

Statement of Qualifications

Asset Management and Additional Engineering Services

Town of Barrington, New Hampshire
May 6, 2020



132633X
May 6, 2020

Conner MacIver, Town Administrator
Town of Barrington
333 Calef Highway, Barrington, NH 03825

RE: Request for Qualifications, Asset Management and Additional Engineering Services

Dear Conner MacIver and Members of the Selection Committee:

DuBois & King (D&K) is proud to have served the Town of Barrington (Town) as Engineer of Record (EOR) for the past 10 years. In our role as EOR, we serve as an extension of the Town’s staff, assisting the Planning Board with subdivision/site plan reviews and construction inspection services, as well as providing services to other municipal departments. We are excited to submit our qualifications to support the Town’s asset management program and hope to continue to build upon our relationship with Barrington to further improve the Town’s infrastructure. The assigned team is experienced in assessing assets and communicating the data for a wide range of municipal infrastructure and understands the requirements for projects receiving New Hampshire Clean Water State Revolving Funds (CWSRF). Our project team is also experienced in providing engineering services for many municipalities in the State of New Hampshire.

Team members assigned to this project are experienced in evaluating, designing, and constructing municipal stormwater collection systems throughout New Hampshire and northern New England. Project Manager Michael Hildenbrand, PE, led a D&K team to develop a New Hampshire Department of Environmental Services (NHDES) Asset Management Program for the Town of Milford. Our team worked with the Milford to get their stormwater system inspection ratings into an easy-to-use spreadsheet that town staff could maintain on their own. The project was fully approved by NHDES and met all of the CWSRF funding requirements. Vice President Chuck Goodling, PE, led the D&K team that evaluated 58 miles of the City of Claremont’s wastewater collection system for input into CarteGraph GIS software for tracking. Chuck also led the 20-year evaluation of Burlington, Vermont’s three wastewater treatment plants and 25 wastewater pumping stations; the deliverables included a narrative report and an interactive spreadsheet for each component of these facilities. Senior Engineer Scott Bourcier, PE, has led D&K services to complete an assessment of existing conditions (including stormwater patterns, drainage infrastructure, erosion areas, roadway conditions and subsurface conditions) to identify opportunities to mitigate roadway and site water quality impacts to East Lake for the Eastman Community Association in Grantham.

D&K understands that operation and maintenance costs are solely the long-term responsibility of the Town. Minimizing these costs and reducing stormwater collection and conveyance system failures are central to our team’s approach to evaluation and planning efforts. D&K will undertake assessments and capital planning that maximize opportunities for the Town to save money through efficient operations and maintenance. We will work with Town resources to create a decision making tool from software the Town may already have, potentially eliminating the need for the Town to purchase and maintain additional software programs.

D&K looks forward to continuing to support the Town of Barrington; our team will serve as a knowledgeable and responsive partner that will complete the evaluation and deliver a product that has lasting value to the Town. We will actively communicate with you and your staff to understand what is important to the Town and direct the work accordingly. If you have questions, please contact Contract Administrator Jeff Adler at 603.637.1043 or via email at jadler@dubois-king.com.

Sincerely,
DuBois & King, Inc.

Jeff Adler, PE, LPA
Principal | Contract Administrator

Michael Hildenbrand, PE
Project Manager

Introduction

The Town of Barrington's (Town) voters supported a warrant article to pursue a grant opportunity with the NHDES to improve the Town's asset management program. The asset management program will help guide the Town's decisions in determining where and when to improve stormwater collection and conveyance features as well as guide budgeting efforts. The Town has not performed an operational or structural inspection of the stormwater collection, conveyance, or treatment features within the Town. The Town has solicited a Request for Qualifications (RFQ) from qualified engineering firms to assist with developing a complete community-specific decision-making tool. This project has received funding through the NHDES Clean Water State Revolving Fund. The asset management program will address the core elements of asset management to qualify for loan forgiveness. The core elements are effective tools for the Town to communicate with stakeholders.

Additionally, the Town will use this evaluation process to select qualified engineering firms to support other on-call municipal engineering services for various Town projects. The additional engineering services may include stormwater design; civil/site evaluation design; bridge evaluation and design; stormwater management; roadway, sidewalk, trail, path, and streetscape evaluation/permitting/design; and planning board assistance and review.

