VERIFIED HEALTHY BUILDING

Helping to Ensure Healthy Indoor Environments

An Independent Partner for the Real Estate Industry

Empowering Trust®

Provide Science-Driven Reassurance for Tenants and Occupants

More than ever, property professionals need to demonstrate a commitment to indoor environmental health to secure and retain high-value tenants. Real estate leaders are taking strides to improve indoor environments, facilitate occupant comfort, health and wellness, secure more advantageous rental premiums and reduce tenant turnover.

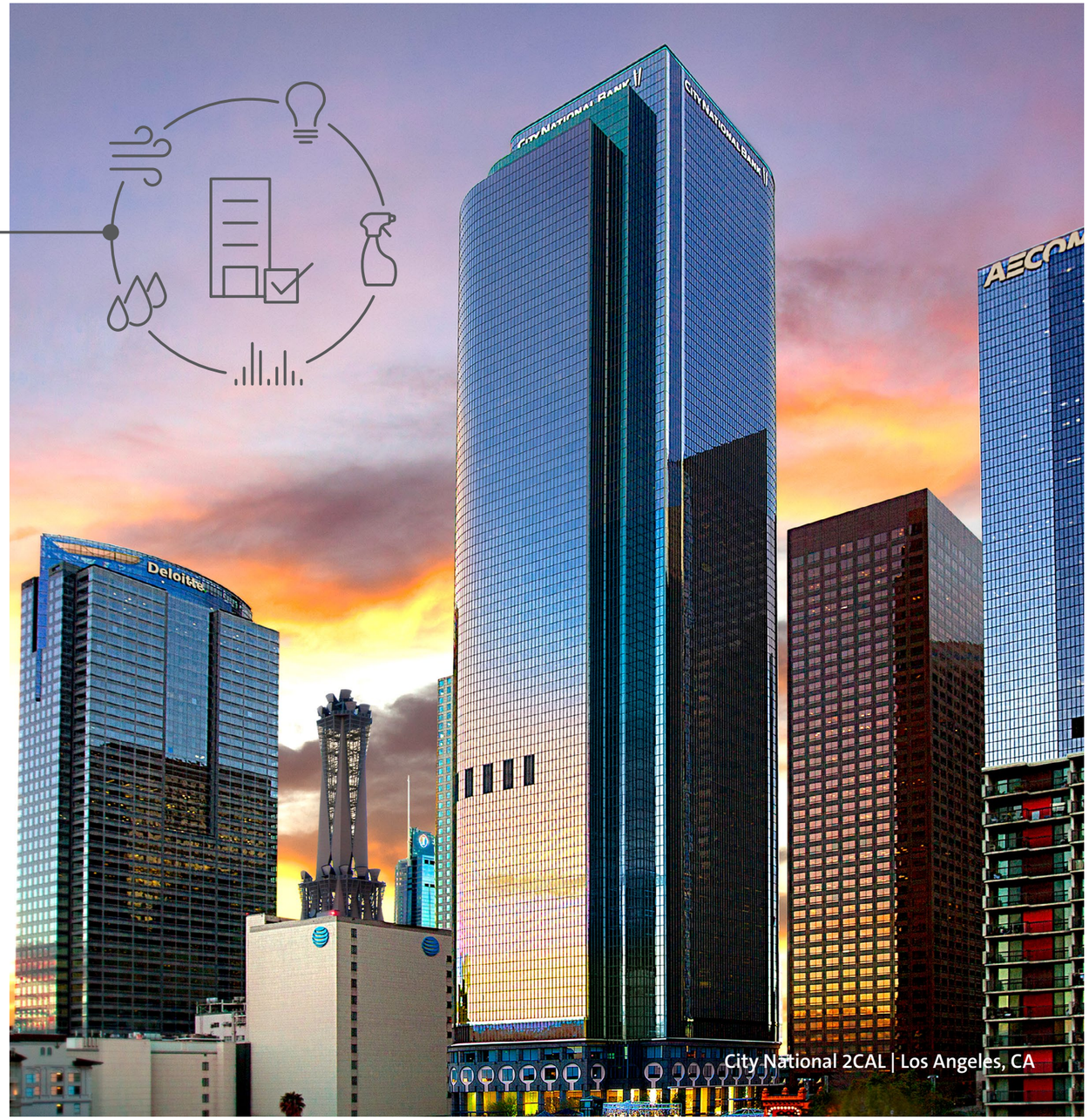
UL's Verified Healthy Building program offers the real estate industry an independent source of reassurance from a respected safety science leader. This program leverages 40 years of indoor environment inspections to develop a quantitative review process driven by:

