

Outdoor Recreation Trails and Access Routes



Pedestrian Routes

Trails

Outdoor Recreation Access
Routes (ORAR)

Beach Access Routes



Trail



Pedestrian route developed primarily for outdoor recreational purposes

Newly constructed/altered trail directly connected to a trailhead or another trail that substantially complies with guidelines

Trail Guidelines

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 Guidelines

Width

36 inches 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

$\frac{1}{2}$ inch maximum



Conditional exceptions

Apply on a provision-by-provision basis

Where full compliance with a technical provision is not possible because of the limitations and constraints included in the conditional exceptions... the portion of the trail shall comply with the provision to the “extent practicable.”

Conditional exceptions

...not practical due to terrain



Conditional exceptions

...cannot be accomplished with the prevailing construction practices



Conditional exceptions

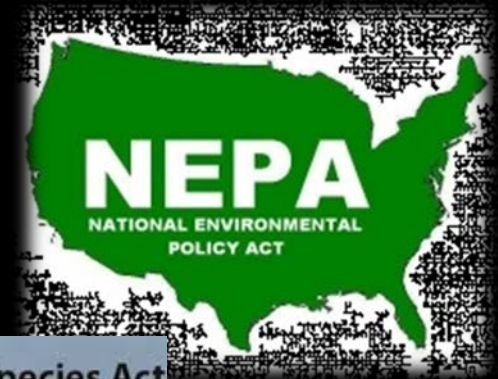
Compliance would fundamentally alter the function or purpose of the facility or the setting



Conditional exceptions

Compliance is precluded by the:

- Endangered Species Act;
- National Environmental Policy Act;
- National Historic Preservation Act;
- Wilderness Act; or
- Other Federal, State, or local laws



Trailheads



Outdoor space developed to serve as an access point to a trail

Not a junction of two or more trails where no other access point is provided

Min Requirements for Trail Signs



New trail information signs provided at trailheads... shall include the following information:

1. Length of the *trail or trail segment*
2. Surface type
3. Typical and minimum tread width
4. Typical and maximum *running slope*
5. Typical and maximum *cross slope*

ABA-2013, Section 1017.11 & FSTAG-2013 Section 7.4.11.2

Outdoor Recreation Access Routes - ORAR

Connecting common use and public use areas in picnic, camping, and viewing areas



Outdoor Recreation Access Routes - ORAR

Connecting recreation facilities



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
every 200 ft. max

Openings

< 0.5 inch sphere



Beach Access Route



Beach Access Route

Permanent or removable

Minimum number

at least one for each $\frac{1}{2}$ mile of shoreline managed by the entity

Not required to exceed the number of pedestrian access points to a beach provided by the entity



Beach AR

Grade

Between 1:20 (5%)
and 1:12 (8.33%),
50 ft max

Between 1:12 (8.33%) and 1:10 (10%), 30 ft max

Obstacles

1 inch max, except concrete, asphalt,
or boards = ½ inch



Surface

... shall be firm and stable



Photo credit: © Deschamps SAS & Deschamps Mats Systems Inc.

Surface Firmness & Stability



Series 100 Rotational Penetrometer (RP)

A reliable, objective, portable, precision instrument for measuring the firmness and stability of ground and floor surfaces.

Available from
Beneficial Designs

Rotational Penetrometer



The RP is used by surface manufacturers, land & trail managers, school & park facilities, and ADA accessibility consultants and is the only device of its kind.

Rotational Penetrometer Readings

<u>Surface</u>	<u>Firmness</u>	<u>Stability</u>
Decomposed Granite	0.18	0.82
Gravelpave2	0.17	0.38
Geoblock2	0.17	0.41
Envirogrid Geoweb	0.18	0.44
EGA20 Geoweb	0.20	0.62

Dissemination of Access Information to the Public

Facility Brochures

Online

Panel Maps & Kiosks

Trailhead Signs

Trail Access Information (TAI) to Convey to Users

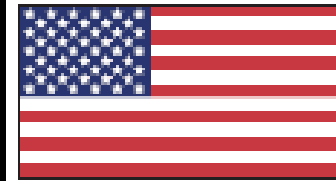
Grade

Cross Slope

Tread Width

Surface

Obstructions



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

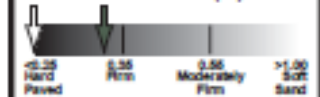
Tread Width

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

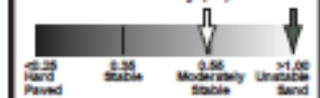
Surface

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



Obstructions

Multiple 6 in (15.2 cm) Rocks


WARNING: Trail conditions may have changed since January 2004 when this trail was assessed. Temporary obstacles were not mapped.


