corporation.
- 6.4 GIFTS. The Authority may accept any contribution, gift, bequest, or devise for any purpose of the Authority, unless conditions placed on the contribution, gift, bequest or devise, if any, are contrary to law.

ARTICLE 7
BOOKS AND RECORDS

The Authority's books and records will be audited annually either by the Board of Supervisors or by an independent auditor hired by the Authority. A copy of the annual audit of the Authority's books and records will be made available to each member of the Authority Board immediately after the audit's conclusion. A copy of the annual audit will be forwarded in the same manner to the County Administrator and forwarded to the Board of Supervisors.

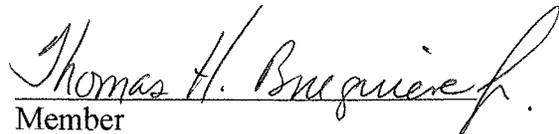
ARTICLE 8
RULES OF ORDER

The Authority will use Roberts's Rules of Order as a procedural guideline for conducting all business.

ARTICLE 9
AMENDMENT OF BYLAWS

These Bylaws may be altered, amended, or repealed and new Bylaws may be adopted by a majority of the members of the Authority Board present in any regular or special meeting at which a quorum is present.

Adopted this 14th day of December, 2010, by the Nelson County Broadband Authority.


Member


Member

Alan M. Hale
Member

[Signature]
Member

[Signature]
Member

ATTEST

Caroline W. McGaughey
Secretary

2016 Proposed NCBA Officers and Meeting Schedule:

- A. Chair – Allen M. Hale
- B. Vice Chair – Thomas D. Harvey
- C. Secretary – Candice McGarry
- D. Treasurer – Debra McCann
- E. 2016 Meeting Schedule – Second Tuesday of January, April, July, October at 1pm in General District Courtroom (Just prior to the regular BOS meeting).

2015 NCBA Officers and Meeting Schedule:

- A. Chair – Alan Patrick
- B. Vice Chair – Allen M. Hale
- C. Secretary – Candice McGarry
- D. Treasurer – Debra McCann
- E. 2015 Meeting Schedule – Second Tuesday of January, April, July, October at 1pm in General District Courtroom (Just prior to the regular BOS meeting).

2014 NCBA Officers and Meeting Schedule:

- A. Chair – Larry D. Saunders
- B. Vice Chair – Alan Patrick
- C. Secretary – Candice McGarry
- D. Treasurer – Debra McCann
- E. 2014 Meeting Schedule – Second Tuesday of January, April, July, October at 1pm in General District Courtroom (Just prior to the regular BOS meeting).

2013 NCBA Officers and Meeting Schedule:

- A. Chair – Thomas D. Harvey
- B. Vice Chair – Larry D. Saunders
- C. Secretary – Candice McGarry
- D. Treasurer – Debra McCann
- E. 2013 Meeting Schedule – Fourth Thursday of each month at 6pm in General District Courtroom

2012 NCBA Officers and Meeting Schedule:

- A. Chair – Thomas H. Bruguere, Jr.
- B. Vice Chair – Constance Brennan
- C. Secretary – Candice McGarry
- D. Treasurer – Debra McCann
- E. 2012 Meeting Schedule – Fourth Thursday of January, April, July, October at 6pm in BOS Room

**RESOLUTION R2016-01
NELSON COUNTY BROADBAND AUTHORITY
APPROVAL OF MEETING MINUTES
(October 13, 2015)**

RESOLVED, by the Nelson County Broadband Authority that the minutes of said Authority's meetings conducted on **October 13, 2015** be and hereby are approved and authorized for entry into the official record of the Broadband Authority's meetings.

Approved: January 12, 2016

Attest: _____, Secretary
Nelson County Broadband Authority

October 13, 2015

Virginia:

AT A REGULAR MEETING of the Nelson County Broadband Authority Board at 1:00 p.m. in the General District Courtroom located on the third floor of the Nelson County Courthouse, Lovingson Virginia.

Present: Thomas H. Bruguere, Jr. West District
Alan Patrick, Central District – Chair
Larry D. Saunders, South District – South
Stephen A. Carter, County Administrator
Candice W. McGarry, Secretary
Debra K. McCann, Treasurer
Susan Rorrer, Director of Information Systems

Absent: Thomas D. Harvey, North District
Allen M. Hale - Vice Chair

I. Call to Order

Mr. Patrick called the meeting to order at 1:05 PM with three (3) members present to establish a quorum and Mr. Harvey and Mr. Hale being absent.

II. Public Comments

1. Gary Strong, Horizons Village - Nellysford

Mr. Strong noted that their neighborhood currently had twenty (20) letters of intent signed. He noted that their community was not completely built out and they were adding about two (2) houses per year and they were expected to also want fiber. He added that four (4) sites did not have homes yet and the owners wanted the fiber installed to make the lots more sellable and two were in the process of development. He noted that they had suggested a hybrid proposal that they would like to see approved; after installations and contracts were done, he would like to see Horizons Village form a Coop to insure that future connections would go through it.

2. Marion Kanour, Edgehill Way - Faber

Ms. Kanour noted she was representing the Edgehill Way community, they had six (6) installation and service contracts with Nelson County Cable and they were working in the neighborhood. She added that they had service boxes in the homes and needed VDOT to give permission for Nelson County Cable to cross the road. She added she was not sure why the permit was not being granted by VDOT and that it was of great inconvenience to them.

3. Tony Mustain, Nelson County Cable

Mr. Mustain noted he represented Nelson County Cable, who was an Internet Service Provider on the Network. He noted that they had five (5) existing customers and five (5) more were under contract; with

six (6) or seven (7) in various stages of connection. He added that they had hired a salesperson to go around and drum up business.

4. Joe Lee McClellan, Nelson County Cable

Mr. McClellan requested that the Authority extend the installation discount until January 1st. He noted that they have made commitments but had not gotten paperwork signed. He added that they had hired a new employee to contact people along the NCBA fiber route to try to help the County get more customers.

III. Consent Agenda

A. Resolution – R2015-06 Minutes for Approval

Mr. Bruguere moved to approve the consent agenda and Mr. Saunders seconded the motion. There being no further discussion, Members voted unanimously by voice vote to approve the motion and the following resolution was adopted:

**RESOLUTION R2015-06
NELSON COUNTY BROADBAND AUTHORITY
APPROVAL OF MEETING MINUTES
(July 14, 2015)**

RESOLVED, by the Nelson County Broadband Authority that the minutes of said Authority’s meetings conducted on **July 14, 2015** be and hereby are approved and authorized for entry into the official record of the Broadband Authority’s meetings.

IV. New/Unfinished Business

A. Network Operator Report - Blue Ridge Internetworks

Nelson County Broadband Authority
A/R Aging Summary
As of October 12, 2015

	<u>Current</u>	<u>1 - 30</u>	<u>31 - 60</u>	<u>61 - 90</u>	<u>> 90</u>	<u>TOTAL</u>
BRI	9,709.36	0.00	0.00	0.00	0.00	9,709.36
Lumos	437.50	437.50	0.00	0.00	0.00	875.00
MBC	1,000.95	600.00	0.00	0.00	0.00	1,600.95
NCC	1,450.00	0.00	0.00	0.00	0.00	1,450.00
Shentel	4,368.00	4,368.00	0.00	0.00	0.00	8,736.00
Social Services	0.00	250.00	0.00	0.00	0.00	250.00
Stewart Computer Services	1,600.00	0.00	0.00	0.00	199.17	1,799.17
TOTAL	18,565.81	5,655.50	0.00	0.00	199.17	24,420.48

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In response to questions, Ms. McCann noted that the amount shown over ninety (90) days old, was due to a discrepancy in the retroactive reduction of their rates and that Staff would get to the bottom of it. Mr. Carter added that it pertained to Stewart Computer Services and staff would get back to them on it.

