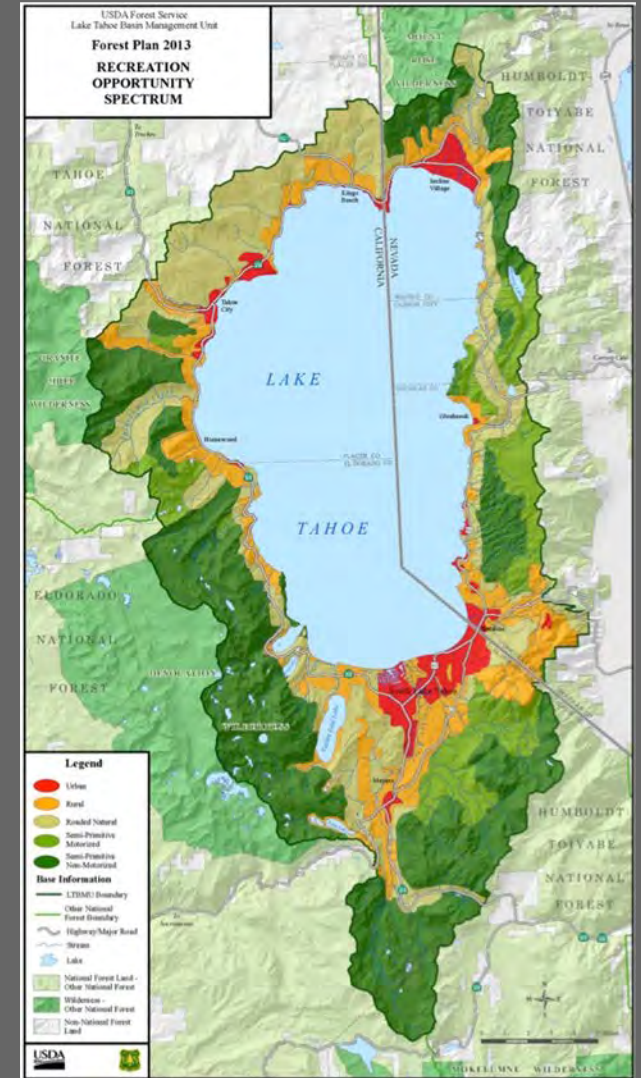
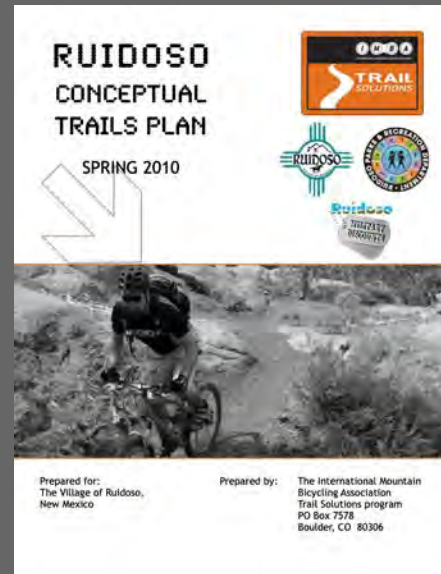


DEVELOPING THE PLAN



ZONE ANALYSIS

- After you've completed community and land manager engagement, created a vision, found available data, assessed the terrain, and identified major control points, lines, and polygons; its time to start developing the plan!
- Before you draw lines on map, pull back your view and think higher level.
- Zones (polygons) are a useful tool to segregate certain terrain types and the experiences they can host. Zones may include key positive control points and avoid negative ones, they may meet at important intersections or junctions, especially those driven by the landscape.
- Sketching in zones lets one assess feasibility of the project, is it possible, is it worth it?
- Conceptual zones can help determine trail density. Trail density often depends on the landscape setting and planned experience goals.
- Rough rules of thumb; 1 mile per 10 acres is quite dense (think city park), the less dense the system to more remote/solitude your provide visitors, single-use experience pods like mountain bike gravity zones may appeal to more dense trails, typically the densest part of the system is adjacent to the trailhead.

KEY IDEAS

Stacked Loops

- Stacked loops are appealing because they offer variety. Loops let visitors enjoy trails of varying distances, difficulty, or ecosystems in the same outing. Several different types of loops can work depending on the landscape constraints; links in a chain, lollipops connected together, large outer loop with inner options, etc. Stacked loops make optimal use of available land by dispersing visitors depending on their desired experience and skill.
- In general, the easiest loops/terrain should be close to the trailhead to provide the best accessibility to new trail users or those looking for quick simple outings. The most challenging trails and terrain should be further away from the proposed parking hubs, rewarding those willing to travel longer distances. Putting the difficult segments further out of reach of beginners, and giving riders time and distance to warm up before reaching those technical segments, provides a level of self-selection in the system, a proven risk management tool.
- Connectivity is important, and loops are not always possible. Shared use corridors are common when constraints create one feasible trail alignment. Providing connectivity is important, there may only be one route to a mountain peak. But in general, loops are much preferred by all visitor types.



KEY IDEAS

Connectivity

- Connectivity is important, and loops are not always possible. Shared use corridors are common when constraints create one feasible trail alignment. Providing connectivity is important, there may only be one route to a mountain peak or one way to a community access point. In general, loops are much preferred by all visitor types, minimize “out and back” experiences when possible.

KEY IDEAS

Shared use & Single Use

- Shared use trails are important for building community and offering the most recreation from the landscape. Key connections between access points, trailheads, or important control points are often shared use.
- Pockets of single use can help accommodate more diverse experiences and reduce visitor conflicts. For instance, a hiking-only nature trail can offer quiet solitude for those seeking connection with nature, while a mountain bike-only descent gives riders a chance to let loose and go fast, without worry of startling other visitors.

KEY IDEAS

Intersections

- Intersections are important control points, like turning locations they may not be identified until the design phase. During the planning phases, key intersections may be established to guide the interaction of experience zones and trail corridors.
- Natural intersection points may include the trailhead/access points, saddles between peaks, or key water crossings. In general, intersections on anything over mellow slopes are tough to create without some conflict potential.

KEY IDEAS

Hubs & Clusters

- Hubs and clusters are enhanced purposeful intersections and associated experience zones. They give visitors more trail options for varying skill levels at each hub (major intersection), allowing for progressive skill level and trail types diversity. At many hubs, there is the option to change the trail difficulty or type, or continue on the same skill level/style trail.
- This practice better spreads out visitation and helps reduce visitor conflict. A “cluster” is a concentration of trails with various difficulty levels or styles. Clusters may have a theme, creating an experience zone, such as a gravity zone for bike-only descents, or a nature zone near waterfront for hikers and walkers.

KEY IDEAS

Trailheads

- Well-placed trailheads and parking lots contribute to successful trail systems. Trailheads should be located in areas of lower elevation, as most trail visitors prefer outbound climbs with inbound descents back to the parking area. This also helps mitigate risk by allowing fatigued riders an easier route back to their starting point. This is especially true for mountain bikers, and necessary for families and beginners. Mountain bikers usually prefer to exert themselves the fullest on the first half of an outing, and enjoy a descent back to their vehicle on the second half. Trailheads can be well-developed, or primitive. They can also be focused towards one visitor type over the other.
- Determining your trailhead needs is important during planning. Trail systems intended to host competitive events may require large parking areas. Will there be camping at the trailhead? Do you need parking for 10 or 100 cars? Mountain bikers often have large racks on their cars, spaces need to be larger, while equestrians need whole trailer areas. Will there be night use of the trails? Should the trailhead be lit? Restrooms? Portable or flushing toilets?

KEY IDEAS

Community Access Points

- Access points generally have no parking, often just a trail connection to existing infrastructure (bike path, road, etc.) Access points are important to promote inclusion and accessibility. Not all trail visitors have vehicles to drive to dedicated trailheads, community access points can help provide more options for a diverse population.
- Access points are difficult to manage at trail systems with gate revenue goals. Access points also open up more confusion in a trail system, ensuring adequate and appropriate signage throughout the system is vital to all visitors.






KEY IDEAS

Progression & Diversity

- Progression and diversity are important concepts from planning to construction that will help create a successful trail system that offers the most recreational benefits from the landscape in a minimal way.
- Providing progressive trail difficulty levels will help visitors increase their skills and grow. This is very important for mountain bikers. Diverse trail experiences, with different trail objectives and settings, help disperse visitors and create unique options for exploration.
- When combined with stacked loops, hubs and clusters, shared use and single use pockets; these guiding principles can help produce a high quality trail system for a wide range of visitors.

