

Nicholas DiGruttolo

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Work Experience

3001 Inc. 2008

- Supervise field crew deployment and data acquisition for survey control.
- Design control network geometry and assure accuracy requirements are achieved.

Sarasota County Government, Survey / Mapping Section 1991-2006

- Manage large-scale land surveying projects and coordinate multiple field crews when necessary for timely completion of assignments.
- Implemented the use of the State Plane Coordinate System on survey projects through the installation of a countywide network of Continuous Operating Reference Stations to facilitate Global Positioning System observations of survey control monuments.
- Supervised the ongoing conversion of Sarasota County's official vertical datum from the National Geodetic Vertical Datum of 1929 to the more recent, North American Vertical Datum of 1988.
- Perform land surveys for Capital Improvement Projects within county government.
- Created a Geographic Information System based job-tracking utility to improve access to existing information and eliminate duplication of effort.
- Assigned responsibility for maintaining inventory of survey equipment valued at over \$300,000.
- Maintained field crews computers, data recorders, and equipment to ensure the latest versions of software and firmware were installed and trained employees on efficient use of all systems.

LS&E Land Surveyors 1988-1991

- Learned techniques for field surveying, computations and mechanical drafting.
- Performed mortgage surveys and construction stakeout with supervision.

Education

Bachelor of Science in Geomatics 2008

University of Florida
Summa Cum Laude

Associate of Arts 2006

Manatee Community College
Magna Cum Laude

Desirable Skills

Surveyor in Training licensure, Level 4 Certified Survey Technician. Detailed knowledge of coordinate geometry, trigonometry, and statistics, including least squares adjustments. Proficient in the use of total stations with data recorders, digital and conventional levels, and GPS receivers. Computer skills including ArcGIS, AutoCAD Land Desktop, MicroStation, MS Access, and MS Excel. Training in processing and statistical analysis of static GPS data and use of geoid models. Familiar with proper use of State Plane Coordinate Systems and datum conversions. Understand the legal requirements of Florida's Minimum Technical Standards of Surveying and the Federal Geodetic Control Committee's standards for control surveys. Extensive use of the Public Lands Survey System. College coursework in hydrographic surveying, geodesy, and photogrammetry.

Other Assets

Mechanical ability including troubleshooting, design, welding/fabrication. Certified in the Incident Command System, traffic safety and CPR. Possess Florida Class D driver's license with experience in off-road vehicle operation. Familiar with boat operation. Good written and oral communication skills. Self motivated and well organized.

References provided upon request

Special Projects

- Organized crews to provide static Global Positioning System (GPS) observations of six stations to assist in the simultaneous state-wide reobservation of the Florida High Accuracy Reference Network. (HARN). The observations, conducted in cooperation with Florida's advisor to the National Geodetic Survey (NGS), encompassed a three day period and required training crew members to follow strict guidelines for data collection methods. Logistics for the dependable performance and safety of the equipment and personnel during the overnight session were accomplished by thorough planning and preparation.
- Performed NGS bluebooking procedures for the inclusion of control stations in the 2007 readjustment of the North American Datum of 1983 (NAD83, NSRS2007).
- Conducted exhaustive effort to recover and document all NGS benchmarks with published North American Vertical Datum of 1988 (NAVD88) elevations within Sarasota County. Created and maintained spatial database of all recovered stations that includes detailed sketches, digital photographs, to reach descriptions, coordinates, reference marks with horizontal and highly precise vertical ties, and static GPS derived orthometric heights and error estimates of entire network.
- Directly involved with planning for first and second order level runs throughout Sarasota contracted with and recently completed by other firms in a cooperative effort with the Southwest Florida Water Management District (SWFWMD) and the Federal Emergency Management Agency (FEMA). This planning included determination of the most valuable routes for first and second order level runs to provide a framework that would encompass frequent ties to existing control and minimize distances between level runs for future third order densification by in-house crews while staying within budget constraints dictated by SWFWMD.
- Began densification effort of county benchmark network to provide accurate NAVD88 elevations to the areas with the greatest need. The initial densification involved a precise digital leveling network utilizing existing Coastal Construction Control Line (CCCL) monumentation on Siesta Key. Recovery and documentation of every CCCL monument was performed with the benefit in mind that the existing information available for the monuments through the Florida Department of Environmental Protection, Division of Beaches and Shores is a valuable asset. Well established monuments with detailed descriptions, accurate coordinates, and existing but obsolete elevations provided a foundation for a precise level network that will be accessible to the Surveyors that work on the high risk barrier island.
- Established and maintained data for a county-wide stormwater monitoring system and computer model. Conducted detailed drainage surveys over entire basins in remote areas using conventional methods and Real Time Kinematic (RTK) GPS. RTK corrections were provided via a cellular modem connection to a permanent reference station network established for the purpose. Constructing and maintaining this system, with much help from the equipment vendor, provided me great insight into the great advantages and potential problems of such a network.
- Participated in effort to recover all section corners in Sarasota County and obtain accurate GPS coordinates for adjustment of the Geographic Information System (GIS) basemap.
- Supervised several excellent employees and interns. Frequent training in teamwork and leadership skills provided by the county government allowed me to learn and utilize the most recent ideas on developing efficient and effective practices to improve performance and help employees realize their potential.
- Direct interaction with upper management and engineering staff of in-house departments and outside firms. This experience has provided me with the communication skills necessary to ask the questions needed to insure I provide the right service with the minimum use of valuable resources.
- Acted as chief union steward for Teamsters bargaining unit within the county government. I learned state and federal laws regarding human resources and contract negotiations. Realized well structured organization of employees can provide benefits to both management and labor by rewarding hard work without shielding underperforming workers from needed reprimand.