

# What I Learned on the Playground that Helped Me In School



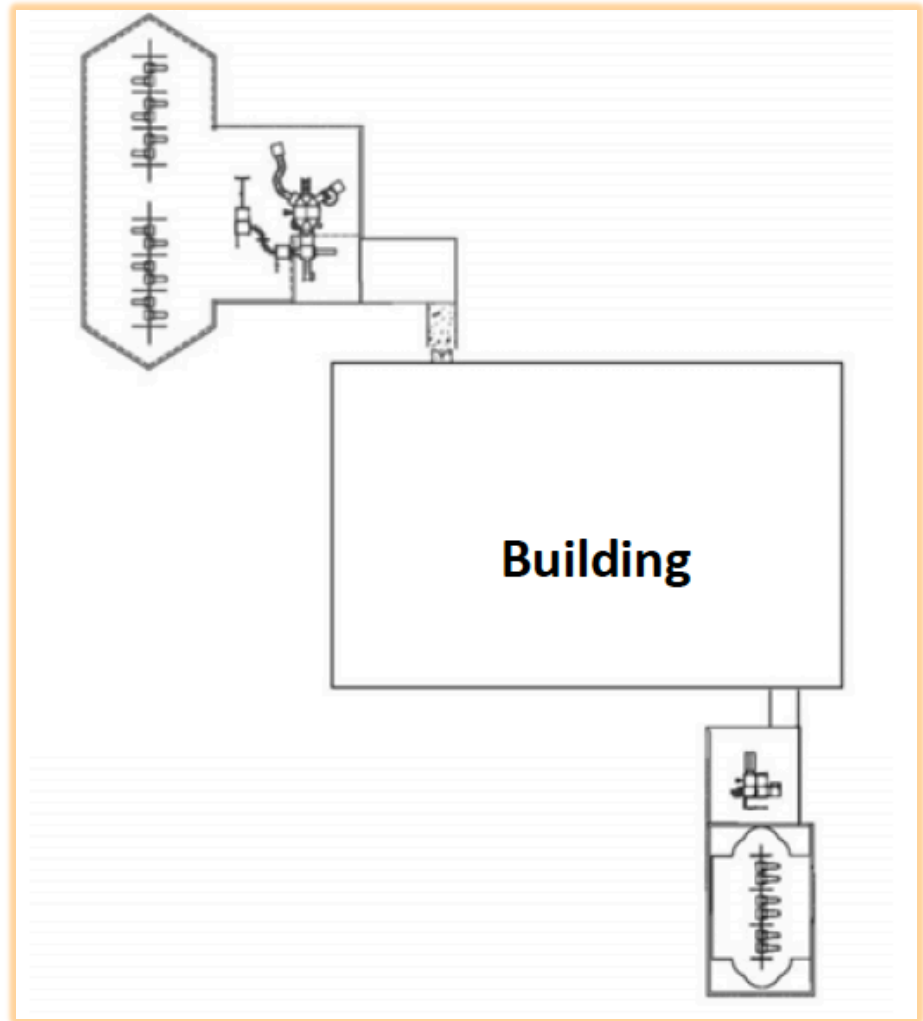
Pete Biaggio, NDE SPED Office  
Lilly Blase, SPED ADA Specialist,  
Assistive Technology Partnership  
Kristine Luebbe, NDE Early Childhood Office



# Accessible Play = Inclusive Play

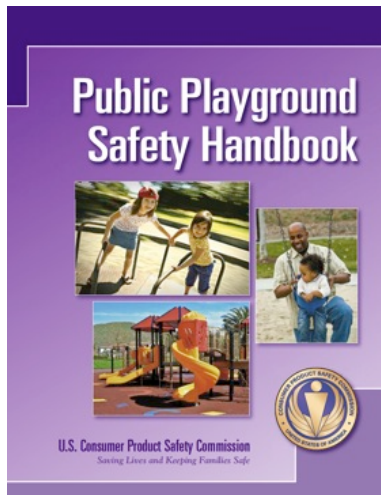
## Agenda

- **ADA Play Equipment**
- **ADA Accessible Surfacing**
- **Early Childhood Play Areas**
- **ADA Facility Modifications**