Project Approach

Kickoff Meeting. At the kickoff meeting the D&K team will work with Town staff and interested stakeholders to discuss the desired outcomes and the timetable for completing the project. At this kickoff meeting, D&K will introduce the project team to Town representatives, establish communication protocols, discuss the existing maintenance program and records, and discuss how to evaluate the existing stormwater system and known issues. It will be important to discuss the quantity and type of the Town's stormwater collection and conveyance features. If video inspection is not going to be completed, the age and type of material for each feature will be needed to develop life cycle costs and estimate future funding requirements.

Also at the kickoff meeting, we will discuss the components of the vision statement that may be achieved by developing an asset management plan. A community-specific vision statement will help communicate with stakeholders and guide the development of other core elements such as the level of service (LOS).

The project will utilize the EPA's Fundamentals of Asset Management to guide the project using the following steps:

1. Develop an Asset Registry
2. Assess Performance
3. Determine Residual Life
4. Determine Life Cycle and Replacement Costs
5. Set Target Level of Service
6. Determine Risk
7. Review the Operations and Management Budget
8. Review Capital Investment Budget
9. Explore Funding Strategies
10. Develop the Asset Management Plan

Reference Material

Review. Our evaluation will continue with a review of the applicable reference documents for each asset type and material. This will include manufacturer recommendations, record drawings, and past evaluations, if any. If possible, we will determine the burial depth and land use above the asset type, such as vehicular traffic or parking areas/driveways.

Site Visits. Once this data has been reviewed, members of the project team, in conjunction with town staff, will conduct a series of site visits. The team will observe the conditions of at least one location of each asset type and material and of infrastructure that is evidently in poor condition. The additional infrastructure to be reviewed will be selected from the more sensitive locations (age, material, burial depth, and land use) and known problem areas (flooding, erosion, and frequent maintenance).

Site Visit Tasks. The site visits will be conducted with copies of the applicable documents so that items may be evaluated in the field and additional data can be gathered or requested from the town as necessary. The team will

What can you do?

Know when to call the Town and **what blockage details to report:**

- Location
- Status (estimate blockage amount)
- Identify cause of blockage

Clean opening Clean opening Partially filled

Partially filled Blocked Blocked

Town of Milford
1 Union Square
Milford, NH 03055
LDaley@Milford.nh.gov
603-249-0620

Prepared by DuBois & King for the Town of Milford

D&K developed, for the Milford Community, a flyer guiding management of stormwater within the Town.

photo-document each location and areas of concern so that visual aids may be included in the report. D&K and Town staff will evaluate the following deficiencies during site visits: invert or crown cracking, concrete slabbing, deflections in flexible piping, joint separation, or presence of soil. The team will note the likely causes for these observed conditions: dead or live loading on piping exceeding the design capacity; presence of the seasonal high groundwater table; improper bedding; improper compaction during installation; insufficient cover; corrosion or deterioration of culvert material due to pH of water, resistivity of soil, or the presence of chemicals; improper seating of joints; movement of pipes due to erosion, freeze-thaw, or settlement; or environmental stress.

Evaluation Report (Deliverable). Once the site visits have been completed, the field data will be combined with the maintenance program, records, and additional information obtained for the stormwater collection and conveyance systems. The combined information will be reviewed and summarized in the evaluation report in a format that best suits the Town's needs. As noted above, visual aids including photographs will be used wherever possible to assist in making the report an easily usable document. Based on the information obtained from the Town and the site visits, the Project Team will create an inventory and ranking system as part of the Asset Inventory and Prioritization of Assets core elements.

Level of Service (LOS) Workshop. D&K will work with the Town to develop a draft Level of Service (LOS) statement for each asset type. The LOS statement will address the demand for services by the community, what regulators require, and the actual performance of the system. Additionally, current funding levels and the investment required to achieve various levels of service will guide the draft LOS statement. We will work with Town staff to coordinate and present at a workshop to discuss LOS goals and, if appropriate, select a desired level of service. *Deliverable: Draft Level of Service Statement.*

Prioritization of Assets. D&K will work with the Town to develop a protocol for determining asset conditions and prioritizing assets for rehabilitation or replacement based on the condition and critical nature of each asset. The information obtained during the site visits will be the baseline for the initial system evaluation. The condition for the parts of the stormwater collection and conveyance system that cannot be observed will be estimated based on relative conditions and assumptions. The relative conditions include age and materials. *Deliverable: Prioritization Spreadsheet.*

