



TOWN OF CONCORD MUNICIPAL UTILITIES

ELECTRIC | WATER | SEWER | TELECOMMUNICATIONS

October 2022 – Broadband Updates

Concord Broadband is pleased to share the following updates and information from the past month. Please do not hesitate to contact us at broadband@concordma.gov should you have any questions, concerns, or feedback.

Operations

We are incredibly happy to announce that on Tuesday, October 11th, Dale Hartling began working as the Broadband Manager at the Light Plant. After an extensive search, in Dale we found a strong leader with vast network management experience and a passion to support the values that make Concord Broadband a strong community resource. Because he began only yesterday, I'll have him attend next month's Light Board meeting for a brief introduction so the Board and public can put a face to the name.

We are still working on the recruitment of the second Network Engineer, which was a position listed as open until filled.

We continue to make strides improving organizational efficiency, and we are looking at ways to implement a new sign-up process that will simply the experience for customers and offer them a more granular look at what is possible if they were to sign up.

Network Services

Upgrades and Updates

The core networking equipment Concord Broadband uses to provide internet connectivity to all customers needs to be replaced every 4-6 years, and our current devices are approaching 5 years of age. By redesigning our plans, we were able to save considerably on the initial replacement quote while maintaining a redundant and enterprise-grade solution. The order was placed on August 1, 2022, and we have received half of the equipment so far, with the remainder estimated to be received at the end of October. Our goal will be to cut over to the new equipment by February of 2023.

On October 17th, a vendor will be on site at our datacenter to replace the DC power supplies that power the devices that bring all customer data into our network. The old equipment has exceeded its useful life, and we want to make sure we do not suffer any failures as a result. The new equipment benefits from additional redundancy, allowing operations to continue with no intervention in the event of a failure of one of the circuits.

Maintenance

There is more information about the recent fiber repair project in this update, but I will just mention that crews worked overnight (8pm to 6am) on three nights to splice fiber damaged by rodents in late December 2021. Three of five damaged cables have been replaced, and the 4th/5th will be replaced on 10/18 and 10/19.

I want to thank the team, from the vendor to our internal employees who have made themselves available to do this work each night.

More information can be found here:

