



# Building the Future of Data Centers

Roof to Foundation.  
Seamless Protection.



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# THE RISK

Architects design with precision to address complex challenges—fire safety, power redundancy, and security among them. **Even with thoughtful planning, moisture remains a stealth risk in data center performance.** From below-grade foundations to roof transitions, **managing water intrusion is essential to preventing outages, corrosion, and long-term operational issues.**



## The Reality Behind the Risk

**\$300,000**

per hour

average cost of  
downtime

**90%**

of water intrusion  
**originates** in the  
building envelope

**70-80%**

of commercial  
insurance claims are  
**water-related**

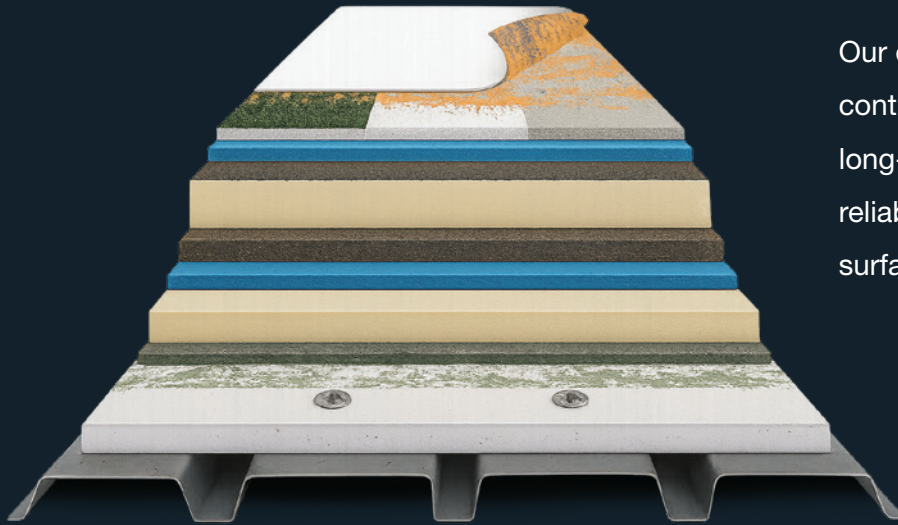
**80%**

of wind-related  
losses are tied to  
**compromised  
roofing systems**

<sup>1</sup> Uptime Institute's Annual Outage Analysis 2023. <sup>2</sup> U.S. Department of Energy. DOE Building America Best Practices Series, Volume 10 Link: [energy.gov](https://energy.gov). <sup>3</sup> Construction Industry Institute / Zurich Insurance – Risk Analysis of Building Failures

# Protecting Data Centers with Seamless, End-to-End Systems

Carlisle eliminates these weak points with integrated systems engineered to work together.



Our end-to-end approach ensures continuity, compatibility, and long-term protection — delivering reliable performance across every surface of the data center envelope.

## Integrated Design. Proven Performance.

- **Continuity of Protection** from roof to foundation
- **Compatibility** across roofing, waterproofing, sealants, and air barriers
- **Resilience at Critical Transitions** where 90% of failures occur
- **Long-Term Assurance** with comprehensive system warranties



# Solutions for Every Surface

From roof to foundation, Carlisle provides a complete portfolio of building envelope solutions designed for the unique challenges of data centers.

## Roofing Systems

### Single-Ply Membrane Solutions

Carlisle's single-ply systems deliver watertight performance, weather resistance, and long-term durability for critical facility roofing.

### Perimeter Edge Metal

Perimeter edge metal - fascia, coping, and water control - provides the first line of defense in inclement weather. Securing the edge with tested, code compliant, high-performance systems.

### Integrated Roof Assemblies

Engineered assemblies pair single-ply membranes with metal, insulation, adhesives, and cover boards to create a unified, high-performance system.



# Above-Grade Protection

## Air Barrier Systems

Meet rigorous air- and water-resistance standards to protect walls from moisture infiltration while improving building airtightness and energy performance.

## Continuous Insulation

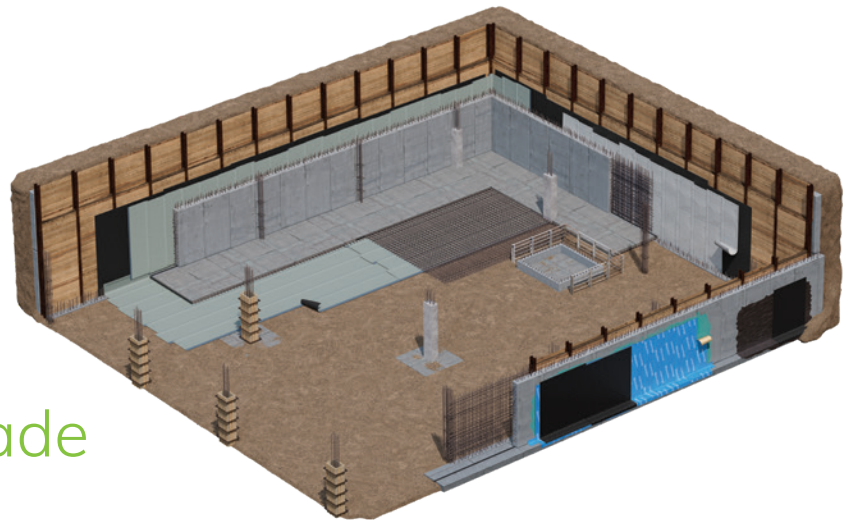
Optimizes thermal performance and simplifies attachment strategies for faster installation and consistent coverage across complex wall assemblies.

## Metal Wall Panels

Feature integrated cladding systems that provide long-term durability and visual appeal while maintaining continuity with underlying envelope components.

