Executive Summary

The opportunity the project seeks to address: The New York State Office of the Chief Information Officer/Office for Technology (CIO/OFT) intends to complete a fiber optic interconnect, using its existing network, the NYeNet, with the existing Development Authority of the North Country (DANC) fiber optic network in Syracuse and the proposed CBN Connect fiber optic network in Plattsburgh. Pervasive broadband communications remain an elusive goal for the State’s largely remote northern region. A significant opportunity exists to improve broadband Internet access, communications, and interoperability throughout that regions so that residents, businesses and public sector facilities can enjoy improved health care, government services, education, and employment opportunities. This project seeks to create a complete fiber optic ring running through 15 counties in a largely underserved and economically distressed area of northern New York. Creating this ring will provide access to more companies, anchor institutions, and ultimately end users. This will undoubtedly help local businesses and institutions become more competitive and grow, create job opportunities, attract telecommunication-intensive businesses and related service industries, and promote advancements in education, health care, public safety and government. General Description of the proposed funded service area: The fiber ring will physically traverse 13 northern NYS counties, completely encompassing the nearly 6 million acre Adirondack Park and extending services to 10 counties identified by the FHWA HEPGIS as being economically distressed. Number of households and businesses passed: While, DANC and CBN will use CIO/OFT’s middle mile transport to introduce new providers to serve households and businesses, CIO/OFT is limited, by its enabling legislation, to providing services to other government entities. Number of anchor institutions passed and/or involved: In addition to the 15 county data centers that OFT will ultimately connect to, there are 19 NYS correctional facilities, 20+ state police and sheriff barracks, 3 NYS universities and 4 community college campuses, as well as numerous NYS government offices within the OFT-DANC-CBN fiber ring that CIO/OFT expects to ultimately serve with broadband connectivity. Proposed services and applications: The CIO/OFT will light existing infrastructure along the I-87 corridor from Albany to the Canadian border and physically interconnect our fiber with CBN’s proposed fiber infrastructure in Plattsburgh, as well as with DANC’s existing fiber infrastructure in Syracuse. DANC and CBN will interconnect their fiber networks in Nicholville (St. Lawrence County) as proposed in CBN’s grant application (EasyGrant ID# 6412). This will create a multijurisdictional fiber optic network that encompasses the entire 6 million acre Adirondack Park from Albany to Plattsburgh to Watertown to Syracuse to Albany and all 3 entities have agreed to swap wavelengths/bandwidth across their facilities with one another to create dedicated virtual private network rings. DANC and CBN may permit carriers, including ISPs and wireless providers, to access their wavelengths/bandwidth in
CIO/OFT's Albany and Syracuse Network Access Points where the State already has a myriad of carrier interconnects. Service providers (without a presence in northern NYS) would be encouraged to extend their network presence via low-cost, high-speed transport from DANC and/or CBN across these wavelengths from the Albany and/or Syracuse MSAs. Competition would be fostered by eliminating the expensive CapEx traditionally associated with extending the reach of a service provider's network with the expectation that these 'start-ups' would reinvest those CapEx funds in low cost services and/or last mile solutions for the betterment of the citizens in the Adirondack Park communities. CBN and DANC do not compete with one another as they have mutually-exclusive territories, and while CIO/OFT's territorial interests do overlap, our customer base is limited to the government sector (state and local government as well as public sector academia). DANC and CBN would pursue all of the commercial, residential, private colleges, school districts, etc. within their respective service areas with the added capability of providing egress/ingress for customer traffic in Albany and/or Syracuse via their NYeNet-transported wavelengths. Approach to addressing non-discrimination and interconnection obligations: CIO/OFT already has established interconnects with a myriad of service providers in both Albany and Syracuse, the result of recurring openly solicited competitive opportunities; DANC and CBN are both 'open access' telecommunications networks (i.e. a carrier's carrier). Additionally, if CIO/OFT receives grant funding for this project, we will advise any entity CIO/OFT provides access to that such access is consistent with the NOFA's non-discrimination and network interconnection obligations. Type of broadband system to be deployed: CIO/OFT, DANC and CBN have committed to providing each other with dedicated comparable wavelengths/bandwidth across our respective networks. All three entities will be using Dense Wave Division Multiplexing (DWDM) over a singlemode fiber optic infrastructure to generate multiple wavelengths of 1Gbps to 10Gbps. By working directly with CBN and DANC on this project and leveraging one another's assets, all 3 entities will have a dedicated 1Gbps'10Gbps virtual private network traversing the entire ring with no single points of failure and dual ingress/egress points (Albany and Syracuse). Qualifications of applicant: Since it's inception in 1997, CIO/OFT has evolved from an organization that plans and coordinates the State's investments regarding information technology into an organization with significant operational responsibilities. The agency's mission today is to provide centralized technology services, shape technology policy and coordinate statewide technology-related initiatives to improve the efficiency of NYS government. The agency manages a $535.5M annual operating budget of which $407M is an Internal Services Fund with chargeback billing to customer agencies. CIO/OFT has successfully operated the State's network infrastructure (the NYeNet) since 2000 and completely amortized the $35M capital expenditure associated with its creation. CIO/OFT also operates the fifth largest telecommunications company in NYS (in terms of subscribers) and maintains over 1,600 miles of optical fiber. IT operations and support are available 24x7x365. Overall infrastructure cost of the broadband system: CIO/OFT estimates its one-time expenses for this project will not exceed $1,750,000. By leveraging our existing fiber optic resources, the lion's share of our expense (approximately $1.5M) is associated with 'lighting' our dark fiber along the I-87 corridor and provisioning DWDM and other electronic equipment throughout the infrastructure. Minimal additional expenses will be incurred to interconnect the NYeNet with the DANC and CBN fiber optic networks in Syracuse and Plattsburgh (respectively). CIO/OFT is committed to providing a 30% cash contribution ($525,000) for this initiative if the federal government approves our grant application for the remaining $1,225,000. Overall expected subscriber projections: As noted above, CIO/OFT's customer base is
limited to the public sector. It is our expectation that we will eventually provide broadband connectivity to all of the public sector institutions cited above. We are not comfortable attempting to forecast the commercial and/or residential subscriptions that CBN and/or DANC may project as a result of our interconnectivity relationship with both entities. Estimated number of jobs created and/or retained: Implementation of this network and advancing our relationship with CBN and DANC will stimulate the economy and create/retain jobs in the northernmost region of NYS. The project will be a platform for innovation and job growth in a large portion of the Adirondack Park, which desperately needs environmentally compatible infrastructure in order to help develop digitally smart and resilient workforces in these distressed communities. Over the project timeline, $1.75M will be spent on a variety of technology introductions and professional services. Using the Communications Workers of America estimates that five jobs in telecommunications and network services are created with every $100,000 invested, we estimate that 85 jobs will be created from our portion alone. This number should increase dramatically when the CBN and DANC components are included.