



# Building Envelope Services

SELECT PROJECT SHOWCASE

Empowering Trust<sup>®</sup>





## Project showcase

Our experienced and knowledgeable staff understand the science behind the built environment. Partners in the building materials and construction community — architects, manufacturers, contractors, consultants, building owners and regulatory authorities — trust UL for the knowledge and expertise we provide. Our testing services help ensure performance of building products, systems and structures, meet regulatory demands, and protect brand value.

Our team of highly specialized professionals operate out of global centers of excellence locations based in Chicago, Montreal, Toronto and England. We provide a wide range of services including:

- Laboratory Performance Mock-Up Testing
- Field Performance Testing
- Advisory Services
- Research and Design Testing
- Life Safety and Security Building Inspections

Discover our expansive portfolio of services through the following project highlights.

*Left picture: water penetration testing of windows, curtain walls and doors using dynamic pressure.*

# Interactive project showcase map

Click the bubbles below to view project details



**Location** Laboratory performance mock-up testing

**Location** Field performance testing

**Location** Advisory services

**Location** R&D

**Location** Life safety and security building inspections

# About laboratory performance mock-up testing

UL's dynamic team of highly specialized and experienced staff can test your curtain wall and façade mock-ups to the American Architectural Manufacturers Association (AAMA), ASTM, Centre for Window and Cladding Technology (CWCT) and European Standards (EN), as well as to project specifications.

We can test for extreme weather conditions ranging from air infiltration, water penetration (static and dynamic), wind loads and impact testing.



Mock-up  
Testing

# Laboratory performance mock-up testing



## Arsenal Stadium

London, England

Service: Performance Mock-Up Testing

Test Method: ASTM and AAMA

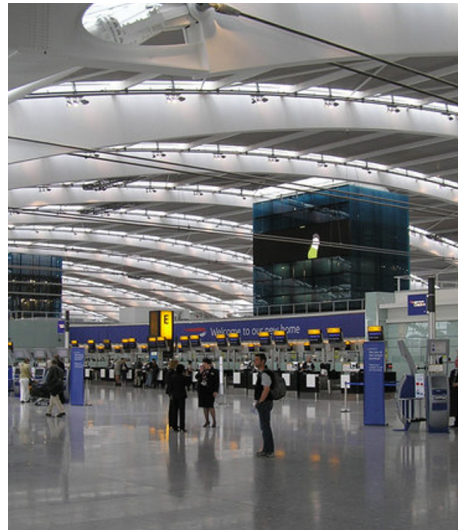
Laboratory: Telford, England

Building type: Stadium

Architect: Populous

UL's client: Parry Bowen Ltd

UL project completed: 2006



## Heathrow Terminal 5

London, England

Service: Performance Mock-Up Testing

Test method: CWCT Sequence B

Laboratory: Telford, England

Building type: Airport

Architect: Richard Rogers

UL's client: Hathaway

UL project completed: 2007



## Bullring Shopping Centre

Birmingham, England

Service: Performance Mock-Up Testing

Test method: CWCT TN75, CWCT TN76

Laboratory: Telford, England

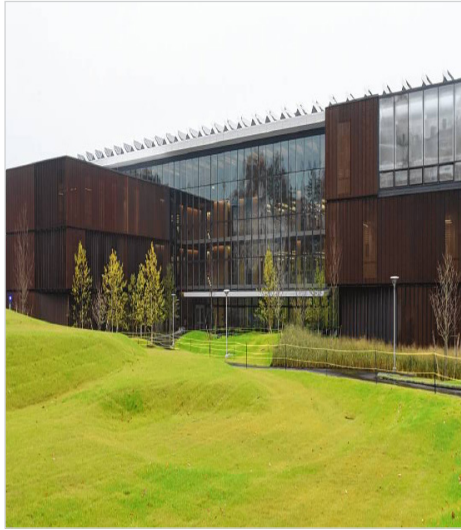
Building type: Shopping Center

Architect: Future Systems

UL's client: Laing

UL project completed: 2007

# Laboratory performance mock-up testing



## **Amherst College Science Building**

Amherst, Massachusetts, USA

Service: Performance Mock-Up Testing

Test Method: AAMA 501 (as applicable)

Laboratory: Chicago, Illinois

Building type: School

Architect: Payette

UL's client: Novum Structures LLC

UL project completed: 2017



## **Essex on the Park**

Chicago, Illinois, USA

Service: Performance Mock-Up Testing

Test Method: AAMA 501 (as applicable)

