

Fall 2019 Update

Beaver Island Telecommunications Advisory Committee





Background

- **Committee Members**

Kevin Boyle

Gary Conant

Wil Cwikel

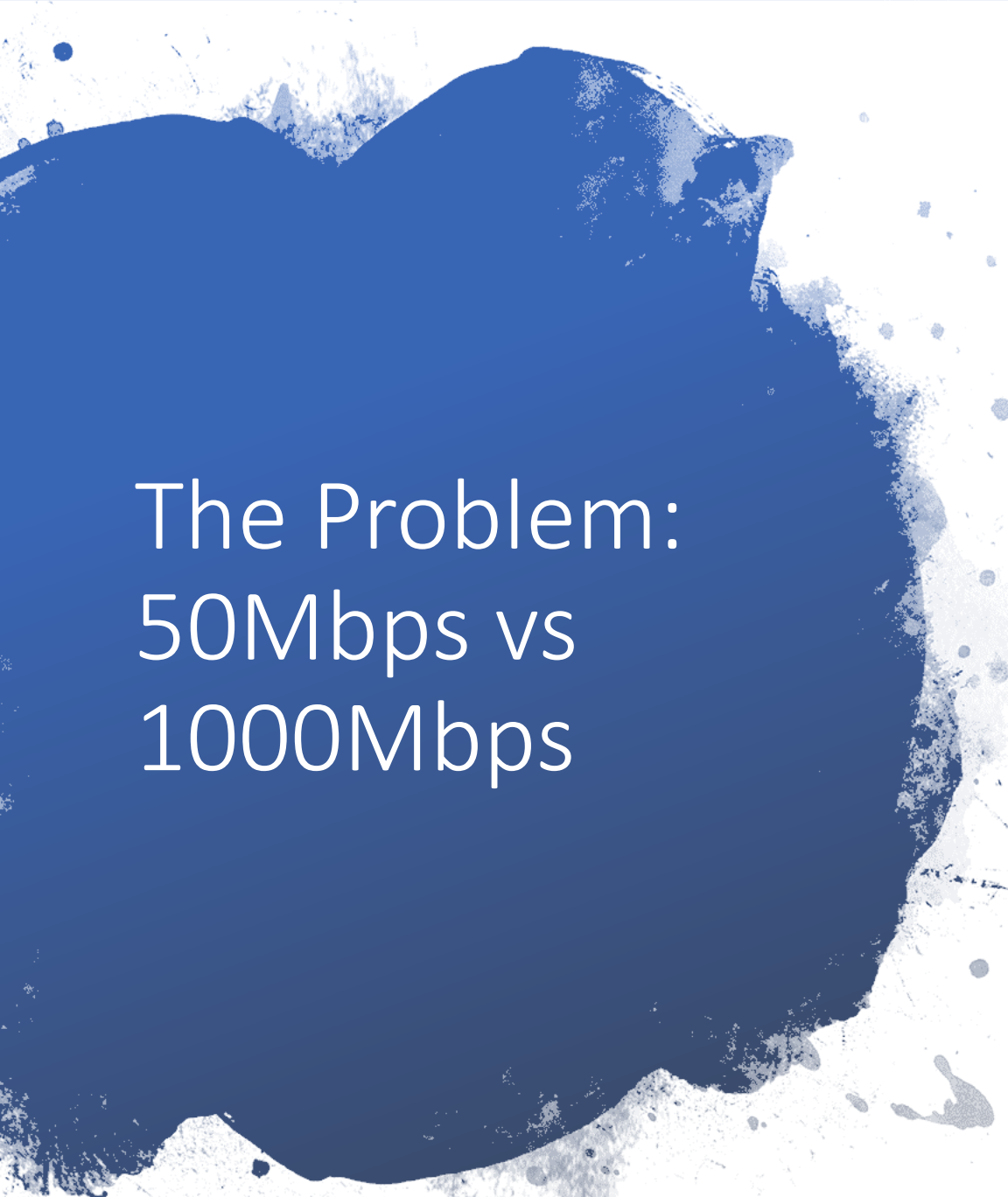
Neal Green

Theresa McDonough

Kitty McNamara

Paul Welke

- **Established by Peaine and St James Townships – October**
- **Nearly Monthly Meetings for the last year**



