



CITY OF HAYWARD

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Cover Memo

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DATE: February 23, 2016

TO: Mayor and City Council

FROM: Economic Development Manager

SUBJECT

Authorization for the City Manager to Negotiate and Execute a Professional Services Agreement for the Preparation of the Hayward Fiber-Optic Network Master Plan.

RECOMMENDATION

That Council adopts the resolution (Attachment I) authorizing the City Manager to negotiate and execute a professional services contract with CTC Technology and Energy to prepare a Fiber-Optic Network Master Plan.

SUMMARY

In today's fast-moving, technology-driven world, broadband internet service is considered the foundation for economic growth, job creation, global competitiveness, and a better quality of life. Like electricity did a century ago, broadband infrastructure is driving economic development. It fosters and attracts new advanced industries and is helping existing businesses expand and remain competitive globally. Broadband is also changing the way communities educate children, provide public services, and access and disseminate knowledge.

To unlock the economic development potential afforded by broadband, the City is working toward establishing a system called the High-Speed Hayward Fiber-Optic Network (High-Speed Hayward) to serve our business community and potentially residents over the long term. However, this complex telecommunications initiative requires strategic planning to ensure the system is well designed, subscribed to, and managed. To ensure the achievement of these overarching goals, staff developed and is executing a comprehensive work program that includes data collection and analysis, the exploration of public-private partnerships, pursuit of funding opportunities, and development of a Fiber-Optic Network Master Plan (Fiber Master Plan).

This professional services contract will result in a Fiber Master Plan that will guide the City in planning, budgeting, and implementing this infrastructure project. The Master Plan is scheduled to be completed within nine months from contract initiation.

BACKGROUND

Work Task IS3.C of the [Economic Development Strategic Plan <http://www.hayward-ca.gov/haywardopenforbusiness/documents/2013/Economic_Development_Strategic_Plan.pdf>](http://www.hayward-ca.gov/haywardopenforbusiness/documents/2013/Economic_Development_Strategic_Plan.pdf) tasks staff to “explore a public/private partnership to secure broadband/fiber optic network in the industrial area.” To achieve this task, which is programmed over the duration of the five-year plan, Economic Development staff developed, and is executing a comprehensive work program designed to meet near- and long-term needs. Key elements of this program include:

1. Collecting data on existing broadband resources and business needs;
2. Engaging with technology and service providers to identify each organization’s plan or willingness to expand service to the Industrial Crescent and explore potential public-private partnerships;
3. Pursuing funding opportunities including federal economic development and public works grants for network design and construction;
4. Developing a Fiber Master Plan to guide the City in planning, budgeting and implementing a telecommunications infrastructure project.

Over the past two years in accordance with the EDSP work task, staff focused on providing an expeditious solution to Hayward’s business community’s broadband needs by seeking a private partner. While exploring partnerships with large and small providers (detailed below), staff discovered that the technical complexity of the project itself and the potential impacts on the City, the business end-users and other stakeholders required a more strategic and methodical approach to ensure the outcomes met the community’s needs. Staff determined that a fiber master plan utilizing subject-area expertise was required from specialized consultants to dive deeper into determining and evaluating network routes, technical equipment requirements, cost estimates, appropriate business models, and phasing of implementation.

Staff outlined this programmatic approach, received positive feedback and presented regular activity updates at meetings of the Council Economic Development Committee ([September 14, 2015 <https://hayward.legistar.com/ViewReport.ashx?M=R&N=Text&GID=606&ID=2277160&GUID=3B4C34A4-138D-4EC3-A6DD-1FA8E36CD578&Title=Staff+Report>](https://hayward.legistar.com/ViewReport.ashx?M=R&N=Text&GID=606&ID=2277160&GUID=3B4C34A4-138D-4EC3-A6DD-1FA8E36CD578&Title=Staff+Report) and February 1, 2016) and Council Technology Application Committee (October 2015 and December 2015).

The Fiber Master Plan is a critical element to move this EDSP initiative forward. It will leverage the wealth of data and analysis conducted by staff and guides the City from planning to actual implementation. A summary of staff’s progress on laying the foundation for this plan and its application are as follows:

- 1. Data Collection & GIS Mapping:** ED staff, working closely with Public Works - Engineering and Transportation, and Information Technology (IT), compiled all available data regarding existing and planned City and private-owned fiber infrastructure. This information includes existing and planned City-owned conduit and fiber. Staff then combined this with data from the Industrial Technology and Innovation Corridor Baseline Profile to produce the first map system that plots existing fiber infrastructure, planned conduit, and locations of major employers. This new system provides the basis for planning a fiber-optic network loop to serve the Industrial Corridor and provides foundational data for selecting locations for fiber as resources become available.

