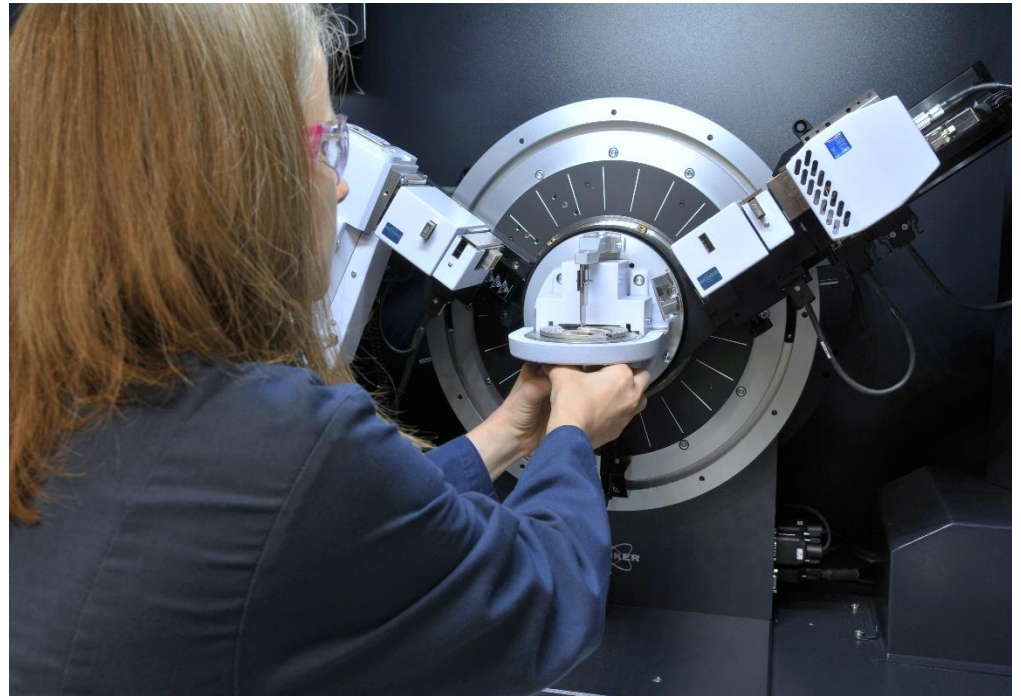




## CAPABILITY PROFILE

# Janney Technical Center

Materials and Structures Laboratory and Field Testing



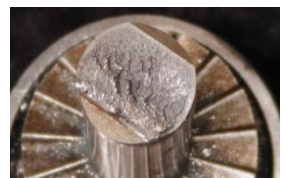
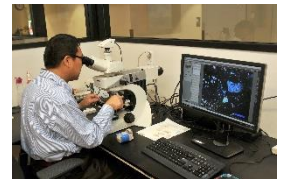
- Materials Testing and Chemical Analysis
- Standardized (ASTM and other) and Specialty Testing
- Metallurgy
- Petrography
- Accelerated Weathering, Climate Control, and Freeze/Thaw Chambers
- Applied Research and Test Method Development
- Corrosion and Service Life Assessments
- Product Evaluation
- Cement, Concrete, Mortar, and Admixture Analysis
- Paints, Special Coatings, Waterproofing, Adhesives, and Sealants
- Glass Testing
- Structural Load and Fatigue Testing
- Field Instrumentation and Nondestructive Evaluation

WJE's Janney Technical Center (JTC) is named after WJE founder Jack Janney. Composed of both engineers and scientists, the JTC provides advanced testing and forensic capabilities to solve the most technically challenging problems in connection with structures, construction materials, and manufactured components. After half a century and more than 125,000 assignments, JTC engineers and materials scientists have successfully completed investigative, testing, and repair projects involving virtually every type of construction material, structural system, and architectural component.

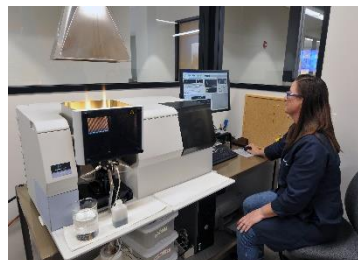
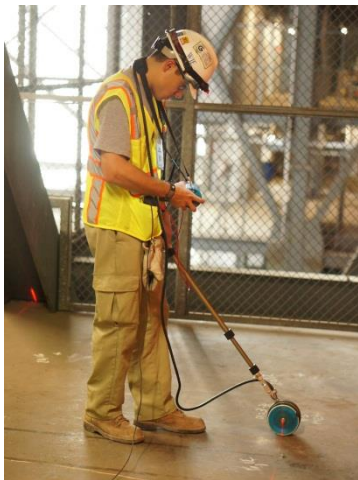
The JTC's 70,000-square-foot state-of-the-art testing and applied research facility includes a full array of chemistry, petrography, metallurgy, concrete and mortar, corrosion, and structural testing laboratories as well as environmental exposure chambers.

