Universal Trail Assessment Process (UTAP) &

High Efficiency Trail Assessment Process (HETAP)

Application & Dissemination



P.O. Box 491797 Redding, CA 96049-1797 (530) 547-2060 Fax: (530) 547-2035 trailhead@americantrails.org



P.O. Box 69 Minden, NV 89423 (775) 783-8822 Fax: (775) 783-8823

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Applying the UTAP & HETAP Objectives

Describe how to use the UTAP or HETAP to measure various trails and paths

Adapt the UTAP or HETAP to obtain the most valuable information

Prioritize trails to assess

HETAP Principles

- Objective measurements
- Description of trail tread
- Features on and around trail
- Typical and extreme values
- Collect all data in one assessment
- Best path of travel
- Data required by land managers
- Disseminate data to trail users

Assessment Options

Full detail

Select type and amount of feature detail

Select type and level of detail for trail tread measurements

Description of Trail Tread

Grade - typical and maximum

Cross Slope - typical and maximum

Surface - firmness and type

Width - typical and minimum clearance

What is Extreme for this Trail?





Description of Trail Features



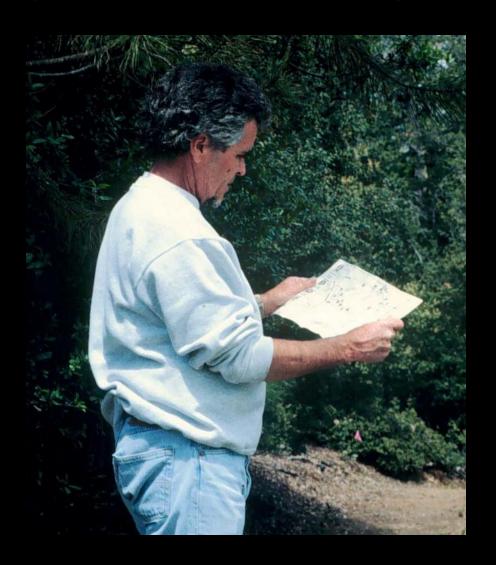
Construction and maintenance



Health and safety

User enjoyment and comfort

Uses of the UTAP & HETAP



Access

Conservation

Interpretation

Maintenance

Mapping

Asset Management

Examples of Possible Modifications

Long distance and back country

Shared use paths and ORARs

Compliance with design standards

Maintenance, planning and budgeting

For your scenario, consider:

Can the HETAP or UTAP be used?

What measurements would be made?

What level of detail for trail tread?

What level of detail for features?

For an ADAAG Assessment

- Measure extreme conditions
- Typical values do not matter
- Combined grade and cross slope
- Work required for compliance

Reminder: ADA Compliance



Standards for Outdoor Developed Areas now part of the Architectural Barriers Act (ABA) Accessibility Standards and apply to national parks and other outdoor areas developed by the federal government.

They do not apply to outdoor areas developed with federal grants or loans.

Trail

Grade

1:20 (5%) to 1:12 (8.33%) 200 feet max 1:12 (8.33%) to 1:10 (10%) 30 feet max 1:10 (10%) to 1:8 (12%) 10 feet max

Cross Slope

1:20 (5%) maximum unless concrete, asphalt or boards, then 1:48 (2%)

Trail Width

36 in minimum width

Passing spaces – every 1,000 feet where less than 60 inches in width

Tread obstacles

2 inches maximum, except concrete, asphalt, or board = $\frac{1}{2}$ inch

Openings

½ inch maximum



Outdoor Recreation Access Routes

Grade

Between 1:20 (5%) and 1:12 (8.33%), 50 feet maximum

Between 1:12 (8.33%) and 1:10 (10%), 30 feet maximum

Cross Slope

1:33 (3%) maximum unless concrete, asphalt or boards, then 1:48 (2%)

Outdoor Recreation Access Route

Surface firm and stable

Width 36 inches min

Passing space

required where width is less than 60 inches - 200 ft. max

Openings

< 0.5 inch sphere



How might you prioritize to complete trail assessments?

