

Sebago Technics, Inc.

Transportation & Traffic

Planning
Design
Operations



Engineers • Surveyors • Landscape Architects • Environmental Specialists

About Us



What Sets Us Apart?

Approach

Our approach to project delivery provides a single point of contact, responsive scheduling and cost efficiency.

Reputation

Sebago Technics is recognized as a firm that excels in the permitting of projects through experienced knowledge and excellent reputation.

Ownership

Employee ownership results in improved responsiveness, commitment and accountability throughout the organization.

Quality

Our designs, graphics and plans are subject to rigorous quality standards and review which results in clear, effective documents.

Innovation

Sebago Technics' design professionals employ the latest engineering and technological methods to develop practical, cost-effective solutions.

Results

Sebago Technics' resources and experience combined with our project team approach provide the capacity to meet client needs and deliver results.

Founded in 1981, Sebago Technics is a multi-service consulting firm of more than fifty design professionals and technical staff practicing throughout New England. We specialize in land surveying; surface transportation planning, design, and operations; site and civil engineering; landscape architecture; natural resource identification and permitting; geotechnical engineering; and construction administration. We have committed ourselves to being accessible, communicative and proactive in assisting our clients with their planning, permitting and design needs in any capacity.

At a Glance:

Year Established: 1981
(Employee Owned Since 1998)

Licensed & Certified Professionals

Professional Engineers*
Certified Geologist
Certified Wetland Scientist
DOT Project Administrators
LEED Accredited Professionals
Professional Land Surveyors

Registered Landscape Architects
Licensed Soil Scientist
Subsurface Disposal Systems Designers
Erosion Control, Sedimentation &
Stormwater Inspectors

*Registered in all New England States,
New York & New Jersey

Approach & Services



Achieving the proper balance between mobility, pedestrian and vehicular safety, and preservation of community character is often the challenge we face today. In addressing the efficient movement of people and goods for the vitality of our local and regional economies, we can no longer afford to solve our congestion concerns by solely constructing more system capacity. Today's world demands more creative approaches that consider the interrelationships between land use and transportation. Our solutions need to thoroughly exhaust actions that make our current roadway networks more efficient by implementing proven access management and transportation systems management (TSM) techniques, but not at the expense of our communities. Context sensitive designs are required. In addition, whenever possible, traffic reduction (or TDM) strategies aimed at lowering the number of Single Occupant Vehicles on our roadway systems should be pursued. Looking for ways to better manage travel demand can ease the burden on our major roadways without the need for widening. Here in New England, transportation is the major contributor to greenhouse gas production. Reducing harmful air emissions and our dependence on foreign oil can both be accomplished by creating transportation systems that are more environmentally friendly.

We embrace a holistic approach to transportation planning, engineering, and operations. Our transportation engineers and planners routinely collaborate with in-house land use planners and landscape architects to develop solutions that achieve superior results in terms of mobility, safety, aesthetics, and environmental quality.

List of Services

- Corridor Studies
- Traffic Impact/Access Management Analyses
- Traffic Modeling and Simulations
- TSM Evaluations
- TDM Evaluations
- Context Sensitive Highway/Urban Street Design
- Pedestrian and Bikeway Facilities Design
- Traffic Signal System Planning
- Traffic Signal Design and Management
- Intermodal Facility Planning and Design
- Right-of-Way Coordination
- Construction Inspection & Administration

Planning



We approach planning much as we do all opportunities : with pragmatism and creativity. As New Englanders we realize that personal independence is a long-standing tradition, and the freedom and mobility we enjoy from our cars is a valued aspect of our lives. Having said this, we recognize that as our cities and towns grow, the need to respond to this growth with efficient transportation systems is key to maintaining their vitality. In the past, the predominant solutions to congestion were bypasses and wider roads. Today we can no longer afford these projects, nor do our citizens want the attendant impacts. More typically, we are asked to look at the challenges of mobility by exploring ways of moving people and goods rather than single occupant vehicles. Preservation of community character and livability, or quality of place, are themes that we often see in urban centers and rural towns alike. For example, in the historic village of South Berwick, ME managing demand rather than building additional capacity was the adopted preference for accommodating the more than 20,000 vehicles that pass through their downtown daily. On Central Avenue in Dover, NH, the community didn't want to expand this arterial either, so they adopted stricter land use controls and initiated a TDM ordinance as a means of reducing the rate of traffic growth within this corridor. In many cases it is not just thinking outside the box, but creating a new box that solves the problem.

- **Central Avenue Corridor Study**
- **Dover, NH**
- Long-Range Transportation Plan blending TSM and TDM Strategies for corridor preservation without expansion. Assistance in the creation of the City's initial TDM ordinance.
- **Downtown Transportation Feasibility Study**
- **South Berwick, ME**
- Long-Range Transportation Plan for improving pedestrian and vehicular safety, while preserving mobility and community character within this historic village district.
- **Route 1/3 High Street Study**
- **Ellsworth, ME**
- Capacity improvements and access management were central to addressing the needs of this primary arterial corridor leading to the entrance of Acadia National Park.
- **U.S.P.S. Distribution Center Expansion**
- **North Reading, MA**
- Traffic Impact Assessment for 140,000 s.f. expansion of an existing postal facility.
- **Maine Street Improvement Study**
- **Brunswick, ME**
- Safety evaluation and recommendations for addressing this High Crash area (3 locations) within downtown. Improvements focused on reducing vehicle conflicts, improving pedestrian crossings, and preserving critical on-street parking.
- **Tolland Turnpike Estates**
- **Manchester, CT**
- Traffic Impact Assessment for planned residential development.