Geographically Separated Play Areas

# Standards

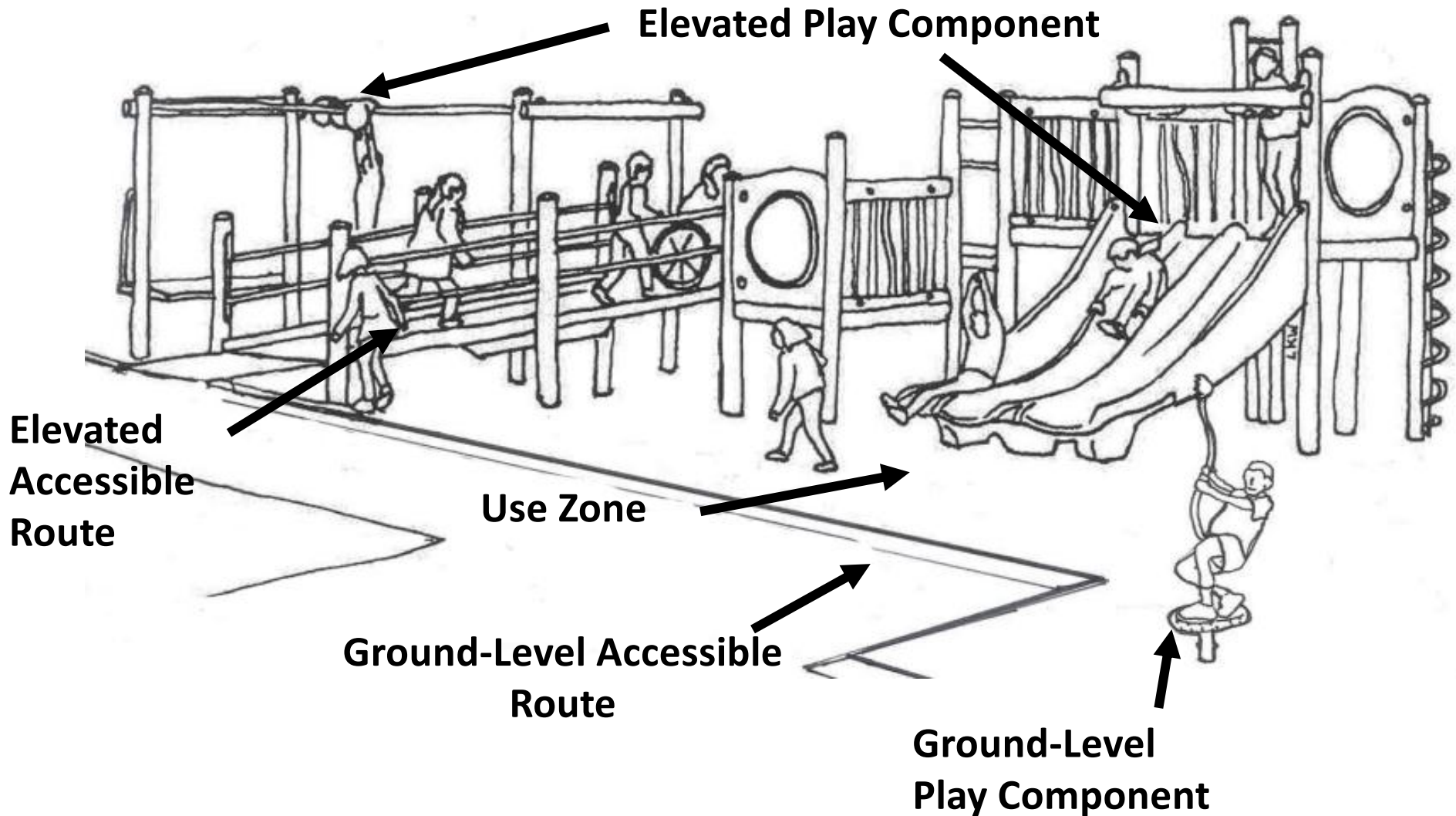


- ASTM is the American Society for Testing & Materials
- U.S. Consumer Product Safety Commission (CPSC) Public Playground Safety Handbook #325
- ADA, ECERS & the CPSC reference ASTM
- ASTM has standards for play equipment & play surfaces



This playset **DOES NOT** meet ASTM F1487 public use play equipment.

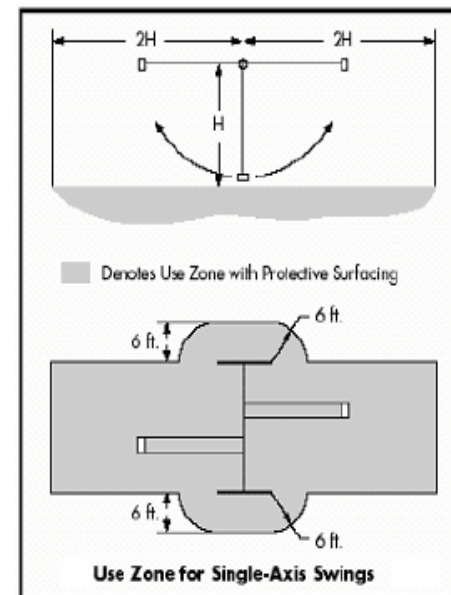
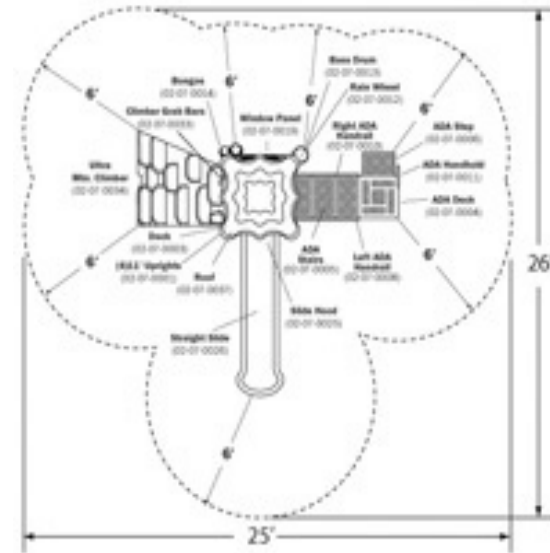
# Play Area Terms





