SANBORN HEAD

PROPOSAL FOR

Mountain Street Stormwater Improvement Scoping Study

Submitted to

Town of Bristol, VT

May 30, 2025

187 Saint Paul Street
Burlington, VT 05401

Ian Albinson
Interim Town Administrator
Town of Bristol
1 South Street
Bristol, VT 05443

May 30, 2025

Re: **Proposal for Engineering Services for Mountain Street Stormwater Improvement Scoping Study**

Attention Mr. Ian Albinson:

Sanborn, Head & Associates, Inc. (Sanborn Head) appreciates the opportunity to submit our proposal to the Town of Bristol (Town) to provide engineering services for the scoping study of the Mountain Street drainage system. This proposal and qualifications are based on the Request for Proposals (RFP) prepared by the Town dated April 16, 2025.

We understand that this study will help to inform stormwater infrastructure planning, manage flood risk, and identify potential opportunities for sustainable water management. Our team brings extensive experience in stormwater planning, hydrology, and integrated water management. We are confident in our ability to deliver a high-quality study that identifies key constraints, assesses the current system, and provides practical and innovative recommendations to support your planning and investment decisions.

The attached proposal outlines our understanding of the project scope, methodology, deliverables, timelines, and budget. We have also included relevant experience and team qualifications for your consideration.

We are enthusiastic about the opportunity to support Town of Bristol on this important initiative and look forward to the potential to work together.

Please don't hesitate to contact me, Rob Kenneally, P.E. the Primary Contact and Principal-in-Charge. You can reach me any time by phone at (857) 301-8282 or by email at rkenneally@sanbornhead.com should you have any questions or require further clarification.

Very truly yours,
SANBORN, HEAD & ASSOCIATES, INC.

Rob Kenneally, P.E.
Vice President

1. Project Overview

The Town of Bristol is soliciting proposals from qualified engineering firms to conduct a **scoping study** of the Mountain Street drainage system. The primary objective is to identify and evaluate practical, cost-effective solutions to mitigate stormwater runoff issues that have caused flooding, impacts to roadway drainage and residential properties.

Background

Mountain Street, particularly the section across from the Bristol Elementary School, between Finch Avenue and Spring Street, has experienced recurring stormwater flooding. The existing stormwater inlets, drainage culverts and swale system do not appear to have sufficient capacity to convey the present day drainage flows. As a result, during major rainfall the drainage system is overwhelmed and floods Mountain Street affecting adjacent properties and infrastructure. The general direction of drainage on Mountain Street appears to convey flow toward Spring Streets. However, in review of available LiDAR topographic data and the position of the culvert inlets, per VT DEC stormwater mapping, it's possible that Finch Avenue may also be impacted from flooding on Mountain Street.

2. Qualifications of the Consultant Firm

Sanborn Head Team has extensive experience in stormwater management, hydraulic analysis, and infrastructure feasibility studies. Our multidisciplinary team has successfully completed stormwater management projects across New England. Leading our team is Rob Kenneally, who has over 30-years of stormwater management experience in various design projects, as presented below:

Relevant Experience:

- **Renewable Natural Gas Facility at DADS Landfill, Denver CO (2024):**
  Conducted full hydrologic and hydraulic modeling with EPA SWMM software in the proposed design of facility drainage swales culverts and stormwater extended detention basin to achieve required water quality and the stormwater control of peak flow rates and volumes.

- **Howard Street Tunnel Clearance Improvement Project, Baltimore, MD (2023):** Engineered a drainage system within a 1,300-LF long section of constrained railroad corridor at the West Portal of the Howard Street Tunnel. Performed hydrologic and hydraulic analysis in the design of corridor drainage swales, culvert crossings, stormwater pump station and detention basin. Also responsible for the preparation of related stormwater permitting for the project.

- **River Road Drainage and Slope Stability Evaluation, Clinton, MA (2020):** Objective of this project was to develop solution for the stabilization of an existing steep slope and design for roadway drainage system for 800-lf section. Drainage design incorporates the removal of several existing catch basin outfalls and replacing that with a new closed drainage system to convey runoff to particle separator structure and detention basin to address water quality and peak rate flow control.

