

Our Approach, Scope of Work, Work Plan and Timelines

Broadband planning in rural, frontier, and mountainous communities differs significantly from similar planning in regions that do not exhibit these characteristics. As we live and work in the rural mountains of Colorado, we intimately understand the challenges rural, remote, and mountainous locations pose to development of advanced broadband networks. We also understand the issues regarding construction costs and limited construction seasons. We understand from our own experience, that lacking advanced broadband services can create all kinds of issues in conducting business and that having advanced broadband services is often a game-changer for economic development, delivery of e-government services, and improvement of education and healthcare. An understanding of these issues will be critical in your broadband planning project.

NEO is able to provide seamless end-to-end services for all service areas detailed in this Request for Proposal. Our tightly integrated team has assigned roles and responsibilities for all aspects of project delivery leveraging our in-house subject-matter-expertise to provide you with the depth and breadth necessary to ensure the on-time, on-budget delivery of fiber network engineering and related professional services.

Typically, a weekly or bi-weekly conference call and/or on-site meeting are conducted to communicate progress updates, communications, weekly objectives and critical milestones. In addition to the on-site project meeting, our Project Team will provide weekly electronic update reports to you and will be available as needed to meet with your personnel and associated parties to review schedules and progress.

Individual deliverables and work streams will be managed under a single, unified project plan, allowing for parallel paths and harmonious knowledge transfer, accelerating the planning process for the City of Craig and Moffat County.

Working with all of the key stakeholders within the City of Craig and Moffat County, we will strive to:

- Identify strategies to help make broadband abundant, redundant, affordable and accessible in the areas targeted by the community's broader economic development goals.
- Identify key stakeholders and service providers to include in the needs assessment process. Engage stakeholders and service providers in an ongoing dialogue to identify opportunities for collaboration
- Provide thorough market research on existing service providers, their service offerings and pricing information
- Identify public and private assets in place and provide documentation and maps of assets.
- Identify gaps in services offered and provide a road map and strategies to ensure that public and private investments have the most impact, especially from an economic development and jobs attraction perspective.
- Provide guidance on best practices for products, services and pricing.
- Increase the opportunities for the City of Craig and Moffat County to attract the new Knowledge Economy businesses by having the right broadband infrastructure to complement the excellent quality of life and scenic beauty of the area.
- Address sustainability, scalability and maintenance of the network into the future by recommending various business models for construction and operations.

- Provide guidance on governance, structure, management, and service delivery models.
- Provide sound analysis on risks vs. rewards, identifying both political and financial risks and strategies to mitigate these risks.

Our team is very familiar with the scope of work described within this Request for Proposal. In fact, this is entirely what we do. NEO's Kruse has written articles and speaks nationally on the topic of leveraging existing assets to improve broadband services within your community. We applaud your foresight in establishing a fiber network and we look forward to working with you to help achieve your economic development goals. We realize the importance of having advanced broadband infrastructure within your community and are confident that we can help with the planning, design, financial aspects and community engagement needed to educate your community, involve key stakeholders that may be partners in this endeavor.

We can be creative because we are intimately familiar with all of the aspects of broadband planning. This includes the design, engineering, identifying capital costs, mapping existing resources, engagement with anchor institutions, other providers and key stakeholders and in the negotiation of resources. This aids our ability to put together a comprehensive business and financial plan, giving you the tools needed to implement an advanced broadband network.

Below is a detailed approach to the Scope of Services.

Kick-off Meeting. Before we begin the work needed to formulate the plan, we will set up a meeting with you, key stakeholders and the steering committee to further define the mission, value and goals of the project. In this meeting and in collaboration with the City of Craig and Moffat County staff and the broadband committee, we will specifically identify the components of the implementation plan document. In our planning session, we will also identify and recommend key stakeholders and potential partners that shall participate in the process and map out and assign dates to all of the required meetings, workshops, and tasks necessary to complete the plan document. Our team will be available either in person or via conference call to participate in all meetings necessary to inform the the broadband committee, City Councils, County Commissioners and any key stakeholders in the process.

Deliverable: Work Plan, timelines, list of contacts of shareholders and businesses, talking points and agendas for the meetings with stakeholders. Project Plan and Timeline.

Timeline: Week 1

Baseline Information, Existing Assets, Current Speeds, Needs Assessment

As part of our market research, we recommend having several days of meetings set aside for discussions with City and County leaders, GIS departments and time to conduct the on-site speed tests. We believe good relationships with community leaders are essential as well as excellent communications with asset owners, private fiber networks, and providers. We will make every effort to represent you well in all of our communication with stakeholders. We also recommend sending out a survey to businesses and residents that includes questions regarding current service and usage, future needs, service providers, pricing, and questions regarding their current needs and experiences. The survey can also include a real speed test to gather these results as well. Additionally, we will assess the

citizens' preferences for the City of Craig and Moffat County's role in promoting more affordable, reliable, and abundant broadband.

Deliverable: Report on surveys, speed test results.