Laboratory: Chicago, Illinois

Building type: Residential

Architect: Heartshorne Plunkard

UL's client: Power Construction Chicago Heights Glass

UL project completed: 2017



## **Hoxton Hotel**

Chicago, Illinois, USA

Service: Performance Mock-Up Testing

Test method: AAMA 501 (as applicable)

Laboratory: Chicago, Illinois

Building type: Hotel

Architect: Adjmi Architects and Chicago's GREC Architects

UL's client: Power Construction, Northern Glass

UL project completed: 2018

# Laboratory performance mock-up testing



## Queens Plaza Park (Sven)

Queens, New York

Service: Performance Mock-Up Testing

Test Method:

Laboratory: Varennes, Quebec

Building type: Residential

Architect: Studio Gang with executive architect Hill West

UL's client: BPD L Precast Concrete

UL project completed: 2019



## One Vanderbilt

New York City, New York, USA

Service: Performance Mock-Up Testing

Test Method: AAMA 501 (as applicable)

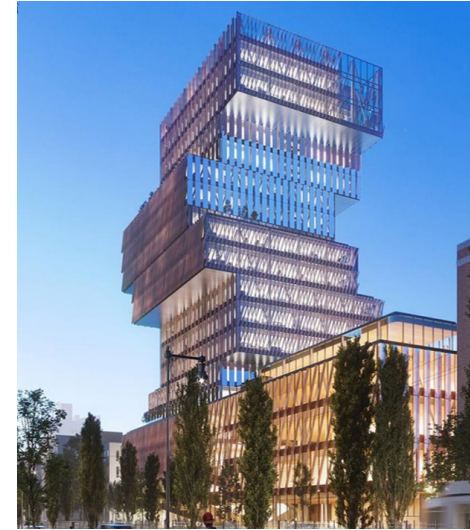
Laboratory: Varennes, Quebec

Building type: Skyscraper

Architect: Kohn Pedersen Fox

UL's client: Hines

UL project completed: 2017



## Boston University Data Science Building

Boston, Massachusetts, USA

Service: Performance Mock-Up Testing

Test method: AAMA 501 (as applicable)

Laboratory: Toronto, Ontario

Building type: Office/Education

Architect: KPMB Architects

UL's client: Ferguson Neudorf Glass Inc.

UL project completed: 2020

# Laboratory performance mock-up testing



## University of Oregon

Eugene, Oregon, USA

Service: Performance Mock-Up Testing

Test Method: AAMA 501 (as applicable)

Laboratory: Toronto, Ontario

Building type: Office / Education

Architect: BORA / Ennead

UL's client: Ferguson Neudorf Glass Inc.

UL project completed: 2019



## 450 S Main Street

Seattle, Washington, USA

Service: Performance Mock-Up Testing

Test method: AAMA 501 (as applicable)

Laboratory: Toronto, Ontario

Building type: Residential

Architect: KMD Architects Inc.

UL's client: BV Glazing Systems Ltd.

UL project completed: 2019



# About field performance testing

UL's full-service independent laboratories with field-testing experts in North America and England, conduct on-site assessments to determine compliance with American Architectural Manufacturers Association (AAMA), Centre for Window and Cladding Technology (CWCT), National House Building Council (NHBC), and other building requirement standards.

By conducting field tests, stakeholders mitigate risk and reduce unexpected costs associated with potential future performance issues. Field testing is an accurate and reliable tool for establishing trust in a new and existing building envelope system.



# Field performance testing



## **National Gallery of Canada** Ottawa, Ontario

Service: Field Performance Testing and Forensic Investigations

Test method: ASTM

Laboratory: Ottawa, Ontario

Building type: National Art Gallery

Architect: Moshe Safdie

UL's client: National Gallery of Canada

UL project completed: On-call understanding offer for ongoing provision of services.



## **Parliamentary Precinct | West Block** Ottawa, Canada

Service: Field Performance Testing

Test method: ASTM

Laboratory: Montreal, Quebec

Building type: Government

Architect: Arcop/FGMA

UL's client: seele

UL project completed: 2018



## **Olympic Stadium** Montreal, Quebec, Canada

Service: Field Performance Testing

Test method: ASTM

Laboratory: Montreal, Quebec

Building type: Stadium

Architect: Provencher Roy

UL's client: Vitreco

UL project completed: 2016

# Field performance testing



## **Thomas Waters Elementary School**

Chicago, Illinois USA

Service: Field Performance Testing

Test method: ASTM

Laboratory: Chicago, Illinois

Building type: School

UL's client: IG Commercial

UL project completed: 2020



## **Bailey Hall – Illinois Institute of Technology**

Chicago, Illinois USA

Service: Field Performance Testing

Test method: ASTM

Laboratory: Chicago, Illinois

Building type: School

Architect: Corvias, Gilbane, Dirksen

UL's client: IG Commercial

UL project completed: 2020



## **Battersea Power Station**

London, England

Service: Field Performance Testing

Test method: CWCT Section 9

Laboratory: Telford, England

Building type: Commercial and residential

Architect: Rafael Vinoly Architects,  
Ian Simpson Architects, dRMM

UL's client: Cantifix, seele GmbH, Thorpe  
Precast, Permasteelista (England)  
Ltd, Martifer

