Colorado Deck Drain Experts Launches Technical Educational Series on Regional Sub-Deck Moisture Mitigation Standards

September 02, 2026

BRIGHTON, CO - September 02, 2026 -
On September 2, 2026, Colorado Deck Drain Experts released a pair of technical white papers outlining moisture mitigation protocols for an under deck drainage system in Denver, CO, designed to align regional installation practices with the 2024 International Residential Code. Authored by Lead Technical Director John Miller, PE, and Senior Building Inspector Sarah Jenkins, the publications address how local freeze-thaw cycles impact sub-deck framing components across Front Range residential communities.

The first report, titled "Front Range Sub-Deck Hydrology and IRC Flashing Standards," presents empirical data collected from field inspections across 45 residential construction sites in the Denver metropolitan area between May 2024 and June 2026. The evaluation measures panel deflection rates, joint seal durability, and runoff capacity under ASTM D638 standards for high-altitude PVC and coated aluminum ceiling systems. The authors analyzed structural performance under simulated heavy rain loads and spring snow accumulation to establish baseline material tolerances.

"Standard residential building codes provide general guidance for exterior flashing, but they frequently lack specific criteria for enclosed under-deck ceiling spaces in high-altitude, semi-arid environments," stated John Miller, PE, co-author of the series. "Our team gathered field metrics to give regional contractors, architects, and municipal inspectors verifiable data and code-referenced installation guidelines tailored specifically to local climate challenges."

The second paper, titled "Structural Timber Longevity Under Variable Snowmelt Conditions," analyzes how sustained water diversion influences framing lumber integrity over an estimated ten-year exposure cycle. The report indicates that when properly designed, correctly installed, and regularly cleared of organic debris, an under deck drainage system in Denver, CO, can reduce continuous moisture contact along support joists. However, the report emphasizes that long-term rot prevention remains dependent on proper perimeter flashing, adequate sub-deck air ventilation, structural slope, and consistent ongoing maintenance.

The technical series also evaluates foundation protection measures, specifically addressing soil erosion management near concrete support footings and the environmental conditions required for mold formation along exterior rim joists. While effective water catchment systems reduce localized moisture accumulation near house foundations, the authors note that structural outcome depends heavily on site-specific factors such as soil expansion coefficients, overall lot grading, and gutter discharge capacity during high-intensity weather events.

Designed as technical reference guides for regional general contractors, structural engineering firms, and municipal building officials, the publications include detailed CAD schematics for integrating sub-deck catchment channels into existing municipal stormwater management frameworks. The research team utilized hydrologic flow modeling to evaluate minimum pitch slopes ranging from one-quarter inch to one-half inch per linear foot under varying spring runoff rates. The schematics demonstrate proper flashing attachment details for various house ledger connections and siding types.

Future installments in the planned quarterly publication series will cover recycled polymer composite performance, fastener corrosion rates in pressure-treated lumber, and closed-loop rainwater harvesting system integrations. Each upcoming module will undergo independent peer review by regional building science professionals before public release to ensure accuracy and objectivity.

Both initial white papers are available for immediate download through the Colorado Deck Drain Experts technical documentation repository. In conjunction with the publication release, the company will host a digital technical seminar on September 18, 2026, allowing regional building professionals to review the research methodologies and discuss field implementation strategies directly with the authors.

Colorado Deck Drain Experts is a Denver-based specialty contracting firm specializing in sub-deck drainage engineering and structural moisture control solutions for residential properties throughout the metropolitan region. Established in 2012, the firm provides technical consulting, system installation, and educational resources aligned with current regional building codes and environmental performance criteria.

Direct media inquiries, interview requests for technical contributors John Miller, PE, or Sarah Jenkins, and requests for complimentary copies of the full white papers with accompanying structural diagrams to the organization's public communications office. Communications representatives are available to provide technical documentation, additional field data, and expert commentary regarding residential moisture mitigation standards.

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