ENGINEERING SUCCESS **TOGETHER**

Pavement Management Proposal

Sanford, ME

Submitted by:
BETA Group, Inc.
40 Stark Street
Manchester, NH 03101
(603) 321-3207

www.BETA-Inc.com

Submitted to:
Matthew Hill
Public Works Director
156 School Street
Sanford, ME 04073

July 7, 2015

ENGINEERING SUCCESS **TOGETHER**

July 7, 2015

Mr. Matthew Hill
Public Works Director
156 School Street
Sanford, ME 04073

Re: Pavement Management Program

Dear Mr. Hill:

BETA Group, Inc. has assembled a team of experienced Engineers and Asset Management/GIS specialists to provide professional engineering services relating to the inventory and assessment of Sanford's City maintained roadways. *Our selection for this project will provide you with BETA's wealth of expertise, experience and our time-tested asset management software and services.*

BETA is a multi-disciplinary firm specializing in Transportation Engineering, Master Planning, GIS/Asset Management and a wide range of environmental engineering services.

Our team provides services beyond standard Pavement Management and GIS – we move and manage data. Our ideas for this project are matched only by our ability to deliver, as demonstrated by our diverse range of municipal, regional and state-wide projects.

Over the past decade, our project team has devoted significant corporate resources in the development and evolution of our asset management system capabilities.

Anthony Garro will lead our team as Project Manager. He has over 20 years of professional management experience providing roadway management services, transportation/capital improvement planning, and a broad range of GIS based mapping services to numerous agencies and communities across New England.

Anthony Puntin, PE, a registered engineer in New Hampshire, will serve as Lead Project Engineer. He has over 22 years of experience in the transportation and asset management field and has worked on several projects in a similar capacity.

We look forward to your favorable consideration of our proposal and the opportunity to discuss our qualifications and approach further. In the meantime, if you have any questions or concerns regarding our proposal submission, please feel free to contact me at (603) 321-3207.

Sincerely,

BETA Group, Inc.

Anthony T. Lionetta

Anthony Lionetta, PE
Senior Vice President, Principal in Charge

BETA GROUP, INC.
40 Stark Street, Manchester NH 03101
P: 603.321.3207 | W: www.BETA-Inc.com

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SECTION 1 – FIRM INTRODUCTION

INTRODUCTION TO THE FIRM

BETA Group, Inc. (BETA) was established in 1982 and has grown to become a regional leader in the fields of asset management/GIS, landscape architecture, civil/site engineering, stormwater management, transportation, environmental engineering, and environmental science. Since 2014, BETA has been recognized as a nationally-ranked Top 500 firm by Engineering News-Record.

BETA has offices in Manchester, NH; Norwood, MA; Chicopee, MA; Lincoln, RI; and Hartford, CT and employs a staff of more than 140 engineers, scientists, certified soil evaluators, LEED professionals, landscape architects, planners, construction managers and support personnel. **We take pride in a reputation for high quality technical services, on-time performance and a strong commitment to meeting the needs of our clients.**

BETA's composition as a local employee-owned firm is a key factor in the successful delivery of projects and services to our clients. Given the structure and nature of the firm, our staff is vested and empowered to perform well. **Our goal is to have and maintain long-term relationships with our clients.**

BETA believes that the most successful projects are those that establish a close working relationship with our client so that critical decisions become a collaborative effort. Our clients agree and the result is that the majority of our practice is repeat engagements with existing clients. The concept of providing quality technical services to maintain clients is ingrained in the fabric of BETA. **The result is ENGINEERING SUCCESS TOGETHER.**

BETA provides a wide range of professional services (listed to the right) to state, municipal and private clients.

OFFICE LOCATIONS

New Hampshire:
40 Stark Street
Manchester, NH 03101
T: (603) 321-3207

Eastern Massachusetts:
315 Norwood Park South, 2nd Floor
Norwood, MA 02062
T: (781) 255-1982
F: (781) 255-7980

Western Massachusetts:
1 Springfield Street, 2nd Floor
Chicopee, MA 01013
T: (413) 331-5326

GIS/Asset Management
- Pavement Management
- Asset Mapping
- Stormwater Mapping
- Utility Mapping
- Scanning & Archiving
- Parcel Zoning & Mapping
- Comprehensive Plan Mapping
- GPS Data Collection

Landscape Architecture
- Site Master Planning & Design
- Historic Downtown Planning & Revitalization
- Streetscapes
- Urban Planning
- School and Municipal Site Design
- Sports and Recreational Fields
- Bicycle/Pedestrian Trails, Parks & Open Spaces

Civil-Site Engineering
- Site Design
- Land Development
- Storm-water Management
- Permitting
- Utility Design
- Master Site Planning
- Hydrology & Hydraulic Analysis

Environmental Engineering
- Wastewater Systems
- Potable Water Systems
- Trenchless Technology
- Biosolids Management
- Facility/Master Planning
- Capital Improvement Planning
- System Modeling

Environmental Science
- MCP Response Actions
- Brownfields Redevelopment
- Site Investigation & Remediation
- Soil and Waste Characterization & Management
- Regulated & Hazardous Building Materials
- Environmental Permitting & Compliance
- Landfill Closure & Monitoring
- Building Demolitions

Structural Engineering
- Bridge Inspection, Evaluation & Ratings
- Highway & Pedestrian Bridge
- Culverts & Special Structures
- Retaining Walls
- Environmental Structures

Transportation & Traffic Engineering
- Traffic Safety Studies/Audits
- Circulation & Parking Studies
- Peer Reviews
- Roadway/Intersection Design
- Traffic Calming/Complete Streets
- Traffic Signal/Advanced System Design
- Computer Modeling/Simulation

Complementary Services
- Regulatory Compliance/Permitting
- Grant & Loan Assistance
- Construction Management

Rhode Island (Corporate Headquarters):
6 Blackstone Valley Place, Suite 101
Lincoln, RI 02865
T: (401) 333-2382
F: (401) 333-9225

Connecticut:
1010 Wethersfield Avenue, Suite 305
Hartford, CT 06114
T: (860) 513-1503
F: (860) 513-1582

PRIMARY POINT OF CONTACT

Mr. Conrad Leger will serve as project's primary point of contact. He will be readily available for the duration of the project and for any inquiries from the City.

Mr. Conrad Leger
C: (617) 833-5050
E: **CLeger@BETA-Inc.com**

SECTION 2 – PROJECT TEAM

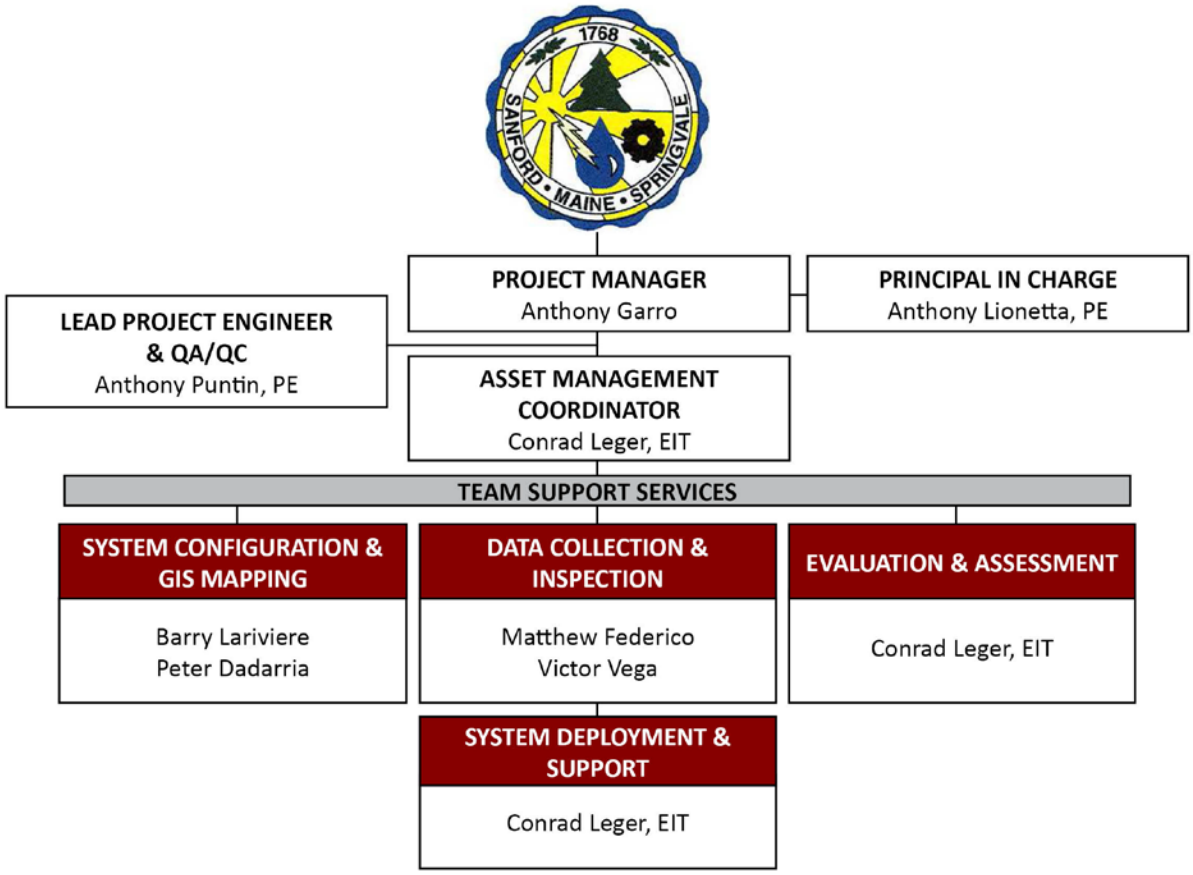
INTRODUCTION

BETA has built its reputation by constantly providing a high level of service to its clients. We believe that putting together the right team to work on a project is paramount to that project's success.