Nelson County Broadband Authority 10/12/15
Income Statement by Item Accrual Basis
July through September 2015

	Jul 15	Aug 15	Sep 15	TOTAL
Service				
Collo 2RU (Collocation: 2 Rack Units, 20A)	225.00	225.00	225.00	675.00
Collo Full Rack (Collocation: 19" Rack, incl 20A DC)	350.00	350.00	350.00	1,050.00
Collo Power \$250 (Collo Power Fee)	250.00	250.00	250.00	750.00
Collo Power 10A (Collocation: Additional Power, 10A)	437.50	437.50	437.50	1,312.50
Dark Fiber (Dark Fiber Lease)	1,000.95	0.00	0.00	1,000.95
Tier 1 25x5 (Tier 1 25x5 Access Circuit)	2,216.67	2,251.62	2,641.67	7,109.96
Tier 1 50x10 (Tier 1 50x10 Access Circuit)	300.00	300.00	300.00	900.00
Tier 2 100x100 (Tier 2 100x100 Access Circuit)	0.00	0.00	300.00	300.00
Tier 2 25x25 (Tier 2 25x25 Access Circuit)	225.00	225.00	225.00	675.00
Tier 2 500x500 (Tier 2 500x500 Circuit)	0.00	850.00	0.00	850.00
Tier 2 Gig (Tier 2 Gigabit)	1,000.00	1,000.00	1,000.00	3,000.00
Tier 3 1G (Tier 3 Private WAN 1 Gbps)	4,368.00	4,368.00	4,368.00	13,104.00
Tier 3 25M (Tier 3 P2P WAN 25 Mbps)	250.00	250.00	250.00	750.00
Tower Lease (Tower Lease Income)	1,525.00	1,525.00	1,525.00	4,575.00
Xconn (Colocation Cross Connect Fee)	250.00	250.00	250.00	750.00
Total Service	12,398.12	12,282.12	12,122.17	36,802.41
Other Charges				
CF Amort (Construction Fee Amortized Pmt)	1,814.19	2,018.97	2,302.47	6,135.63
CF Std (Construction Fee One-Time Pmt)	0.00	500.00	3,779.00	4,279.00
Total Other Charges	1,814.19	2,518.97	6,081.47	10,414.63
ITAL	14,212.31	14,801.09	18,203.64	47,217.04

B. Treasurer's Report

<u>BROADBAND FUND @9/30/2015</u>	
<u>OPERATIONS</u>	
Beginning Balance 7/1/2015	\$ 406,277.36
July-September 2015 Expenditures	\$ (79,119.71)
July-September 2015 Revenues	\$ 44,958.22
Subtotal	\$ 372,115.87
General Fund Transfer	\$ 150,000.00
Ending Balance 9/30/2015	\$ 522,115.87
Current Year Revenue Exceeds Expense by	\$ 115,838.51

<u>EXPANSION PROJECT</u>	
Beginning Balance 7/1/2015	\$ 38,957.00
July-September 2015 Expenditures	\$ (137,192.00)
July-September 2015 Revenues	\$ 138,188.80
	\$ 39,953.80
<u>SUMMARY OF FUND BALANCE</u>	
Project Funds	\$ 39,953.80
Amortized Installation Fund	\$ 111,915.53
Operational Funds	\$ 410,200.34
Available Bank Balance @9/30/2015	\$ 562,069.67

Ms. McCann reviewed the Broadband Fund balances as of September 30, 2015 and noted that the expenditures related to the expansion project were for project materials. She also noted that the Revenues consisted of the \$100,000 local match for the project and drawn down grant funds.

She also provided a report that showed the following regarding the Broadband Network Operating Fund:

The Broadband Network Operations report showed year-to-date expenditures (July – September) of \$79,119.71 for Network Operations, with there being an unencumbered balance of \$363,285.29 and a Contingency Reserve remaining of \$55,195.00. The Revenue Summary for Network Operations showed year-to-date revenues of \$44,958.22 and a balance of \$175,891.78 expected for the remainder of the year. Ms. McCann Noted that transfers showed \$150,000 that was a contribution from the General fund and \$138,188.80 that was a contribution from the CDBG Grant fund for a total Y-T-D revenue amount shown of \$333,147.02.

Ms. McCann then reported that the \$165,707 appropriated year ending balance shown on the revenue report was the amount set aside for amortized installations and upfront costs.

V. Other Business

A. County Administrator’s Report

Mr. Carter reported the following:

- 1. Current Customer Base:** 136 Connections with 1 Connection in Process = 137 Total Connections.
- 2. Financial Report:** The FY 15-16 year to date summary of revenues and expenditures is included in the agenda document. D. McCann, Director of Finance and HR, will summarize this report to the Authority on 10-13.
- 3. CDBG Grant/County Funded 8 Mile Expansion Project:** Construction start up (Phase 1 – Routes 151 & 6 to Routes 151 & 664) has been delayed due to VDOT permit requirements. Revised drawings and specifications (from the project contractor) will be submitted to VDOT by October 9th or early in the week of October 12th. A ten week build is projected and will be followed by the two additional phases (Rt.

October 13, 2015

151 at network's current norther terminus to County line on Route 151 and, Rt. 151 & 6 to Route 6 and intersection of Saddleback Farm). An end of year project completion is still possible albeit the project may now extend into early 2016.

Mr. Carter noted he thought the final set of drawings were ready to submit to VDOT. He added that the VDOT requirements and comments were more editorial and if need be, he would go speak to the Lynchburg District Director about it.

Mr. Patrick related that when he went to the Regional Broadband meeting in Charlottesville, the one goal was that when a project crossed locality boundary lines, things should be consistent and VDOT needed to find some way to resolve that issue.

Mr. Carter then assured the Board that staff was focused on getting this done and that the County was stuck in the middle between the outside plant contractor and VDOT. He added that Staff had reached out to VDOT to note how important the project was and that to be helpful, VDOT staff had come over and spent the day with CCTS looking at the route.

4. Nelson County Public Schools: A five year dark fiber lease (2 strands) is being completed with Shentel to enable the company to provide greater bandwidth to the public school's local area network (from NCHS/NMS to both Rockfish and Tye River elementary schools and to the central administration office within the Courthouse). The dark fiber lease will be revenue generating, approximately \$20,000 additional income per year, than the current revenue from leasing of circuits from the network to serve the school division.

5. Additional Service Providers: County staff has had recent meetings with Shentel and Lumos (Residential Small Business – RSB Division) staff to discuss the two companies becoming service providers on the NCBA network. While Shentel provides services to the NC School Division it does not utilize the local network beyond this service. Lumos provides service to the County's local government but is not an ISP on the local network. Final decisions by both companies are pending.

6. Meeting with Ting: County staff will meet with representatives of Ting (which purchased Blue Ridge Internetworks within the past year) on 10-22. The purpose of the meeting will be to discuss possible changes in Ting's services as Network Operator to the NCBA network and Ting's interest in providing 5/5 and symmetrical gigabit plans services to end users (customers), which may require revision to the Authority's rate schedule(s) to accommodate these service levels.

7. Negotiating Neighborhood Builds to Achieve Expanded Customer Base: Attached are two financial projections (Edgewood Park and Horizons Village) for the Authority's review and approval consideration. The premise(s) of this information is that the NCBA will share in the expense of expanding the local network into residential neighborhoods/subdivisions, as a means of achieving an expanded customer base. The investment by NCBA in the neighborhood build out(s) would be recovered within a five year period and those properties that do not initially participate in the network build would be subject to payment of the same amount of the lateral installation cost (the expansion of the network from the middle mile backbone into the neighborhood/subdivision, excluding the installation of the service connection from the lateral expansion to the end user) at such time as these properties would decide to request service from an ISP provider on the NCBA network.

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To date, County staff has been meeting with representatives of Edgewood Park (Messrs. Dick Averitt and Howard Ellis) and Horizon Village (Gary Strong) to work to incorporate these two subdivisions into the NCBA network. The input from the two residential communities is the NCBA should also share in the cost of expanding/extending the local network in order to increase the Authority's overall customer base. The present concern with the Authority incurring additional expense to share the cost to expand the network into neighborhoods/subdivisions is, simply put, having the financial capacity to do so. Therefore, it is critically important, if the Authority is amenable to the strategy(s) contained in the attached financial analyses that the Authority is able to recover the investment (albeit over time) from revenues realized from the increase in the network's customer base and do so within an appropriate period of time, which at present is "considered" to be no more than five year (this comports to the five year ability of customers to amortize their installation costs). Assuming that the Authority can at minimum recover its financial outlay(s) within five years and have the potential for additional revenue (that would be realized from revenues paid by customers who did not initially agree to establish service through the neighborhood/subdivision expansion project and would, therefore, be subject to pay the same share of the lateral installation cost, which would be additional revenue to the Authority).

