

**Professional Qualifications and Experience of Michael W. Finkbeiner.**

Professional Land Surveyor NY # 050352 CT # 16105 Florida (pending)

Professional Forester CT # 150 (inactive)

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2017-2019 **Andes Consulting Engineering, PLLC** Chief Surveyor Providing precise GPS controls for drone mapping, photogrammetry, land-form models in point cloud, lidar processing, Geo-HecRas floodway models, machine-control programming for topographic and land fill sculpting.

2013-2016 Formed **Earth Image LLC** (Delaware). Provided hydrographic survey and precision GPS location services for baseline grid and datum determination in Cayman Brac under work permit from Cayman Islands government. Established permanent 2000 meter rowing course in Greenwich Cove for AlumniSprints.org as annual April event. Specialized in FEMA mapping revisions to the Post-Sandy coastal hazard mapping in NY & CT. Performed 400 new surveys and serviced on-going clientele of 1000+ projects since 2003, including 40+ hydrographic surveys.

2010 – 2012 Added training in stormwater quality and management. Joined Intl. Erosion Control Assoc. for training by EnvironCert in MS4 permitting, Stormwater management practices and Federal Clean Water Act enforcement and performance standards, including Environmental Justice laws. Continued to provide professional services for land surveying in New York and CT, with hydrographic and underground capability. Member of the NY State DOT Real-time GPS network for high-precision mapping and location. Provided hydrographic mapping for NYC water system at Schoharie Reservoir and the East River Esplanade Project to connect 34<sup>th</sup> St to 62<sup>nd</sup> St over the water in front of the United Nations and under the 59<sup>th</sup> St Bridge.

2006-2009 **Earth Image** added marine capability for hydrographic surveys. Utilizing both a hard-bottom RIB and soft-bottom Zodiacs (15 hp & 2 hp) , pre-and post-dredge volume and contour surveys were prepared, utilizing RTK signals broadcast from the Earth Image Reference Base Station. Our base station feeds its RTK correction signal to the private [“Superior Instruments”](#) Connecticut Real-time Precision Network. We also provided services for underwater land grant mapping in New York State, including expert court testimony, and compliance surveys for NY DEC and CT Office of Long Island Sound as-built documentation. A number of large water-front construction projects were completed, with our participation in site plan development, hearings and permitting procedures, construction layout, as-built certification and regulatory compliance surveys and filings.

2003-2005 Formed **Earth Image Dot Net** for underground and underwater mapping, combining ground penetrating radar (earth image as a play on words for earth=ground) and depth soundings with high precision GPS to assist in geophysical investigations for archeology, mapping applications and underwater permitting and construction. Received certification from [Geophysical Survey Systems, Inc](#) in Theory and Practice of Applying Interface Radar in Engineering and Geophysical Investigations. Developed custom software multiplexer to integrate simultaneous signals of GPS satellite signals with subsurface returns. Added reflectorless fully robotic total station (Leica 1203 with SurvCE) for land-side survey work. This equipment integrates seamlessly with our Hiper+ (GPS

+ Glonass) real-time broadcast network. For 2002-2005, served as a director of the Westchester-Putnam Association of Land Surveyors, a chapter of the New York State Assoc. of Land Surveyors ([Nysapls.net](http://Nysapls.net)).

1999 - 2003 Partner/Owner in **J. A. Kirby Company LLP**, a Port Chester, NY surveying and engineering company founded in 1871. Acted as Chief of Surveying, with responsibility for computer networks, CAD configuration of hardware and software, and development of proprietary software for field-to-finish processing of surveying field data files. Developed the JAKirby.com Website, hosted on site by Kirby's own in-house web-server. Organized electronic archive and retrieval databases for 130 years of paper mapping records and field book. Daily activities included directing field crews

1998 Started **Resource Image and Mapping, Int'l (RIM)** to develop software and field techniques to combine laser and other technology for imaging with ZCad programming to create non-traditional mapping products combining raster and vector data with photographic images to create presentation and exhibit maps.

1995-1997 Staff Land Surveyor at **Redniss and Mead, Inc.**, Stamford, CT. Participated in conveyance mapping of Olin Headquarters and Walden Books headquarters to G E Capital. Mapped wetlands for Rockefeller Lands subdivision in Greenwich, CT. Part-time member of the Watchtower Education Center **Regulatory Services** Department at Patterson, New York. Specialized in soil and vegetation analysis of nutrient cycling for a pilot study of New York State's first permits to utilize tertiary treated sewage effluent for agricultural irrigation in a public drinking watershed. This involved using 30,000 gallons daily from the Watchtower Treatment Facility for campus landscape irrigation. The New York City Dept. of Environmental Protection closely scrutinized this project for its beneficial downstream effects, in reducing nutrients in the watershed by vegetative uptake and fixing. During this project, studied water recycling systems in Florida and California to learn the methodology of environmental analysis.