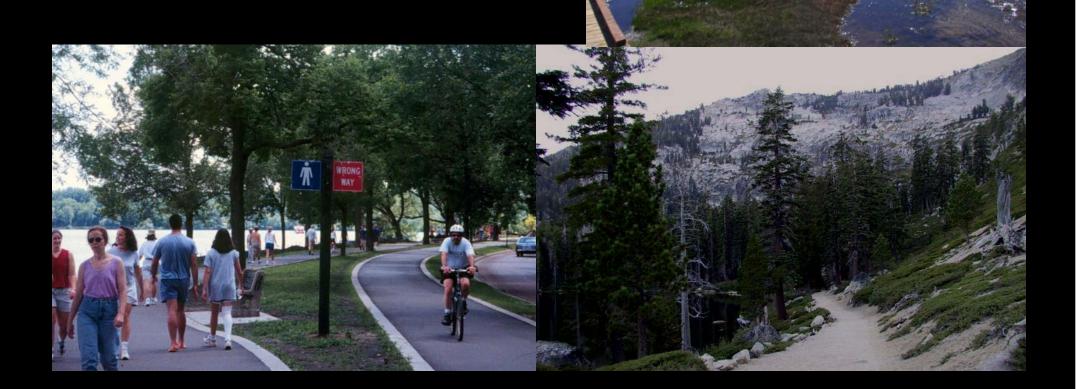




Trails that
Provide a
Higher Level
of Access



Short or Highly Used Trails





Applying the UTAP/HETAP Summary

HETAP & UTAP can be modified for many different settings and purposes

Maintain key principles and modify to suit your needs

Priority for trails to primary features, different environments, and shorter, high use or higher access trails

Disseminating Information to Users is Critical

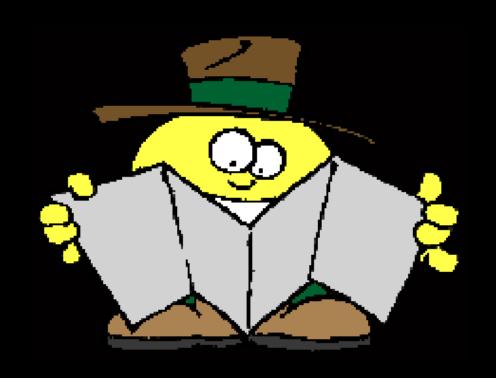
Informed choice

User responsibility

Safety

Satisfaction

Accessible formats



Several methods to display Trail Access Information

				nent Date: 2009-01-07
Fort Churchill	State Historic	Park		y: Nevada State Parks
Ruins Loop			State:	Nevada
1 Ruins Fort 2	2009-01-07		County	. Lyon
Trail Length:	0.6 mi (1.0 km)	Trail Type:	Loop
Elevation: Gain:	45.9 ft (14.0 m)		
Loss:	39.6 ft (12.1 m)		
Typical Grade:	2.6%	Ma	ximum Grade:	16.4%
Typical Cross Slope:	1.6%		ximum Cross	6.5%
Typical Tread Width:	69.9 in (177 cr	Mir	nimum Tread	36.0 in (91 cm)
Minimum Vertical Obstruction Heigh	3	Mir	nimum Clearance	
Trail Design and	Measurement 7	hreshold	ds	A
Minimum Obstruc Height:		(5 cm)	Design Tread Width:	36.0 in (91 cm)
Minimum MCW B			Vertical Obstru	
Height:		(7 cm)	Design Height:	
Largest Obstruct Type:		Height):	Remaining Tread:	Location:
Rock	2.0 in	(5 cm)	30.0 in (76	cm) 31.4 ft (9.6 m)
Rock		(5 cm)	30.0 in (76	3278.7 ft (999.4
n/a		(n/a cm)		cm) n/a ft (n/a m)
Typical Surface				
	tegory: Length:	0 1	Percentage:	
ve	ry Soft: 0.0 ft (0		0.0 %	
	Soft: 0.0 ft (0		-	
	Firm: 3311.81	_		
	Hard: 0.0 ft (0		0.0 %	
	Paved: 0.0 ft (0	.u m)	0.0 %	
Rotational Penetrometer:				
	rmness: 0.19 i	n	Typical Sta	bility:- 0.19 in
	rmness: 0.54 i			bility:- 0.71 in
Least Fi	11111633 0.341	11	Least Sta	Dility U.7 1 III