The Edgewood Park and Horizons Village neighborhoods are poised to move forward with these two lateral expansion projects, which would result in approximately 34 total new network connections (15 in Edgewood Park and 19 in Horizons Village). Both of these expansions would be completed once the middle mile network is expanded from Martins Store (Routes 6 and 151) to the intersection of Routes 151 and 664, which, as noted, herein, should begin construction later this month (October).

The considerations for the Authority include: 1) Approval of the two lateral expansion projects based upon the projections completed by County staff (which may require modification once the ability to provide service to these neighborhoods is in place). 2) Continuing to approve such lateral expansions on a case by case basis or providing County staff authority to complete such negotiated expansions based upon no net financial loss to the NCBA network. 3) Possibly revising the rate structure or development of a policy that provides specific criteria for the continued expansion of the local network into neighborhoods/subdivisions in which the Authority, as may be necessary, shares the expense of the lateral expansion from the backbone but recovers this cost through revenues realized from an expanded customer base.

Subject to the Authority's review, staff recommends favorable consideration of the two network lateral builds to Edgewood Park and Horizons Village.

Mr. Carter related that staff had met with Mr. Payne that morning and that neighborhood builds had been authorized with the Paul's Creek Subdivision build and Mr. Payne had written a policy on this. He noted that over five years, the Authority would be fully reimbursed for these installations. He added that the amortization fund enabled this to happen and it currently had a balance of \$111,000. Mr. Carter also noted that staff had been discussing what funds to use for this since it would deplete the amortization fund more quickly since funds would be going out faster than they would be coming in.

Mr. Patrick noted that in the proposals, some number of homes were willing to sign up and then there were a number of empty lots with some interested and some not. He noted that the totals included only those that were interested; however those signing up earlier got to take advantage of the present day costs and what was done about that.

It was noted that Edgewood Park and Horizons Village were different strategies. Edgewood Park would be somewhat subsidized but funds would eventually be recovered and the later connections would be charged the same amount as those that were connecting now. It was also noted that in the latter case, the discount and amortization would not necessarily be available and this should be made known. Mr. Carter added that the Authority was taking future risk and Mr. Patrick noted that in the case of the Rockfish Orchard subdivision, the Homeowners Association took on the build cost. Mr. Carter noted that if the Authority could take on the expansion financially, the growth of the network was important and Mr. Patrick agreed.

Mr. Bruguere then inquired if it would be necessary for Horizons Village to form a COOP and Mr. Carter noted it would be up to them. He added that their build was different because there were more undeveloped lots that were not included in the initial build. Ms. Rorrer added that because of those, the Authority would not just recoup its investment; but rather would earn more over and above that and that would have to be worked out. Mr. Carter noted in using the Horizons Village example, should the NCBA or the HOA be reimbursed. He added that the strategy was to expand the network, not lose money but gain money over time.

Mr. Patrick noted he thought it was good to do as long as it was fair to all and that those that chose not to connect now should have to pay their fair share later. Mr. Carter agreed and noted that they would at some point. He added that unless there was a concern or issue, the plan was to complete the CDBG project and proceed with the two builds in these neighborhoods. He added that the referenced policy gave guidance on how these were to be handled.

Mr. Patrick then questioned how in Edgehill, the build began before the permitting process was complete. Ms. Rorrer explained that the construction that had been completed was outside of the VDOT Right-Of-Way, in utility easements or on private property. She noted that CCTS did the installation. Mr. Carter elaborated that where the contractor could complete an installation without VDOT permits, it was done. Ms. Rorrer added that in an effort to keep things moving along, CCTS went ahead and started. She noted there was the potential risk that they would not get the permit; however she thought they would and it was a matter of logistics.

Mr. Bruguere asked if it would be worthwhile to engage legislators on the VDOT issues and Mr. Carter noted it was not necessary right now and the first step would be to speak with the District Administrator. He noted there were problems on both sides of the equation and Ms. Rorrer added that there had been a change in personnel with VDOT, they were having to adjust to something new, and that the level of detail required had changed.

8. Network Expansion Plan and NCBA Planning Session: A Request for Proposals (RFP) is pending completion. Staff has discussed the tasks, which are multifaceted, that would be included in the planning project but this work is pending completion but will be accomplished within FY 15-16 (and as soon as possible). A pending decision is the \$30,000 planning grant funding request made to VA-DHCD. It is anticipated that the Department will decide on the County's grant application within the ensuing several weeks. If successful (which is very uncertain) the total available funding for the network planning project would be \$80,000, all of which may or may not be required.

With respect to the Authority's request to conduct a session to discuss short and long range planning, staff's recommendation is to schedule this meeting later in FY 15-16 (perhaps in December) to enable

many of the subjects that are presently in process to either be concluded or brought to a point in which the Authority's participation is required. Staff's consideration in this position is that Authority will be better positioned to discuss the status, present and future, of the NCBA in the ensuing months of FY15-16 rather than at present (there are many things in process that when outcomes are final will better position the Authority to have a more meaningful planning session).

9. Letter from Nelson County Community Cablevision: The letter from the local cable company is included under correspondence in the agenda document. Staff (S. Carter) has not responded to the letter and staff does not concur with the statements made in the letter. Staff can provide comment, as may be necessary, to the Authority on the company's correspondence, and is prepared to respond to the letter if the Authority deems it necessary.

Mr. Carter noted that he did not see where the County could reverse course on the project now; which could hurt future funding opportunities and it was too far along. Mr. Patrick agreed and Mr. Carter added that the project was funded through an innovation program and was for job creation and he did not want to give that up.

10. Other: Input, questions, etc. from the Authority or from staff (at the meeting on 10-13).

Thank you for your consideration.

Attachments: Edgewood Park Neighborhood Build & Horizons Village Neighborhood Build

Edgewood Park Neighborhood Build

22 Developed Lots (Homes)

Assuming a Take Rate of 70% (15 customers)

Total Lateral Build Cost:	\$25,124
Total Per Customer Share of Lateral Build Cost:	\$1,142

Edgewood Park neighborhood gets connection agreements from 15 customers.

15 customers initially connect and pay \$17,130 of the total build cost.

NCBA invests \$7,994 in completing the neighborhood build.

It is assumed that NCBA will eventually recover most, if not all, of its investment as the remaining 7 customers connect to the network and are charged an equal share (\$1,142) of the total lateral build cost.

In addition, NCBA begins receiving \$25.00 per customer (from the service provider) in revenue upon connection of the customer.

Even if no new customers connect to the network in this neighborhood:

- NCBA recovers the maximum out of pocket expense for the discount offering (\$750 per customer) in 2.5 years.
- NCBA recovers the \$7,994 investment in an additional 21.3 months.
- All NCBA investment is recovered through revenue in 51.3 months or 4.3 years.

Total Cost of Installation to the Customer (does not include the monthly fee for services):

Share of Lateral Installation Cost:	\$1,142
Customer Drop Installation Cost:	\$1,284
Total Installation Cost Per Customer:	\$2,426

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Total Installation Cost Less \$750 NCBA Discount: \$1,676 (**\$750 discount currently requires 5 year contract with Service Provider.)

Total Monthly Installation Payment per Customer: \$27.93 (Assumes 5 year contract.)

Horizons Village Neighborhood Build

24 Developed Lots (Homes)

19 Letters of Intent to Connect to the Network (80%)

16 Vacant Lots

Total Lateral Build Cost: \$36,097

Total Per Customer Share of Lateral Build Cost: \$1,504

Horizons Village neighborhood gets connection agreements from 19 customers.

19 customers initially connect and pay \$28,576 of the total build cost.

NCBA invests \$7,521 in completing the neighborhood build.

It is assumed that NCBA will eventually recover most, if not all, of its investment as the remaining 5 customers connect to the network and are charged an equal share (\$1,504) of the total lateral build cost.

In addition, NCBA begins receiving \$25.00 per customer (from the service provider) in revenue upon connection of the customer.