JTC personnel are recognized leaders in their fields and are active participants in standards development and industry organizations. The multi-disciplinary nature of our team of experienced scientists and engineers enables WJE to offer extensive testing and investigation capabilities to characterize materials, determine root causes of problems, and evaluate performance. The JTC performs tests to determine specification compliance, simulate performance under field conditions, understand failure mechanisms, generate fundamental engineering properties, and assess service life to meet the needs of various types of clients. Our services extend beyond our laboratories, and it is common for JTC personnel to take our expertise to the field and conduct specialized testing on site.

From the laboratory to the job site, from engineering to chemistry to physical sciences, JTC professionals develop and test new approaches and create innovative solutions for the built world.



# Janney Technical Center



### MATERIALS EVALUATION

- Physical Properties and Composition
- Durability Potential
- Corrosion Assessment

### CHEMISTRY AND ANALYTICAL

- Atomic Absorption Spectroscopy (AA)
- Ion Chromatography (IC)
- Fourier Transform Infrared Spectroscopy (FTIR)
- Ultraviolet-Visible Spectroscopy (UV-VIS)
- X-Ray Fluorescence (XRF)
- X-Ray Diffraction (XRD)
- Gas Chromatography with Mass Spectrometry (GCMS)
- Differential Scanning Calorimetry (DSC)
- Thermogravimetric Analysis (TGA)
- Isothermal Conduction Calorimetry (ICC)

### MICROSCOPY

- Petrography
- Metallography
- Fractography
- Scanning Electron Microscope (SEM-EDS)

### NONDESTRUCTIVE EVALUATION

- Acoustic Sounding
- Corrosion Potential and Rate Tests
- Ground Penetrating Radar (GPR)
- Ultrasonic Pulse Velocity
- Impact Echo, Impulse Response
- Ultrasonic Shear Wave
- Magnetic Particle Inspection
- Ultrasonic Flaw Detection
- Infrared Thermography (FLIR)
- Nuclear Gage Moisture Surveys
- High and Low Voltage Membrane
- Negative Pressure Uplift
- Air and Water Infiltration
- Unmanned Aerial Systems (Drones)

### STRUCTURAL TESTING

- Load and Fatigue Testing
- Strain, Deflection, Rotation, and Movement Measurements
- Davit and Dedicated Anchorage Testing
- Strain Relief Method
- Bond and Adhesion Testing

### MONITORING AND INSTRUMENTATION

- Vibrations and Acoustic Emission
- Temperature, Humidity, and Moisture Transmission

### QUALITY PROGRAMS AND ACCREDITATIONS

- AASHTO Materials Reference Laboratory (AMRL)
- ASME NQA-1 Compliant Nuclear Quality Assurance Program
- City of Los Angeles Approved Testing Agency
- Illinois DOT Approved Test Laboratory
- ISO/IEC 17020:2012 *Conformity Assessment - Requirements for the Operation of Various Types of Bodies Performing Inspection* by the ANSI-ASQ National Accreditation Board (ANAB)
- ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories* by the ANSI-ASQ National Accreditation Board (ANAB)
- Massachusetts DOT Approved Test Laboratory
- Miami-Dade County Accredited Test Laboratory

### STAFF CERTIFICATIONS

- American Concrete Institute (ACI)
  - Adhesive Anchor Installer
  - Aggregate Testing Technician - Level I
  - Cement Physical Tester
  - Concrete Field Testing Technician - Grade I
  - Concrete Flatwork Technician
  - Concrete Laboratory Testing Technician - Levels I and II
  - Concrete Strength Testing Technician
- American Society for Nondestructive Testing (ASNT)
  - Level I Thermographer
  - NDT Inspector - Levels II and III
  - NDT Magnetic Particle Testing - Level II
  - NDT Ultrasonic Technician - Levels I and II
- American Welding Society (AWS)
  - Certified Welder and Welding Operator
  - Certified Welding Engineer
  - Certified Welding Inspector
- International Concrete Repair Institute (ICRI)
  - Concrete Slab Moisture Testing Technician
- Infrared Thermographer - Levels I and II
- National Association of Corrosion Engineers (NACE International)
  - Cathodic Protection - Levels CP 1, CP 2, and CP 3
  - Coating Inspector - CIP Levels 1 and 2
  - Corrosion Technician
- PTI Bonded Post-Tensioning Field Specialist - Level I
- Remote Pilot - Small Unmanned Aerial Systems (Drones)