Life Cycle Cost Analysis. The Life Cycle Cost Analysis will be used to assess the total cost of each asset type. By taking into account as many economic impacts as possible, the Life Cycle Cost Analysis will provide the Town with an apples to apples comparison for rehabilitation or replacement of each asset type. D&K will prepare the life cycle cost analysis, which will take into consideration that most assets will be rehabilitated in place with a percentage of assets fully replaced. *Deliverable: Life Cycle Cost Analysis Spreadsheet.*

Funding Strategy. D&K will work with the Town to determine funding sources to achieve the various levels of service. We will prepare a recommendations memo summarizing gaps in funding, if any, and repair methods (traditional and progressive), potential grant programs, and alternative funding sources. *Deliverable: Recommendations Memo.*

Implementation Plan. After the Stormwater Asset Management Plan is completed, we will provide a guideline for keeping the document current and relevant. The guideline will include instructions for the above spreadsheets and suggestions for an update schedule. Living documents will provide the best decision making tools for the Town. D&K will meet with Town staff to review the Implementation Plan and discuss the process for updating the various documents to keep them current and relevant. *Deliverables: Implementation Plan and Meeting with Town Staff.*

Communications Plan. D&K will prepare a communications plan that can be used by Town staff to discuss the Stormwater Asset Management Plan with the community. The communications plan will provide suggestions for public notices on the Town's website under the Public Works and Stormwater Departments and public forums and via an informational flier or brochure. *Deliverable: Presentation Materials.*

Firm Overview

DuBois & King, founded in 1962, is a multidisciplinary firm providing planning, engineering, and construction phase services to municipal, federal, state, institutional, industrial clients throughout New Hampshire and Vermont. D&K provides professional services in civil engineering, site development, water resources, survey, water/wastewater engineering, environmental documentation, and mechanical, electrical, and structural engineering. With a staff of 130, the firm employs

engineers, planners, designers, surveyors, technicians, environmental and permitting specialists, wetland scientists, and support personnel.

Founded initially as an environmental engineering firm specializing in water and wastewater projects, D&K continues as a leader in the study, design, permitting, and construction management of municipal wastewater treatment facilities and wastewater collection and pumping systems. The firm's work has encompassed engineering studies and upgrade evaluations of dozens of wastewater treatment facilities and collection systems. Project services will be provided from the firm's Randolph, Bedford, Keene, and Laconia offices.

D&K has significant asset management experience developing asset management programs directly for New Hampshire municipalities and state government entities. Over the past 15 years, D&K has designed and constructed a half-dozen municipal or industrial wastewater treatment facilities, completed 20-year performance evaluations and/or upgrade assessments, and prepared Capital Improvement Plans for municipal infrastructure.

Project Team



Jeffrey Adler, PE, Principal and Contract Administrator, has 35 years of experience in civil and environmental engineering, providing professional services for municipal, state, and private clients. Jeff has served as Project Manager and Senior Engineer for state and municipal-level

recreation, planning, and infrastructure improvement projects. Projects have included management of multidisciplinary services, including civil/site, structural, electrical, and HVAC improvements. Assignments have involved roadway and runway reconstruction and paving, lighting, permitting, water and wastewater, parking, drainage, and utilities. He currently serves as Client Manager/Town Engineer for the Towns of Barrington, Chester, Bow, Raymond, Hampstead, and South Hampton. **Responsibilities:** *Jeff will serve as the local point of contact to the Town and will administer the contract.*



Michael Hildenbrand, PE, Project Manager, brings 19 years of experience in the assessment, design, and construction phases of stormwater projects. His expertise includes hydraulic modeling, local, state and federal permitting assistance, and closed and open channel drainage systems design and maintenance.

Michael is currently evaluating existing stormwater assets and building a stormwater infrastructure asset management plan to assist the Town of Milford with prioritizing and budgeting for drainage system maintenance and operational upgrades and repairs. He also evaluated the condition and capacity of a stormwater collection system associated with the design and construction of a 4-roundabout 2-lane highway reconstruction project located in Brattleboro, Vermont. As a former selectboard member and current fire chief, Michael's municipal experience includes intimate knowledge of regulatory and funding constraints of large-scale municipal infrastructure evaluation projects. **Responsibilities:** *Michael will manage the day-to-day project development for his stormwater asset management project.*