- Building metrics discerned through performance testing
- Comprehensive on-site visual inspections
- Verification of the implementation of policies

Read on to learn more about our process and review select projects.

In a recent survey, MIT's Real Estate Innovation Lab found that certified and registered "healthy buildings" command rents of 4-7.7% more per square foot than buildings without this distinction.

MIT Real Estate Innovation Lab. (2020). "The Financial Impact of Healthy Buildings." https://realestateinnovationlab.mit.edu/research_article/the-financial-impact-of-healthy-buildings/



City National 2CAL | Los Angeles, CA

Benefits Tailored for Your Built Environment

Commercial and Corporate Real Estate

With UL's Verified Healthy Building program, owners and managers can show dedication to a work environment that prioritizes health, well-being and productivity. Feel confident that your building's healthy environment can improve employee and occupant performance while increasing your building's value and returns for stakeholders.

Hospitality

Employees and guests deserve a clear commitment to a healthy indoor environment. Our programs evaluate quality and cleanliness across various hospitality settings to provide your team with an optimal setting for rest and relaxation backed by third-party verification from UL.

Manufacturing

Specialized production environments feature industry-specific challenges regarding indoor environment management on a factory floor or office setting. Pollution control strategies are required to manage the needs of equipment, ingredients, components or chemicals.

Our program may help reduce risks in the manufacturing area and improve the environmental quality of adjacent office spaces, which can also lead to improved productivity.

87% of *real estate investors* report **INCREASED DEMAND** for **healthy buildings** during 2019-2020, and **92%** expect the demand to **GROW OVER THE NEXT THREE YEARS.**

BentallGreenOak, Center for Active Design and United Nations Environment Programme Finance Initiative. (2021). A New Investor Consensus: The Rising Demand for Healthy Buildings. https://www.fitwel.org/new-investor-consensus/

Addressing the Indoor Environment with a Holistic, Multifaceted Approach

MetLife Building, 200 Park Avenue | New York, NY

From a wealth of experience working with the real estate industry, UL professionals understand that building owners, managers and occupants need a flexible set of program options that fit each customer's needs. The Verified Healthy Building program features three tiers that examine different factors against accepted science-centric standards.

1 Verified Healthy Building for Indoor Air

This program option evaluates indoor air quality (IAQ), as well as policies and plans for the continual advancement of IAQ. UL teams inspect HVAC systems to verify that preventative maintenance is performed while focusing on ventilation, filtration and hygiene to help ensure continuous, excellent IAQ.

2 Verified Healthy Building for Indoor Air and Water

This program evaluates buildings for IAQ and water quality. This includes a detailed assessment to limit the risk of waterborne pathogens and testing for contaminants as outlined by the Environmental Protection Agency's (EPA) drinking water standards to help ensure water is safe for consumption.

UL teams work with building stakeholders to develop a water management plan to aid in the control of Legionella and other bacteria in cooling towers and potable water systems.

3 Verified Healthy Building for Indoor Environment

This is the most holistic look at a building's indoor environment, assessing IAQ and water quality as well as building cleanliness, lighting and acoustics. This selection also helps ensure that policies and plans have been developed and enacted to support the continual advancement of overall indoor environmental quality (IEQ).