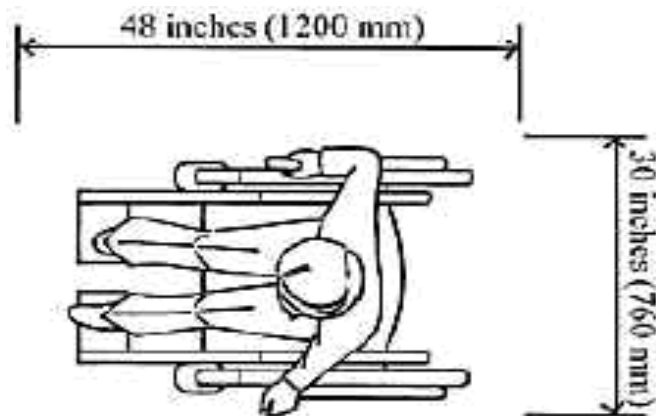
# Use Zones = Fall Zones

- Same thing!
- USE ZONE – Ground level area beneath & immediately adjacent to a play structure or piece of equipment that is designated for unrestricted circulation around the equipment
- It is predicted that a user would fall & land or exit the equipment on the surface of the use zone
- Minimum 6' or height of equipment if higher
- Swing use zone is 2x the pivot point height both in front & in back with 6' from perimeter of supporting structure
- Can not overlap use zones



# Clear Floor or Ground Space & Reach Ranges

- 30" x 48" min. wheelchair footprint
- Applies to ground-level & elevated components accessed by ramp
- 3 – 4 yrs: 20" – 36"
- 5 – 8 yrs: 18" – 40"
- 9 – 12 yrs: 16" – 44"



# What is a Play Component?

A play component is an element designed to generate specific opportunities for play, socialization, & learning.





# Play Types -

*Identified by the experience  
the play component generally  
is designed to provide*



**Spinning**

Plastic slides may cause static (ESD) to cochlear implants, may need a metal slide



**Climbing**



**Sliding**



**Rocking**



**Swinging**

# Ground level play components

- **Approached & exited at ground level**
- **Provide an accessible one of each type**





# Play Tables

**For ages 5 years old and over:**

- **Knee clearance minimums**
  - 24” high
  - 30” wide
  - 17” deep
- **Top of rim 31 in. max**

**Under age 5:**

- **May provide parallel approach**





# Swing Types



- Follow swing use zone requirements
- Place in same area as standard belt seat swings
- Provide 30" x 48" min. clear ground space for transfer
- Abilities of students



# Elevated play components

- Approached from elevated level
- Attached to composite play structure





# Minimum Number of Elevated Components

50% of all elevated play components in a play area must be reached by an accessible route



20 or more elevated components:  
25 % ramp + 25% ramp and/or transfer = 50%



Less than 20 elevated components:  
ramp and/or transfer = 50%

# Elevated Accessible Routes

- **Transfer Systems**



- **Ramps**





# Transfer Supports



**A means of support must be provided**

# Transfer Platform



*Where it is expected that an individual would transfer onto the play structure and leave behind their wheelchair or mobility device*

