



**NEO's Proposal for El Dorado County, Pre-Construction Costs
Design and Engineering Services and Consulting
Fiber to the Premise Networks**

Contact and Preparer of Document:

Diane Kruse
NEO Connect
PO Box 2664
Glenwood Springs, CO 81602
Contact: 970-309-3500
Email: diane@NEOconnect.us
Website: www.NEOconnect.us



Table of Contents

Company Background and Overview	3
Our Experience	3
Team Personnel, Qualifications and Technical Expertise	4
Ability to Meet Project Schedule	7
Previous Projects Similar in Scope	8
LATA Scope of Work, Final Design and Engineering Services for Fiber to the Premise Networks	9
Final Design and Engineering	10
Deliverables, Reimbursable Work Product.....	10
Detailed Cost Estimates.....	11
Proposed Timeline for Completion within 24 months.....	18

Company Background and Overview



NEO Fiber, Inc., doing business as NEO Connect, is a Colorado-based firm that was formed in 2010, and has offices in Denver and Glenwood Springs, Colorado. We are a privately-held, woman-owned business with less than twenty employees.

NEO's founder and CEO, Diane Kruse has served as Chairman of the Fiber Broadband Association, a national industry organization that provides advocacy, education and resources to companies, organizations and communities who want to deploy the best networks through Fiber to the Premise networks. Kruse also served as Masters of Ceremonies and one of the Chairmen of the Broadband Communities' Summit, another broadband advocacy organization helping to shape the national conversation regarding improving broadband services.

Throughout our twelve-year history, we have worked with hundreds of local governments on broadband planning services. NEO has the capacity to undertake the project/services for El Dorado County and can conform to the requirements of the proposal. Bios of our key team members are provided and a description of our team is provided below. Additionally, we have provided resumes of the key team members assigned to this project.



Our engineering partner, eX² Technology, focuses on the design and construction of fiber optic and FTTP networks. eX² is headquartered in Omaha, NE and maintains local sales, engineering and operations offices in Denver, CO Chicago, IL and Atlanta, GA. eX² is a single-source solution for those seeking to build, scale or upgrade their communications infrastructure. It provides smart community, critical infrastructure, intelligent transportation and private network solutions and services with greater efficiency, less cost and a streamlined acquisition process. eX² specializes in network design-build-maintain services, network asset commercialization and project financing assistance for communities, public and private agencies, broadband consortiums, utilities and carriers. More information can be found at www.eX2technology.com.

For more than 25 years, eX² Technology management team members have worked together designing, building, commercializing and maintaining healthcare, energy and intelligent transportation, broadband networks throughout the US. Through their combined efforts, eX² team members have designed and built more than 2M+ fiber miles and accumulated \$340M+ in duct and dark fiber sales. NEO and eX²'s engineering team have worked together for more than 18 years. NEO will be the Prime Contractor for this engagement and eX² is a subcontractor to NEO.

Our Experience

NEO is one of a handful of companies in the industry that has first-hand experience in planning, community engagement, design/engineering, business modeling, financing, owning, and operating fiber optic, wireless and Fiber to the Premise (FTTP) networks. NEO is keenly interested in this project as the Scope of Work aligns with exactly what we do. We provide community broadband planning and engineering services for local governments that want to improve the lives and economic opportunities of their constituents.

NEO's core competences include strategic and financial planning, design and engineering services,

Gigabit planning services, project management and construction oversight. We have extensive experience in conducting all the distinct types of work required to implement the scope needed for this project. We fully understand the requirements of the project, the nature of the work and the level of effort necessary to successfully provide the defined services because we have provided feasibility studies and consulting services for more than 200 broadband planning and implementation projects across the United States, Canada and the U.S. Virgin Islands.

We agree with your intention and consideration of having a modern digital infrastructure in place. We too, consider broadband, smart city and digital infrastructure to be a critical component of a competitive city or county of the future, and we are aligned with your desire to ensure El Dorado County is well positioned to meet the current and future needs of its residents, businesses and anchor institutions.

Team Personnel, Qualifications and Technical Expertise

NEO and eX² have provided feasibility studies, planning, design/engineering and implementation work for the following entities; many of which include regional councils of governments, economic development councils, local municipalities and counties and school districts. Below is a sampling of our team members clients.