Our project team is uniquely qualified to assist the City in this endeavor, having successfully provided similar services to over 100 municipalities in the region for over a decade. In addition to our extensive GIS and asset management capabilities, we offer customized GIS mapping and web-based solution, as well as the person-to-person support necessary for the City to realize the maximum benefits of the final deliverable. We are confident that the extensive experience of our project team, coupled with our firm's GIS/asset management capabilities, will exceed the stated goals of the project, ultimately resulting in improved asset management and long-term infrastructure conditions in the City of Sanford.

The following organizational chart shows the team we have assembled possesses the specialized skills required to successfully undertake the tasks within your Request for Proposals. Summary biographies of key personnel are presented after our organizational chart.

ORGANIZATIONAL CHART



BIOS OF KEY PERSONNEL

Anthony Lionetta, PE – Principal in Charge

Tony Lionetta has 38 years of technical, project and program management experience on transportation and civil engineering services to municipalities, and federal and state agencies. Tony's experience includes a full spectrum of client services ranging from the identification of funding sources, feasibility studies, conceptual design, planning, constraint identification and impact assessment, design development, construction documents and services during construction. He has technical expertise in the planning and design of transportation infrastructure. He also has led public involvement efforts and agency coordination.

Anthony Garro – Project Manager

Tony Garro has worked in the planning and GIS fields for more than 20 years. He has integrated his extensive knowledge of Asset Management and GIS infrastructure mapping into his planning expertise, thereby creating synergistic and dynamic end products for clients that exceed their expectations. Tony is BETA's Lead GIS Analyst and Transportation Planner having completed projects for state agencies, universities and municipalities throughout New England. He also brings extensive public presentation and outreach experience in the areas of community planning, pavement management and capital improvement plans/bond referendums.

Tony has been responsible for the development of BETA's GIS and Asset Management Platform. He has deployed desktop and Web-enabled systems for more than 50 municipalities throughout New England, including regional and statewide programs. Most recently, Mr. Garro has developed GIS tools to support the data collection, analysis and reporting of municipal assets such as pavement, sidewalks, ramps, signs and street trees. The system module known as "complete streets" also includes assessment and analysis geared toward helping communities achieve compliance with MUTCD and ADA standards.

Tony has also authored several approved Community Master Plans throughout New England. In addition, he has provided planning and GIS support services on regional transportation and corridor analysis projects that included conducting build-out analyses and transportation modeling. Tony was also part of the team that received APA's Outstanding Planning, Comprehensive Planning Award (Pittsfield Master Plan).

Anthony Puntin, PE – Lead Project Engineer & QA/QC

Tony Puntin has 22 years of experience in the civil engineering industry with a focus on transportation related design projects, asset management, and project management. He has been Project Manager for numerous design projects where his responsibilities entailed: contract preparation; technical supervision; QA/QC; budget, cost, and schedule control; client relations and satisfaction; and public hearings. His experience also includes projects utilizing alternative delivery methods; as he served as project manager for 3 design-build roadway and bridge projects. Tony is a registered engineer in Maine and will apply his extensive roadway design and capital planning experience to this project.

Conrad Leger, EIT – Asset Management Coordinator; Evaluation & Assessment

Conrad Leger is an Asset Management Coordinator with 8 years of experience in Asset Management, Roadway Design, and Construction Management. For many of our municipal clients, Conrad is BETA's primary point of contact from the initial project kick-off meeting through the support phase of these

projects. His background in transportation design lends well to developing attainable rehabilitation and preservation plans for municipalities. He is heavily involved in the capital planning phase of pavement management projects and is well versed in presenting project findings and capital plans in public forums. Conrad has dedicated much of his time to further enhancing the analysis tools utilized by many of our municipal clients. His daily tasks include customizing field forms to achieve project goals, training of field personnel, and managing field operations involving web-based data collection projects.

Barry Lariviere – GIS Mapping

Barry Lariviere is BETA's Lead GIS Analyst with more than 15 years of experience in the public works, geographic and environmental fields. Barry has been part of the development, organization and the completion of all of BETA's municipal infrastructure projects. His municipal background coupled with his GIS/GPS utility, environmental and field data collection and inspection experience has given him a wealth of practical hands on knowledge. Barry is BETA's Infrastructure Field Manager and has served as such on all pavement and utility mapping projects.

RESUMES

Resumes for team members identified on the organizational chart are appended to this section.

SECTION 3 – RELEVANT EXPERIENCE

PROJECT EXPERIENCE

In the appended project examples, BETA's experience, capabilities and qualifications to provide consultant services for pavement management services.

It should be noted that BETA's Asset Management programs include the development of comprehensive Capital Improvement Plans that are performance-based and apply techniques that both preserve and extend the life of the asset. BETA's experience with GIS and pavement management will prove to be a valuable asset to the City of Sanford.

SECTION 4 – REFERENCES

CLIENT REFERENCES

There is no better benchmark on the quality of services provided by our staff than feedback and testimonials from our clients. BETA is pleased to provide the following list of references for your consultation. Those listed can speak to BETA's professionalism, technical expertise and responsiveness.

Mr. Norman Albert
Commissioner of Public Works
Town of Kittery
200 Rogers Road
Kittery, ME 03904
(207) 739-0333

Mr. David Knowlton
City Engineer
City of Salem
120 Washington Street
Salem, MA 01970
(978) 745-9595

Mr. Thomas Reynolds
Director of Public Works
Town of Marshfield
870 Moraine Street
Marshfield, MA 02050
(781) 834-5575

Mr. Richard Stinson
Director of Public Works
Town of Wakefield
1 Lafayette Street
Wakefield, MA 01880
(781) 246-6300

Mr. Daniel Garlington
Highway Supervisor
Town of Plaistow
37 Old County Road
Plaistow, NH 03865
(603) 382-6771

Mr. Anthony Furnari
Public Works Director
City of Newburyport
16A Perry Way
Newburyport, MA 01950
(978) 465-4464

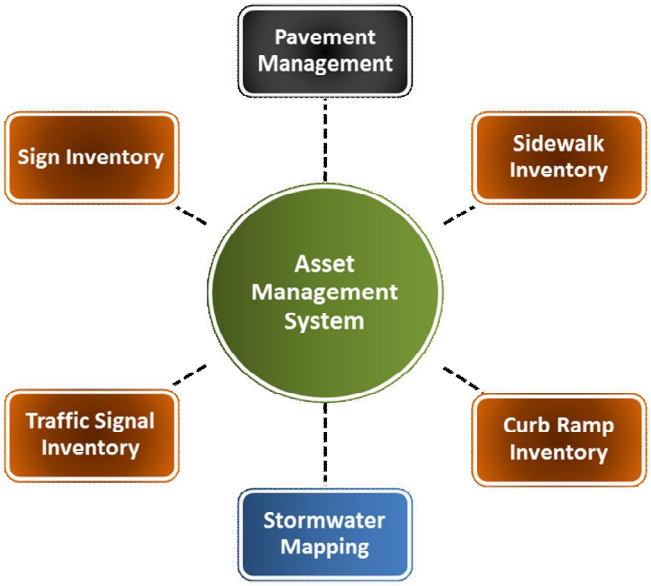
SECTION 5 – SCOPE OF WORK

PROJECT UNDERSTANDING

The City of Sanford, like many municipalities, has finite funds with which to operate, maintain, and improve its varied and interconnected infrastructure systems. BETA believes the key to efficiently utilizing available funding and maximizing the long-term life cycles of the infrastructure is developing and maintaining a comprehensive Asset Management Program (AMP).

Such a system will provide the City with a tool to keep its infrastructure in the best possible condition through a combination of:

(1) Performing timely and consistent routine maintenance
(2) Prudent spending of available funding for necessary capital improvements
(3) Avoiding repetitive and redundant expenditures on separate infrastructure elements which could and should be addressed simultaneously to achieve cost savings



It also allows the City to generate visual representations (GIS maps) of the information contained in the database. This is critical; to not only effectively communicate with stakeholders at all levels, but to facilitate maintenance and upgrades.

We understand that the City of Sanford intends to develop a Pavement Management Program (PMP) which will assist the City with maintaining one of its most valuable assets, its roadway network.

Specifically, BETA sees the project goals consisting of:

- Establishing a baseline existing condition rating for roadways throughout the City
- Review repair strategies and unit costs
- Develop a 3 year pavement rehabilitation plan to support needs related to annual capital costs
- Develop a practical schedule of reconstruction and rehabilitation projects
- Develop a system with the capability to include additional roadway assets

The system we are proposing will provide the City with the capability of using the collected information to create a comprehensive Capital Improvement Plan (CIP).

System Overview

BETA has developed a customizable MS Office-based AMS, combined with the ESRI suite of GIS mapping products. This combination allows the program to be flexible, simple to operate, and expandable with integrated GIS capabilities. The system concentrates on the collection, management, and analysis of infrastructure asset data for the public works market. It has evolved over the years with input from a variety of industry clients (state & municipal public works) to include a host of asset-management data organization and reporting options. The database structure allows for the collection and programming of a variety of detailed asset information, such as asset element data, features, images, maps and reports.