Trail Access Information Summary Assessment Date: 2009-01-07 Ruins Loop Agency: Nevada State

Parks

Fort Churchill State Historic Park

State: Nevada

Ruins Fort County: Lyon

2009-01-07

Trail Uses Allowed	Trail Uses Not Allowed
Hiking	Motor Vehicles
Bicycling	Equestrian
Dogs - On Leash	Hunting
Photography	

Park Information/Amenities:

Fort Churchill was once an active U.S. Army fort built in 1861 to provide protection for early settlers. It was abandoned nine years later, and today the ruins are preserved in a state of arrested decay. A visitor center displays information and artifacts of the fort's history. The Pony Express and the Overland Telegraph once passed through this area. Buckland Station is nearby, a Pony Express stop, supply center, and former hotel built in 1870. Facilities at the park include trails, a campground, picnic area, group-use area and access to the Carson River. Visitors can enjoy hiking, historic and environmental education, camping, picnicking, photography and canoeing. The park is located eight miles south of Silver Springs on Alternate U.S. 95, and one mile on Fort Churchill Road.775-577-2345region3@cccomm.nethttps://parks.nv.gov/fc.htm

Trailhead Location:

Trail can be accessed from several locations, primarily from the parking lot at the north side of the loop and from the visitor center.

Warning: Trail conditions may have changed since this trail was assessed. Temporary obstructions (e.g. fallen trees or land slides) may not have been mapped. Maximum grades and cross-slopes may vary. Obstructions less than 2.0 in (5 cm) or outside of the tread area 36.0 in (91 cm) wide by 80.0 in (203 cm) high were not reported. Minimum clearance width boundaries were at least 3.0 in (7 cm) high.

This report is generated by HETAP software using a High Efficiency Trail Assessment Process which has been created by Beneficial Designs, Inc.

www.beneficialdesigns.com

trails@beneficialdesigns.com



Trail Uses



Dogs on Leash



No Bikes



No Equestrians



No Motorized Vehicles

Hazards and Obstructions



Step



Rock



Pacific Crest Trail

Eldorado National Forest

Trail Length 1.1 mi (1.8 km) Linear trail

Trail is part of the Pacific Crest National Scenic Trail and starts next to the seasonally open visitor center at Carson Pass. Restrooms are available at trailhead. A \$3.00 parking charge is required to park and hike. Envelopes/depository for fee is present. An overnight camping permit is required if staying overnight. Several local and regional maps are displayed at the trailhead.

Cumulative Elevation Change

Gain 427 ft (130 m) Loss 82 ft (25 m)



Typical Grade is 8.5%

48% of the trail is between 8% and 22% 144 ft (44 m) is between 20% and 22% 8% grade is a standard ramp.



Typical Cross Slope is 3.1% 20% of the trail is between 5% and 11% 226 ft (69 m) is between 8% and 11%



Typical Tread Width is 49 in (124 cm)
Tread Width ranges from 14 in (36 cm) to 100 in (254 cm)



Trail Surface is Soil

100% of the trail is Hard or better 5962 ft (1817 m) of the trail is Firm or better

Trailhead Location

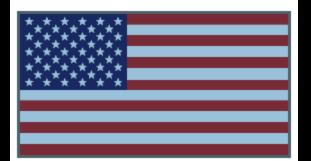
At Carson Pass on Highway 88 directly on north side of the seasonally



Trail Access Information Warning: Trail conditions may have changed since this trail was assessed. Temporary obstructions (e.g. fallen trees or land slides) may not have been mapped. Maximum grades and cross slopes may vary.