Even if no new customers connect to the network in this neighborhood:

- NCBA recovers the maximum out of pocket expense for the discount offering (\$750 per customer) in 2.5 years.
- NCBA recovers the \$7,521 investment in an additional 15.8 months.
- All NCBA investment is recovered through revenue in 45.8 months or 3.8 years.

Total Cost of Installation to the Customer (does not include the monthly fee for services):

Share of Lateral Installation Cost: \$1,504

**Average Customer Drop Installation Cost: \$1,814

Total Installation Cost Per Customer: \$3,318

Total Installation Cost Less \$750 NCBA Discount: \$2,568 (**\$750 discount currently requires 5 year contract with Service Provider.)

Total One-time Payment: \$68.00 (Amount in excess of \$2,500 max for amortization)

Total Monthly Installation Payment per Customer: \$41.67 (Assumes 5 year contract.)

**Distance for drops varies between 200 and 1300 feet. How cost will be allocated per customer is to be determined.

B. Correspondence – Nelson County Cablevision Corporation

This subject was discussed under item #9 of the County Administrator’s Report.

C. Introduced: Strategic Plan and Status of Wireless Deployment

Mr. Patrick then questioned what the Broadband Authority could do to support the strategic planning effort and he suggested forming a subcommittee or having an outside contractor work with staff. Mr. Carter

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noted that staff intended to put together an RFP to hire an outside company to assist with the strategic plan. He added that there were so many things to be looked at: build out, last mile cost, and operations to name a few and it would be best to have someone in the industry help look at all of that.

Mr. Patrick noted that at some point, this would get complicated and he would like to appoint some ex officio officers or have someone preset to discuss and answer the more technical questions they would have. Mr. Carter advised that the County should know soon if it was going to get the \$30,000 planning grant for this. He noted that they could always appoint a citizens committee or a combination of the two. He added that part of the plan could be to look at how to work better with Nelson cable, relooking at the rate structure and a better way to do business.

Mr. Bruguire noted that if the planning grant was awarded and the County hired a consultant, they would be reporting on what was feasible or not. Mr. Carter agreed and noted that there were so many things currently at play such as Shentel and Lumos may want different dynamics in order to work with the Authority and staff would be on this mission.

Mr. Patrick inquired as to what was happening with wireless in the County and Mr. Carter noted he had not heard anything from Mr. Stewart and knew he was working in several other counties. Mr. Carter then advised that the strategic plan would also help with what to do about wireless services. He added that Shentel had related that they may have a wireless interest as well. Mr. Carter then cautioned the members that it was unsure as to whether or not Shentel and Lumos would become internet service providers on the network; however staff was talking with them.

Mr. Bruguire noted that Stewart Computer Services was working in the area and had done work for them recently. He added that he supported getting as many ISPs as possible on the network; however he thought lack of density was an issue. Mr. Saunders noted he had seen Mr. Stewart a few weeks back and noted he had made some personnel changes and was working with other counties. He had noted that he was expanding out where he could as he could.

Mr. Joe Lee McClellan was recognized by the Chair and he advised that Mr. Stewart was expanding as fast as he could and he was not attending the Authority meetings because he did not feel like the County was trying to help him do anything. He added that the County needed to figure out a way to work with him and he used the Massies Mill tower as an example; if he were charged by customer then he would use the tower.

Mr. Carter advised that Mr. Stewart has been paying for the space on the Massies Mill tower and not serving anyone from it.

VI. Adjournment

At 1:58 PM, Mr. Saunders moved to adjourn and Mr. Bruguire seconded the motion. There being no further discussion, Members voted unanimously by voice vote to approve the motion and the meeting adjourned.

BROADBAND FUND @12/31/2015**OPERATIONS**

Beginning Balance 7/1/2015	\$ 406,277.36
July-September 2015 Expenditures	\$ (79,119.71)
July-September 2015 Revenues	\$ 44,958.22
October-December 2015 Expenditures	\$ (92,258.60)
October-December 2015 Revenues	\$ 83,166.95
Subtotal	\$ 363,024.22
General Fund Transfer	\$ 150,000.00
Ending Balance 12/31/2016	\$ 513,024.22

Current Year Revenue Exceeds Expense by \$ 106,746.86

EXPANSION PROJECT

Beginning Balance 7/1/2015	\$ 38,957.00
July-September 2015 Expenditures	\$ (137,192.00)
July-September 2015 Revenues	\$ 138,188.80
October-December 2015 Expenditures	\$ (14,237.50)
October-December 2015 Revenues	\$ 45,377.76
	\$ 71,094.06

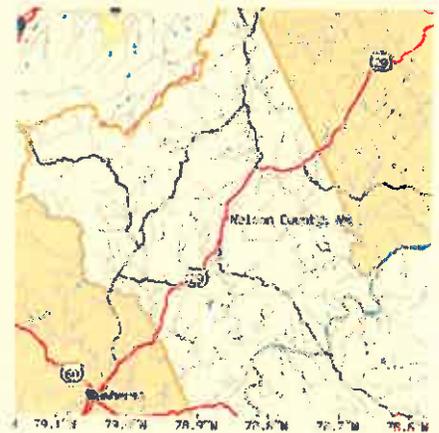
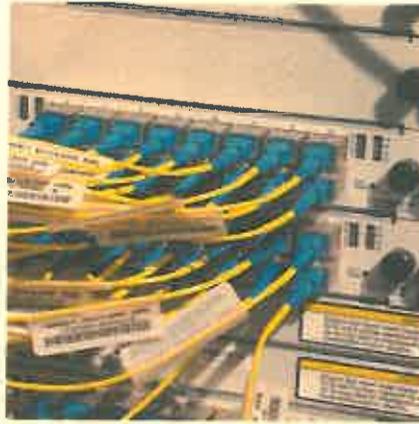
SUMMARY OF FUND BALANCE

Project Funds	\$ 71,094.06
Amortized Installation Fund	\$ 94,271.00
Operational Funds	\$ 409,942.12
Available Bank Balance @12/31/2015	\$ 584,118.28

MAJOR ACCT#	DESCRIPTION	BUDGET AMOUNT	APPR. AMOUNT	CURRENT AMOUNT	Y-T-D AMOUNT	ENCUMBRANCE AMOUNT	UNENCUMBERED BALANCE	REMAIN.
94100	***Broadband Network***							
94200	***Network Operations***							
1011	Remuneration-Broadband Authority	1,875.00	1,875.00	.00	450.00	.00	1,425.00	76.00
3002	Professional Services (Metop)	81,600.00	81,600.00	6,640.00	41,420.00	.00	40,180.00	49.24
3003	Professional Services	10,000.00	10,000.00	2,835.00	9,115.00	.00	885.00	8.85
3004	Repair & Maintenance	7,400.00	7,400.00	.00	100.00	.00	7,300.00	98.64
3005	Insurance	2,500.00	2,500.00	.00	2,342.00	.00	158.00	6.32
3006	Utilities Including Locates	30,000.00	30,000.00	16,819.83	21,039.54	.00	8,960.46	29.86
3009	Installation Expense (Discount)	37,500.00	37,500.00	1,500.00	23,300.00	.00	14,200.00	37.86
3010	Installation Expense	10,000.00	10,000.00	.00	17,349.88	.00	7,349.88	73.49
3011	Installation Expense (Amortized)	146,550.00	146,550.00	3,951.10	36,737.45	.00	109,812.55	74.93
3012	Service Contracts	10,000.00	10,000.00	.00	1,910.64	.00	8,089.36	80.89
5401	Office Supplies	300.00	300.00	.00	.00	.00	300.00	100.00
5501	Travel (Mileage)	150.00	150.00	.00	71.99	.00	78.01	52.00
7007	Equipment	45,000.00	45,000.00	.00	8,011.46	.00	36,988.54	82.19
8112	Tower Leases	9,530.00	9,530.00	9,530.35	9,530.35	.00	.35	.00
8500	Network Strategic Plan	50,000.00	50,000.00	.00	.00	.00	50,000.00	100.00
	Network Operations	442,405.00	442,405.00	41,276.28	171,378.31	.00	271,026.69	61.26
94500	***CDBG EXPANSION 2015***							
3140	Design Drawings	25,580.00	25,580.00	.00	25,177.50	.00	402.50	1.57
3160	Construction	308,377.00	308,377.00	.00	.00	.00	308,377.00	100.00
3170	Permit Fees & Misc.	5,000.00	5,000.00	3,360.00	3,360.00	.00	1,640.00	32.80
8203	Materials	.00	.00	.00	122,892.00	.00	122,892.00	100.00
	CDBG EXPANSION 2015	338,957.00	338,957.00	3,360.00	151,429.50	.00	187,527.50	55.32
	Broadband Network	781,362.00	781,362.00	44,636.28	322,807.81	.00	458,554.19	58.68
999000	***Contingency***							
9901	Contingency Reserve	55,195.00	55,195.00	.00	.00	.00	55,195.00	100.00
	Contingency	55,195.00	55,195.00	.00	.00	.00	55,195.00	100.00
	Contingency	55,195.00	55,195.00	.00	.00	.00	55,195.00	100.00
	--FUND TOTAL--	836,557.00	836,557.00	44,636.28	322,807.81	.00	513,749.19	61.41