IMBA Trail Difficulty Rating System



	 EASIEST WHITE CIRCLE	 EASY GREEN CIRCLE	 MORE DIFFICULT BLUE SQUARE	 VERY DIFFICULT BLACK DIAMOND	 EXTREMELY DIFFICULT DBL. BLACK DIAMOND
TRAIL WIDTH	72" (1,800 mm) or more	36" (900 mm) or more	24" (600 mm) or more	12" (300 mm) or more	6" (150 mm) or more
TREAD SURFACE	Hardened or surfaced	Firm and stable	Mostly stable with some variability	Widely variable	Widely variable and unpredictable
AVERAGE TRAIL GRADE	Less than 5%	5% or less	10% or less	15% or less	20% or more
MAXIMUM TRAIL GRADE	Max 10%	Max 15%	Max 15% or greater	Max 15% or greater	Max 15% or greater
NATURAL OBSTACLES AND TECHNICAL TRAIL FEATURES (TTF)	None	Unavoidable obstacles 2" (50 mm) tall or less Avoidable obstacles may be present Unavoidable bridges 36" (900 mm) or wider	Unavoidable obstacles 8" (200 mm) tall or less Avoidable obstacles may be present Unavoidable bridges 24" (600 mm) or wider TTF's 24" (600 mm) high or less, width of deck is greater than 1/2 the height	Unavoidable obstacles 15" (380 mm) tall or less Avoidable obstacles may be present May include loose rocks Unavoidable bridges 24" (600 mm) or wider TTF's 48" (1,200 mm) high or less, width of deck is less than 1/2 the height Short sections may exceed criteria	Unavoidable obstacles 15" (380 mm) tall or less Avoidable obstacles may be present May include loose rocks Unavoidable bridges 24" (600 mm) or narrower TTF's 48" (1,200 mm) high or greater, width of deck is unpredictable Many sections may exceed criteria

CORRIDOR ANALYSIS

- Zone analysis lets you determine large conceptual ideas and feasibility. It can often be useful for selling the vision and idea to others, land managers, local businesses, politicians, neighbors, etc.
- Corridors, actual trail alignments (lines), require some level of ground truthing. No amount of data can reliably be used to create accurate trail alignments without fieldwork.
- Corridor width depends on the level of planning you completing. Generally, at some point, going into enough depth turns to design. Wide corridors should be used during the planning phase, to better assess actual trail possibility and inform the design phase. During corridor analysis trail type becomes important, this will be based upon the zone.
- 100- to 300-foot corridors are quite common during master planning, where conceptual ideas are further vetted with corridors and more trail details. Sketching corridors on maps or spatial analysis programs can help identify new issues or confirm ideas from the zone analysis. Lines on a map are only as useful as the topographic data and trail grade details. If you draw a line that is too steep, it may misrepresent your opportunities.
- For instance, if you hoped for a 1-mile descent to the trailhead in your beginner zone, you may sketch a line at appropriate grades to confirm or deny.

TRAIL TYPES



INTERNATIONAL MOUNTAIN BICYCLING ASSOCIATION

TRAIL TYPES

TRADITIONAL SINGLETRACK



INTERNATIONAL MOUNTAIN BICYCLING ASSOCIATION

TRAIL TYPES

MTB OPTIMIZED SINGLETRACK



INTERNATIONAL MOUNTAIN BICYCLING ASSOCIATION

TRAIL TYPES

MTB GRAVITY SINGLETRACK



TRAIL TYPES

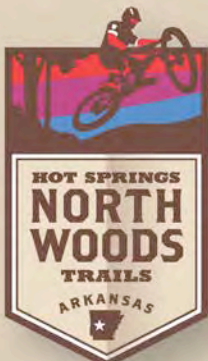
ROADS, PATHS, DOUBLETRACK



TRAIL TYPES

BIKE PARKS





WATERWORKS TRAILHEAD

LEGEND

- GREEN CIRCLE - EASIEST (BEGINNER)**
These trails typically have gentle climbs and descents, with attention paid to safety, general advice, trailheads, trailheads and other trailhead amenities.
- BLUE SQUARE - MORE DIFFICULT (INTERMEDIATE)**
These trails provide challenging riding with steep slopes, variable terrain, narrow trails, narrow turns, tight corners, jumps, and other terrain variations.
- BLACK DIAMOND - MOST DIFFICULT (ADVANCED)**
These trails have a mixture of long descents, loose soil conditions, technical and trail features, steep slopes, narrow, exposed, and/or unimproved features, steep descents, drops, jumps and other terrain variations.
- DIRECTIONAL ARROWS - ONE WAY, BIKE ONLY**

WEST TRAIL DESCRIPTIONS

- WATERWORKS 6.8 MI. (EASIEST, SHARED-USE)**
This trailhead, 14.5 miles from downtown Jones for Waterworks, is a great starting point for a beginner. It's a great starting point for a beginner.
- MOCKINGBIRD 0.1 MI. (EASIEST, BIKE-ONLY DESCENT)**
This short trail is a great way to get used to the Waterworks trailhead, or practice your skills before heading out on other trails in the area.
- WHIP-POOR-WILL 0.2 MI. (EASIEST, BIKE-ONLY DESCENT)**
This trailhead is located in a wooded area near Mockingbird.
- NIGHTHAWK 0.2 MI. (EASIEST, BIKE-ONLY DESCENT)**
This longer trail is a fun for everyone. With hills, bumps, and opportunities to get the wheels off the ground, it's a great thing to do in the woods.
- BROWN THRASHER 0.3 MI. (EASIEST, SHARED-USE)**
A short loop trail that is a great way to get used to the Waterworks trailhead, or practice your skills before heading out on other trails in the area.
- BETHEL 0.8 MI. (MORE DIFFICULT, SHARED-USE)**
A short loop trail along Bethel Lake and through "Cypress Cove", this trail offers views, narrow trails, and rocky technical riding. The descent way from Waterworks trailhead to Hub F.
- WATERWORKS 0.8 MI. (MORE DIFFICULT, SHARED-USE)**
An extension of the main Waterworks trailhead, this trail starts to climb as the trail narrows. A technical challenge designed to access the Lowrey Ridge, gravity hub H.
- LOWREY 0.8 MI. (MORE DIFFICULT, SHARED-USE)**
Named after a long time resident here, this trail is a technical challenge. It's a great way to get used to the Waterworks trailhead, or practice your skills before heading out on other trails in the area.
- DREAMCATCHER 0.7 MI. (MORE DIFFICULT, SHARED-USE)**
This trail is a technical challenge. It's a great way to get used to the Waterworks trailhead, or practice your skills before heading out on other trails in the area.
- SCREECH DWL 0.2 MI. (MORE DIFFICULT, BIKE-ONLY DESCENT)**
Building off Highback this descending trail gives you some time to practice parking or end riding before you get back to the way on the top lift.
- BLUE JAY 0.8 MI. (MORE DIFFICULT, BIKE-ONLY DESCENT)**
By this trail, you'll be on a more technical trail. Expect the terrain to get steeper and the ground to get more rocky as you descend.
- VALKYRIE 0.8 MI. (MORE DIFFICULT, SHARED-USE)**
An alternative way to access Hub J from Hub C. This traditional downhill trail is one of the best spots of Bethel Lake. If you can take your eyes off the road and come.
- RAGNAROK 1.2 MI. (MORE DIFFICULT, BIKE-ONLY DESCENT)**
Between all the peaks of Blue Jay and Larkspur, this trail is a technical challenge. It's a great way to get used to the Waterworks trailhead, or practice your skills before heading out on other trails in the area.
- ZIG ZAG 0.7 MI. (MORE DIFFICULT, SHARED-USE)**
With over a dozen jumps, bumps and lots of steep turns, this trail is a technical challenge. It's a great way to get used to the Waterworks trailhead, or practice your skills before heading out on other trails in the area.
- LUCKY 13 0.8 MI. (MOST DIFFICULT, BIKE-ONLY DESCENT)**
It doesn't get much steeper than this. A lot of steep descents, but the trail is a technical challenge. It's a great way to get used to the Waterworks trailhead, or practice your skills before heading out on other trails in the area.
- WISHBONE 0.2 MI. (MOST DIFFICULT, SHARED-USE)**
A very narrow, exposed, and technically challenging single-track trail. A great way to get used to the Waterworks trailhead, or practice your skills before heading out on other trails in the area.
- END OF THE RAINBOW 0.5 MI. (MOST DIFFICULT, SHARED-USE)**
Named after the rainbow, this trail is a technical challenge. It's a great way to get used to the Waterworks trailhead, or practice your skills before heading out on other trails in the area.

