

2010 APR 15 PM 4:00 **CITY OF OAKLAND**
AGENDA REPORT

TO: Office of the City Administrator
ATTN: Dan Lindheim
FROM: Department of Information Technology
DATE: April 27, 2010

RE: Informational Report regarding the findings of the Wireless Broadband Feasibility Study conducted by the consultant Tellus Venture Associates

SUMMARY

The Oakland City Council approved a resolution authorizing the City Administrator to negotiate and execute a professional services agreement with Tellus Venture Associates to conduct a thorough wireless broadband assessment process for the City of Oakland.

The main objective of the assessment process was to conduct the necessary fact finding that will support the establishment of a sound vision for the deployment of an achievable and sustainable wireless broadband network.

Tellus Venture Associates conducted a thorough stakeholder assessment, taking into account the expressed needs of citizens, businesses, non-profits, government agencies and City departments. This assessment included a general town hall meeting; public focus groups in each Council district; workshops for City staff, businesses, non-profits and other government and education agencies; telephone and email outreach; and internal surveys.

From this extensive research, a comprehensive analysis of needs, priorities, requirements and assets was developed in support of the City's goal of establishing a citywide broadband network. A wide range of points of view was represented and many different opinions were expressed. A broad consensus within the Oakland community concerning broadband deployment was also achieved.

FISCAL IMPACT

This report is informational only, no fiscal impacts are included. However, if the City decides to build a broadband wireless network the estimated cost are:

| Estimated cost to build out a Wireless Network with Alternatives | | |
|---|---------------------|------------------------------|
| | Capital Cost | Yearly Operating Cost |
| Wireless Core Backbone | \$3,375,123 | \$292,385 |
| Alternatives | | |
| General Government Fixed | \$1,966,369 | \$222,967 |
| General Government Nomadic | \$751,113 | \$84,529 |
| BayRICS 700 MHz Scenario | \$934,275 | \$55,032 |
| Business and Entrepreneurship | \$129,164 | \$94,209 |
| Drinking Fountain Model | \$1,977,310 | \$788,059 |
| Sub Total | \$5,758,231 | \$1,244,796 |
| Total | \$9,133,354 | \$1,537,181 |

BACKGROUND

Tellus Ventures Associates submitted a comprehensive report on the findings of a wireless broadband feasibility study conducted for the City of Oakland. Tellus Ventures conducted the study to determine the feasibility of deploying a sustainable wireless broadband network that will have an impact on enhancing economic development and public safety; overcoming the digital divide; increasing the effectiveness of anchor institutions; whereby, improving the quality of life for all Oakland citizens. The study employed a research, outreach, technical and financial analysis process as the method for producing the data to support the study's findings. A special effort was made to achieve staff and community participation through a citywide town hall meeting; focus groups conducted in each Council district; public input via phone and email; and workshops for businesses, non-profits, city agencies and departments. In support of deploying a wireless broadband network, the study examined resources and assets available to the City, and identified the technological and financial challenges. A copy of the Tellus Ventures Associates Wireless Broadband Feasibility Study is provided as **Attachment A**.

The findings in the report come at an opportune time. Broadband Technology Opportunities Program ("BTOP") grants under the American Recovery and Reinvestment Act of 2009 ("ARRA" or Federal Government's "Stimulus Package") are now being accepted through round 2 applications. BTOP offers the City a great opportunity to apply for capital funding to deploy a broadband network. The needs assessment findings of the study produced scenarios and alternatives for extending broadband technology

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capabilities for many worthy purposes. Some notable broadband capabilities include general government fixed and nomadic applications; wireless “hotspots”; mobile public safety applications; public Internet access for community anchor institutions; and business grade Internet service to both unserved and underserved businesses. All of these broadband capabilities meet the BTOP qualifications and satisfy the eligibility requirements for BTOP grant funds to construct new or expand existing facilities that are required to provide broadband network services to the City of Oakland

KEY ISSUES AND IMPACTS

The community saw broadband as a highly effective tool for enhancing city services, promoting economic development and social justice, and improving the quality of life in Oakland. Nearly all believed that the City should invest in broadband infrastructure. Most agreed that the City should upgrade its broadband infrastructure and extend it further into the community were financially feasible.

Priorities, needs and specific user requirements were tabulated, and formed the basis for a conceptual broadband network design model. The financial implications, including the potential for cost savings and efficiency gains, were calculated and the final report was prepared.