MAJOR ACCT#	DESCRIPTION	BUDGET AMOUNT	APPR. AMOUNT	CURRENT AMOUNT	Y-T-D AMOUNT	BALANCE	REMAIN.
999	***Revenues-Broadband Network***						
1502	***Revenue from Use of Property***	4,000.00	4,000.00	.00	2,001.90	1,998.10	49.95
0020	Fiber Leases	77,550.00	77,550.00	39,646.40	45,746.40	31,803.60	41.01
0030	Tower Leases	81,550.00	81,550.00	39,646.40	47,748.30	33,801.70	41.44
	Revenue from Use of Property						
1620	***Charges for Services***						
0001	Network Access Charges	84,000.00	84,000.00	6,043.00	48,378.53	35,621.47	42.40
0100	Other Network Charges	15,000.00	15,000.00	1,787.50	8,025.00	6,975.00	46.50
	Charges for Services						
1899	***Installation Reimbursements***						
0110	Installation Upfront Payments	10,000.00	10,000.00	.00	9,321.00	679.00	6.79
0115	Installation Amortized Payments	30,300.00	30,300.00	47.28	10,284.34	20,015.66	66.05
	Installation Reimbursements						
	Revenue from Use of Property	220,850.00	220,850.00	47,524.18	123,757.17	97,092.83	43.96
3201	***Grants & Transfers***						
4101	***Non-Revenue Receipts***						
4105	***Transfers***						
0100	Transfer from General Fund	150,000.00	150,000.00	.00	150,000.00	.00	.00
0503	Transfer from CDBG Fund	300,000.00	300,000.00	.00	183,566.56	116,433.44	38.81
	Transfers						
	Non-Revenue Receipts	450,000.00	450,000.00	.00	333,566.56	116,433.44	25.87
9999	***Year Ending Balance***						
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Nelson
County
Strategic Plan
for Broadband
Development



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Letter of Interest

Stephen A. Carter
Nelson County Administrator
84 Courthouse Square
Lovington, VA 22949

Dear Mr. Carter:

High-speed connectivity that works as seamlessly as electric power is the goal of Design Nine. The mission of our company is to help communities build and use 21st century infrastructure affordably, with a choice of providers, services, and prices.

Design Nine will assist the County in the completion of a strategic plan for the local broadband network that is owned by the County and administered/operated by the Nelson County Broadband Authority. Our time-tested best practices, state of the art applications and world class partners take the worry out of planning, designing and managing a modern broadband network.

We will support the County and the Broadband Authority as directed and as guided by the enclosed Scope of Work, with the goal of ensuring the long term financial and technical sustainability of the Authority's broadband network.

With our help, County government will have the information and guidance to bring the network to its full potential. Our expertise is unmatched and has enabled us to set new standards in delivering sustainable solutions and strategies for communities around the country.

Our commitment is to assist the County by providing the data, information, and recommendations that will allow you to control your future instead of letting the future control Nelson County. Design Nine operations and management expertise has been the inspiration and road map to success for many communities not only in Virginia but throughout North America.

After you have received our final deliverables, you will know exactly where you stand with respect to your options, detailed cost estimates and funding strategies, and exactly the next steps required. We are confident that Design Nine can not only meet, but exceed your expectations for this work, and can do so affordably. We look forward to the opportunity to work with you.

Best regards,



Andrew Cohill, PhD.
President
Design Nine, Inc.
Email: cohill@designnine.com
2000 Kraft Drive, Suite 2200
Blacksburg, VA 24060

Voice: 540-951-4400
Fax: 540-242-3201

Web: www.designnine.com

Our Approach to the Work

High speed broadband is has become a business and economic development essential for American communities. Design Nine, with more than two decades of experience helping communities get modern fiber and wireless infrastructure, brings “one stop” broadband planning and development to Nelson County.

We are not an engineering firm, we are not a construction firm, nor are we a service provider. Instead, we operate as an architect hired to build a building operates:

- ▶ We create the network design and construction specifications.
- ▶ We develop the business and financial strategy to ensure long term financial solvency.
- ▶ We supervise the work of the contractors we have hired to build the network.
- ▶ We develop and negotiate the business agreements to bring competitive, open access service providers to the county.
- ▶ We can manage the network, including routine network operations, routine maintenance and repairs, and emergency repairs.

Business Planning and
Financial Development

Network Design and
Market Development

Business Staffing and
Operations Development

Fiber Build Out

Ongoing Operations and
Network Management

A NETWORK DESIGNED TO MEET COMMUNITY NEEDS

- ▶ Technical Expertise – We design and build super-fast wireless and fiber networks.
- ▶ Reliability – We help design “business class” networks with features that businesses want.
- ▶ A basket of financing – We can help develop a “basket” of financing strategies that help pay for both initial construction and ongoing expansion.

EXPERTISE FROM A COMPANY A TRACK RECORD OF SUCCESS

- ▶ World class expertise and best practice knowledge to help guide your decisions.
- ▶ Business and financial planning for both short term and long term development.
- ▶ Design Nine provides professional planning and development for your network. You do not need to become network managers or marketers.

A GUARANTEE OF QUALITY IN CONSTRUCTION AND OPERATIONS

- ▶ A job done right because of our deep experience with wireless and fiber construction.
- ▶ Your network runs efficiently and cost effectively because we have the “best practice” knowledge to know what works.
- ▶ Service providers and services are on your network on day one because of our skill and experience attracting and negotiating with service providers.
- ▶ We want your network to support itself. We will work with you to develop a business plan and revenue/expense projections that make sense.