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

Trail Access Information

Sparks Blvd. Bike Path
City of Sparks
Truckee River to Pyramid Hwy.
Length 6.8 mi (10.9 km)

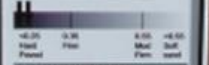
-  Hikers
-  Dogs on Leash
per posted restrictions
-  Bikes
-  No Equestrians
-  No Motorized Vehicles

 **Grade**
Typical Grade 1.7%
4% of the trail is 5% to 8%
131 ft (40 m) is 8% to 15%
8% grade is a standard ramp.

 **X-Slope**
Typical Cross Slope 2.3%
5% of the trail is 5% to 8%
185 ft (56 m) is 8% to 14%

 **Tread Width**
Typical Tread Width
109 in (276 cm)

 **Surface Type**
Concrete / Asphalt
Typical Firmness 0.19
Minimum Firmness 0.22




Typical Stability 0.25
Minimum Stability 0.27

0.25	0.26	0.27	0.28	0.29	0.30
Hard Paved	Stable	Stable	Med Stable	Med Stable	Med Stable

100% is Firm and Stable

DISCLAIMER: Trail conditions may have changed since August 2007. The City of Sparks reserves the right to change trail conditions without notice. The City of Sparks is not responsible for any injuries or damages that may occur while using the trail.

Map created by Mountain Design Inc. P.O. Box 88
Sparks, NV 89410-0088. Photo captured by a
certified trail assessment coordinator.

 **Trail Access Information**



Dune Trek
0.6 mi (0.9 km)

Length: 0.6 mi (0.9 km)
Time: 15-20 min
Difficulty: Easy

Icons:
Elevation
Distance
Elevation Gain
Grade
Cross Slope
Tread Width
Surface

Grade:
Normal Grade: 4.2%
Steepest Grade: 10% to 15%
Shallowest Grade: 1% to 2%
Average Grade: 6.5%

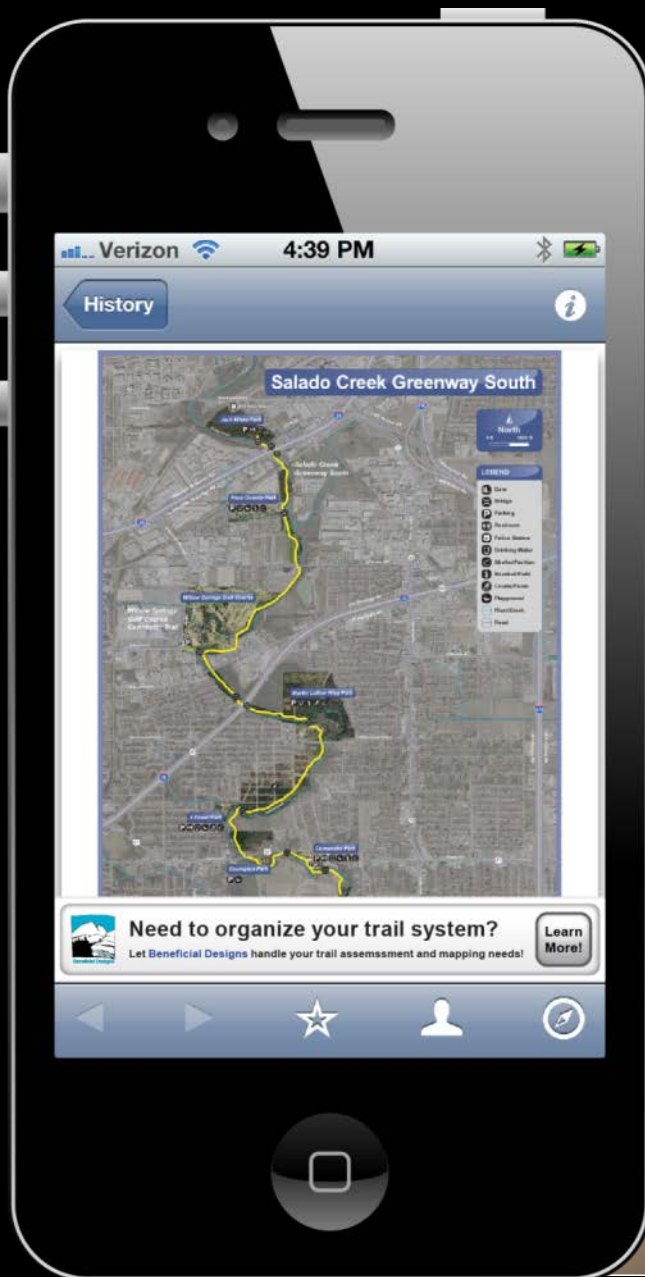
Cross Slope:
Normal Cross Slope: 4.2%
Steepest Cross Slope: 10% to 15%
Shallowest Cross Slope: 1% to 2%
Average Cross Slope: 6.5%