3. Scope of Work

The following scope outlines our proposed approach to conducting the Mountain Street Stormwater Improvement Scoping Study. It addresses the core objectives detailed in the Request for Proposal (RFP). Sanborn Head will work closely with the Town Administrator and the Public Works Foreman to complete the following:

- Perform stormwater analysis on Mountain Street, between Spring Street and the drainage divide south of Finch Avenue. Determine extent and impact of flooding.
- Assess potential solutions and develop an alternatives analysis to reduce or eliminate flooding incidents on Mountain Street.
- For each feasible alternative, prepare benefit-cost analyses of potential improvements.
- Present findings in Scoping Study Report with supporting documentation.

Task 1: Project Initiation and Meetings

This task will be comprised of the following elements:

- Conduct a project kickoff meeting with the Town Administrator, Public Works Foreman, and relevant stakeholders to clarify goals, and establish communication protocols. Also to take the opportunity to discuss any notable historic rain event dates to which flooding occurred and collect relevant available information such as photos, documented impact

to properties, or prior drainage reports, which can be utilized in the analysis to confirm project boundaries.

- Perform initial site walk to assess existing drainage conditions along Mountain and Spring Streets, with emphasis on:
    - Documentation of existing drainage inlet and culvert dimensions and locations or any relevant drainage features.
    - Identify any physical constraint or erosion-prone zones along Mountain Street .
    - Elevation data and offset distance of adjacent properties and/or infrastructure to the historic flooding and drainage impact areas.

Deliverables: *Meeting summary, site assessment notes, and photo documentation of drainage impact area.*

Task 2: Field Reconnaissance and Data Collection

The following desktop data collection and field activities are proposed under this task:

- Compile and review all relevant existing documentation including:
    - Infrastructure records
    - Topographic and soil data
    - Drainage & Land use maps
    - Previous stormwater management studies
- Interview and document stakeholders (Town personnel or residents in the Mountain St area) who may have first-hand knowledgeable on the extent, depth and duration of the flood event. This information will be used in comparison to the hydrologic modeling to model calibrate or evaluate the sensitivity of hydrologic model.
- Project base plan information will be built upon geographic information system (GIS) data (i.e. topography, roads, parcels, utilities, etc.) obtained from Vermont Center for Geographic Information (VCGI), which is Vermont's clearinghouse for GIS data. All information will be established in state plane coordinates under North American Vertical Datum (NAVD) 1988.
- Sanborn Head personnel will conduct a condition assessment and document the existing drainage infrastructure.
- Attempt to identify and document any existing signs of erosion, scour or high-water mark indicators or any potential contributing factors to flooding and runoff concerns during our field activities.

- Supplement available topographic/GIS data with on-the-ground survey utilizing global positioning survey (GPS) equipment. Sanborn Head plans to perform 1-day of GPS survey to verify existing drainage features within the limit of work. For GPS survey equipment we propose utilizing the Trimble DA2 GNSS receivers with the Catalyst GNSS positioning service and ArcGIS Online Field Maps to collect spatial data in the field.

Deliverables: *Summary of data reviewed, system inventory map, and condition matrix.*

Task 3: Hydrologic and Hydraulic Analysis

A stormwater analysis will be performed on the existing drainage system to determine the extent of flooding and will include the following:

- Perform hydrologic modeling to assess existing conditions runoff volumes for 10-year, 25-year, and 100-year, 24-hour storm events. Utilize Natural Resources Conservation Service (NRCS) Technical Release TR-20 methodology as part of the stormwater analysis.
- Precipitation characteristics for the design storms at the project site will be obtained from National Oceanic and Atmospheric Administration (NOAA) Atlas 14 will used in determining the rainfall intensity and depth for the defined design storm event.
- Propose utilizing available high resolution LiDAR topographic data and land cover data provided through Vermont Center for Geographic Information (VGGI) to develop a subcatchment area and associated land use contributing runoff flow to the Mountain Street area of concern.
- Develop hydraulic models of the existing system to evaluate drainage performance and identify system bottlenecks and problem areas. Sanborn Head will utilize the Vermont Agency of Transportation (VTrans) 2015 Hydraulic Manual for guidance in design criteria of hydraulic analysis.
- Develop flood mapping to present finding of hydrologic and hydraulic analysis under existing drainage system.