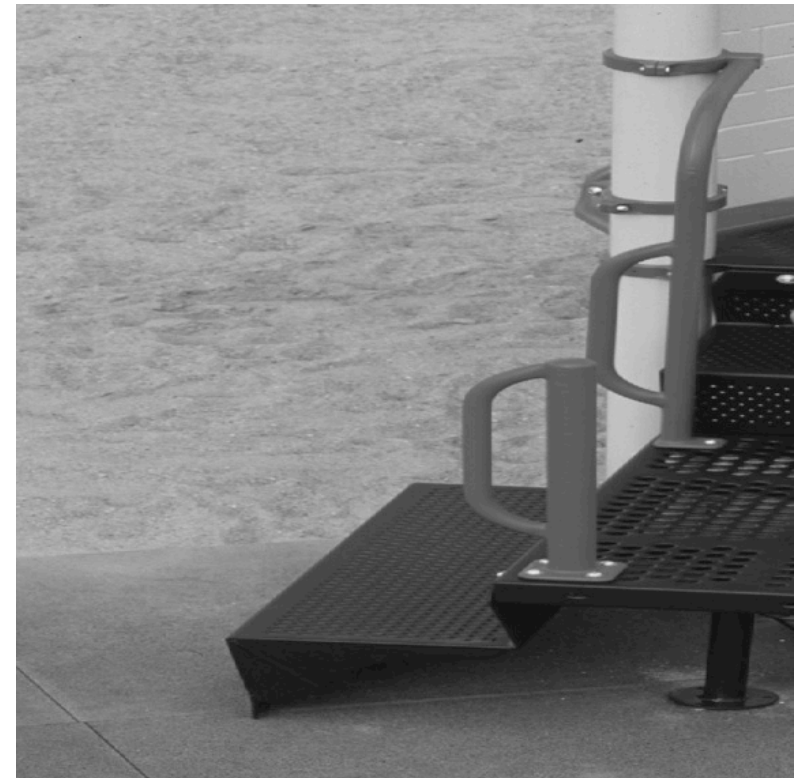
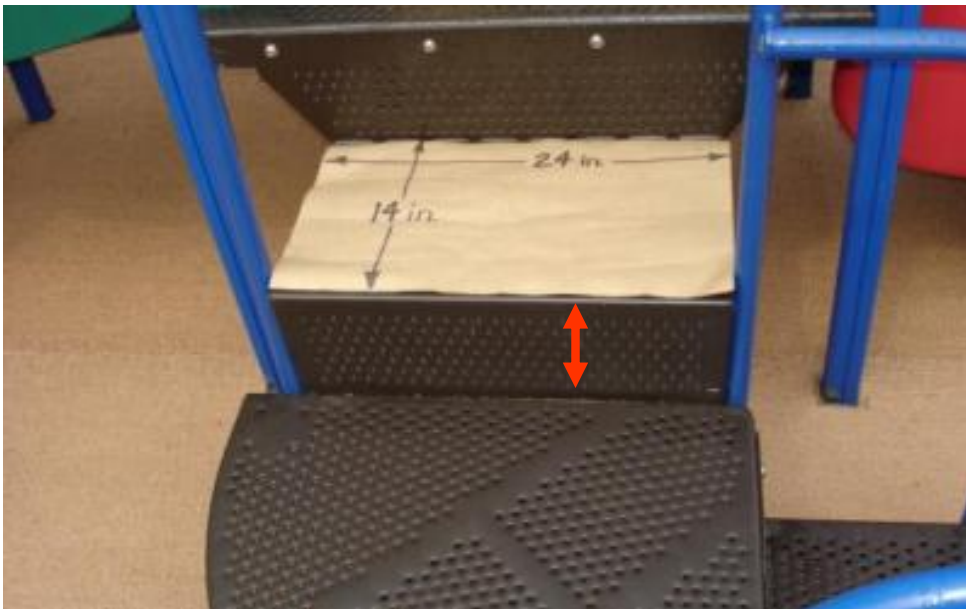
- **14" deep X 24" wide minimum**
- **11– 18" above ground surface**
- **24" side to be unobstructed**





# Transfer Steps

- 14" deep by 24" wide minimum
- 8" maximum height



# Ramps

- 36" minimum clear width
- May reduce to 32" width for 24" to accommodate composite structure features
- Exceed where possible, two way traffic is great
- Maximum ramp running slope 1:12
- Continuous handrails full length of ramp 20" – 28" above ramp surface
- 60" turning space at landings



# Ground Level Accessible Routes

- 60" accessible route from school building to enter & exit play area
- Permitted to narrow to 36" for 60" distance to go by a tree or other feature
- Accessible route provides access within the play area
- Running Slope maximum 1:16 to accommodate ground level terrain
- Cross Slope must not be steeper than 1:48
- May use unitary surface in accessible areas & loose fill in reminder, however must maintain level & sweep off unitary surface





# Surfaces in the Play Area



**Accessible ground surfaces must comply with ASTM F1951-99**



**Includes accessible routes, clear ground spaces & turning spaces**

# Surfaces in the Use Zone

If located within the use zone, the accessible ground surfaces must also be impact attenuating (ASTM F1292-99)





# Surface inspection & maintenance

Accessible ground surfaces must be inspected & maintained regularly & frequently to ensure continued compliance with ASTM 1951-99.

