



Public Works Department City of Bellingham

Broadband Advisory Workgroup

Meeting Notes
Tuesday, April 20, 2021
6:00pm – 7:30pm
Zoom

Workgroup Members in attendance:

Maximillian Carper
Linda Fels
Kristopher Keillor
Michelle Kopcha

Milissa Miller
Spencer Moore
Steve Spitzer
RB Tewksbury

Ex Officio Members in attendance:

Atul Deshmane
Terry Davis
David Brinn
Michael Gann

Kurt Gazow
David Namura
Gina Stark
Allen Meeks

City Staff and Facilitator in attendance:

Eric Johnston, Public Works Director
Iris Kaneshige, City Staff
Marty Mulholland, City Information Technology Director
Rush Duncan, Public Works Webinar Support

David Roberts, Peak Sustainability Group, Facilitator

1. Welcome & Approval of Notes

David Roberts started the meeting at 6:00 PM. One comment received from Steven Spitzer. The notes were updated to reflect the change.

2. Administrative & Technology Items Update, RFP Update

Eric Johnston noted the RFP was posted last week to the City's bid portal and was scheduled to be officially advertised in the Bellingham Herald. The materials are attached and the link to the bid portal is below.

<https://cob.procureware.com/home>

In order to access the bid portal you will need to complete the free registration. Several interested parties and plan centers have already accessed the information via the bid portal.

The City Council is requesting an update from the Broadband Workgroup tentatively scheduled for May 24th. Those interested in participating should contact Eric to help with the presentation.

3. Presentations:

City fiber optic network Eric Johnston + Q&A by workgroup members

Eric described the history, purpose and extent of the fiber optic network in the City of Bellingham. He showed how the network was designed to help the City manage their utility assets like water, sewer, and traffic signals as well as connect City buildings and public safety facilities together. Bellingham Public Schools has connections to the network to bring service to their facilities. This system has been funded by a combination of City enterprise utilities and the Bellingham Public School District.

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The development of the network was created without policy direction from the City Council. The system is maintained by City staff, none of which have this task as a primary role. Eric shared two maps. One showing the extent of the current network and a second showing where the City would like to fill gaps and create redundancies.

Eric also explained the longstanding practice of “dig once.” The goal is to lay fiber as a part of any project where the City sees a future need, primarily for the purpose of reaching public utilities, services, and schools. This can change with a new policy that could emerge from this group.

The City’s network has some limitations. Some fiber is running in existing streetlight conduits. Not all conduit is in pristine condition. There are also challenges related to a lack of redundancy and reliability. There is no dedicated staff to maintain the existing system. If there is a break in the fiber, it is typically repaired by an outside contractor due to staffing limitations.

Marty Mulholland noted that the Information Technology Department should be considered a customer of the fiber network. There are 42 sites on that network where they serve staff. By not leasing fiber from another entity, Eric estimated the City is saving \$60,000 -120,000 per year.

Questions:

Question: Who gets to use the public right of way for broadband?

EJ: There are 6 franchised communication companies that have the right to use the public right of way to provide their services. They are using their own network and a separate system. The City does not map or maintain maps of their proprietary infrastructure. City-funded capital projects allow the franchised communication companies to lay fiber during the construction process. The City does not install and maintain open conduit for use by other entities. A City-owned conduit bank was shown to be prohibitively expensive.

Question: What if part of our proposal includes dedicated staff to maintain fiber? Have you had those conversations with the Council?

EJ: Yes, we always say we need additional staff to provide additional services.

Question: If all this fiber has to be registered with 811, can they be the source of knowledge of fiber in the community?

EJ: No. The 811 system notifies the utilities who have indicated they have resources in a particular area. There is no singular entity that maintains a map of the fiber. Milissa Miller noted that utilities must provide information to the 811 database if they have equipment in the vicinity. Terry Davis mentioned that Comcast’s facilities include more than fiber. They are required to provide facility information on their use of right of way. Their fiber maps are competitive and proprietary.

Question: Are any City facilities not currently connected by fiber? Are any of the low-income housing facilities connected to fiber?

EJ: There are some City utilities that are still connected using a radio system that the City would like to have connected by fiber. Low-income housing facilities are owned and managed by the Bellingham Housing Authority.

Question: Does the City own the whole piece of the network even if it is owned by different departments?

EJ: The City and the school system, for example, share ownership of bundles of fiber.

Question: To clarify the conduit policy: the City only puts in new conduit if it is for a City need.
EJ: That's correct. Water, sewer, stormwater, or street utilities. The City cannot spend utility money on a non-utility system.

Bellingham School District fiber optic network (Kurt Gazow) + Q&A by workgroup members

Kurt Gazow (KG): The partnership with the City began 19 years ago. The initial agreement between the district and the City was to combine resources for a fiber optic network to benefit the public. It is a shared resource that extends throughout the City. The District owns the "last mile" connectivity from the network to the school buildings.