Chrysler Building | New York, NY

Key Performance Assessment Areas

UL's Approach to Assessing Your Built Environment

Indoor air
Our program measures relevant air quality factors throughout the building. Specific measurements include the following factors that impact the health and safety of occupants:

- Temperature and humidity
- Carbon dioxide
- Volatile Organic Compounds (VOCs) and formaldehyde from building pollutants, such as cleaning products and off gassing from building materials, furnishings and personal effects
- Particulate levels
- Combustion gasses, carbon monoxide, nitrogen dioxide and sulfur dioxide related to cooking, vehicle exhaust and pollution
- Ozone a pollutant related to smog

Additionally, a thorough qualitative inspection of the HVAC system focusing on ventilation, filtration and hygiene provides a predictive analysis helpful in maintaining good indoor air quality over time.

Water
This assessment focuses on overall optimal water quality:

- Develop a site-specific water management plan that includes guidance on Legionella risk reduction and procedures for maintaining a building's water systems during times of low occupancy
- Measure representative assets in the building's potable water system to evaluate if the water meets the EPA's primary standards for drinking water, including heavy metals and bacteria
- Sample for Legionella in high-risk assets such as cooling towers and decorative fountains

Hygiene
The cleanliness of a building is one of the most important visual aspects to tenants and occupants. Our team assesses the performance of your janitorial program to support occupant health and well-being, such as the cleaning of high-touch surfaces and overall building cleanliness.

Acoustics
This assessment area measures background noise of the building's fundamental mechanical systems to find excessive noise levels that may deter occupants' ability to concentrate in working environments.

Lighting
This area focuses on lighting for safety and comfort:

- Analyze adequate lighting in common areas to facilitate safe egress
- Identify fixtures with issues, such as flickering, that may affect visibility and impact comfort for occupants


1600 Market Street | Philadelphia, PA

Kelley King Photography

Denver Place | Denver, CO

Critical evaluation criteria for indoor environments

- Indoor air quality
- Water quality
- Hygiene
- Lighting
- Acoustics

How It Works

Details on Inspection and Verification

On-site inspections typically take between one and five days. Upon completion, a UL representative works with building teams to complete an evaluation and document corrective actions.

Indoor Air (Tier 1)
Indoor air quality testing of representative areas on each floor, including:

- Carbon dioxide
- Fine particulate matter (PM2.5)
- Total volatile organic compounds (TVOC)
- Ozone
- Relative humidity
- Temperature
- Airflow
- And more

Visual inspection of the building and HVAC system, focusing on:

- Ventilation
- Filtration
- Hygiene

A cursory check for moisture intrusion and plumbing leaks via thermal imagery:

IAQ and HVAC inspections must be conducted twice a year for ongoing verification.

Indoor Air and Water Quality (Tier 2)
Testing areas include:

- ASHRAE Standard 188-compliant Legionella risk assessment of potable and utility water systems
- Water panel sample for key EPA primary and secondary water quality indicators, including E. coli and toxic metals from the domestic main and one other representative location per every 100,000 square feet
- IAQ and HVAC inspections must be conducted twice a year for ongoing verification.
- Water quality sampling must be conducted annually for ongoing verification.

Indoor Environment: Indoor Air, Water Quality, Hygiene, Lighting and Acoustics (Tier 3)
Testing areas include:

