

Broadband USA Applications Database

Applicant Name: Gold Ivory LLC

Project Title: Hawaii Public Safety Broadband Network

Project Type: Middle Mile

Executive Summary

Our project, the Hawaii Public Safety Broadband Network (HPSBN), provides a secure broadband network that meets the needs of public safety agencies and first responders to protect and defend the rural areas of the state of Hawaii. As will be illustrated, Hawaii must deal with unique challenges that arise out of our isolation and rural conditions. The proposed fiber-optic and microwave system will ensure reliable broadband capacity to support technologies necessary for our public safety agencies to execute their duties and responsibilities for preparing and responding to natural disasters, acts of war and other emergencies. The state of Hawaii has fallen victim to some of nature's most destructive forces. Tsunamis, hurricanes, volcanic eruptions, and earthquakes have wreaked havoc on this most remote state in the union. As history has proven, Hawaii has also been a vulnerable target for foreign attack. The shoreline borders of our islands create significant exposure to infiltration by enemies of the state and other illegal activities. Being the only island state in the country, Hawaii's isolation presents unparalleled communications challenges due to the state's distance from the continental United States as well as each county's physical separation by ocean. Thus, our counties must rely solely on their limited constituency base to fund broadband capabilities for public safety efforts. The islands' natural beauty also draws visitors and residents to explore some of its most remote areas. These scenic areas have dramatic topographical features that have prevented communication amongst public safety personnel during search and rescue missions. Our proposed network adds coverage to previously inaccessible regions across the counties. Furthermore, Hawaii's strategic location in the Pacific makes it a critical military site for our nation, with personnel and assets that must be protected from acts of war and terrorism. Hawaii supports all four branches of the military, as well as federal public safety agencies such as Homeland Security, DEA, FBI, and the Pacific Tsunami Warning Center. This significant federal presence increases the demand on local public safety agencies, intensifying their need to have access to a robust, interoperable, broadband network tailored for and dedicated to first responders, both on island and between islands. Due to limited funding, public safety agencies have been unable to build out reliable broadband networks with adequate coverage. Hawaii's public safety entities are restricted by networks that: are not interoperable; do not offer a variety of access capabilities (including mobility); are not capable of providing simultaneous voice, video, and data services; are not capable of managing high levels of traffic; and cannot provide priority access to public safety when needed. These public safety organizations are currently limited by networks with dial-up connections and rely on push-to-talk radios, a significant limitation on personnel who must respond to emergencies and would benefit from the exchange of video, images and geo-referenced information that requires a broadband network. For example, public safety agencies on the counties of Maui, Kauai, and Hawaii all rely on obsolete analog