- Jeffco Schools
- City of Arvada
- City of Westminster
- Region 10
- City of Grand Junction
- Town of Estes Park
- El Dorado County, CA
- Central Sierra region, CA
- Garfield County, CO
- Southwest Colorado Council of Governments, CO
- Iron Range Communities, MN
- Stearns County, MN
- UC2B, Illinois
- Teller County, CO
- Routt County, CO
- Town of Mount Washington, MA
- Chattanooga EPB
- City of Nashville
- Iowa DOT
- Michigan DOT
- City of Batavia, IL Rural Nebraska Healthcare Network
- KGP
- City of Highland Park. IL
- Arizona Hospital and Healthcare Association
- ExteNet
- Chicago Transit Authority
- City of Ottumwa, IA
- Ammon, ID
- E-470 Public Highway Authority
- Colorado Springs School District #11
- Five Colleges Net
- Mid-Atlantic Broadband Cooperative
- Illinois Rural Health Net
- MassBroadband 123
- Iowa Communications Network
- State of Connecticut
- Colorado DOT RoadX
- Boulder Valley School District
- Mass Technology Collaborative
- Ports of Oakland, Los Angeles, Long Beach, Corpus Christi, Baltimore, Miami, USVI Port Authority, Houston
- Sho Me Technologies, MO
- San Miguel County, CO
- U.S. Virgin Islands NGN
- Moffat County, CO
- State of Tennessee
- State of Colorado
- Atlanta BeltLine, Inc.
- Verizon
- Delta Montrose Electric Association

- Blue Ridge Internetworks
- Ting/Tucows
- Google Fiber
- State of Tennessee
- Gilpin County
- Clear Creek County
- Cedar Networks
- Pitkin County
- City of Durango
- Hagerstown Fiber
- Point Broadband

Projects requiring unique human capital specialties must have dedicated specific resources throughout the life of the project to ensure success. We have assembled a highly qualified team of industry experts to address each of your needs. Our collective team has the experience, education and ability to execute your project in a methodical manner using time-tested proven processes.

NEO's Diane Kruse will be the primary lead person for all work on the plan, and for all of the associated deliverables of this project. Chad Renfro will lead the design and mapping efforts for this project.

Below are the bios of the team members who will be working on the El Dorado County project. Resumes are provided as an attachment to this proposal. Our team members are available and will commit the time needed in order to meet the project schedule described in this proposal.

DIANE KRUSE, CEO and Lead Consultant, NEO (Glenwood Springs)



Diane is the founder and CEO of NEO. She will be the primary contact and lead project manager for this project and will be the meeting facilitator for all meetings, conference calls and consulting services.

Diane has founded four successful telecommunication companies and is providing consulting services for start-up organizations, high-growth companies and Fortune 500 companies. She has 32 years of telecommunications and energy industry experience, the last 21 years as an entrepreneur starting and managing successful telecommunication, energy and start-up companies. Prior to NEO, she was the CEO of Zoomy, a leading firm in the FTTP industry that specialized in FTTP design/engineering and construction for municipalities, rural telecommunications companies and real estate developers. In addition to providing engineering and construction services, Zoomy also owned and/or operated multiple FTTP networks throughout the country. Diane is an experienced leader and visionary with an excellent track record of managing complex and diverse projects.

JIM ENGLISH, PROJECT MANAGER, NEO (Glenwood Springs)



Jim has recently joined NEO's team as a Project Manager and Consultant. Prior to joining NEO, Jim was the Executive Director of Information Technologies for Colorado Mountain College (CMC). Jim was responsible for the Information Technology Department, and includes Strategic Technology Planning, IT Security, Application Services, Service Desk, Desktop Support and Network Services. Jim was with CMC for 28 years and was instrumental in the strategic development and deployment of a private high-speed data network that connects all of CMC's locations, campuses and student population. Before CMC, Jim was the Director of Information Services for Eastern New Mexico

University – Roswell, and he spent over three years as a faculty member teaching information technology. Jim holds a Bachelors of Business Administration and a Master of Business Administration from Eastern New Mexico University. Jim has been the co-chairman of Club 20's Telecommunications Policy Committee.