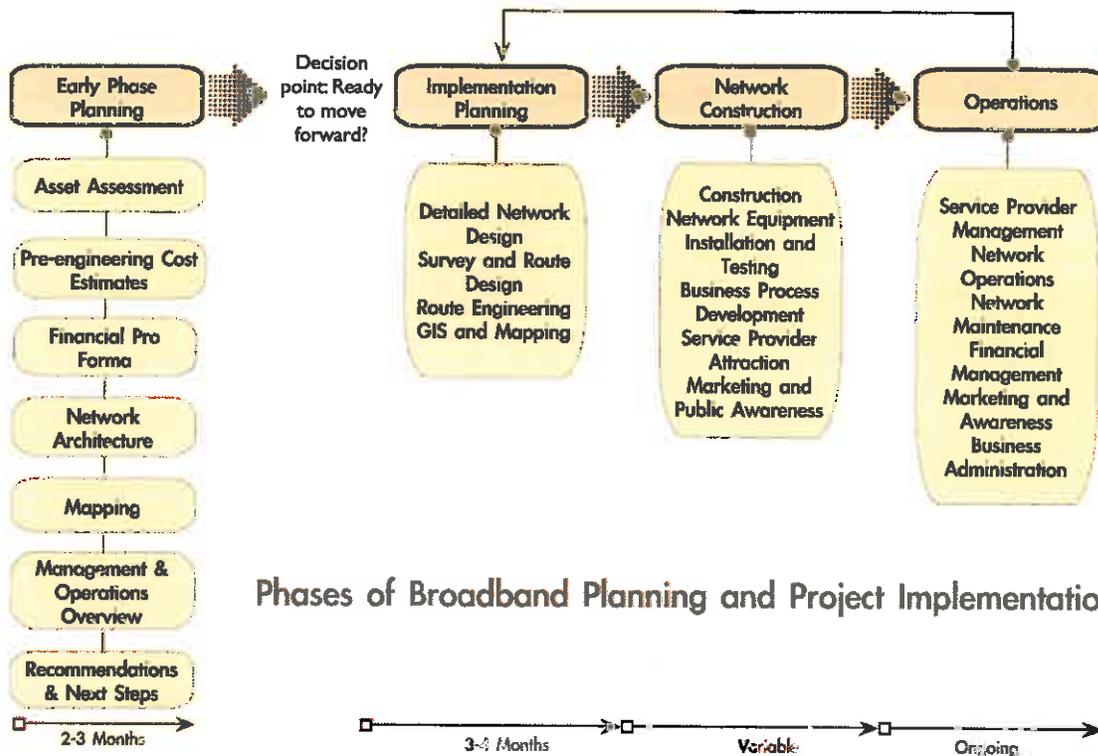
Our approach to success

We believe strongly in a highly interactive and collaborative approach to broadband planning. In our experience, bringing stakeholders, providers, and key users together as part of the planning process is crucial to long term success.



We will schedule extensive discussion and dialogue with asset owners, vendors and service providers. We believe good relationships with asset owners, private fiber networks, and providers is essential, and we fully support the development of public/private partnerships.

By listening and by being open to all points of view, we can more easily identify where resistance may exist, and this allows us to modify and adapt partnerships. We also adjust and change planning to meet and address legitimate concerns. The introduction of new technologies and systems in a community or region creates legitimate concerns and worries. We focus on the human factor in the deployment of new technology and systems and are always looking for the right fit in local conditions.



About Design Nine

Design Nine helps communities plan for and build modern, high performance broadband networks

Design Nine brings many decades of experience in the formation, development and ongoing operation of telecom systems. Our mission is to empower local communities to take control of their economic future with state of the art wireless and fiber networks, through various forms of public-private partnerships which are custom designed for each community.

Our philosophy is to stay involved with our clients for the long term, continuing to work for their success by providing a complete turnkey solution that includes the following services:

- ▶ Financial and business planning, including development of a complete long term financing strategy compatible with existing Virginia law.
- ▶ Network architecture, network design, and construction specifications.
- ▶ Network construction RFP development, contractor procurement, and network construction oversight and quality assurance.
- ▶ Network integration, network testing, and network service provisioning.
- ▶ Network operations, including monitoring, fault diagnosis, repair oversight and quality assurance.
- ▶ We bring service provider attraction, service provider business negotiation, and management services to local networks.

Our management team and senior project leaders have decades of experience in the telecom industry, and there is no other company with as many successful open access networks already up and running.

- ▶ 7 in-place municipal or state networks and 3 under-construction networks
- ▶ 4 active wireless and fiber planning engagements
- ▶ 200+ engagements with communities in twenty-two states since 1994
- ▶ An aggregate of thousands of miles of fiber constructed among our partners.

Design Nine and its team have worked with many local governments over the past twenty years to help them take control of their economic future by showing them “where the money is” and by developing road maps for infrastructure investments.

- ▶ We understand that government projects must be sensitive to local political realities. Our recommendations take into account local government and community initiatives which can make a huge difference in fiber deployments.
- ▶ We understand that funding a project like this is almost always viewed as “risky” by some in the community. Our commitment to the County is provide recommendations and build plans that reflect the current funding opportunities. We do not recommend “pie in the sky” projects that look good on paper but that cannot be funded.
- ▶ We believe in results and achievable goals. Our plans start with a clean sheet of paper for every community, and we build our recommendations organically as we interact with stakeholders, the County, business people, and service providers. Community input, while sometimes “messy,” provides us with the information we need to give the County solid plans grounded in the realities of funding, local spending priorities, construction requirements, and yes, local politics.

Expertise We Bring to Nelson County

NETWORK PLANNING AND DESIGN

We have extensive experience planning, designing and building fiber and wireless networks. We will provide detailed network architecture specifications for backbone/core network routes, local distribution networks, and access network specifications (connections to the business/residence). We have produced both passive (PON) and active fiber network designs, and on the wireless side, have extensive experience with WiFi and WiMax network design.

BUSINESS AND FINANCIAL PLANNING

Our business and financial planning expertise is unmatched, and no other firm has our financial planning tools, which have been developed and extensively enhanced over the past decade to support community-owned networks. For this project, we will work closely with the County to develop a ten year financial pro forma that identifies capital construction costs, operational management and maintenance costs, and identifies expected revenue from businesses and residents. We believe in developing business plans that are financially sustainable over the long term. This means we focus on conservative customer and revenue projections and conservative estimates of operational costs, with the goal to create a self-sustaining business using a basket of financing strategies to build the network.

CONSTRUCTION AND PROJECT MANAGEMENT

We have a well-defined construction and project management (PM) process that is used in every planning effort. More than 140 staff years of experience with technology and community broadband projects enables us to manage and track projects effectively, and we use state of the art PM software and systems. We provide each client with a project management Web site (fully access controlled) so the County and other stakeholders will have a single place to get project updates, meeting times, and project documents. Any actual construction work would be bid out, using procurement documents (RFPs) and detailed network specifications.

GIS AND MAPPING

Mapping work typically includes analysis of market demand in the community, road layout, pole lines (if data is available), public and private tower locations, public buildings and schools, business parks and commercial/retail areas, walking/hiking trails, and easements and rights of way. Our in-house GIS and mapping systems are interoperable with all common GIS and CAD systems typically used by local governments, including ArcGIS and AutoCAD.

LEGAL COUNSEL, CONTRACTS AND AGREEMENTS

Our legal counsel maintains an extensive library of master service provider agreements, tower leases, right of way agreements, service level agreements, and related contracts. As part of the development process, our legal advisors will modify and revise these agreements as needed to meet local and state law.

Our Experience

Among our work is:

Charles City County, VA - Construction on a fiber and wireless network in the county began in early summer. Phase one includes fiber in a key business park, nearby commercial areas, some fiber to the home, and wireless broadband in other parts of the county.

Louisa County, VA - Planning, network design, and cost estimates for a fiber and wireless county-wide network for business, school, and residential use.

Shaker Heights, Ohio - Detailed planning effort underway to deliver fiber to the home to the entire community.

Missoula, Montana- Missoula Fiber - Planning is underway for a regional Gigabit fiber network serving businesses, residents, local government and K12 schools. Work includes design of a 10/100Gig redundant core ring, cost estimates, business plans, and financial strategy.

Bozeman Fiber, Inc. - Our technical design and financial plans, developed in less than six months, is bringing Gig fiber to the City of Bozeman, Montana. Our work with the City raised the initial \$4 million needed to build the network. We are already engineering the design and preparing construction bid documents.

WideOpen Blacksburg - We are currently rolling out the first stages of market development and demand aggregation for this all fiber network in Blacksburg, Virginia. Construction in the first two neighborhoods will start in the spring of 2016.

nDanville - The first municipal open access network in the U.S., in its 9th year and generating enough revenue to return funds to the City and to fund fiber to more homes and businesses.

The Wired Road - The first fully integrated fiber and wireless open access municipal network in the United States. The Wired Road covers 1000 sq. miles and is in its 8th year of operation.

New Hampshire FastRoads - We wrote a successful \$7.7 million stimulus grant and built a 120 mile, 22 town open access network. It has four providers and is in its 3rd year of operation.

Eastern Shore of Virginia Broadband Authority - We provided the financial, business planning for the 80 mile fiber network. In its 7th year of operation, it operates in the black.

Palm Coast FiberNET, Florida - We provided the technical, business, and financial planning for this forty mile City-owned network, now in its sixth year operation--in the black in year 1.

AccessEagan - Design Nine planned and managed the build out of this city owned network in the Twin Cities area of Minnesota. The network is in its second year of operation and has signed three providers. The network has been credited with attracting a major private sector data center to the city of Eagan.