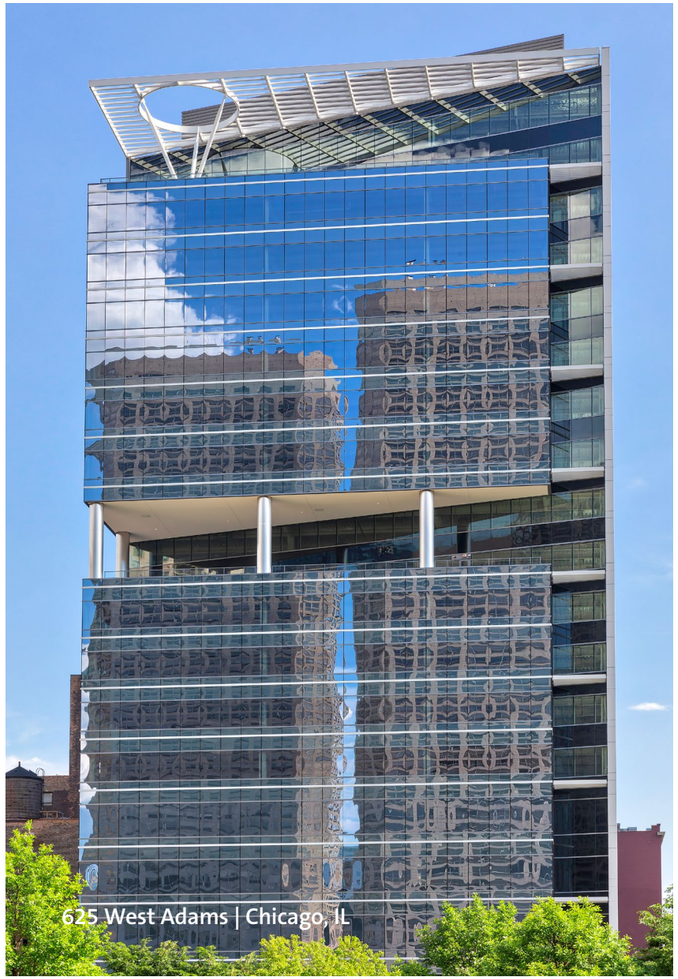
- Representative testing of background noise and light levels on each floor
- Evaluation of janitorial effectiveness via Adenosine Triphosphate (ATP) sampling
- IAQ and HVAC inspections must be conducted twice a year for ongoing verification.
- Water quality sampling must be conducted annually for ongoing verification.
- Acoustic, lighting and hygiene inspections must be conducted annually for ongoing verification.

Tiers are subject to change, depending on the needs of each industry segment. For full program details, please contact one of our UL representatives.

Plaza Tower | Costa Mesa, CA

Add to Your Existing Green Building Achievements

The Verified Healthy Building program is designed to work in tandem with the requirements of other green building programs to support a building's overall sustainability, health and wellness while not adding to an already intense regulatory workload.



625 West Adams | Chicago, IL

61% of *real estate investors* are using **HEALTHY BUILDING** CERTIFICATION PROGRAMS as a way to **showcase** *successful efforts* towards HEALTH AND WELLNESS, or to ***attract*** and ***retain*** tenants.

(BentallGreenOak, Center for Active Design, & United Nations Environment Programme Finance Initiative. (2021). A New Investor Consensus: The Rising Demand for Healthy Buildings. https://www.fitwel.org/new-investor-consensus/)

Here's how our programs overlap with certain markers for other third-party programs.

- **Building Research Establishment's Environmental Assessment Method (BREEAM)** – The UL Verification Mark provides required data for BREEAM In-Use for air and water quality assessments.
- **ENERGY STAR** – Program completion provides data for indoor environmental quality assessments to support ENERGY STAR submittal.
- **Fitwel and Fitwel Viral Response Module** – Meets compliance standards for both Fitwel and Fitwel Viral Response Module, indoor air quality testing and assessment requirements.
- **GRESB** – Counts towards the indicator for having an operational green building certification scheme. In the area of building certification, it covers policies on environmental and social issues.

Aligned with criteria from certification programs from third-party organizations such as:

- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
- Centers for Disease Control (CDC)
- Environmental Protection Agency (EPA)
- Leadership in Energy and Environmental Design (LEEDv4.1)
- National Institute for Occupational Safety and Health (NIOSH)
- World Health Organization (WHO)

- **LEED** – Includes data required for LEED operations and maintenance credits for v4.1 indoor air quality submittal.
- **WELL** – Includes data to contribute for WELL and WELL Health-Safety Program from ongoing air and water quality monitoring, mold and moisture management, and ongoing monitoring requirements for air and thermal comfort.

NBC Tower | Chicago, IL

Contact Us

UL's team of built environment experts look forward to working with you to evaluate your building. Through our science-based methodology and independent process, UL verification is a clear sign for new and existing tenants that your company is committed to a positive and productive environment today — and into the future.

To start the process or learn more about the distinct tiers and requirements, please visit UL.com/VHB.

Bank of America Plaza | Dallas, TX

UL.com

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