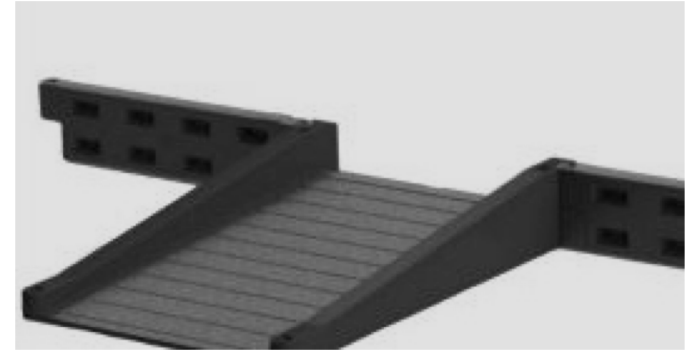




# Surface Transition



Flush with access route



Border with half ramp



Bevel ramp from access route



Dual surface failure



Border with full ramp

# ASTM Lab Surface Testing



- ASTM lab test was originally intended as a interim step before a field test

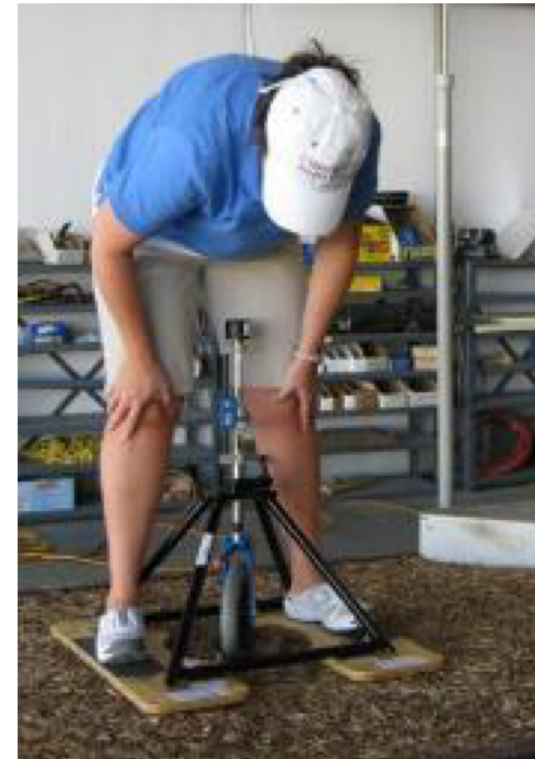


- Many variables not measured, i.e. how installed, location, drainage, use patterns, climate

# Field Testing Study



ASTM F1292 Impact  
Attenuation with a TRIAX



ASTM F1951 Surface Access  
Wheelchair Work Force with  
Rotational Penetrometer





*Longitudinal Assessment*

# NCA Playground Surface Study



Rubber tiles, Poured In Place (PIP), Engineered Wood Fiber (EWF), Hybrids – artificial turf, PEM matting, outdoor carpet systems.

\* Loose fill crumb rubber manufacturers' declined all invitations to join study

# US Dept. of Education OCR Complaint

US Dept. of Office of Civil Rights first Section 504 ADA complaint of its kind alleging an elementary school playgrounds not accessible.

EWf surface not regularly & frequently maintained.

St. Johns County School District sent a 13 page letter & entered into a resolution agreement with OCR.

District given deadline to develop written maintenance plan for playgrounds & make playgrounds available for onsite inspection.



UNITED STATES DEPARTMENT OF EDUCATION  
OFFICE FOR CIVIL RIGHTS, REGION IV  
61 FORSYTH ST., SOUTHWEST, SUITE 19170  
ATLANTA, GA 30303-8927

REGION IV  
ALABAMA  
FLORIDA  
GEORGIA  
TENNESSEE

October 17, 2013

Dr. Joseph Joyner  
Superintendent  
St. Johns County School District  
40 Orange Street  
St. Augustine, Florida 32084-3693

Re: Complaint #04-13-1269

Dear Dr. Joyner:

The U.S. Department of Education (Department), Office for Civil Rights (OCR), has completed its investigation of the above-referenced complaint filed on April 9, 2013 against the St Johns County School District (District), alleging discrimination on the basis of disability. Specifically, the Complainant alleged that the playgrounds at Cunningham Creek Elementary School (School) are not accessible to students with mobility impairments.

As a recipient of Federal financial assistance from the Department and a public entity, the District is subject to Section 504 of the Rehabilitation Act of 1973 (Section 504), as amended, 29 U.S.C. § 794, and its implementing regulation at 34 C.F.R. Part 104, and Title II of the Americans with Disabilities Act of 1990 (Title II), as amended, 42 U.S.C. §§ 12131 *et seq.*, and its implementing regulation, 28 C.F.R. Part 35. Accordingly, OCR has jurisdiction over this complaint.

OCR investigated the following legal issue:

- Whether the School's playgrounds are inaccessible to or unusable by individuals with mobility impairments in noncompliance with the Section 504 implementing regulation at 34 C.F.R. §§ 104.21-104.23, and the Title II implementing regulation at 28 C.F.R. §§ 35.149-35.151.

In reaching its determination, OCR conducted an on-site accessibility review of 4 playgrounds, analyzed documents pertinent to the complaint issue and conducted interviews with the Complainant, the School's Maintenance Manager, the District's Executive Director for Facilities and New Construction, and the District's Building Code Administrator. OCR evaluates evidence obtained during an investigation under a preponderance of the evidence standard to determine whether the greater weight of the evidence is sufficient to support a conclusion that a recipient, such as the District, failed to comply with the laws or regulations enforced by OCR, or whether the evidence is insufficient to support such a conclusion. Based on its investigation, OCR has determined that there is sufficient evidence to conclude that Playground 2 is in full compliance with Section 504 and Title II, while Playgrounds 1, 3 and 4 are not in full compliance with Section 504 and Title II, with respect to the issue investigated.

