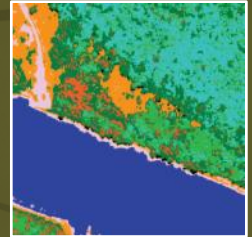
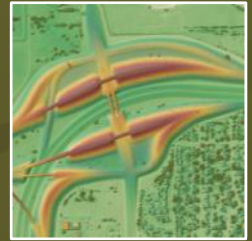




High School Surveying Career Presentation

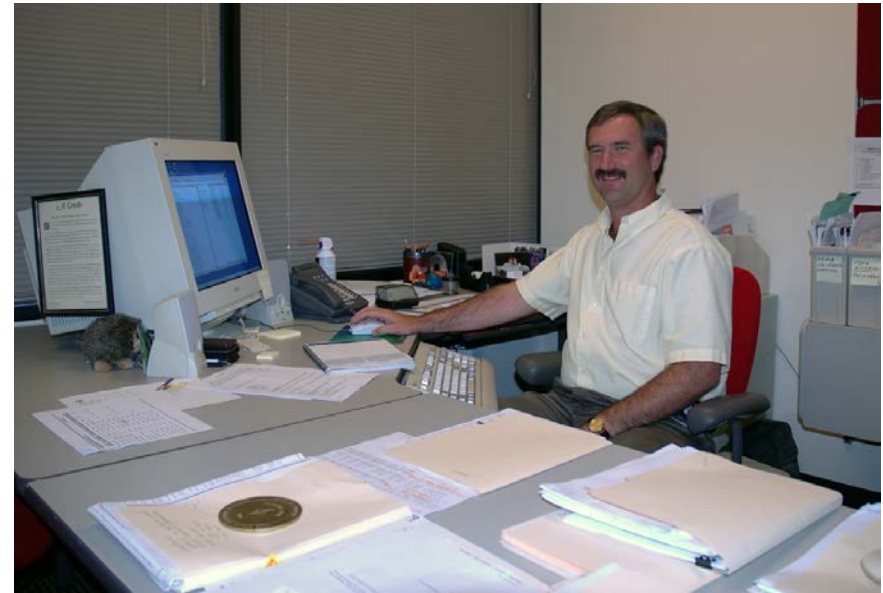


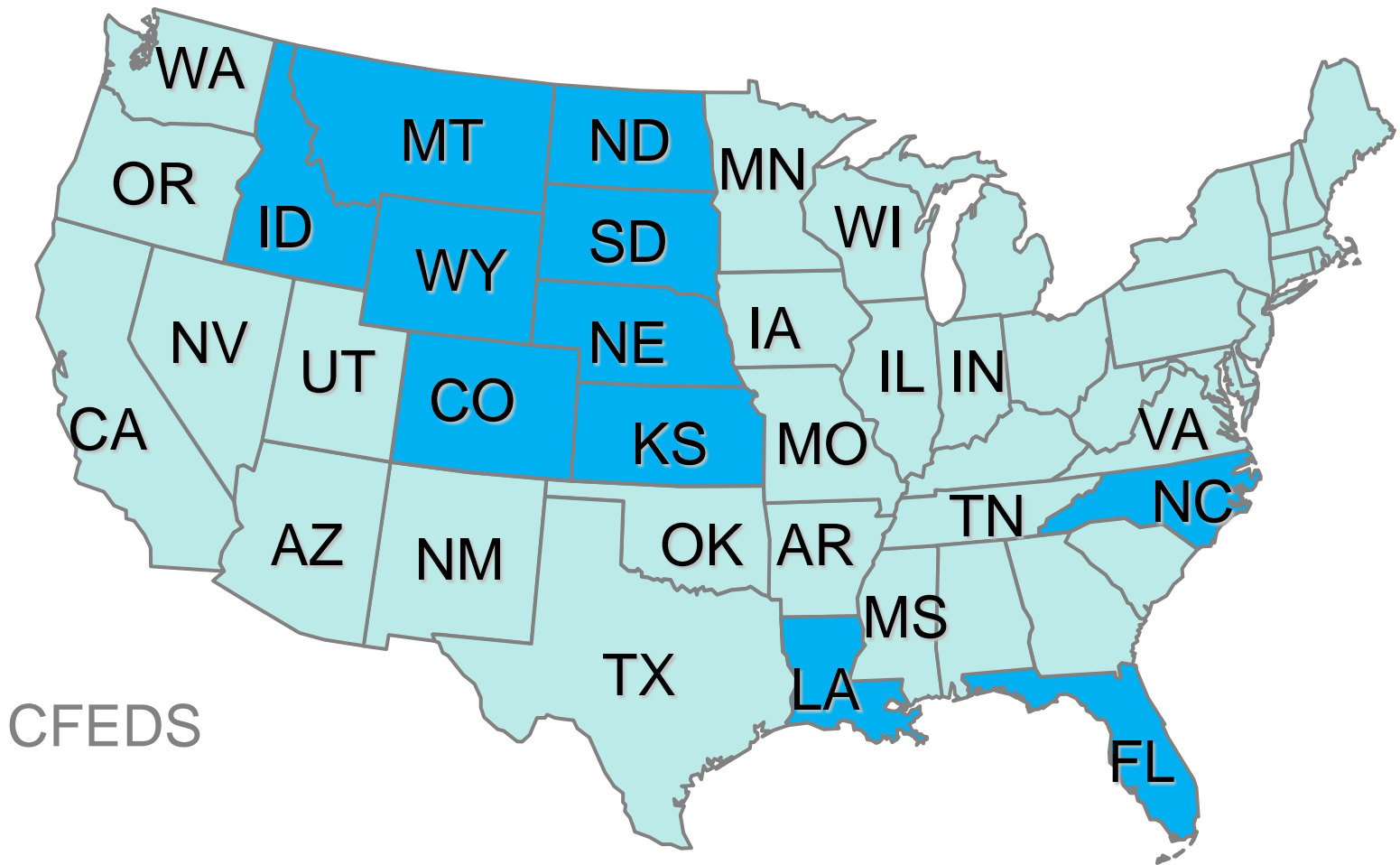
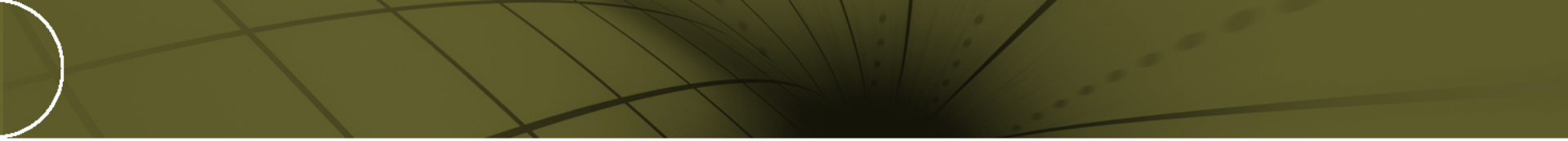
GEOSPATIAL SOLUTIONS