- 2. Public-Private Partnership Exploration and Formation:** While developing the GIS maps, staff began engaging private providers to explore partnership options. These potential partners included: AT&T, Comcast, Sonic, and San Leandro Dark Fiber among others. The goal was to determine each organization's plan or willingness to expand service to the Industrial Corridor. AT&T and Comcast continue to provide services for those within proximity to service connection points. Sonic has no plans to expand fiber into the Hayward market at this time, but if the City expands the fiber network, they would be interested in the future. The greatest progress has been with San Leandro Dark Fiber.

San Leandro Dark Fiber (SLDF), who is the City of San Leandro's private partner for the Lit San Leandro Fiber Network, expressed a strong interest to expand their network to Hayward. They are currently working with Alameda County on expanding service through Cherryland and have maintained a strong interest in developing a partnership with the High-Speed Hayward Fiber Optic Network. Staff is currently collaborating with SLDF to develop an agreement to provide robust fiber services to Hayward businesses through the construction of the "Fiber Loop," which would connect existing City-owned conduit with newly constructed conduit creating a loop through the City and would become the backbone for fiber services. Staff is currently negotiating with SLDF on terms. Key to this agreement is the Fiber Grant Application, which is discussed in detail below.

- 3. United States Economic Development Administration Public Works Grant Application:** The development of a fiber optic network is a complex and costly infrastructure project with the greatest expense associated with the installation of conduit within the street systems. The City applied for a \$2.7 million grant opportunity to expand the City's fiber conduit infrastructure by to create a fiber loop under the United States Economic Development Administration (U.S. EDA) Public Works Program in June 2015. The application passed multiple panel evaluations, but ultimately was not funded for the 2015 federal fiscal year. U.S. EDA representatives have been supportive of the grant application and recommended continuing the application to FY 2016.

Staff submitted an updated FY 2016 grant application in October 2015. U.S. EDA responded favorably and requested the City provide additional technical information to further Hayward's application. The specificity of these requests, which included initiating environmental consultations with State and local agencies, indicate that a positive outcome is likely. Grants under this program are awarded on a rolling basis. Staff will continue work closely with and respond in a timely manner to U.S. EDA to maximize the likelihood of funding.

DISCUSSION

While staff continues to explore opportunities for meeting immediate demand for broadband connectivity from our business community, a Master Plan will serve as a strategic long-term planning document. The Master Plan's primary objective is to collect and analyze information and data that will provide the best path and business model to deploy a fiber optic network. The initial emphasis of the network is to serve businesses located in Hayward's Industrial Innovation and Technology Corridor. Additional information on this targeted area and the types of business activities within it can be found in the [Industrial Technology and Innovation Corridor Baseline Profile <http://www.hayward-ca.gov/haywardupward/wp-content/uploads/2015/06/IndustrialBaselineReport.pdf>](http://www.hayward-ca.gov/haywardupward/wp-content/uploads/2015/06/IndustrialBaselineReport.pdf) published by the

City's Economic Development Division in March 2015. In addition, there may be an opportunity to provide fiber connectivity for our residential neighborhoods over the long-term.

Specific technical goals of the Master Plan are as follows:

1. Provide the City with information and data to set its goals and facilitate the design and deployment of a Fiber Optic Network in Hayward;
2. Research and inventory the current supply of broadband communication assets, products and services in the Industrial Crescent;
3. Produce an inventory and assessment of existing City-owned assets and infrastructure required to support deployment of a fiber network;
4. Define and evaluate potential fiber optic network routes and requirements;
5. Identify impacts of a fiber network including impacts on City right-of-way, City-owned conduit, streetlight pools, traffic lights, existing fiber system and other real property;
6. Define services and technologies to be offered on the fiber optic network;
7. Prepare high-level conceptual network routes, deployment cost estimates and evaluate potential business models to build, operate, and make last mile connections to a fiber optic network;
8. Provide City Council and the City Council Committees with findings, recommendations, and feedback opportunities regarding the feasibility and costs of building a fiber-optic network and the best business model to achieve the goals; and
9. Produce comprehensive Master Plan document and phased Implementation Plan to achieve these goals.

