The Vermont Community Broadband Implementation Atlas and Explore VCBB Hub Website

STONE ENVIRONMENTAL
100% EMPLOYEE-OWNED

Services / Expertise
Geospatial Data and Solutions
Web Application Development

Technology
ArcGIS Online
ArcGIS Hub Premium
ArcGIS Web App Builder
ArcGIS Experience Builder
ArcGIS Dashboards
Javascript and NodeJS
ArcGIS Pro

Markets
Local and Regional Planning
State Government

Project Location
Vermont–Statewide

Date Completed
2021–Present

Project Owner
Vermont Community Broadband Board

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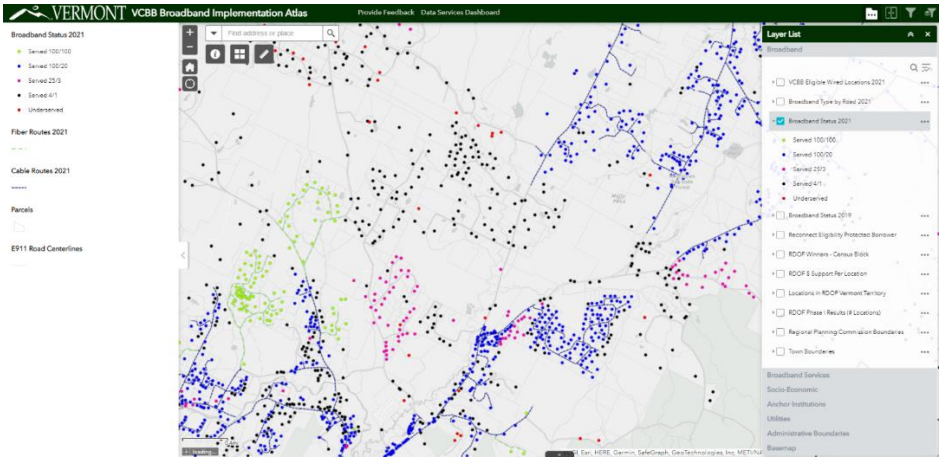

The VCBB Broadband Implementation Atlas is an interactive map showing a wide variety of GIS data layers that give context to broadband, including utilities, municipalities, and transportation.

THE US government has prioritized expanding broadband capacity, allocating funding to extend broadband access to underserved areas of rural states like Vermont.

Many of our towns are organized into Communications Union Districts (CUDs), responsible for building broadband in their respective areas while considering the diverse needs and interests of each member town. In 2021, Governor Phil Scott installed the Vermont Community Broadband Board (VCBB) to distribute state and federal funding to the CUDs and oversee broadband expansion across the state. The VCBB required a geographic information system (GIS) to track the dollar allocations related to network buildout.

Stone's Vermont roots and history of building and using GIS made our team a natural fit for the task. We designed, implemented, and configured ArcGIS Online, ArcGIS Hub, ArcGIS Dashboards, and ArcGIS StoryMaps to capture and track data from the CUDs' implementation work, which often used the same tools to plan networks and perform outreach. Some CUDs developed their own planning solutions and data management systems, and Stone collaborated with them and other private firms to manage spatial data in different formats. We developed and shared standards to ensure data could be moved from its source to the data platform and provided training to CUDs.

The Explore VCBB website (built using ArcGIS Hub) contains all the public tools and data generated by this project. Stone developed the VCBB Broadband Implementation Atlas to make available more than 40 datasets for examining Vermont's locations and the utility, community, and other factors that influence broadband expansion. The Atlas includes data that Stone created using Public Service Department broadband status information from recent years.

esri Partner Network Member

State and Local Government Specialty

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VCBB Broadband Implementation Atlas