The Problem: 50Mbps vs 1000Mbps

- Island is falling behind service available in-home communities of our visitors *and* our near-shore neighbors
 - 50Mbps is the most envisioned by providers for service to all island locations
 - Gigabit speeds in Charlevoix, Petoskey and Traverse City are coming or available *today*
- Visitors leave (or don't come) for lack of broadband
- Live anywhere knowledge workers can't consider the island
- Lost opportunities to improve education and healthcare for lack of high-quality video conferencing
- Uncompetitive costs: \$80 or more a month for 10 Mbps (or less service) for many island locations vs. community projects with gigabit service for the same price

Bandwidth Needs

Recommended home-use speeds for *today*...

- Check email and browse the web: 1-5 Mbps minimum
- Stream HD content (e.g., Netflix) : 15-25 Mbps minimum
- Stream 4K content and play competitive online games: 40-100 Mbps minimum
- Stream 4K content, play online games, and download very large files: 200+ Mbps minimum

Recommended business-use speeds for *today*...

- VOIP telephone: 1 Mbps symmetric
- Video conference: 6 Mbps symmetric
- Telecommuting: 5-25 Mbps symmetric
- Off-site data backup: 25-50 Mbps symmetric (home office small business)
- Large size/volume file transfer: 100 Mbps+

Competition

Gigabit service is coming to near-shore service areas...

- GLE service areas in Charlevoix County (other than Beaver Island)
- GLE service areas in Emmet County
- City of Traverse City (city-owned and developed system)

Gigabit service available now in many home communities of island visitors

Canada

United States

MICHIGAN

Cuba

Guatemala

● = Gbps speed test

2017 Speedtest.com data

Path to a Solution

Short-term (summer 2020 or sooner)
Interim Pools of Service at Key Locations

Middle-term (2 to 3 years)
Educational Access Network (20x5 for \$30)
Great Lakes Energy (50x10 for \$80)

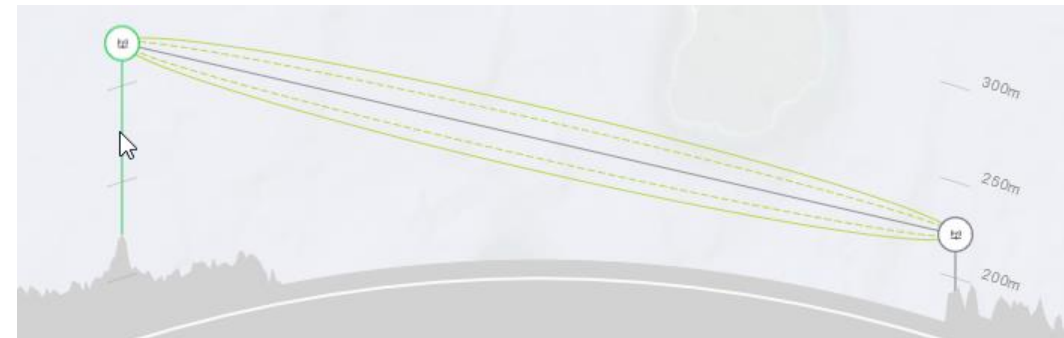
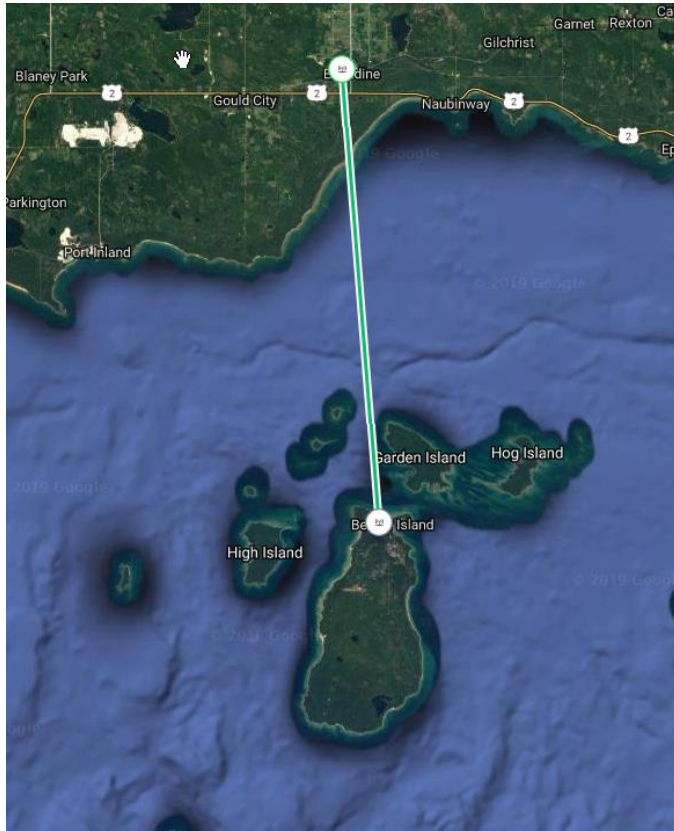
Long-term (2 to 5 years)
Quickstart Study to begin evaluations of
Gigabit-capable connectivity for the island

