

PROFESSIONAL SERVICES AGREEMENT

THIS AGREEMENT is made and entered into as of May 27, 2016 by and between **LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT** ("Owner" or "LFUCG"), an urban county government of the Commonwealth of Kentucky pursuant to Chapter 67A of the Kentucky Revised Statutes, located at 200 East Main Street, Lexington, Kentucky 40507 and **CTC TECHNOLOGY & ENERGY aka COLUMBIA TELECOMMUNICATIONS CORPORATION** ("Consultant" or "CTC"), with offices at 10613 Concord Street Kensington, MD 20895. Owner intends to engage the services of Consultant for a high-level design and construction cost estimate of a fiber-optic network in Lexington-Fayette County described in the attached proposal dated April 1, 2016 ("Proposal").

OWNER AND CONSULTANT in consideration of their mutually agreed upon promises, conditions, and covenants, with respect to the services described in the Proposal and payment for those services by Owner as set forth below, agree as follows:

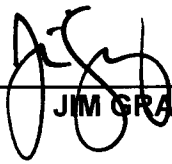
1. **SCOPE OF SERVICES.** Consultant shall use its best efforts to accomplish the following objectives for LFUCG, as defined in the Proposal, which is attached hereto as Exhibit A and incorporated herein by reference as if fully stated.
 - A. Deliverable 1 – Develop high-level design and cost estimate
 - B. Deliverable 2 – Develop a candidate public-private partnership strategy
 - C. Deliverable 3 – Facilitate stakeholder discussions (needs assessment)
 - D. Deliverable 4 – Develop a financial model
 - E. Deliverable 5 – Provide strategic recommendations
2. **COMPENSATION.** The professional services included herein shall be provided at a cost not to exceed \$58,000.00, payable in installments of \$11,600.00 upon satisfactory receipt of each deliverable by LFUCG. Consultant shall submit a detailed monthly report indicating work performed for LFUCG for the duration of this Agreement.
3. **TERM.** The term of engagement shall commence on May 27, 2016 and shall terminate upon Consultant providing the final satisfactory deliverable to LFUCG and receipt of final payment from LFUCG.
4. **CANCELLATION.** LFUCG, through its Council, the Mayor or his designee, may cancel the engagement for services for any reason, and without any liability therefore, upon giving Consultant seven (7) days' prior written notice sent to the last known address of the Consultant. Upon cancellation, LFUCG shall pay Consultant on the basis of the actual services satisfactorily performed and reasonable costs incurred up to the time of the cancellation as calculated by LFUCG.
5. **INDEMNIFICATION AND INSURANCE.** Consultant or any of its agents or subcontractors to the extent permitted by law, agrees to defend, indemnify and hold harmless LFUCG, its employees, volunteers and elected and appointed officials,

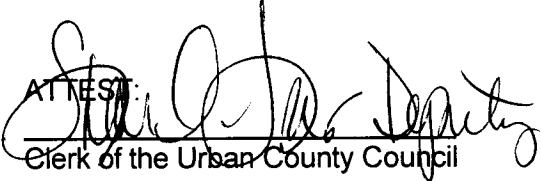
from and against all liabilities, claims, actions, expenses, obligations, losses, fines, and assessments resulting from or arising out of any error or omission, negligence or intentional misconduct or any other action relating to the provision of the services specified herein. Indemnification will include, in addition to the above, attorney's fees, costs related to investigation and defense and any other expenses related to any such claim, action or proceeding. Consultant will not be liable for such claims, actions, obligations, losses, fines, penalties and assessments resulting from or arising out of any error or omission, negligence or intentional misconduct of LFUCG, its agents, employees, volunteers, or elected and appointed officials. Consultant will provide and maintain in force at all times during the term of the services contemplated herein Commercial General Liability Insurance and Errors and Omissions Coverage against claims which may arise from or in connection with the work performed in the principal amount of not less than One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) aggregate, per policy year, for any claim, act or omission in providing those services. Additionally, the Consultant will maintain during the term of the services Commercial Automobile Liability Insurance coverage with combined single limits of not less than \$1,000,000 per occurrence. Said policies shall name "The Lexington-Fayette Urban County Government, its elected and appointed officials, employees, agents, boards, consultants, assigns, volunteers and successors in interest," as "additional insureds." Consultant will also maintain Workers Compensation Insurance as required by the Kentucky Revised Statutes and Employer Liability Coverage equal to \$1,000,000. All policies of insurance shall be placed with an insurer authorized to do business in the Commonwealth of Kentucky with a rating classification of no less than VIII, as defined by the most current Best's Key Rating Guide. The policy will provide that such insurance will not be cancelled, modified or permitted to lapse without thirty (30) days' prior written notice to LFUCG.