COMPLETE STREETS

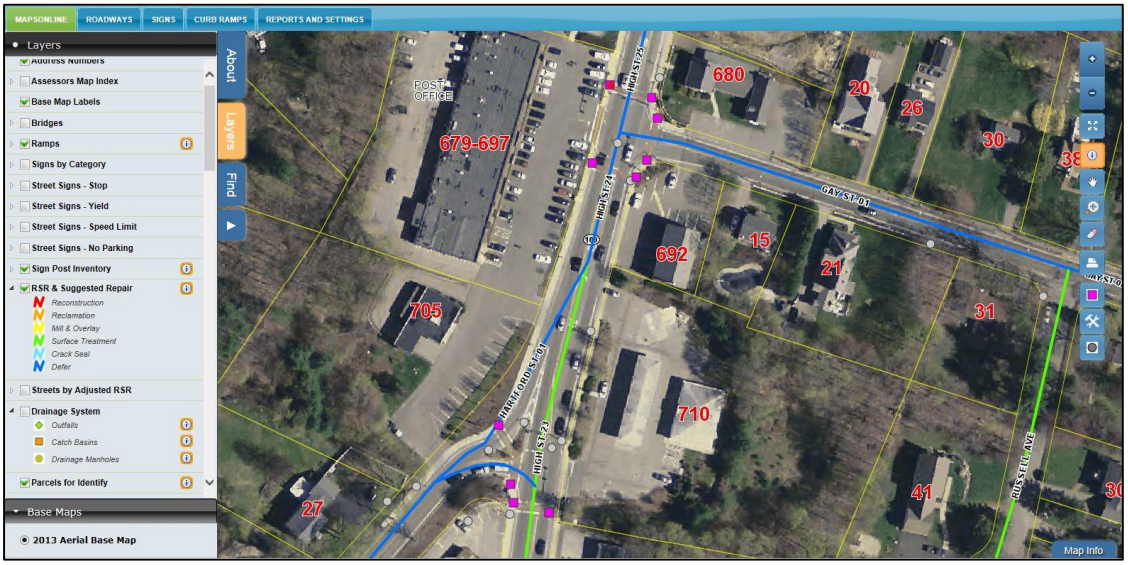
The information shown herein is from the Complete Streets database as created and provided by PeopleGIS Inc. in collaboration with the BETA Group Inc. Questions regarding the software application should be directed to PeopleGIS. Questions regarding the actual data, computational model, field work, recommendations, and results should be directed to BETA.

PEOPLEGIS
500 West Cummings Park
Suite 5950
Woburn, MA 01801
www.peoplegis.com

BETA
315 Norwood Park South
Norwood, MA 02062
www.beta-inc.com

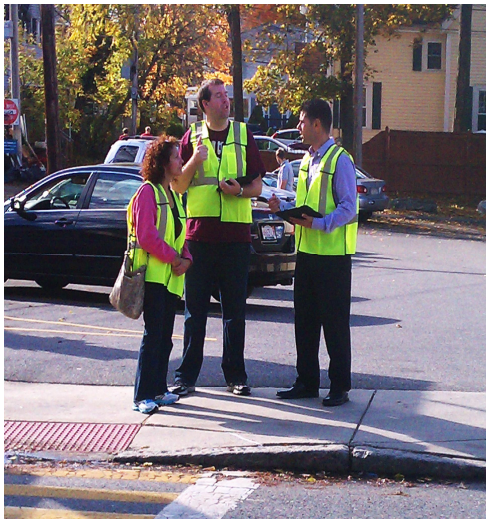
Over the past 2 years, BETA has teamed with PeopleGIS, a web GIS provider, to bring our Asset Management tools to the next level. With the release of our "Complete Streets" module hosted by PeopleGIS, much of the functionality of our desktop platform can be utilized on this web platform. This allows for end users to access the data from anywhere, at any time, with a variety of devices (desktop computers, laptops, tablets and even smartphones).

BETA proposes that the final deliverable for this project include deployment of the "Complete Streets" platform. This will be utilized by the City for maintenance of the pavement management database and also allow the City to consider managing additional assets such as street signs, curb ramps and sidewalks all through this web platform.



Complete Streets Interface

TECHNICAL APPROACH



One of the main benefits of a Pavement Management Program is the improved management of roadway infrastructure. For example, roadway ratings and potential projects can be displayed geographically and presented at public forums. By creating a shared database, one department can benefit from the work of another.

This data then becomes the basis for a historical record of maintained infrastructure and for managing and evaluating existing and projected road conditions. The goal is to save money in both the short and long term by developing a road repair program that maximizes expenditures while meeting the overall road program goals set by community decision makers.

Additional benefits include the following:

- Improved information management and departmental performance (data can be collected once and used many times)
- Enable better asset management and informed decision making
- Improved customer service and enhanced perception of operations (grants, data requests)
- Increased funding opportunities and bond support

The following provides a description of the tasks required for this project.

Task 1: Data Collection & Inspection

Kick-off Meeting

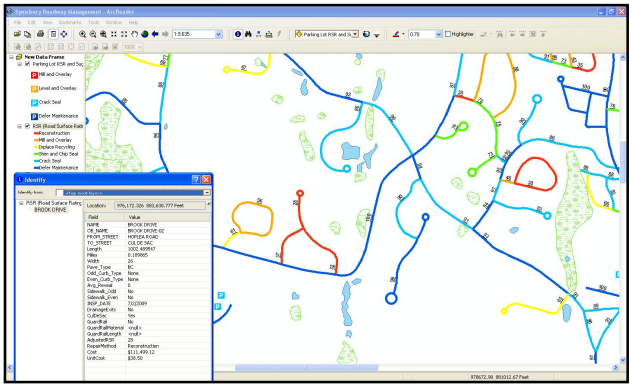
The first task of the project will be to establish specific goals and objectives for the PMP. This effort will include a meeting with City staff to obtain existing data, discuss rating policies, and ensure consensus on the final deliverables and schedule.

This forum will also provide the opportunity for decision makers and staff ultimately responsible for maintaining the database to provide input. It is also envisioned that the kick-off meeting will include a discussion of required database components, software options, system architecture, end-user reports/GIS maps and confirmation of the project schedule.

Database Setup

The primary goal of this task is to develop a complete and accurate road inventory database prior to initiating the road inspection program. BETA will evaluate the most current GIS Centerline File to ensure all roadway segments are accounted for. Establishing a complete network will require coordinating with City staff to isolate roadways that have been constructed since the file was developed.

Roadways that are under construction or have been recently accepted should also be added to complete this database. Additional information such as planned utility improvement projects, traffic volume data and functional classification information should also be obtained as part of this stage of the project.



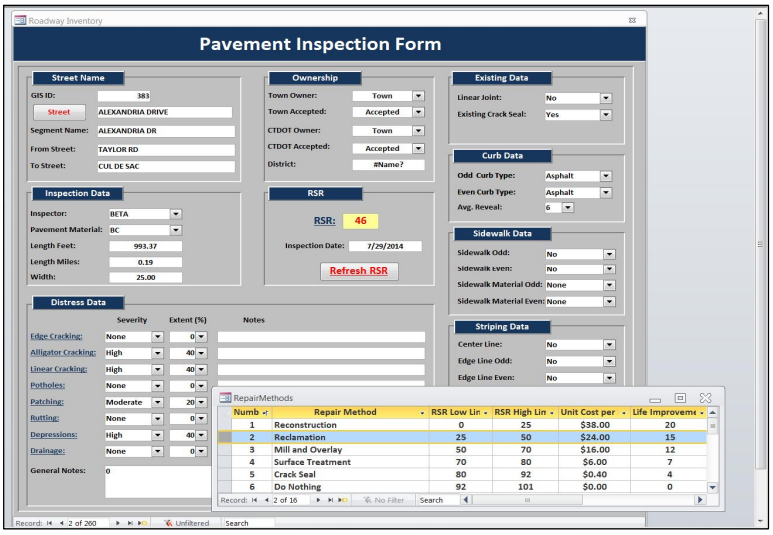
For the purposes of this proposal, BETA assumes that the work to be conducted includes up to 165 miles of City maintained roads in the overall inspection program (per MaineDOT web site).

Maintenance information provided by the City will also be incorporated into the pavement database to establish a history of work completed. This information can eventually be utilized for performance measuring and capital planning.

Field Inspection Program

One of the keys to the success of this project is a well-executed field data collection program. This starts with the staff assigned to carry out this task. BETA's task leaders and field staff that will be assigned to this project have inspected more than 12,000 miles of roadway throughout New England. We believe this is an important statement as the data collected will serve as the basis for decision making in years to come.

Since the initial development process of BETA's MS Access software, a series of field data collection forms have been used on a wide variety of roadway management-related projects. These forms included prompts to ensure that data collection is complete and consistent. The forms have been structured to enter data in sequence and in a format that is consistent for the data requirements for this project.



Roadway Inventory Form

Field Data Collection

Once the network to be inspected has been established, a BETA Inspection Team will visually rate each roadway segment for the extent and severity of observed pavement surface distresses. The pavement management program relies heavily on the pavement data collected as part of this task for reporting and analysis.