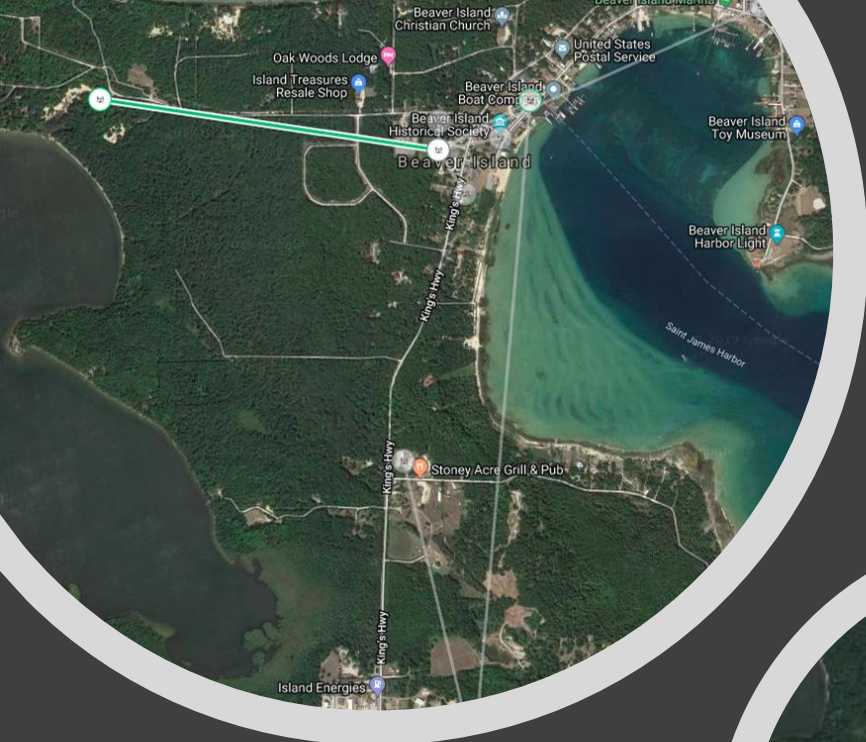
- \$35,000 to \$40,000 project to create interim “pools” of 200 Mbps symmetric service (up and down) at key island locations
- Available for use in workspace at Library, Community Center, Museums and Township Buildings
- Also used for township and county business at connected locations (halls, county building, transfer station, governmental center, St. James fire hall, Health Center) School, Municipal Docks (visitors)
- This is designed to address immediate service issues not a long-term solution
- Core equipment could be re-used for future projects
- Added service will relieve summer pressure on TDS service
- Possible use for consolidated VoIP telephone services for consortium members