Deliverables: *Modeling results, flood risk maps, system performance analysis.*

Task 4: Development and Evaluation of Alternatives

Sanborn Head will perform an alternatives analysis on what would be considered a feasible solution or strategy. The alternatives analysis will include evaluation against the range of calculated peak flows for each design storm to assess the proposed improvements full functionality and the degree of flood reduction. The alternatives analysis will include the elements listed below.

- The stormwater management strategies/solutions to be evaluated include:

    - Add catch basins
    - Reconfiguring or expanding ditching
    - Modification to culvert
        - Replacing the culvert with a large pipe
        - Improve inlet efficiency by add a headwall with beveled edges. (*This is contingent an inlet control condition at the culvert.*)

- Consider nature-based solutions and green infrastructure where applicable
    - Possible use of a subsurface infiltration system (*provided available footprint can be provided*) to promote infiltration. Possibly integrate into school playground or parking area.
    - Installation dry well or series of dry wells (*within the right-of-way*) to promote infiltration.

- For each alternative:
    - Conduct a benefit-cost analysis
    - Evaluate constructability, lifespan, and maintenance needs

Deliverables: *Alternatives matrix, concept sketches, evaluation summary.*

Task 5: Scoping Report and Recommendations

The scoping report is intended to be used to inform decision-making and guide detailed design or further investigations. The report will include all hydrologic and hydraulic calculations and supporting documentation as part of the stormwater alternatives analysis. If necessary, the report will identify any potential data gaps and/or needs for further investigation or detail modeling. The report will provide a summary of the preferred alternative or strategies and present the recommended cost effective solution. Report will also provide recommended next steps for stormwater management.

Deliverables: *Final Scoping Study Report (PDF + editable formats), GIS shapefiles.*

4. Proposed Schedule

Activity	Timeline
Project Kickoff / Initiation	Week 1
Field Reconnaissance & Data Collection	Weeks 2–4
Hydrologic/Hydraulic Modeling	Weeks 5–8
Alternatives Development	Weeks 8–11
Final Report Delivery	Week 13
Review & Close-Out Meeting	Week 14

Total Duration: 14 weeks
Assumes project start: Second week in July, 2025.
Anticipated project completion: third week in October, 2025

5. Project Organization

Project Management Structure:

- **Principal in Charge:** Rob Kenneally, PE
  Lead stormwater design & coordination, schedule, and quality control.
- **Assistant Project Manager:** Jessica Sheridan, EIT
  Hydrologic/hydraulic modeler and drainage evaluation.
- **Project Engineer:** Tyler Bodette
  Support field engineer activities.
- **GIS Analyst:** David Heacock
  Manages mapping, modeling visualizations, and data presentation.

All team members report to the Project Manager, who is the single point of contact for the Town of Bristol.

6. Resumes of Key Staff

Our proposed project team are summarized here. We have included full resumes in Attachment A of this proposal.

Rob Kenneally, PE – Project Manager

- **Role:** Overall project lead, quality assurance, stakeholder coordination
- **Experience:** 30+ years in civil-site and stormwater engineering

Jessica Sheridan, EIT – Lead Engineer

- **Role:** Modeling and design analysis
- **Experience:** 5 years specializing in solid waste engineering and stormwater infrastructure design.

David Heacock – GIS Analyst

- **Role:** Mapping, spatial analysis, data integration.
- **Experience:** 5 years in GIS-based infrastructure planning.

Tyler Bodette – Project Engineer

- **Role:** Field engineer responsible for data collection and documentation.
- **Experience:** 2 years civil engineering experience.