WEST



EXAMPLES OF DIVERSE TRAIL SYSTEMS WITH MULTIPLE TRAIL TYPES

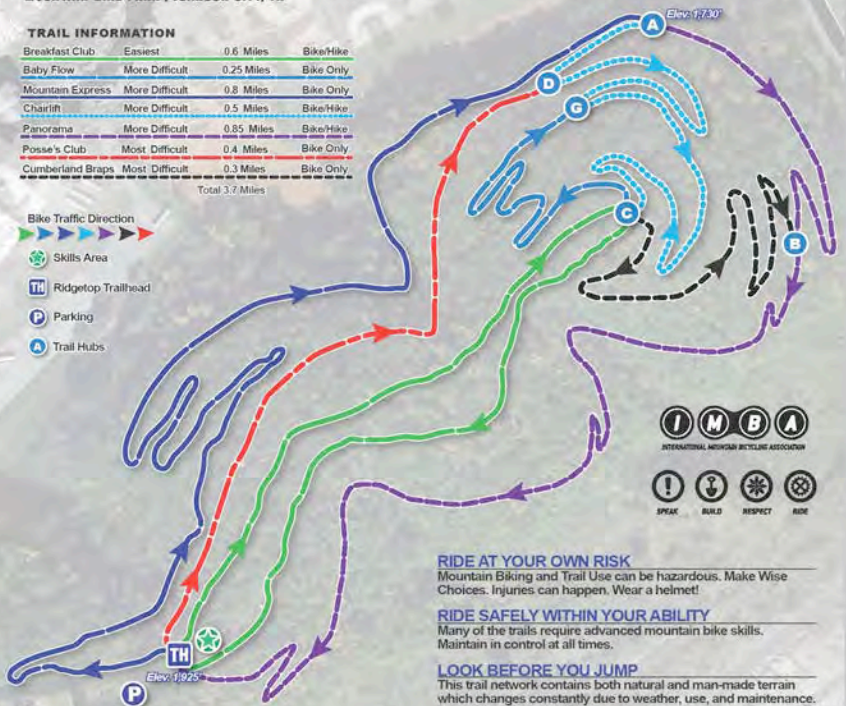


TANNERY KNOBS

MOUNTAIN BIKE PARK | JOHNSON CITY, TN

Trail Name	Difficulty	Length	Access
Breakfast Club	Easiest	0.6 Miles	Bike/Hike
Baby Flow	More Difficult	0.25 Miles	Bike Only
Mountain Express	More Difficult	0.8 Miles	Bike Only
Chairlift	More Difficult	0.5 Miles	Bike/Hike
Panorama	More Difficult	0.85 Miles	Bike/Hike
Posse's Club	Most Difficult	0.4 Miles	Bike Only
Cumberland Brags	Most Difficult	0.3 Miles	Bike Only
Total 3.7 Miles			

- Bike Traffic Direction**
- Skills Area**
- TH** Ridgetop Trailhead
- P** Parking
- A** Trail Hubs



- RIDE AT YOUR OWN RISK**
Mountain Biking and Trail Use can be hazardous. Make Wise Choices. Injuries can happen. Wear a helmet!
- RIDE SAFELY WITHIN YOUR ABILITY**
Many of the trails require advanced mountain bike skills. Maintain in control at all times.
- LOOK BEFORE YOU JUMP**
This trail network contains both natural and man-made terrain which changes constantly due to weather, use, and maintenance. Do not ride or jump blindly.
- RESPECT EACH OTHER AND SHARE THE TRAIL**
Respect the land, wildlife, and other guests. Watch out for each other and stay clear of landing areas.
- BE AWARE OF YOUR SURROUNDINGS**
Pay attention to the weather, dress appropriately, and carry plenty of water.
- DO NOT RIDE MUDDY TRAILS!**
- LOWER YOUR SADDLE FOR MORE FUN**
It is strongly recommended you lower your saddle before descents for improved bike handling. Raise your seat for the climb.
- WEAR SAFETY EQUIPMENT**
This includes appropriate clothing, helmet, knee and elbow pads. Serious injury or death can occur even with proper precautions.

CALL 911 FOR EMERGENCIES

You are at Tannery Knobs Bike Park Ridgetop Trailhead 18 Tannery Knobs, Johnson City, TN 37601
Identify your location to the 911 operator by using the nearest intersection and/or trail marker
The nearest hospital is Johnson City Medical Center 400 N State of Franklin Rd #11, Johnson City, TN
Please report any non-emergencies and criminal activity to the Johnson City Police Department (423) 434-6000



This Project Made Possible Through Partnerships with:



Planning, Design, and Construction by:



EXAMPLE PLANNING 1

COMMUNITY GOALS

HALF-DAY DRIVE DESTINATION

PRIMARILY SHARED-USE (HIKE/BIKE)

MODERN MOUNTAIN BIKE EXPERIENCES

MAINTAIN NATURAL SETTING

MINIMIZE NEIGHBOR IMPACTS

LAND MANAGER GOALS

AVOID IMPACTS TO WETLANDS/STREAMS

AVOID CULTURAL SITES

MINIMIZE IMPACTS TO SPECIAL HABITAT

MINIMIZE IMPACTS TO HUNTING

MAINTAIN FIRE MANAGEMENT POTENTIAL

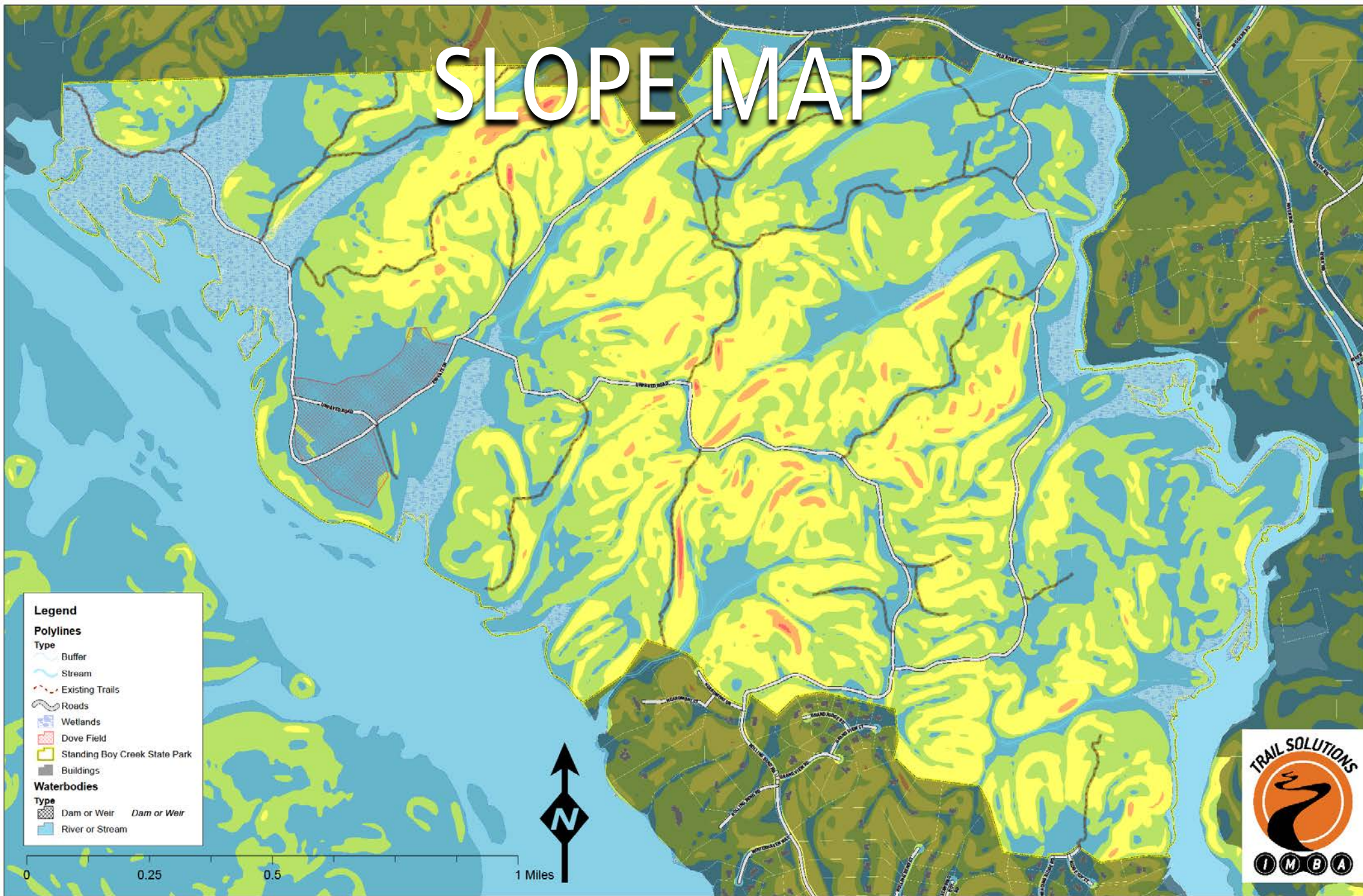
SHARED-USE TRAILS



TOPO MAP



SLOPE MAP



Legend

Polylines

Type

- Buffer
- Stream
- Existing Trails
- Roads
- Wetlands
- Dove Field
- Standing Boy Creek State Park
- Buildings