Obstructions less than 6.0 in (15 cm) or outside the tread area 12 in wide by 120 in (3 m) high were not measured. Minimum clearance boundaries were at least 12 in high.

This report has been generated by TrailWare which has been created by Beneficial Designs, Inc.



Ruins Loop

Fort Churchill State Historic Park

Length 0.6 mi (1.0 km)



Hikers



Bikes



Dogs OK



Equestrians



No Motorized Vehicles



Grade

Typical Grade 2.6%

8% of the trail is 5% to 12%

23 ft (7 m) is 12% to 17% 8% grade is a standard ramp



Cross Slope

Typical Cross Slope 5.9%

13% of the trail is 10% to 15%

455 ft (139 m) is 15% to 28% 8% grade is a standard ramp



Tread Width

Typical 19 in (48 cm) Minimum 12 in (31 cm)

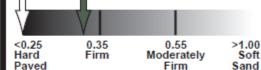


Surface

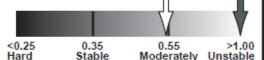
Soil

3% of the trail is Soft

Typical Firmness (in) 0.21 Minimum Firmness (in) 0.32



Typical Stability (in) 0.54
Minimum Stability (in) 1.03





Paved

Obstructions

Sand

Multiple 6 in (15.2 cm) Rocks

WARNING: Trail conditions may have changed since January 2009 when this trail was assessed. Temporary obstacles were not mapped.

Signage created by Beneficial Designs Inc. using data collected by a certified trail assessment coordinator.



Trail Access Information

Verizon 🛜 4:39 PM History Salado Creek Greenway South Need to organize your trail system?