DOUG FLENTGE, PROJECT MANAGER, NEO (Glenwood Springs)



Doug has recently joined NEO's team as a Project Manager. Prior to joining NEO, Doug was the Operations/Project Manager for Glenwood Caverns Adventure Park (GCAP). Doug was responsible for all capital improvement projects as well as all aspects of park operations including, Capital Improvements, Infrastructure Build-out, Major and Minor Park remodel projects, Maintenance, Attractions, Facilities and Transportation. Jim has been involved with project management for 5 years with GCAP and was responsible for several large projects including commercial, utilities, transportation and employee housing. Before GCAP, Doug worked for several engineering firms in design and project management. Doug holds a Bachelors of Mechanical Engineering from University of California, Los Angeles.

CHAD RENFRO, EIT, PROJECT MANAGER, eX² TECHNOLOGY (Atlanta)



Chad Renfro, EIT, will lead the overall program's preliminary design and engineering services effort. He has more than 12 years of telecommunications and fiber optic industry experience, much of it as an Engineering Manager. Chad's previous experience includes positions as a Design Engineer, Engineering Project Manager, Project Manager, Director of Strategic Development and Sales and Specifications Engineer. He is an expert in site selection consulting, fiber optic counts and sizing, conduit design, telecommunications and fiber optic engineering/FTTP engineering, adherence to safety standards, scheduling and budgeting and day-to-day project management responsibilities. Chad holds a Bachelor of Science in Electrical Engineering from the Georgia Institute of Technology and is a registered EIT.

JAYSON SWOPE, VP OF ENGINEERING, eX² TECHNOLOGY (Omaha)



Jayson Swope has over 20 years of experience in the telecommunications and critical infrastructure industry. He leads the eX² engineering group and has extensive experience overseeing communications and critical infrastructure engineering teams across the nation. Jayson is responsible for all project specific systems design engineering, integration, testing and acceptance of large-scale communications and security systems. He has received numerous certifications, is a lauded industry conference speaker and was named Security Dealer Magazine's "Top 20 Under 40" Most Influential Leaders in 2011. Jayson holds a Bachelor of Science degree in Engineering from Iowa State University.

JAY JORGENSEN, VP OF OPERATIONS, eX² TECHNOLOGY (Omaha)



Jay Jorgensen, eX² VP of Operations, is responsible for exceeding customer expectations by bringing complex networks to completion, on time and within budget. Jay has held operations and executive management roles within the telecommunications and security industries for more than 20 years. He oversees strict adherence of contract specifications as well as eX²'s stringent safety and quality standards. Jay has overseen large capital projects at a management and executive level for a wide range of customers. Jay holds a Bachelors of Business Administration in Finance from the University of Iowa.

JIM BUHRDORF, P.E., OSP ENGINEERING MANAGER, eX² TECHNOLOGY (Omaha)

Jim is a licensed Professional Engineer in 13 states with more than 20 years of experience designing, estimating and administering contracts for multi-million-dollar fiber optic infrastructure construction projects, including designing FTTP networks for Cambridge NE, Bartley NE, East & West Lafayette IN, Logansport IN, Monticello IN, Westfield IN, Greenwood IN, Thornton IN, Crawfordsville IN, Huntington IN, Ammon ID, and Mount Washington MA. Prior to joining eX², Jim served as the Director of Engineering for MetroNet, Inc., an internet, voice and IPTV provider, based in Evansville, Indiana. Under Jim's direction, MetroNet designed, built and operated 22 FTTP networks in rural to mid-sized communities throughout suburban and rural communities in Illinois and Indiana. Jim holds a Bachelor of Science in Engineering with a minor in Mathematics and Chemistry from Iowa State University.

ROGER BRANDENBURG, LEAD ESTIMATOR, eX² TECHNOLOGY (Omaha)

eX²'s Lead Estimator, Roger Brandenburg will provide estimates and bill of materials for the capital costs for the network. Roger has 20+ years of experience in OSP design, network estimating, ROW permitting and environmental permitting and is a Certified Fiber to the Home Professional (CFHP). He has successfully completed complex communications and critical infrastructure projects for private companies and large governmental entities across the country.