UL project completed: Ongoing

# About advisory services

UL's building envelope advisory services include technical assessments and construction commissioning services. Building owners and managers can rely on comprehensive information on the condition of the building envelope, future performance expectations and solutions to maintain acceptable performance for an extended service life.



# Advisory services



**Olympic Stadium**  
Montreal, Canada

Service: Advisory Services  
Laboratory: Montreal, Canada  
Building type: Stadium  
Architect: Provencher-Roy  
UL's client: Regie des installations  
Olympiques  
UL project completed: 2018



**Bank of Canada Headquarters**  
Ottawa, Canada

Service: Advisory Services  
Laboratory: Ottawa, Ontario  
Building type: Office  
Architect: Arthur Erickson  
UL's client: Bank of Canada  
UL project completed: 2009



**Canadian War Museum**  
Ottawa, Canada

Service: Advisory Services  
Laboratory: Ottawa, Ontario  
Building type: Museum  
Architect: Moriyama & Teshima Architects  
UL's client: Canadian War Museum  
UL project completed: on-going

# Advisory services



## **Musee Des Beaux Arts**

Quebec, Canada

Service: Advisory Services

Laboratory: Varennes, Quebec

Building type: Museum

Architect: Provencher Roy & Associes  
Architectes

UL client: Provencher Roy & Associes  
Architectes

UL project completed: 2016



## **Isabella Stewart Gardner Museum**

Chicago, Illinois, USA

Service: Advisory Services

Laboratory: Northbrook, Illinois

Building type: Museum

UL's client: Isabella Stewart Gardner Museum

UL project completed: 2013

# About research and development testing

UL understands that some custom-made systems, which are purpose built for specific projects, may require a higher level of testing during the development stage. Sometimes the testing required is outside the parameters of existing test methods. When this happens, we work with customers to test these systems to an agreed upon and customized testing plan.

The test plans are often based on existing test standards and are used to detect potential errors with the design of custom-made systems. This helps ensure the systems meet their project requirements.



# R&D testing



## **Etihad Stadium, Manchester City FC** Manchester, England

Service: Quality Assurance

Test Type: Dynamic Weather Test based  
on CWCT guidance

Laboratory: Telford England

Building type: Football Stadium

Architect: Arup

UL's client: John Laing

UL project completed: 2000



# About life safety and security building inspections

UL has the expertise to assist you in optimizing the compliance of your building's life safety systems to international code requirements. Our menu of services covers the life cycle of the building, including building inspection, precommissioning, training, and annual life safety reviews; as well as a review and assessment of building security needs.

UL understands complex construction requirements across the globe, and we customize services to meet customer needs.



# Life safety and security building inspections



## **Kempinski Grand Hotel Des Bains**

St Moritz, Switzerland

Service: Building Inspections

Test method: BIP

Office: Chicago, Illinois

Building type: Hotel

UL's client: Kempinski

UL project completed: 2019



## **Kempinski Marza Malaz**

Doha, Qatar

Service: Life Safety and Security Building Inspections

Test method: BIP NFPA 1, 10, 25,72,101, 708

Office: Chicago, Illinois

Building type: Hotel

UL's client: Kempinski

UL project completed: 2019



## **Burj Rafal Hotel Kempinski**

Riyadh, Saudi Arabia

Service: Life Safety and Security Building Inspections

Test method: BIP NFPA 1, 10, 25,72,101, 708

Office: Chicago, Illinois

Building type: Hotel

UL's client: Kempinski

UL project completed: 2019

# Life safety and security building inspections



## **Kempinski Hotel Mokika22**

St. Petersburg, Russia

Service: Life Safety and Security Building Inspections

Test method: BIP NFPA 1, 10, 25,72,101, 708

Office: Chicago, IL

Building type: Hotel

UL's client: Kempinski

UL project completed: 2019

To know more visit  
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[BuildingEnvelopeQuote@ul.com](mailto:BuildingEnvelopeQuote@ul.com)





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