October 1, 2013

Resume/Qualifications

- Roger Nelson, PLS
 - Bachelor of Science – Production Management
 - Associate of Science – Land Surveying
 - Professional Land Surveyor's of Colorado (PLSC) President
 - International Right of Way Association - Member
 - Survey Licenses:





Agenda

- Define Surveying
- Survey Regulation
- Detail Survey Current Education Requirements
- What Does A Survey Career Look Like?
 - Field Surveyor
 - Office Technician
 - Professional
- Potential Salary
- Questions

Survey Regulation

- Department of Regulatory Agencies (DORA)
- State Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors
 - In order to safeguard life, health, and property and to promote the public welfare, **the practice of professional land surveying in Colorado is hereby declared to be subject to regulation.** It shall be unlawful for any individual to practice professional land surveying in Colorado or to use in connection with such individual's name, or to otherwise assume, or to advertise any title or description tending to convey the impression that such individual is a professional land surveyor, unless such individual has been duly licensed or is exempted under the provisions of this part 2. The practice of professional land surveying shall be deemed a privilege granted by the state of Colorado based on the qualifications of the individual as evidenced by such individual's licensing.

Surveying Defined

- Professional land surveying" means the application of special knowledge of principles of mathematics, methods of measurement, and **law** for the determination and preservation of land boundaries. "Professional land surveying" specifically includes:
 - (I) Restoration and rehabilitation of corners and boundaries in the United States public land survey system;
 - (II) Obtaining and evaluating boundary evidence;
 - (III) Determination of the areas and elevations of land parcels;
 - (IV) Subdivision of land parcels into smaller parcels and layout of alignment and grades for streets or roads to serve such smaller parcels;

Surveying Defined (Cont.)

- (V) Measuring and platting underground mine workings;
- (VI) Preparation of the boundary control portions of geographic information systems and land information systems except as allowed otherwise by section 38-51-109.3, C.R.S.;
- (VII) Establishment, restoration, and rehabilitation of land survey monuments and bench marks;
- (VIII) Preparation of land survey plats, condominium plats, monument records, property descriptions that result from the practice of professional land surveying, and survey reports;

Surveying Defined (Cont.)

- (IX) Surveying, monumenting, and platting of easements and rights-of-way;
- (X) Geodetic surveying;
- (X.5) Basic control for engineering projects; and
- (XI) Any other activities incidental to and necessary for the adequate performance of the services described in this paragraph (a).

Surveying Defined (Cont.)