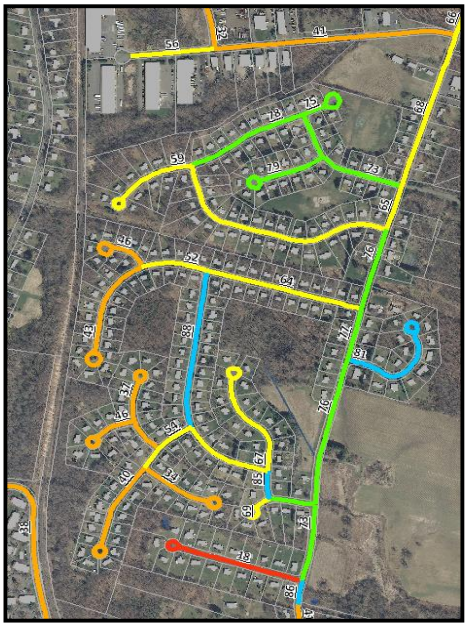
The inspection will focus on pavement attributes that change over time such as the following distresses:

Paved Roads:

- Alligator Cracking
- Linear Cracking (longitudinal/transverse)
- Edge Cracking
- Potholes/Delamination
- Utility Patching
- Rutting
- Drainage

Gravel Roadways (if necessary)

- Inadequate Roadside Drainage
- Corrugation
- Potholes
- Rutting
- Loose Aggregate



In addition to the distress information listed above, a photo log will be established which will include representative photos of each roadway segment. Additional roadway attributes such as street width, line striping, curb type, curb reveal, sidewalk location, and sidewalk material will also be collected as part of the Pavement Condition Assessment. Each of the distresses indicated above will be evaluated as to their extent and severity within a particular road segment, as required for condition index assignment. The pavement information will then be entered into the database during the field inspection program. As mentioned, roadway network inventory data describing roadway lengths, segment start and end points, etc. (items that seldom change) will be pre-populated to reduce key strokes and improve field operation efficiencies. These attributes will be confirmed as part of the inspection process and revised as required.

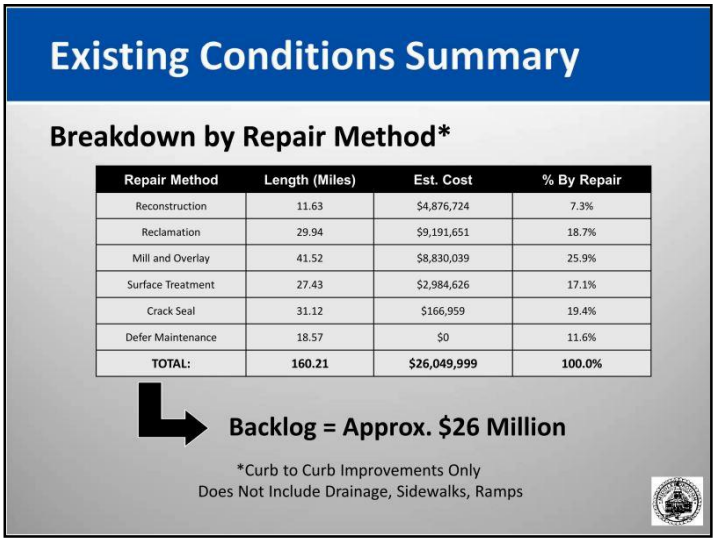
BETA recommends that one (1) field crew be utilized to evaluate the required roadway segments for this project, providing Sanford with not only a consistent network-wide rating, but ensuring accurate budgetary figures. Our field crew consists of asset management specialists and civil engineers trained in the fields of pavement management and capital planning.

Task 2 – Evaluation and Assessment

The pavement management process is conducted with the intent to keep the roadway system in the best possible condition with the most efficient use of available funds. There are distinct advantages to managing the network's pavement condition and significant cost savings that can take place with preventative maintenance or rehabilitation measures rather than waiting until a road is in need of reconstruction.

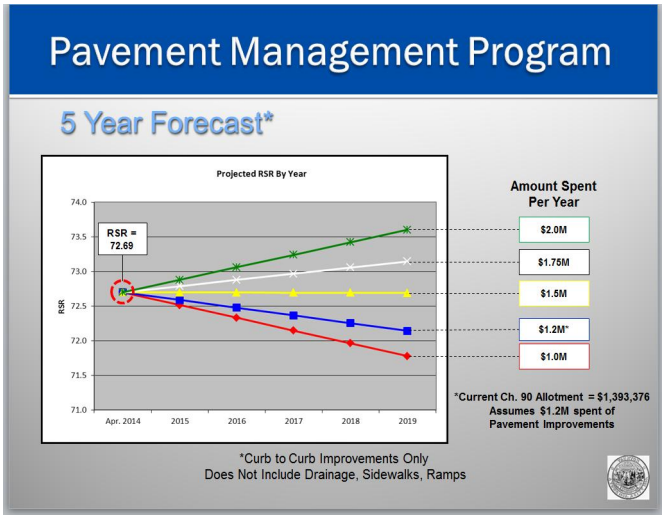
In order to attain this goal, a Road Surface Rating (RSR) will be generated for each paved roadway segment. A RSR is a rating from zero to 100, with 100 representing a pavement in excellent condition and zero representing a road in extremely poor condition. This rating is calculated based on the distress information collected as part of Task 1. Through the RSR, each roadway can be placed into a "repair band" which is designed to, in general, show the type of repair which should be performed on the roadway. An estimated unit cost will be associated with each repair band allowing for a network backlog of work to be calculated. This initial backlog figure will act as the City's benchmark for progress moving forward and will be classified into the following categories:

- Defer Maintenance (no maintenance required)
- Routine Maintenance
- Preventative Maintenance
- Pavement Rehabilitation
- Pavement Reconstruction



The system's graphic and tabular reports can be enhanced by using a GIS map to display the data. Segment condition rating, functional class, treatment type and other database elements can be displayed using map graphics. A GIS map will allow the City to quickly and clearly see system-wide trends and localized areas of need for the purposes of project planning considerations. The program allows the user to easily maintain an accurate and up-to-date segment inventory that includes inspection and maintenance information. Building an inventory is simplified through the use of a customizable interface with tools to add or remove fields, create unique forms and build reports.

BETA will also make recommendations with respect to the development of specific repair strategies and design standards (i.e. crack sealing, micro seal, chip seal, shim & overlay, mill & overlay, hot-in-place recycling, reclamation, full depth reconstruction) and associated unit costs for consideration in the capital planning process. This will facilitate the establishment of a series of repair brands, as mentioned above, to streamline the repair assignment and budgeting process. Sanford will have the ability to refine these repair strategies annually by updating the roadway database as improvements are made. This will prove helpful to track the success rate of each repair type and associated unit costs at the segment level.



As strides are taken to optimize the impact of available budgets, the Pavement Management Program's capital improvement planning capabilities make it easy to analyze alternatives, costs and benefits. Production of "what if" scenarios help to develop a multi-year work plan that optimizes each maintenance dollar, thereby creating strategies for the current year as well as years to come. This functionality puts into practice *preventative maintenance* instead of performing activities on an as needed basis. Forecast models can be generated based on a variety of funding levels to anticipate network needs.

As part of developing the pavement management database, BETA will work with the City to develop a systemized method for establishing priority ratings and repair strategies based on available information. Reports such as our Cost Benefit Value report (or Network Priority Ranking), which are automatically generated through our system, will be used as a tool to help in developing short and long term Capital Improvement Plans.

The system was designed to provide municipalities with an easy-to-use Capital Improvement Planning (CIP), analysis, and reporting tool. The program takes advantage of the ESRI GeoDatabase and Access relationships and can be easily integrated with other software products. Considering the system has an open architecture, the data can be exported to other software systems if desired in the future.

Capital Improvement Planning

BETA has a number of municipal clients where we serve as an extension of the DPW and Engineering Departments. In this capacity, we routinely scope future infrastructure projects and assist the Public Works and Engineering Departments in preparing budgets for these assignments that can be used in their Capital Improvements Plans (CIP's).

As part of the CIP process, BETA will:

- Evaluate the City's current roadway maintenance budget as it relates to the computed network backlog and associated costs
- Conduct a life-cycle cost analysis of different repair strategies that will identify the cost benefit value (CBV) of different approaches
- Develop a 3-Year pavement repair work plan based on selected optimal repair strategy and priority analysis inputs
- Develop short and long-range forecasting models based on a variety of funding scenarios and maintenance alternatives

	Miles	Initial Cost	Police Estimate	DYCL Striping	Fog Line Striping	CIP Estimate
Project Year: FY 2011						
Funding Source: Local Funds						
Crack Seal	19.63	$105,694.00	$0.00	$0.00	$0.00	$110,975.00
Heat Scarification	4.58	$295,539.00	$0.00	$8,999.00	$0.00	$318,954.00
Mill and Overlay	10.29	$1,017,445.00	$0.00	$5,326.00	$0.00	$1,073,649.00
Shim and Chip Seal	1.30	$60,972.00	$0.00	$0.00	$0.00	$64,021.00
FY 2011 Total:	35.80	$1,479,650.00	$0.00	$14,325.00	$0.00	$1,567,599.00
Project Year: FY 2012						
Funding Source: Local Funds						
Crack Seal	14.23	$75,390.00	$0.00	$0.00	$0.00	$79,158.00
Heat Scarification	10.18	$693,763.00	$0.00	$841.00	$0.00	$729,296.00
Mill and Overlay	7.56	$722,167.00	$0.00	$0.00	$0.00	$758,276.00
FY 2012 Total:	31.97	$1,491,320.00	$0.00	$841.00	$0.00	$1,566,730.00
Project Year: FY 2013						
Funding Source: Local Funds						
Crack Seal	29.79	$158,407.00	$0.00	$0.00	$0.00	$166,333.00
Heat Scarification	17.37	$1,139,519.00	$0.00	$2,020.00	$0.00	$1,198,514.00
Mill and Overlay	1.82	$187,129.00	$0.00	$0.00	$0.00	$195,976.00
FY 2013 Total:	48.98	$1,485,055.00	$0.00	$2,020.00	$0.00	$1,560,823.00
3-Year Total:	116.75	$4,456,025.00	$0.00	$17,186.00	$0.00	$4,695,152.00

Sample CIP Summary

Task 3 – Training Program and System Support

BETA will provide training to the City upon completion of field data collection and installation of the final database. Two on-site training sessions will be conducted – each session running for up to four hours. Based on past experience, the training element of the project is critical to the future success of the program.