voice systems as their mission critical field communications infrastructure. Unfortunately, the counties are unable to replace their analog system with current push-to-talk technology because their existing backbone network has insufficient intelligence and capacity. As a result, the counties are forced to use unreliable and expensive commercial cellular carriers to support their communication needs in the field. HPSBN is a "Middle Mile" broadband infrastructure project that will build out a secure network for public safety agencies and first responders on the counties of Maui (consisting of the islands of Maui, Molokai and Lanai), Hawaii, and Kauai. The backhaul network will consist of mesh topology with pole-mounted, underground, and submarine fiber, plus a robust microwave infrastructure. This network will add coverage to remote areas, provide inter-island connectivity and operability, and will lay the foundation for the addition of LTE and other access technologies that will enable applications such as VoIP, video (conferencing, training, surveillance, etc.), data services (mobile and fixed), internet access, CAD dispatch, GIS/Mapping, and SCADA-telemetry. HPSBN is an open middle mile network that is consistent with the non-discrimination and interconnection obligations set forth in the NOFA and, as such, will provide enhanced broadband access to a number of key constituencies serving children, and supporting educational and health care delivery efforts. Critical community organizations, including educational institutions, community outreach centers, and health care institutions, will benefit from broadband access at increased rates of speed, and realize broadband for its potential as a medium for economic development, enhanced educational opportunities, and job creation. Once complete, Gold Ivory will transfer, at no cost, the HPSBN to the counties to be used as the primary communication network by public safety agencies. The counties have made commitments to assume operation and maintenance responsibilities for the network as part of their ongoing operating budgets, ensuring that the public safety network will be sustainable well beyond the project's three year timeframe. Additionally, Gold Ivory has agreed to provide training to these public safety officials to facilitate greater use of broadband service and interrelated devices and equipment, at no cost to the counties. Gold Ivory is a privately held native Hawaiian corporation that was established specifically to implement the proposed project. Its president, Albert Hee, is a native Hawaiian that appreciates the unique problems associated with the remoteness and isolation of our islands. He recognizes that a reliable and respected public safety presence is essential for our rural communities to establish a stable and healthy economy, and to ensure positive social growth. Mr. Hee has spent the last 25 years developing utility infrastructure in Hawaii, including telecommunications. Given his intimate knowledge of the telecommunications issues unique to Hawaii, and his ability to access technical expertise, Gold Ivory is uniquely qualified to bring the necessary resources together to successfully complete the project. To date, Gold Ivory has developed strategic partnerships with: Raytheon Company, a tier one Fortune 500 Company with more than 40 years of experience designing, integrating, and testing Communications Systems and networks; the counties of Hawaii, Kauai and Maui, to provide existing land and facilities, and to facilitate county permit approvals and land use agreements; and ClearCom, a Hawaii based Competitive Local Exchange Carrier, to support the initiative by providing Gold Ivory with access to its statewide fiber optic network that connects all the islands. The HPSBN will cost \$258,236,345. However, by leveraging existing resources and partnerships, Gold Ivory is prepared to provide \$85,628,352 in matching funds, which is 33% of the total cost, reducing the funding request to \$172,607,993. This funding will infuse much needed capital into the economies of the rural counties that have been devastated by the economic recession and dramatic decline in tourism, the state's primary economic

driver. The HPSBN is estimated to create approximately 112 jobs. Maui, Hawaii and Kauai counties make up the three proposed funded service areas for the HPSBN. On Kauai County, our project will pass the following, which constitutes all that exists on the entire island: 21 communities; 25,295 households; 2,019 businesses; 7 fire stations; 6 police stations; 5 emergency medical stations; 3 hospitals; 21 schools; and 6 libraries. On Maui County, our project will pass the following: 21 communities; 56,240 households; 4,584 businesses; 16 police stations; 15 fire stations; 5 hospitals; 33 schools; 8 libraries ;13 community and service centers; and 45 county offices. On Hawaii County, our project will pass the following: 42 communities; 4,297 businesses; 14 police stations; 28 fire stations; 7 hospitals; 57 schools; 13 libraries; and 24 community and service centers. On Kauai County, our project will have the following subscribers/personnel: 147 fire; 148 police; 6 civil defense; 57 ocean safety; 147 transportation; 284 parks and recreation; 22 housing and community service; 208 public works; and 30 county support. On Maui County, our project will have the following subscribers/personnel: 403 police; 300 fire; 45 civil defense; 34 public works; 25 water department; 63 parks and ocean safety; 82 emergency medical service; 28 state enforcement; 10 forestry; 26 public health; 28 airport fire rescuers; 8 U.S. Coast Guard; 17 national park rangers; and 20 Transportation Security Administration. On Hawaii County, our project will have the following subscribers/personnel: 565 police; 440 fire; 7 civil defense; 60 public works; and 50 water department. The HPSBN is worthy of funding because it provides our isolated, rural public safety agencies with the ability to coordinate response and recovery efforts both on-island and with neighboring islands, as well as with other state and federal agencies. This creates a reliable and trustworthy public safety presence that will cultivate economic development and societal well-being by creating an environment that fosters investment in local businesses and attracts new consumers. Ultimately, in the event of a natural disaster or other catastrophic situation, a robust public safety network will maximize recovery efforts and quickly restore normal business and community activities to the counties.