KS - NTIA MM Grant Application - Budget Narrative

Applicant Name:	Kansas Office of Broadband Development
Applicant Type:	State
Proposed Period of Performance:	5 years
Total Project Costs:	$69,730,044.00
Total Federal Grant Request:	$42,514,219.13
Total Matching Funds (Cash):	$26,778,604.87
Total Matching Funds (In-Kind):	$437,220.00
Total Matching Funds (Cash + In-Kind):	$27,215,824.87
Total Matching Funds (Cash + In-Kind) as Percentage of Total Project Costs:	39.03%

The State of Kansas Departments of Commerce (the applicant, hereafter called "Commerce") is requesting $42,514,219.13 in middle mile grant funding to complete this project, matched by $27,215,824.87 in non-federal cash and in-kind contributions. This 39.03% matching contribution goes above and beyond the NTIA's requirement of 30% non-federal share for middle mile projects, demonstrating the applicant's willingness to contribute capital and resources to the project; however, the project would not be possible to implement competitively but for federal contributions.

The State of Kansas Department of Commerce (Applicant) and Department of Transportation (a subrecipient "KDOT") propose to work with competitively selected private partners to design, build, maintain, and operate an open-access statewide middle-mile network ("KNET") that will serve multiple key goals: First, it will accelerate last-mile expansion in unserved and underserved areas of the State; second, it will support anchor institutions statewide, including higher education and public safety; and third, it will meet the needs of KDOT for next-generation communications services for public safety, transportation management, automated vehicle connectivity, and other innovations related to the use of communications services by KDOT.

Commerce and KDOT will adopt fiscally sustainable middle-mile strategies throughout the implementation of the Proposed Project. The two Departments both recognize that interconnection between middle mile infrastructure last mile broadband providers is critical to achieving the Infrastructure Act's goals. This project will offer non-discriminatory interconnection to terrestrial and wireless last mile broadband providers and any other party making a bona fide request, on an open access and non-discriminatory basis. The fiber-optic middle mile network proposed in this application will support transport speeds of 100 Gbps or more, while permitting symmetric last-mile services of 10 Gbps and 1 Gbps (or higher), at extremely low latency. Dark Fiber Indefeasible Rights of Use (IRU) will also be available.

As detailed in the proforma, the project begins generating revenue in year two and continually increases throughout the projection, becoming cashflow positive within two years of the project completion. Even with conservative take rate estimates, the project remains profitable.

- **Administrative and Legal Expenses - $1,154,822.00**

Activity	Total Time	Rate	Total Cost

Broadband Middle Mile Program Manager-Hourly	10,000 hours	$42.75 per hour	$427,500.00
Broadband Middle Mile Program Manager-Fringe	10,000 hours	$14.11 per hour	$141,075.00
Consultant – Grant Administration	10,000 hours	$50 per hour	$536,247.00
Application preparation expense	Each/Item	Item	$50,000.00

Broadband Office Staffing/Consultants

Broadband Middle Mile Program Manager–Salary
The program manager will perform day-to-day oversight of the middle mile broadband program. This individual will also build partnerships to maximize access by last mile providers, bringing affordable service to residents and businesses throughout the state. Other Primary programmatic activities will be determined as the project moves forward. The Broadband Middle Mile Program Manager is a term position and will be 90% funded through grant funds for a period of five years (10,000 hours), at an annual salary of $95,000.00 (hourly rate of $42.75), for a total cost of $427,500.00 during the five-year period of performance. This is a new position (currently unstaffed). Recruitment will begin upon EMMBI award announcement, with an open position posting on the Kansas website for individuals to submit applications.

Broadband Middle Mile Program Manager- Fringe Benefits
A 33% fringe rate is estimated for the program manager, based on data from current average fringe rates from the US Department of Labor and the state of Kansas. Fringe benefits for this position include health and dental care, life insurance, long-term disability, retirement, workers compensation, and agency personnel charges. These benefits are projected to cost $31,350.00 per year. Given the 90% allocation to the grant, the total cost is $141,075.00 during the five-year period of performance.

Consultant, Grants Administration
KOBD will engage a qualified contractor for Grants Administration services. This engagement will directly support grant requirements, as laid out in the NOFO. KOBD anticipates that this effort will require the issuance of one or more contracts for these services. RFPs are yet to be developed. All procurements associated with grant funding will be published and awarded by the end of Q2 2023. KOBD will share all RFPs and anticipated contracts with NTIA prior to execution to ensure it is/they are allowable, allocable, and reasonable to meet the program goals. The consulting firm(s) will work under the direction of KOBD staff throughout the course of the project. The consultant(s) will deliver operational and compliance support to the middle mile program. KOBD will work through the state's Master Services Agreement (MSA) procurement process to post related opportunities for competitive bid. The director, deputy director and chief of staff will review quotes and provide feedback on the proposals' timeline, budget, and organizational capability of the organization to meet the needs listed in the posting and will select the entity in line with the Kansas Department of Administration (KDoA) procurement process. A copy of the procurement policy will be posted on the Kansas Department of Administration website at https://admin.ks.gov/offices/procurement-contracts/bidding--contracts. KOBD is estimating 10,000 hours of consulting time, at a rate of $50/hour. During the five-year period of performance, the total estimated cost is $536,247.00.

