



TOWN OF CONCORD MUNICIPAL UTILITIES

ELECTRIC | WATER | SEWER | TELECOMMUNICATIONS

September 2023 – 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

Recruitment continues for a new Network Engineer. We have 2 first-round interviews and 1 second-round interview scheduled in the next week.

Concord Broadband is conducting a trial of a new OTDR in mid-October. These expensive diagnostic tools send lasers down fiber and report back what they find. With this data, they can tell you how far down a fiber is broken, if it's bent too much, or if there are other issues that could cause signal loss. This generation of equipment can be used on active fiber to diagnose conflicts or other problems. The real-world application for the OTDR is when an underground cable is chewed by a rodent, it quickly tells you exactly how many meters the damage is from the test site. The OTDR in stock today is at least 8 years old.

Finally, the team has done a terrific job getting installations done this month with 25 installed in September. We appreciate their help in getting customers connected quickly and professionally.

Public Power Week Open House – 125 Years

From 10am-2pm on Saturday, October 14, 2023, you can come visit Broadband staff at the Concord Municipal Light Plant's 125th anniversary celebration during Public Power Week. Broadband Manager Dale Hartling has been on the planning committee for this event and will be there along with two Broadband Technicians and the Town's Chief Technology Officer Jason Bulger.

For the event, we will have a fiber optic splicing demonstration, a fiber scope to show the difference between a clean a dirty fiber, and other equipment. Of note, we will also have a demonstration of our high-speed internet. People can see the difference that is offered with symmetric download/upload speeds and even try a faster bandwidth than what they have today.

We appreciate all of the time staff have taken to put together these programs for the public, and we hope we have a great turnout for the event!

Upcoming Maintenance

A maintenance window is scheduled for 5-6am on Friday, October 13, 2023. While we do not anticipate any impact on customers, one of our three Internet Service Providers will be replacing their circuit, resulting in down time for that circuit. Because we have two other circuits, we should have no impact to customers. If there is a hiccup, though, we like to let everyone know that we are doing work at that time.

You can learn more about this maintenance in this document.

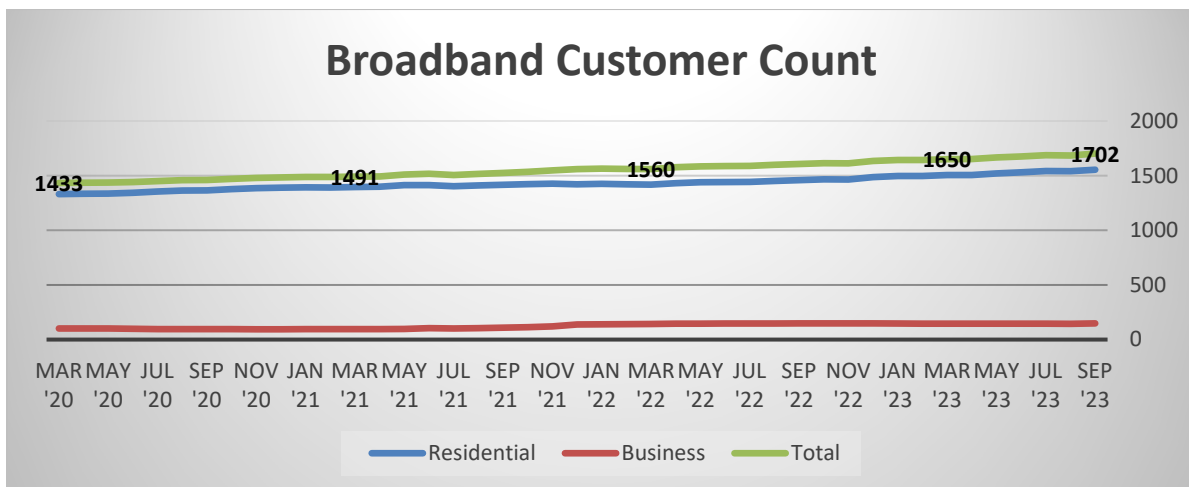
Recent Maintenance – A new circuit installed

Unlike other ISPs, we like to inform customers as to the nature of the maintenance we conduct. The transparency builds trust, and many find it interesting. In September and October, we conducted three maintenance windows, with most of the time **not** being service-impacting.