QR Codes take TAI to the next level



TAI on Carbonate & Existing Signpost



TAI on Wooden Post

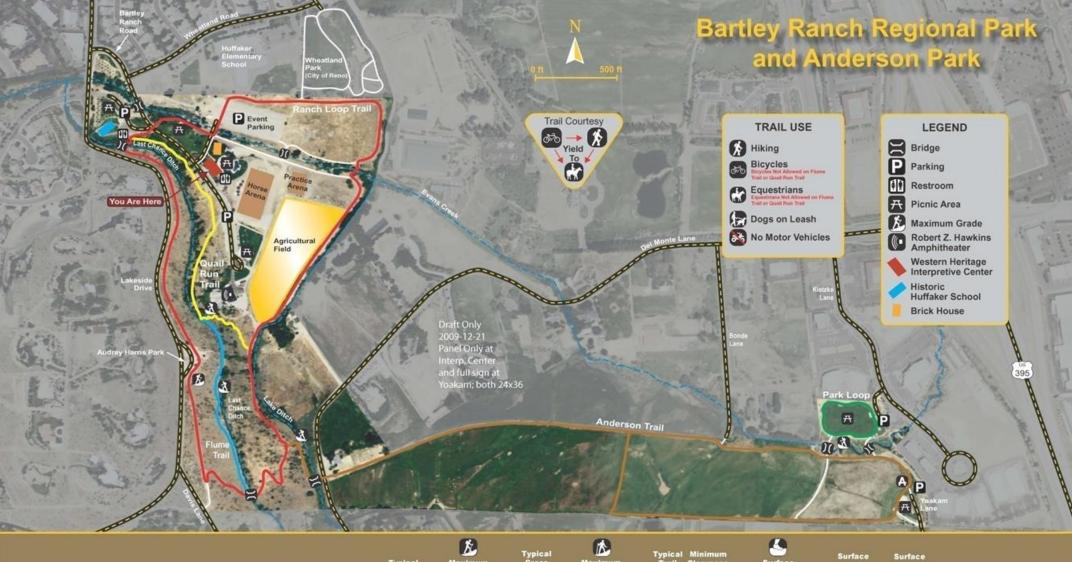




TAI on Panel Map













unded by	the Nevada	Recreational	Trails Pro	oram

Trail Name	Length	Typical Grade	Maximum Grade	Typical Cross Slope	Maximum Cross Slope	Typical Trail Width	Minimum Clearance Width	Surface Type	Surf Firm Typical	ness	Surf Stat Typical	bility
Ranch Loop Trail	1.5 mi	4.5%	371 ft is 16% – 25%	2.8%	18 ft is 16% – 20%	90 in	40 in	Aggregate/Gravel	0.19	0.22	0.36	0.60
Quail Run Trail	0.4 mi	7.3%	186 ft is 20% – 40%	3.5%	46 ft is 18% – 30%	60 in	25 in	Aggregate/Gravel	0.19	0.22	0.39	0.50
Flume Trail	0.2 mi	4.6%	37 ft is 14% - 19%	3.9%	47 ft is 12% – 14%	48 in	20 in	Soil	0.23	0.25	0.38	0.49
Anderson Trail (Round Trip)	1.7 mi	2.5%	196 ft is 14% – 21%	2.4%	311 ft is 7% - 11%	76 in	48 in	Aggregate/Gravel	0.19	0.22	0.39	0.52
Park Loop	0.2 mi	1.6%	64 ft is 4% - 5%	1.8%	230 ft is 3% - 4%	84 in	84 in	Aggregate/Gravel	0.18	0.19	0.37	0.43

Surface Firmness (in)

Eisenhower Park Trails

/	Trail Name Red Oak Trail	Len	gth G	pical rade	Maximum Grade Standard Ramp is 8.39		Maximum Cross Slope	Typical Tread Width	Minimum Clearance	Surface
7	Shady Creek Trail	0.5 n	1	1%	78 ft is 20% - 29%	5.7%	78 ft is 20% - 22%	1	Width	Туре
		0.4 m	5.4	1%	66 ft is 15% - 29%	4.4%		48 in	48 in	Aggregate / Gravel
	Cedar Flats Trail	0.8 mi	4.39	% /	133 ft is 15% - 21%		145 ft is 13% - 17%	44 in	36 in	Aggregate /
_	Hillview Natural Trail	2.6 mi	4.8%			3.5%	87 ft is 9% - 10%	84 in		Gravel
	Yucca Paved Trail	1.6 mi		-	353 ft is 21% - 37%	3.5%	231 ft is 15% - 26%		84 in	Asphalt
	Observation Tower Trail		4.0%		67 ft is 21% - 39%	3.3%		55 In	36 in	Crushed Stone
	ive Oak Trail	0.1 mi	4.7%	/ 1	124 ft is 11% - 17%		111 ft is 16% - 24%	72 in	30 in	(Fines) Wood Chip /
	/ Jun Hall	0.1 mi	4.5%			2.9%	45 ft is 6%	96 in		Mulch
	0.2				33 ft is 11% - 15%	4.2%	65 ft is 10% - 19%	30 111	96 in	Asphalt
	Palanco						55 H IS 10% - 19%	60 in	60 in	Wood Chip /













WARNING:
Trail conditions may have changed since March 2011
when these trails were assessed. Signage created by
Beneficial Designs Inc. using trail data collected by a
certified trail assessment coordinator.