Pre-Application Expenses
Application Preparation Services
Project collaborator KanREN engaged the services of CTC Technology & Energy (CTC) to prepare the application materials for the NTIA Middle Mile Grant program. CTC charged a flat fee for application preparation services of $50,000.00.

- **Land, structures, rights-of-way, appraisals, etc. - $2,104,500.00**

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
Permit – Rural County Fee	Each	$4,500.00	1	$4,500
Railroad permits	Each	$10,000.00	30	$300,000
IRU – Zayo	Each	$20.38/fiber mile	4 strands @ 92 miles for 240 months	$1,800,000.00

Rural County Permit Fee
The program will require one Rural County Permit of $4,500.

Railroad Permits
The proposed project includes 30 railroad crossings and will require permits valued at $10,000.00 each for a total of $300,000.

Zayo IRU
The program will engage with Zayo to acquire a 20-year Indefeasible Rights of Use (IRU) agreement for 4 strands of fiber, at $20.38 per strand mile for approximately 92 miles. As with the above noted IdeaTek IRU, the project will leverage existing infrastructure to create a contiguous network that serves the most immediate needs and objectives of both KanREN and K-DOT. Zayo leases dark fiber on a semi-neutral basis throughout their footprint in the state. This 20-year IRU will cost approximately $1,800,000, based on historical quotes and projected volume discounts.

- **Relocation expenses and payment - $0.00**

Description	Unit Basis	Unit Cost	Number of Units	Total Cost

The proposal does not include relocation expenses and payments.

- **Architectural and engineering fees - $2,184,000**

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
Engineering Design and As-Built Documentation	Per Hour	$250.00	8,736	$2,184,000

Engineering Design and As-Built Documentation

The estimated effort to complete engineering design for the proposed network and prepare 'as-built' documentation following deployment, is $2,184,000.00. This is based on an internal IdeaTek estimate of 8,736 hours at $250.00 per hour.

- **Other architectural and engineering fees - $250,000.00**

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
NEPA/Section 106 Permitting	Hourly	$250	1,000	$250,000.00

Environmental/State & Tribal Historical Preservation (Section 106) Permitting
KOBD estimates $250,000.00 in consultation and permitting costs related to the National Environmental Protection Act and Section 106 requirements. This is based on an estimate for 1,000 hours at $250.00 per hour. A contractor will be engaged to undertake this effort upon award. The contractor will employ a four-person team over the course of six months at 250 hours each to complete any required environmental requirements.

- **Project Inspection fees - $546,000.00**

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
QA/QC Inspections	Hourly	$250	2184	$546,000

Quality Assurance/Control Inspections
A contractor will be engaged to provide Quality Assurance/Control reviews and markups of red line documentation for final engineering as built documents. This effort is estimated to require 2,184 hours at $250.00 per hour, totaling $546.000.00.

- **Site work - $0.00**

Description	Unit Basis	Unit Cost	Number of Units	Total Cost

This proposal does not include funding for site work.

- **Demolition and removal - $0.00**

Description	Unit Basis	Unit Cost	Number of Units	Total Cost

This proposal does not include funding for demolition and removal.

- **Construction - $56,379,569.00**

Construction Labor	Unit Basis	Unit Cost	Number of Units	Total Cost
Bore	Foot	$ 15.00	783,066	$ 11,745,994.00
Plow	Foot	$ 3.50	2,275,273	$ 7,963,457.00
Bore- heavy rock	Foot	$ 30.60	195,413	$ 5,979,632.00
Bore- light rock	Foot	$ 5.60	363,739	$ 2,036,940.00

Bore- urban dense	Foot	$ 20.00	157,133	$ 3,142,656.00
pull fiber- existing conduit	Foot	$ 1.00	558,149	$ 558,149.00
Pull fiber	Foot	$ 0.80	3,670,008	$ 2,936,006.00
Splicing	Hour	$ 95.00	14,959	$ 1,421,143.00
Project management	Hour	$ 95.00	10400	$ 988,000.00
Construction Materials	**Unit Basis**	**Unit Cost**	**Number of Units**	**Total Cost**
Vaults	Item	$ 764.50	1,158	$ 885,644.00
Markers	Item	$ 24.31	1,158	$ 28,162.00
Splice case/dome closures	Item	$ 398.87	342	$ 136,601.00
Other, misc	Item	$ 361,649.00	1	$ 361,649.00
Microduct	Item	$ 3.19	3,364,174	$ 10,731,714.00
Microfiber	Item	$ 0.88	8,009,794	$ 7,048,619.00
locate terminals	Item	$ 55.00	1,158	$ 63,715.00
duct splice kits	Item	$ 79.20	3,302	$ 261,488.00
Pad materials	Item	$ 7,500.00	12	$ 90,000.00

Labor

The Applicant anticipates a total labor cost of $35,783,977.00, which includes the boring and plowing necessary to create the channels for the fiber-optic infrastructure they are placing, as well as the labor to place the fiber and splice it. 783,066 feet of boring will be completed at a composite rate of $15.00 a foot for a total labor cost of $11,745,994.00 for this item. 2,275,273 of plowing will be completed at a composite rate of $3.50 per foot for a total labor cost of $7,963,457.00.