Chuck Goodling, PE, QA/QC, leads D&K's Public Works and Facilities Division and has served as project engineer, project manager, or principal-in-charge for many municipal and private sector projects involving water and wastewater infrastructure, stormwater, wastewater

collection, and road/utility reconstruction projects. Chuck brings 31 years of experience with infrastructure improvement projects including the development of municipal asset management plans and programs, detailed engineering design, project management and scheduling, cost estimating, quality control, and value engineering, and coordination with municipal, state, and federal agencies regarding permitting, funding, and project approvals. His project experience includes serving as Project Manager for a 20-year asset management plan and 10-year capital improvements plan for 3 wastewater treatment facilities and 25 pump stations in Burlington, Vermont. He also served as the Principal for the Asset Management Program project for the town of Milford. **Responsibilities:** *Chuck will provide quality assurance review of deliverables.*



Scott Bourcier, PE, Senior Engineer, brings 20 years of municipal civil engineering experience. He is currently under contract as City/Town Engineer for approximately ten communities, with some contracts spanning decades. He understands the value of

being a readily available resource to help municipalities maintain living asset management programs by providing evaluation and design for existing infrastructure. For the New Hampshire Army National Guard, Scott served as the primary staff member evaluating closed drainage, pavement condition, and other site/civil elements of 44 facilities, preparing a technical memorandum for each that included anticipated service life of components, recommended improvements, and opinions of probable construction costs for planning purposes. Scott also evaluated the Eastman Community Association's drainage and roadway systems for their anticipated service life and impacts to water quality in Eastman Lake. **Responsibilities:** *Scott will assist with asset data collection and cost estimating as needed and will assist with the on-call services for all other Town projects.*

Representative Experience

Asset Management Experience

D&K engineers have assisted municipal and state agencies with condition assessment, inventory, valuation, use, and reporting of municipal and state assets associated with public infrastructure. The firm's asset management experience includes assessment, evaluation, and development of data for use in capital planning for water and wastewater systems, roadway systems, water resource infrastructure, and state and municipal owned public buildings. D&K is familiar with CWSRF, NHDES, NHDOT, FAA and other large funding organizations' requirements for municipal asset management systems. Following is a brief listing of AMP systems used by the firm:

- GIS
- Spreadsheet and other tabular formats
- AMP software systems
- Narrative reports
- O&M manuals
- Pro-bono site visits and meeting attendance
- Drone-collected data

Experience with NHDES CWSRF Funding

D&K has relevant experience and is fully capable of supporting and/or leading the requisite funding agency coordination and preparing grant/loan funding applications and associated documentation for the Town's project through planning, design, and construction phases. D&K also has experience conforming professional services agreements to the requirements of a variety of funding agencies.

Senior members of our project team have decades of experience assisting New Hampshire municipalities with funding for infrastructure improvement projects. D&K staff have worked with the Clean Water State Revolving Fund Priority List and Loan Program.

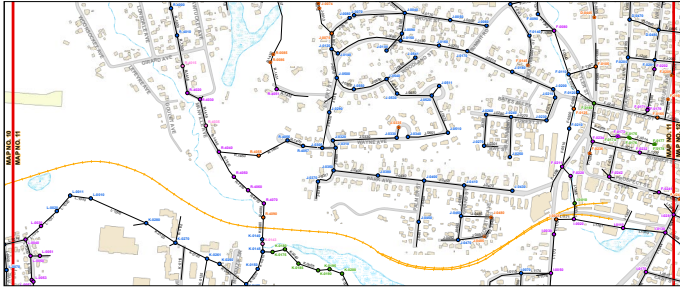
Project Experience

Asset Management Program, Town of Milford, New Hampshire



D&K assisted the Town of Milford with advancing the stormwater collection, conveyance, and discharge system, from the inspection ratings and inventory through the asset management program development. D&K converted their rating reports into an Excel spreadsheet, prepared level of service (LOS) statements, prioritized assets based on structural and operational condition, and developed a life cycle cost analysis (LCCA). Additionally, the D&K team prepared budgetary information, discussed an implementation plan, and provided a stormwater brochure for the Town to distribute to property owners to assist in working towards improved water quality. This project received a CWSRF loan.

Wastewater Collection System, GIS Mapping and Condition Assessment, Claremont, New Hampshire



The City of Claremont's collection system was identified by EPA as an "old" wastewater collection system in need of improvements. The first phase included a major evaluation of a 58-mile collection system and 6 pump stations, GIS mapping of collection system, inspection of 500 manholes, and TV inspection of 30,000 linear feet of sewer lines. Field condition evaluations were uploaded to the City's GIS-based infrastructure management software (CarteGraph). This included data management preparation of comprehensive mapping of the City's wastewater collection system on GIS base map. D&K staff prepared an asset management engineering report to summarize an evaluation of alternative corrective measures to reduce inflow and infiltration, to eliminate known points of Combined Sewer Overflow (CSO), and to prioritize needed improvements. The firm has designed resultant collection system improvements, including the reconstruction of Main Street, and provides periodic updates to the GIS data.

