

CLACKAMAS COUNTY BOARD OF COUNTY COMMISSIONERS

Study Session Worksheet

Presentation Date: 10/15/2013 **Approx Start Time:** 2:15 **Approx Length:** 45 minutes

Presentation Title: Clackamas Broadband Express (CBX) Update

Department: Technology Services

Presenters: Nancy Newton – Deputy County Administrator

Dave Cummings – Chief Information Officer (CIO) / Director

Dave DeVore – Deputy CIO

Duke Dexter – CBX Coordinator

Other Invitees: Alan Hammond – Senior Network Administrator

WHAT ACTION ARE YOU REQUESTING FROM THE BOARD?

This presentation is to update the Board on the status of the County Fiber Project – Clackamas Broadband Express (CBX) with the end of the Federal Grant and the planned direction as the project moves into the next phase.

EXECUTIVE SUMMARY:

Historical: Over three years ago, Technology Services (TS) applied and received a Federal Stimulus Grant as part of the American Recovery and Reinvestment Act of 2009 for approximately \$7.8 million to construct a fiber optic infrastructure in Clackamas County connecting over 150 sites, creating backbone opportunities for local telecommunication companies and expanding economic growth.

Current: As of October 01, 2013, the grant is officially over and CBX begins the transition into operating like a fiber utility business and is now fully self-sustaining. At this point, CBX has installed 180 miles of fiber, 163 connected sites and has 4 commercial customers. CBX now moves into a maintenance mode ensuring the availability of the fiber plant for our customers as well as building capital reserves for the expansion of fiber infrastructure (limited at first, increasing as reserves allow).

Along with providing significant improvements in broadband options and performance to our customers, CBX also reduces operating costs. The annual savings varies depending on the agency and utilization. Some examples for savings include:

- | | |
|------------------------------------|-------------|
| - North Clackamas School District | \$83,304/yr |
| - Oregon City School District | \$83,754/yr |
| - All Other School Districts Total | \$86,470/yr |

Future: As CBX moves forward, it will be utilizing revenue from connection fees to remain self-sustainable and expand the plant to support the needs of the CBX customers and the County. This could include connections to new sites such as schools and governmental agencies, and additional backbone paths to expand the potential use of the plant by commercial vendors and promote economic growth.

FINANCIAL IMPLICATIONS (current year and ongoing):

The grant phase of CBX (ending October 1st 2013) to build the initial fiber plant had a total estimated cost of \$11.3 Million of which \$7.8 million was Federal grant, \$2.6 million was matching in the form of Rights of Way, \$309,000 was County cash match and \$570,000 in matching Public, Educational & Government Access (PEG) funds.

With the end of the grant, a primary tenant of the project was to become self sustaining utilizing connection fees to cover the ongoing maintenance costs of the project and to build a capital reserve for limited expansion. For FY13-14, this includes a fund balance estimated at \$222,000, PEG contribution of a budgeted \$200K and an estimated \$387,000 in revenue. No additional funding is expected or required from the County. Over the next 3 years, it is conservatively projected the revenue will increase to \$522,000 by FY15-16 allowing for an estimated \$100,000 annual reserve to be established for fiber expansion.

LEGAL/POLICY REQUIREMENTS:

No legal or policy issues at this time. Future direction may be required as new issues arise such as franchises, Service contracts, resource sharing agreements and expansion decisions.

PUBLIC/GOVERNMENTAL PARTICIPATION:

As CBX adds new connections (both public and private) and expands fiber pathways, new Service Level Agreements (SLA) and Intergovernmental Agreements (IGA) will occur. CBX has a standard approved SLA utilized in most transactions.

OPTIONS:

N/A

RECOMMENDATION:

ATTACHMENTS:

- CBX Project Summary
- CBX Fiber Plant Map
- CBX Customer Spreadsheet
- CBX 3 year Projected Income Spreadsheet

SUBMITTED BY:

Division Director/Head Approval _____
Department Director/Head Approval DC
County Administrator Approval _____

For information on this issue or copies of attachments, please contact Duke Dexter @ 503-722-6663

Fiscal Impact Form

RESOURCES:

Is this item in your current work plan and budget?

