

# Maximizing the Power of Wind

## THE CHALLENGE

A wind farm site, once selected for its wind resources, can present multiple challenges to the developer, including steep slopes, rocky soil, wetlands, and extremes of weather. How the developer balances the site's advantages, including existing roads and proximity to transmission lines, with its constraints can have a profound impact on project schedule, costs and future profitability. Good site design makes optimal use of existing benefits to minimize the project footprint, expedite permitting, and reduce environmental impacts and asset maintenance over the long term.

## LOW-IMPACT WIND DESIGN

Sewall brings time-tested traditional engineering and creative problem solving to address the challenges of wind farm site design, with specific expertise on mountainous terrain. We integrate the following services in our design solutions:

- ✦ Aerial/land surveying and mapping
- ✦ Civil site design
- ✦ Constructability reviews and cost estimates
- ✦ Turbine micrositing
- ✦ Transportation studies

## THE BENEFITS

Our design solutions:

- ✦ Use existing infrastructure to reduce project footprint and expedite permitting
- ✦ Balance cut and fill requirements to reduce earthwork, optimize use of on-site materials and minimize hauling
- ✦ Maintain and protect existing hydrology to limit impacts to wetlands, vernal pools and significant natural habitat

*For information on Sewall's integrated solutions for wind energy projects, contact: Brett Hart, PE, Director of Engineering, at 800 648 4202; Email: [brett.hart@sewall.com](mailto:brett.hart@sewall.com)*



JAMES W. SEWALL COMPANY / Since 1880

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## INTEGRATED SOLUTIONS FOR LOW-IMPACT DESIGN

### ✦ Aerial/Land Survey

- Acquisition of new/existing aerial photography
- ALTA boundary and topographic surveys
- Digital orthophotography and large-scale photogrammetric mapping

### ✦ Engineering Services

- Site conceptual design and turbine micrositing strategy
- Permit-level site design plans (access /ridgeline roads, turbine clearings, building design)
- Assistance in acquiring leases, easements, and ROWs
- Stormwater BMP and management system design
- Hydrologic modeling and phosphorus export calculations
- Federal, state and local permitting support
- Site constructability reviews
- Turbine component transportation studies and design
- Construction plans, technical specifications, bid packages and inspection

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