

Louisa County Broadband Authority Countywide Fiber and Wireless Cost Estimate

1	ITEM/PROJECT	ESTIMATED	INDIVIDUAL PROJECT COST, PM INCLUDED
2	LCBA Co-location and Equipment	\$116,273.00	\$146,503.98
3	Louisa / Mineral Fiber (includes Industrial Air Park)	\$663,044.70	\$835,436.32
4	Louisa / Mineral Fiber Equipment (includes Industrial Air Park)	\$38,728.00	\$48,797.28
5	Ferncliff Fiber	\$294,853.44	\$371,515.34
6	Ferncliff Equipment	\$24,338.00	\$30,665.88
7	Zion Crossroads Fiber (includes both business parks)	\$368,786.48	\$464,670.97
8	Zion Crossroads Equipment (includes both business parks)	\$31,694.00	\$39,934.44
9	K12 Fiber Extensions	\$2,132,609.97	\$2,687,088.56
10	K12 Fiber Equipment	\$62,468.00	\$78,709.68
11	Trevilians Tower & Wireless Equipment	\$82,460.00	\$103,899.60
12	Zion Crossroads Rescue Squad Tower & Wireless	\$82,460.00	\$103,899.60
13	Moss-Nuckols ES Tower & Wireless	\$82,460.00	\$103,899.60
14	Jouett ES Tower & Wireless	\$82,460.00	\$103,899.60
15	Thomas Jefferson ES Tower & Wireless	\$82,460.00	\$103,899.60
16	LCBA Tower & Wireless	\$105,460.00	\$132,879.60
17	Wares Crossroads Tower & Wireless	\$82,460.00	\$103,899.60
18	Louisa County Nuclear Plant Tower & Wireless	\$82,460.00	\$103,899.60
19	North Anna River Retention Tower & Wireless	\$82,460.00	\$103,899.60
20	Gum Springs Tower & Wireless	\$82,460.00	\$103,899.60
21	Network Construction Subtotal	\$4,580,395.59	Not Applicable
22	Project Management, Network Engineering, Integration, and Testing	\$801,569.23	Professional Services costs included in construction estimates for each item (no contingency). The cost of individual projects undertaken separately would total: \$5,771,298.45
23	Engineering Cost Discount for Combined Projects (\$1,500 per mile)	-\$64,095.00	
24	Misc Fees, Advertising, Technical Services	\$15,000.00	
25	Bookkeeping and Administration	\$12,000.00	
26	Other Costs Subtotal	\$764,474.23	Not Applicable
27	Project Total (No Contingency)	\$5,344,869.82	Not Applicable
28	Project Total (10% contingency)	\$5,879,356.80	

NETWORK CONSTRUCTION

The Project Summary table shows the estimated costs for each phase or segment of the proposed network. It includes not only the direct construction costs for burying conduit and cable and/or hanging aerial fiber on utility poles, but also includes the estimated costs for shelter/cabinet and network equipment for each route or portion of the network. Construction costs for drops are estimated based on a take rate for each segment and will be performed during the network construction. While the initial number of drops is relatively small, the network will have the capability of serving many additional drops. Future drops will involve construction costs to be born by the network, the Service Providers, or the individual customers.

PROJECT MANAGEMENT, NETWORK ENGINEERING, INTEGRATION AND TESTING

Project management for a telecom build requires thorough and detailed planning, experience in procuring construction materials for a telecom project, and the ability to oversee and convey project information to contractors through the duration of the project, including construction inspection work (ensuring construction contractors have done their job properly). Some configuring and testing will take place after the network is built and before it is ready for use. Work in this category requires a skilled professional who is familiar with the network architecture and the business model (e.g. open access).

This work does include a full design of the outside plant network, cabinet and shelter specifications, and extensive detail (blueprints) that specifies how all fiber cable, wireless towers, and network equipment is to be installed. These documents have to be completed prior to bidding out any construction work, and are usually included as part of a construction bid package. The detail includes fiber optic cable route determination and size determination, active and passive network equipment selection and placement planning, splicing layouts and documentation, network configuration planning, and all engineering necessary to complete construction.

MISCELLANEOUS FEES AND TECHNICAL SERVICES

Many projects routinely incur a variety of mostly small amounts for fees and services. Typical items might include railroad crossing fees, lease and title fees, notary fees, legal fees for lease agreements or other legal matters, fees for archeological studies, etc.

BOOKKEEPING AND ADMINISTRATION

Network projects create substantial amounts of paperwork, invoices, and related bookkeeping requirements. Grant-funded projects typically incur additional state level and/or Federal reporting and bookkeeping.

CONTINGENCIES

The Contingency category is included and calculated as a percentage of the construction subtotal estimated cost (e.g. 10% of subtotal cost) to provide flexibility in managing the overall budget. Equipment costs can and do change between the time an estimate is made and construction commences. Labor costs can vary depending upon the time of year the work starts, the state of the local economy, national economy, and bidding environment. Some grant agencies do not permit contingency funding as an allowable cost.



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
TOTAL PROJECT REVENUE	\$295,037	\$526,024	\$574,723	\$648,263	\$730,878	\$865,131	\$952,508	\$1,082,121	\$1,187,261	\$1,265,549
EXPENSES:										
Salary, General & Administrative Expenses (SG&A)	\$69,734	\$142,953	\$187,527	\$238,492	\$232,158	\$251,150	\$236,511	\$256,624	\$235,281	\$256,148
Operational Expenses (OPEX)	\$42,068	\$85,681	\$105,432	\$119,046	\$133,903	\$148,411	\$156,763	\$171,726	\$173,761	\$175,465
Interest Expense	\$90,023	\$168,795	\$165,720	\$159,795	\$153,579	\$147,083	\$140,295	\$133,201	\$125,788	\$118,041
Total Expenses	\$201,824	\$397,429	\$458,680	\$517,334	\$519,640	\$546,644	\$533,569	\$561,551	\$534,830	\$549,655
Income After Expenses	\$93,213	\$128,595	\$116,043	\$130,930	\$211,238	\$318,487	\$418,939	\$520,569	\$652,431	\$715,894
Earnings	\$93,213	\$128,595	\$116,043	\$130,930	\$211,238	\$318,487	\$418,939	\$520,569	\$652,431	\$715,894
Depreciation	\$0	\$168,053	\$243,048	\$245,518	\$254,696	\$258,507	\$205,401	\$200,118	\$219,891	\$211,380
Amortization	\$0	\$7,900	\$7,900	\$7,928	\$8,053	\$8,088	\$334	\$370	\$496	\$371
Net Income	\$93,213	-\$47,358	-\$134,905	-\$122,516	-\$51,511	\$51,893	\$213,203	\$320,081	\$432,044	\$504,144
Cash-On-Hand at Year End	\$156,217	\$481,255	\$456,796	\$154,210	\$183,264	\$20,878	\$251,569	\$292,882	\$771,557	\$1,004,211