7. References

1. **Michelle Wittenbrink, PE**
   Operations Engineer, Waste Management
   Denver, CO
   (702) 876-2621
   mwittenb@wm.gov
   Project: Renewable Natural Gas Facility at DADS Landfill, Denver CO

2. **Brandon Knapp, PE**
   Sr Director – Mid-Atlantic Construction CSX Transportation
   Jacksonville, FL
   (904) 652-5690
   brandon_knapp@csx.com
   Project: Howard Street Tunnel Project, Baltimore, MD

3. **John Gregoire**
   Program Manager – Reservoir Operations, Massachusetts Water Resource Authority
   Southborough, MA
   (508) 424-3608
   john.gregoire@mwra.com
   Project: River Road , Clinton, MA

8. Budget Allocation

Estimated Budget – Mountain Street Stormwater Improvement Scoping Study

Task	Estimated Cost
Project Management & Meetings	$4,950
Field Reconnaissance & Data Collection	$10,500
Hydrologic/Hydraulic Modeling	$11,800
Alternatives Evaluation	$9,400
Final Report & Recommendations	$9,100
Total	**$45,750**

KEY ASSUMPTIONS AND EXCLUSIONS

- Assuming Town of Bristol will assist in providing access to stormwater system, if needed, by means of providing staff to open manholes covers or catch basin frames for inspection. In the event the manhole is in the middle of the street they could provide some form of traffic control/safety, such as a DPW truck (with flashers) for protection.

A

PROJECT TEAM RESUMES

ROB KENNEALLY, PE

Vice President/Principal-in-Charge

KEY AREAS OF PRACTICE

Site/Civil Development
AutoCAD, Civil 3D
Roadway Design & Permitting
Utility Design
Stormwater Engineering
Stormwater Modeling

EDUCATION

B.S., Civil Engineering Technology, Wentworth Institute, 1999

REGISTRATIONS

Professional Engineer – MA, NH

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers (ASCE)
Boston Society of Civil Engineers (BSCE)

SANBORN HEAD

Since 2024

Rob is a Vice President of our Solid Waste service area. He has over 30 years of experience as a civil/site design engineer, project manager and construction manager. His technical background includes hydrologic/hydraulic analysis, stormwater management, solid waste and civil site development. He has applied his technical expertise and project/construction management experience on projects that range from the design and construction of stormwater management projects, management of landfill closures, to the construction of sewer mains utilizing hard rock and soft ground tunneling techniques, to various subsurface site investigations involving environmental and geotechnical investigations. Rob has significant experience in horizontal directional drilling, slope stability analysis, road and earthwork grading, erosion and sedimentation controls, culvert design, hydrologic analysis, and hydraulic engineering.

RELEVANT EXPERIENCE

Renewable Natural Gas Facility, Waste Management Renewable Energy LLC, Denver Arapahoe Disposal Site, Aurora, CO

Waste Management Renewable Energy contracted Sanborn Head to design a proposed 4,000 to 6,000 scfm renewable natural gas (RNG) facility at their Denver Arapahoe Disposal Site (DADS). DADS is one of the largest landfill disposal sites in Colorado. The landfill gas (LFG) generated at DADS is to be processed at the proposed RNG facility and injected into a nearby high-pressure natural gas pipeline. This project is proposed to replace the existing landfill gas-to-energy (LFGTE) facility on the property. Mr. Kenneally served as the lead stormwater engineer on this project. Responsibilities include the design of the stormwater management system, which include grassed perimeter swales, two drainage culverts and one extended detention basin that address peak flow management and stormwater quality for the project. Mr. Kenneally was also responsible for the preparation of the grading, erosion and sediment control (GESC) report and plans. In addition to the preparation and documentation of the Phase III Drainage Report, which meets the stormwater criteria for both Mile-High Flood District and the Arapahoe County.