YES

NO

START-UP EXPENSES AND STAFFING (if applicable):

As of the end of the grant phase of the project, total 3 year project expenses are estimated at: (final detailed expenditures are still being processed)

Fiber Plant Design/Construction	\$8,239,258
In-kind Contribution	\$2,659,638
Staffing and related expenses	\$439,093
 TOTAL	 \$11,332,989

At end of Grant construction, there is an estimated \$222,000 remaining on Oct 1st 2013 to roll into the remaining fiscal year as to help fund FY13-14 operating and capital reserve expenditures.

ONGOING OPERATING EXPENSES/SAVINGS AND STAFFING (if applicable):

Starting October 1st 2013, CBX moved into being self-sustaining operating as a business based on revenue for connection fees. For FY13-14 the budget is in transition as the 1st 3 months were still under the grant budget with 2 FTE staff and the remaining portion of the fiscal year is non-grant with only 1 FTE ongoing. Budgeted expenses are:

	<u>FY13-14</u>	<u>FY14-15</u>
Personnel	\$165,730	\$106,218
Plant Maintenance	\$92,952	\$96,771
Professional & Internal Services	\$25,601	\$75,576
Allocation	\$65,428	\$40,000
Other	\$64,186	\$36,703
<hr/> TOTAL Budgeted	<hr/> \$413,897	<hr/> \$355,267

For detailed breakout of the current and projected 3 fiscal year budgets, please see the attached CBX 3 year Projected Income Spreadsheet.

The annual savings to Clackamas County varies depending on the department and utilization. Some examples for savings:

- Clackamas County TS Allocation (dropped external connections) \$87,000/yr
- Clackamas County Water Environmental Services (WES) \$27,000/yr

ANTICIPATED RESULTS:

CBX is now beginning to operate as a self-funding business relying on fee based revenue and potentially other revenue (such as PEG funds) to assist in fiber plant expansion. The anticipated Net Income each year is planned to be saved into a capital operating fund utilized for:

- Annual review of rates to determine annual adjustments as required (up or down).

- Funding of a capital reserve for self-funding of additional fiber plant expansion as required to connect new sites, customers and areas (such as Enterprise Zones) as determined in the best interest of CBX and County interests.
- The amount will vary depending on operating expenses, changes in customer base and decisions on plant expansion. Current estimates start at approximately \$100K a year and grow each year as the customer base increases.

COSTS & BENEFITS:

For FY13-14 the budget is in transition as the 1st 3 months were still under the grant budget with 2 FTE staff and the remaining portion of the fiscal year is non-grant with only 1 FTE ongoing. Therefore the expenses below are from the FY14-15 estimated budget. Please see the attached CBX 3 year projected income for more details.

Another key benefit of the fiber is the huge increase in potential bandwidth available to customers over what is traditionally available in the market allowing new business and economic opportunities for both anchor sites and commercial vendors. For example, a typical T1 connection allows for 1.5 Mbps connection while CBX allows up to 10,000 Mbps connections depending on the equipment.

Costs: FY14-15 Estimated CBX Budget							
	Item	Hours	Start-up Capital	Other Start-up	Annual Operations	Annual Capital	TOTAL
	Post Grant Operating Expenses (Staff, Operating, Maint ect)				355,267		355,000
	Annual Estimated Capital Reserve if used for expansion (growing each year)					100,000	100,000
	Total Start-up Costs						N/A
	Ongoing Annual Costs				355,267	100,000	455,267
Benefits/Savings:							
	Item	Hours	Start-up Capital	Other Start-up	Annual Operations	Annual Capital	TOTAL
	TS Reduced allocation for inter-building network connections				87,000		87,000
	Estimated County Savings for T1 connections to internet / network				90,000		90,000
	Savings to external agencies (Varies with agency)				N/A	N/A	N/A
	Total Start-up Benefit/Savings						N/A
	Ongoing Annual Benefit/Savings				177,000		177,000

CBX Project Summary

Brief History

-In 2000, Clackamas County commissioned the County-wide Communications Needs Assessment and Feasibility Study as a means to better understand the County's communications situation. The Study revealed that the County was in need of access to affordable, advanced communications infrastructure and services. The 2000 Study identified several unique challenges that Clackamas County faces that contributed to the difficulty of obtaining the needed infrastructure and services; these unique challenges remain for the County today including:

- The vast size of the County at roughly 1,900 square miles;
- The high percentage of rural areas at roughly 90% or 1,650 square miles;
- Very few incorporated cities (17) that are widely dispersed, roughly half of which have a population of less than 5,000;
- A total of 20 individual communications companies, each with a relatively small service territory, thus no single communications company to serve the entire County; and
- No cohesive plan to provide modern, state-of-the-art communications to the County as a whole.