Tread Width:
Normal: 36 in (91 cm)
Steepest: 36 in (91 cm)

Surface:
Normal Surface: Sand
Steepest Surface: Heavy Sand
Shallowest Surface: Sand
Average Surface: Sand
Normal Firmness: 8.000
Steepest Firmness: 8.000
Shallowest Firmness: 8.000
Average Firmness: 8.000

Map: [Small map icon]

QR Codes take TAI to the next level



Eisenhower Park Trails



North

0 0.5 1.0 Miles

LEGEND

- Bridge
- Parking
- Restroom
- Park Entrance
- Drinking Water
- Shelter/Pool
- River/Creek
- Road

Trail Access Information

Trail Name	Length	Trail Type	Surface	Difficulty	Seasonal Access	Water	Shelter	Restroom	Drinking Water	Other Amenities
Red Oak Trail	0.5 mi	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Cedar Hills Trail	0.5 mi	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Millers Branch Trail	0.5 mi	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Woods Preserve Trail	0.5 mi	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lincoln Park Trail	0.5 mi	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lincoln Park Trail	0.5 mi	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lincoln Park Trail	0.5 mi	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lincoln Park Trail	0.5 mi	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5



Eisenhower Park Trails

A Trail Access Information

Typical Trail Qualities

Trail Name	Length	Typical Grade	Maximum Grade Standard Ramp is 8.3%	Typical Cross Slope	Maximum Cross Slope	Typical Tread Width	Minimum Clearance Width	Surface Type
Red Oak Trail	0.5 mi	7.1%	78 ft is 20% - 29%	5.7%	78 ft is 20% - 22%	48 in	48 in	Aggregate / Gravel
Shady Creek Trail	0.4 mi	5.4%	66 ft is 15% - 29%	4.4%	145 ft is 13% - 17%	44 in	36 in	Aggregate / Gravel
Cedar Flats Trail	0.8 mi	4.3%	133 ft is 15% - 21%	3.5%	87 ft is 9% - 10%	84 in	84 in	Asphalt
Hillview Natural Trail	2.6 mi	4.8%	353 ft is 21% - 37%	3.5%	231 ft is 15% - 26%	55 in	36 in	Crushed Stone (Fines)
Yucca Paved Trail	1.6 mi	4.0%	67 ft is 21% - 39%	3.3%	111 ft is 16% - 24%	72 in	30 in	Wood Chip / Mulch
Observation Tower Trail	0.1 mi	4.7%	124 ft is 11% - 17%	2.9%	45 ft is 6%	96 in	96 in	Asphalt
Live Oak Trail	0.1 mi	4.5%	33 ft is 11% - 15%	4.2%	65 ft is 10% - 19%	60 in	60 in	Wood Chip / Mulch



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.

Trail Name	Length	Typical Grade	Maximum Grade	Typical Cross Slope	Maximum Cross Slope	Typical Tread Width	Minimum Clearance Width	Surface Type
Red Oak Trail	0.5 mi	7.1%	78 ft is 20% - 29%	5.7%	78 ft is 20% - 22%	48 in	48 in	Aggregate / Gravel
Shady Creek Trail	0.4 mi	5.4%	66 ft is 15% - 29%	4.4%	145 ft is 13% - 17%	44 in	36 in	Aggregate / Gravel
Cedar Flats Trail	0.8 mi	4.3%	133 ft is 15% - 21%	3.5%	87 ft is 9% - 10%	84 in	84 in	Asphalt
Hillview Natural Trail	2.6 mi	4.8%	353 ft is 21% - 37%	3.5%	231 ft is 15% - 26%	55 in	36 in	Crushed Stone (Fines)
Yucca Paved Trail	1.6 mi	4.0%	67 ft is 21% - 39%	3.3%	111 ft is 16% - 24%	72 in	30 in	Wood Chip / Mulch
Observation Tower Trail	0.1 mi	4.7%	124 ft is 11% - 17%	2.9%	45 ft is 6%	96 in	96 in	Asphalt
Live Oak Trail	0.1 mi	4.5%	33 ft is 11% - 15%	4.2%	65 ft is 10% - 19%	60 in	60 in	Wood Chip / Mulch