Waterbodies

Type

- Dam or Weir
- River or Stream



EXAMPLE PLANNING 1

POSITIVE CONTROL

LAKESHORE

POSSIBLE VIEWS

EXISTING CULVERTS

NEW PARKING AREA

ROCKY AREAS

TRAILHEAD

NEGATIVE CONTROL

WETLAND

STREAMS

OPEN AREAS

DOVE FIELD

NEIGHBORS

HOMESTEADS



OPEN GENTLE SLOPES

INCISED/ERODED STREAMS



LARGE ROCKS



WET AREAS AND BOUNDARIES



LAKESHORE AND VIEWS



▼ Search

Search

src: Pizza near Clayville, NY

Get Directions History

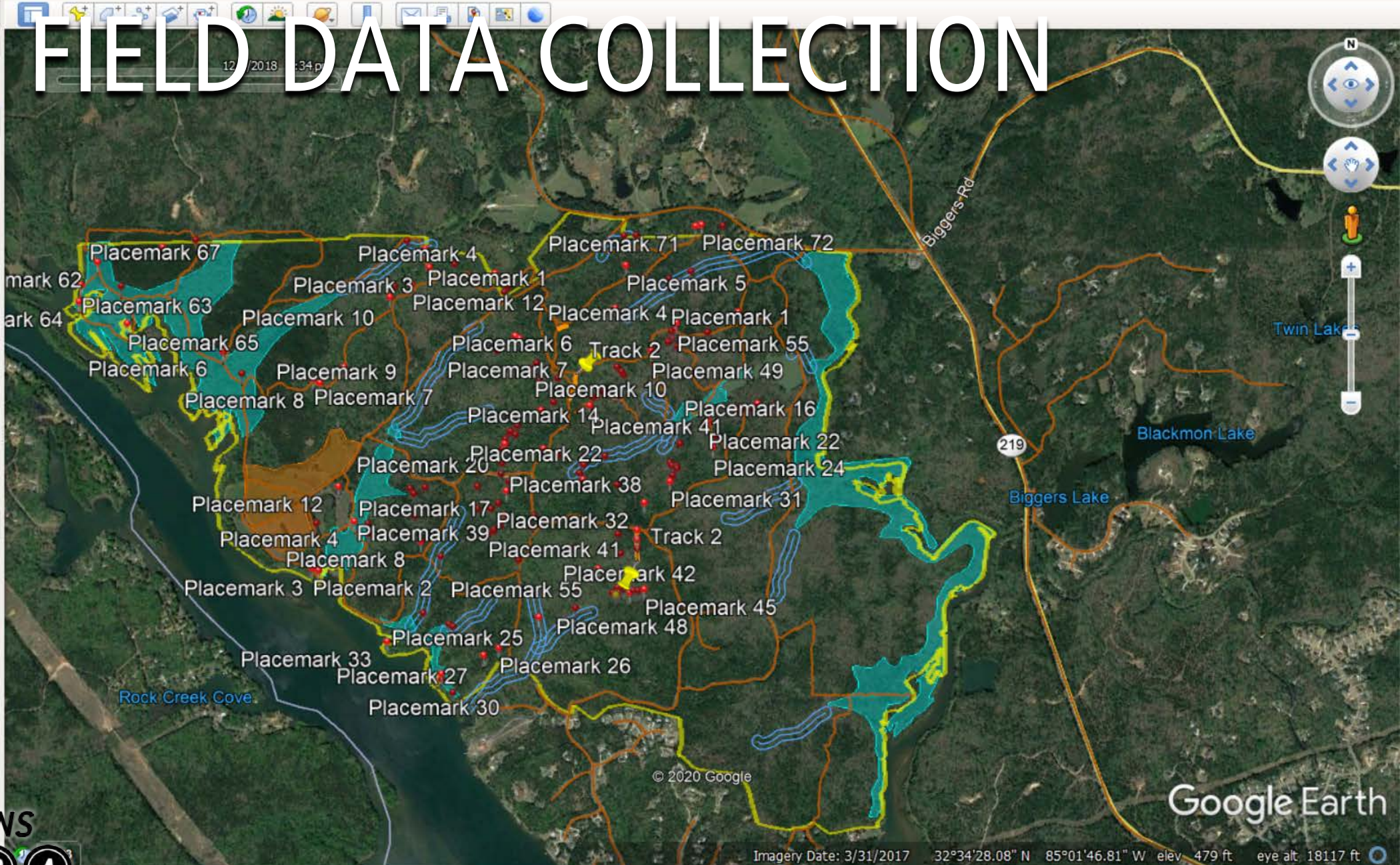
▼ Places

- My Places
- Temporary Places
- 181204 SB MP.kmz
- 181202-SK.kmz
- 181203-SK.kmz
- 181204-SK.kmz

Layers

- Primary Database
- Announcements
- Borders and Labels
- Places
- Photos
- Roads
- 3D Buildings
- Weather
- Gallery
- More
- Terrain

FIELD DATA COLLECTION



EXAMPLE PLANNING 1

ZONE ANALYSIS

DETERMINE ZONES OF FEASIBILITY (USEABLE AND UNUSABLE TERRAIN)

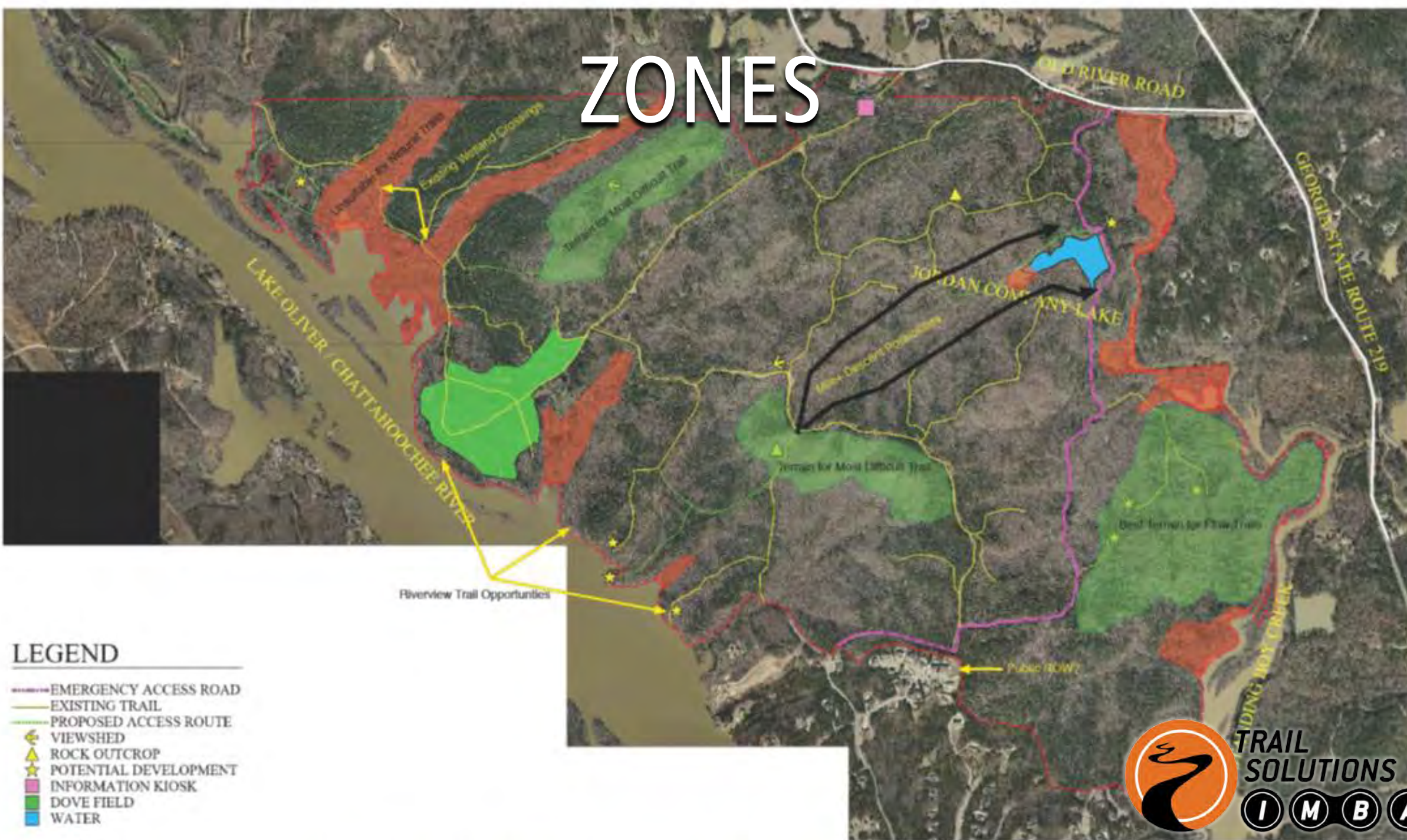
IDENTIFY ZONES BASED UPON TERRAIN CONTROLLED SKILL LEVEL CONSTRAINTS (GENTLE SLOPES FOR BEGINNER TRIALS, STEEPER SLOPES FOR MORE ADVANCED)

IDENTIFY ZONES BASED UPON TERRAIN CONTROLLED TRAIL TYPE OPPORTUNITIES (ROCKY AREAS FOR TECHNICAL TRAILS, OPEN MODERATE SLOPES FOR FLOW)

IDENTIFY MAJOR POIS (TRAILHEAD, BUFFERS, KEY INTERSECTIONS, VIEWS, ROCKS, ETC.)



