



## **EXECUTIVE OVERVIEW**

For over 90 years, the City of Hampton and the Air Force have shared a mutually beneficial relationship. The City has an advanced technology culture built on the foundation of Air Force and NASA personnel who live and work as an integral part of the community. From Mercury Boulevard, the City's main thoroughfare, to Air Power Park, community assets reflect both the high-tech and aerospace traditions of the City and its culture. Some have called Hampton a "new Silicon Valley, with a much lower cost of living."

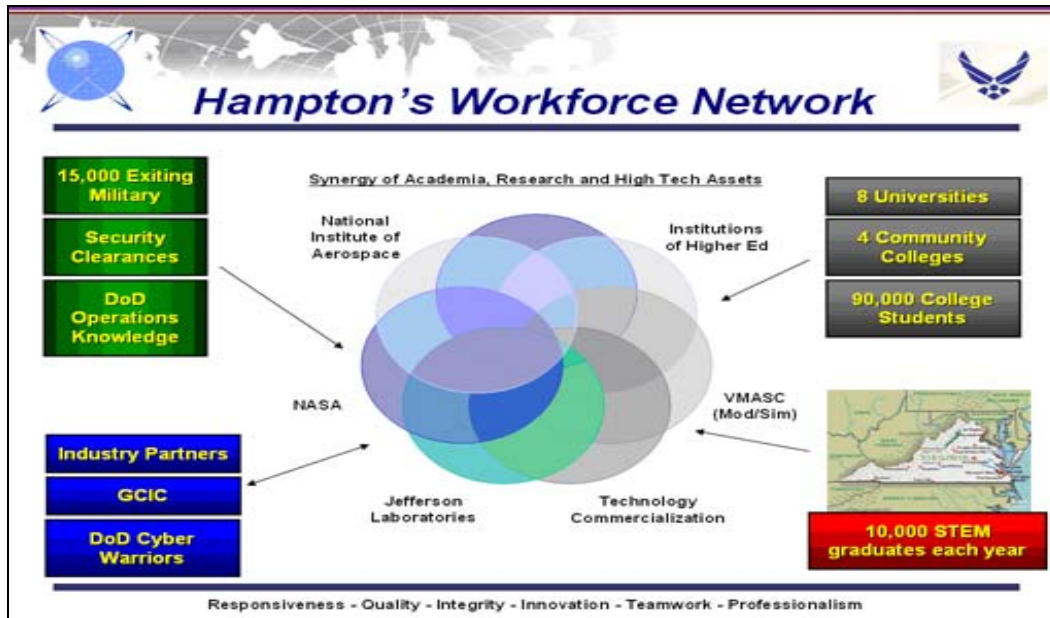
The City is committed to continuing to engage the Air Force as a good community partner, working closely together for long-term sustainability and community responsiveness. To that end, the City believes it possesses the unique assets to successfully host AFCYBER Command.

Hampton and the surrounding region have an unmatched high technology defense industrial base and the skilled workforce with the education and security credentials to make a day-one contribution. These critical capabilities combined with our world-class academic and government research centers, a strong pro-military culture, and superior lifestyle make Hampton the ideal choice as the location for the Air Force's newest major command. The primary reasons why Hampton is an ideal location for AFCYBER are outlined below.

### **WORKFORCE AND OPERATIONAL SYNERGIES**

Hampton Roads is home to many major military commands representing all military services. Joint Forces Command, Army Training & Doctrine Command, Navy Fleet Forces Command, and the Air Force's Air Combat Command are at the top of a list of twenty five military installations and commands. A tremendous opportunity exists here to create synergy between these organizations in pursuit of cyberspace superiority. Other partners include the Virginia Air National Guard, industry, academia and our many research institutions. Having so many quality assets located in one area presents an opportunity to capitalize on the collaborative and integrating components that high-tech projects require.

The City of Hampton, the Hampton Roads region, and the Commonwealth of Virginia offer an outstanding and well-prepared workforce of computer scientists and engineers. NASA LaRC, VMASC, the National Institute of Aerospace, Jefferson Lab, and many other research facilities are located here. There are also some 15,000 personnel exiting the military here each year who are looking for second careers and are already well versed in military operations. Many of them also hold the necessary security clearances.