While we are conducting stakeholder meetings/calls with anchor institutions, businesses and service providers, we will also schedule meetings/conference calls with the participating jurisdictions and the Colorado State Office of Information Technology to collect, verify and compile data. Additionally, we will meet with CDOT, Unite Fiber Networks, regional and local economic development councils, the local transit authorities, the power and energy companies, the cellular companies, EAGLE-net and any other entities that might have conduit, right of way, easements, pole attachments, fiber, towers or other assets. These meetings will gather information and available maps of existing public and private assets in place and available for contractual use. From our surveys, and community engagement meetings and our independent research, we will gather, evaluate and analyze information on broadband-dependent next-generation needs from users within the potential service areas (i.e. residents, businesses, city, county, healthcare, and public safety and educational institutions).

Deliverable: The needs assessment will include current and future needs of these users.

We will assemble information on the market, including the existing service providers (middle mile providers and last mile providers), their service offerings and pricing and assess their capabilities, their financial ability to expand services and their offerings and their future plans for further build-out of their facilities. We will conduct one-on-one meetings and conference calls with the service providers to identify potential partnerships, and opportunities for collaboration. We will invite them to participate in the planning process.

We also recommend issuing a formal Request for Information for the service providers to respond to regarding potential Public-Private Partnerships. NEO's team will write the RFI and will respond to questions submitted during this process. This RFI will provide information on what is possible regarding partnerships with the private sector, funding available to cover capital costs, services that can be offered and pricing information. This process will inform our team of the specific options and models available for potential Public-Private Partnerships.

Deliverable: Market research on competitive service providers and their service offerings. Request for Information document and report of findings.

Asset Mapping

We have a team of individuals dedicated to utilizing GIS to assist clients with various projects including asset management solutions for a wide variety of a community's assets. We will assemble maps of existing assets within the City of Craig and Moffat County, including any conduit and/or fiber that are owned by the various agencies. We will also assemble maps of existing infrastructure owned by other entities such as the local ISPs, incumbent cable and phone companies, the Department of Transportation, the local transit authorities, the power and energy companies, the cellular companies, and any other entities that might have conduit, right of way, easements, pole attachments, fiber, towers

or other assets. Gathering this information will allow us to access potential public/private partnerships and identify assets that may be leveraged and may contribute value to the Broadband Plan.

We will gather information and available maps of existing public and private assets in place and available for contractual use and we will provide a Google-Earth file or GIS-based map of these assets. We will then provide an assessment of these assets, including the technical evaluation of the existing

Deliverable: Map of existing fiber, conduit and other assets

Perform a Gap Analysis of the Current Broadband Environment

Preliminary Design, Preliminary Engineering, and Projected Capital Costs. From the service provider, infrastructure owner and stakeholder meetings, NEO will provide its support and expertise to identify gaps in the network of service coverage. We will define, identify, map, characterize, and report on the opportunities and challenges presented by a variety of last mile network options, disruptive technologies, - including input from multiple stakeholders and other relevant data sources; and will provide support and expertise in designing, developing and delivering of complex networking solutions; including providing advice on relevant trends and best practices on last mile broadband approaches and models.

We will design a broadband delivery system that leverages any existing conduit, and fiber assets in place and addresses both the current and future needs of the City of Craig and Moffat County. Our team has vast experience in accurately estimating design and construction costs for underground FTTP systems because our design partner, AEG, has designed and built over 80% of the FTTP municipal networks in the country and provides lead design for Google Fiber. Working for Google Fiber has sharpened our abilities and has challenged our team to provide innovative construction techniques that have the ability and potential to significantly reduce construction costs.

With our real-world construction of FTTP network experience comes practical advice and know-how. This experience will greatly impact the success of this project. No other consulting firm has this vast experience and knowledge in actual – not just theoretical – implementation.

Plan to Fill the Gaps, Meet Broadband Needs. We will provide information on trends in the industry globally, providing information on average and best broadband speeds, pricing targets, best practices and reasonable standards for capacity, throughput, quality of service/reliability, etc. for multiple applicable classes of next generation broadband services. NEO will rely on its previous experience, research already conducted in the industry by others, and our knowledge, expertise and vast resources of information assembled over the years.

We will research these attributes through community engagement meetings, surveys, market research, etc. We will take the information compiled for the City of Craig and Moffat County and compare it to findings conducted nationally to determine and predict market demand, estimated take rate percentages and needs. We will also provide best practices for mitigating any uncertainty in trying to predict these factors to eliminate or minimize risks associated with take rate projections.

From the information gathered through the Needs Assessment process, we will identify existing broadband options and costs and will examine the feasibility of the City partnering with various service providers and other infrastructure owners. We will provide an assessment of the strategies and alternatives to address the engineering and business parameters for deploying broadband service throughout the City. We will determine what economic and community impact broadband issues are having on the City of Craig and Moffat County. The Gap Analysis should include an evaluation of key issues limiting broadband expansion.

Deliverable: Preliminary design of network maps using GIS-based mapping software. Projected capital costs and write-up of methods for construction and delivery of service options. Write up of economic and community impacts and evaluation of key issues limiting broadband expansion.

Models for Consideration, Service Delivery Options, Collaboration, Partnerships and Possibilities and Prioritization. During our engagement with City of Craig and Moffat County, we will identify opportunities for collaboration, joint builds, grants, etc. that will influence the prioritization of the project/needs. There needs to be ample time available in the budget to discuss these opportunities and strategies.