BETA takes pride in supporting the systems we help communities develop. We believe that the AMS will prove to be a valuable asset for many years to come by allowing the City to continue to evaluate their maintenance program and think proactively rather than reactively. Following the completion of the project, updating the database as maintenance activities are completed is vital to the success of the system moving forward. To assist the City in this task, BETA will assign Conrad Leger to the City for system support for a period of twelve months. He will be available via email, phone or in person meeting in order to answer questions and provide technical assistance. BETA's team makes it a point to conduct periodic site visits and conduct follow up training to ensure the system is being utilized to its maximum potential.

BETA will provide this system support for a period of twelve months at no cost following the substantial completion of the project. After the initial 12 months, BETA will provide system support as needed based on a time and materials basis.

QA/QC PROCESS

BETA will employ a quality assurance program that will include both in- and post-production controls. This effort will be led by our Project Engineer, Anthony Puntin, who has significant roadway design experience. He, along with his QA/QC team, will have the following responsibilities:

- Monitor and review the progress of the project tasks with respect to the scope outlined above to evaluate methodology and error trapping tests during production reducing the number of errors found during QA/QC in later stages of the project.
- Develop and perform quality tests for consistency and completeness on all digital and hard copy deliverables before these products are forwarded to the City for their own testing and acceptance.
- Ensure that digital data sets can be successfully disseminated to the project team upon completion.

BETA will implement a series of QA/QC operations to insure that all final deliverable products are complete.

PROJECT DELIVERABLES

While our team understands that the data collected as part of the pavement management program will serve for the basis of decisions for years to come, the team also knows that the final deliverable is just as important for the continued success of the program. Below is an outline of items the City can expect to receive at the completion of this project:

- "Complete Streets" Suite (12 Month subscription)
  - It is assumed that BETA will deliver its "Complete Streets" Suite, a web based GIS Platform hosted by PeopleGIS. This platform will allow City staff to maintain the pavement management database from anywhere at any time with login credentials. This platform has been developed to allow the City to not only manage their roadway network, but to also collect data for additional roadway assets such as street signs, curb ramps and sidewalks. The project scope outlined assumes the first 12 months of service for this platform and associated fees. Following this 12 month period, the City will have the option to continue this service or move to BETA's MS Access based platform.

- Existing Condition Reports
  - Through our experience working with municipalities such as Sanford, BETA has developed a library of existing conditions reports which will allow the City to review the data in a variety of ways. These reports have been designed to quickly and effectively portray existing conditions, roadway attribute data and prioritization of projects.

- Roadway Forecast Model
  - BETA's roadway forecast model will allow the City to see how a number of funding scenarios and treatment types would affect the overall network condition over a 5 or 10 year period.

- 3 Year Capital Improvement Plan
  - BETA will work the City to develop a 3 year capital improvement plan. This plan will include review of the City's current pavement repair strategies and introduction of additional alternatives that the City may not currently utilize. Our team of engineers will work with the City to develop a plan that best works for them.

- Public Presentation
  - BETA will attend one public meeting to present the findings of this project.

- System Support (12 Months)
  - Once the project is delivered to the City, the BETA team does not believe that this is the final step in the process. In order to ensure continued success of the project, BETA will offer technical support for up to 12 months at no additional cost to the City. This typically includes phone conversations and site visits on an as needed basis.

Anthony T. Lionetta, PE
Senior Vice President

Primary Discipline
Transportation

Years of Experience
- BETA: Since 2005
- Total: Since 1973

Education
- M.S., Transportation Engineering, Northeastern University (1977)
- B.S., Civil Engineering, Northeastern University (1973)

Registrations
- Professional Engineer – MA #30360, VT #7681, NH #6241

Affiliations
- American Society of Civil Engineers
- Institute of Transportation Engineers
- ACEC/MA, Transportation Agency Liaison Committee
- American Public Works Association, Awards Committee
- Massachusetts Highway Association
- Arlington Capital Planning Committee
- Arlington Play Field Committee
- Arlington School Building Committees
- Massachusetts Avenue Steering Committee

Professional Overview
Mr. Lionetta is a Senior Vice President of BETA and has over four decades of technical, project and program management experience on transportation and civil engineering services to municipalities, federal and state agencies, in New England.

Mr. Lionetta's experience includes a full spectrum of client services ranging from the identification of funding sources, feasibility studies, conceptual design, planning, constraint identification and impact assessment, design development, construction documents and services during construction. Projects have included the study, planning and / or design of traffic devices, intersections, roadways, bridges, building sites, parks, intermodal facilities, rest areas, downtown improvements, as well as utility infrastructure. He also has led public involvement efforts and agency coordination.

In addition to his project based experience, Mr. Lionetta has extensive experience with the management of staff and overall group operations. His responsibilities include oversight of staff resources of the Norwood office, client satisfaction and the monitoring of quality control measures.

He has been actively involved in his Town government serving on its Capital Planning Committee for over 22 years. He has also served on many committees, including Play Field Management, School Rebuild and special projects.

Mr. Lionetta has served as principal-in-charge on a wide array of projects. Some of these projects include:

- Charles River Basin Synchronization Program – MassDOT
- Bowker Overpass Ramp Rehabilitation – MA DCR
- Traffic Signal Inventory / Upgrade Program – Barnstable, MA
- Route 9/ 27 Interchange Upgrade – Natick, MA
- Comprehensive Downtown Planning and Design – Framingham, MA
- Sagamore Circle Upgrade – MassDOT
- Providence Highway Bridge – MassDOT
- Route 44 New Alignment Highway – MassDOT
- On-Call Scoping Assignments – VTrans
- Height of Land Overlook/Route 17 – MaineDOT
- Traffic Calming Services – Cambridge, MA
- I-93 Visitor Center – Salem, NH - NHDOT
- On-Call Assignments – University of Connecticut
- Numerous Roadway Improvement Projects – Cities & Towns
- Numerous Traffic Improvement Projects – Cities & Towns
- Numerous On Call Services – State Agencies and Municipalities
- Numerous Downtown/Village Enhancement Projects

Anthony J. Garro

GIS Project Manager/Vice President

Professional Overview

Mr. Garro is a highly skilled technical project manager that has been involved in the implementation and management of a wide variety of GIS, Asset Management and Master Planning projects at both the municipal and state agency level. Mr. Garro has worked in the GIS and planning fields for more than 20 years and has been involved with numerous projects related to transportation and wastewater collection. He has integrated his extensive knowledge of GIS into his planning expertise thereby creating synergetic and dynamic end products for clients that exceed their expectations. Mr. Garro is BETA's project leader for municipal and state agencies on GIS, transportation and master planning projects and is an appointed member of the RIGIS Executive Board.

As Project Manager at BETA, Mr. Garro has been involved in a wide range of projects where he has gained experience over a wide range of responsibilities including:

- Asset Management Implementation
- Pavement Management Systems
- Sign Inventory & MUTCD Compliance Programs
- GIS Utility Mapping (Sewer, Drain, Water)
- Transportation, Environmental and GIS Assessments
- Comprehensive Community Plans
- Safety Management & Crash Reporting Systems
- University Master Plans
- GIS Software (ESRI Suite)
- Traffic Modeling (SYNCHRO)
- Asset Performance Measuring & Preservation (Map 21)

GIS/Asset Management

Mr. Garro has served as Project Manager on Pavement Management projects exceeding 10,000 miles of road in communities throughout New England. He has inspected roadways, developed capital improvement plans (CIP) and integrated data with GIS software. His other responsibilities have included:

- Performed on-site installation and set-up of new pavement management systems for more than 50 communities throughout New England. Implemented systems utilizing Microsoft Access, ArcView, MicroPaver, RSMS and PAVEMENTview (Cartgraph)
- Responsible for the development of a GIS-based sign inventory and MUTCD Compliance Programs for communities in Massachusetts, Rhode Island and most recently for the Connecticut Department of Transportation (ConnDOT). Projects involved established an inventory of all regulatory and warning signs and evaluating for compliance with the new MUTCD requirements. Developed a three-year plan and replacement program
- Project Manager under Ledge Light Technologies, Inc. to assist with the development of a GIS-based Asset Management System for the CNMI DPW. Project involved conducting a GPS training program for members of the Department of Public Works in Saipan. Built a custom ArcReader interface consisting of DPW infrastructure assets including regulatory and warning signs