ZONES



LEGEND

- EMERGENCY ACCESS ROAD
- EXISTING TRAIL
- PROPOSED ACCESS ROUTE
- VIEWSHED
- ROCK OUTCROP
- POTENTIAL DEVELOPMENT
- INFORMATION KIOSK
- DOVE FIELD
- WATER



EXAMPLE PLANNING 1

CORRIDOR ANALYSIS

CONNECT THE DOTS (AND AVOID THE NEGATIVE ONES)

ALWAYS STRIVE TO SKETCH CORRIDORS AT APPROPRIATE GRADES (LEARN MORE IN DESIGN)

AN EXERCISE IN DENSITY, APPROXIMATELY HOW MUCH TRAIL CAN FIT IN THESE ZONES

USE ZONE ANALYSIS TO ESTIMATE SKILL LEVEL AND TRAIL TYPE

TRY TO CREATE LOOPS, USE YOUR MAJOR CONTROL POINTS, THINK HUB & CLUSTER

NOT AN ABSOLUTE, NOT THE END GAME

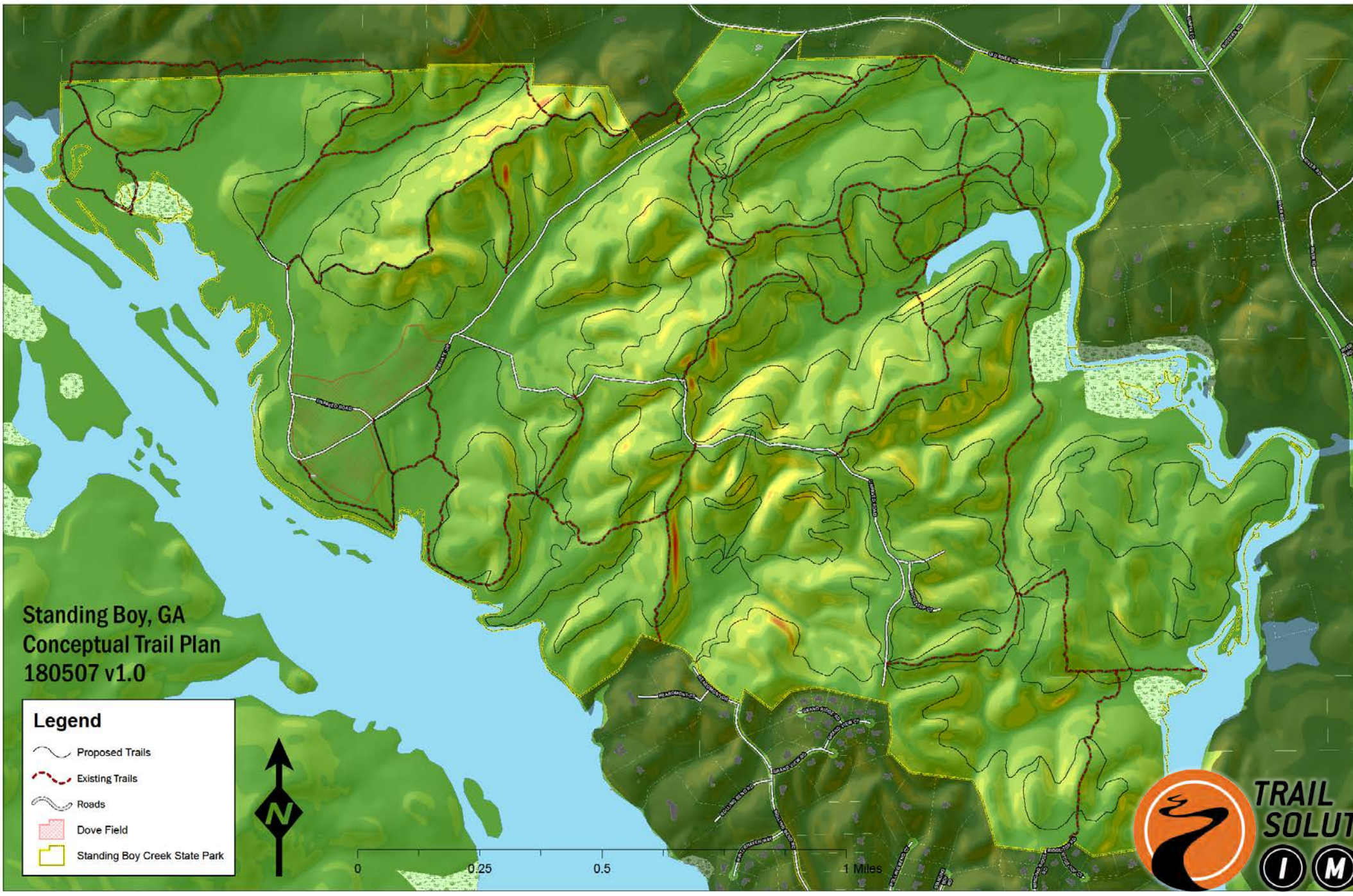
REFINE, REFINE, REFINE (PLANNING IS ITERATIVE)



Standing Boy, GA
Conceptual Trail Plan
180507 v1.0

Legend

- Proposed Trails
- Existing Trails
- Roads
- Dove Field
- Standing Boy Creek State Park



Standing Boy, GA
 DRAFT Master Plan
 181213 v1.0

Legend

Type

- Duffer
- Stream
- Existing trail to be closed
- Existing Trails
- Existing Trails
- Roads

Concept Trails

Difficulty, Type

- BLK, GRV
- BK, XC
- BLU, GRV
- BLU, XC
- GRN, GRV
- GRN, XC

- Parking
- Wetlands
- Dove Field
- Standing Boy Creek State Park



0 0.25 0.5 1 Miles



TRAIL SOLUTIONS



EXAMPLE PLANNING 1

REFINE CORRIDORS

LAND MANAGER IDENTIFIED NEW TRAILHEAD

LAND MANAGER PLANS TO PROVIDE FIRE MANAGEMENT TO SOME AREAS

NEIGHBORHOOD BUFFER IS ADDED TO SOUTHERN PART OF PARCEL

TORNADO DAMAGE



INTERNATIONAL MOUNTAIN BICYCLING ASSOCIATION

DRAFT Standing Boy Trails Design Table					
Segment	Flag Color	Length (ft)	Phase	Difficulty	Type
1	Pink	3991	2	GRN	XC
2	Pink	9292	1	GRN	XC
3	Pink	7476	3	GRN	XC
4	Pink	5728	3	GRN	XC
5	Pink	7459	3	GRN	XC
6	Orange	3798	1	GRN	XC
7	Orange/Black	5962	1	GRN	GRV
8	Blue	6137	2	BLU	XC
9	Blue	2998	2	BLU	XC
10	Blue	5731	3	BLU	XC
11	Blue	6936	3	BLU	XC
12	Orange	3668	3	BLU	XC
13	Orange	19621	3	BLU	XC
14	Orange	4067	3	BLU	XC
15	Orange	5771	3	BLU	XC
16	Orange	4166	3	BLU	XC
16	Orange	1226	3	BLU	XC
17	Pink/Black	3158	3	BLK	GRV
18	Orange/Black	6402	2	BLU	GRV
19	Pink/Black	7443	2	BLU	GRV
20	Orange/Black	3238	3	BLK	GRV
21	Orange/Black	1712	2	BLK	GRV

DRAFT

Standing Boy, GA
DRAFT Trails Master Plan
190220 v1.4

Legend

- Parking
- 2019 Planned Dump Areas
- Neighborhood Safety Buffer
- Trail Hubs
- Type**
- Duffler
- Stream
- Existing Trails
- Roads
- Difficulty, Type**
- BLK, GRV
- BLU, GRV
- BLU, XC
- GRN, GRV
- GRN, XC
- Wetlands
- Dove Field
- Standing Boy Creek State Park
- Type**
- 10 foot
- 100 foot



TRAIL SOLUTIONS
I M B A



Standing Boy, GA Construction Map 200202 v1.0

Legend

200201 Status

Status

- Built
- Under Construction

Difficulty, Type

- Green XC
- Green Gravity
- Blue XC
- Blue Gravity
- Black XC
- Black Gravity

Polylines

Type

- Buffer
- Stream
- Existing Trails
- Roads
- Wetlands
- Dove Field
- Standing Boy Creek State Park
- Buildings