## **HIGH SPEED BANDWIDTH/NETWORK CAPACITY**

The City of Hampton, Langley Air Force Base (AFB), NASA Langley Research Center (LaRC), and dozens of federal, commercial, and industrial installations across the Hampton Roads region all enjoy a robust, reliable, and scalable set of communications solutions provided by large-scale telecommunications providers. These communication systems use the latest in wiring infrastructure plant technology, utilizing state-of-the-art fiber and routing equipment. Because the local and regional communications systems provide connectivity to very large Department of Defense users, such systems are considered extremely secure.

There are over 650,000 miles of fiber optic cable in Hampton Roads. Much of this fiber is also dark, allowing for additional capacity and scalability as new technologies emerge to take advantage of the latest in fiber optic multiplexing techniques.

The Hampton Roads region also has one of the most advanced regional research networks in the country. E-LITE provides 10GB connections between our universities, NASA LaRC, Thomas Jefferson National Accelerator Facility (Jefferson Lab), the VMASC, and provides Gigabit connectivity to the National Lambda Rail and Internet-2.

## **SYNERGY OF SUPERIOR EXISTING RESOURCES**

The Commonwealth of Virginia has long been a national leader in innovative and cutting-edge technology, as evidenced by the sophisticated network of technologically-based government installations, businesses and educational institutions present, growing, and prospering here. In addition, Hampton Roads, along with Northern Virginia, are internationally known as world class sources of highly-skilled workers with all levels of security clearances and expertise in information operations, network security and information assurance, as well as advanced cyberspace research and development.

Virginia's superior technological environment, coupled with our distinctive military, private business, and educational assets, creates a synergistic supply and demand ecosystem of interdependent entities, duplicated nowhere else in the world. In fact, we've contributed to the cyber mission for some time through entities already performing cyber-related work. For example, the Global Cyber Integration Center (GCIC), located in Hampton, Virginia, is already a part of the AFCYBER mission, executing and implementing the Secretary of the Air Force's "policy and guidance to better integrate land, air, space, and cyberspace capabilities into a seamless network." Also directly contributing to the cyber domain is the Naval Network Warfare Command, located in Virginia Beach, Virginia, just a few miles away from GCIC.

The considerable presence of important private sector entities conducting cyber-related work in Hampton Roads can be explained by the unique breadth and large number of significant military assets located here, coupled with the Commonwealth's exceptional technology infrastructure. The City of Hampton and the Hampton Roads region is home to one of the most advanced communications networks in the country. Two primary communications providers (Cox and Verizon) offer robust connectivity solutions that are state-of-the-art, secure, reliable and scalable.

Such sophisticated technological infrastructure, coupled with the significant presence of government and military installations, has drawn dozens of internationally well-known defense contractors to the region. In fact, the top ten defense contractors in 2007 all have offices in or near Hampton Roads, as do smaller entities organic to the City of Hampton, such as Zel Technologies, Birhlie Applied Research, and Analytical Mechanics Associates; among dozens of others, an indication of the growing and thriving workforce present here already contributing to the cyber domain. A number of these private businesses are already supporting cyber-related activities on Langley AFB.

In fact, existing industries in the Hampton Roads region employ over 33,000 workers across a wide range of technology-oriented sectors. Engineering Services and Computer Systems Design and Related Services together employ over 25,000 workers in the Hampton Roads region. In addition, over 3,000 technical or very high level personnel exit the military annually in the region, many of them with a top secret or higher clearance, and many of whom remain in the region to reside permanently.

These high technology industries in the Hampton Roads region also draw from the strong local public school system, as well as our superb regional university and community college programs and the strong academic programs across the state.

## **SECURITY FEATURES**

The Commonwealth of Virginia and the City of Hampton have exceptional security programs in place to address a wide range of anti-terrorist measures ensuring the overall safety of its citizens and facilities. The threat of terrorism will not go away, and as such, government agencies at all levels throughout the nation must plan on such events. The active engagement of local, state, and federal government law enforcement agencies

within the region is outstanding. Within Hampton, the federal installations of NASA Langley Research Center, Langley Air Force Base (AFB), and Fort Monroe may themselves be targeted. Government operations of the city are less likely to be a target of terrorism, but may be involved in a terrorist incident involving the federal facilities, roadways, bridges or tunnels. The City's light industry is also not viewed to be as likely a target as other industries in neighboring jurisdictions such as the refinery or the shipyard. An Air Force installations threat assessment is an ongoing process for the Base Commander by Security Forces and OSI. The 1<sup>st</sup> Fighter Wing local terrorist threat assessment is considered low.