Primary Discipline

GIS/Asset Management

Years of Experience

- BETA: Since 1989
- Total: Since 1989

Education

- B.S., Urban and Regional Planning; Westfield State College (1989)
- GIS Certification, Boshe Institute/Northeastern Univ. (2003)
- Various ESRI Training Sessions
- RIDOT Statistics Seminar - Providence, Rhode Islan d
- U.S. Department of Transportation, Federal Highway Administration
- Microsoft Access Training - Boston University

Affiliations

- American Public Works Association (APWA)
- NEAPWA (Rhode Island Chapter Director 2010-2012)
- NEARC
- RIGIS Executive Board Member
- American Planners Association (APA)

Anthony Puntin, PE
Associate

Primary Discipline

Transportation Engineering

Years of Experience

- BETA: Since 2014
- Total: Since 1992

Education

- BS, Civil Engineering, University of Massachusetts – Amherst (1992)

Registrations

- Professional Engineering (NH, MA, ME and VT)

Affiliations

- Boston Society of Civil Engineers
- American Society of Civil Engineers
- National Society of Professional Engineers
- Civil and Environmental Engineering Advisory Council (UMass Amherst)

Professional Overview

Mr. Puntin has 22 years of experience in the civil engineering industry with a focus on transportation related design projects, asset management, and project management. He has been Project Manager for numerous design projects where his responsibilities entailed: contract preparation; technical supervision; QA/QC; budget, cost, and schedule control; client relations and satisfaction; and public hearings. His experience also includes projects utilizing alternative delivery methods; as he served as project manager for 3 design-build roadway and bridge projects.

As an Associate at BETA, Mr. Puntin is responsible for the management and oversight of the technical and operational activities in BETA's northern New England office.

I-93 Salem-Manchester Corridor Widening, Salem/Manchester, NH
Project Manager for the final design of New Hampshire Department of Transportation's Southern Segment of this $300 million reconstruction which includes widening of Interstate I-93 for approximately eight miles and the replacement of 19 bridges, from the Massachusetts border northerly through the towns of Salem and Windham. .

Piscataquis River Bridge Design/Build Replacement Project, Howland, ME
Project Manager on behalf of Cianbro Corporation for the final design and construction phases for this $11M project that carries US Route 116 over the Piscataquis River. The project design included a new three-span 582' long bridge, retaining walls, 1900' of roadway approach work, water/sewer relocation, and removal of the existing three-span truss bridge.

Route 125/136 Design-Build, Freeport, ME
Project Manager on behalf of Shaw Brothers Construction for the final design of the Maine Department of Transportation $6.3 million reconstruction of 3 miles for Route 136/125. The project included the design and reconstruction of a major urban collector and the rehabilitation of the Collins Mill Bridge in the Town of Freeport, ME. Minor vertical and horizontal corrections were undertaken and significant drainage improvements were performed.

Roadway Design Review and Construction Inspection Services, Various Communities, NH
Project Manager for "on-call" contracts with the Hillsborough, Loudon, Milford, and Pittsfield. LBG was retained by these communities to provide design review services for the numerous roadway projects submitted to the Town. The reviews are conducted to evaluate the conformance of the design to established Town regulations, AASHTO, guidelines, NHDOT standards, and good engineering practice. A detailed evaluation is presented to the Towns for their review and is the basis for design revision.

Route 7/20 Reconstruction, Lenox and Pittsfield, MA
Design Engineer for MassHighway on this $10 Million, 2.75 mile reconstruction of a rural arterial. The existing two-lane road which carried 20,000 vehicles per day was designed to be upgraded to two lanes per direction. The project included the addition of 3 signals, major profile revisions and the addition of turning lanes. The substandard conditions were upgraded to meet current MassHighway and AASHTO requirements. Limited ROW, wetland constraints and historical houses were major factors in the design. Also, due to shallow grades (0.5%), edge of pavement profiles were developed in all areas of superelevation. Responsibilities also included extensive quantity takeoffs and construction cost estimates for this project.

Conrad Leger
Asset Management Coordinator

Professional Overview

Mr. Leger is an Asset Management Coordinator with 8 years of experience in Asset Management, Civil Engineering, and Construction Management. Mr. Leger's experience includes:

- Project Coordinator for Asset Management Projects
- Oversees Field Inspection Crews for Data Collection
- Develops protocols and provides training for Field Inspection Teams
- Conducts Public Presentations for focusing on inspection findings and Capital Improvement Plans
- Responsible for QA/QC of project deliverables

Mr. Leger has been involved in a number of Asset Management and Highway Design Projects, to which he has gained experience including:

Pavement Management

- Bourne, MA
- Easton, MA
- Lynn, MA
- Randolph, MA
- Plymouth, MA
- Marshfield, MA
- Andover, MA
- Salem, MA
- Gloucester, MA
- Wakefield, MA
- Stoughton, MA
- Middleborough, MA
- Westwood, MA
- East Bridgewater, MA
- Hartford, CT
- Naugatuck, CT
- Madison, CT
- Milford, CT
- West Haven, CT
- Branford, CT
- Kittery, ME

MUTCD Sign Inventory Programs

- Bourne, MA
- Natick, MA
- Middleborough, MA
- Upton, MA
- Tewksbury, MA
- Hartford, CT

Stormwater Mapping Programs

- Lakeville, MA
- Foxborough, MA

Sidewalk and Wheelchair Ramp Inventory Programs

- Natick, MA
- Hartford, CT
- Salem, MA
- Ipswich, MA
- Maynard, MA
- Quincy, MA

Inventory of City Assets – Hartford, CT

- Oversaw large scale asset management project and remotely monitored field data collection using web GIS tools. Project scope called for pavement, signs, sidewalks, ramps, median island, and guardrail to be located and inspected over 220 centerline miles of City accepted roadway. Tasks included management of incoming data, correspondence with client, oversight of sub-consultant and field staff, and constructing a summary of findings.

Safe Steps Walkability Program – Natick, MA

- Trained and Oversaw volunteer inspection teams tasked with inventorying Town sidewalks. Volunteers were asked to identify new sidewalk, impediments, trip hazards, ramp and crosswalk locations. Constructed a summary of findings and presented conclusions to Town staff.

Primary Discipline

Asset Management Coordinator

Years of Experience

- BETA: Since 2012
- Total: Since 2006

Education

- B.S., Civil Engineering Technology Wentworth Institute of Technology (2006)

Affiliations

- American Public Works Association (APWA)

Registrations

- EIT – Nevada 0T5980 (2009)
- FHWA-NHI-130055 Safety Inspection of In-Service Bridges (2011)

Computer Skills

- AutoCAD
- Microstation
- Inroads
- AutoTURN 6
- ArcGIS
- PeopleGIS
- Microsoft Office

Barry Lariviere
Senior GIS Analyst

Professional Overview

Mr. Lariviere is a Sr. GIS Project Analyst who has 15 years of experience in the public works, geographic and environmental fields. Mr. Lariviere has been part of the development, organization and the completion of many municipal infrastructure projects. His municipal background coupled with his GIS/GPS, environmental and field experience has given him a wealth of practical hands on knowledge. Mr. Lariviere also has extensive knowledge of MassGIS, RIGIS and CTGIS data layers and attributable information. Mr. Lariviere has been involved in numerous, GIS, GPS, engineering and planning projects where he has gained experience over a wide range of responsibilities including:

- GIS Utility Network Development (Sewer, Drain, Water)
- Pavement Management
- GIS Software (ArcReader,Arcview, ArcGIS, AutoCAD)
- GeoDatabase Design and Management
- Collection, Organization and Mapping of GIS Data
- GPS Software and Equipment (Path Finder Office and Pocket, GeoXH, GeoXT)
- GPS Data Dictionary Design and Data Conversion
- Field Inspections and Sampling (Phase II Stormwater)
- GIS and GPS Training

Geographic Information Systems

Pavement Management Programs

- Inspected over 5,000 miles of roads in over 90 communities throughout New England
- Manage Field Inspection Crews and Data Collection
- Developed Database Design and Data Integration into various software products
- Create Inventory and Inspection, Budget (CIP) Reports and Thematic Mapping
- Provide Database and Field Inspection Training
- End products included ArcReader and ArcGIS projects, Roadway GeoDatabase and final mapping

Storm Water Infrastructure Mapping

- Bellingham, MA
- Douglas, MA
- Fairhaven, MA
- Gloucester, MA
- Needham, MA
- Natick, MA
- North Attleborough, MA
- Taunton, MA
- Uxbridge, MA
- Weymouth, MA
- Bristol, RI
- Bloomfield, CT
- Newington, CT
- Storm Water Network Automation
- Collected Storm Water Infrastructure via GPS (Trimble GeoXT)
- Designed job specific Data Dictionary
- GPS Data Conversion and Management
- Automated storm water system from GPS data and available record plans
- Field Inspections, Sampling and Oversight
- End products included GIS Storm Water GeoDatabase and final mapping