Prior to Sanborn Head

Hydrology/Hydraulics

Howard Street Tunnel Clearance Improvement Project, CSX Transportation, Baltimore, MD

The CSXT Howard Street Tunnel (HST) Project (the "Project") is a key component of CSX's Howard Street Tunnel Clearance Program to increase clearance along the I-95 Rail Corridor to enable the passage of double-stack trains. The HST is 1.7-mile long, 125-year old, brick-lined horseshoe tunnel serves an access point for commercial freight to Baltimore Harbor. The proposed design approach will optimize the profile and alignment of the track in the HST to achieve the required horizontal and vertical clearances within the existing structure. Mr. Kenneally was responsible for developing the new drainage system for both inside the tunnel (i.e. wall and invert) drainage but also for the HST west portal drainage system. Tunnel design efforts incorporated the collection of groundwater inflow measurements both for the tunnel inflow along the tunnel wall and in the tunnel invert. Mr. Kenneally was responsible for determining the tunnel design flow and for preparation of an alternative drainage analysis in the process of determining the selection of the final tunnel drainage design system. The

objective of the west portal drainage design was to collect and manage stormwater surface flow from entering the tunnel. Mr. Kenneally's responsibility for drainage design for 1,400-LF stretch of the railroad corridor which incorporated drainage swale, three drainage culverts, stormwater pump station and stormwater detention basin.

River Road Drainage and Slope Stability Evaluation, Massachusetts Water Resources Authority, Clinton, MA

Mr. Kenneally served as the Senior Civil Design Engineer on the River Road Drainage and Slope Stability Project. This project involved the drainage and slope stability evaluation of a slope along River Road, which is the lower access road to the Wachusett Dam in Clinton, Massachusetts. There was a severe landslide a number of years prior to this evaluation that took out a portion of the roadway that led to a "temporary" repair along the roadway. Since that time of the earlier landslide, the River Road slope was observed to continue to be more unstable, resulting in a recent "mini-slide" landslide that took out a 20-foot section of the slope below River Road slumped into Lancaster Mills Pond. Mr. Kenneally's responsibilities under this project consist of conducting site visits to observe and document the specific drainage systems and site features associated with the reported problem area, which spanned over an 800-lf length on River Road. Following field data collection, he provided an evaluate of the existing drainage conditions and identify appropriate corrective actions, which are documented in Technical Memorandum to the Authority. The evaluation memorandum included proposed corrective action scope of work, opinion of probable construction cost, and engineering fee estimate for the proposed corrective action alternatives.

Harvard Street Conceptual Drainage Study, Green Line Extension Project, Massachusetts Bay Transportation Authority (MBTA), Medford, MA

The objective of this project was to assess the extent of the historic flooding occurring at the Harvard Street underpass. Mr. Kenneally, as the Principal Stormwater Design Engineer on the Green Line Extension Project, research revealed that the underpass is the discharge point for an 18.7-acre watershed in Medford. He developed two stormwater detention scenarios and analyzed the potential drainage improvements that would alleviate the issue of flooding. The selected option included a combination of upgrading the 24-inch pipe that drains Harvard Street to a 30-inch pipe, raising Harvard Street approximately 1.33 feet at the road low point in the area of flooding, and extending a 24-inch storm drain across the railroad corridor to Boston Avenue to accommodate a future detention tank. As Task Manager for this assignment, Mr. Kenneally was responsible for performing the hydraulic and hydrologic calculations, sizing of Best Management Practices (BMPs), preparing civil layout plans using AutoCAD Civil 3D, and report preparation. His approach reduced the surface flooding in the underpass by 70%.

Cape Cod Water Resources Restoration Project, Barnstable County, USDA-NRCS State of MA

The objective of this project is to restore degraded fishways (i.e., fish ladders) to allow herring and other fish to move to and from upstream spawning areas. Mr. Kenneally served as the lead hydraulics and hydrology engineer for this project, which encompassed four fishway design projects that are located in four towns in Barnstable County (Cape Cod), Massachusetts. This restoration project covered a variety of different types of fish ladder structures, which ranged from design of a natural stream step-pool fish ladder to a concrete reinforced Denil fish ladder. Mr. Kenneally was responsible for the civil site layout and grading using AutoCAD 2011 Civil 3D, performing hydrologic and hydraulic calculations using HydroCAD, preparing specification and developing construction cost estimates.

JESSICA SHERIDAN

Project Engineer/Assistant Project Manager

KEY AREAS OF PRACTICE

Civil3D

HydroCAD

Slide2

ArcGIS Pro

EDUCATION

M.S., Civil and Environmental Engineering, The University of Vermont, 2020

B.S., Environmental Engineering, The University of Vermont, 2019

REGISTRATIONS

Engineering Intern - VT

SANBORN HEAD

Since 2021

Jessica is a self-motivated, adaptable, and detail-oriented Project Engineer with our Solid Waste Client Service Area. Her experience includes earthwork construction, stormwater permitting, general consulting, and AutoCAD design.