Interim Pools of Service: Short-term solution overview

Mainland connection

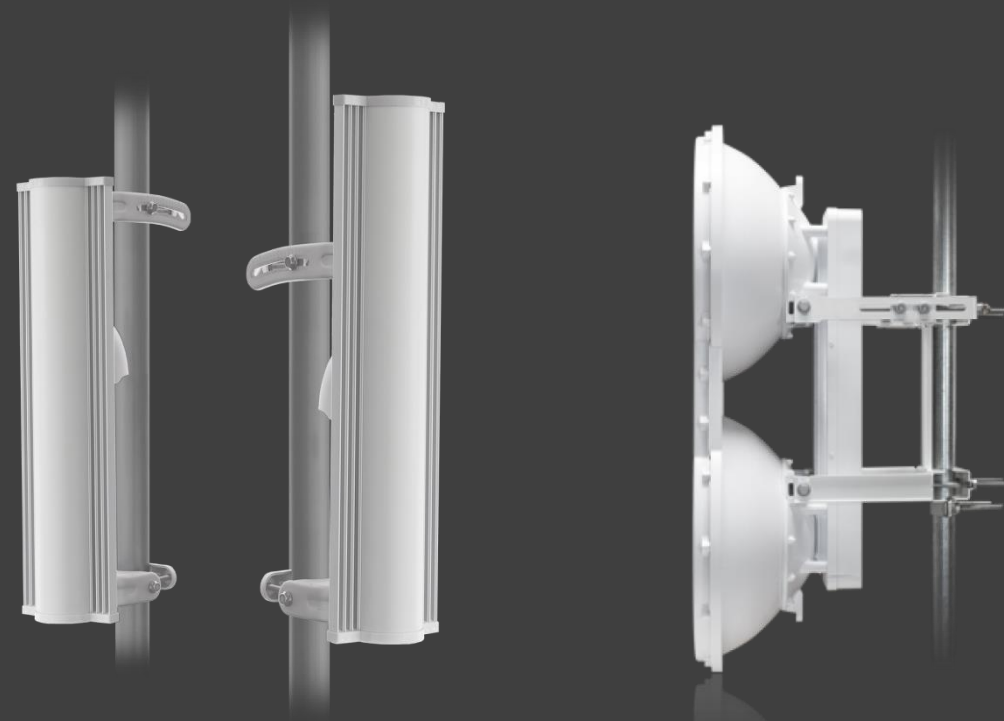
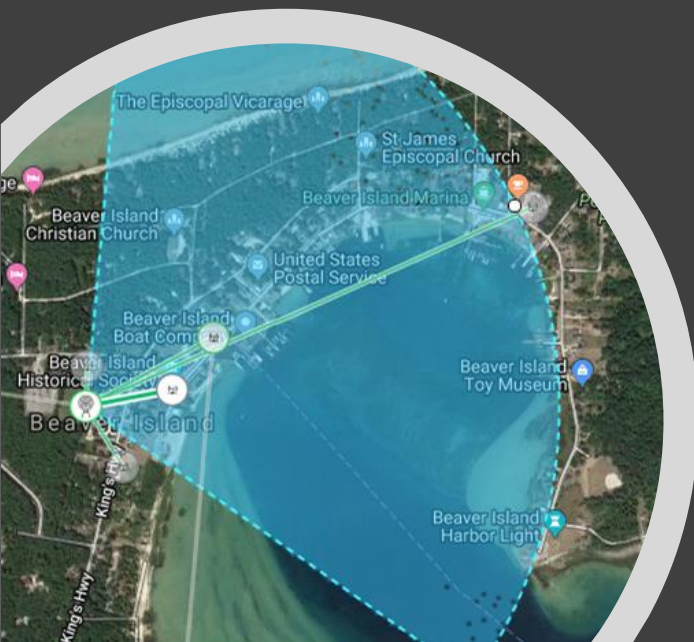
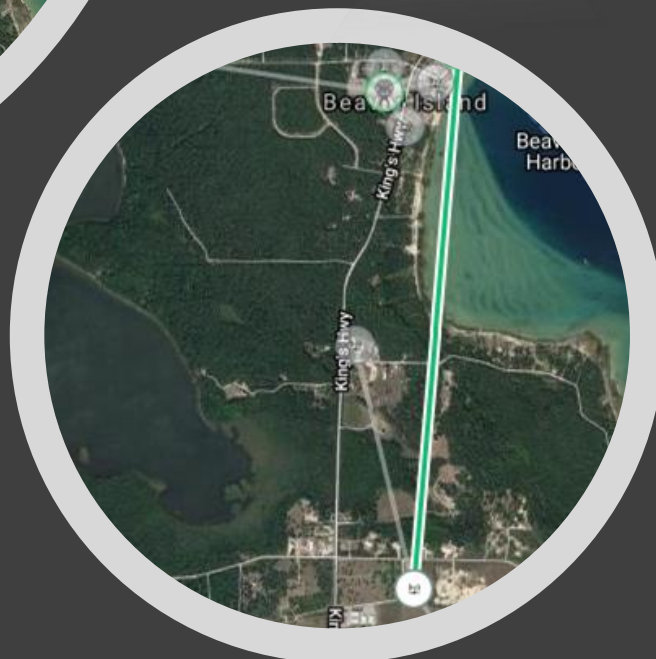
- Microwave to Engadine in the UP where Merit and other fiber are available
- Tower space from NMU for \$300/month