<https://concordma.gov/3144/Broadband-Maintenance>

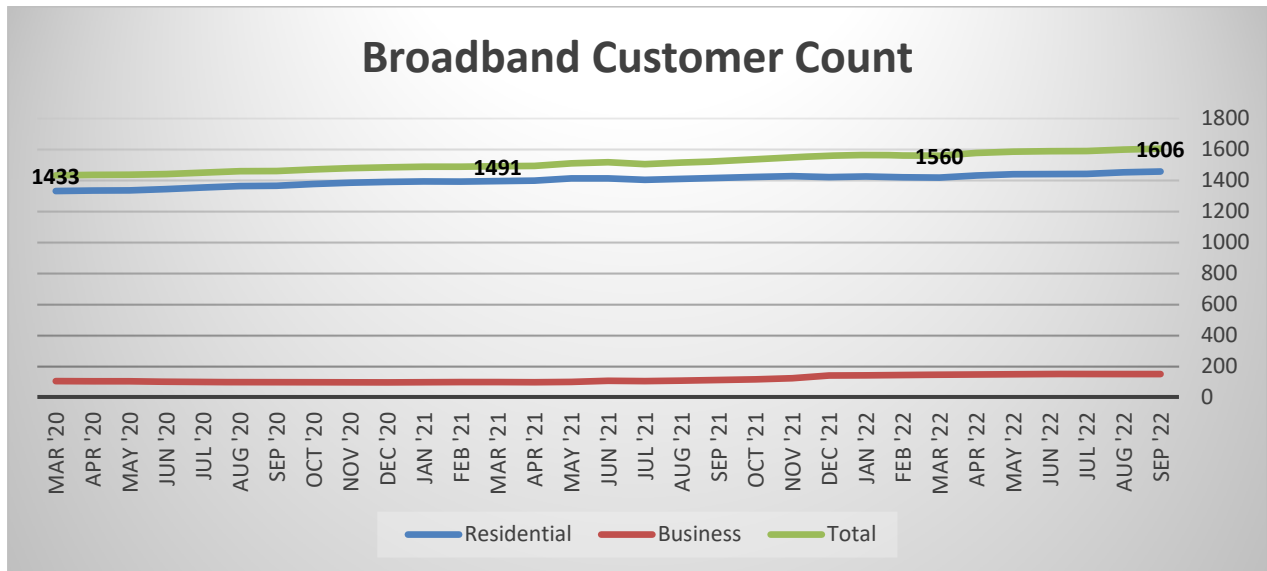
RFP 457: Broadband Help Desk Services

Concord Broadband advertised RFP #457 for Help Desk Services on July 21st. We had many interested parties request a copy of the RFP, and multiple addenda were issued to answer questions by those vendors. By August 19th, when we were set to open them, two proposals had been received. We found one that failed to meet the minimum requirements established in the RFP, and another from our current provider, Netegrity.

The Town Manager has approved the selection of a proposal, and we have sent the contract to the vendor, who will be executing it shortly. The RFP process can be tedious, but it's important to fulfill all requirements of the state's procurement law to ensure that we are transparent in our actions and compliant with regulations.

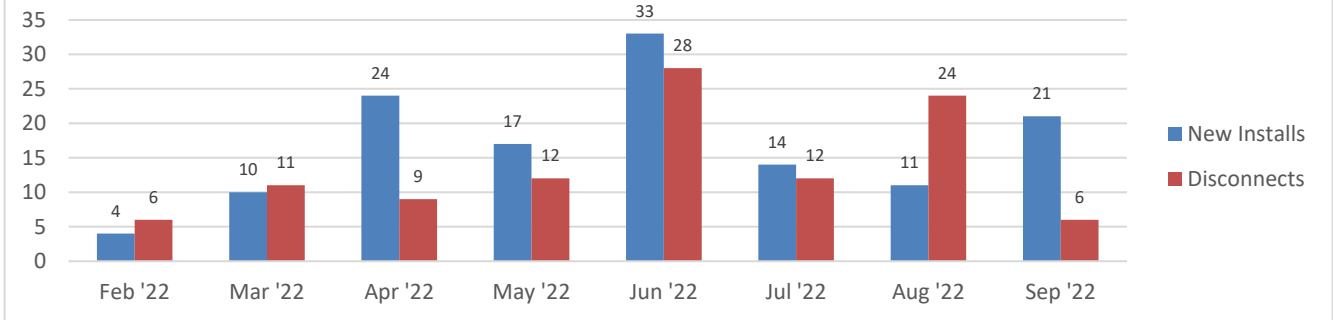
There will not be any gap in service for our customers. The first call for any troubleshooting should always be the Concord Broadband Helpdesk at (978) 318-3199.

Monthly Metrics and Business Data



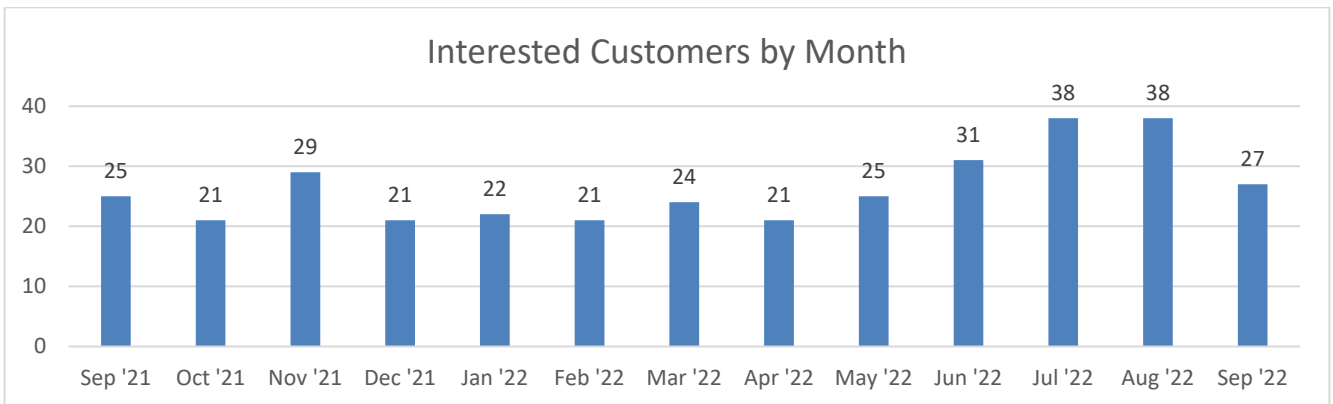
(Customer count: March 2020 – September 2022)