MONTE WOODS, SR. CADD & GIS TECHNICIAN, eX² TECHNOLOGY (Omaha)

Monte Woods is a 20+ year veteran CADD operator with exceptional relevant experience in developing engineering and design drawings for municipal construction and permitting packages. As an expert in his field, he understands GIS-based design and leverages AutoCAD for routine design drawings. He has worked alongside eX²'s Jim Buhrdorf for over 15 years, on thousands of fiber-optic design projects across the nation, including countless, multi-million-dollar projects for critical public infrastructure. Monte completed his Associates Degree in Drafting and Engineering Design from the Metropolitan Community College and studied GIS at the University of Nebraska at Omaha.

GIS, Engineering and Consulting

In addition to our core team listed above, each of our respective organizations brings a host of engineers, GIS-mapping specialists, project managers and consultants.

Ability to Meet Project Schedule

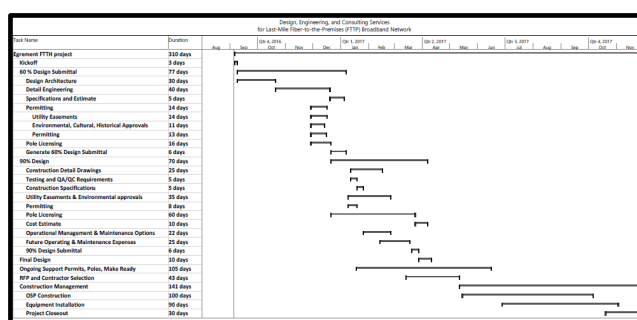
Our team members have the availability and will commit the time needed to meet the project schedule per the requirements of the proposal. NEO's Diane Kruse will manage the overall project management and deliverables of this engagement. We base all project schedules using the Critical Path Method

(CPM), breaking the project into several work tasks, entering them into a flow chart and then calculating the project duration based on estimated durations for each task.

The project schedule will be vetted internally and externally for resource allocation and work effort determination. Logs will be used to track ongoing issues and risks defined by the team members for resolution and/or mitigation. NEO manages its work utilizing formal project schedules. The overall project schedule will address all major tasks to be performed and the project's work flow.

We will have regularly scheduled project meetings to provide the progress, schedule, and budget reports. In addition to these meetings, we recommend weekly scheduled conference calls or meetings to discuss work progress and any issues as they arise. We believe a high level of communication and collaboration with your staff will ensure all people are informed of the project's progress.

We will consistently update and adjust the schedule to meet your implementation deadlines. The schedule will be adjusted on a weekly basis to reflect actual production and field conditions. Contingency and recovery plans will be developed and implemented as warranted to ensure on-time project completion. All decisions will include a project schedule impact analysis. To help manage and monitor the schedules, we utilize two regular status meetings – a weekly status meeting and a monthly project schedule meeting.



SAMPLE PROJECT SCHEDULE

Previous Projects Similar in Scope

NEO has become a leader in local government broadband planning in the State of Colorado. We have provided planning, evaluation, management, and/or implementation services for thirty-five (35) of the state's sixty-four (64) counties, and for forty-nine (49) cities and towns statewide. The vast majority of these projects have been rural, grant-funded efforts aimed at enabling economic development, educational opportunities, public safety, government accessibility, and lowering costs and improving services for all. While we are proud of our local roots and the positive change that we have affected across Colorado, NEO continues to work nationally to improve broadband services.

To highlight some of our experience, in California, we have recently completed a Broadband Plan and Feasibility Study for El Dorado County. We completed the needs assessment, policy recommendations, inventory of existing assets, mapping of CIP, paving and potential projects, including both middle mile and last mile considerations. Our plan included a comprehensive phasing, funding and sustainability plan. We conducted ride-outs of various key infrastructure routes, worked with Caltrans and developed capital cost estimates for implementation of middle mile infrastructure. We provided a number of options for consideration and are now working with the County in development of pilot projects, partnership, and funding alternatives. Within the last year, we have applied for several pilot projects through the EDA Public Works Program to build middle mile infrastructure to some of their most unserved areas. The County has received a conditional grant award for three project areas to build middle mile fiber infrastructure - Cool, Garden Valley and parts of Georgetown.

This project will further the work in El Dorado County by providing final design and engineering for

several priority areas within the County. With this work, NEO has established relationships with many of the key stakeholders in the region, including the Tahoe Prosperity Center, Placer County, the Sierra Business Council, Tahoe Transportation, Douglas NV County, Washoe County, Caltrans, and the NV Department of Transportation.