RELEVANT EXPERIENCE

Modern Corporation, General Consulting Services, Model City, NY

Assisted with consulting services for the Modern Landfill including design work and construction services for 19.3 acres of baseliner system including Section IV Areas 3A1, 3A2, and 3B and 5.5-acres of final cover system. Performed stormwater modeling of swales, ponds, culverts, and catch basins for several interim construction phases, and prepared permitting and construction drawing sets.

Confidential Client, Three-Acre Site Stormwater Permitting, Hardwick, VT

Performed stormwater permitting and design work for improvements to three-acre industrial site in the state of Vermont. Design features included stormwater reduction and treatment features consisting of swales, lined bioretention practices, gravel wetlands, wet ponds, infiltration basins, and a subsurface infiltration chamber.

Casella Waste Systems, New England Waste Services of Vermont (NEWSVT), Phase VI Earthwork Construction, Coventry, VT

Assisted with engineering services associated with the construction of an approximately 20.5-acre lined area for Phase VI Cells 1A and 1B at the NEWSVT landfill facility in Coventry, VT. Responsibilities included construction observation and quality assurance services for the Phase VI Cell 1A Geosynthetics installation and Phase IV 2021 gas well installations.

Casella Waste Systems, New England Waste Services of Vermont (NEWSVT), Soil Stockpile and Stormwater Permitting, Coventry, VT

Assisted client in obtaining new land use and stormwater permits at the NEWSVT landfill facility in Coventry, VT. Tasks performed included stockpile slope evaluation, stormwater design & permitting, pond grading, and stormwater modeling using Civil 3D, Carlson, and HydroCAD.

Omya, Verpol Facility, General Consulting Services, Florence, VT

Assisted with consulting and engineering services to Omya Inc. at the Verpol Facility in Florence, VT. Prepared volume calculations to determine the effects of different buffer distances from a Type II Wetland on a proposed filling plan. Prepared a filling schedule for the tailings management facility.

Aegis Renewable Energy, Bristol Landfill Solar Project, Bristol, VT

Assisted with design and permitting services for a proposed solar array on the closed Bristol landfill. Responsibilities include preparing a slope evaluation plan using Civil 3D, performing stability calculations using Slide, and performing ballast and settlement calculations for the solar array.

Rutland County Solid Waste District, Site Stormwater Permitting, Rutland, VT

Performed stormwater permitting and design work for improvements to a three-acre waste processing site in Rutland, Vermont. Design features included stormwater reduction and treatment features consisting of swales, lined bioretention practices, gravel wetlands, wet ponds, infiltration basins, and a subsurface infiltration chamber.

Prior to Sanborn Head

Researcher, Burlington Submersible Algal Sensor System, Burlington, VT, 2019-2021

Managed the development of low-cost, in-situ, real-time, cyanobacteria monitoring device for use as an early warning system in Lake Champlain while learning on the fly. Designed structural parts, developed code, tested electronics, and assembled components in a fabrication and electronics lab to create a LoRa compatible in-situ fluorometer for under $300. Also researched existing cyanobacteria monitoring designs, documented the development process in detail, and maintained algae and cyanobacteria cultures for sensor calibration and tracked their growth in a limnology lab.

DAVID HEACOCK

GIS Analyst 2

KEY AREAS OF PRACTICE

GIS Design and Figure Development

Database Design

Remote Sensing

EDUCATION

M.S., Geo-Information Science, Salem State University, 2020

B.A., Business Administration, Gordon College, 2013

SANBORN HEAD

Since 2023

David is an experienced Geographical Information System (GIS) analyst who creates maps and graphic depictions of systems, properties and assets, and compiles data from various resources to develop and maintain propriety database systems. He uses his GIS expertise to develop and execute workflows that involve spatial analyses of various types of data. He is adept at clearly displaying information, and at effectively maintaining projects. David also has experience implementing GPS/GNSS data collection at multiple organizations. He has taken the lead role in configuring and training field staff to use a combination of GPS tools, GIS software, and tablets for collecting spatial data and has developed custom workflows to better leverage data.

