



**LEVELTON**

# MATERIALS & CORROSION

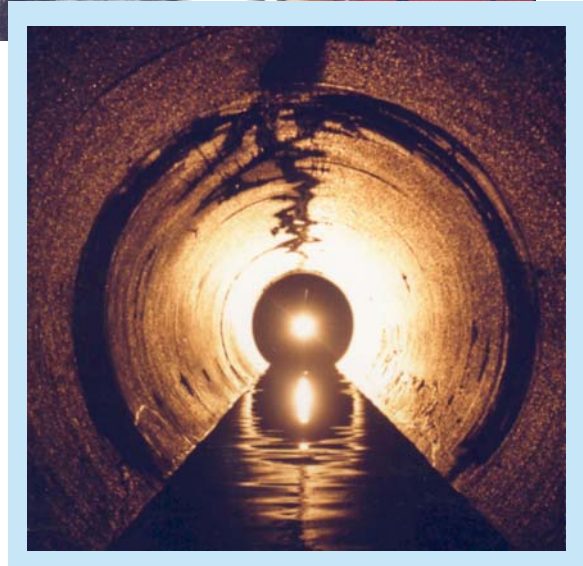
Municipal Infrastructure

Billions of dollars are spent annually in North America upgrading or replacing infrastructure that has deteriorated – in many cases prematurely. Design and construction deficiencies may be responsible for the premature deterioration resulting in the waste of precious tax dollars. Responsibility rests with various levels of government to maximize the benefits derived in spending the tax dollars wisely, to ensure the infrastructure design life is attained.



---

**Levelton Consultants Ltd.** has a long and successful history working with government, agencies and designers during the design and construction phases of projects. We provide valuable design advice on durability and corrosion protection as well as quality assurance services during the construction phase.





**LEVELTON**

### Levelton's Municipal Infrastructure Expertise is Diverse

#### **We perform condition surveys for:**

- Existing steel, ductile iron, cast iron and asbestos cement pipe water mains.
- Bridges, pavements, buildings, water and sewage treatment plants, reservoirs and related structures.

#### **We design material systems, including:**

- Selection, specifications and inspection of protective coatings and linings for steel and ductile iron water mains and for steel water reservoirs.
- Specifications, inspection and turnkey installations for galvanic anode and impressed current cathodic protection systems for steel and ductile iron water supply mains, steel reservoirs, sewer outfalls and sewer lift stations.
- Building envelopes and roofing or waterproofing membranes.
- Concrete and asphalt roads.

#### **We prepare and manage quality assurance programs for:**

- New structures such as buildings, infrastructure, pavements, earthworks.
- Repair and restoration for buildings, infrastructure and pavements.
- Building envelopes and roofing membranes.

#### **We provide environmental assessments and remediation for:**

- Leakage in underground natural gas lines, potable water mains and fuel storage tanks.
- Indoor air quality problems and hazardous materials such as asbestos in municipal buildings.
- Contaminated sites.
- Pre-purchase property acquisition.

### Additional Services we Provide:

- Failure analysis of water main pipe materials including asbestos-cement, PVC, steel, cast iron, ductile iron, and concrete cylinder pipe.
- Prediction of life-expectancy and leak frequency of existing steel pipelines.
- Geotechnical investigations for the design of building foundations, slope stability, retaining walls and underground piping system.
- WRC grading of sewer CCTV video tapes and conversion to digital format.
- Project management services for the trenchless rehabilitation of sanitary and storm sewer mains.
- Evaluation and test studies of in situ liners and protection systems for sewer mains and related structures.
- Evaluate service life of materials for original design and rehabilitation project.
- In situ corrosion monitoring.

Levelton's unique ability to combine talents through diverse, in-house expertise and laboratory facilities assures a high-quality, comprehensive team approach on all projects. We can call upon experts from all six of our practice groups; Materials Engineering, Materials and Corrosion, Environmental, Building Science, Geotechnical and Physical and Analytical Testing Services.

We respond to Client's needs and the requirements of the project. Our unique, multi-talented, integrated team makes us well qualified to manage municipal projects which often require a multi-disciplinary approach.

Levelton Consultants Ltd.

150 – 12791 Clarke Place Richmond, B.C. V6V 2H9  
Tel: 604.278.1411 Fax: 604.278.1042  
Email: info@levelton.com www.levelton.com