#### Applicable Regulatory Authority

*The Department of Education's mission is to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access.*  
[www.ed.gov](http://www.ed.gov)

# Ask Play Surface Vendor

- Warranty
- Written instructions for installation
- Written description of base, sub-base & required drainage
- Results of ASTM F1951 lab test
- Results of ASTM F1292 lab test (same sample)
- Written description of maintenance & frequency



**IPEMA** INTERNATIONAL PLAY EQUIPMENT MANUFACTURERS ASSOCIATION

**Installation for Engineered Wood Fiber (EWf) to meet ADA Requirements**

IPEMA believes that following the installation and maintenance recommendations below will result in greater accessibility and compliance with ADA requirements for EWf accessible surfacing under and around playground equipment. EWf accessible surfacing should meet the ASTM F1951 surface accessibility standard. Request a copy of the manufacturer's ASTM F1951 surface testing report to confirm that the product meets the maneuverability performance requirements of the accessibility standard.

**Installation:**

1. Please visit the IPEMA website ([www.ipema.org](http://www.ipema.org)) to print a certificate showing the engineered wood fiber is IPEMA certified for ASTM F1292-impact attenuation within the use zone of the playground equipment, F2075- sieve analysis, tramp metals and hazardous metals.
2. Prepare the site in accordance with the project engineer's directions and project specifications.
3. Install drainage as recommended by the manufacturer of the engineered wood fiber (EWf). Drainage installation is recommended to increase the life of EWf, reduce mold and fungus issues and help retain resiliency during cold temperatures. Different drainage systems are available. Pictured to the right is a typical gravel drainage model.
4. Installing one or more compliant ADA ramps into the play area is recommended to allow an accessible entrance to and from the play area.
5. Once drainage is installed, proceed to install the EWf at the recommended thickness per the equipment manufacturer's recommendations. Be sure the surface is level & compacted.  
**Optional:** To speed up the natural compaction process, once drainage is installed, install the EWf in layers, 6" at a time. Rake, level and wet the surface before compacting with a mechanical compactor after each layer is installed. Change direction 90 degrees between each layer. Repeat these steps until the desired surface thickness is achieved.
6. In kick-out areas, such as swings and slides, install wear mats on top of the EWf to prevent holes and to maintain a level surface. Be sure these mats are installed in such a way as they do not have an edge above the surface that will create an accessibility issue. Tapered edges are recommended.

*Note: This is a technical document and in no way is an endorsement for any particular surfacing. It is intended to assist the playground owner in making their playground a well-maintained and accessible area. It does not imply that an injury cannot occur. For more information about the IPEMA certification program, go to [www.ipema.org](http://www.ipema.org).*

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# Early Childhood Play Areas - Rule 11

- 75 square feet
- Protected by fences or physical barriers
- Safe, durable, age-appropriate equipment



# Early Childhood Play Areas - ECERS

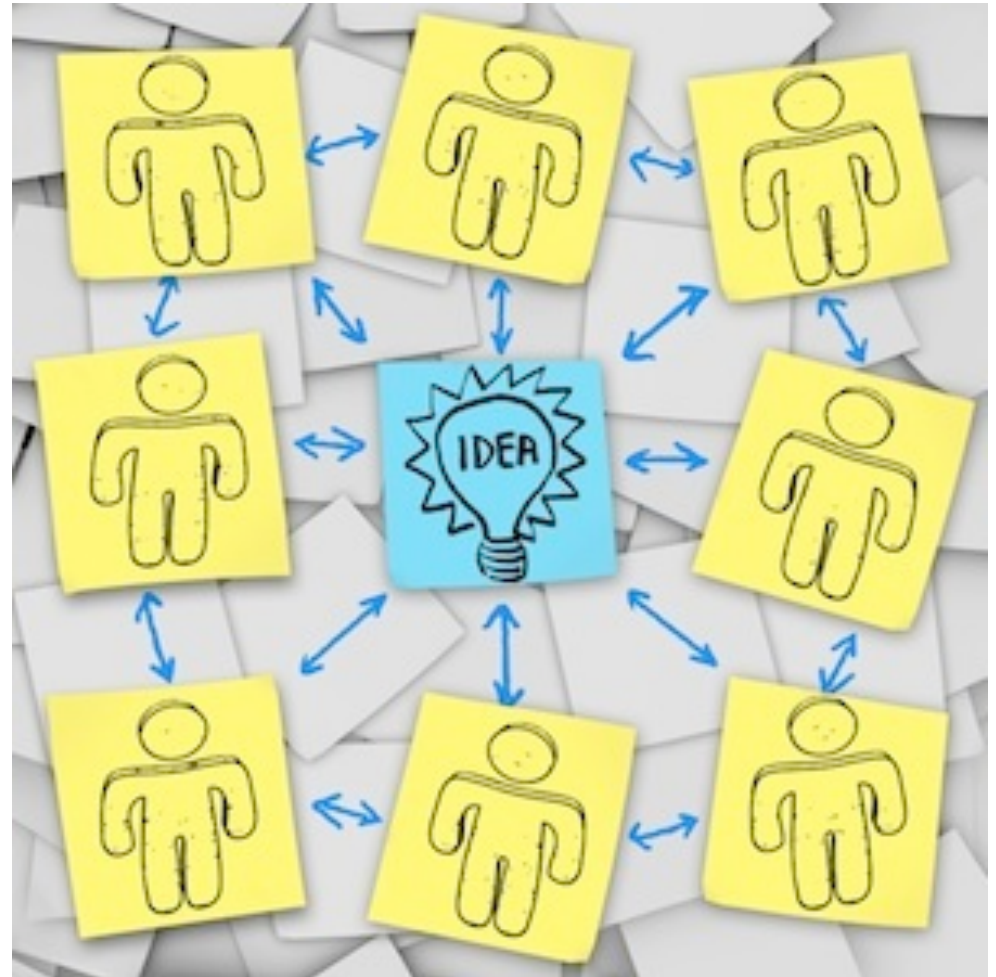
- Some equipment not considered safe for preschoolers
- Protective Surface
- Equipment spacing-Fall zones for playground equipment need to be in place.
- Entrapment hazards: “S” hooks & guardrails
- Cement footings
- Protection from the elements