Main Street Utilities and Roadway Reconstruction, Claremont, New Hampshire



The City of Claremont is completing a full-depth roadway reconstruction project which was identified as a priority the City's wastewater collection systems assessment. The project includes water and sewer line upgrades, combined sewer overflow (CSO) mitigation, on-street parking revisions, retaining wall replacements, and signing. DuBois & King is providing preliminary through final design of drainage,

stormwater, retaining wall, and utility improvements associated with the reconstruction. Improvements to the water and sewer lines were funded through the CWSRF and DWSRF.

20-Year Engineering Evaluation, 10-Year Capital Plan and Bond Report for Main, North and East WWTPs, Burlington, Vermont



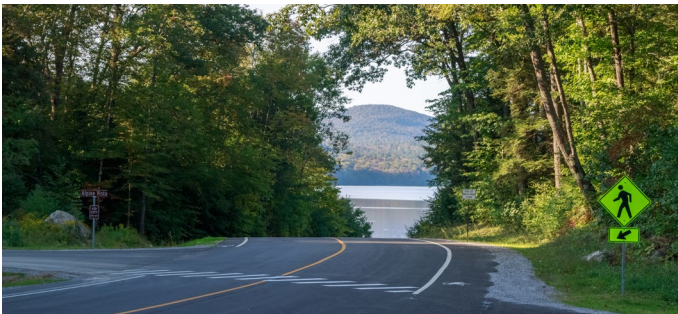
D&K evaluated Burlington's three wastewater treatment plants and all 25 wastewater pumping stations that serve the City's 42,000 residents. The existing facilities include screening, grit removal, clarification, aeration, and sludge dewatering and digestion. D&K staff visited each pumping station and treatment plant to determine the existing conditions of each device within each facility, forecast replacement costs, and impacts to ratepayers. D&K completed an evaluation report, which was prepared in a ranking matrix, with each item defined on a risk/probability scale, and each item hyperlinked to a photograph. The report is divided into individual components and is cross-linked to Burlington's GIS system. This provides integrated asset management capabilities and a user-friendly method for staff to access current equipment condition information. The report is complete and D&K has subsequently assisted the City with the design of improvements.

Stormwater and Drainage Evaluation and Design, Charlestown, New Hampshire



D&K evaluated Charlestown's stormwater collection and conveyance system for a municipality due to observed system failures—stormwater being discharged from the system through inlets, not the desired discharge location. D&K evaluated the system using the layouts provided by the municipality and the approximate drainage areas. Drainage areas were determined using LiDAR or other available topography. The catchbasins collect stormwater from approximately combined pervious and impervious surfaces. The drainage area consists of both local and state roads and stormwater systems. The project is designed to store approximately water in a subsurface chamber which includes infiltration. The project was successfully constructed.

Stormwater and Roadway Systems Evaluation and Design, Eastman Community Association, Grantham, New Hampshire



D&K assessed existing conditions (including stormwater patterns, drainage infrastructure, erosion areas, roadway conditions and subsurface conditions) for opportunities to mitigate roadway and site water quality impacts to Eastman Lake. DuBois & King collaborated with both stakeholders on developing improvement alternatives. Through the completion of a study summarizing the assessment, public meeting input, and direction from ECA, D&K firm provided hydraulic and hydrologic (H&H) analysis, open and closed drainage system evaluation and design, geotechnical engineering, wetland delineation, survey, and permitting assistance to advance the project. The study resulted in phased implementation of improvements. The project is in the third phase of construction as of April 2020.

Pavement Management Program as Town Engineer, Barrington, New Hampshire



DuBois & King is providing professional engineering services to the Town of Barrington. Services include Planning Board review services for private development of subdivisions/site plans, construction observations services, and design of solutions for various municipal projects. D&K has performed a transportation study to provide a master roadway plan and report to the Town. Firm staff completed an assessment of the roadway pavement conditions in Barrington. Scope of services included assessment of existing conditions, prioritization of recommended improvements, and development of a budget for the Town's future road maintenance. The town has approximately 67 miles of paved and 13 miles of unpaved roads. In addition to frequent Town Engineer formal and informal consultations, Town and D&K staff meet annually to assess use of available roadway funding and logical steps forward for roadway improvement projects described within the Pavement Management Program. D&K also provides design engineer services during construction and construction observation for these projects.