RELEVANT EXPERIENCE

Turnkey Recycling & Environmental Enterprises (TREE) Facility, Numerous Projects, Rochester, NH

Provided GIS services to support Sanborn Head's ongoing environmental and civil engineering projects supporting WMNH's overall effort to provide solid waste services in New Hampshire. Tasks included creating a drivetime analysis of potential areas to relocate a residential drop-off facility as well as the mapping of landfill leachate.

New Hampshire Department of Environmental Services, Dummer Yard Landfill Site Inspection, Berlin, NH

Sanborn Head developed a work plan to perform site inspection and summary report for a 105-acre unlined, closed landfill in New Hampshire. Work scope included the development of a web map and the creation of a data collection workflow for field teams using GPS field data collection tools.

Confidential Landfill Client, Environmental Services, NH

Provided GIS support for a confidential solid waste client in New Hampshire. Work included the development of wetland geospatial models in Python as well as mapping the wetlands using ArcGIS Field Maps and ArcGIS Pro. Created field data collection systems for high-accuracy GPS data collection.

HYM Investment Group, Suffolk Downs Redevelopment, GIS, East Boston/Revere, MA

Managed GIS services for a 161-acre, multi-phase transit-oriented development with commercial office, retail, residential, and open space. Scope included streamlining field data collection and figure creation using field data collected using a GPS and tablet. The ongoing project includes a surcharge design to support infrastructure improvements, and geotechnical design services for the six (6) buildings of the first phase of development.

Bellwether Innovation District, GIS, Philadelphia, PA

Provided GIS support for ongoing remediation of a 1,300-acre former refinery located in Philadelphia, Pennsylvania in accordance with Pennsylvania's Act 2 Program and the PA One Cleanup Program. Services included the analysis and modeling of contaminants and the creation of figures for both internal and public usage.

City of Nashua, NH, Four Hills Landfill Engineering Services, Nashua, NH

Provided GIS services to support Sanborn Head's ongoing efforts to provide environmental and civil engineering services for a major urban area in Southern New Hampshire. Work included the use of GIS tools to map bedrock contours at the site.

Camber Development, 800 Salem Street, Due Diligence & Phase 1 ESA, Wilmington, MA

Sanborn Head provided geotechnical and environmental engineering services to support the construction of a new industrial development in Wilmington, MA. GIS scope of work included the creation of web maps and a project dashboard to efficiently manage long-term field observations. Included setting up a high-accuracy GPS data collection systems and new workflows to manage data.

BioMed Realty, 585 Kendall, Geotechnical and Environmental Services, Cambridge, MA

Provided GIS data processing and soil pre-characterization maps to support the ongoing development of a 16-story R&D building on a congested urban site. Services include soil pre-characterization, planning and implementation of a treatability study for odor control, preparation of soil packages, preparation and review of project specifications, remote dust/VOC monitoring, soil management support, permitting support, and general construction administration.

Bethlehem Reimagined, Inc., Former Sinclair Hotel, Brownfields Cleanup, Bethlehem, NH

Provided GIS services for the assessment and cleanup of the former Sinclair Hotel site conducted on behalf of the NHDES under their USEPA Brownfields grant and under BRI Development, LLC. (BRI) under their USEPA Brownfields Cleanup Grant. Work included providing GIS figures for both internal and external audiences, as well as the set-up of field data collection workflows. The project included a Phase I and Phase II ESA, an ABCA and RAP and the preparation of technical construction specifications, design drawings, and bid package for selection of a remedial contractor. Sanborn Head led the construction oversight for remedy implementation which included stabilization of lead-impacted soils, excavation and off-site disposal of lead, asbestos, and PAH-impacted soils, and consolidation and capping of remaining soil impacts.