Another recent project in California is our work with the Central Sierra five counties of Alpine, Amador, Calaveras, Mariposa and Tuolumne County. NEO's team is completing their Broadband Roadmap to implement middle mile fiber and last mile fiber through partnerships with the State of California, Caltrans and the existing service providers in region.

We recently completed two broadband feasibility studies for the Iron Range Communities in St. Louis County, MN and a feasibility study and Request to Negotiate process for Stearns County, MN to seek service provider partners to leverage ARPA monies, Border-to-Border grants and to build out to most of the County with Gigabit services.

NEO completed the State of Tennessee's strategic broadband plan, assisting the State in developing policies, strategies and funding mechanisms to improve services throughout many of its economically distressed counties. In Mississippi, we have developed, built and operated one of the first FTTP projects in the state. That project expanded from a single master planned community to working with nine large municipalities to bring Gigabit services to all of their constituents. In recent years, we have worked on broadband projects in Florida, Utah, the Virgin Islands, Michigan, Minnesota, Kansas, Mississippi, Illinois, and Arizona.

We have recently implemented a smart-city, broadband enabled program for the Atlanta Beltline project, the City of Herndon, and Highland Park. We are also currently working with the City of Aurora, Illinois on monetizing their existing fiber network.

LATA Scope of Work, Final Design and Engineering Services for Fiber to the Premise Networks

NEO will provide final design and engineering services for a Fiber to the Premise GPON Network capable of a minimum of 1000/1000 Mbps to all homes and businesses provided in the shape files within the following unincorporated communities of El Dorado County.

- Chrome
- Coloma
- Cool
- Garden Valley
- Georgetown
- Pleasant Valley
- Fairplay
- Somerset
- Grizzley Flats
- Spring Creek

All of these project areas are either unserved or underserved, currently lacking consistent broadband capacity of 100/20 Mbps. Shapefiles for all of these geographic areas are included in the submission.

Final Design and Engineering

The work for these project areas includes the following tasks.

Detail Design – Finalize desktop design and create necessary drawings required to complete future phases of the work.

- Import all provided maps, data, shape files and high-level design notes into GIS
- Perform detailed route surveys.
- Perform Pole Survey
- Update the route design and make necessary modifications to the route.
- Develop typical fiber construction details (i.e., Aerial, directional boring, and underground installations).
- Develop typical installation details (Handhole, Splice case, entrances, patch panel, splice diagram).
- Outside plant drawings will include plan view drawings for permitting and construction.
 - a. The proposed aerial design will be located within the communication space.
 - b. The proposed underground/buried design will include the applicable HDPE conduits with applicable risers, handholes.
- Fiber sizing and splitter design.
- Finalize construction drawing package.
- Finalize specifications.
- Develop Bill of Materials
- Develop construction pricing

Make Ready Engineering

- Perform make ready engineering
- Pole loading analysis
- Complete pole attachment applications

Assumptions and Pricing Clarifications

- Assumed 80% underground and 20% aerial construction for most project areas. Some project areas assumed 100% underground construction.
- All quantities are approximate and based on preliminary assessments of each community.
- Unit rate for make ready engineering is included if required by pole owner
- Unit rate for pole load analysis is included if required by pole owner
- Taxes are not included in price, if required all applicable tax will be included in billing

After the design stage is complete, NEO will provide strategic consulting services including developing public private partnerships, RFPs for construction and final mapping and construction documents.

Deliverables, Reimbursable Work Product

The reimbursable work product will include a written engineering study for each project area will include network and outside plant drawings for permitting and construction, construction-ready

documents with fiber sizing and splitter design, specifications, bill of materials, and projected construction pricing.

After the design is complete, the work product includes strategic consulting regarding next steps and potential public private partnerships with service providers, a written RFP for construction and grant close-out.

The project will be broken down by geographic area and includes the following reimbursable work products:

	Cost
Chrome Ridge Design	\$ 3,441.89
Coloma Design	\$ 22,069.13
Cool Design	\$ 76,803.57
Garden Valley Design	\$ 52,276.81
Georgetown Smaller Section Design	\$ 20,902.50
Pleasant Valley Design	\$ 30,118.86
Fairplay Design	\$ 35,982.27
Somerset Design	\$ 21,308.54
Grizzley Flats Design	\$112,260.99
Spring Creek Design	\$ 72,484.09
Subtotal	<u>\$447,648.63</u>
Final Mapping, Construction Documents, Consulting, RFP, Contingency	\$ 52,351.37
Total	<u>\$500,000.00</u>

Detailed Cost Estimates

NEO charges an hourly rate of \$175 per hour for consulting services. The costs for the design work for this project is based upon the number of households and the number of utility poles per each project area. The per unit rates vary based upon the household density per mile. This information was assembled during the earlier broadband planning work and includes the following detailed cost estimates and major assumptions.