Findings of the study were:

- A wireless broadband system serving specific community and institutional needs is financially and technically sustainable for the City of Oakland.
- Some of the cost of building and operating such a system can be met through identifiable cost savings, efficiency gains and budgetary choices based on the economic value of benefits.
- Public Internet access by way of community anchor institutions is financially and technically feasible and universally supported by a diverse range of Oakland residents, organizations, agencies and businesses if implemented in a fiscally sound manner.
- Combining broadband access with equipment, software, support and training will insure widespread community access to the empowering capabilities of useful, relevant and affordable applications and services.
- Enabling entrepreneurial opportunities for local businesses through a pay-as-you-go public-private partnership was backed by Oakland stakeholders and supported by the financial and technical analysis conducted for this study.

- Providing wireless Internet service to residences or individual consumers is not financially sustainable or technically feasible for the City of Oakland, and is opposed by nearly all stakeholders. The near-universal failure of such projects in other cities was frequently cited as a useful lesson to be learned.

Recommendations of the study were:

- Seek capital funding through various Federal and State grants to deploy a Broadband Network. The study produced a conceptual broadband network design ("reference network model"). Several business model scenarios were evaluated against the "reference network model". The most cost effective model required a capital fund outlay of approximately 9.5 million dollars and an annual operating budget for maintenance and equipment upgrade cost of 2 million dollars. While cost saving offsets and projected revenues will cover the annual operating budget requirement, the capital cost for the project will need to be funded. The Stimulus Package is the recommended near-term solution for obtaining capital funding.
- Realize cost savings offsets by eliminating leased circuit services that parallel deployed broadband network services where possible. The broadband network will allow the City to replace costly, low-bandwidth leased lines with faster, cost-effective City owned connections.
Take advantage of new wireless technology to improve the City services delivery mechanism, bring efficiency in field operations by allowing the mobile force to connect to the centralized computer systems, and implement real-time data collection, and paper free report submissions.
- Extend broadband infrastructure to a diversity of entities such as community institutions, schools, non-profits, social service agencies and City departments, provided it can be done within predefined budget guidelines.
- Allow for an "Open Network" which will allow local entrepreneurs the ability to develop applications and offer wireless broadband services to unserved and underserved businesses and consumers.
- Pursue bridging the "Digital Divide" by providing public Internet access through community anchor institutions, such as the public housing authority, parks and recreation, senior centers, and libraries.

SUSTAINABLE OPPORTUNITIES

Economic: Deployment of a Broadband Network has the potential to provide a means of economic growth; supplying new jobs for Oakland residents, increasing community

broadband connections within the City of Oakland, producing business taxes, sales taxes, and other revenues for the City.

Environmental: There are no Environmental impacts at this time.

Social Equity: Deployment of a Broadband Network will provide high speed broadband service to unserved and underserved communities in the City of Oakland, helping to bridge the “Digital Divide” by providing public Internet access through community anchor institutions.

DISABILITY AND SENIOR CITIZEN ACCESS

Deployment of a Broadband Network will provide broadband service to anchor community institutions, which will include school programs, non-profits, social services, adult training, senior citizen centers, community centers and in other facilities where citizens with physical disabilities can have access.

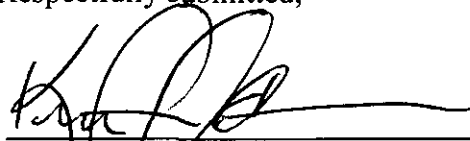
ACTIONS AND RECOMMENDATIONS

The Department of Information Technology will establish a public and private partnership to apply for grant funding through the American Recovery and Reinvestment Act (ARRA) also known as the Federal Stimulus grant program, to subsidize the deployment of a Broadband Network in the City of Oakland.

ACTION REQUESTED OF THE CITY COUNCIL

Staff recommends that the City Council accepts this report.

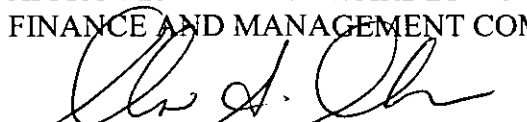
Respectfully submitted,



Ken Gordon
Project Manager III and Acting Director
Department of Information Technology

Brian Tino Granados
Department of Information Technology

APPROVED AND FORWARDED TO THE
FINANCE AND MANAGEMENT COMMITTEE



Office of the City Administrator

Attachment A- Wireless Broadband Feasibility Study

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