Consultant Selection

Staff conducted extensive research and analysis to prepare the Request for proposals (RFP) and complete a competitive bidding process. RFP development, which began in August 2015, involved collaboration with staff from multiple departments, including Information Technology (IT), Public Works Engineering and Transportation, and Finance. Economic Development staff also reviewed related RFPs and completed Master Plans from the Cities of Palo Alto, Oakland, Santa Monica, Ontario, Victorville, and Santa Cruz.

[The RFP was released on September 3, 2015 <http://www.hayward-ca.gov/CITY-GOVERNMENT/DEPARTMENTS/FINANCE/documents/2015/rfp/1608-090115_Fiber_Master_Plan_RFP_PN_Final_08_25_MC2.pdf>](http://www.hayward-ca.gov/CITY-GOVERNMENT/DEPARTMENTS/FINANCE/documents/2015/rfp/1608-090115_Fiber_Master_Plan_RFP_PN_Final_08_25_MC2.pdf). Responses were received on September 25, 2015 from four firms: The Broadband Group, CTC Energy and Technology, Magellan Advisors and SiFi Networks. These proposals were reviewed and scored by an interdepartmental panel and three of the four firms were invited for interviews on December 3, 2015. Interviewed firms included The Broadband Group, CTC Energy and Technology, and Magellan Advisors.

Following oral interviews and discussions conducted therein, staff sought additional information from the interviewed firms to clarify their technical approach to selected work tasks. Staff issued a request for revised scope, budget, and schedule information on December 21, 2015. All three vendors responded by the January 15, 2016 due date. These responses were reviewed and scored by an interdepartmental panel on January 22, 2016. Based on their experience, proposal scores, and interview performance, CTC Energy and Technology was unanimously selected by the panel.

CTC Energy and Technology offers extensive experience and expertise in all aspects of broadband master planning. The firm has completed similar work including market surveys, business plans, engineering and design, and financial pro forma for clients nationwide including the California cities of Culver City, Palo Alto, San Francisco, and Santa Cruz. The firm is currently preparing a similar plan for the City of Vallejo.

ECONOMIC IMPACT

The job creation impacts attributable to this initiative cannot be estimated at this time. However, information collected through the Economic Development Business Visitation Program from September 2014 to date indicates there is high demand for broadband connectivity for small to medium-sized businesses within the advanced industries sector. Firms in the biotechnology, construction and engineering, information and business services, and manufacturing sectors have expressed a need for such service to help them grow and remain competitive.

The ability to add this infrastructure to Hayward's Industrial Crescent will also serve as a strong competitive advantage over other communities. Improved broadband connectivity in our industrial corridor will support business attraction efforts. While the existence of fiber is only one of many site selection factors (such as lease rents, building configuration, traffic patterns, etc.), being able to market Hayward's broadband connectivity to the business community at large not only helps satisfy a site selection criterion, it will strengthen City's reputation as a center for innovation and growth.

FISCAL IMPACT

The Economic Development Division's operating budget for professional consulting services has adequate fund balance to appropriate up to \$108,000 to create the new project, Fiber-Optic Network Master Plan. This amount includes a contract base value of \$89,530 and an additional \$18,470 or approximately twenty percent as a contingency for any unforeseen changes in scope and/or potential follow-on tasks linked to Master Plan implementation.

PUBLIC CONTACT

Selection of the consultant was completed through a transparent and competitive bidding process. In accordance to City procurement procedures, the RFP was posted to the City website and advertisement notices were sent to potential vendors identified through internet research.

Interviews with business representatives and organizations, property owners, and other public and private stakeholders are key elements of the scope of work to be completed by the consultant.

Work sessions and staff updates with the Council, Council Economic Development Committee, and the Council Technology Application Committee will also be scheduled to allow review and comment on the Fiber Master Plan.

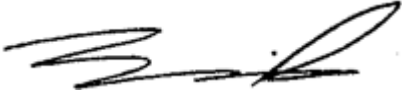
SCHEDULE

If approved, the project is scheduled to kick-off in mid-March and be completed within nine months.

Prepared by: Paul Nguyen, Economic Development Specialist

Recommended by: Micah Hinkle, Economic Development Manager

Approved by:



Fran David, City Manager

Attachments:

Attachment I

Resolution