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The Accessibility of Playground Loose Fill Wood Fiber

U.S. DOJ settlement agreement defines measurable firmness and stability for school play areas

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Engineered wood fiber (EWF) has long been the most commonly used ground surface material found in school play areas. A May 2020 U.S. Department of Justice settlement agreement with an Iowa school district, however, may have a far-reaching impact on the determination of the product as an accessible ADA-conforming play surface. The agreement establishes for the first time field-testing procedures and objective measurable criteria to determine if play area loose fill surfacing meets "firm and stable" requirements.

The Iowa City Community School District case began in 2017. Several families filed a federal complaint regarding non-complying ADA standards at 12 district elementary schools with play areas constructed or modified beginning in March 2012. The complaint included all aspects of the playgrounds, play equipment and paths of travel, including the engineered wood fiber product used in most of the district's more than 60 total play boxes.

The U.S. Dept. of Education's Office for Civil Rights (OCR) investigation took more than three years and concluded that all evaluated play areas contained non-compliant elements. The ensuing USDOJ voluntary compliance agreement with the Iowa City school district now stipulates that ongoing monitoring, testing and EWF installation practices are required to meet all ADA requirements, including for accessible routes. https://www.ada.gov/iccsd_sa.html

Both state and federal accessibility building standards require that accessible routes, including those within play areas, are "firm, stable and slip resistant." However, the 2010 Americans with Disabilities Act (ADA) standards and California Building Code (CBC) Chapter 11B requirements have not defined measurable standards for what constitutes ground surface firmness and stability. A USDOJ Advisory statement refers to a firm surface as one that "resists deformation by either indentations or particles moving on its surface."

The precedent-setting Iowa City agreement establishes for the first time a methodology to measure ground surface "firmness" and "stability" in the field post installation. A portable device, known as a rotational penetrometer, measures the vertical displacement of a surface with an instrumented spring-loaded wheelchair caster. The wheel measures the allowable indentation depths with the wheel straight down (max 0.5" indent) and with the wheel turned from side to side (max 1.0" indent) to determine surface firmness and stability respectively.

Play area accessibility complaints have seen an uptick in recent years. Most focus on the usability of EWF-surfaced play areas by students with mobility impairments. Family complaints commonly start at an individual school or district administration level, but referral to the U.S. Dept. of Education's OCR office is possible at any time during the process. Northern California has seen many of these play area cases, including a recent significant OCR case that helped establish the basis for the Iowa City agreement.

The most likely outcome and impact of Iowa City is that future OCR play area accessibility complaint investigations will include rotational penetrometer field testing. The newly established measurable standards will provide a more definitive Pass/Fail ASTM F1951 compliance determination.

Loose fill wood fiber installation methods and ongoing maintenance practices play a critical role in ensuring that the material meets both safety impact attenuation (ASTM F1292) and accessibility requirements. The layered "wet-and-compact" technique knits the loose fill wood fiber material together to improve the surface firmness and stability.

SIA recommends that member organizations consider these recent developments when evaluating their school playground programs and future new construction and alteration projects.

Contact SIA for more information on this complex issue or assistance with play area pre-project planning and design review. SIA also offers a Playground Inspections for Safety and Accessibility in-class or field training at your own schools.