Primary Discipline

GIS/Asset Management

Years of Experience

- BETA: Since 2003
- Total: Since 2000

Education

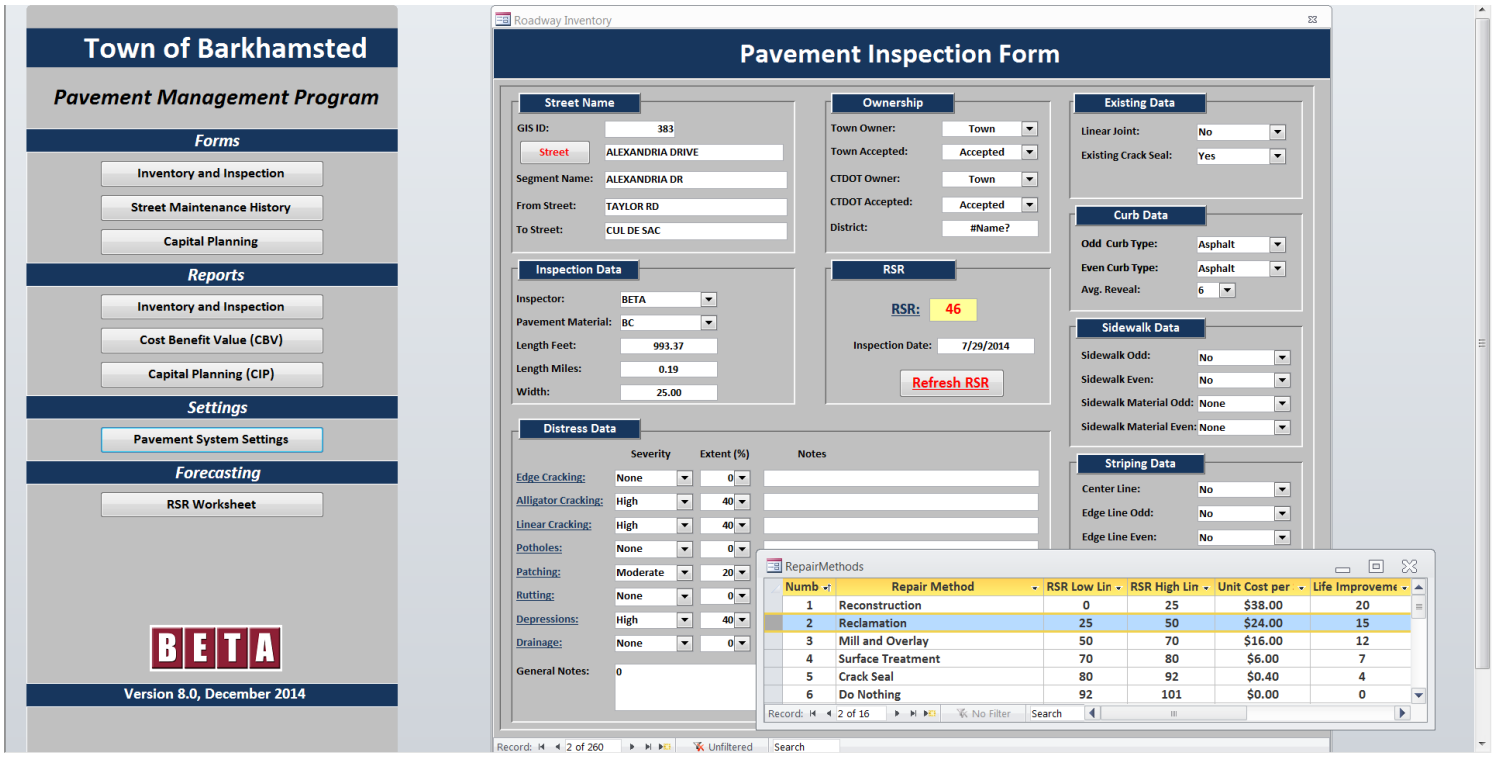
- BS, Geography, Bridgewater State College (2000)
  Gamma Theta Upsilon

Affiliations

- Member/Vice Chair, Bellingham Conservation Commission (2000 – Present)
- Board Member, Metacomet Land Trust (2002 – Present)
- Member, Water Environment Federation

Pavement Management Program Services

Various Communities, New England



REFERENCES

Mr. Roger A. Hill, PE, PLS
Director of Public Works
Town of Foxborough
40 South Street
Foxborough, MA 02035
(508) 543-1209

Mr. Art Simonian
Director of Public Works
Town of Berlin
240 Kensington Road
Berlin, CT 06037
(860) 828-7014

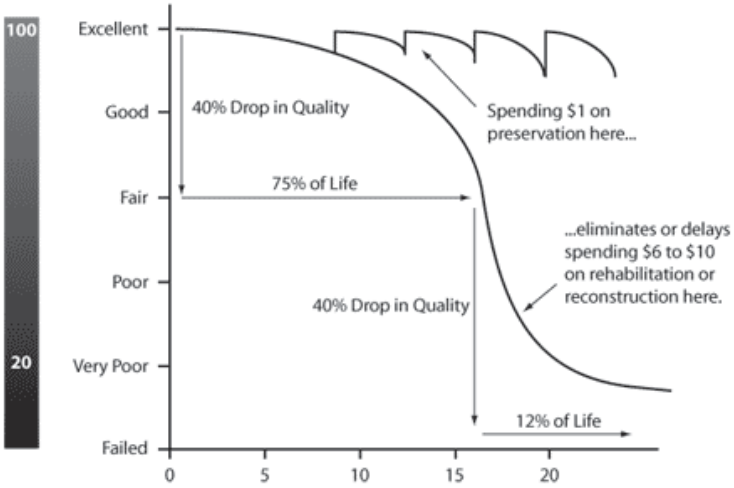
Mr. Bruce Thibodeau
Director of Public Works
Town of North Andover
384 Osgood Street
North Andover, MA 01845
(978) 685-0950

Mr. Brutus A. Cantoreggi
Director of Public Works
Town of Franklin
257 Fisher Street
Franklin, MA 02038
(508) 520-4910

KEY PERSONNEL

Anthony Garro
Conrad Leger, EIT
Barry Lariviere

BETA has developed more than 100 Pavement Management Programs for municipalities throughout New England (references provided). The Pavement Management Program was developed utilizing BETA's customized Microsoft Access application. This system provides each municipality with the opportunity to synthesize pavement condition data with other descriptive information on a host of related roadway elements such as drainage, traffic signs, sidewalks and to assist with capital improvement planning (CIP). The following provides a brief description of the program's functionality.



All functions of the pavement management program are run from a main switchboard dialog box within Microsoft Access. From this switchboard, users can access specialized forms for entering pavement inventory data, modify the road surface rating (RSR) calculation parameters, and enter possible repair methods and budgeting information. Reports can be sorted by a variety of parameters, and can be customized to the needs of each individual user.

The final deliverable for these projects, in addition to the pavement data elements, will be a report that summarizes the system findings of the pavement. This includes presenting information related to software capabilities, data collection methodologies, and existing pavement and programming/budgeting options.

Pavement Management Program
Kittery, Maine

REFERENCE
Mr. Norman Albert
Commissioner of Public Works
Town of Kittery
200 Rogers Road
Kittery, ME 03904
207-739-0333

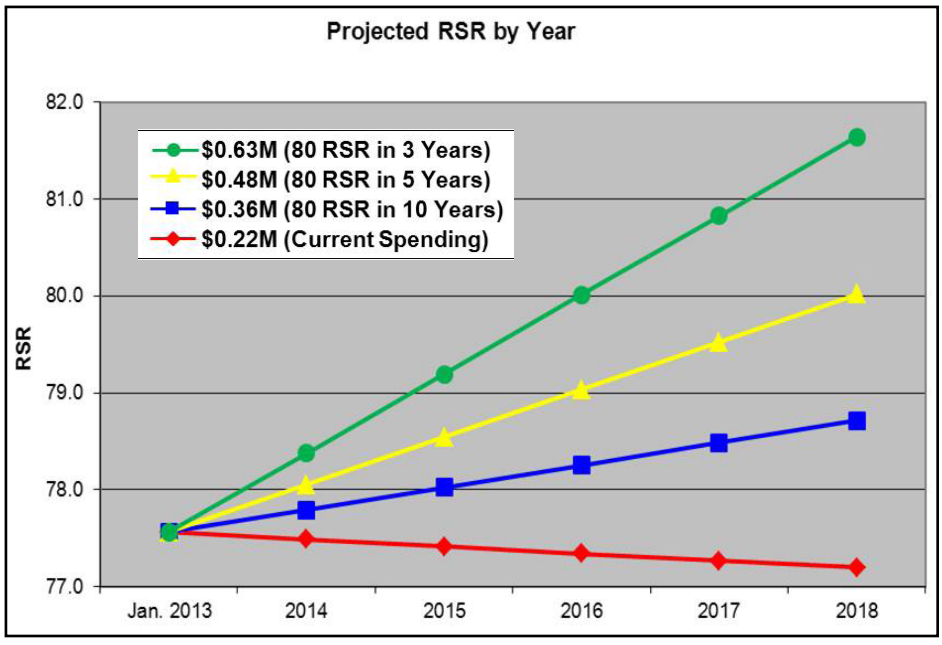
PROJECT STATUS
Ongoing

KEY PERSONNEL
Anthony Garro
Conrad Leger
Barry Lariviere
Peter Dadarria

The Town of Kittery retained BETA in 2014 to develop a Pavement Management Program for its 65-mile roadway network. The Pavement Management Program was developed utilizing BETA's customized Microsoft Access application.

The primary goal of the project was to accurately predict roadway deterioration through the implementation of an automated pavement management system. This system provides Kittery with the opportunity to synthesize pavement inventory and condition data with other descriptive information on a host of related roadway elements. The development of the Pavement Management Program supported the passing of a Town Road Bond.

In addition to developing the Pavement Management Program, BETA also assessed the condition of sidewalks and inventoried all guardrails on town maintained streets. The final deliverable included a series of MS-Access based reports and GIS maps representing each asset as well as a 3-Year Capital Improvement Plan regarding the Pavement Management Program.