Washoe Lake State Park

TRAIL USE

- Hiking
- Bicycles
- Equestrian
- Dogs on Leash
- No Motor Vehicles

- No public access beyond viewing tower on Wetlands Loop February 1-July 15 to protect nesting habitat
- No bicycles allowed on Wetlands Loop
- No equestrians allowed on Wetlands Loop and Deadman's Creek Trail

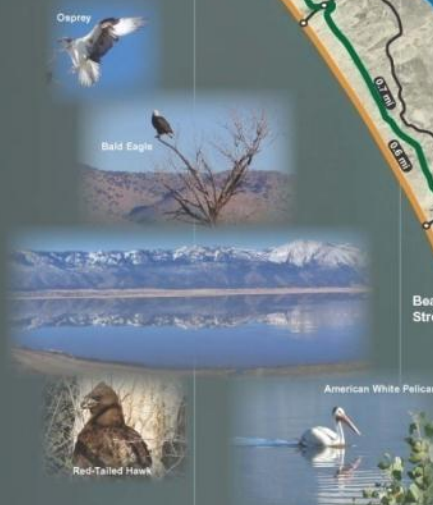
LEGEND

- Bridge
- Parking
- Restroom
- Picnic Area
- Boat Launch
- Drinking Water
- Maximum Grade
- Stair Viewing Tower
- Entrance Fee Station
- Horse Trailer Parking

A Trail Access Information

Trail Name	Length	Typical Grade	Maximum Grade	Typical Cross Slope	Maximum Cross Slope	Typical Tread Width	Minimum Clearance Width	Surface Type	Surface Firmness	Surface Stability
									Typical	Typical
Beach Stroll	2.7 mi	1.8%	220 ft is 8 - 9%	2.8%	473 ft is 8 - 11%	42 ft	20 ft	Sand	0.98	1.00
Day Use Pathway	0.4 mi	2.2%	9 ft is 9 - 15%	2.9%	333 ft is 5 - 7%	6 ft	48 in	Asphalt	0.16	0.16
Deadman's Creek Trail	0.6 mi	7.5%	309 ft is 16 - 28%	7.8%	298 ft is 16 - 26%	26 in	16 in	Soil	0.17	0.18
Dune Trek	2.4 mi	9.2%	175 ft is 35 - 49%	4.2%	217 ft is 15 - 23%	32 in	18 in	Sand	0.77	0.80
East Loop	3.8 mi	2.0%	106 ft is 8 - 15%	1.8%	35 ft is 8 - 13%	43 in	18 in	Sand	0.41	0.53
North Loop	3.4 mi	1.8%	173 ft is 10 - 27%	2.4%	200 ft is 7 - 9%	60 in	24 in	Sand	0.47	0.68
South Loop	2.5 mi	1.6%	316 ft is 5 - 6%	2.1%	738 ft is 5 - 7%	60 in	24 in	Sand	0.35	0.43
Wetlands Loop	1.1 mi	1.3%	335 ft is 5 - 11%	1.6%	28 ft is 5 - 11%	7 ft	46 in	Aggregat Gravel	0.23	0.27