Chrome Ridge				
(Density 48.94 HHP / Mile)				
Description	Estimated Quantity		Unit Rate	Estimated Total
FTTH Engineering	23	HHP	\$ 25.80	\$ 593.37
Field Engineering (Underground) CRO	23	HHP	\$ 123.85	\$ 2,848.53
Pole Survey	-	Pole	\$ -	\$ -
Make Ready Engineering (MRE) (if required)	-	Pole	\$ -	\$ -
Pole Load Analysis (PLA) and Pole Applications (if required)	-	Pole	\$ -	\$ -
Pole Attachment Application	-	Pole	\$ -	\$ -
Total				\$ 3,441.89
Major Assumptions		Chrome Ridge		
# Parcels/Passings	23			
Total Plant Miles	0.47			
# Poles	0			
Est. Aerial Miles	0.00			
Est. UG Miles	0.47			
Aerial %	0%			
UG %	100%			
Density HH/Mile	48.94			

Coloma				
(Density 11.69 HHP / Mile)				
Description	Estimated Quantity		Unit Rate	Estimated Total
FTTH Engineering	45	HHP	\$ 121.57	\$ 5,470.54
Field Engineering (Underground) CRO	45	HHP	\$ 139.95	\$ 6,297.95
Pole Survey	41	Pole	\$ 98.98	\$ 4,058.26
Make Ready Engineering (MRE) (if required)	41	Pole	\$ 82.26	\$ 3,372.48
Pole Load Analysis (PLA) and Pole Applications (if required)	41	Pole	\$ 50.27	\$ 2,061.23
Pole Attachment Application	41	Pole	\$ 19.72	\$ 808.66
Total				\$ 22,069.13
Major Assumptions		Coloma		
# Parcels/Passings	45			
Total Plant Miles	3.85			
# Poles	41			
Est. Aerial Miles	0.77			
Est. UG Miles	3.08			
Aerial %	20%			
UG %	80%			
Density HH/Mile	11.69			

Georgetown, Smaller Section				
Major Assumptions				
Georgetown Smaller Section				
# Parcels/Passings	267			
Total Plant Miles	7.98			
# Poles	0			
Est. Aerial Miles	0.00			
Est. UG Miles	7.98			
Aerial %	0%			
UG %	100%			
Density HH/Mile	33.46			
Georgetown, Smaller Section (Density 33.46 HHP / Mile)				
Description				
Estimated Quantity		Unit Rate	Estimated Total	
FTTH Engineering	267 HHP	\$ 37.73	\$ 10,074.58	
Field Engineering (Underground) CRO	267 HHP	\$ 40.55	\$ 10,827.92	
Pole Survey	-	\$ -	\$ -	
Make Ready Engineering (MRE) (if required)	-	\$ -	\$ -	
Pole Load Analysis (PLA) and Pole Applications (if required)	-	\$ -	\$ -	
Pole Attachment Application	-	\$ -	\$ -	
Total			\$ 20,902.50	

Cool				
Georgetown, Smaller Section (Density 31.32 HHP / Mile)				
Description				
Estimated Quantity		Unit Rate	Estimated Total	
FTTH Engineering	535 HHP	\$ 45.33	\$ 24,253.16	
Field Engineering (Underground) CRO	535 HHP	\$ 39.34	\$ 21,046.37	
Pole Survey	181	\$ 59.93	\$ 10,846.70	
Make Ready Engineering (MRE) (if required)	181	\$ 44.13	\$ 7,987.80	
Pole Load Analysis (PLA) and Pole Applications (if required)	181	\$ 50.27	\$ 9,099.59	
Pole Attachment Application	181	\$ 19.72	\$ 3,569.95	
Total			\$ 76,803.57	
Major Assumptions				
Cool				
# Parcels/Passings	535			
Total Plant Miles	17.08			
# Poles	181			
Est. Aerial Miles	3.42			
Est. UG Miles	13.66			
Aerial %	20%			
UG %	80%			
Density HH/Mile	31.32			