While the Study made it clear that the County was in need of advanced and comprehensive communications infrastructure, no funding source was identified at that time.

-In February 2009, the United State Congress enacted the American Recovery and Reinvestment Act (ARRA) commonly known as the economic stimulus bill. Through ARRA, the National Telecommunications and Information Administration (NTIA) was provided \$4.7 billion to fund projects across the United States aimed at expanding access to broadband services.

-Clackamas County submitted a grant in August 2009 outlining plans for the construction of 134 miles of dark fiber-optic cable infrastructure to 94 anchor sites throughout the County. The grant was submitted on the premise that Clackamas County is an underserved area. This grant was denied.

-In May 2010, Clackamas County submitted for a round 2 grant based on 180 miles of dark fiber-optic cable infrastructure to 158 anchor sites. In July 2010, Clackamas County was awarded a BTOP grant for \$7.8 million – the largest such recipient in Oregon – to develop the Clackamas Broadband Express (CBX). In addition to the BTOP grant, the County pledged to contribute the required \$3.3 million in matching funds for a total project cost of \$11.1 million. This funding opportunity made it possible for the County to begin to meet the advanced communications needs identified in the 2000 Study.

-Construction of phase one of the CBX began in March 2011.

Where We Are Now (3 years later)

-Grant Expenditures Met

-Utilized the entire construction/design budget of \$8,239,258.

Grant Metrics			
	Grant Award	Grant Actuals	Percent increase
Community Anchor Institutions	149	163	9% Increase
Route Miles	180	180	
Fiber Miles	28,968	34,045	18% Increase
HUBS	3	4	33% Increase

- Save Customers Money
 - \$27,000/yr TCSD/CCSD#1 saves a year
 - \$253,000/yr All School Districts
 - \$87,000/yr county saves a year
- Commercial Customer
 - 4 commercial carriers (Wave, Silver Star, Edge IT, SandyNet)
 - Estimated 78 direct and indirect jobs created because of this grant.
- Map *Attach*

Future

- Self Sustaining
 - Provide Income Statement *Attach*
 - The CBX Fiber Network is self-sustaining from day 1!
 - Future expansion paid for by CBX net revenue.
- Economic Development
 - Business Growth in small communities
 - Access to the network is open to any entity
 - Windell's Action Sports Camp, Welches, OR
 - Providence, Molalla & Canby, OR
 - Local Entities Future Growth
 - School Districts save \$5 million over 20 years
 - TCSD/CCSD#1 saves \$540,000 over 20 years
- Expansion
 - Wilsonville
 - Timberline
 - Additional CAI's
- Ribbon Cutting Event

New or improved broadband connections using Clackamas County's federal BTOP grant-funded fiber optic network			
	Grant-funded connections	Non-grant funded connections	Total connections
City sites	8	2	10
Commercial	0	4	4
County sites	10	1	11
Fire	20	0	20
Government-other (water districts, ODOT, etc.)	4	0	4
Medical and health	8	1	9
Higher education	2	0	2
Libraries	11	1	12
Police & law enforcement	14	0	14
Schools (k-12)	86	5	91
Traffic signals and cameras	0	13	13
Totals	163	26	190