School facilities were connected by T1 which was upgraded to six strands of fiber. The bandwidth was upgraded with new equipment. This results in a cost savings to the taxpayers in the community. The District uses fiber for metro area connectivity plus a centralized data center connecting all schools to a common backbone and access for the District Internet Service Provider.

Questions:

Question: How much data is being pushed through?

KG: The District has 10 Gbps metro connectivity to the ISP and 5 Gbps to the District facilities which is a shared connection that is managed and scaled well. Typically, there is a good deal of excess capacity.

Mary Mulholland: In a similar way, the City is scaling up with other providers as well.

Question: So, is extra bandwidth available?

KG: There is opportunity to scale up. The District has been able to meet their demand. They monitor their connections throughout all District facilities. Failures can generally get it fixed within hours. The District has similar challenges as the City regarding redundancy balanced with a multi-path environment and the desire to expand.

Question: How much is the City using their fiber to the schools, library, etc. to facilitate wireless hotspots for the underserved community? Is every public school connected to fiber?

KG: All but two District facilities has a fiber optic system. Access is provided to a guest wireless network for anyone in District facilities. It is intended for a student's education or access for visitors, usually available within the envelope of the building. The District is looking at expanding this service due to the current circumstances and the needs in underserved communities. There is a lot of interest in this approach and the District is looking at creative ways to address it such as providing resources for students where they live. The District is attempting to address these needs through partnerships and can see an increasing need for an improved bandwidth and connectivity.

Marty Mulholland (MM): The City provides **COB Public** for public access. It originated with City Hall similar to the school model about 10-12 years ago. The library was given access at their sites. City coverage was extended outside the main library site which is now at capacity for the equipment available.

Question: Are all of the City departments using the same ISP?

MM: The City uses mostly one ISP, but there are exceptions.

Question: Does the City and School District have a plan to replace their fiber network in the next 5-10 years? Did you have to upgrade your equipment?

EJ: There is not a plan to replace the fiber beyond what the utilities need to have replaced.

KG: The District plans to do a qualification tests for each site to address the equipment upgrades. All of District sites are running 10 Gbps. It would be fairly straightforward to increase that capacity.

Question: Given that there is a patchwork of leased, City- and District-owned infrastructure, and given the conduit that is not robustly placed, is the current dig once policy in conflict with a retail model? How would that be resolved over time?

EJ: If you change the goal to provide retail service, then the dig once policy completely changes. The approach in place today meets the current need as described previously. The hardware, system, and staffing does not currently exist for a fiber to home ISP seven days a week.

Question: Would cost for a system like that (the retail model) come from utilities or multiple buckets of funding?

EJ: It cannot come from the enterprise utilities. It must come from the General Fund and revenue for services provided.

Question: Can we define broadband as a utility?

EJ: Yes, the City could. But most cities are doing this through a general fund activity, separate from the utility side.

Question: The library took steps to extend their coverage. Was this thanks to the library and Friends of the Library who are not on this call today? Maybe we could have a presentation from this group in the future? Can we hear more about how that came about?

MM: The larger scaling up of the library services was completed 10 years ago, when the library identified these services as mission critical to them and their customers. The City provided the technical support. They also requested to extend their coverage which was done. There is also a MyFi service that was requested by Friends of the Library.

Question: Is it only the equipment that was purchased from the PUD that has a restriction on use, or does anything else we build have to have that?

EJ: It is hard to use a utilities asset for a non-utilities purpose, or a school asset for a non-school purpose. These arrangements can be changed and there is capacity in the existing fiber network. But it is not as simple as flipping a switch. The network was not designed or intended to meet that purpose. Some cities are building new systems to meet this retail model. The City of Bellingham has the luxury of having started 40 years ago (the envy of many) but the system is not set up for the retail model.

Question: Even though this is a patchwork, do we have an open canvas to paint whatever this group wants to do?

EJ: Yes, you are correct, but we need a bigger conversation on that.

Port efforts at supporting broadband development (Gina Stark) + Q&A by workgroup members

Gina Stark (GS) is the Economic Development Project Manager for Port of Bellingham and Project Manager for Rural Broadband. Her division, although deployed by the Port, has county-wide responsibilities for economic development which includes inside the City.

Gina began by providing a presentation on the history of the Port's economic development efforts. A County-wide broadband feasibility/implementation study began in 2018 with funding from Community Economic Revitalization Board (CERB). Out of the study the Port created the Whatcom County Rural Broadband Project.

The study identified five goals:

- Build fiber routes in the highest need areas. Bridge the digital inequities.
- Provide opportunities for competition where none currently exists.
- Be fiscally responsible with public funding.
- Collaborate with all our partners and stakeholders.
- Support our local business and develop an economy for new businesses.