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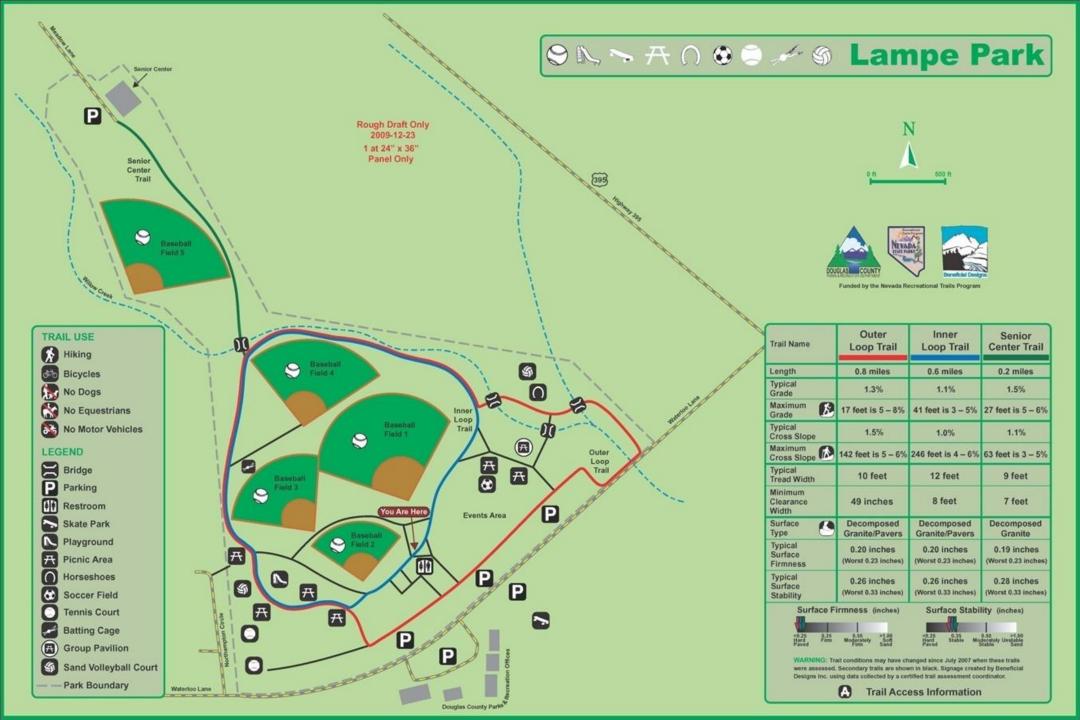














Computer Kiosk or Internet Site



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DEFINITIONS

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TRAIL ACCESS INFORMATION



Customize your search by trail use and features.

TRAIL ACCESS

Find a trail to suit your ability. Search by grade, cross-slope and surface.

TRAIL MANAGEMENT

Authorized trail managers may add or edit trail information. Contact Beneficial Designs.



TRAIL SEARCH



Type in (a few letters of) a park or trail name:

OR

View trails by state:

Choose a state



PICK OF THE MONTH

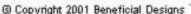


Big Basin Redwoods State Park Boulder Creek, CA

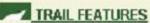
Features 2,000 year-old redwoods and over 50 miles of trails. Reservations required for camping. Phone: 831,338,8860

Have you ever finished a three hour hike in one hour? Have you struggled on a "moderate" trail? Have you encountered barriers on an "easy" trail? The Trail Explorer website is unique because it uses Irail Access Information to help trail users make informed decisions about which public lands to visit, and which trails will best meet their interests, abilities and desired experiences. Trail Explorer benefits all users, but is particularly helpful for individuals with disabilities, older adults, parents with young children, and novice hikers.

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Customize your search by trail use and features

TRAIL ACCESS

Find a trail to suit your ability. Search by grade, cross-slope and surface.

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CONTACTUS



TRAIL ACCESS SEARCH Use this advanced search to find a trail to match your abilities by selecting your preferences from the options below. To broaden your search, remove preferences in categories of less importance. For the definition of a term, click on the term.

Choose a state: Indiana 🔻	
Trail length: 1.0 mi (1.6 km) or less	Surface Firmness: Firm or better
Typical grade: 5% or less ▼	Typical cross-slope: Less than 5%
Typical tread width: No preference	Minimum clearance width: 36 inches (91 cm) or greater
Find Trails	Clear Form

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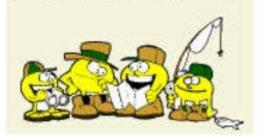
Customize your search by trail use and features.