Design



Design is the foundation of our practice. As engineers, we gain no greater satisfaction than seeing our ideas implemented. Whether it is a \$6.5 million upgrade of the Exit 3 interchange on I-295 in South Portland, or a one-mile long \$700,000 reconstruction of a gravel road in Hollis, the approach is the same: meet the client's expectations for technical quality, cost and timeliness. To meet these goals, Sebago is continuously upgrading its "tools of the trade". We maintain both AutoCad and Microstation drawing platforms, including 3D design packages for each. We have even had success providing contractors our 3D design models for direct use in their automated earthwork equipment – saving owners considerable time and money.

Transportation systems are becoming more complex as the demand for their use is becoming more diverse and sometimes even competing. Context Sensitive Design Solutions is a process Sebago used with MaineDOT back in 2001 on a project through Lincolnville Beach. Our design solution achieved a balance between pedestrian, bicycle, and vehicle mobility, while preserving community character. The Complete Streets movement has captured the attention of many in the urban design community, and the latest attempts at keeping our industry energy and environmental conscious is termed Green Streets. All of these strategies have their place, and we would be delighted to show you how they can work in your community.

- **Municipal Streets
Portland, ME**

- Redesign of 16 arterial and collector streets, including storm sewer separation, totaling more than 4 miles in length as part of the City's CSO program.

- **Exit 3, I-295
South Portland, ME**

- \$6.5 million redesign of existing interchange to expand capacity and eliminate 3 High Crash Locations.

- **Route 15 Improvements
Brewer, ME**

- TSM improvements along existing Route 15 to accommodate new major employer and to address existing safety and capacity concerns. Construction accomplished with a \$2.1 million federal earmark.

- **Scarborough Gallery Development
Scarborough, ME**

- Creation of a new landscaped boulevard and extensive off-site roadway improvements to provide access and circulation through new 500,000 sf, 90-acre, retail center. Transportation infrastructure valued at \$2.5 million.

- **Killock Pond Road
Hollis, ME**

- Design and construction of a one mile long gravel roadway upgrade to paved surface and 35 mph design speed using a Design/Build form of project delivery.

- **William Clarke Boulevard
Westbrook, ME**

- \$6.8 million redesign of one mile long 4-lane undivided highway into a 5-lane landscaped boulevard

Signal System Design and Management



In urban areas, design and construction of efficient traffic signal systems is extremely cost-effective in addressing congestion, but it doesn't stop there. On-going signal operations and management is required to effectively manage these sophisticated, centrally controlled systems in order to realize their full benefits. Sebago's traffic engineers are also operations specialists, and we are providing this service to a growing number of communities in northern New England. Our experience has shown that an appropriately timed traffic signal system can reduce motorist delay and stops by more than 20% during peak periods, which can translate into substantial savings in time, energy, and harmful air emissions for regular users of a corridor. Recently in Dover, NH, the retiming of three coordinated signals on Central Avenue cut fuel consumption and CO2 emissions by 21%. This translates to 2,900 gallons of fuel saved and 25 tons of CO2 produced annually, just during the afternoon rush hour.

- **Maine Mall System**
- South Portland/Scarborough, Maine
- 28 Naztec Signals with Streetwise Software
- **Broadway**
- South Portland, Maine
- 6 Naztec Signals with Streetwise Software
- **Routes 1 & 3**
- Ellsworth, Maine
- 6 Econolite Signals with Aries Software
- **Central Avenue**
- Dover, New Hampshire
- 5 Eagle Signals with MarcNX Software
- **High Street**
- Somersworth, New Hampshire
- 5 Econolite Signals with Aries Software
- **ATRC**
- Lewiston/Auburn, Maine
- 80 Naztec Signals with Streetwise Software
- **William Clarke Drive**
- Westbrook, ME
- 6 Naztec signals with Streetwise software

Our People



Stephen Sawyer, PE
Vice President &
Project Manager
37 years experience



Lynne Seeley
Transportation Oriented
Land Use Planner
18 years experience



John Adams, PE
Traffic Engineer &
Planner
17 years experience



Jack Murphy, PE
Traffic Signal
Design Engineer
40 years experience



Pengfei "Taylor" Li, PhD
Traffic Signal
Optimization Engineer
4 years experience



Bradley Lyon, EI
Transportation
Design Engineer
4 years experience



Arthur Dietrich Jr.
Senior Signal Designer
31 years of experience



Theodore Smith
Utility Coordination &
ROW Specialist
40 years experience



Kevin Burns, PE
Construction Inspector
40 years of experience



Michael Kane
Construction Inspector
35 years of experience

Civil Engineering

Site Plans
Grading & Drainage Design
Utility Design (Water, Sewer)
Stormwater Management
Permitting (Local, State & Federal)
Quarry/Gravel Pit Studies & Permitting
Technical Review
Construction Inspection

Environmental Engineering

NRPA/NEPA Studies
Site Assessments (ESAs, VRAPs)
Septic Design & Analysis
Groundwater Studies & Treatment
Floodplain Studies & Permitting

Transportation Engineering

Signal Analysis, Design & Management
Traffic Analysis & Permitting
Intersection, Road & Highway Design
Alternatives Analysis & Route Design

Landscape Architecture

Conceptual & Site Design
Park & Public Space Design
Urban Design
Master and Campus Planning
Waterfront Planning
Planting Design

Land Surveying

Boundary & Topographic Survey
Subdivisions
GPS Survey & Mapping
Construction Layout
As-Built Survey
Deed Research
GIS Mapping

Soil Sciences

Soil Surveys & Testing
Wetland Assessment & Permitting
Turf Impact Testing

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