# Facility ADA Modifications

The Process --

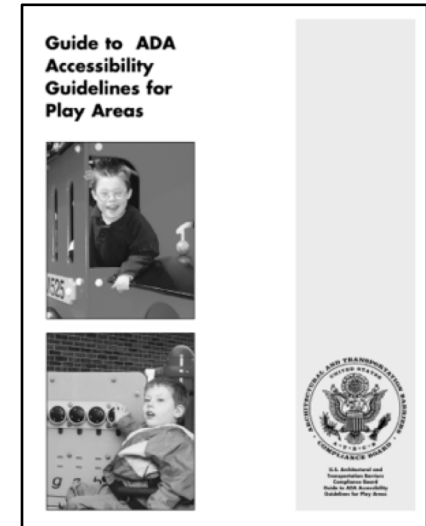
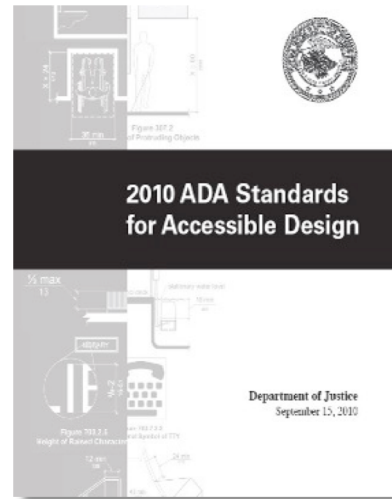
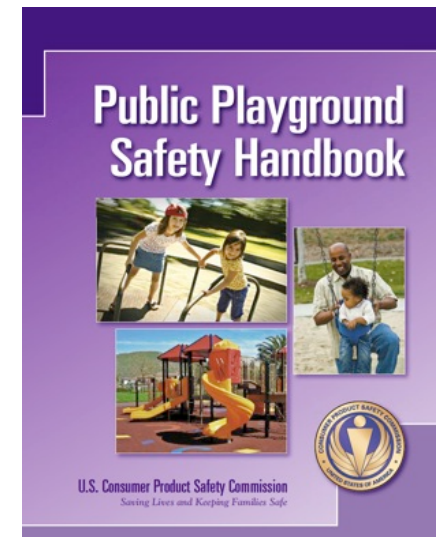
- Application Review
- Reporting
- Payment





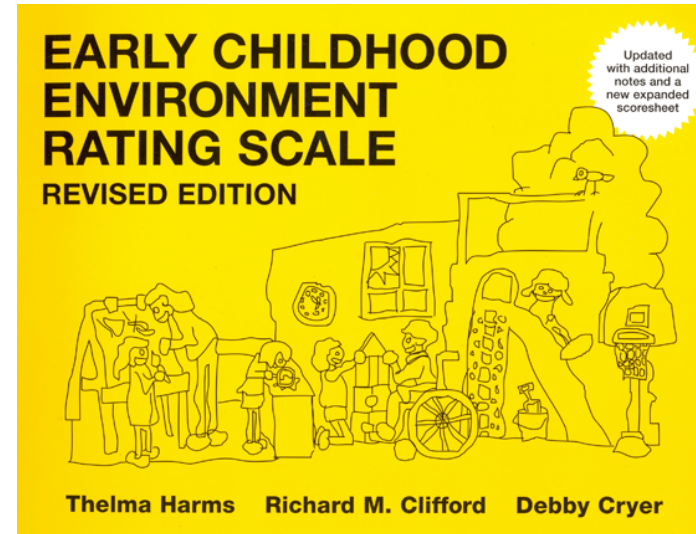
# Resources – Free Downloads

- US Department of Justice ADA page: [www.ada.gov/](http://www.ada.gov/)
- US Access Board (slides 2-25): <http://www.access-board.gov/guidelines-and-standards/recreation-facilities/guides/play-areas>
- ADA Facilities Checklists: [www.adachecklist.org/](http://www.adachecklist.org/)
- US Consumer Product Safety Commission Playground Safety: <https://www.cpsc.gov/s3fs-public/325.pdf>

The image shows a checklist form titled 'ADA Checklist for Readily Achievable Barrier Removal Play Areas'. The form has a header with the title and a sub-header 'Play Areas'. Below the header, there are several fields for information: Project, Building, Location, Date, Surveyors, and Contact Information. To the left of these fields is a simple line drawing of a playground area with a tree, a ramp, and a person in a wheelchair. At the bottom of the form, there is a statement: 'Play areas should be accessible to everyone, including people with disabilities.' and logos for the National Center for Human Centered Design and the ADA National Network.