TRAIL ACCESS

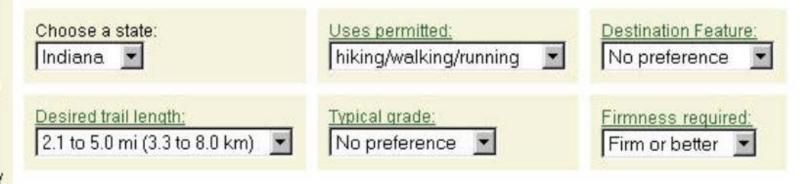
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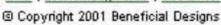
TRAIL FEATURE SEARCH - Find a trail that fits your interests and abilities by selecting your preferences from the options below. To broaden your search, remove preferences in categories of less importance. For the definition of a term, click on the term.



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9 trails found. Use the "Back" button on your browser to refine your selection. Click on the trail name for more information.

Click on the column heading to sort by column.

Trail	Park	State	Length	Typical Grade	Max Grade	Typical Xslope	Max Xslope	Typical Tread Width	Min Clear Width	Surface Firmness	Surface Matts
Trail 10	McCormick's Creek State Park	IN	0.7 miles (1.1 km)	3.3%	34%	3.5%	12%	50 in (126 cm)	na	Firm	Rock/Boulder
Trail 8	McCormick's Creek State Park	IN	0.7 miles (1.1 km)	2.3%	12%	1.1%	4%	60 in (152 cm)	na	Paved	Asphalt
<u>Trail A</u>	McCormick's Creek State Park	IN	0.2 miles (0.3 km)	2.2%	9%	1.3%	4%	58 in (148 cm)	na	Firm	Crushed Stone (Fines)
Trail 6	Spring Mill State Park	IN	0.4 miles (0.7 km)	2.3%	7%	2.2%	4%	60 in (152 cm)	na	Paved	Asphalt
Trail 7	Spring Mill State Park	IN	0.9 miles (1.5 km)	3.3%	23%	3.1%	8%	52 in (131 cm)	na	Firm	Soil
Trail 7 Spur to Trail 4	Spring Mill State Park	IN	0.4 miles (0.6 km)	3.9%	27%	2.8%	9%	49 in (125 cm)	na	Firm	Soil
Trail 10 Spur to Camels Back	Turkey Run State Park	IN	0.1 miles (0.2 km)	0.9%	2%	1.8%	5%	60 in (152 cm)	na	Firm	Crushed Stone (Fines)
Trail 11	Turkey Run State Park	IN	0.2 miles (0.3 km)	3.1%	9%	4.3%	11%	60 in (152 cm)	na	Firm	Crushed Stone (Fines)
Trail 7 Spur to Campground	Turkey Run State Park	IN	0.1 miles (0.2 km)	3.3%	6%	2.7%	5%	60 in (152 cm)	na	Firm	Soil

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TRAIL ACCESS INFORMATION

Trail 11 **Turkey Run State Park**

Route 1 Box 164 Marshall, IN 47859

County:

(765) 597-2635 Phone:

FAX: Email:

Website: http://www.state.in.us/dnr/parklake/parks/turkeyrun.html

Length: 0.2 miles (0.3 km)

Destination: Lieber Memorial & Log Church

Destination Type: Historical

Trail 11 starts from the Service Road besides the Turkey Run Inn. A short hike about Turkey Run Hollow to the Lieber Memorial and Log Church.

Cumulative Elevation Gain: 23 ft (7 m) Cumulative Elevation Loss: 4 ft (1 m)

Hiking Uses:

Facilities: Historical

Features:

Lieber Memorial Log Church

Obstructions:



Typical Grade is 3.1% 7% of the trail is 6% to 9% 64 ft (20 m) is 8% to 9% 8% grade is a standard ramp.



Minimum Tread Width is 60 in (152 cm) Maximum Tread Width is 60 in (152



Typical Cross Slope is 4.3% 18% of the trail is 6% to 11% 160 ft (49 m) is 10% to 11%



Trail Surface is Crushed Stone (Fines) 100% of the trail is Firm Oft (Om) of the trail is Soft

Summary

- HETAP & UTAP can be modified for many different settings and purposes
- Maintain key principles and modify to suit your needs
- Priority for trails to primary features, different environments, and shorter, high use or higher access trails
- Provide trail data that meets the desire of trail users

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Working toward universal access through research, design & education