Asset Management Pilot Project
Manchester, NH

REFERENCE
Mr. Kevin Sheppard
Public Works Director
City of Manchester, NH
228 Maple Street
Manchester, NH 03103
(603) 624-6444

PROJECT STATUS
Completed 2013

KEY PERSONNEL
Anthony J. Garro
Barry Lariviere
Peter Dadarria

World Tech: Richard Benevento

PROJECT OVERVIEW

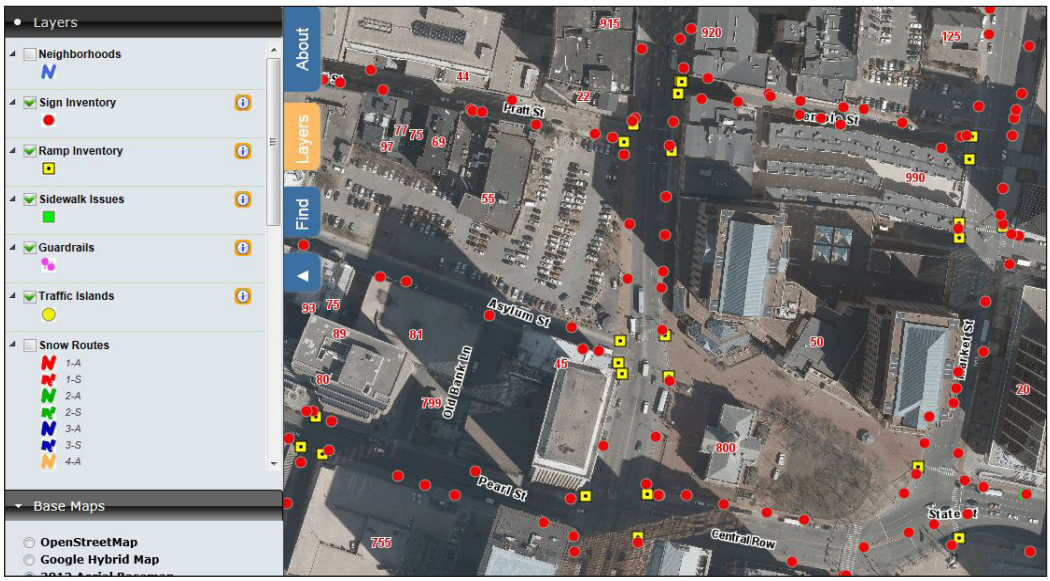
The City of Manchester hired Worldtech Engineering & BETA Group to develop a GIS-based Asset Management Pilot Project for roadways and traffic signs. The primary goal of the project was to provide data that can be used immediately for decision making and to provide the framework for implementation on a city-wide basis.

The Pavement Management component involved conducting a condition assessment of 38 miles of arterial and collector roadways. Ultimately, a Road Surface Rating (0-100 value) was calculated for each roadway segment allowing for improvement methods and associated estimates to be developed.

The Sign inventory consisted of an inventory of traffic signs along the same roadways. Each sign that was inventoried was inspected for various attributes (Sign Type, Sign Material, Height, Retroreflectivity etc.), which ultimately determined compliance with MUTCD requirements. ArcGIS was utilized in the field on a tablet laptop and gave BETA the ability to inventory and accurately position each sign inspected.

The Asset Management Program was developed utilizing ESRI's ArcView coupled with BETA's custom MS Access application. The final deliverable for this project was a series of graphics, GIS maps and reports summarizing the findings of the inventory and inspection process.

Asset Management - Signs, Wheelchair Ramps, Sidewalks & Pavement: Hartford, CT



REFERENCE
Mr. Aaron Nash
GIS Project Leader
260 Consitution Plaza
Hartford, CT 06103
(860) 757-9495

PROJECT STATUS
Completed Fall 2014

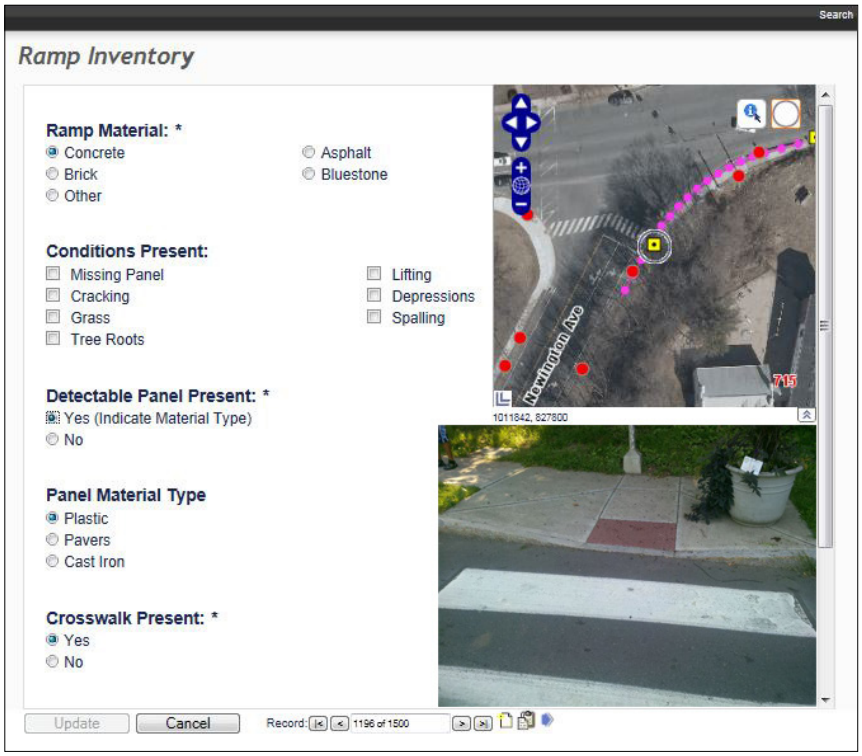
KEY PERSONNEL
Anthony J. Garro
Conrad Leger, EIT
Barry Lariviere

PROJECT OVERVIEW

The City of Hartford retained the services of BETA Group, Inc. to develop a comprehensive Asset Management System. Utilizing a Web GIS application, developed in conjunction with PeopleGIS, BETA collected existing condition information for assets such as regulatory and warning signs, street name signs, wheelchair ramps, sidewalk distresses, median islands, and guide rails. The use of the web enabled GIS program allowed BETA to track progress in real-time while working simultaneously to quality control incoming data as well as perform in-office coding. The project also included updating the Pavement Management Program with a 2013 baseline, and Backlog Summary for the City's 220 roadway miles.

The City of Hartford requested that a portion of the field data collection be performed using interns who were also City residents. BETA trained and managed the interns while working side by side to collect the data both efficiently and accurately. A comprehensive training program was conducted with the interns as both a benefit to the project and a learning experience to the high school students.

In collaboration with the City, BETA was able to develop custom field inspection forms for each of the assets to be collected. The project resulted in the location and documentation of more than 13,000 signs, 3,500 curb ramps and 19,000 sidewalk maintenance locations.



Asset Management Program
Barnstable, MA

REFERENCE
Mr. Roger Parsons
Town Engineer
382 Falmouth Road
Hyannis, MA 02601
(508) 790-6400

PROJECT SCHEDULE
Ongoing

KEY PERSONNEL
Anthony J. Garro
Barry Lariviere
Conrad Leger, EIT

PROJECT OVERVIEW

The Town of Barnstable recently requested the services of BETA to assist the Town in developing a user-friendly Asset Management System which was capable of incorporating the Town's pavement management, sign management, wheelchair ramps, stormwater, sidewalks, traffic signals, street lights and guard rails. The Town's main objective was to create a Capital Improvement Plan which was based on all of the assets collected but also have the capability to separate out each asset into its own 5 year CIP. The use of a Web GIS program allowed BETA to seamlessly link photos to point data and instantly access this information from any location.

Streets were segmented on an intersection to intersection basis. Each segment of roadway was visually inspected and a photograph was captured. Wheelchair ramps were inventoried and located using the Web GIS program, hosted by PeopleGIS which allowed for real time attribution and progress tracking. Ramps were inspected for general condition, ramp material, whether a tactile warning panel was present, and a smart level reading was taken at each location. A photograph of every ramp was also captured, given a unique ID, and linked to each GIS location. Signs, catch basins, traffic signals, and street lights were also inspected and recorded as a point feature with applicable attribution.

ENGINEERING SUCCESS **TOGETHER**

July 7, 2015

Mr. Matthew Hill
Public Works Director
156 School Street
Sanford, ME 04073

Re: Pavement Management Program

Dear Mr. Hill:

BETA Group Inc. (BETA) is pleased to present our Fee Proposal as follows:

1: Pavement Update and CIP Development	$ 35,000.00
2: Evaluation and Assessment	$ 13,000.00
3: Training and Deployment	$ 10,500.00
Lump Sum Total:	$ 58,500.00

As stated in the attached scope of work, the lump sum fee includes the first 12 months user fees of the web based GIS platform (Complete Streets) and 12 months of system support following the completion of the project, at no additional cost to the City.

Our objective is to partner with the City and apply our skills and experience to the development of a City wide Pavement Management Program. We look forward to hearing your response.

Very truly yours,
BETA GROUP, INC.

Anthony Lionetta, PE
Senior Vice President, Principal in Charge

BETA GROUP, INC.
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P: 603.321.3207 | W: www.BETA-Inc.com