K- 12 School Sites	
Oregon Trail School District	
1	Oregon Trail Elem
2	Naas Elem
3	Cedar Ridge Middle
4	Firwood Elem
5	Oregon Trail Dist Office
6	Welches Elem
7	Welches Middle
8	Sandy Grade
9	Boring Middle
10	Kelso Elem
11	Old Sandy High
12	New Sandy High
Gladstone School District	
13	John Wetten Elem
14	Gladstone High
North Clackamas School District	
15	Scouters Mtn Elem
16	Rock Creek Middle
17	Verne A Duncan Elem
18	Clackamas High
19	Sunrise Middle
20	Oak Grove Elem
21	Riverside Elem
22	Ardenwald Elem
23	Linwood Elem
24	Kraxberger Middle
25	Witchita Family Center
26	New Urban High
27	Sojourner School
28	Lewelling Elem
29	Sunnyside Elem
30	Alder Creek
31	North Clackamas SD Maintenance
32	Spring Mtn Elem
33	Whitcomb Elem
34	Sabin Tech
35	Schellenberger School
36	Rowe Middle
37	Happy Valley Middle
38	North Clackamas SD Physical Plant
39	Campbell School
40	Happy Valley Elem
41	North Clackamas School Admin
42	North Clackamas SD Admin
43	Milwaukie Elem
44	El Puente Bilingual School

45	Mt Scott Elem
46	View Acres Elem
47	Putnam High
48	Concord Elem
49	Bilquist Elem
50	Milwaukie High
51	Milwaukie Academy of the Arts
Molalla River School District	
52	Molalla High
53	Molalla Elem
54	Molalla School District Office
55	Molalla River Middle
56	Molalla Elem
Oregon City School District	
57	OC High School
58	Park Place School
59	Holcomb School
60	King School
61	John McLoughlin
62	Gardiner Middle School
63	Barclay School
64	Jennings Lodge Elementary
65	Gaffney School
66	Jackson Campus
67	Candy Lane Elementary
68	OC District Office
69	Hera Community School
70	Oregon City Service Learning Academy
71	Sage School
72	Ogden School
73	OC Bus Barn
Colton School District	
74	Colton High
75	Colton Elem
76	Colton Middle
Canby School District	
77	Carus School
78	Canby High School
79	Canby Dist Office
80	Ackerman
81	Trost
82	Lee Elementary
83	Knight Elementary
84	Eccles
85	Baker Prairie Middle School
86	Clackamas ESD

School Sites Connected Using Non-Grant Funds	
1	Good Shepherd
2	Estacada HS
3	Estacada middle
4	Estacada elementary #1
5	Estacada elementary #2

County Sites	
1	DSB
2	CC Dog Services
3	Hoodland Treatment Plant
4	Clackamas County Milwaukie Senior Center ncprd
5	Kellog Creek Water Control Plant
6	Tri-City Water Control Plant
7	WES Intertie
8	Parks Rec Maintenance Building
9	Hood View Park
10	Gladstone Center for Children

County Sites Connected Using Non-Grant Funds	
1	WES, Eveklyn & Jennifer

Fire Sites	
1	FD 72 station 72
2	Clackamas Fire, Station #7, Boring
3	CCFD1 Stn 6 Happy Valley, SE King Rd.
4	FD 1 station 3, oak grove blvd
5	FD 1 Admin office
6	FD 1 station 4, Lake Rd
7	FD1 station 2, Milw
8	FD 1 station 5, Causey Av
9	FD 1 station 8, SE 130th
10	FD 1 Fire Training Center
11	Gladstone Fire Dept
12	Boring Fire, Station 149
13	Boring Fire, Station 140
14	FD 59 Boring station 148
15	Clackamas Fire Station #1, Fuller Rd
16	CCFD #1 Holcomb
17	CCFD #1 Station 17, South End Rd
18	FD 74 Hoodland station 251
19	FD 74 Hoodland station 253
20	CCFD #1 Station 16, Molalla Ave

Other Government Sites	
1	Sunrise Water Authority
2	CRW Ops Building
3	Gov Camp ODOT
4	CRW Office

City Sites	
1	Sandy City Hall
2	Happy Valley City Hall
3	Milwaukie Public Works
4	Milwaukie City hall
5	Gladstone City Hall
6	Damascus City Hall
7	Damascus City Hall
8	Happy Valley Public Works

City Sites Connected Using Non-Grant Funds	
1	City of Molalla
2	City of Happey Valley

Commercial	
1	Wave Broadband
2	Silver Star
3	EdgeIT
4	SandyNet

Library Sites	
1	Oak Lodge Library
2	LINCC Main Office
3	Sandy Public Library
4	Sunnyside Library
5	Ledding Library
6	Pond House
7	Gladstone Library
8	Molalla Public Library
9	Hoodland Library
10	Oak Lodge for County
11	Sunnyside for County