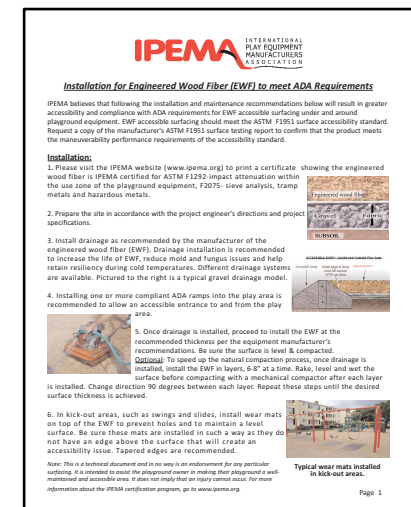
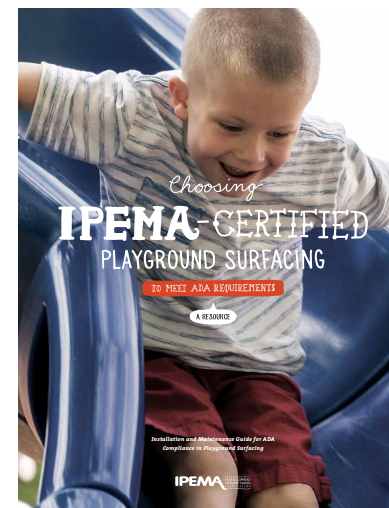
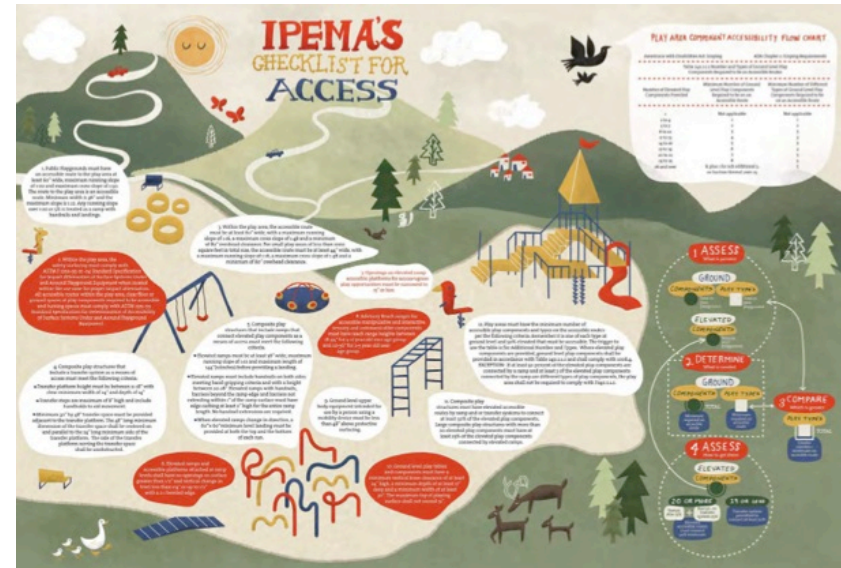
# EC Training Resources

- Early Childhood Environment Rating Scale-Revised Edition:  
<http://www.ersi.info/index.html>
- NDE OEC Professional Development & Training:  
<https://www.education.ned.gov/oec/>
- NDE Early Childhood Training Center:  
<http://www.education.ned.gov/OEC/ectc.html>



# Resources

- National Program for Playground Safety: <http://www.playgroundsafety.org/>
- International Play Equipment Manufacturers Assn: <http://www.ipema.org/>
- National Center on Accessibility (slide 26): <http://www.ncaonline.org/>
- National Recreation & Park Assn: <http://www.nrpa.org>





# Nature & School Yard Resources

- NDE OEC Re-Connecting The World's Children to Nature:  
[https://www.education.ne.gov/wp-content/uploads/2017/07/Call\\_to\\_Action.pdf](https://www.education.ne.gov/wp-content/uploads/2017/07/Call_to_Action.pdf)
- Nature Explore, a collaborative program of Arbor Day Foundation & Dimensions Educational Research Foundation:  
<http://www.natureexplore.org>
- UNL / Nebraska Statewide Arboretum / Nebraska Forest Service Conservation Education:  
<https://nfs.unl.edu/education>

Nebraska Early Learning Guidelines



# Questions?

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Kristine Luebbe

NDE Office of Early Childhood  
Education

402-471-3184 / 402-471-1860

[Kristine.luebbe@nebraska.gov](mailto:Kristine.luebbe@nebraska.gov)

NDE Early Childhood Training Center

800-892-4453 / 402-557-6880



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