Monthly New Customer Installs and Disconnects



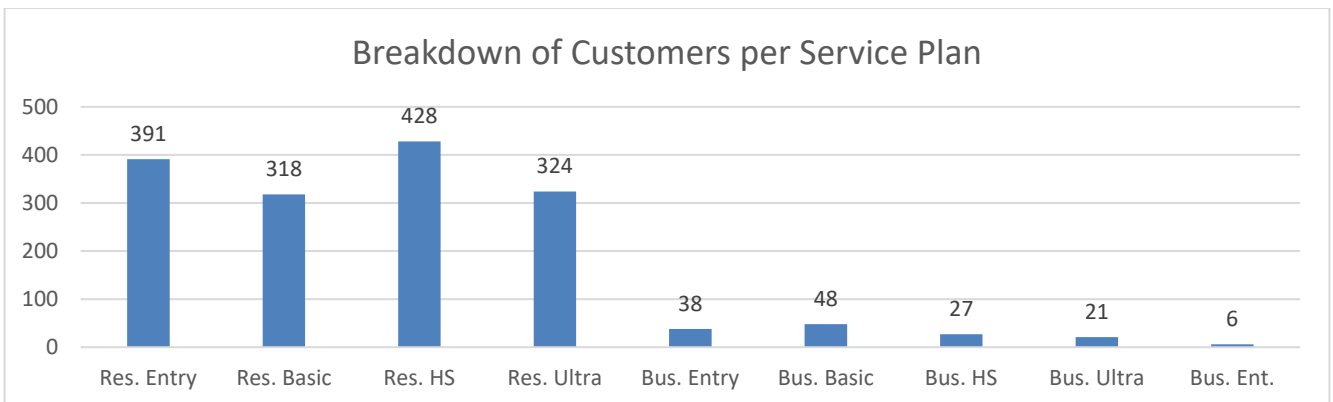
(The number of new installations and [NEW!] disconnects completed each month)

Interested Customers by Month



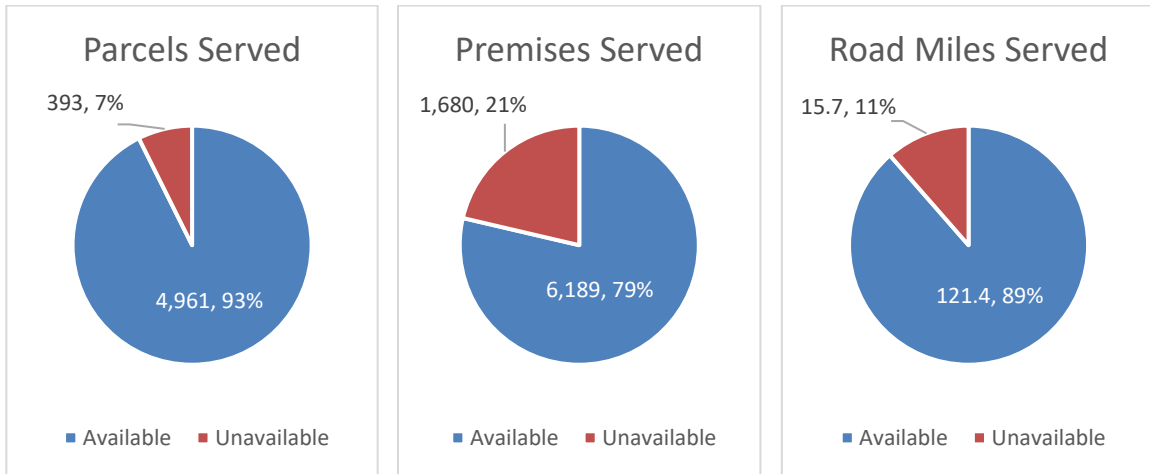
(This is the number of individuals who complete the Concord Broadband interest form on the Concord Website, whether they are in the current service area or not.)