## **AVAILABLE FACILITIES**

The City of Hampton has a proven track record for being responsive to the Air Force's needs. When the Global Cyber Integration Center (GCIC) was created two years ago, Hampton worked with a local developer to construct a facility to military specifications that met Air Force anti-terrorism building standards and a state-of-the-art communications infrastructure in less than a year. Hampton stands ready with available space and infrastructure to facilitate a smooth "turn key" transition for AFCYBER Command operations.

The City of Hampton understands that the Air Force will need to bed-down personnel quickly. The City has space available *today*: 20,000 square feet at the National Institute for Aerospace adjacent to GCIC; 87,000 square feet at Lockheed's Air Operations Center; and 120,000 square feet at NetCenter. Other available options include available office space and acreage on NASA Langley Research Center (LaRC) in Hampton. NASA LaRC operates a secure complex, consisting of over 800 acres. A significant portion of that land – approximately 250 acres – will be made available for development to both public and private interests under NASA's Enhanced Use Lease Authority (EULA) (which becomes effective on December 31, 2008). NASA would like to offer the City of Hampton and the Air Force the opportunity to utilize a portion of this land as the location for the Cyber Command Headquarters. In addition, NASA has vacated certain buildings located on this acreage (Buildings 1162, 1162A, and 1163) which may be suitable for use by Cyber Command in their initial operational phase.

The City can also work to custom build a facility to the Air Force's specifications in less than 12 months, as it did with the GCIC. The Hampton Roads Center – North Campus is pre-equipped and site-ready for an additional building.

## **POWER SUPPLY**

Hampton Roads and Virginia are home to one of the nation's largest producers and transporters of energy. Dominion Virginia Power can provide for the immediate power needs of the Air Force with existing facilities and infrastructure and little (if any) build out. Such power provisions can be made for highly secure requirements, offer redundancy and diversity of transmission paths, and are scalable to allow growth for multi-megawatt needs. Both Langley Air Force Base (AFB) and the adjoining NASA Langley Research Center (LaRC) have their own power sub-stations. Other sub-stations

exist outside the gate in the general vicinity providing multiple options and connection points. Outages in the area are negligible, demonstrating a stable and ample supply of power. Power generation and infrastructure facilities are secure and have multiple levels of protection. Uninterrupted power systems are available both behind the gate and through other readily available commercial means.

### **TRANSPORTATION**

Traveling to and throughout Hampton Roads is both easy and efficient. The region is served by several different modes of transportation with numerous options. The transportation system is safe, practical and easily accessible offering multiple routes of travel. It provides for a good flow of both goods and people, resulting in a vibrant economy and an attractive quality of life. Virginia operates the third largest state-maintained highway system in the United States, with over 70,000 miles of highway and six major interstate highways.

### **NATURAL EVENTS & EMERGENCY PREPAREDNESS**

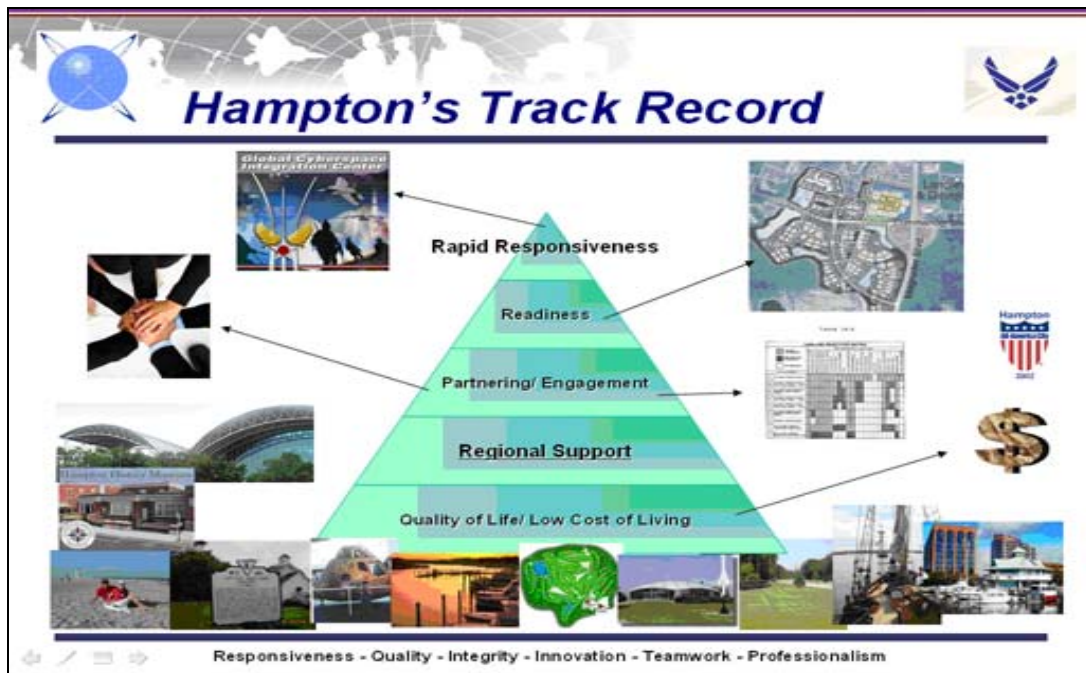
There have been no major natural events or emergencies in Hampton Roads in the last few years. Still, the community is continuously dedicated to both proactively improving regional planning and lessening the impacts from possible weather events.