TYLER BODETTE
Engineer

EDUCATION
B.S., Civil Engineering, University of Vermont, 2023

SANBORN HEAD
Since 2021

Tyler is an engineer with experience in environmental and solid waste engineering. He is a highly motivated and resourceful Engineer with a strong knowledge base and work ethic. Tyler can quickly comprehend and complete assigned tasks and can function well as an independent worker or as a member of a professional engineering and construction team.

RELEVANT EXPERIENCE

Town of East Montpelier, Sanders Circle Culvert Replacement, East Montpelier, VT

Served as field engineer for geotechnical engineering services to support DeWolfe Engineering Associates, PC in the construction of a buried 3-sided steel plate arch culvert to replace an existing washed-out culvert in Montpelier, VT. Field services included a subsurface exploration program consisting of one test boring and lab testing of selected soil samples for use in developing a geotechnical report.

Vanasse Hangen Brustlin, Inc., Road Culvert Replacements, Killington, VT

Sanborn Head provided geotechnical engineering services for two culvert replacements along Killington Road in Killington, VT. Provided field engineering services to perform a subsurface investigation at the culvert locations for use in a geotechnical engineering report including recommendations for the design and construction of new culverts.

Casella Waste Systems, New England Waste Services of Vermont (NEWSVT), General Engineering Services, Coventry, VT

Provided field engineering services for general engineering support for a sanitary landfill in Coventry, VT. Services provided include support for permit applications, site visits and evaluations, annual landfill and environmental inspections and evaluations, and development of engineering reports.

Omya, Verpol Facility, General Consulting Services, Florence, VT

Assisted with consulting and engineering services to Omya Inc. at the Verpol Facility in Florence, VT. Provided field engineering services for design and permitting work for facility improvements.

Casella Waste Systems, New England Waste Services of Vermont (NEWSVT), Phase VI Cell 1A Design and Bid Phase Services, Coventry, VT

Provided construction quality assurance services to Support Sanborn Head's work on the design and construction of a new solid waste management cell at the NEWSVT landfill in Coventry, VT.

Casella Waste Systems, New England Waste Services of Vermont (NEWSVT), Phase VI Cell 1B Design and Bid Phase Services, Coventry, VT

Provided construction quality assurance services to Support Sanborn Head's work on the design and construction of a new solid waste management cell at the NEWSVT landfill in Coventry, VT.

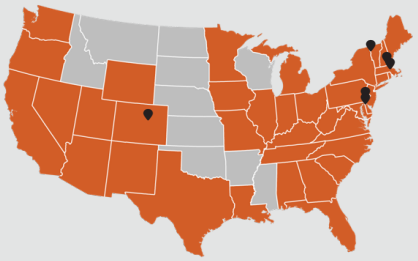
B

FIRM OVERVIEW

SANBORN HEAD

Firm Overview

Where We're Registered



Our Offices

Sanborn Head brings together the unique talents of engineers and scientists to provide creative and cost-effective consulting solutions. We're big enough to deliver real technical depth on projects, but small enough to be highly collaborative and responsive to client needs.

As consultants, we take pride not just in finding solutions to important problems, but in clearly communicating those solutions and answering client questions at all stages of a project. Ultimately, we're hard-wired to help clients achieve their goals. It's who we are.

Our mission is to stand out as a thriving and influential firm known for technical excellence, passion, and creativity; a firm that delivers value to our clients and opportunity for our people.

We think big. We tackle projects with a big-picture mindset that complements our technical expertise. We think and work strategically to meet our clients' goals.

We're people people. In a field known for drawing plans and numbers, we're friendly, easy to work with, and excited to work alongside our clients and colleagues.

We're in this together. We actively share ideas across our offices, disciplines, and project teams, always seeking to make the most of our collective knowledge. We work together for the greater good.

We create opportunities. We understand that more than anything our people desire the opportunity to push themselves and contribute to exceptional work. We share that priority, matching people to projects in a way that provides variety and allows our people to learn, grow, and succeed.

FOUNDED

1993

160 PROFESSIONALS

Civil Engineers

Environmental Engineers

Geotechnical Engineers

Mechanical Engineers

Electrical Engineers

Chemical Engineers

Geologists

Risk Assessors

OFFICES IN

Bedford NH

Boston MA

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