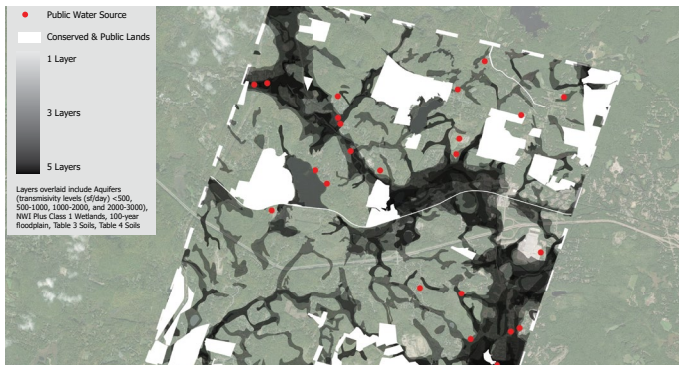
Facility Analysis and Sustainment Asset Management Plan, New Hampshire Army National Guard, Statewide



DuBois & King served as team leader for assessment and report of 44 NH Army National Guard facilities. The project included architectural assessments, code compliance, MEP assessments, energy audits, and maintenance planning. Facility assessments include building interiors, exteriors, and roofs; verification of

building layout to original drawings; code compliance; and site/civil features. Engineering assessments include review of existing drawings, visual inspection, equipment inventory, and recording of existing conditions. D&K completed a condition assessment of: mechanical-HVAC equipment, ventilation requirements based upon occupancy and usage, EMS/temperature control systems, plumbing fixtures and recommendations/options for water conservation measures, lighting, and life safety and fire alarm. Inventory of equipment by manufacturer and part number, evaluation of equipment condition with recommendations and capital improvements, and estimates of probable costs for equipment upgrades or repairs. D&K completed a summary report of assessment, recommendations, and estimates.

Wetland Function Evaluation and Mapping, Town-wide, Raymond, New Hampshire



D&K developed methods to map potential wetlands within Raymond and to evaluate town wetlands for groundwater protection/water quality functions. D&K ranked the wetlands for overall groundwater protection potential. This evaluation enabled the town to develop zoning regulations that preserve and improve groundwater quality.

D&K analyzed NWI-Plus wetland data for wetlands five acres or larger and NRCS hydric soils data using ArcGIS to identify potential additional wetlands beyond those mapped by NWI-Plus. D&K identified additional Class I, II, and III wetlands. D&K used spatial analysis to identify wetlands for groundwater protection based upon the presence of aquifers, 100-year floodplains, soil characteristics, public water source locations, and locations in relation to fourth order and other streams and waterbodies.

D&K's GIS specialists added fields to a geodatabase of the wetlands to assess wetland sub-areas in relation to the class of aquifer present, overall wetland size, and percent of permeable soils in the wetlands and 100' buffers. D&K's evaluation factors were weighted according to each wetland's abilities to contribute to water quality protection to produce

co-occurrent values for each wetland subarea. The values for each subarea were multiplied by their percent cover of the overall wetland, and the subarea values for each wetland were summed to provide an overall rating for each wetland. D&K identified 17 priority wetlands and evaluated them for their ability protect groundwater. D&K's wetland scientists used the 2015 "Method for Inventorying and Evaluating Freshwater Wetlands in New Hampshire" for the Flood Storage, Groundwater and Sediment Trapping Functions.

Stormwater Evaluation, Design, and Permitting for 4 Roundabouts and 4-lane divided roadway reconstruction, Brattleboro, Vermont

DuBois & King is providing design review of stormwater collection and treatment, and permitting; ROW, and lighting for this \$20M complex roadway project. As part of the permitting process firm staff are evaluating stormwater collection and treatment systems within the 1.5-mile section of roadway.

Keating-Birchwood Roadway and Utilities Reconstruction, Dover, New Hampshire



D&K served as the prime engineering consultant for 3,700 linear feet of residential roadway and water, sewer, and stormwater reconstruction design. One project challenge included ensuring the project's stormwater flows were compatible with the City's existing system and outfall. The design included a 36-in-diameter by 200-ft-long perforated HDPE pipe and stone infiltration practice to attenuate stormwater surges. Designing a project with reduced impervious surfaces was a priority to ensure that the piping that led to the outfall did not need to be enlarged. New sidewalks and granite curb were designed and constructed throughout the neighborhood. D&K met regularly with residents and City officials during the design phase to understand stakeholders' concerns so that the character of the neighborhood was preserved throughout the project. The project received funding from a \$2.6M loan from the NHDES Clean Water Revolving Loan Fund.