Library Sites Connected Using Non-Grant Funds	
1	Estacada Library

Traffic Signals	
Oregon City	
4 Locations	
Oak Grove	
1 Location	
Milwaukie	
7 locations	
Clackamas	
1 Location	

Medical Sites	
1	Sunnyside Clinic
2	Health Clinic-Oregon City HS
3	Providence Medical Plaza
4	Providence Medical Group
5	Providence Milwaukie Hospital
6	Providence OC
7	Providence Molalla
8	Providence Canby - Willamette Falls

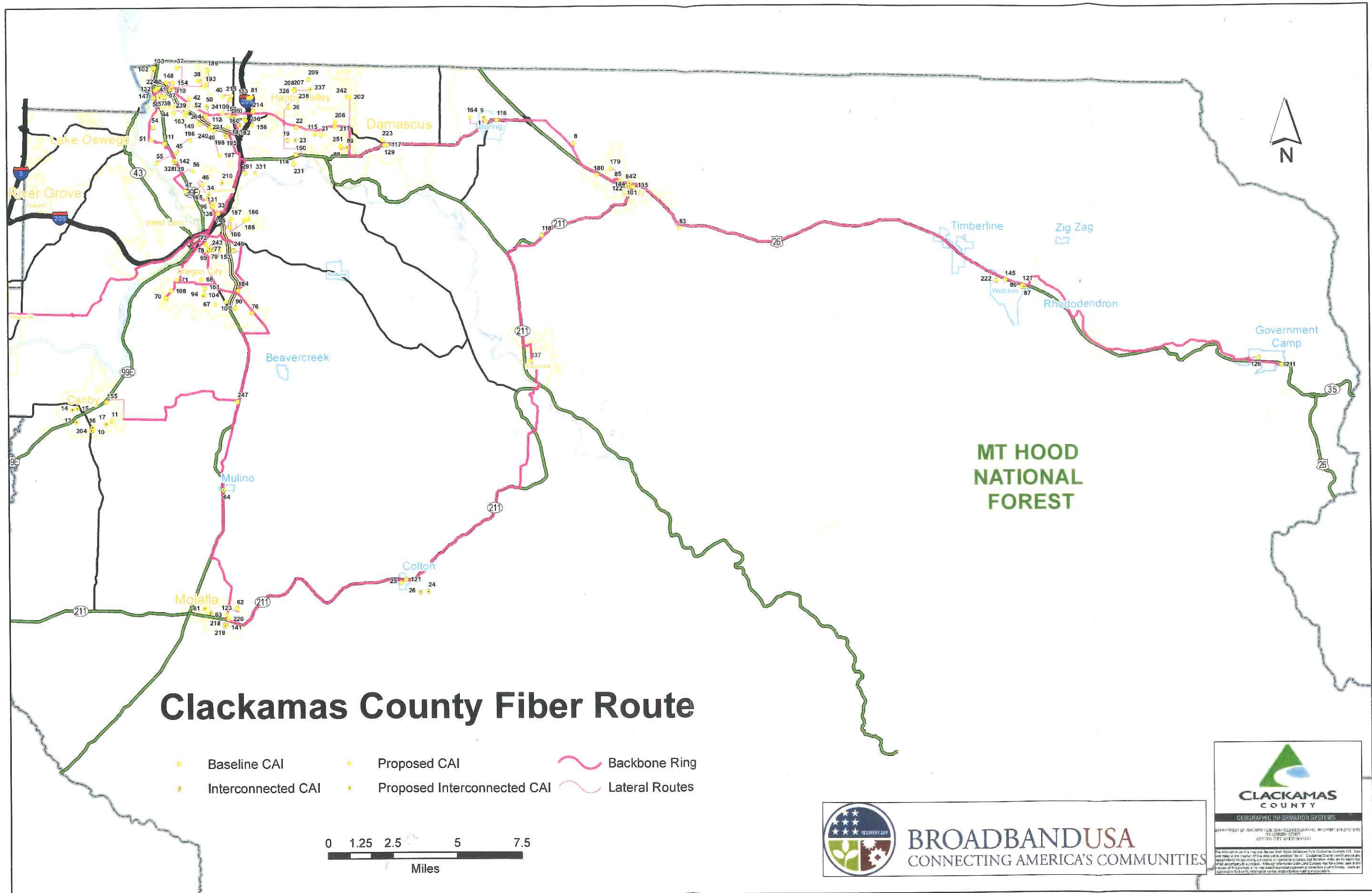
Medical Sites Connected Using Non-Grant Funds	
1	Crisis Center