Waterbodies

Type

- Dam or Weir
- Dam or Weir

River or Stream

SB 10 foot

Type

- 10 foot
- 100 foot

Standing Boy Trails Design Table

Segment	Status	Flag Color	Name	Length (ft)	Phase	Difficulty	Type
1	Built	Pink	Quality Time	3797	2	GRN	XC
2	Built	Pink	Primary Goods	9982	1	GRN	XC
3	Built	Pink	Bimini	7446	3	GRN	XC
4	Built	Pink	Bimini	5728	3	GRN	XC
5	Built	Pink	Bimini	7780	3	GRN	XC
6	Built	Orange	Doughboy	3469	1	GRN	XC
7	Under Construction	Orange/Black	The Bug	5358	1	GRN	GRV
8	Flagged	Blue	See-See Rider	6069	2	BLU	XC
9	Flagged	Blue	See-See Rider	3006	2	BLU	XC
10	Flagged	Blue	See-See Rider	5731	3	BLU	XC
11	Flagged	Blue	See-See Rider	7065	3	BLU	XC
12	Flagged	Orange	Tie Snake	3668	3	BLU	XC
13	Flagged	Orange	The Lonely Hunter	19963	3	BLU	XC
14	Flagged	Orange	The Lonely Hunter	4067	3	BLU	XC
15	Under Construction	Orange	The Lonely Hunter	5771	3	BLU	XC
16	Under Construction	Orange	The Lonely Hunter	4166	3	BLU	XC
16	Flagged	Orange	The Lonely Hunter	1084	3	BLU	XC
17	Flagged	Pink	Stockade	5391	3	BLK	GRV
18	Flagged	Orange/Black	Swavey's	6402	2	BLU	GRV
19	Flagged	Pink/Black	Ironclad	7443	2	BLU	GRV
20	Flagged	Orange/Black	Bless your Heart	2029	3	BLK	GRV
21	Flagged	Orange/Black	Sittin' Pretty	1712	2	BLK	GRV



EXAMPLE PLANNING 1

SUMMARY

MORE THAN 25 MILES AVAILABLE WITH LOW TO MODERATE DENSITY

TO MAXIMIZE EXPERIENCES AND ENSURE A DAY'S DRIVE DESTINATION FOR MOUNTAIN BIKERS, UNIQUE EXPERIENCES FOR THE REGION WERE FOCUSED ON

THESE KEY SPECIAL EXPERIENCES INCLUDE A LONG (>2HRS RIDING, >4HRS HIKING), SHARED USE, BACKCOUNTRY STYLE LOOP WITH SCENIC LAKE VIEWS AND CHALLENGING ROCKY SECTIONS

A GRAVITY CLUSTER WHICH UTILIZES THE MAXIMUM AVAILABLE ELEVATION DIFFERENCE AND ENDS AT THE TRAILHEAD

A VARIETY OF BEGINNER TRAILS (SHARED USE AND BIKE-ONLY FLOW) CONFIGURED IN LOOPS ALLOW MANY NEW VISITORS TO EXPERIENCE TRAILS



EXAMPLE PLANNING 2

COMMUNITY GOALS

HALF-DAY DRIVE DESTINATION

PRIMARILY SHARED-USE (HIKE/BIKE)

MODERN MOUNTAIN BIKE EXPERIENCES

MAINTAIN NATURAL SETTING

CREATE OPPORTUNITIES FOR EVENTS

LAND MANAGER GOALS

CREATE SIGNATURE TRAIL SYSTEM

SCHOLASTIC RACING VENUE FOR MOUNTAIN BIKERS

SHARED USE WITH MODERN BIKE-ONLY PODS

AVOID POLICE SHOOTING RANGE

AVOID LEAF DISPOSAL PILE

AVOID WATER RECLAMATION FACILITY



EXAMPLE PLANNING 1

POSITIVE CONTROL

MELLOW SLOPE RIDGE TOPS

EXPOSED BEDROCK

STEEP SLOPES

SLIGHT VIEWS

NEGATIVE CONTROL

RECENT TIMBER HARVEST

EXPOSED BEDROCK

POLICE SHOOTING RANGE

LEAF DISPOSAL PILE

STEEP SLOPES

WATER RECLAMATION FACILITY



INTERNATIONAL MOUNTAIN BICYCLING ASSOCIATION

EXAMPLE PLANNING 2

CONSTRAINTS AND OPPORTUNITIES

POLICE SHOOTING RANGE TO BE AVOIDED

EXPOSED BEDROCK = HARD BUILDING BUT GOOD OPPORTUNITY FOR TECHNICAL ADVANCED TRAILS

STEEP SLOPES = GOOD FOR ADVANCED TRAILS

RECENT TIMBER HARVEST ARE THICK AND GNARLY, NOT THE PRETTIEST PLACE FOR TRAILS

FLATTER SLOPES (IDENTICAL TO TIMBER HARVEST) ARE IDEAL FOR BEGINNER TRAILS

FLATTER SLOPES AT THE TOP OF THE HILLS, ACCESS?

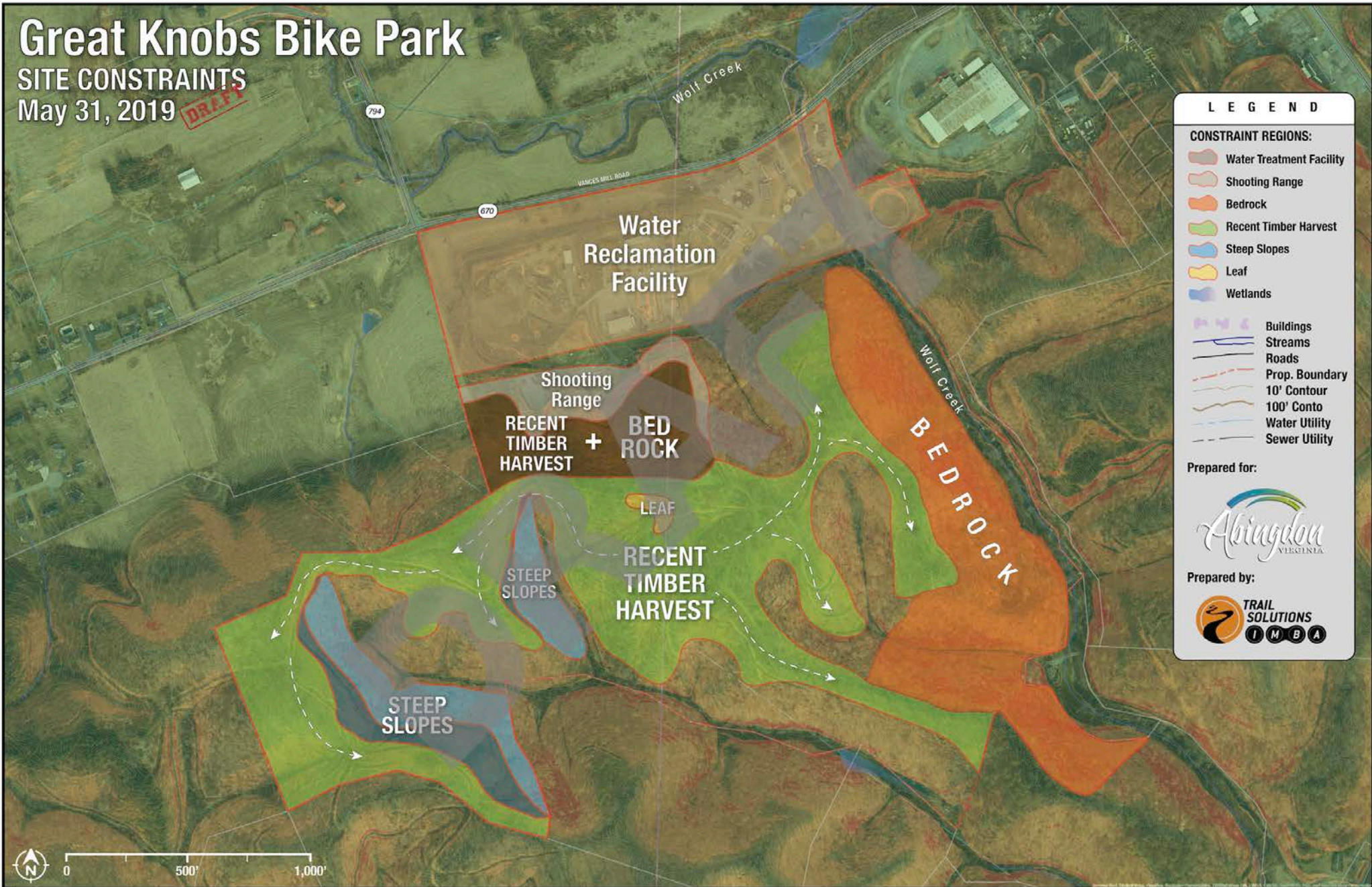


Great Knobs Bike Park

SITE CONSTRAINTS

May 31, 2019

DRAFT



Great Knobs Bike Park

TRAIL CONCEPT MAP

May 31, 2019 **DRAFT**

C O S T O P I N I O N T A B L E





ZONE	DIFFICULTY TRAIL TYPE	LENGTH (mi)	DESIGN	CONSTRUCTION
1	BEGINNER CROSS COUNTRY (XC)	2-3	\$9,000	\$142,500
2	BEGINNER GRAVITY	1-2	\$6,500	\$105,500
3	INTERMEDIATE XC	1-2	\$6,000	\$126,500
4	INTERMEDIATE GRAVITY	1-2	\$6,500	\$105,500
5	ADVANCED XC	½-1	\$3,000	\$126,500
6	ADVANCED GRAVITY	1-2	\$4,000	\$158,500
		6½-12 miles	\$35,000	\$765,000