Water Resources Asset Management Summary Matrix

The following table showcases a sample of D&K experience providing stormwater, water, and wastewater asset management services.

Project Name	Asset	Documentation							
		Narrative	On-call review/recommendation	GIS	Spreadsheet	Plans & Specs/Schematics	O&M Manual/Monitoring	Form-based data collection	Living Document/Ongoing Town Engineer Support/Resultant Design
Wastewater Collection System, GIS Mapping and Condition Assessment, Claremont, NH	Wastewater Collection	●	●	●	●			●	●
Asset Management Plan, Milford, NH	Stormwater	●	●	●	●	●			●
20-Year Engineering Evaluation, 10-Year Capital Plan and Bond Report for Main, North and East WWTPs, Burlington, VT	Wastewater Treatment	●		●	●		●	●	●
Wetland Function Evaluation and Mapping, Town-wide, Raymond, NH	Natural Resources	●		●	●			●	
Stormwater and Roadway Systems Evaluation and Design, Eastman Community Association, Grantham, NH	Stormwater/Roadway	●	●		●	●		●	●

References

Contact: Lincoln Daley, Director of Community Development
Client: Town of Milford
Address: 1 Union Square, Milford, NH 03055
Phone Number: 603-249-0620
Project: Asset Management Program

Contact: Michael Oleson, Road Agent
Client: Town of Chester
Address: 84 Chester Street, Chester, NH 03036
Email: 603-887-3636
Project: Town-wide Roadway Condition Assessment

Contact: Michael Gornnert, Chief Maintenance Officer
Client: Eastman Community Association
Address: PO Box 53, Grantham, New Hampshire 03753
Phone Number: 603-863-4044
Project: Stormwater and Roadway Systems Evaluation and Design

Contact: Steve Roy, Water Resources Engineer
Client: Burlington DPW-Burlington Water Treatment Plant
Address: 234 Penny Lane, Burlington, VT 05401
Phone Number: 802-865-7258
Project: Wastewater 20-Year Engineering Evaluation, 10-Year Capital Plan and Bond Report for Main, North and East WWTPs

Contact: Andrew Hadik, Planning Coordinator
Client: Town of Chester
Address: 84 Chester Street, Chester, NH 03036
Email: 603-887-3636
Project: D&K serves as Town Engineer

Additional Services

Brief summaries of D&K's capabilities related to the six additional engineering services listed in Barrington's RFQ follow.



Water, Wastewater, and Stormwater

Wastewater and Stormwater Collection | Water Distribution Mains and Pumping | Wastewater Collection Mains and Pumping | Permitting and Funding Assistance | Hazardous Materials Investigation, Assessment, and Mitigation

D&K professionals have planned and designed water distribution and wastewater collection systems since 1962. Our continual involvement in infrastructure planning, analysis, and design of new facilities, upgrades, and rehabilitation has resulted in the development of substantial experience and expertise in water and wastewater collection, pumping, distribution, and treatment systems and knowledge of technologies that meet regulatory compliance and usage demands. Engineers routinely evaluate alternative sewer alignments to achieve the most cost effective and efficient designs that reduce, minimize, or eliminate personal property impacts and easement complications. D&K professionals have expertise in drainage and stormwater management and stormwater design and asset management. D&K environmental professionals have an in-depth knowledge of federal and state regulations to effectively manage and guide clients through the regulatory process.



Civil Site Engineering

Site Evaluation/Planning/Design | Local/Regional/State Permits, | Stormwater & Drainage Design | Low Impact Development | Utilities Design | Access Roads | Pathways | Parking Design | Cost Estimates | Bid and Construction Phase Services

D&K's extensive land development experience assures each client technical expertise in determining project feasibility, suitable site selection, and compliance with regulatory agencies. Firm civil/site engineers are supported by a team of surveyors, landscape architects, wetland scientists, and permitting specialists that provide comprehensive design services for commercial development, institutional and industrial campuses, recreational facilities, and municipal infrastructure projects. The firm's site design assignments involve land use planning, site selection studies, site and utility engineering, stormwater management, environmental impact studies, traffic analysis, traffic design and engineering, landscape architecture, public engagement, and construction administration. Continual quality control and constructability reviews are performed during design to ensure that plans and specifications result in quality design products. Planning documents and site designs are developed to be environmentally sound, aesthetically suited to the site, and economically feasible.



