



TECHNICAL UPDATE

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FOOTWEAR AND WORKER SAFETY

Workplace safety remains a top priority for any county, especially in roles involving physical labor and exposure to outdoor conditions. The number of incidents, particularly among maintenance, road, and bridge workers, highlights the need for counties to have a comprehensive footwear policy. Implementing a policy based on job hazard assessments and environmental factors can reduce injury rates, decrease workers' compensation claims, and improve overall safety and productivity.

THE ROLE OF FOOTWEAR IN INJURY PREVENTION

Footwear is a critical component of personal protective equipment (PPE) for physically demanding roles. Work boots differ from "every day" boots in that they have a higher shaft to support the ankle, a slip-resistant sole, and a reinforced toe. For county workers, the right shoes can prevent common injuries like slips, trips, and falls that lead to sprains, fractures, and other musculoskeletal injuries.

Statistics consistently show that falls are among the leading causes of workplace injuries, especially in outdoor and maintenance roles. According to recent data from the Bureau of Labor Statistics, incidents involving slipping or tripping accounted for over 30% of injury claims filed by maintenance and road workers in the past year. These incidents resulted in significant time off work and increased insurance costs.

ASSESSING JOB HAZARDS OVER ENVIRONMENTAL CONDITIONS

A strong footwear policy for counties should prioritize job hazard assessments over just environmental conditions. For instance, while hazards like snow, rain, or ice are important, job-specific risks are equally critical. Maintenance workers lifting heavy equipment or navigating uneven terrain, and road and bridge workers frequently getting in and out of machinery, face high risks of slips and falls due to the demands of their roles.

To mitigate these risks, footwear should be chosen based on specific job tasks, such as:

- **Maintenance Workers:** Slip-resistant boots with ankle support and defined heels offer stability on slick surfaces. Safety toes and compression protection are recommended for high-hazard tasks.
- **Road and Bridge Workers:** A lace-up boot with ankle support and proper traction is critical for workers who frequently enter and exit heavy machinery on muddy or uneven ground.
- **Mine Workers:** Heavy-duty boots with enhanced traction, puncture-resistant, and safety toes protect against sharp objects and support work around heavy machinery and gravel pits.

Below are specific recommendations for shoe types based on the ground surface:

- **Stiff Rubber Soles:** Ideal for greasy concrete and wood surfaces.
- **Soft Rubber Soles:** Best for dry surfaces.
- **Crepe Soles:** Suitable for rough concrete, wet or dry.
- **Neoprene Soles:** Effective on most damp or dry surfaces.

RECOMMENDATIONS FOR ALL-SEASON FOOTWEAR

In Colorado, weather conditions vary significantly throughout the year, with snow and ice in winter and potential muddy or slippery conditions in other seasons. Selecting footwear that offers year-round protection is essential. All-season footwear should meet the following standards:

- 1. Slip-Resistance:** Boots should have slip-resistant soles to prevent falls on wet, icy, or slick surfaces. Look for outsoles with deep treads for better traction.
- 2. Ankle Support and Stability:** Boots should have built-in ankle support to prevent twisting injuries. This is especially beneficial for workers on uneven terrain or operating machinery.
- 3. Durability and Waterproofing:** Weather-resistant materials like leather with water-repellent treatments help prevent water penetration, maintaining comfort and safety in wet conditions.
- 4. Safety Toe:** Consider including a steel or composite safety toe in roles with a high risk of foot injuries (e.g., exposure to heavy equipment or materials).



WHAT THIS MEANS FOR COUNTIES

A comprehensive footwear policy that prioritizes job hazards and environmental conditions is an essential investment in worker safety. By mandating durable, supportive, and all-season-appropriate footwear as part of PPE standards, counties can help protect their workers, lower injury rates, and reduce workers' compensation claims. For questions, contact CTSI at (303) 861-0507.