Opportunity: The City of Bellevue, partner cities and anchor institutions are members of a Regional Fiber Consortium that has completed significant portions of an anchor institution owned regional fiber network loop (Lake Washington Loop) and has secured (or is in the process of securing) non-BTOP funding to complete this broadband network loop. The project proposed in this application will extend this anchor institution owned broadband infrastructure south to: improve access to and use of broadband for public safety agencies; build broadband connectivity for municipalities, community and technical colleges, schools, hospitals, medical facilities, universities; build broadband infrastructure for delivery of broadband services in underserved economically distressed areas that will stimulate local economic development and job creation; provide a geographically diverse broadband infrastructure that will expand availability of broadband services and create opportunities for private broadband service delivery that do not currently exist. Description: This broadband infrastructure will immediately serve and benefit 12 cities in King and Pierce County WA. Anchor institutions participating in or benefitting from the project include the University of Washington, Bellevue College, Lake Washington School District, Bellevue School District, Renton School District, Evergreen Hospital, Overlake Hospital, Lake Washington Technical College, Valley Communications Center Public Safety Answering Point (PSAP), the North East King County Regional Public Safety Communications Agency PSAP(NORCOM), the South Correctional Entity (SCORE), and Puget Sound Access community communications facility. The proposed funded service area includes the campuses of 7 community colleges, technical colleges, and public and private colleges and universities; over 25 first responder public safety entities; 5 public school districts (K-12); 9 regional libraries; and 4 hospital campuses. Public / Private Partnerships: The participating cities and anchor institutions are partnering with a key private broadband service provider to manage the delivery of commercial services in the proposed funded service areas and a national wireless broadband service provider committed to providing wireless services. The Trilogy-Spectrum Partnership (TSP) is a joint venture between two affiliated entities, Trilogy Equity Partners, LLC (Trilogy) and Spectrum Networks, Inc. (Spectrum), with deep roots in the telecommunications industry and current operations in the Applicant's proposed Service Areas. Spectrum is the operating entity that will manage the provision of wholesale services on the Applicant's network, while Trilogy will provide financial capital and additional operating expertise. Spectrum is a regional wholesale transport and Internet service provider serving enterprises, digital media companies, and carriers in Washington State, with the majority of its operations focused within the Applicant's Service Areas. Spectrum also provides last-mile, ultra-high-bandwidth broadband services to several large residential buildings in the Seattle area through its subsidiary, CondoInternet. CondoInternet provides 100mbps internet access to hundreds of
customers in downtown Seattle. Private wireless Internet service provider, HarborLink Network is a national provider of hotspot, advertising supported access, integration and network management services. HarborLink currently operates over 800 locations in 44 states, including commercial hot spots, municipal networks, university networks and mass transit systems, delivering localized content and offering authentication and hotspot management services. Nondiscrimination and Interconnection Obligations: The core competency of Spectrum, TSP’s operating affiliate, is the provision of bandwidth to other carriers, last mile providers, businesses and anchor institution. Spectrum does not discriminate between potential customers and will sell broadband services to any party wanting to interconnect to its network. The Spectrum management practices will be entirely consistent with the NOFA’s nondiscrimination and network interconnection obligations. The underserved service area will have an interconnect point at each anchor institution end point and there will be interconnect points at every junction along the fiber route; ensuring middle mile fiber is available to service providers, underserved communities, businesses and anchor institutions. Type of Broadband System: The broadband network in the proposed funded service area will be a 288 fiber strand middle mile backbone system (and smaller count spurs) with dedicated fibers for each city and participating anchor institution. In the South Middle Mile service area, 147,286 LF will be installed in existing city-owned conduit, 6,854 LF installed in new conduit and 82,896 LF installed on existing utility poles. The proposed North Lake Washington Loop middle mile backbone consists approximately 120,812 LF of 288 strand fiber overlashed or installed existing conduit where possible. The wholesale network will provide interconnection opportunities at every location where the fiber enters a partner-owned building or existing telecom facility. These splice locations will be turned into locations for active electronics to facilitate customer connections upon order by one of the following methods: (i) installation of a collocation cabinet within a partner-owned building such as a city facility; (ii) a lateral build to an adjacent meet-me point (building or pole-mounted enclosure), or (iii) lateral fiber installed by a customer spliced directly into the ring with Spectrum electronics installed at the customer premise. All locations will be provisioned using simple 1G or 10G Ethernet switches or SONET transport (Cisco ONS platform) shelves with uplinks configured across both paths back to the nearest backbone POPs. All backbone POPs will be interconnected in a ring amongst themselves using a 32 channel 10G DWDM system to provide for backbone capacity and fault tolerance in the event of a fiber cut. Qualifications of the Applicant: The City of Bellevue and the participating cities and anchor institutions have jointly, through the Regional Fiber Consortium, or individually, completed over 45+ similar fiber optic network projects. The Regional Fiber Consortium projects have been part of the successful construction of the 35+ mile anchor institution owned, Lake Washington Loop. To date, participating cities and anchor institutions have invested approximately $1,700,000 in building this regional middle mile network. Significant portions the Lake Washington Loop have been funded by a $744,000 DHS Urban Area Strategic Initiate (UASI) grant and an additional UASI grant of $678,000 is expected to be awarded next year for the Lake Washington Loop backbone from Tukwila to Seattle. Overall Infrastructure Cost: The projected overall cost for the broadband system that the applicant is proposing is calculated at $11,406,764. This total includes all associated expense relative to the installation the fiber optic cable and equipment, including Total Matching Funds (Cash) of $737,563 and Total Matching Funds (In-Kind) of $2,901,668. Total Matching Funds as Percentage of Total Project Costs is 31.9%. The Total Federal Grant Request, net of matching funds, is $7,767,533. Subscriber Projections: Spectrum has identified 161 low-rise commercial buildings (2-10 stories) that will be passed
by the network. Spectrum forecasts that, in addition to the partner cities and anchor institutions connected to the network, Spectrum will connect 30 buildings to the network over the 8-year forecast (3 to 6 buildings per year). This is an 18.6% 'take rate' of the identified buildings over the forecast period. Spectrum has validated that this growth rate of new connections is also consistent with the size of the technical organization assumed in the forecast, based on its existing operations. Spectrum forecasts that 132 revenue-generating customers will be connected to the network by the end of Year 8. The forecast assumes that 70% of these are connected through wholesale providers and 30% are connected directly by Spectrum. Number of Jobs: It is estimated that the planning, management and construction of this proposed project will create or save an estimated 84 jobs as calculated by the Simple Rule for Estimating Job-Years Created by Government Spending. Contractor Netversant estimates that the proposed project will create or preserve as many as 30 additional jobs. The secondary indirect benefit building the broadband facilities and infrastructure for delivery of broadband services in this underserved and economically distressed area will stimulate local economic development that will ultimately result in the creation of numerous additional jobs.