Breakdown of Customers per Service Plan



(This is the number of each customer on our different service plans as of 9/30/2022.)

Quarterly Metrics



(As of 6/30/2022; we are working on updating mechanisms to track this so it can be updated as of 9/30/2022)

Rate/Speed Adjustments

At last month's meeting, we discussed the survey results that informed our process to create a recommendation to the Town Manager and the Light Board. After several meetings and detailed analysis of what customers wanted, we pulled together a proposal (which appears in the appendix here).

In summary, the changes recommended are:

- Add three new tiers for residential customers
 - A 25/25 mb/s tier for \$24.95 per month only for residential customers who qualify for CMLP's Assistance Rate billing
 - A 500/500 mb/s tier for \$109.95 per month
 - A 1G/1G tier for \$149.95 per month
- Add one new tier for business customers
 - A 1G/1G tier for \$349.95 per month
- Increase the speed (but not the cost) for the 35/35 residential tier
- Waive installation costs for locations that have already had Concord Broadband service (in most cases; those that have altered service or would like to relocate equipment will not get this waiver)

We took a hard look at the prices we currently charged, and while Concord Broadband's costs have dramatically risen, competition makes it difficult to raise rates at this time. Further, changes that we make to the tiers will create movement and changes among customers, and changing rates at the same time would make it difficult to determine the true effect of each change. We will need to reevaluate our rates and costs in 2023 to ensure they support our operations and planned capital expenditures.

The one residential tier change came from the calculation of the dollar per mb/s that each tier subscriber pays and the realization that this tier is actually more expensive than the lowest business plan when calculated this way. Residential customers have a slower guaranteed response time and should not be paying a premium over business customers.

We listened to the community feedback, which overwhelmingly showed that (1) people were mostly satisfied with the speeds we offer today, (2) the people who are not happy are mostly looking for faster speeds, and (3) 36% of respondents feel the prices we charge would discourage someone from signing up.

In addition to these changes, we plan on looking at other services we can offer customers, based on the feedback we received. We would like to thank all survey respondents for their participation!

Fiber Splicing

On the nights of September 27-29, Concord Broadband engaged a third-party contractor to assist with the replacement of 3 of 5 separate cables that were damaged by a rodent on December 24, 2021. At the time, our staff made emergency repairs, the cables themselves were still breached, which meant that they could fail unexpectedly if they weren't replaced.

The repairs were technically difficult because each cable travels to a splice case between 50 and several hundred feet away, and the work needs to be performed at night to minimize impact on the customers. Because the backbone fiber was not designed with this purpose in mind, there was inadequate slack left, which ordinarily would be used to perform maintenance inside a van, where temperatures are controlled (fiber gets brittle below 40 degrees Fahrenheit) and technicians have adequate access to tools and supplies.

A Concord Broadband technician supervised the entire process on site, and we were constantly monitoring the impact on our customers to ensure that nothing got missed. For this particular project, we had 55 known customers impacted, but there was a chance for a larger impact if something was mishandled. Fortunately, it wasn't.

As of this writing, we plan on completing the splicing work overnight on Tuesday and Wednesday, October 18-19, 2022.

We are very grateful for the work of the team on this project, from the planning, coordination, communication, and supervision of the steps necessary to complete the work.

Incidentally, we have visited all similar locations to ensure that they were properly sealed to discourage rodents from further damage.