1991-1994 Land Surveyor/Partner at **Ahneman Associates PC**, Greenwich, CT. Utilized **Zcad** programs to automate field-to-finish drafting for Topcon equipment. Projects included photogrammetry and master planning for the John D. Rockefeller III estate in Sleepy Hollow.

1989-1990 Consulting Forester/ Prof. Land Surveyor based at 309 Greenwich Ave., Greenwich, Connecticut. Developed **Zcad** lisp programs for AutoCad mapping functions. Spent 80 working days as staff programmer at **Watchtower Society**, Brooklyn, NY developing surveying relating applications for the **Watchtower** CivilCad tablet. This was installed in over 300 **Society** engineering workstations worldwide to assist in construction and planning efforts.

1987-88 Partner in **Hammons & Finkbeiner**, Surveyors and Foresters. Mapped wetlands and boundary for Rockefeller lands, Colman & Blake property, Pommeranz/Tuchman property, and other large parcels of open space/forestry land. Cemetery mapping projects in NY, Mass, Conn.

1984-86 Estate of **G. Rockefeller**. Worked on mapping and planning for development of Rockefeller Property. Developed and marketed **Survey.WIZ** program for Tandy Model 100. This Software was adopted by Precision Surveys of Bradenton Florida for mobile mapping applications in Manatee County, Florida. Consulted on-site for this project.

1978-1983 worked for **Godfrey Rockefeller** and his family office at 500 Fifth Ave., New York. (Land Management in Vermont, Maine, Florida & Conn. and Fortran programming for **Indian Rock Corp** & Asset Records, Inc.) Provided Land Utilization Study and Recommendations for Rockefeller owned Acosta Groves, Mims, Volusia County, Florida.

1975-1978 Consulting Forester, specializing in mapping applications. Editor of Newsletter of **Conn. Wood Producers Association** (sawmills and loggers). Again worked with **Tim Mellon**, then at Timcor in forest resource procurement for rebuilding the NE rail corridor.

1974 –75 Taught surveying and photogrammetry at **Yale School of Forestry and Environmental Science**. Developed and copyrighted Canon Calculators "Surveyor" software package, which was marketed as a desktop system worldwide by Canon.

1973 Began consulting work for Wang Labs, New Haven office, developing additions to land surveying modules. Mapping under CT Current Use Valuation Law for Forest, Farm and Open Space Lands – CT Public Act 490.

1971 Completed **Yale Master of Forest Science** degree. Pursued interest in mapping systems, and began development of Yale Computer Center Fortran COGO (coordinate geometry computations system). During Summer 1970 worked for Yale Forests in Keene, New Hampshire and Union, Conn. maintaining on-going research projects and performing boundary surveys and mapping updates under direction of Prof. David M. Smith. In Mar. '71 began employment with J. R. Codespoti, Land Surveyor, Stratford, Conn. while providing computational consulting for land surveying/sub-division work on IBM 360 system, first at Yale, then through Tim Mellon, Guilford,Ct. Environmental Consulting on Coastal Wetlands under CT Tidal Wetlands Act passed in 1969.

1969 Completed **Yale BS degree in economics**, with thesis/project on commercial paper markets under Prof. **Joseph Stiglitz**.( Reviewed by **Robert Rubin** at Goldman Sachs.) After graduation, obtained employment at **Cowles Foundation** at Yale University for Economic Research as Fortran Programmer in lead/lag investment analysis of 100 sectors of the U.S. econometric model, assisting Prof. **Bishoff**. Mathematical model building done in collaboration with Yale Forestry School professional staff led to a **Ford Foundation** grant to obtain MFS degree there:

Summer Activities:

**1968 Bartlett Tree Experts**. Arborist. Later obtained Conn. ground spray license

**1967 Yale University** Summer Student Employment.

**1966 Harvard** Summer School. Studied Old & Middle English. Started major in linguistics.

**1965** Graduated from **William Penn Sr. High School** in Harrisburg, Pennsylvania, earning an 800 score in the math achievement portion of the college board exams. Admitted as Freshman to **Yale University**, Morse College Class of 1969. Traveled in Europe from May to August, spending 2 weeks with French film director Jacques Tati with a part in his film "Playtime", See [www.tativille.com](http://www.tativille.com)

**1964 Notre Dame University** After 11<sup>th</sup> Grade. Math Summer Program for High School Students.

**1963 Lehigh University** after 10<sup>th</sup> Grade- Summer Engineering Camp. Exposure to various engineering disciplines.