

MCNC, one of the nation's leading not-for-profit middle mile networks, has for nearly 40 years provided nondiscriminatory, open-access, competitively priced middle mile services in the state of North Carolina. By combining a \$11,186,163 grant from NTIA's Middle Mile Grant Program (MMG) with MCNC's own 41% matching investment of \$7,773,435 - including \$1,382,782.18 made possible by the GoldenLEAF foundation -MCNC's **High-speed Economies for Rural Opportunity (HERO)** project will directly support improvements to broadband access and affordability across central and southeastern North Carolina. If funded, HERO will extend MCNC's reach via the construction of 209 miles of new middle mile fiber through substantially unserved and underserved areas, including some of the highest poverty areas in the state. Upon completion, HERO will support affordable, high-performance broadband for at least 4998 fully unserved locations (and nearly 4300 additional underserved locations) within just 5 miles of the planned routes.¹ The 11-county area has over 16,000 unserved and 12,000 underserved housing units, including many substantially unserved local communities. In total, the affordability, latency, and resilience benefits of HERO would impact over 350,000 housing units and 696 CAIs, bringing new economic opportunities to these economically challenged rural areas of North Carolina.

Currently, MCNC offers open access, highly affordable middle mile services, with a presence in many but not all areas of the state. MCNC is highly competitive as a low-cost provider of middle mile services, and is the only truly open access provider of middle mile access in most parts of the state, offering services ranging from dark fiber IRUs (not available from traditional providers) to wavelengths to managed Internet transport. Should funding be granted to MCNC via this MMG grant, MCNC commits to provide in perpetuity wholesale broadband service at reasonable rates on a carrier neutral, fully open, non-discriminatory basis to all HERO infrastructure. MCNC is very well positioned to make this commitment based on our status as a proven not-for-profit provider of wholesale middle mile services, with both an identified set of existing and potential customers as well as an efficient operational cost position from our existing network. The expansion of MCNC's open access network via this grant will allow MCNC to enhance the affordability strategies of last mile providers who are drawn to MCNC as the only low-cost, fully non-discriminatory provider offering services including dark fiber over the longest time horizons.

The two proposed routes therefore offer multiple benefits that are closely aligned with NTIA's policy objectives. HERO will enable affordable, high-performance broadband in substantially unserved areas of the state that today lack competitive middle mile options. HERO will at the same time provide significantly improved network reliability, resiliency, and latency. Multiple last-mile providers have provided letters of support and commitment, including Roanoke Connect – an innovative last-mile provider working with electric co-operatives to expand access to fiber – and CloudWyze. As locally oriented providers, both Roanoke and Cloudwyze have committed to Community Benefit Agreements as they expand service in the HERO areas. Finally, the project passes by four Department of Defense facilities, providing vital network resiliency benefits to these installations.

In its entirety, HERO would serve as a powerful springboard for the state's investments in expanded last-mile access via federal funds from ARPA and IIJA, as attested to in the support for HERO from both the North Carolina Broadband Office² and Governor Cooper. Just as NTIA's Broadband Technology Opportunities Program (BTOP) played a pivotal role in expanding the

¹ A very conservative figure based on locations within a 5-mile distance from the routes per recent FCC Form 477 data.

² North Carolina Department of Information Technology's Division of Broadband and Digital Equity

reach of the MCNC network to advance the broadband goals of the past decade, today's MMG program can by funding HERO serve as a catalyst for achieving NTIA's goals for the upcoming decade and beyond.

We are seeking MMG support because the current MCNC network does not yet reach all key areas of the state. An NTIA grant for HERO therefore would be particularly impactful because in North Carolina, no other solution is likely to develop; privately funded networks have failed to deliver any attractive middle mile options in these economically distressed areas. The two proposed routes would extend MCNC into areas of North Carolina with over 130,000 housing units in low-income census blocks. A conservative estimate - based upon locations within 5 miles of the proposed route - shows that 37% of all census blocks in the regions to be served by this project have an average median income below the 200% poverty mark.

Economic prosperity in these eleven counties is hampered by high unemployment rates, slow or no population growth, and low property tax revenues. Furthermore, the NC Department of Public Instruction reports that 28 - 49% of the K-12 students in these 11 counties are eligible for the National School Lunch Program (NSLP). The objective of the HERO project is to for the first time put affordable, high-performance broadband within reach of these truly underserved populations.

MCNC is a proven network operator that for nearly 40 years has provided facility-based networking services to the public sector of North Carolina via the North Carolina Research and Education Network (NCREN) and the North Carolina Telehealth Network. MCNC also focuses on improving last-mile broadband and expanding economic opportunities for the citizenry of North Carolina. MCNC is fully authorized to provide middle-mile service to any type of last-mile ISP wishing to utilize our network, including via dark fiber IRU sales. Using various sources of investment, including prior NTIA BTOP funding, MCNC has grown to more than 4000 miles of fiber statewide. MCNC has completed a total of 197 fiber sales to 22 competitive last mile carriers. The HERO project would fill critical gaps in MCNC's middle mile reach just as new waves of last-mile fiber deployment are set to commence.

The two HERO fiber routes have been engineered to withstand all identified weather- and climate-related risks. MCNC also has planned the HERO project to minimize implementation risks. MCNC is a proven manager of fiber construction projects; we are currently engaged in active fiber construction using other sources of funds elsewhere in the state, work that has proceeded on-time and on-budget. Drawing on that operational expertise, we have designed a 2-year project implementation timeline for HERO.

MCNC maintains a strong commitment to developing a skilled, diverse workforce to meet broadband needs throughout the State of North Carolina. MCNC continues to provide training to attract, train, retain, or transition to meet broadband workforce needs and has established strong partnerships with local workforce initiatives such as Wilson County Community College's FBA Fiber OpTIC™ Certification course. Priority will be given to hiring such local workers including those populations previously underrepresented and working with a variety of community and workforce development groups to ensure equitable and reasonable access to job opportunities presented by middle mile infrastructure. Finally, MCNC has discussed with Corning a potential partnership on workforce focused on creating opportunities during the near-term implementation of HERO (2023-24) for new broadband/fiber workers who are receiving training/skill development from Corning, with an overall goal of expanding the workforce in North Carolina able to implement new last-mile fiber projects funded by BEAD in the 2024-26 timeframe.

MCNC has an unblemished, multiyear track record of managerial, financial, and operational excellence that fully meets and exceeds NTIA's requirements. Throughout its history including the successful deployment of middle mile infrastructure made possible via BTOP grants and other sources, MCNC has demonstrated itself as an effective administrator of grant funds with a successful track record of compliance, and looks forward to the continuance of such via this grant.