

### Roger E. Pelletier | Senior Associate



#### EDUCATION

- Harper College
  - Associate of Science, Electronics Technology, 1987
  - Associate of Science, Digital Electronics and Microprocessor Technology, 1989

#### PRACTICE AREAS

- Dynamic Testing and Analysis
- Load Testing
- Research and Testing
- Testing and Instrumentation
- Health Monitoring
- Nondestructive Testing
- Vibration Studies and Noise Monitoring
- Fatigue and Fracture Studies

#### PROFESSIONAL AFFILIATIONS

- Society for Experimental Mechanics (SEM)

#### CONTACT

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#### EXPERIENCE

Roger Pelletier is a project and lead technician on various instrumentation projects using seismographs and other instrumentation for measuring and recording dynamic responses and events. He has developed computer-controlled data acquisition systems for laboratory and remote sites. Mr. Pelletier consulted, developed, and built a number of systems that monitor dynamic vibration, building motion, strain, temperature, and record other physical measurements.

Mr. Pelletier is well experienced in the instrumentation and field testing of bridge structures. These tests include measurements under heavy controlled vehicles and normal traffic to determine live load stress ranges. Mr. Pelletier also conducts monitoring of building envelope systems such as masonry, glass, aluminum, sealants, and anchorage. His work includes development of specialized load application systems for qualification testing under static and cyclic loadings.

#### REPRESENTATIVE PROJECTS

##### Dynamic Testing and Analysis

- Contained Firing Facility - Tracy, CA: Dynamic recording of high explosive blast, using strain gages, accelerometers, and pressure transducers
- Impact testing of glass panels - London, England: Monitoring and analyzing data; strain gages and velocity measurements
- Mesta - Long Beach, CA: 33,000-ton press, monitoring system of strain gages for overload prevention

##### Load Testing

- Wacker Drive - Chicago, IL: Prototype precast concrete model
- SEPTA - Philadelphia, PA: Elevated rapid transit bridge
- Bronx, NY: Load testing of repaired parking structure
- I-80, I-480, and I-29 Bridges - IA: Fatigue measurements and controlled load tests using strain gages and deflection transducers

##### Research and Testing

- I-95 Bridge: Instrumentation of test bridges for the Nondestructive Evaluation (NDE) Validation Center
- NCHRP - Northbrook, IL: Data system and special equipment for corroding reinforcing steel

##### Testing and Instrumentation

- Cape Hatteras Lighthouse - Buxton, NC: Relocation of instrumentation and monitoring system
- Cardinals Stadium - Glendale, AZ: Instrument and tension cross members on seven hundred-foot Brunel trusses; instrument and monitor "Super Lift" of roof using wireless systems
- Reconstruction of Flight 800 - Long Island, NY: Construction and fabrication of special items to replace lost parts
- Instrumentation and balancing of movable bridges in more than seven U.S. states

##### Health Monitoring

- New Benicia Martinez Bridge - Benicia, CA: Installation and set-up of system and transducer
- Wacker Drive Reconstruction - Chicago, IL: Installation of gages in concrete and on underside of roadway; installation and monitoring of system