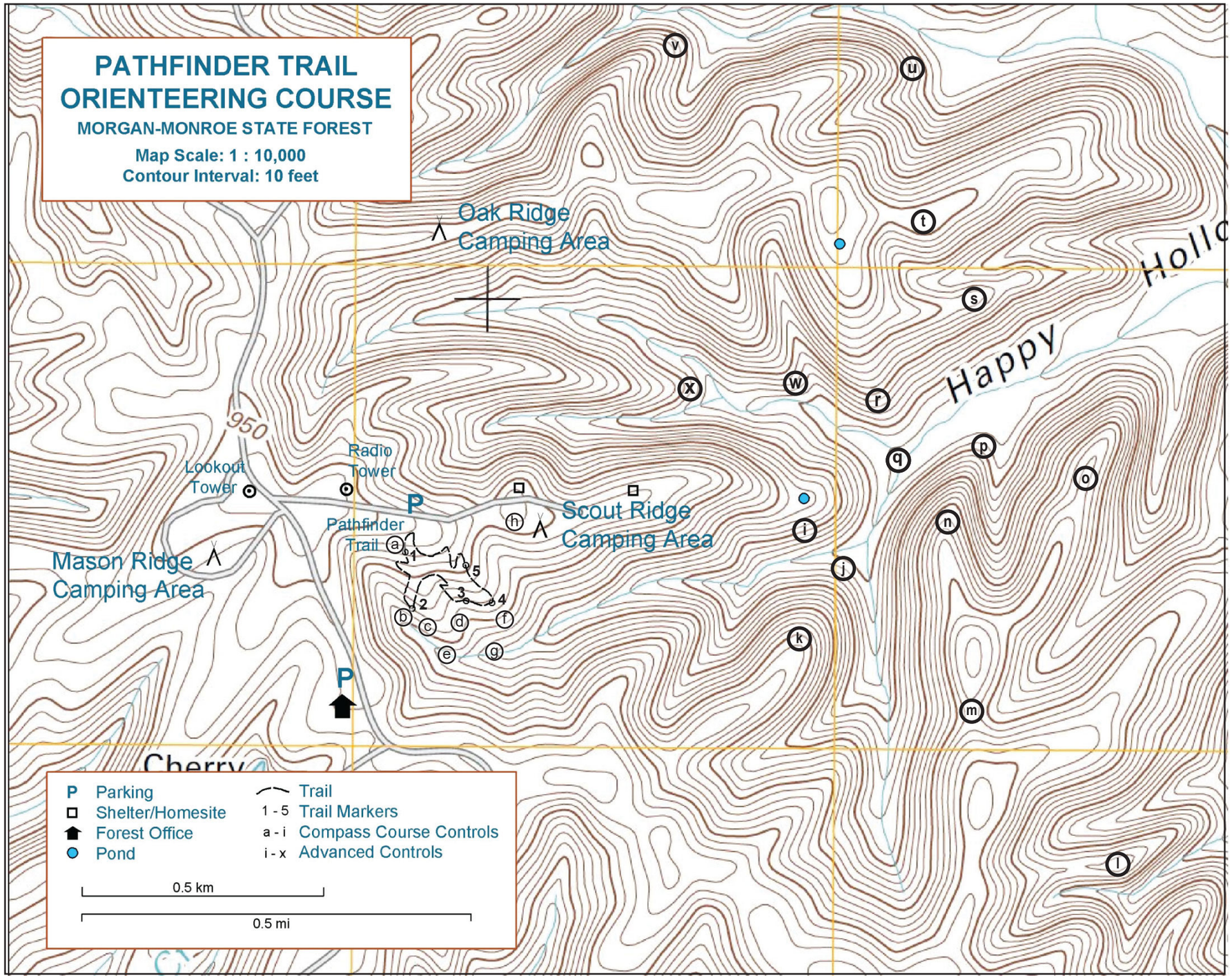
PATHFINDER TRAIL ORIENTEERING COURSE

A combined compass course and challenging orienteering course for both beginners and those experienced with maps and compass.

Developed with the aid of the Environmental Club of Bloomington South High School May 1997

Revised May 2013



Morgan-Monroe State Forest
6220 Forest Road
Martinsville, IN 46151
765-342-4026
morgansf@dnr.in.gov

PATHFINDER TRAIL ORIENTEERING COURSE

The Pathfinder Trail Orienteering Course on Scout Ridge has been set up for instruction and as a test of compass and map reading skills. Orienteering is the sport of navigating with map and compass.