- (b) An individual shall be construed as practicing or offering to practice "professional land surveying" within the meaning and intent of this part 2 if such individual engages therein or, by verbal claim, sign, letterhead, or card or in any other way holds himself or herself out to be a professional land surveyor or as being able to perform any professional land surveying service or if such individual does perform any professional land surveying service or work.
- (c) Professional land surveying may include other types of surveying.

Survey Education Requirements

- Education Trend:
 - National Trend is 4 – Year degree requirement
 - Current Colorado Requirements:
 - Have graduated from a board-approved surveying curriculum of **four or more years**; and
 - Have two years of progressive land surveying experience under the supervision of a professional land surveyor or an exempted federal employee defined in section 12-25-203 (1) (b); and
 - Have been certified as a land surveyor-intern in this state; or

Survey Education Requirements (Cont.)

- Have graduated from a non-board-approved surveying curriculum of four or more years; and
- Have four years of progressive land surveying experience of which at least two must be under the supervision of a professional land surveyor or an exempted federal employee as defined in section 12-25-203 (1) (b); and
- Have been certified as a land surveyor-intern in this state; or

Survey Education Requirements (Cont.)

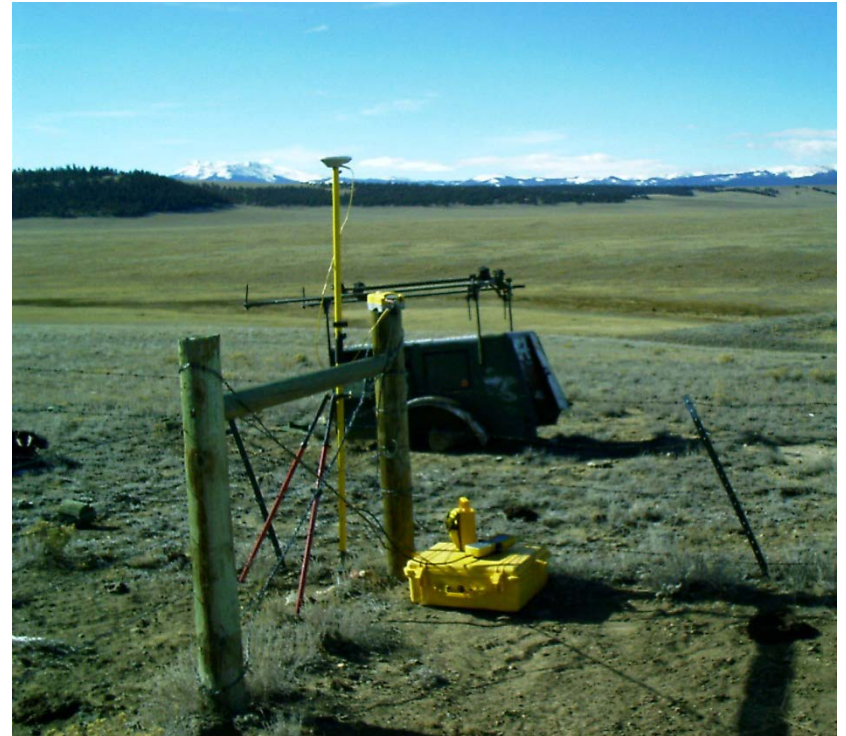
- Have graduated from a board-approved **two-year** surveying curriculum or from a four-year engineering curriculum that included surveying course work as specified by the board by rule; and
- Have six years of progressive land surveying experience of which four years shall have been under the supervision of a professional land surveyor or an exempt federal employee as defined under 12-25-203 (1) (b); and
- Have been certified as a land surveyor-intern in this state.

Survey Education Requirements (Cont.)

- Have obtained a bachelor's degree in a nonsurveying curriculum;
- Have completed surveying and other related course work, as specified by the board by rule;
- Have six years of progressive land surveying experience, of which four years shall have been under the supervision of a professional land surveyor or an exempted federal employee as defined in section 12-25-203; and
- Have been certified as a land surveyor-intern in this state.

Survey Career?

- Field Surveyor
 - Instrument operator – Total Station, Level, GPS Equipment
 - Party Chief – Calculations, Note keeping, Communications with office



Survey Career?

- Field Surveyor?



Survey Career?

- Field Surveyor?