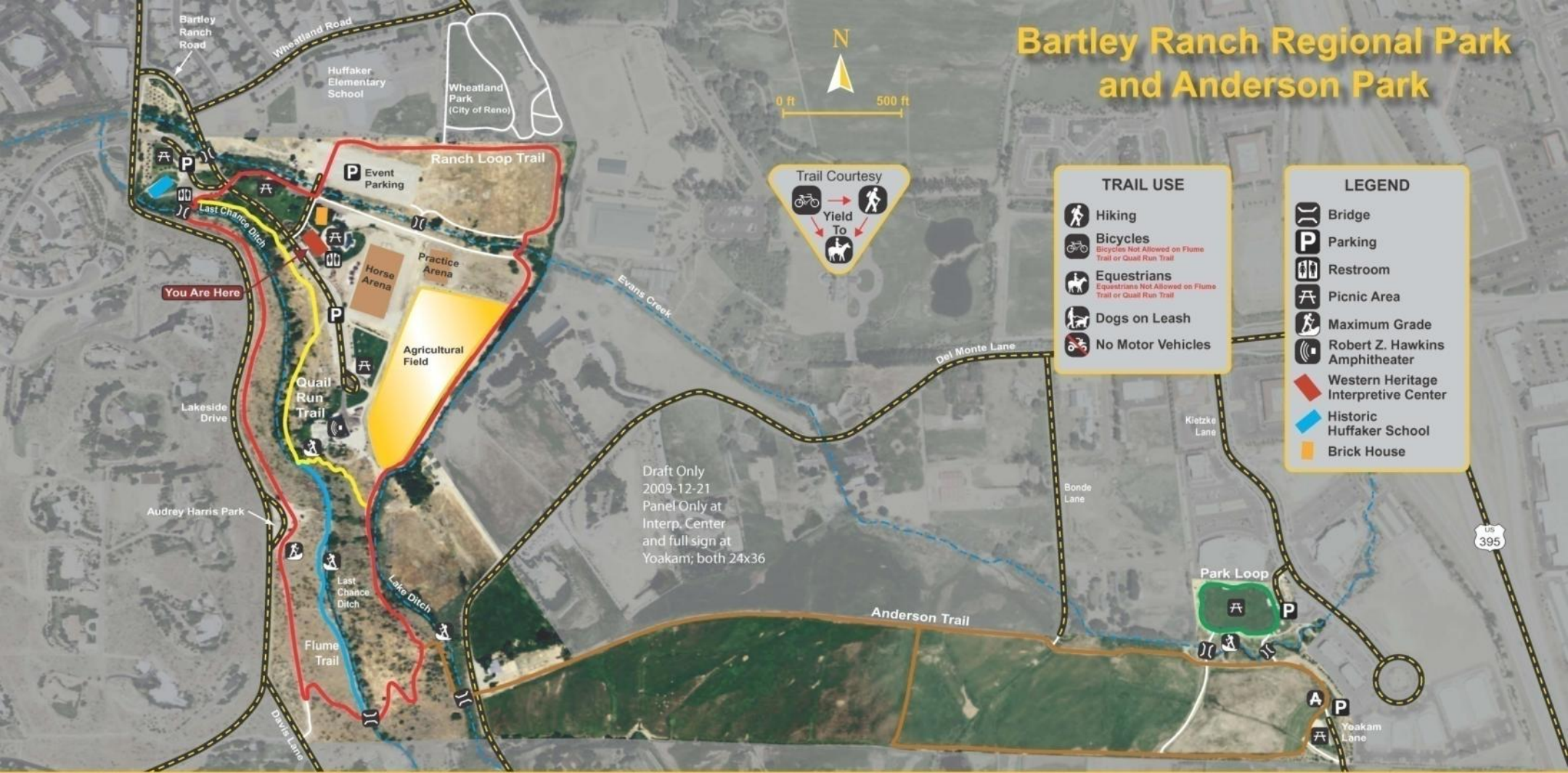
WARNING: Trail conditions may have changed since January 2009 when these trails were assessed. Secondary trails are shown in black. Not all trails are mapped. Signage created by Beneficial Designs Inc. using trail data collected by a certified trail assessment coordinator.



Rough Draft Only
2009-12-24
5 at 20x24 at south equestrian, north equestrian, entrance area, middle, Deadman's



Bartley Ranch Regional Park and Anderson Park



- ### TRAIL USE
- Hiking
 - Bicycles
Bicycles Not Allowed on Flume Trail or Quail Run Trail
 - Equestrians
Equestrians Not Allowed on Flume Trail or Quail Run Trail
 - Dogs on Leash
 - No Motor Vehicles

- ### LEGEND
- Bridge
 - Parking
 - Restroom
 - Picnic Area
 - Maximum Grade
 - Robert Z. Hawkins Amphitheater
 - Western Heritage Interpretive Center
 - Historic Huffaker School
 - Brick House

Trail Name	Length	Typical Grade	Maximum Grade	Typical Cross Slope	Maximum Cross Slope	Typical Trail Width	Minimum Clearance Width	Surface Type	Surface Firmness		Surface Stability	
									Typical	Worst	Typical	Worst
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



Funded by the Nevada Recreational Trails Program

WARNING: Trail conditions may have changed since September 2009 when these trails were assessed. Secondary trails are shown in white. Signage created by Beneficial Designs Inc. using data collected by a certified trail assessment coordinator.

Trail Access Information

Acknowledgement

Phase I & II funding for the Developed Outdoor Recreation Assessment Process was provided by the U.S. Department of Agriculture through the Small Business Innovation and Research program Grant number 2013-33610-21051

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*Working toward universal access
through research, design & education*