The threat of hurricanes and flooding has precipitated regional and city plans to accommodate such incidents, resulting in emergency operation plans of a stronger caliber than most communities. It is rare for a major hurricane to threaten the Virginia coast as hurricanes this far north tend to weaken due to cooler coastal waters and increasingly westerly winds aloft. Despite this, proactive preparation and planning has created an environment of survivability and reliability among the region's resources as evidenced by the significant presence of government, military, private business, and academic installations present throughout the Hampton Roads region.

The Hampton Roads region has two regional committees dedicated to the planning and mitigation of natural disasters. The Hampton Roads Planning District Commission serves as the regional coordinator to foster and support local and regional strategies that will complement existing emergency management programs in cities and counties throughout Hampton Roads. The Hampton Roads Emergency Management Committee (HREMC) promotes the inter-jurisdictional and inter-agency coordination of emergency management issues and foster emergency preparedness in the Hampton Roads region. The HREMC provides a working group for the exchange of information, experience, and technology among individuals with responsibilities for emergency management in Hampton Roads region. Another strong testament to Hampton Roads' commitment and proactive approach to mitigating any possible impact of natural weather events is a resilient communications system featuring redundancy at multiple levels, backup/recovery, and continuity functions.

As evidence of Virginia's impeccable disaster planning, a number of awards and accolades have been bestowed upon the Commonwealth in recent years. In fact, just this year, the Emergency Management Accreditation Program has recognized Virginia

Department of Emergency Management's online Continuity of Operations Plan Toolkit as a best practice.



## SUMMARY

The City of Hampton, with its unmatched high technology defense industrial base, skilled workforce with education and security credentials, top-notch academic and government research centers, and strongly pro-military culture and superior lifestyle already possesses the distinct synergistic enabling capabilities to support the AF Cyber Command mission. These agencies and organizations of excellence perform a wide variety of DoD related operations that in many ways use, support, and are responsible for the development of cyberspace operations within their service, joint and agency missions. This submission will outline in detail the many unique attributes of the City's diverse organizations, which as a whole, provide the Air Force Cyber Command with the set of operational synergies necessary to create the foundation for achieving cyberspace superiority.

Effective development of the capabilities necessary to achieve cyberspace superiority for the nation will encompass more than just developing people, processes and technology. It will demand cross-domain information exchange between all of the military services, joint commands and agencies involved in cyber operations, as well as those of our partners and allies, to achieve the desired operational freedom of action for the United States and deny that same freedom to our adversaries. Hampton offers exactly the right set of service and joint partnerships and proximity, as well as ease of access to Washington, to successfully execute the AFCYBER Strategic Vision outlined above.

Hampton Roads hosts the largest concentration of military personnel in the continental United States because the region is supportive of the military's mission. The region boasts a robust community with a great business climate, high quality of life, and an established positive relationship with the Air Force, other military branches, the Department of Defense, and a host of federal agencies. Hampton Roads offers a large collection of joint service facilities with critical cyberspace missions. These facilities are complimented by top-notch academic institutions providing a quality work force. Furthermore, the region offers a state-of-the-art communications network, ample bandwidth, ready-to-occupy and/or ready-to-build facility opportunities, as well as an all-star list of corporate firms already invested in development and delivery of cyber systems.

Lastly, living in Hampton Roads offers a high quality of life across a diverse spectrum ranging from the beaches to the arts to sports to shopping and dining. The local climate is secure, pro-Air Force, and is populated by a highly educated workforce. This combination of factors makes Hampton the optimum site for hosting AF Cyber Command and for advancing the critical military capability required for national defense.