

Beneficial Design

Examples of...Designing Beyond the Norm to Meet the Needs of All People

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Beneficial Design

Designing Beyond the Norm to Meet the Needs of All People

Research
Design
Education

Beneficial Designs' Mission Statement

Beneficial Designs works towards universal access through research, design, and education. We believe all individuals should have access to the physical, intellectual, and spiritual aspects of life.

Beneficial Designs' Mission Statement

We seek to enhance the quality of life for people of all abilities, and work to achieve this aim by developing and marketing technology for daily living, vocational, and leisure activities.

The BD Team

Facilities needed to support design and testing

Testing

Wheelchair testing

Drop testing—for air travel
Loading PWC in baggage of AC

Surface Testing

ASTM F 1951

Standard specification for determination of accessibility of surface systems under and around playground equipment

Testing available from BD

Rotational Penetrometer

Objective firmness and stability msmt
Available from Beneficial Designs

Surface Stabilizers Gravelpave2

Seat Cushion Testing

ISO and RESNA standards

SKELI - Gelbutt

Used for Standards testing

ASLI Prototype

Personal Technologies

Activity-Specific Technologies
Environmental Technologies
FlexRim Ergonomic Pushrim

Available from Spinergy

Pax Back

Back support for comfort and function

Activity-Specific Technologies

Balance Dimension

Physical
Intellectual
Spiritual

Variety of Recreational Opportunities

Arroya Sit Ski

Mono Ski

Available from several companies
Chairlift access issues

Dynamic Seating Spring Assist

Cross Country Ski

Back country ski

Pneumatic Piano Pedal Pusher

Do it yourself design specifications

Manual Transmission Hand Controls

Hand Bike and tandem

Adaptive Canoe Seating

Available from Chosen Valley Canoe
Accessories

Hip Grip

Wave Ski

Skydiving with constant flow regulator

Flying in Ultralight aircraft

Environmental Technologies

Things that do not move

Tools and Technology for Accessible Trails The standards

Architectural Barriers Act Outdoor
Recreation Access Guidelines

ADA Recreation Trail standards

Grade

8.33% for 200 feet
10% for 30 feet
12.5% for 10 feet

Cross Slope

5% maximum

Rest Areas

60 inches length, 5% slope

Surface

firm and stable

Width

36 inches minimum

Universal Trail Assessment Process (UTAP) – Over 1900 people trained

Key UTAP Information

Length, Grade, Width, Surface,
Cross slope, Features & Facilities
Training available from BD

High Efficiency Trail Assessment Process (HETAP)

USDA SBIR Phase II

Equipment available from BD

Trail Access Information (TAI)

Signposts
Panel maps

Developed Outdoor Recreation Assessment Process (DORAP)

Under development at BD
Outdoor Constructed Features
Bench, Camp Shelter, Cooking
Surface/Grill, Fire Ring, Wood
Stove/Fireplace, Outdoor Rinsing
Shower, Parking Area, Picnic Table,
Pit Toilet, Tent Pad/Platform, Toilet
Building, Trash/Recycling
Receptacle, Utility/Sewage
Connection, Viewing Area at
Overlooks, Viewing Scope, Water
Spout

Campsite Access Information

Signage available from BD

Develop Standards for Trail and Sidewalk Design

Pedestrian Right of Way Assessment Process (PROWAP)

Wireless Measurement Devices
Measuring Process
GIS Data
GIS Mapping
Services available from BD

Universal Design of Fitness Equipment (UDFE) Standards

Accessible “mainstream” fitness equipment
Low Step-up Height Design
Grip Bars
Weight Pin Color Contrast
Weight Pin Gripability
Control Panel Contrast
ASTM standard now published

Amusement Park Wheelchair Access

Accommodates Wheelchair
Accommodates Transfer
Development of Transfer Devices
Design services available from BD

Current work

Assistive Technology for Air Travel
Steep Jetways
Narrow boarding chairs
Aircraft seating issues
Inaccessible lavatories
Damage to mobility devices

IATA Guidance on the Transport of Mobility Aids

Assistive Technology for Air Travel
Standards (ATAT)
Powered Mobility Devices designed for Air
travel
Air Travel Configuration Card

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