In the summer, we were notified by one of our three carriers that their equipment had reached its end-of-life and needed to be replaced. This necessitated us finding a separate fiber path for them to configure the new equipment on to reduce downtime. Once that was done, we scheduled the work of installing the equipment and then testing and turning up the circuit. While we have two other carriers that provide connectivity, there had to be brief moments of disconnection to test the failover capacity for the link, both for its own redundant connection and for the connection to the other carriers.

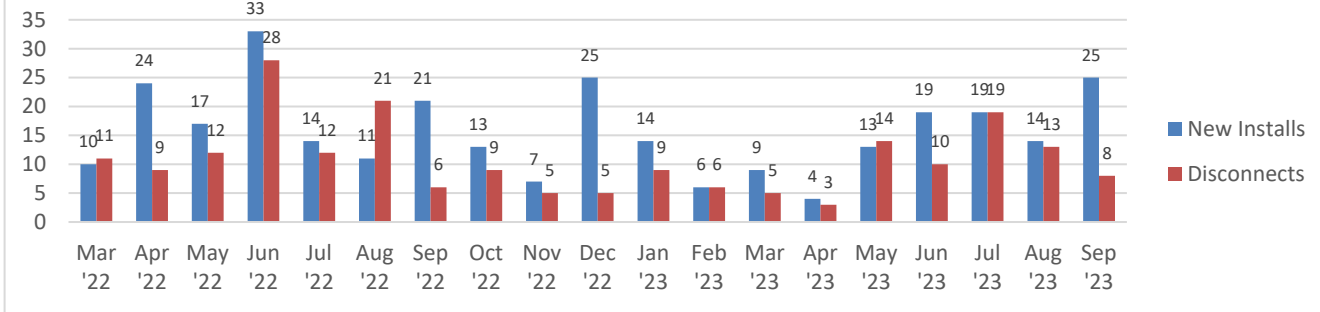
We appreciate our customers' patience during these replacements and upgrades that will serve to increase resilience throughout the network.

Monthly Metrics and Business Data



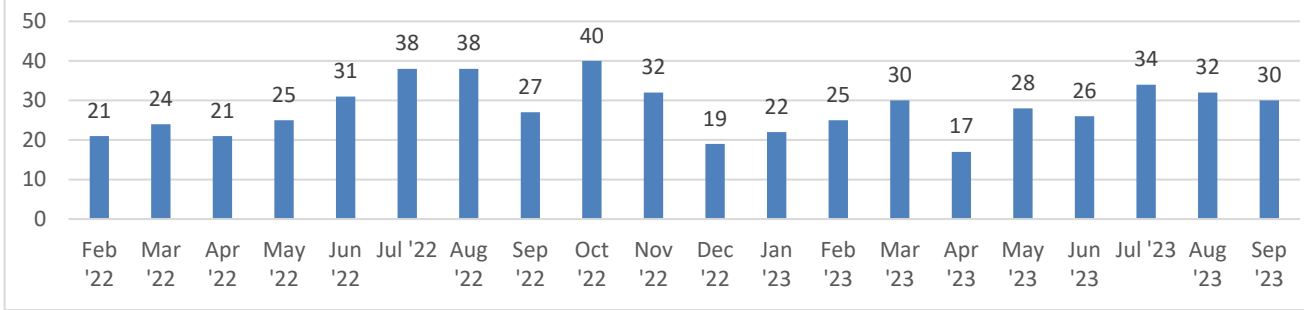
(Customer count: March 2020 – September 2023)

Monthly New Customer Installs and Disconnects



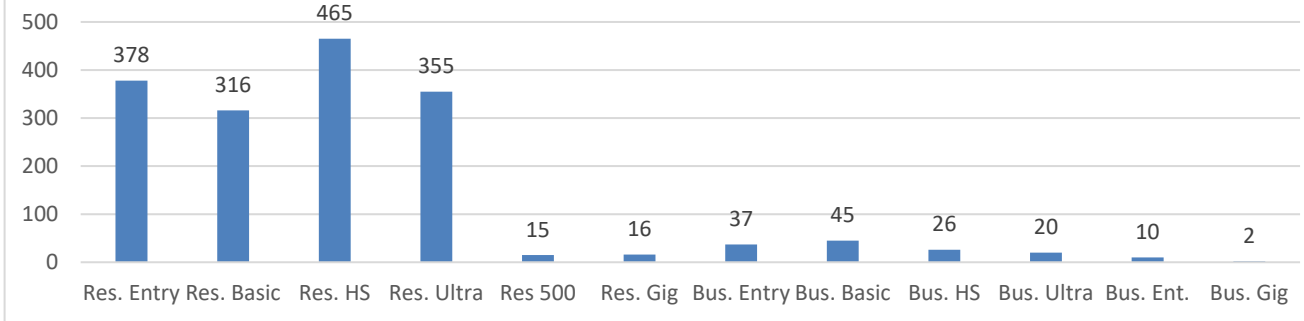
(The number of new installations and disconnects completed each month.)