The study also identified geographic areas with significant broadband needs (unserved or underserved). The decision was made to start by completing the connection between the Bellingham and Glacier which had been started years before.

As part of the process, the port Commission adopted the following Mission:

To provide publicly owned open access dark fiber broadband in order to serve communities in our rural areas who are currently unserved or underserved.

The port has taken on the following responsibilities:

- Build infrastructure
- Apply and manage funding
- Maintain and operate the network
- Lease fiber
- Collaborate and work with partners

In 2020 the Port:

- Worked with Connect Whatcom Workgroup to develop a community broadband action committee
- Worked with School Districts to purchase equipment for students
- Worked with County to provide CARES funding

Gina described the Bellingham to Glacier project in more detail. It includes 20 miles of open access fiber tied to 20 miles of existing leased dark fiber. It also includes a pilot project to provide fiber to 30 homes. Gina provided the timeline for the project and showed plans for the next project along Highway 9.

Gina listed the following challenges and opportunities the Port faces:

- Funding limitations – Whatcom County is not classified rural or distressed.
- Shovel ready projects – engineering, design and permitting is expensive
- Establishing partnerships and collaborations
- Greater awareness of broadband needs
- Greater access to elected officials and decision makers

The Port's 2021 workplan includes identifying gaps, working on smaller projects to get results sooner, building and leveraging partnerships, exploring new funding, providing fiber to the home, considering retail authority, participating with the COB Broadband Advisory Workgroup, and working on digital equity.

Questions:

Question: Can you tell us what CERB and EDI are?

GS: CERB is part of Washington State Department of Commerce. Their focus is on meeting the needs of underserved communities. They provide funding loans and grants for broadband infrastructure and feasibility as well as support for tribal communities. EDI is local funding from Whatcom County's \$0.09 sales tax money.

Question: How do you work with ISPs? Is there substantial collaboration?

GS: Examples of working with ISPs include check-in calls letting them know about leasing opportunities. Zippy was approached to partner on providing fiber to the home. Another collaboration focused on leasing fiber from WAVE to avoid overbuilding.

Question: What systems and physical equipment were most useful for fiber to the premises? What lessons did you learn? Could those same technologies be scaled up?

GS: The project has not progressed to the point of installing equipment for the fiber to the home project. Gina will let the Workgroup know when that gets going. She hopes to be able to use the same technologies to scale up. Maybe not to huge things because of the rural focus, but the intent is to take the model and replicate it.

Question: Did you say one of the goals was for a publicly owned fiber network?

GS: Yes, the network the Port builds is publicly owned. The Port will own and maintain it.

Question: Do the ISPs see you as competition now?

GS: No. The Port is building where it is not economically feasible for ISPs. The build out to Glacier serves about 300 homes. Building with grants or loans makes it economically feasible.

Comments and Discussion

Steve Spitzer: With your focus on rural communities in Whatcom County, it doesn't seem logical that the private enterprise would want to collaborate with you on something that is not economically affordable for rural communities. How is that possible without help from the PUD or a subsidy in order for those homes to be able to afford it. I'm curious about your economic and financial models and how you will support it from a cost revenue standpoint. I would also like our group to be able to listen to, attend, or find out what your schedules are for your discussions at the PUD on broadband, and if we are allowed to listen in or partake in the spirit of collaboration. My last question is what is the metric for Whatcom County – some metrics about why Whatcom County is not considered rural for its funding sources. That's an intellectual curiosity on my part. Maybe nobody else has any interest in that, but I'm curious about that.

GS: Clarified that she works for the Port, not the PUD.

David Roberts: The Port's meetings are available for the public to watch. You just have to know when broadband is on the agenda.

Kristopher Keillor: The reason the ISPs want the Port or the City to take on the long-term investment is because that is the most expensive part and the least profitable. They do see us as competition. They will not share fiber maps for example, which is why I am pushing for a full-service model. If voters were made aware of a publicly-owned last mile utility provider, and we can keep the economic development in a circle with the public sphere and the public institutions, I feel the public would support a tax or levy, without giving the lion's share to corporations.

Steve Spitzer: ISPs are in business to make money, provide shareholder value, but I don't believe they have the underserved interests at heart.

4. Definitions Discussion There was not enough time for discussion of definitions. This item moved to next meeting.

5. Items for next meeting Agenda items for May 4th

- Additional Q&A with Gina, Eric and Kurt
- PUD Broadband Presentation: Atul Deshmane
- Continue working on the definitions.

Agenda Planning Team: Spencer Moore, Kristopher Keillor and Linda Fels

6. What did members appreciate about tonight's meeting? Very informative! Great presentations! Learning together!

Meeting adjourned at 8:13pm.

Next meeting scheduled for Tuesday, May 4th at 6:00pm via Zoom