On-island distribution

- Low cost, easy to install microwave systems
- High speed link from Font Lake tower to hub at governmental center or BICS
- Distributed from hub using point to multi-point or point to point systems





Possible
Consortium
Members

| Beaver Island Anchor Institutions |
|-----------------------------------|
| Peaine Township |
| St. James Township |
| Charlevoix County |
| BI Community School |
| BI District Library |
| BI Rural Health Center |
| BI Community Center |
| BI Historical Society |

Upfront Costs

| Link | Equipment | No. | Unit | Cost |
|--------------|----------------------------|-----|--------------|------------------|
| Font --> Hub | Air Fiber 5U | 2 | 1,000 | 2,000 |
| Hub | Rocket 5AC Prism Gen 2 | 1 | 250 | 250 |
| Stations | PowerBeam 5AC Gen2 | 11 | 110 | 1,210 |
| Hub Tower | 60' | 1 | 7,000 | 7,000 |
| BIRHC Mast | 30' (Rooftop for BIRHC) | 1 | 1,500 | 1,500 |
| UP Link | | 1 | 20,000 | 20,000 |
| Contingency | | 1 | 3,196 | 3,196 |
| | | | TOTAL | \$ 35,156 |

Recurring Costs

| Aggregate Backhaul | | Annual Merit | Monthly Cost | Recurring Fees | Monthly Cost | Recurring Fees |
|--------------------|------|--------------|--------------|----------------|--------------|----------------|
| Speed | Term | Charge | 8 Users | Added | 15 Users | Added |
| 500M | 1yr. | \$ 23,040.00 | \$ 240.00 | \$ 268.89 | \$ 128.00 | \$ 161.33 |
| | 5yr. | \$ 19,440.00 | \$ 202.50 | \$ 235.56 | \$ 108.00 | \$ 141.33 |
| 700M | 1yr. | \$ 32,256.00 | \$ 336.00 | \$ 354.22 | \$ 179.20 | \$ 212.53 |
| | 5yr. | \$ 27,216.00 | \$ 283.50 | \$ 307.56 | \$ 151.20 | \$ 184.53 |