We will provide numerous options for consideration including strategic partnerships, specific targeted investments, financing and contracting models and public/private partnerships. The options will include policy changes, dark fiber leasing, open access, municipality-owned and controlled offering of retail services and potential public-private partnerships. The report will include of all issues and discussion of pros and cons of various approaches, options for consideration regarding business models, public/private partnerships and public options.

Business and Financial Modeling. NEO's team will provide detailed financial models for each of the various approaches described above. This business and financial model will include capital investment required, additional assets required, potential services and partners, the operations and maintenance costs of execution of the plans and salary projections based upon need personnel, professional services, outsourcing, and operational needs. Our financial models also address sustainability and financial ratios that investment firms will use to access whether or not the project plan is a good investment, mitigating risks of debt coverage and operational execution. The business and financial models will address all areas discussed in the RFP document and will include reasonable and/or conservative assumptions. We have a proven track record in financial planning for broadband fiber networks.

We will provide a number of plans that are executable and specific to City of Craig and Moffat County. We also have extensive experience on development of potential partnerships and synergies and can provide real-world examples of these partnerships, not just lip-service of these partnerships. Our financial models provide flexibility to easily input various assumptions, variables and what-if scenarios. We will not evaluate a single option, but rather, will provide a number of various approaches and their financial outcomes.

Deliverable: The plan, maps of the planned network, and cost estimates. Business and financial models, capital expenses, projected financial statements, (P&L, balance sheet and cash flow statements) return on investment and feasibility objectives, SWOT analysis, strategies and options.

Recommendations on Broadband Strategy

The Broadband Plan Report will take a holistic approach that is comprised of several sections, including a detailed write-up of the assumptions, timelines, expectations and our recommendation of all of the various models and approaches. We will provide a multifaceted analysis of the data from all of the previous deliverables and our assessment of the best broadband strategy to implement.

We would recommend reviewing the plan draft and cost estimates with the City of Craig and Moffat County staff and the broadband committee to provide feedback on the plan. After we receive feedback from the steering committee, we will put together the final plan.

Deliverable: Draft and final report. Presentations for City and County staff, the committee and City Council and County Commissioners

We will attend all meetings and will meet all of the requirements of this RFP.

Fees/Cost Proposal

We charge an hourly rate of \$150/hour for our services. For travel-related expenses, we will pass through actual costs with a 10% mark-up. Travel related expenses will be minimal as our team is primarily located in Colorado.

Here is our estimated budget for all of the activities outlined in the scope of work. We anticipate no more than a budget of \$2,000 for reimbursable travel expenses.

Scope of Work	Hours	# of People	Hourly Rate	Total
1. Inventory county and municipal broadband infrastructure, public and private. Include download and upload capacity and inventory all physical transport.	20	1	\$ 150	\$ 3,000
2. Conduct and record speed test data for all designated Community Anchor Institutions (CAI's) and inventory current broadband demand at CAI's.	16	1	\$ 150	\$ 2,400
3. Survey a representative sample of local businesses for bandwidth demand.	16	1	\$ 150	\$ 2,400
4. Determine total bandwidth demand for urban and rural communities in order to plan an infrastructure that meets current and future demand.	5	1	\$ 150	\$ 750
5. Address all reasonable means of connectivity and redundancy, including fiber, wireless, and other.	5	1	\$ 150	\$ 750
6. Identify all unserved and underserved sections of the City and County, both residential and commercial sectors.	16	1	\$ 150	\$ 2,400
7. Survey local service providers to assess total demand.	40	1	\$ 150	\$ 6,000
8. Identify major consumers of bandwidth.	8	1	\$ 150	\$ 1,200
9. Determine ratios of public and private sector demand.	5	1	\$ 150	\$ 750
10. Evaluate and report on partnership opportunities within and surrounding the County. Inventory opportunities for aggregating resources.	40	1	\$ 150	\$ 6,000
11. Evaluate willingness of owners of easements and rights of ways to share those resources to improve the broadband infrastructure.	5	1	\$ 150	\$ 750
12. Inventory Middle Mile providers to service to our communities.	20	1	\$ 150	\$ 3,000
13. Inventory and contact Last Mile providers and invite their participation in this planning effort.	8	1	\$ 150	\$ 1,200
14. Identify gaps in the broadband network and strategies to fill those gaps, including cost estimates and funding sources.	60	1	\$ 150	\$ 9,000
15. Deliverables will include all information collected, all supporting materials in written and electronic (editable) format, and a Moffat County Telecommunications Plan.	16	1	\$ 150	\$ 2,400
16. Conduct community meetings as needed.	40	1	\$ 150	\$ 6,000
		Total		\$ 48,000

We can work with the City of Craig and Moffat County to narrow and refine this budget as needed.

In Closing

We thank you for the opportunity to submit our response to your Request for Proposal and we look forward to working with City of Craig and Moffat County team involved in the planning process. For more information, or for further questions, please contact Diane Kruse at 970-309-3500 or by email at diane@NEOconnect.us