RANA - Design Nine wrote a \$10 million grant, then designed and managed the build of a \$3 million data center and 60 miles of fiber in Rockbridge County, VA and the cities of Lexington and Buena Vista.

Scope of Work

Design Nine will assist the County and the Authority as directed, with work tasks identified below but not limited to these work items.

1. Assistance with a prioritized network build out plan (county wide or as extensively as determined feasible) that encompasses both the local middle mile, fiber backbone and the current (wireless) tower networks. This planning would also entail cost projections, grant and financing sources/options and guidance on the County/NCBA network being a conduit for network expansion to end users by other entities through use of the County/NCBA network.
2. Evaluation and recommendations on the NCBA's current rate structure.
3. Evaluation and recommendations on network operations and outside plant services.
4. Evaluation and recommendations for last mile installations (the County currently provides discounts, amortization of costs and sharing of costs for both individual service connections and/or neighborhood builds that entail expansion of the middle mile network to serve the neighborhood).
5. Assistance in determining options for Nelson County or the NCBA to become a participating entity in the FCC's Connect America 2 Program, including identification of potential partners the County or NCBA could engage to meet FCC program requirements.
6. Assistance with identification of ISPs and WISPs the County/NCBA could solicit to provide services in Nelson County through use of the County/NCBA network.
7. Completion of an overall evaluation of the current structure (funding, staffing, operations, etc.) of the County/NCBA network and its operations with recommendation for overall improvement, efficiency, financial sustainability, etc.
8. Other, as may be determined in further consultation with Design Nine to complete a final scope of work for the proposed strategic planning project.

Staff Overview

ANDREW COHILL, Ph.D., PRESIDENT/CEO

Andrew Cohill is President of Design Nine and will be the project manager and will provide overall supervision and management of the effort. He will provide the strategic planning and design for the project, and he will directly supervise the work of the other staff, will make all work assignments, and will review and approve all work items, reports, and recommendations before releasing them to the client.



SID BOSWELL, CHIEF TECHNICAL OFFICER

Sid Boswell will assist with wireless route identification, technical design, market analysis, and business case analysis. He has extensive experience with the deployment of broadband infrastructure. His prior work experience as a senior consultant and project manager for Accenture included extensive work with some of the country's largest service providers, including AT&T, Verizon, Sprint, Comcast, Nextel, and Iridium. Boswell will also assist with vendor and system evaluation and will work closely with service providers to document their current service offerings and coverage areas, and will assist with public/private partnership development. Boswell has worked for Design Nine for seven years.

MATT BUSSING, NETWORK ENGINEER

Mr. Bussing is an experienced broadband engineer. Bussing has worked extensively on municipal network design and construction, is familiar with a wide variety of fiber and wireless network configurations, and has worked on a wide variety of work efforts, including network design, wireless signal propagation studies, service provisioning, radio testing and configuration, and colo fiber and equipment management. His work has included a \$2 million dollar network expansion of The Wired Road, including middle mile fiber, last mile fiber, tower construction, point to point wireless and broadcast wireless design and installation, building renovations, and design of a public community computing center.



Bussing has been the project lead for the Charles City County planning work that led to a \$650,000 state grant to build fiber and wireless facilities in the county.

ANDREW SHAVER, GIS AND MAPPING

Mr. Shaver has a background in architecture, GIS, mapping, and broadband planning. He works closely with the rest of the Design Nine team to develop GIS-based maps of the planned network, develops the wireless and fiber routes needed for cost estimates, and assists with the cost estimate development.

Fee Proposal and Timeline

For the wide variety of work tasks, we suggest that we work on an hourly basis with monthly billing as the least expensive way of managing the work, with an initial budget of \$32,500.

Travel will be billed at the direct cost of normal and ordinary travel expenses (e.g. mileage, lodging, meals, etc.).

HOURLY RATES

The hourly rates below will be used for billing, and we will provide detailed billing reports showing dates worked, number of hours, and staff who completed the work.

Rate Schedule for Staff	Hourly Rate
Broadband Architect	\$125.00
Network Engineer	\$125.00
Senior Broadband Planner	\$105.00
Financial engineering	\$125.00
GIS/CAD design and mapping work	\$85.00
Technical support and Web development	\$65.00

FINANCIAL AND CONTRACTUAL

Invoices are payable within 30 days. Interest is, therefore, charged in the event of non-payment within 60 days. An interest rate of 1% per month will be charged to the unpaid balance.

BROADBAND STRATEGIC PLAN AGREEMENT

This Agreement is entered into between Design Nine (“Contractor”) and Nelson County Broadband Authority (“Authority”) as of January 4, 2016 is an extension of the Louisa County Broadband Authority Letter Agreement dated January 7, 2015. These terms and conditions will apply to all engagements of Design Nine by Nelson County Broadband Authority unless specifically disclaimed in writing by both parties prior to the beginning of the term for service.

For and in consideration of the mutual covenants, promises, and agreements herein contained, agree as follows:

- 1. PROVISION OF SERVICES:** Design Nine will assist the Nelson County Broadband Authority as directed, with work tasks identified below but not limited to these work items:
 - a. Assistance with a prioritized network build out plan (county wide or as extensively as determined feasible) that encompasses both the local middle mile fiber backbone and the current (wireless) tower networks. This planning would also entail cost projections, grant and financing sources/options, assisting the Nelson County Broadband Authority with development of a strategic plan for its broadband network, and guidance on the Nelson County Broadband Authority network being a conduit for network expansion to end users by other entities through use of the Nelson County Broadband Authority network.
 - b. Evaluation and recommendations on the Nelson County Broadband Authority’s current rate structure.
 - c. Evaluation and recommendations on network operations and outside plant services.
 - d. Evaluation and recommendations for last mile installations (the Nelson County Broadband Authority currently provides discounts, amortization of costs and sharing of costs for both individual service connections and/or neighborhood builds that entail expansion of the middle mile network to serve the neighborhood).
 - e. Assistance in determining options for Nelson County Broadband Authority to become a participating entity in the FCC’s Connect America 2 Program, including identification of potential partners the Nelson County Broadband Authority could engage to meet FCC program requirements.
 - f. Assistance with identification of ISPs and WISPs that the Nelson County Broadband Authority could solicit to provide services in Nelson County through use of the Nelson County Broadband Authority network.
 - g. Completion of an overall evaluation of the current structure (funding, staffing, operations, etc.) of the Nelson County Broadband Authority network and its operations with recommendation for overall improvement, efficiency, financial sustainability, etc.

- h. Other, as may be determined in further consultation with Design Nine to complete a final scope of work for the proposed strategic planning project.
- i. Conduct monthly progress meetings.
- j. Presentation of a final report to the Nelson County Broadband Authority.
- k. Additional Scope of Work may be established with each renewal period.

2. DELIVERABLES INCLUDED IN SCOPE:

The following sections describe in detail the deliverables that the Consultant shall produce and present to the Authority.

a. **Progress Reports:**

The consultant shall meet at least monthly with staff to review findings and discuss progress with work tasks.

b. **Final Report to the Authority:**

The Consultant shall prepare and deliver to the Authority a Final Report that contains all of the collected data and analyses performed by the Consultant during the course of the project.

- i. The Final Report shall be reviewed with staff prior to presentation to the Nelson County Broadband Authority.
- ii. The final report shall address all identified work tasks.

3. **CONTRACT DOCUMENTS:** The Contract Documents consist of this agreement, Letter Agreement with Louisa County dated January 7, 2015, Request for Proposal RFP#BPA – 15-01 dated 10/6/2014, Addendum 1, dated 10/16/2014, Appendix A Louisa County Broadband Authority Standard Terms and Conditions, Design Nine response to RFP#BBA15-01, Design Nine Proposal to Nelson County Broadband Authority dated 12/4/2015, Exhibit B Nelson County Broadband Authority General Conditions. All references to “Louisa County Broadband Authority” in the Letter Agreement with Louisa County Broadband Authority are hereby amended to reference Nelson County Broadband Authority. Where the terms of this agreement are at variance with the provisions of the Letter Agreement with Louisa County Broadband Authority, the provisions of this contract shall prevail. Nelson County Broadband Authority General Conditions Exhibit B will hereby replace Appendix A Louisa County Broadband Authority Standard Terms and Conditions.
4. **CONTRACT TERM:** The initial term of this contract shall be for six months commencing on January 1, 2016. Upon mutual agreement of both parties, this contract can be renewed for up to three additional 1 year periods. Scope of Work shall be established at renewal.