Appendix

Fiber Broadband Completion Task Force's Draft Report Goals

| Goal | Type | Priority | Responsible Party | Additional Info. |
|---|--------|----------|--|---------------------------------|
| Policies (p.39) | | | | |
| • Universal Access | Policy | Highest | Select Board/Town Meeting | |
| • Expansion outside current territory | Policy | Low | Select Board/Town Meeting | |
| • Support Economic Vitality, Sustainability, Equity & Inclusion | Policy | High | Select Board/Light Board/TM Economic Development | |
| • Affordable Housing | Policy | Medium | Select Board/Housing Groups | |
| • Public Safety | Policy | Medium | Select Board/Town Manager | |
| • Education | Policy | Medium | Select Board/School Dept. | |
| • Government Access (PEG) | Policy | Medium | Select Board/PAAC | |
| Recommended metrics for tracking (p.41) | | | | |
| • Parcels served | Metric | Medium | Town Staff/Light Board | Complete; will report quarterly |
| • Premises served | Metric | Medium | Town Staff/Light Board | Complete; will report quarterly |
| • Road miles served | Metric | Medium | Town Staff/Light Board | Complete; will report quarterly |
| • Subscribers | Metric | High | Town Staff/Light Board | Complete; will report monthly |
| • Take rate | Metric | Medium | Town Staff/Light Board | Working on this |
| • Churn | Metric | High | Town Staff/Light Board | Working on this |
| • Installations | Metric | Highest | Town Staff/Light Board | Complete; will report monthly |
| Governance (p.39) | | | | |
| • Track progress against completion | Metric | Highest | Light Board/Town Staff | Working on this |
| • Rate of return policy | Policy | High | Light Board/Town Staff | |
| • Financial goals with regular reporting | Policy | High | Light Board/FinCom | |
| • Retained earnings and reserve policy | Policy | High | Light Board/FinCom | |

| Goal | Type | Priority | Responsible Party | Additional Info. |
|---|------------|----------|----------------------------|---|
| Strategic Planning Goals (p.43) | | | | |
| • Marketing and growth | Metric | High | Light Board/Town Staff | |
| • Business return | Policy | High | Light Board/Town Staff | |
| Budgeting Process for Fiber Expansion (p.41) | | | | |
| • Expand to fill existing opportunities | Planning | High | Light Board/Town Staff | |
| • External funding sources | Research | Medium | Light Board/Town Staff | Working on this |
| • ARPA Relief Funds Allocation, incl. Lost Revenue | Finance | Highest | Select Board/Town Manager | |
| • Review/Confirm Internal Loan Findings | Finance | Highest | Financial Audit Comm/Staff | Working on this; preliminary discussion at the FAAC meeting |
| • Review and Rescind PILOF to MMN | Finance | High | Select Board/Town Manager | Working on this |
| Capital Planning Process (p.42) | | | | |
| • Review/Revise Debt financing schedule | Policy | Highest | Light Board/Town Staff | |
| • Quantifying cost of expansion | Planning | Medium | Town Staff | |
| • How to fund expansion | Planning | Medium | Light Board/Town Staff | |
| • Revise/refine methods for computing ROI | Planning | Medium | Light Board/Town Staff | |
| Construction and Logistics (p.42) | | | | |
| • Vibratory plow – direct buried fiber cables | Operations | Medium | Town Staff | Working on this |
| • Revise/Refine Communication conduit construction standards and guidance | Policy | Medium | Town Staff | |
| • Integrate Fiber construction with the Roads Program – focus on Streets without fiber that already have underground electric | Planning | High | Town Staff | Working on this |

Concord Broadband Pricing and Speed Tiers

Updated October 2022

Background

Concord Broadband has not adjusted Broadband speeds since 2018. Through a survey with a 15% customer response rate, we learned that 79% of respondents were satisfied with the speeds Concord Broadband offered, and of the ones not satisfied, 71% reported wanting faster speeds.

Current and Proposed Speed Tiers

| Current Plans | Speed | Cost | Proposed Plans | Speed | Cost |
|----------------------|---------|--------|-------------------------|-----------|--------|
| Residential Entry | 35/35 | 49.95 | Residential Low Income* | 25/25 | 24.95 |
| Residential Basic | 70/70 | 64.95 | Residential Entry | 45/45 | 49.95 |
| Residential Hi-Speed | 150/150 | 74.95 | Residential Basic | 70/70 | 64.95 |
| Residential Ultra | 300/300 | 89.95 | Residential Hi-Speed | 150/150 | 74.95 |
| Business Entry | 70/70 | 74.95 | Residential Ultra | 300/300 | 89.95 |
| Business Basic | 150/150 | 89.95 | Residential 500** | 500/500 | 109.95 |
| Business Hi-Speed | 275/275 | 149.95 | Residential Gig** | 1000/1000 | 149.95 |
| Business Ultra | 400/400 | 199.95 | Business Entry | 70/70 | 74.95 |
| Business Enterprise | 700/700 | 299.95 | Business Basic | 150/150 | 89.95 |
| | | | Business Hi-Speed | 275/275 | 149.95 |
| | | | Business Ultra | 400/400 | 199.95 |
| | | | Business Enterprise | 700/700 | 299.95 |
| | | | Business Gig** | 1000/1000 | 349.95 |

*To qualify for the Residential Low-Income plan, residents must qualify for the Light Plant's Residential Assistance Rate program.