## Fluid-Applied Waterproofing Solutions

Deliver seamless, flexible protection ideal for complex conditions and tight access areas, ensuring continuous coverage and long-term performance.



# Below-Grade Protection

## Pre-Applied Solutions

Create a fully-bonded, watertight barrier against water intrusion at the slab and foundation wall.

## Post-Applied Systems

Provide dependable foundation wall waterproofing for new data centers and retrofits.

A photograph of the Carlisle Construction Materials building entrance. The building features a stone-clad upper section with the Carlisle logo and 'CONSTRUCTION MATERIALS' text. Below is a white portico with glass doors and windows. A concrete walkway leads to the entrance, flanked by parking signs. The image is overlaid with a semi-transparent dark blue filter.

**CARLISLE**  
CONSTRUCTION MATERIALS

## Partnership Beyond the Product

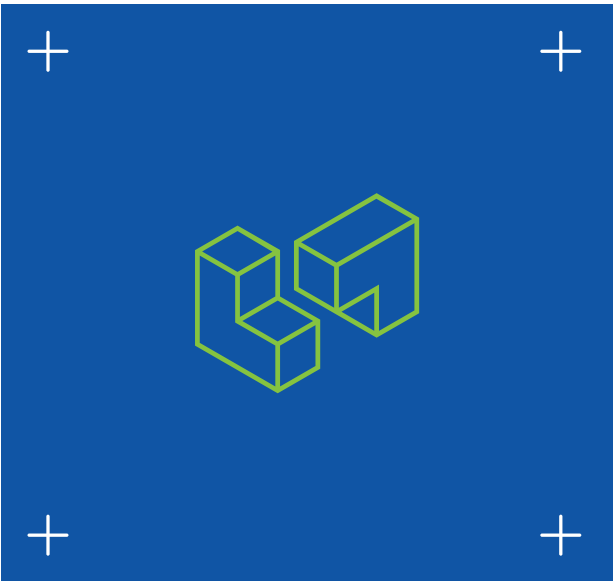
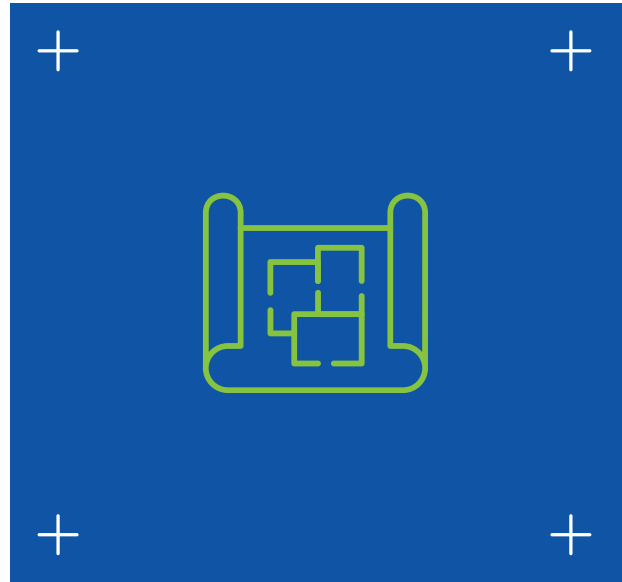
Carlisle doesn't just deliver systems—we deliver peace of mind. From early design through post-construction monitoring, our team empowers architects and owners to feel confident in every decision, informed by real data, and in control of every detail.

**Fully Integrated Building Envelope Systems. One-to-One Partnership.**

Our experts work directly with architects, contractors, and owners to ensure performance continuity throughout every stage of construction. From detailed specifications to onsite support, Carlisle helps ensure every layer performs as intended—today and for years to come.

## Design-Phase Consultations

- Specification Guidance
- Architectural Details
- Energy Modeling Analysis
- Integrated System Guidance
- Critical Tie-in Condition Evaluation
- Warranty Verification
- Roofing System & Tapered Insulation Design Assist



## Installation Support

- Shop Drawings
- Installer Training
- Jobsite Observations
- Submittals & Assembly Letters
- Roof Measurement
- Take Offs
- Comprehensive Bid Package

## Final Inspections

- Comprehensive System Review
- Leak Detection (optional)
- Moisture Scans (optional)



Let's Design Smarter Together.

Learn more about Carlisle's design and installation support services at [CarlisleDataCenters.com](http://CarlisleDataCenters.com)

# Built for Resilience. Designed for Sustainability.

Data centers consume massive amounts of energy. Carlisle solutions reduce operational loads and help projects meet sustainability standards while protecting against water intrusion.



**70%** of Carlisle's revenue comes from LEED-qualified products



High-performance insulation and air barriers **reduce thermal loads**



## Supporting long-term efficiency and environmental performance

**Supports** cooling system efficiency and stable server performance.

**Lowers** operational carbon footprint.

Features **recyclable and low-VOC** materials.

**Integrated systems** optimize energy performance across the entire envelope.

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# PERFORMANCE



## Built to Withstand the Harshest Conditions

### Feature Highlights:

- Warranties including 30+ year options, edge-to-edge warranty for membrane and metal, and lifetime wind coverage
- Resistance to moisture, chemicals, and thermal cycling
- Fast-cure formulations for project efficiency
- Puncture-, abrasion-, and UV-resistant membranes
- Compliance: FM Global, UL, ASTM, LEED, ICC-ES, ANSI/SPRI, Florida Product Approval, Miami Dade



“ These systems sound complex—and my contractor has never worked with them before. ”

↳ Carlisle supports your team before, during, and after the project with training, on-site support, and inspection.

“ What if something goes wrong after installation? ”

↳ Carlisle warranties provide industry-leading protection, including leak repair and active roof monitoring. ←



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Ready to design  
for uptime?

Let's protect your  
data center together.

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