Garden Valley (Density 28.87 HHP / Mile)				
Description	Estimated Quantity		Unit Rate	Estimated Total
FTTH Engineering	343	HHP	\$ 45.90	\$ 15,743.70
Field Engineering (Underground) CRO	343	HHP	\$ 42.07	\$ 14,428.64
Pole Survey	118	Pole	\$ 67.23	\$ 7,933.14
Make Ready Engineering (MRE) (if required)	118	Pole	\$ 50.10	\$ 5,911.62
Pole Load Analysis (PLA) and Pole Applications (if required)	118	Pole	\$ 50.27	\$ 5,932.33
Pole Attachment Application	118	Pole	\$ 19.72	\$ 2,327.37
Total				\$ 52,276.81
Major Assumptions		Garden Valley		
# Parcels/Passings	343			
Total Plant Miles	11.08			
# Poles	118			
Est. Aerial Miles	2.22			
Est. UG Miles	8.86			
Aerial %	20%			
UG %	80%			
Density HH/Mile	30.96			

Pleasant Valley (Density 24.39 HHP / Mile)				
Description	Estimated Quantity		Unit Rate	Estimated Total
FTTH Engineering	140	HHP	\$ 58.24	\$ 8,153.46
Field Engineering (Underground) CRO	140	HHP	\$ 60.03	\$ 8,404.83
Pole Survey	61	Pole	\$ 86.21	\$ 5,258.87
Make Ready Engineering (MRE) (if required)	61	Pole	\$ 66.10	\$ 4,031.86
Pole Load Analysis (PLA) and Pole Applications (if required)	61	Pole	\$ 50.27	\$ 3,066.71
Pole Attachment Application	61	Pole	\$ 19.72	\$ 1,203.13
Total				\$ 30,118.86
Major Assumptions		Pleasant Valley		
# Parcels/Passings	140			
Total Plant Miles	5.74			
# Poles	61			
Est. Aerial Miles	1.15			
Est. UG Miles	4.59			
Aerial %	20%			
UG %	80%			
Density HH/Mile	24.39			

Fairplay				
(Density 14.92 HHP / Mile)				
Description	Estimated Quantity		Unit Rate	Estimated Total
FTTH Engineering	107	HHP	\$ 95.16	\$ 10,182.28
Field Engineering (Underground) CRO	107	HHP	\$ 94.37	\$ 10,097.06
Pole Survey	76	Pole	\$ 77.06	\$ 5,856.41
Make Ready Engineering (MRE) (if required)	76	Pole	\$ 59.56	\$ 4,526.71
Pole Load Analysis (PLA) and Pole Applications (if required)	76	Pole	\$ 50.27	\$ 3,820.82
Pole Attachment Application	76	Pole	\$ 19.72	\$ 1,498.99
Total				\$ 35,982.27
Major Assumptions				
Fairplay				
# Parcels/Passings	107			
Total Plant Miles	7.17			
# Poles	76			
Est. Aerial Miles	1.43			
Est. UG Miles	5.74			
Aerial %	20%			
UG %	80%			
Density HH/Mile	14.92			

Somerset				
(Density 12.98 HHP / Mile)				
Description	Estimated Quantity		Unit Rate	Estimated Total
FTTH Engineering	47	HHP	\$ 109.58	\$ 5,150.24
Field Engineering (Underground) CRO	47	HHP	\$ 129.59	\$ 6,090.57
Pole Survey	39	Pole	\$ 103.37	\$ 4,031.41
Make Ready Engineering (MRE) (if required)	39	Pole	\$ 84.78	\$ 3,306.42
Pole Load Analysis (PLA) and Pole Applications (if required)	39	Pole	\$ 50.27	\$ 1,960.69
Pole Attachment Application	39	Pole	\$ 19.72	\$ 769.22
Total				\$ 21,308.54
Major Assumptions				
Somerset				
# Parcels/Passings	47			
Total Plant Miles	3.62			
# Poles	39			
Est. Aerial Miles	0.72			
Est. UG Miles	2.90			
Aerial %	20%			
UG %	80%			
Density HH/Mile	12.98			