6. **INDEPENDENT CONTRACTOR.** Consultant acknowledges and agrees that its employees or agents are not employees of LFUCG for any purpose whatsoever. CTC shall be considered an independent contractor at all times during the performance of the services specified.
7. **ASSIGNMENT.** Consultant will not assign the performance of its services under this agreement without the prior written approval of the Mayor or his designee.
8. **APPLICABLE LAW.** The terms of this engagement shall be governed by the laws of the Commonwealth of Kentucky, both as to interpretation and performance. Any ambiguity is to be construed in favor of LFUCG.
9. **AMENDMENTS.** This Agreement embodies the entire agreement between the parties and shall not be altered except in writing signed by both parties.
10. **NON-WAIVER.** The failure by one party to require performance of any provision shall not affect that party's right to require performance at any time thereafter, nor shall a waiver of any breach or default of this Agreement constitute a waiver of any subsequent breach or default or a waiver of the provision itself.

IN WITNESS WHEREOF, the parties hereto have affixed their hands and seals the day and year first above written.

LEXINGTON-FAYETTE URBAN COUNTY
GOVERNMENT

BY: 
JIM GRAY, MAYOR

ATTEST: 
Clerk of the Urban County Council

CTC TECHNOLOGY & ENERGY aka
COLUMBIA TELECOMMUNICATIONS
CORPORATION

Signed: Joanne S. Norris
Title: President

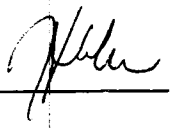
CORPORATE ACKNOWLEDGMENT

STATE OF MARYLAND

COUNTY OF Montgomery

On this the 19th day of April, 2016, before me, the undersigned officer of CTC Technology & Energy aka Columbia Telecom Corp., personally appeared Joanne S. Norris, known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to within the instrument, and acknowledged that he/she executed the same for the purposes therein contained.

In witness whereof I hereunto set my hand and official seal.

NOTARY PUBLIC, residing in Prince Georges Co, Maryland 

My Commission Expires:
01/02/2018

EXHIBIT A

PROPOSAL TO DEVELOP STRATEGIC ANALYSIS OF BROADBAND
OPPORTUNITIES

APRIL 1, 2016

ctc technology & energy

engineering & business consulting

April 1, 2016

Ms. Aldona Valicenti, Chief Information Officer
Mr. Scott Shapiro, Chief Innovation Officer
City of Lexington / Lexington-Fayette Urban County Government
200 East Main Street
Lexington, KY 40507
avalicenti@lexingtonky.gov | sshapiro@lexingtonky.gov

Subject: Proposal to develop strategic analysis of broadband opportunities

Dear Aldona and Scott:

CTC Technology and Energy is pleased to provide this proposal to develop a strategic analysis of broadband opportunities in the areas of Fayette County outside the urban service area. The purpose of this study will be to develop a pragmatic strategy for meeting the needs of the County's businesses and residents with respect to world-class broadband services.

As you requested, we propose to perform the following tasks:

1. Develop high-level design and cost estimate
2. Develop a candidate public-private partnership strategy
3. Facilitate stakeholder discussions (needs assessment)
4. Develop a financial model
5. Provide strategic recommendations

Scope of Work

Task 1 – Develop high-level design and cost estimate

We will develop a high-level design and cost estimate for fiber construction to:

- (1) Create a backbone that could serve as a catalyst for future last-mile deployment while reaching 150 to 200 of the County's key economic development targets—such as community anchor institutions, larger businesses, and businesses central to the County's equine industry—in “horse country” and the non-urban areas of the County.
- (2) Pass all addresses in the target service area

Columbia Telecommunications Corporation

10613 Concord Street • Kensington, MD 20895 • Tel: 301-933-1488 • Fax: 301-933-3340 • www.ctcnet.us

The two cost estimates will enable the LFUCG to understand the likely costs entailed in building this critical infrastructure, regardless of whether the construction is completed by the LFUCG (such that the fiber can then be leased to a private Internet service provider) or whether construction is done by a private investor under an alternative partnership arrangement with the LFUCG.

CTC engineers will conduct an engineering analysis to determine how the LFUCG's existing assets could be used to support this network implementation. To survey candidate fiber routes and develop cost estimates, and to identify efficient and effective way to connect the LFUCG's existing infrastructure to these new routes, a CTC engineer will perform onsite inspections of candidate fiber routing, including examination of existing conduit and fiber resources.

We will identify routing for potential fiber topologies, and will consider construction and design practices to minimize overall cost, including planning construction in conjunction with capital improvements in the rights-of-way (e.g., road work, sidewalk replacement programs).

We will also be seeking to identify areas where relatively small investments in conduit or fiber extensions might add significant value to the LFUCG's infrastructure in terms of economic and community development goals. (We performed a high-level analysis of this type for Arlington County, Virginia to support the jurisdiction's strategic planning for its ConnectArlington network.)