MASTERPLANNING	\$20,000
PERMITTING	\$20,000
SIGNAGE	\$30,000
SUBTOTAL	\$870,000
20% CONTINGENCY	\$174,000
GRAND TOTAL	\$1,044,000

L E G E N D

CONCEPTUAL TRAIL ZONES:

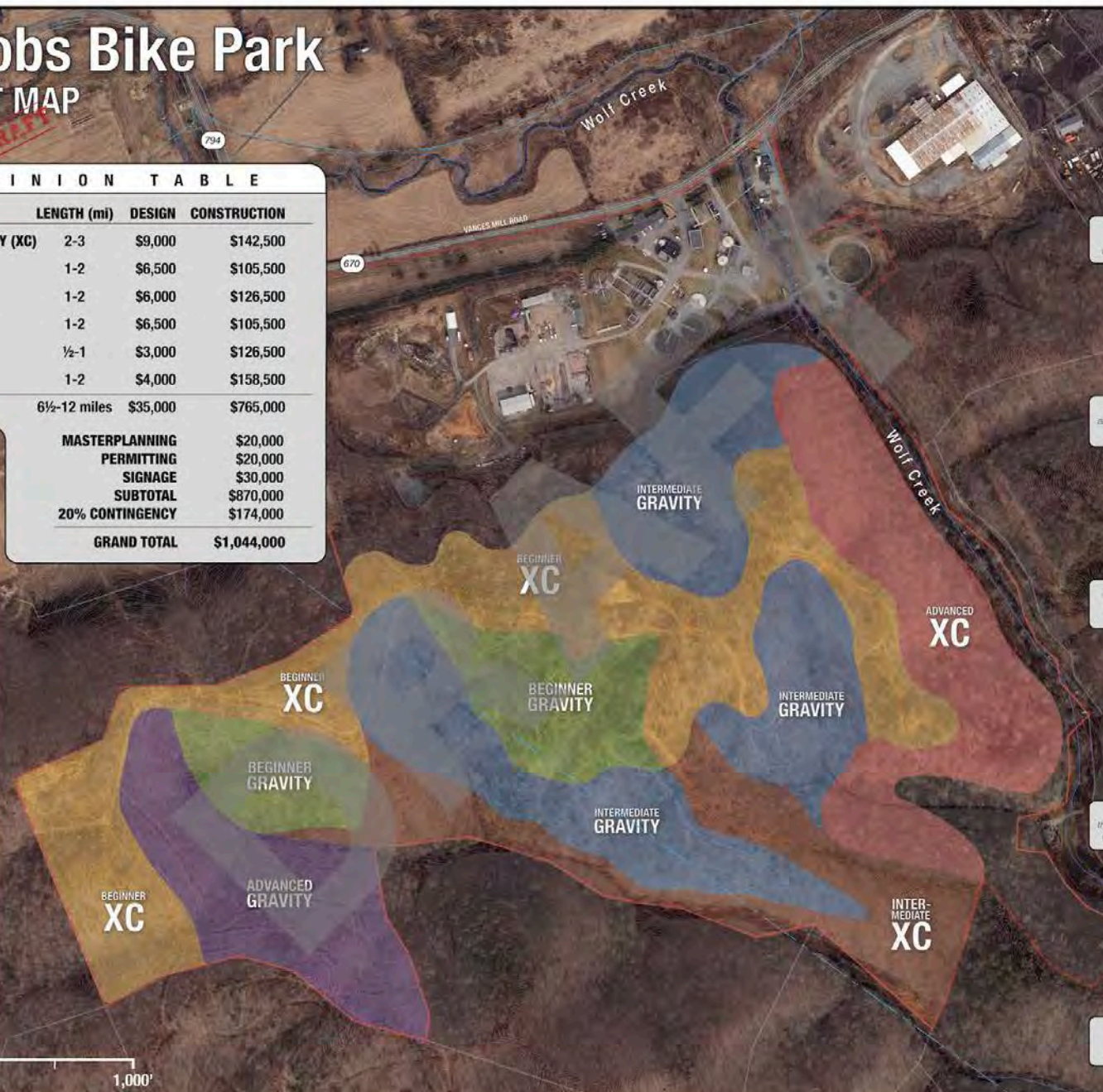
-  BEGINNER XC
-  BEGINNER GRAVITY
-  INTERMEDIATE XC
-  INTERMEDIATE GRAVITY
-  ADVANCED XC
-  ADVANCED GRAVITY

-  Roads
-  Prop. Boundary
-  10' Contour
-  100' Contour

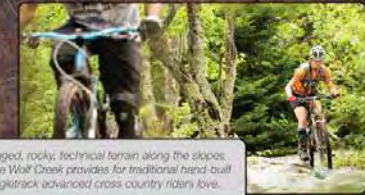
Prepared for:



Prepared by:



Progressive trails provide riders of all ages and ability levels with clearly marked trails of varying difficulty to hone skills & improve rider confidence.



Rugged, rocky, technical terrain along the slopes above Wolf Creek provides for traditional hand-built singletrack advanced cross country riders love.



Traditional singletrack maximizes a narrow, natural tread surface and trail corridor to minimize user conflict by opening up views & limiting speed.



Gravity trails are fun, flowy & directional descents that maximize user experience while minimizing user conflict by forming optimal circulation patterns.



Advanced gravity zones utilize steep slopes to provide challenges that are important for skills progression and the attraction of regional riders.

EXAMPLE PLANNING 2

SUMMARY

UNFEASIBLE

RELOCATING SHOOTING RANGE, STEEP SLOPES, AND LACK OF ROAD ACCESS TO MELLOW TERRAIN = TOO COSTLY

SAVED EFFORT IN THE LONG RUN BY ABANDONING THIS PROPERTY AND FOCUSING ON SIMILAR TERRAIN WITH BETTER ACCESS

EXAMPLE PLANNING 3

COMMUNITY GOALS

HALF-DAY DRIVE DESTINATION

PRIMARILY SHARED-USE (HIKE/BIKE)

