



ARLINGTON COUNTY, VIRGINIA

<p>County Board Agenda Item Meeting of February 21, 2009</p>

DATE: February 6, 2009

SUBJECT: Approve the Award of a Contract to Dominion Virginia Power for the Construction of an Arlington County Government and Arlington Public Schools Fiber Optics Communication Network from 16th Street and Kirkwood to Lee Highway continuing along Lee Highway to 1850 N. Moore Street in Rosslyn, Contract No. 50-09.

C. M. RECOMMENDATIONS:

1. Approve the award of Contract No. 50-09 to Dominion Virginia Power for construction of an Arlington County Government and Arlington Public Schools Fiber Optics Communication Network from 16th Street and Kirkwood, Lee Highway to 1850 N. Moore Street in Rosslyn, in the amount of \$392,082; authorize an allocation of \$39,208 as a contingency for change orders and increased quantities, for a total authorization of \$431,290.
2. Authorize the Purchasing Agent to execute the contract documents, subject to review by the County Attorney.

ISSUE: There are no identifiable issues associated with this item.

SUMMARY: The contract with Dominion Virginia Power (DVP) presents a unique opportunity for the County and Schools to leverage past and planned investments in fiber optic technology to create the next generation of governmental communications network. Fiber optics technology is more reliable, scalable, and adaptable to emerging needs and applications than much of the technology currently in use. An inter-agency team has developed an integrated telecommunications plan to create a government-owned fiber optics communication network that will be able to provide for:

- a robust, redundant public safety and emergency management communications system,
- an integrated traffic signal and camera system to efficiently manage traffic flow and improve communications with public safety officials,
- increased broadband wireless access to better meet community needs, and
- enhanced data, voice and video communications between public facilities.

<p>County Manager: _____</p>

<p>County Attorney: _____</p>

<p>Staff: Penny Newquist, DES, Director's Office, Strategic Planning, Analysis and Technology</p>

BACKGROUND: Over the past several years, the County Board has approved several projects to enhance the communications capabilities of the County. Specifically:

- In July 1, 1998, the County Board approved a franchise agreement with Comcast creating an Institutional Network (INET) that connects all government and school buildings. The INET is only available through the terms and conditions of a franchise agreement with Comcast. The agreement with Comcast that provides this network expires July 1, 2013. There is no certainty the current network will be available under the same conditions after the renewal of the franchise agreement.
- In June 2004, the County Board approved financing for the Emergency Communications Center, a new public safety radio system, and a new radio system infrastructure network to support public safety in the County. The planned fiber ring will connect the County's radio sites which will improve reliability and redundancy for the operation of the remote radio sites. The ring will also provide enhanced network capacity for broadband wireless deployments and advanced mobile data applications for emergency management and public safety.
- In September 2005, the County Board approved applications by the Department of Environmental Services to the Virginia Department of Transportation for replacement of the current copper wire technology traffic signal system with a fiber optics communication network to support the Intelligent Transportation Systems (ITS) program.
- In July 2008, the County Board approved the Founder's Square site plan. The site plan includes an agreement by the developer to provide access for the County to construct sections of the fiber optics network. This has become a new standard site plan condition which will be sought in future projects.
- Over the past 12 months, County staff, consulting with School staff, developed a plan for a single, redundant network to support all these needs. This network will be developed and implemented over the next decade using opportunities to place fiber conduit and the fiber as they become available.

Over the last year, an inter-agency team has developed a plan for implementing fiber optics technology and leveraging County assets such as the right of way as projects by developers, utilities and the County are identified. The attached map (Attachment A) is a working draft and will be adjusted as necessary. By partnering with developers and utilities such as DVP in the placement of conduit for the fiber optics communication network, the County saves money and staff resources by avoiding designing and construction of a separate trench and minimizes disruption to the roadways and the citizens that use those roadways. This approach provides the best opportunity to efficiently use financial resources and the right of way assets to construct the fiber optics communication network. By partnering with DVP, the County avoids costs exceeding \$400,000 if we were to construct the trench as a separate project.

DISCUSSION: An immediate opportunity for placement of fiber optics exists as DVP continues to upgrade its infrastructure in the County. In recent negotiations between the County and DVP, the parties have agreed that as DVP continues trenching and construction, it will install for the County the conduit and fiber necessary to support the County's fiber optics communication network (Attachment B). This will be the first of several opportunities to expand the reach of fiber optic technology. This technology provides a communications network that:

- enhances the County’s ability to ensure safety of its citizens through improved communications,
- enables Arlington County and Arlington Public Schools to communicate with surrounding local jurisdictions, Commonwealth of Virginia Departments, regional and federal agencies as they develop their fiber networks,
- promotes the County’s environmental goals, including telecommuting and additional wireless hot spots,
- strengthens the County’s policies of smart growth by strategically leveraging the use of right of ways,
- presents greater opportunity for County/School collaboration on network and technology development, and
- creates a competitive economic development advantage for Arlington County as educational institutions and other organizations seek to locate in communities with enhanced telecommunications infrastructure.

As the County enhances its own storm water infrastructure, rebuilds public right of ways, constructs and rehabilitates public facilities, coordinates work with other public utilities such as DVP, and approves site plans for private development, a secure and robust network will be constructed. This network will provide the County with alternatives once the Comcast franchise expires in 2013.

FISCAL IMPACT: The project cost of \$431,290 is for installation of fiber optics cable, junction boxes, and associated materials and labor into the two conduits. Funds for this project are available in the Emergency Communications Bond account 546.400000.91000.T.T.T.

The fiber optics communication network project will use multiple sources of funding:

- **Emergency Communications Bond:** The Emergency Communications bond was sold to fund development of the ECC, a new public safety radio system and a new radio infrastructure. OEM now plans on implementing a fiber “ring” to create a redundant, reliable emergency management communications network.
- **Intelligent Transportation System (ITS) Grant Funds:** The ITS grant provides for the upgrading of the traffic signal system and enhancing traffic management capabilities. The traffic network will use fiber optics to optimize traffic signal synchronization and improve traffic flow. Approved grant funding of \$5 million could grow to nearly \$20 million over the next several years as the phased project progresses and provided that grant funds are available. These funds will provide the bulk of funding for the design, trenching, and placing of conduit and fiber in the County’s right-of-way. The ITS grants will allow for upgrades of a large portion of the County’s traffic signals, and enable the County to connect traffic signal fiber with fiber already in place for the County’s I-Net. By connecting the two systems, the County will be the beneficiary of a fully redundant fiber optics communication network.
- **Developer Contributions:** Development projects provide the opportunity to construct “links” of the network which will be connected as the network becomes more extensive. As developers construct underground infrastructure, fiber optics communication network links will be added to avoid repetitious trenching and disruption to the public right of way.

- **Public, Education and Governance (PEG) Funds:** PEG funds are dollars appropriated from the County's cable franchise agreements, and used for capital expenses relating to the promotion of public education, awareness and governance. As the County plans the fiber optics communication network, PEG funds can be leveraged to provide educational opportunities at various County buildings and non-profit locations.

The emerging Federal economic stimulus bill, the American Recovery and Reinvestment Act of 2009, offers opportunities for local governments such as Arlington County to facilitate economic development, digital inclusion, and education goals through grants to be awarded for qualified broadband projects. This bill makes explicit provision for the participation of public entities at the local and state level. County staff will continue to identify and seek grants funds from the Federal and State governments including close review of provisions for fiber optics communication networks as part of the technology components of President Obama's proposed stimulus package.