Interested Customers by Month



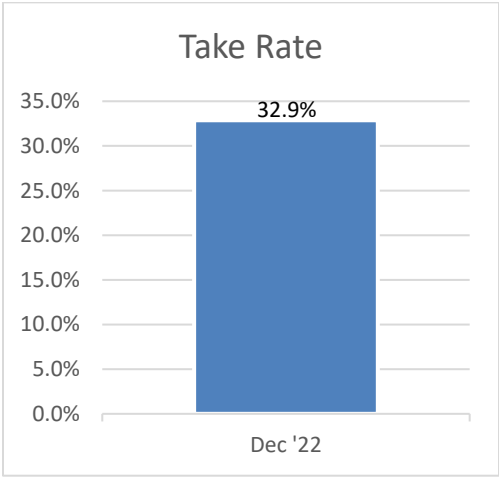
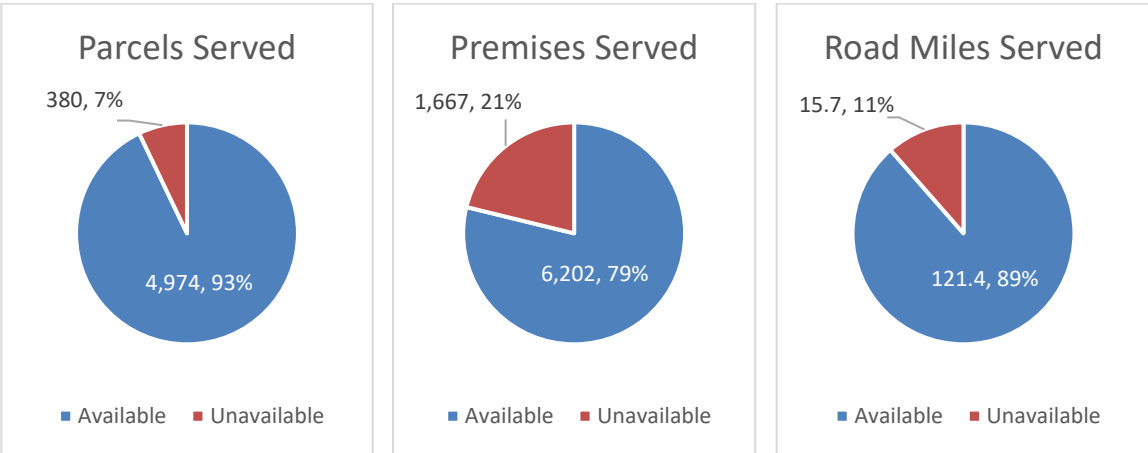
(This is the number of individuals who submit the Broadband interest form, whether they are in the current service area or not.)

Breakdown of Customers per Service Plan



(This is the number of each customer on our different service plans as of 9/30/2023.)

Quarterly Metrics



(As of 9/30/2022; updated numbers will come in a future update)

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	Rate subsidy available
• Affordable Housing	Policy	Medium	Select Board/Housing Groups	Rate subsidy available
• 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	Complete; will report quarterly
• Churn	Metric	High	Town Staff/Light Board	Complete; included in monthly report
• 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; update expected soon
• 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	Working on this
• Review/Confirm Internal Loan Findings	Finance	Highest	Financial Audit Comm/Staff	Complete
• Review and Rescind PILOF to MMN	Finance	High	Select Board/Town Manager	Complete
Capital Planning Process (p.42)				
• Review/Revise Debt financing schedule	Policy	Highest	Light Board/Town Staff	Working on this; update expected soon
• Quantifying cost of expansion	Planning	Medium	Town Staff	Working on this
• 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