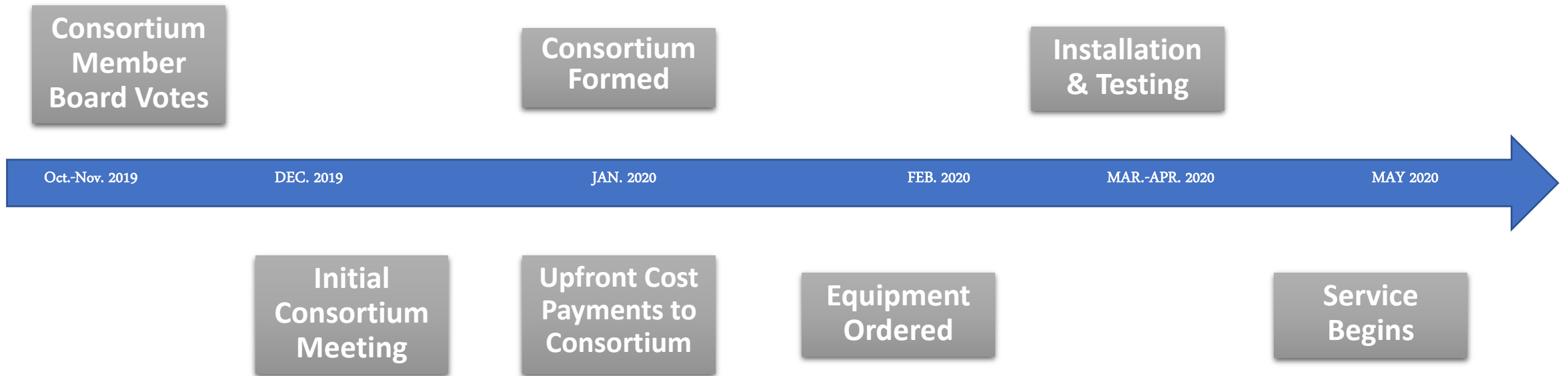
Possible
Consortium
Members

| Participant | Possible Distribution of Probable Upfront Costs |
|------------------------|---|
| Peaine Township | \$ 6,500.00 |
| St. James Township | \$ 6,500.00 |
| Charlevoix County | \$ 10,000.00 |
| BI Community School | \$ 5,000.00 |
| BI District Library | \$ 4,000.00 |
| BI Rural Health Center | \$ 4,000.00 |
| BI Community Center | \$ 2,500.00 |
| BI Historical Society | \$ 1,500.00 |
| Total | \$ 40,000.00 |

Logistics

- Formation of a B.I. Broadband Consortium
 - Consortium to be made up of interested Island anchor institutions
- Billing
 - Annually by township clerk or BICS staff (TBD)
- Break-fix
 - \$5,000 reserve built into Upfront Cost Share
 - Third-party service providers

Timeline for May Launch



What Others are Doing – Lyndon Township

COMMUNITY FINANCED FIBER TO THE HOME

- Township issued millage-backed bonds to finance construction of fiber broadband system to service all businesses and homes in the community.
- Average homeowner cost for millage is \$22 month
- Service costs: \$35 for 25 Mbps | \$45 for 100Mbps | \$70 1Gbps
- Unlimited phone: \$40 residential | \$50 business
- Construction now underway
- Learn more at: <http://www.lyndonbroadband.org/>

What Others are Doing – Arranmore Island

ARRANMORE ISLAND'S DIGITAL WORKSPACE: MODAM

- MODAM is Ireland's first offshore shared digital workspace with a pool of high-speed broadband in a shared workspace.
- Onsite accommodation, 11 desks and a dedicated meeting space make MODAM ideally suited for short- and long-term rental for remote work, projects or just a change of scenery.
- MODAM is an initiative by Arranmore Island Community Council in partnership with Donegal County Council, The Department of Rural and Community Development, Three Ireland and Grow Remote.
- Learn more at: [Arranmore Digital Workspace](#)
- Watch the video: <https://youtu.be/BPqoBlMeD3s>

What Others are Doing - Charlevoix



THE VAULT
CO-WORKING DOWNTOWN CHARLEVOIX

NOW OPEN!

**JOIN OUR DIVERSE GROUP
OF BUSINESS OWNERS,
REMOTE WORKERS, AND
ENTREPRENEURS.**

THEVAULTCHARLEVOIX.COM

201 State Street, Lower Level
(below Huntington Bank)
Charlevoix, MI | 231.437.3454

Learn more at: <http://charlevoixmi.gov/383/The-Vault-Co-Working-Space>

MEMBERSHIP PLANS:

DROP IN | \$15

Be a member for the day and take advantage of our open coworking space from 8am - 5pm M-F.

MAILBOX | \$30/MONTH

If you work from home but need a physical address for mail and/or client meetings, we've got your solution!

PUNCH PASS | \$12

Discounted day passes!

PRIVATE OFFICES (3) | \$199-299/MONTH

Comes furnished with a desk, filing cabinet, chair, and lockable door.

DEDICATED DESK | \$149/MONTH

No more hunting for a workspace! You'll have a desk that is always yours and only yours.

24/7 ACCESS | \$99/MONTH

Get 24/7 access to The Vault for drop-in use outside of the regular 8-5 hours!



Questions