Based on that analysis, we will develop a high-level estimate of likely costs and timelines for construction and implementation of a baseline set of fiber routes. We will identify incremental costs for enhancing construction methodology to include additional conduit capacity and access points to facilitate reduced-cost construction for potential future expansion and site additions. We will seek to identify areas of risk.

Our network design and cost estimates will assume a phased approach to network deployment. To be clear, we will not be providing a blueprint-level network design or cost estimate. Rather, we will be providing an analysis of existing infrastructure, a conceptual design, high-level maps, and a system-level overview of the potential infrastructure—which in turn will become a roadmap for financial analysis and business modeling, and for future decisions (potentially including detailed engineering).

Task 2 – Develop a candidate public-private partnership strategy

Drawing on our experience developing public-private partnerships for local governments (including the cities of Santa Cruz, California; Urbana and Champaign, Illinois; Madison, Wisconsin; Bloomington, Indiana; and Boulder, Colorado) and our thought leadership in this fast-

changing field,¹ we will develop a recommended public–private partnership strategy for the LFUCG.

At a high level, we will consider issues related to risk, benefits, and control. We will focus on determining what role the Unified Government would play and what role the private sector would play in addressing broadband needs in the LFUCG.

We will talk to at least a half dozen potential private partners that may be interested in such an opportunity, to gauge their interest and understand their potential partnership parameters.

We will look at a range of different models including the models currently contemplated for within the urban service area, and other models targeted toward reaching key businesses and stakeholders outside the urban service areas.

Task 3 – Facilitate stakeholder discussions (needs assessment)

The LFUCG’s broadband user groups and stakeholders include the public sector (the Unified Government itself, public safety agencies, other regional government agencies, and educational institutions), business customers, citizens, and broadband service providers. These stakeholder groups have different current broadband needs, and will have unique future demands.

To assess the current and long-term broadband needs of the LFUCG’s stakeholders, we will facilitate five meetings or focus groups with civic leaders, economic organizations, and local businesses outside the urban service area.

We will prepare appropriate questions for each interview subject with a goal of understanding their fiber needs, as well as constraints and challenges. We will draw, too, on our knowledge of the region, developed in our previous engagements with the LFUCG. We will take detailed notes on the discussions, and will use the insights we develop to inform subsequent project tasks—including helping us to understand the size and potential of the broadband market in horse country and other non-urban areas of Fayette County.

We anticipate conducting the in-person interviews over a period of a few days in Lexington. For all of these meetings, we request the LFUCG’s assistance in identifying the participants, scheduling and confirming the focus groups, and arranging a suitable meeting place.

Task 4 – Develop a financial model

As we have done for community broadband strategic planning projects nationwide, we will develop a financial model for the potential broadband network outside the urban service area

¹ CTC President Joanne Hovis recently authored “The Emerging World of Broadband Public–Private Partnerships: A Business Strategy and Legal Guide”—a seminal work published by the Benton Foundation (<https://www.benton.org/sites/default/files/partnerships.pdf>).

based on the system-level design and cost estimates. Our goal will be to help the LFUCG understand, based on the recommended public-private partnership developed in Task 2, the full financial implications of the model, including financing costs (if necessary), operations and maintenance costs, and the revenues necessary to cover those costs.

This high-level financial model will outline operational attributes and processes including policies, staffing levels, maintenance agreements, and other considerations. Particular attention will be paid to back-office and other operating requirements, as well as working capital projections.

The model will include an overall analysis of viable potential services and will provide:

- Sensitivities of key assumptions including, but not limited to:
 - Customer segmentation
 - Market penetration
 - Pricing
 - Tiered revenue structures
 - Operating fees
 - System construction
 - Staffing levels
- Base, best, and worst-case analysis

The pro forma will follow accounting standards and will provide schedules that detail:

- Operating income and cash flow
- Net present value analysis
- Subscriber revenue by service
- Subscriber revenue by customer/customer class
- Debt service analysis
- Reserve fund requirements
- Uses and sources of funds
- Operating expenses
- Operational savings
- Depreciation summary
- Projected construction costs for network, hardware, buildings and other equipment
- Return on investment (ROI)

All of our assumptions and price sensitivities will be clearly stated and justified.

Task 5 – Provide strategic recommendations

Our final deliverable will be a report that recommends a strategic roadmap of actions for the LFUCG’s consideration. The report will include all of the data, insights, and recommendations developed in the previous tasks.

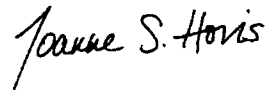
We will provide the LFUCG with an electronic draft of our report, which will include a concise narrative supported by tables, graphics, and maps as appropriate. We will incorporate feedback from reviewers and deliver an electronic version of the final report.

Cost

CTC proposes to perform the tasks described above for a not-to-exceed cost of \$58,000.

Please do not hesitate to contact me if I can answer any questions about our proposal. We look forward to supporting you on this important project.

Best Regards,



Joanne S. Hovis | President