Spring Creek				
(Density 18.17 HHP / Mile)				
Description	Estimated Quantity		Unit Rate	Estimated Total
FTTH Engineering	292	HHP	\$ 78.14	\$ 22,816.30
Field Engineering (Underground) CRO	292	HHP	\$ 68.96	\$ 20,135.74
Pole Survey	170	Pole	\$ 58.86	\$ 10,006.20
Make Ready Engineering (MRE) (if required)	170	Pole	\$ 44.86	\$ 7,626.29
Pole Load Analysis (PLA) and Pole Applications (if required)	170	Pole	\$ 50.27	\$ 8,546.58
Pole Attachment Application	170	Pole	\$ 19.72	\$ 3,353.00
Total				\$ 72,484.09
Major Assumptions	Spring Creek			
# Parcels/Passings	292			
Total Plant Miles	16.07			
# Poles	170			
Est. Aerial Miles	3.21			
Est. UG Miles	12.86			
Aerial %	20%			
UG %	80%			
Density HH/Mile	18.17			

Grizzley Flats				
(Density 48.39 HHP / Mile)				
Description	Estimated Quantitiy		Unit Rate	Estimated Total
FTTH Engineering	1,250	HHP	\$ 29.34	\$ 36,669.38
Field Engineering (Underground) CRO	1,250	HHP	\$ 24.44	\$ 30,543.75
Pole Survey	273	Pole	\$ 54.63	\$ 14,915.22
Make Ready Engineering (MRE) (if required)	273	Pole	\$ 40.38	\$ 11,023.33
Pole Load Analysis (PLA) and Pole Applications (if required)	273	Pole	\$ 50.27	\$ 13,724.80
Pole Attachment Application	273	Pole	\$ 19.72	\$ 5,384.52
Total				\$ 112,260.99
Major Assumptions	Grizzley Flats			
# Parcels/Passings	1250			
Total Plant Miles	25.83			
# Poles	273			
Est. Aerial Miles	5.17			
Est. UG Miles	20.67			
Aerial %	20%			
UG %	80%			
Density HH/Mile	48.39			

Consulting services:

	Estimated # of Hours	Hourly Rate	Total
Final Mapping	40	\$175	\$7,000
Construction Documents	40	\$175	\$7,000
Consulting	180	\$175	\$31,500
RFP	39.15	\$175	\$6,851
		Total	<u>\$52,351</u>

Below is a breakdown of the budget timeline:

	Year 1			Year 2		
Budget Line Item	Work Product	Work Product	Work Product	Work Product	Work Product	Work Product
Work Product Title (e.g, RFP Development, Needs Assessment, Strategic Broadband Plan)	Final Design and Engineering					
Chrome Ridge Design	\$ 3,441.89					
Coloma Design	\$ 22,069.13					
Cool Design	\$ 76,803.57					
Garden Valley Design	\$ 52,276.81					
Georgetown Smaller Section Design	\$ 20,902.50					
Pleasant Valley Design			\$ 30,118.86			
Fairplay Design			\$ 35,982.27			
Somerset Design			\$ 21,308.54			
Grizzly Flats Design		\$ 112,260.99				
Spring Creek Design		\$ 72,484.09				
Final Mapping, Construction Documents, Consulting, RFP, Contingency				\$ 52,351.37		
Work Product Costs (for consultants, subconsultants, organizations, and/or staff)	Cost	Cost	Cost	Cost	Cost	Cost
NEO Fiber, Inc. doing business as NEO Connect	\$175,493.88	\$ 184,745.08	\$ 87,409.67	\$ 52,351.37		
Total Work Product Costs (for consultants, subconsultants, organizations, and/or staff)	\$175,493.88	\$ 184,745.08	\$ 87,409.67	\$ 52,351.37	\$ -	\$ -
Total Administrative Costs (see Note)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL COSTS	\$175,493.88	\$ 184,745.08	\$ 87,409.67	\$ 52,351.37	\$ -	\$ -

Proposed Timeline for Completion within 24 months

We anticipate the project taking 12 months to complete, starting on October 1, 2022 and completing by the end of September 30, 2023. Below is a timeline of the project.

County of El Dorado LATA Grant Final Design and Engineering, Fiber to the Premise Networks

Timeline