**Those seeking new high-speed tiers may require engineering that will involve relocating the path of their service; not all speeds may be available at all locations.

Explanation

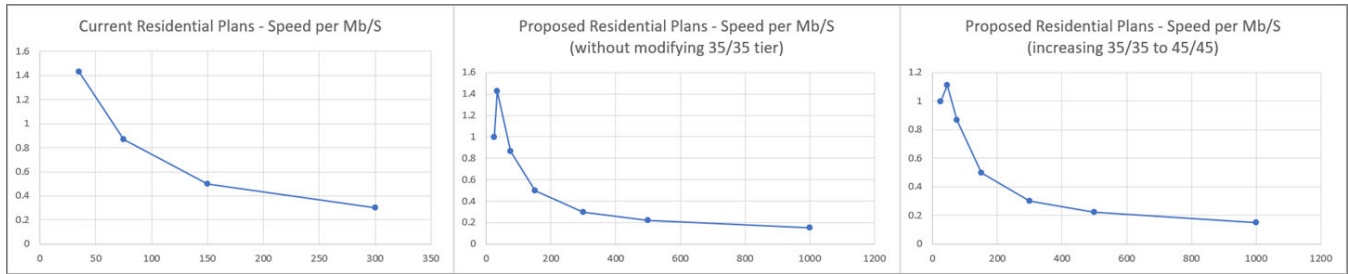
Three residential tiers are recommended to be added to the current offering:

- A low-income plan, which will be only eligible for residents who qualify for the Light Plant's Residential Assistance Rate program
- A 500/500 mb/s plan for \$109.95 per month
- A 1G/1G plan for \$149.95 per month

One business tier is recommended to be added to the current offering:

- A 1G/1G plan for \$349.95/month

We are recommending increasing the speeds for the lowest tier of residential service from 35/35 mb/s to 45/45 mb/s. The current cost per megabit per second for this tier is higher than any of the business tiers, and we think increasing it will make this tier in line with our other residential plans.



While these new tiers add complexity to the services we offer, the survey found people are not worried about how many tiers we offer but that we offer the tier they want.

Notes

By offering these speeds, we need to be cognizant of the current infrastructure that exists to provide service. Other ISPs oversubscribe their circuits, which results in customers not always getting the speeds they pay for. Because we want to deliver on this promise to our customers, these higher speeds may not be available initially in all areas. We will take requests for these rates on a case-by-case basis to keep our customers' trust.

Pricing

Costs across the board are increasing. Energy costs, material costs and payroll costs have skyrocketed across all sectors. Concord Broadband is seeing all material costs rise: fuel, fiber, splice cases, ONTs, routers, switches, and service/support are all up, in some cases more than 10% from last year.

While Concord Broadband does recognize that increased revenue from price increases could help us expand our network to a wider audience, we think that this is not the right time to make pricing changes to existing plans for the following reasons:

- We are about to offer new tiers, which will alter the makeup of our customer base, and if we made pricing changes at the same time, it may be difficult to measure the impact of these new tiers
- Competition is strong, and we do not want to incentivize people to abandon Concord Broadband for lower prices, even if the quality is not equal.

It is possible that we may need to adjust pricing, and we will reevaluate this in 2023 once we have solid data on the financial impacts of the changes contained within this proposal.

Installation Costs

The final change we propose is to waive residential installation costs for locations that have already had service. There is currently a \$150 charge for residential installations, which tries to recoup an average of 4 hours of labor and several hundreds of dollars in equipment. But we have a growing number of locations that already have existing service and just need an ONT installed. We think waiving this \$150 for these locations is both fair and will help Concord Broadband remain competitive. There will be some discretion in the waiving of this fee because some new customers may have altered their previous installation or may request relocation of equipment, which will greatly increase the amount of time required on-site.