MODERN MOUNTAIN BIKE EXPERIENCES

MAINTAIN NATURAL SETTING

REVITALIZE DOWNTOWN ECONOMY

LAND MANAGER GOALS

CREATE SIGNATURE TRAIL SYSTEM

ENSURE BEGINNER/NEW TRAIL VISITOR ACCESS

DEVELOP A SYSTEM LOCAL KIDS CAN APPRECIATE

REVITALIZE DOWNTOWN ECONOMY



EXAMPLE PLANNING 3

POSITIVE CONTROL

MELLOW SLOPE

ROCKY AREAS

STEEP SLOPES

RHODODENDRON THICKS

DOWNTOWN/SCHOOL NOISE

SCENIC VIEWS

NEGATIVE CONTROL

MELLOW SLOPE HAS EXPOSED BEDROCK

STEEP SLOPES

RHODODENDRON THICKS

I-26 NOISE

NEIGHBORHOOD NOISES

OLD BORROW/QUARRY SITES

HOMESTEADS



EXAMPLE PLANNING 3

CONSTRAINTS AND OPPORTUNITIES

MELLOW SLOPES ARE CLOSE TO TRAILHEAD = GOOD ACCESS

EXPOSED BEDROCK ON MELLOW SLOPES = MORE EXPENSIVE BEGINNER TRAIL, BUT WITH OPTIONAL PROGRESSIVE SKILLS FEATURES

MODERATE SLOPES = GOOD FOR FLOW STYLE BIKE-ONLY DESCENTS

STEEP SLOPES = GOOD FOR ADVANCED TRAILS, MORE COSTLY

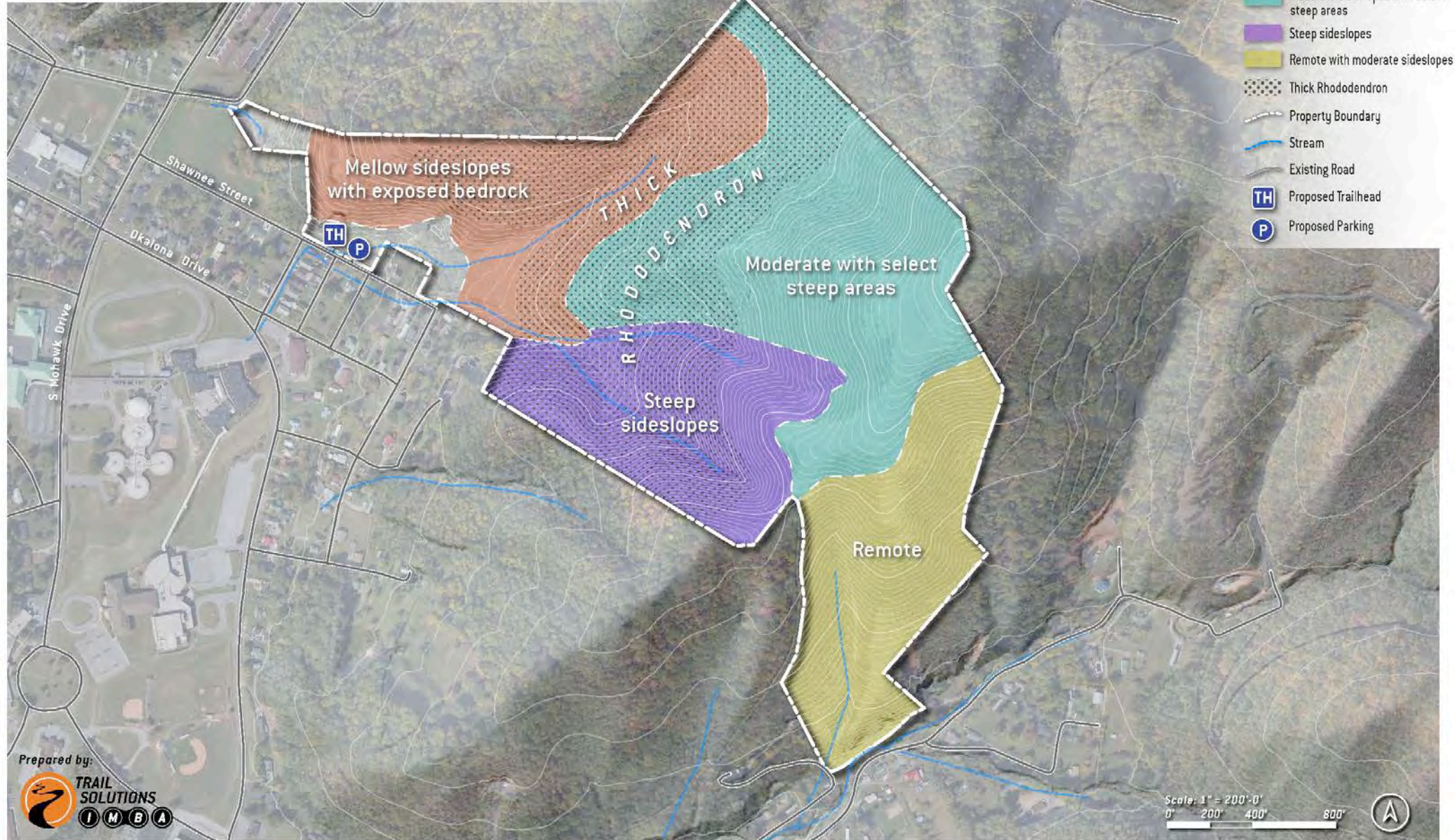
I-26, DOWNTOWN, AND THE SCHOOLS ECHO UP THE HOLLOW = GOOD FOR NEW VISITORS TO FEEL REASSURED IN THE FOREST, BAD FOR THOSE SEEKING ESCAPE AND SOLITUDE

REMOTE SECTION OF PROPERTY IS BLOCKED BY RIDGE AND FAR FROM TRAILHEAD WITH BEST VIEWS = LESS NOISE, DESTINATION FOR ALL VISITORS, ONLY ACCESSIBLE FOR MOST EXPERIENCED TRAIL USERS



O'Brien Watershed Conceptual Trails Plan

Opportunities and Constraints



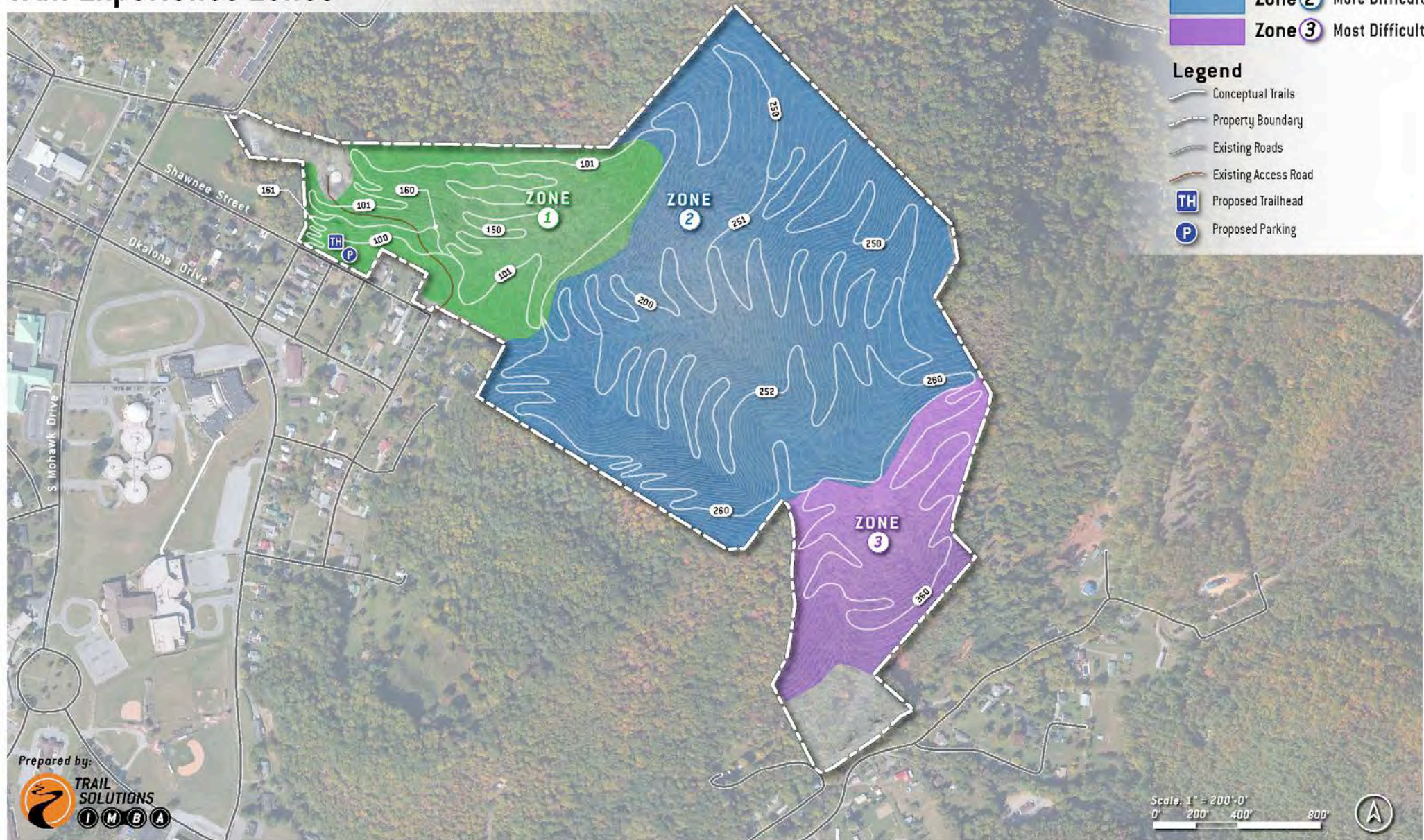
Erwin Watershed Conceptual Trails Plan

Trail Experience Zones

- Trail Experience Zones**
- Zone 1** Easiest
 - Zone 2** More Difficult
 - Zone 3** Most Difficult

Legend

- Conceptual Trails
- Property Boundary
- Existing Roads
- Existing Access Road
- TH Proposed Trailhead
- P Proposed Parking



Prepared by:



Scale: 1" = 200'-0"
0' 200' 400' 800'



EXAMPLE PLANNING 3

SUMMARY

GREAT OPPORTUNITIES, BUT HIGHER THAN NORMAL COSTS IN SOME AREAS

PROXIMITY TO SCHOOL (2 BLOCKS), DOWNTOWN (<1 MILE), AND I-26 (1.5 MILES) CREATE EASY COMMUNITY AND TOURISM ACCESS

PROXIMITY TO DOWNTOWN CAN HELP SPUR ECONOMIC GROWTH

MELLOW SLOPES CLOSE TO TRAILHEAD WILL ALLOW GOOD BEGINNER ACCESSIBLE TRAILS, BUT EXPOSED

BEDROCK IN THIS AREA MEANS IT'LL BE MORE EXPENSIVE THAN NORMAL

MODERATE SLOPES ALLOW SHARED USE CLIMBS WITH BIKE-ONLY DESCENTS

NATURAL SEPARATION OF RIDGE CREATES REMOTE AREA WITH BEST VIEWS AND LITTLE HUMAN DISTRACTION



“The mountains call and I must go.”

-John Muir