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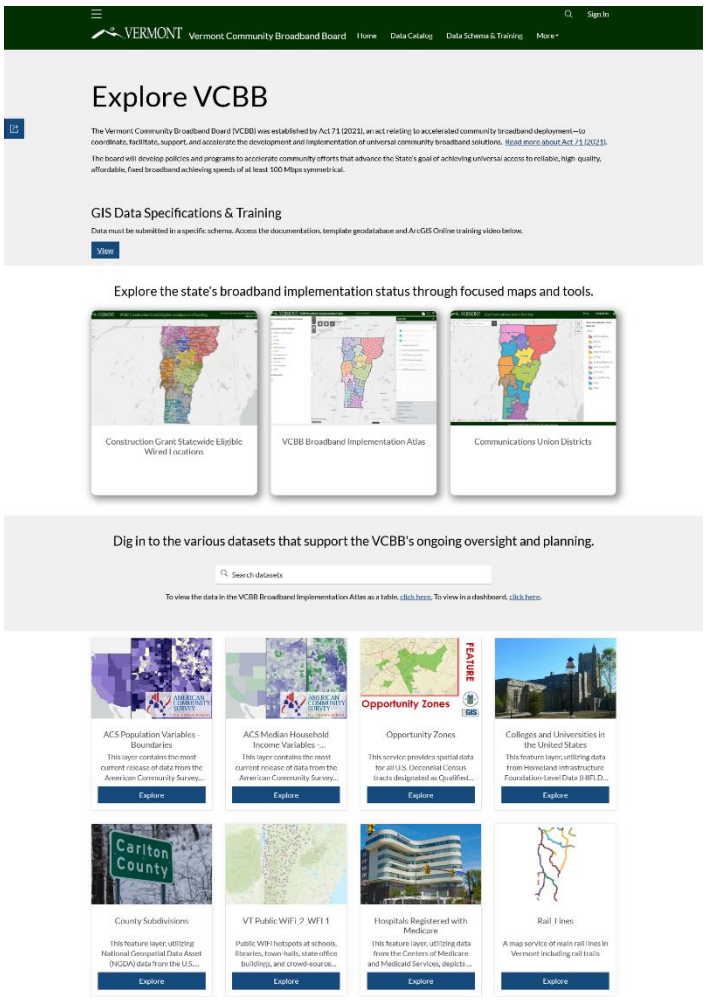
BEAD State-Led Challenge Process Support

VCBB oversees Vermont's federally-funded Broadband Equity, Access and Deployment (BEAD) Program, which addresses Vermont's connectivity gap by funding broadband development in areas that lack internet access or have slow connectivity. Stone developed the VT BEAD Challenge Portal, a sophisticated ArcGIS Online-based solution to meet the requirements of the program's BEAD Challenge Process. Stone created this portal by integrating Experience Builder, Survey123, and Notebooks with Microsoft Power Automate and SharePoint, enabling efficient data quality control and seamless file translation. Stone's support in implementing Vermont's BEAD Program allowed the state to secure an additional $228.9M of federal funding for high-speed broadband expansion and $5.3M for the Digital Empowerment Program to improve accessibility and improve technology education.



Stone organizes all the public tools and data created and collected during this project in an ArcGIS Hub website called Explore VCBB: https://explore-vcbb.hub.arcgis.com , which allows the VCBB board, staff, and the public to draw conclusions and complete quick analyses.

Our work included developing a sophisticated submission progress-tracking dashboard to provide a transparent administrative overview of the process. A key component of this project was integrating ArcGIS with Microsoft Power Automate to ensure accurate, standardized data for the VCBB's stringent requirements. We designed the Vermont BEAD Challenge Portal with user experience in mind, simplifying and streamlining application navigation and workflow management while enhancing efficiency and reducing errors. Multiple levels of guidance support a smooth user experience without inhibiting workflow.

For more information about Stone's work on the BEAD program, visit https://explore-vcbb.hub.arcgis.com/pages/broadband-equity-access-and-deployment.

This work is ongoing as broadband implementation continues in Vermont. We remain dedicated to supporting the VCBB in its efforts,, including Broadband serviceable location, program funding, and build-out tracking.