Specialized labor will be required for 195,413 feet of the route that passes through heavy rock at a cost of $30.60 per foot for a total of $5,979,632.00. An additional $2,036,940.00 of specialized labor expense will be required for the 363,739 feet of the route which passes through light rock, at a cost of $5.60 per foot. The 157,133 feet of the project which passes through dense urban areas will also require specialized labor at a rate of $20.00 per foot for a total cost of $3,142,656.00.

The total labor cost for this project includes pulling fiber through existing conduit at a rate of $1.00 per foot for 558,149 feet for a total cost of $558,149.00. Fiber will also be pulled through the conduit created in this project at a rate of $0.80 per foot for 3,670,008 feet for a total cost of $2,936,006.00.

Additionally, the costs include necessary labor to splice the fiber lines once installed at a rate of $95.00 per hour for an estimated 14,959 hours for a total cost of $1,421,143.00.

Project management (not included in the total labor cost number given above) is anticipated at a rate of $95.00 an hour for 10,400 hours for a total cost of $988,000.00.

Materials

The applicant anticipates a total materials cost of $19,607,592.00. This includes 1,158 36x48 inch poly concrete in-ground vault enclosures at $764.50 per vault for a total of $885,644.00. The project will require 1,158 above-ground fiber optic cable markers at $24.31 each to mark the route for a total of $28,162.00. Additionally, the project calls for 342 splice cases/dome enclosures at $398.87 each to enclose termination splices of the fiber optic cable for a total of $136,601.00.

The applicant intends to lay 3,364,174 feet of 7-way 8/14 micro duct using 5,000-foot spools to protect and install microfiber at $3.19 per foot for a total of $10,731,714.00 and pull 8,009,794 feet of 96 count Corning mini-extended gel filled loose tube micro fiber at $0.88 per foot for a total of $7,048,619.00.

Installation teams will require 1,158 locate terminals to locate access points and connect to ground rods and tracer wires inside vaults, at $55.00 per vault, for a total of $63,715.00; 3,302 duct splice kits at $79.20 each to join segments of underground duct, for a total of $261,488.00; and 12 sets of pad materials to install concrete pads at $7,500 each for a total of $90,000.00.

- **Equipment - $951,000.00**

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
Regen/Pop Sites	Each	$79,250.00	12	951,000.00

The applicant requests funding for equipment for 12 pop sites. Each site is estimated to cost $79,250.00 for a total estimated costs of $951,000.00.

Equipment includes relevant line items associated with powering the lit portion of the network including but not limited to:

Cabinets
Generators
Batteries
DWDM Amplifiers
DWDM Add/Drop Equipment
OLT's
Miscellaneous items necessary for network operation (Optics, Patch Cables, Demarcation supplies etc)

The proposed lit network will operate on a DWDM architecture to facilitate open access to individual wave channels through the add/drop sites noted on the proposed network logical diagram. Some of the existing network locations (notated on the logical diagram) have existing DWDM equipment and some will need to have their current 8 channel configuration expanded to 16 channels or greater. All of the new sites will be provisioned with DWDM amplification and add/drop equipment capable of 8-40 channels and 10 Gbps - 400 Gbps per channel. It's understood that there may be additional need for routing equipment at these locations to provide smaller point-to-point or PON-based services to providers where it isn't technically or financially feasible for them to accept a wave, for these instances the operation pro-forma includes a budget for the necessary routing equipment needed to deliver these services to be added to a site as needed. The design of the network allows for efficient deployment of a range of capable transport network components while also providing non discriminatory access to smaller providers under the pricing matrix that has been provided. $437,220.00 of this equipment will be provided as in-kind match supplied by Connected Nation.

- **Miscellaneous - $0.00**

Description	Unit Basis	Unit Cost	Number of Units	Total Cost

This proposal does not include funding for miscellaneous items.

- **SUBTOTAL (sum of lines 1-11) - $63,569,891.00**

- **Contingencies - $6,160,153.00**

This proposal includes a contingency equal to approximately 9.7% of costs.

- **SUBTOTAL (sum of lines 12-13) - $69,730,044.00**

- **Project (program) income - $0.00**

This proposal does not request income to be treated as part of the match.

- **TOTAL PROJECT COSTS - $69,730,044.00**