Transportation Engineering and Planning

Scoping | Planning | Design | Evaluation | New Roadways | Reconstruction | Rehabilitation | Complete Streets | Traffic Transportation Alternatives Program | Transit | Abutter Coordination | Signing | Striping | Parking | Streetscape | Lighting Right-of-Way | Pavement Management | Permitting | Cost Estimates | Construction Documents | Bid Phase Services | Safety Improvements

D&K's transportation planning and engineering teams work with communities, agencies, and the public on a variety of transportation planning projects, including roadways, realignments and improvements, repairs and widening projects, new alignments, utility relocation, sidewalks, intersections, traffic calming, complete streets, and bicycle and multi-use pedestrian paths. Transportation investments are opportunities for communities to set the stage for achieving their goals and visions for growth and development. Our approach to transportation planning considers public and community concerns and the important influences between land use and transportation design. Our staff are well-versed in the latest innovations of multimodal land use/transportation planning, including mode share analysis for developments, evaluation of road diets, and development of Complete Streets designs. D&K's planning is strengthened by our comprehensive understanding of local transportation facilities programs and applicable federal and state permitting and D&K engineers comply fully with the Manual on Uniform Traffic Control Devices (MUTCD).

Bridge Engineering

Bridge Type Studies | Inspections
| Load Ratings | Rehabilitations |
Replacements | Steel | Concrete |
Timber Covered Bridges | Culverts
| Geotechnical Engineering |



Foundations | Vibration Analysis | Structural Details | Code Analysis | Retaining Walls | Right-of-Way | Parking Structures | Boardwalks and Piers | Permitting | Highway Approach Design | Cost Estimates | Construction Documents | Bid and Construction Phase Services

D&K's bridge engineers prepare condition assessments, calculate load ratings, and make recommendations for rehabilitations and replacements and perform bridge inspections in accordance with the guidelines outlined in the Federal Highway Administration's National Bridge Inspection Program and Bridge Inspectors Training Manual. D&K staff use the latest AASHTO, state design codes and specifications, and principles of Accelerated Bridge Construction. Designs include concrete, steel, and timber bridges; spread footings bearing on soil and directly on ledge; pile foundations; and mechanically stabilized earth (MSE) abutments and retaining walls. The firm's expertise includes the assessment and repair of historic structures, including timber covered, steel truss, and suspension bridges; assessment and design of pedestrian ramps and bridges; and parking garage evaluation and repair.



Planning Board Review

D&K has experience assisting municipalities with planning board reviews. For plan reviews, the firm typically performs a field inspection of the proposed site; a detailed review of soils information with an emphasis on drainage and sewage disposal limitations; a detailed review of stormwater drainage and its impact upon adjacent properties; a detailed review of roadway design; utility layout and design; a review of traffic and parking studies; a review of sedimentation and erosion control plan; review for compliance with Town regulations; and prepares a letter report summarizing findings. D&K has the experience and qualified staff to provide a detailed review of a variety of submissions, including submittal procedures and

completeness, applicable zoning ordinances, applicable federal and state regulations, RSAs, and permits, site layout, environmental impacts, roadway design, stormwater management analysis and design, etc.

D&K as Barrington's Town Engineer

DuBois & King sees our role as town engineer to include being available and responsive on formal and informal requests, including providing emergency assistance. Small communities like Barrington have limited staff and funds to manage, maintain, upgrade, and improve a considerable quantity of municipal infrastructure. Technical assistance from engineering consultants supplements the Town's capabilities to manage maintenance, repair, and upgrade of infrastructure and facilities. Some of the tasks required are well defined, like subdivision/site plan review services and inspections or specific task assignments. For Barrington, we have performed more than 50 site plan reviews and inspections over the past 10 years. D&K's reviews address specific technical areas including stormwater analysis, roadway design, septic design, traffic analysis and erosion control or, in some instances, a comprehensive review. We strive to be thorough and timely in our reviews/inspections and have provided review services within or less than our budget estimate.

D&K has provided assistance to the Selectboard in the preparation of a Town Wide Road Evaluation Study. The study fostered public support of the annual Town highway budget, and D&K has provided continuing assistance to Road Agents to implement the study. D&K assisted the Town in obtaining a waiver from EPA in regard to being classified as an MS4 community. Obtaining the waiver saved the Town from having to file detailed and costly reports/documents associated with an MS4 classification.