Higher Educational Sites	
1	CCC Harmony Campus
2	CCC - Oregon City Campus

Police Sites	
1	Clackamas Corrections
2	Clackamas Correctional Residential
3	Happy Valley Police
4	Sandy Police
5	North Station
6	Public Safety Training Center
7	CCSO Sunnybrook Office
8	Clackamas County Jail
9	CCOM
10	Milwaukie Police
11	Gladstone Police
12	Clackamas ME
13	Oregon ME
14	Justice Court

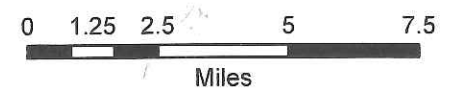
CBX INCOME STATEMENT

	FY 13-14	FY 14-15	FY 15-16	FY 16-17
Revenues				
Public Entity Revenue	\$358,545	\$387,841	\$418,017	\$449,097
Private Entity Revenue	\$29,255	\$61,033	\$104,064	\$148,386
Interest Income				
Franchise Fee collections	\$12,000	\$12,360	\$12,731	\$13,113
USFS fee collections				
Accounts receivable	\$48,670			
Total Revenues	\$448,470	\$461,234	\$534,811	\$610,595
Expenses				
Salaries - 1 FTE (FY 14-15 +)		\$53,805	\$56,764	\$59,886
Salaries - 1.25 FTE (FY 13-14, closing grant)	\$75,999			
Fringe/Benefits - 1 FTE (FY 14-15 +)		\$48,720	\$55,054	\$62,211
Fringe/Benefits - 1.25 FTE (FY 13-14, closing grant)	\$86,231			
Internal Allocation	\$65,428	\$40,000	\$41,600	\$43,264
Vacation buy back	\$1,500	\$1,583	\$1,670	\$1,761
Overtime	\$2,000	\$2,110	\$2,226	\$2,348
Fixed cost sub-total	\$231,158	\$146,218	\$157,313	\$169,471
Network Replacement & Maintenance	\$92,952	\$96,771	\$100,704	\$104,755
Network On-Call Contract Labor	\$601	\$576	\$576	\$576
Phones	\$186	\$143	\$147	\$152
Contingency Reimbursement	\$40,000	\$12,000	\$12,000	\$12,000
Network Expansion				
Internal Network Services		\$50,000	\$50,000	\$50,000
Franchise Fees paid	\$12,000	\$12,360	\$12,731	\$13,113
USFS fees paid				
Material and Services			\$500	\$500
Professional services	\$25,000	\$25,000	\$25,000	\$25,000
Software/Hardware Updates (OSPInSight/Testing Equipment Maint)	\$7,500	\$8,700	\$8,700	\$8,700
Training/Travel	\$4,000	\$3,000	\$3,000	\$3,000
Outreach	\$500	\$500	\$500	\$500
Total Expenses	\$413,897	\$355,267	\$371,171	\$387,766
EBITDA (Net Revenue)	\$34,573	\$105,967	\$163,640	\$222,829
Fund Balance from Grant	\$222,862			
Internal Funding (PEG Funds) restricted	\$200,000			
Earnings Before Interest and Taxes	\$457,435	\$105,967	\$163,640	\$222,829
Net Reserve for Capital Expansion Reserve	\$457,435	\$563,402	\$727,042	\$949,871



Clackamas County Fiber Route

- Baseline CAI
- Proposed CAI
- Interconnected CAI
- Proposed Interconnected CAI
- Backbone Ring
- Lateral Routes



CLACKAMAS COUNTY
 GEOGRAPHIC INFORMATION SYSTEMS
 DEPARTMENT OF INFORMATION SERVICES
 211 LIBRARY COURT
 OREGON CITY, OREGON 97143

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