5. CONTRACT AMOUNT: In return for the services identified above, the Nelson County Broadband Authority shall compensate the Contractor at the hourly rates shown as follows:

Broadband Architect	\$125.00
Network Engineer	\$125.00
Senior Broadband Planner	\$110.00
Financial Engineering	\$115.00
GIS/CAD Design & Mapping Work:	\$85.00
Technical Support & Web Development	\$65.00

The Nelson County Broadband Authority will pay a fee to Contractor not to exceed Thirty Two Thousand, Five Hundred dollars (\$32,500.00) for services as described in this Agreement. The hourly rates for the work shall remain fixed during the initial term of the Agreement and any permitted extension thereof. The Nelson County Broadband Authority agrees to pay Contractor according to monthly invoices rendered by Contractor to the Nelson County Broadband Authority during the term of this Agreement. Compensation shall be due Contractor only for that Work authorized by the Nelson County Broadband Authority.

6. INSURANCE: The Contractor shall, during the performance of the Agreement, keep in force at least the following minimum limits of insurance: Workers compensation insurance shall comply with the requirements of the laws of the Commonwealth of Virginia.

<u>Type of Insurance</u>	<u>Each Person</u>	<u>Each Occurrence</u>	<u>Aggregate</u>
Worker's Compensation Public Liability	Statutory	Statutory	
Property Damage			\$1,000,000
Contractor's Protective Public Liability	\$1,000,000	\$1,000,000	
Contractor's Protective Property Damage			\$1,000,000
Contractual Liability	\$500,000	\$1,000,000	
Contractual Property Damage			\$1,000,000
Completed Operations And Products Liability	\$500,000	\$1,000,000	\$1,000,000

8 January, 2016

To: Nelson County Broadband Authority
From: S. Carter
Re: Report for January 12, 2016 NCBA Meeting

An update on the local broadband network is provided, as follows:

I. Subscription: The middle-mile fiber optic networks' customer base (business and residential) is currently 159 connections. The majority of customers are served by Ting (formerly Blue Ridge Internet Works). Nelson County Community Cablevision is also a service provider on the network.

II. Budget/Finance: Please refer to the financial information included in the Authority's agenda documents.

III. Broadband Strategic Plan: The services of Blacksburg based Design Nine have been retained complete a multi-faceted broadband strategic plan. The base contract document, which delineates the work to be accomplished, is attached hereto. Design Nine's services submittal, which provides overall background on the company and its commentary to assist with completion of the planning project is also included within the 1-12 agenda documentation.

IV. Network Expansion Project: The CDBG and County funded Network Expansion Project, which will add approximately 8.1 miles to the middle-mile fiber network in three areas along or extended from the Route 151 Corridor is behind schedule with construction of the first of three phases not yet initiated (as of 1-8-16). The project's construction contractor, Computer Cabling & Telephone Services, Inc. (CCTS), has, as of 1-6, verbally committed to County staff that CCTS will initiate Phase 1 on 1-11-16 and commence from this date to complete the overall project (i.e. Phases 1 – 3). Should CCTS not begin work on 1-11, this will be reported to the Authority on 1-12 to provide direction to County staff on how to proceed in order to provide for the project's completion, which is now approximately 2 months beyond the original completion date.

V. Network Management/Operation: The former Blue Ridge Internet Works was purchased in 2015 by Canadian based Ting. County staff have met subsequent to Ting's acquisition of BRIW with two or Ting's corporate executives to discuss the continuation of Network Management & Operation services (middle-mile fiber network) by Ting. To date, Ting's corporate representatives have advised County staff of the company's willingness to continue this service albeit with proposed contractual changes. These changes entail Ting 1) not being directly or overall responsible for all installation related services with this responsibility transitioning to either the Authority/County or to another third party; 2) billing services that Ting presently administers transitioning to either the Authority/County or to a another third party (Ting would continue to bill its customers on the NCBA network); 3) revision(s) to the NCBA fee structures, as necessary, to enable Ting to provide a 1 Gigabit Service to residential and business customers at a current price point of \$89.95. These proposed changes will be included in the strategic planning project with outcomes either then negotiated with Ting and/or presented to the Authority for, as needed authorizations.

VI. Outside Plant Services (OSP): The network's OSP services have been provided since the startup of the NCBA network by Harrisonburg based CCTS. CCTS is a full service provider with respect to the Authority's OSP needs. However, CCTS's services have proven to be difficult with regard to timeliness and installation errors, which have resulted in complaints from customers and significant criticism from the Network Operator (BRIW, now Ting) due to CCTS's inconsistent services. County staff have

continually prevailed upon CCTS to address and improve these conditions. Another strategic planning project component is how best to address OSP services.

VII. Internet Service Providers (ISP's): The current service providers on the middle mile fiber network include: 1) Ting and, 2) Nelson County Community Cablevision. As noted herein, Ting is seeking contractual changes with the Authority that will enable the company to sell 1 Gigabit services and transition Ting staff in Charlottesville to the business model the company utilizes in its Canadian and U.S. markets (which will require operational changes in the Authority's current contractual relationship with Ting). Retaining Ting as both an ISP and Network Operator are very important to the network and the changes that may be required are not considered by staff to be a basis of dissolution of these relationships. As to Nelson Cable, the company has become an ISP on the Authority/County middle mile network and has added several customers to the network. County staff want this relationship to continue and to improve. However, there is also a competitive and deterrent relationship that also needs to be addressed.

VIII. Wireless Internet Service Providers (WISP's): Stewart Computer Services (SCS) has been acquired by AcelaNet. The former SCS's operations are understood to be continuing to operate status quo, which includes use of two of the Authority's tower locations (Martins Store and Massies Mill) albeit the company's customer base in Nelson County is not reported to the Authority/County and, therefore cannot be provided with this report. County staff will meet on 1-12 with one of AcelaNet's principals and the communications that led to the scheduling of this meeting have provided for optimism in an improved working relationship.

IX. Network Marketing: A recurring concern expressed by the Authority has been network marketing. While a perception the Authority has had is the responsibility for marketing the network is a requirement of Ting's services to the County this is, somewhat of, a misunderstanding. Ting, as well as Nelson Cable, have the responsibility to market their services but neither, necessarily, has a contractual requirement to market the Authority/County network, etc. The efforts, to date, by County staff has been informational with, primarily, posting or public notices to the County's website or to the local newspaper. To address this concern/need, Lisa Shannon of the Department of Economic Development and Tourism (Lisa has an MA Degree in Marketing) will work with County staff to develop a marketing plan that will endeavor to address the needs in all respects to market the network and do so on a continuous basis.

X. Other: County staff met in the third and fourth quarters of 2015 with representatives of Shentel and Lumos and, most recently, on 1-5, with Mid Atlantic Broadband Communications Corporation (MBC). These meetings entailed broad discussions with each company on their respective interest in significantly broader working relationships with NCBA/Nelson County (each of these companies is connected to the middle mile network and provide a degree of services that either support their operations or provide limited services in the County e.g. Shentel provides internet services to the School Division and Lumos provides this same service to the County's local government network). To date, Shentel has advised that it is no longer interested in an expanded relationship with the County other than to serve its business operations outside the County. Lumos staff have advised that their Small Business & Residential Group is meeting on 1-12 to discuss the NCBA/Nelson County network and will advise County staff after 1-12 of any interest the company may have in an expanded services footprint in the County. Most recently MBC's Vice-President of Sales and Business Development met with county staff (1-5) to discuss MBC, which, as a non-profit corporation, operates an extensive middle mile network and is currently working with Louisa, Orange and Culpeper counties to assist with the development of a "possible" regional network. The meeting with MBC was productive with ensuing input from MBC to County staff anticipated in the very near future. The objective of County staff in all of these discussions/meetings was that of the means to strengthen the local network (operationally and financially), expand services, expand the local network, etc.

Please advise on questions you may have on any of the above subjects. Your consideration of the information reported on herein is appreciated.