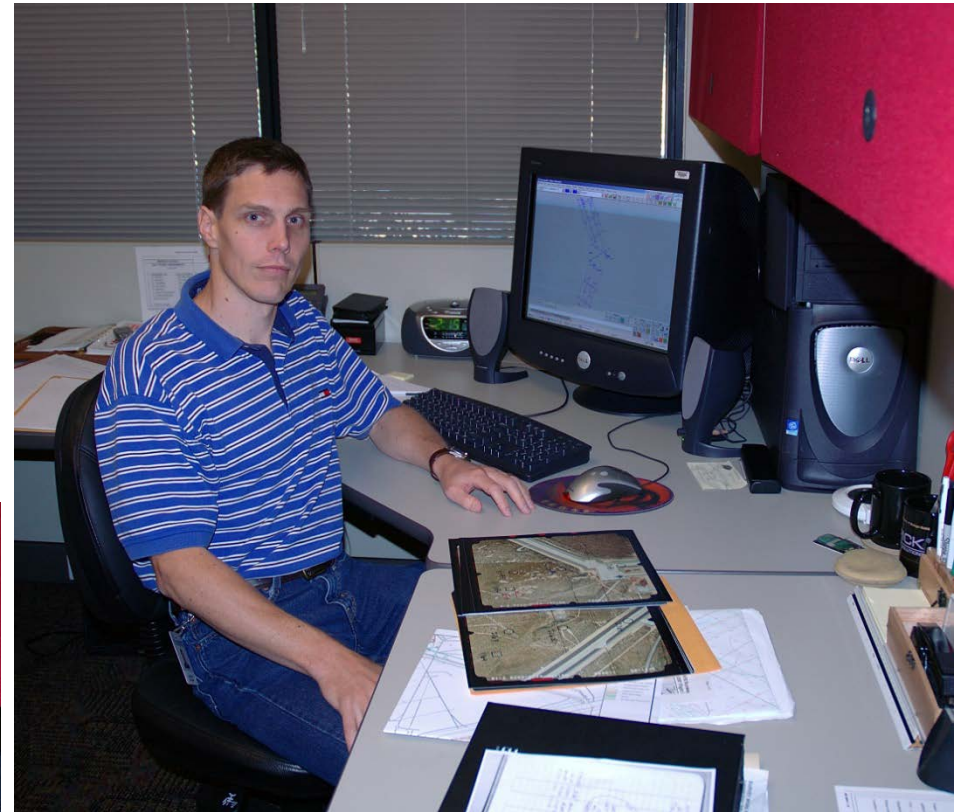
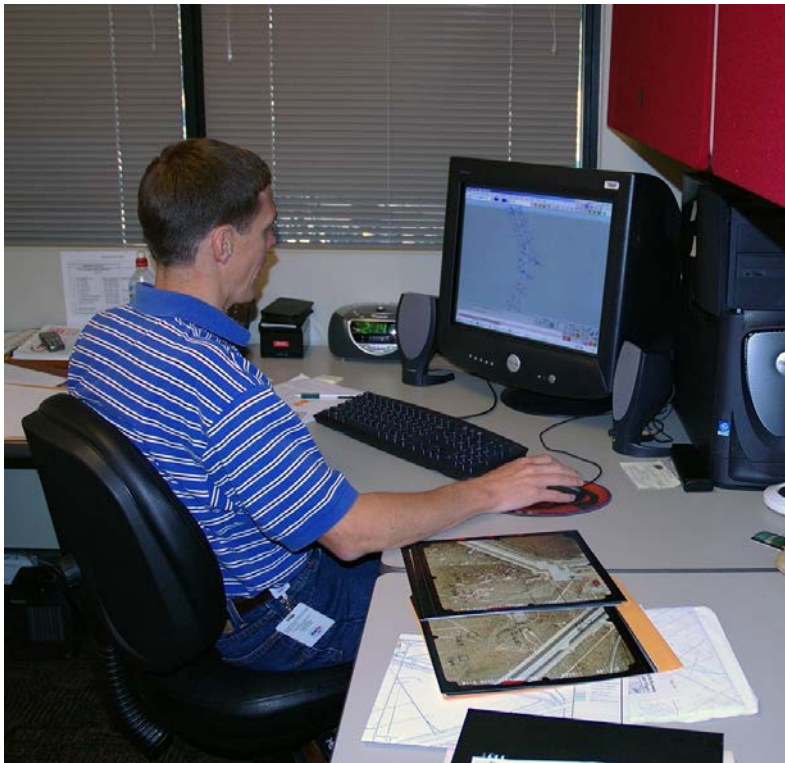
Survey Career?

- Field Surveyor?



Survey Career?

- Office Technician
 - Transcribe field data into CADD
 - Prepare field data for evaluation
 - Create Descriptions & Plats



Survey Career?

- Professional
 - Manage field crews
 - Manage survey technicians
 - Estimate projects
 - Prepare budgets
 - Market surveying services
 - Prepare and review invoicing
 - Collect Payments!



Salary

- \$\$\$\$\$\$\$\$
- Instrument Operator - \$33,280/Yr. - \$41,600/Yr.
\$16/Hr. - \$20/Hr.
- Party Chief - \$41,600/Yr. - \$62,400/Yr.
\$20/Hr. - \$30/Hr.
- Professional - \$62,400/Yr. - \$130,000/Yr.
\$30/Hr. - \$62.50/Hr.

Questions?

Questions?