The Pathfinder Trail itself is a “compass course”, set up for you to practice following bearings and counting pace. Farther east, you’ll find an advanced orienteering course, which emphasizes map reading and following terrain features.

Your task is to find all the plastic marker posts, known as “control points” or “controls”, marked on the map. The locations were chosen to illustrate common terrain challenges. When you find a control, compare its number or letter code with the corresponding course key in this brochure.

For beginners, some techniques are outlined below. The compass course starts at the “orienteering trail” sign on the Scout Ridge access road. Loaner compasses are available at the forest office during normal office hours.

LOST? Note that all the hills/ridges on the map lead to roads. Simply walk uphill, and to the west. Dirt roads will lead to the paved main forest road.

ORIENTEERING POINTERS

Topographic Map. The orienteering course has been drawn on a topographic base map. Contour lines (which describe the “shape” of the land) are drawn at vertical intervals of 10 feet.

Close together lines mean steep slopes; far apart, more level areas. Study the map until you can see how it depicts a pattern of connected long lines of hills (ridges) and streams all draining to the east into Happy Hollow.

The main paved forest road is shown on the map, but many existing service or old wagon roads are not; most ridges have a useful old track.

Note: Due to limitations of scale, “smaller” ravines are only depicted as wavy lines. This is an important detail on the advanced course, as you must get a feel for which terrain features you can “ignore” when navigating, as they are too small to appear on the map.

Orienting the Map. Interpreting the map is easier when it “lines up” with the terrain around you. To do this, rotate the map so that map north points the same direction as compass north. This is called “orienting” the map. Next, find your location on the map. Now all of the terrain in front of you is “up” on the map, and the terrain behind you is “down”. This makes it easy to see what direction your next point of interest is, relative to your current location. When you turn your body to walk in a different direction, re-orient the map so that it is always aligned with the terrain.

Estimating Distance. In the parking area by the information kiosk, a 30-foot distance has been measured out. Check how many of your paces you need to cover this length. (It’s easiest to include both feet in your “pace” length.) Five or six paces would be average for 30 feet. Now you can estimate distances to controls as you walk. Note: uphill, your pace length will be shorter; downhill, longer.

Deriving a Bearing From the Map. Lay the compass on the map, and line up the long edge of the compass baseplate between your location and the control, like a ruler. Then, without moving the baseplate, rotate the dial so that the orienting arrow points to the top of the map (north). Now when you align the compass so that the north end of the needle lines up with the orienting arrow at the bottom of the dial housing, you’ll be facing in the direction of the control.

Route Choice and Handrails. The most direct route between two controls may sometimes be dangerous or too difficult, actually wasting time. To avoid obstacles over short distances, sight on a distant point in the desired direction, such as a clearly identifiable tree, then go around the obstacle.

Following compass bearings over long distances is not practical in ridge-and-valley terrain. Instead, look for “handrails”. A handrail is any linear terrain feature that can be followed in your intended direction, more quickly and reliably than using a bearing. Roads and trails are obvious examples, but ridge tops and stream beds also count, and there are many of these to use on the advanced orienteering course.

PATHFINDER TRAIL COMPASS COURSE

Trail Marker 1. **START HERE!**

Face north, and then orient the map. Look around you, and compare what you see to the map. Note the little ravine to your left. The access road is above you on the hill (north). The main forest road is to your left, at the top of the slope across the ravine.

To locate control “a”, set your compass dial to 320°, and then turn your body so that the north end of the compass needle lines up with the orienting arrow. Follow the bearing for about 75 feet. Hint: Sight on the shagbark hickory. Return to Marker 1.

Before you move on, face downhill on the path, and orient the map again. Continue on the trail, comparing the landscape features around you to the map contours.

Trail Marker 2.

“b” is 90 feet at 220° from Marker 2. Hint: is there a set of big tree twins to sight on? Return to Marker 2.

“c” is approximately 165 feet at a 140° bearing.

Trail Marker 3.

“d” is 90 feet at a 200° bearing. Do you really want to go straight down into and across the gully? Do you see a route choice that makes more sense?

“e” is over the bluff, 170 feet beyond “d” on the same bearing. You can see it’s directly below “d”, but you must figure out another way to approach it.

Trail Marker 4.

From the Marker, “f” is 130 feet at 150°. From control “f”, “g” is 200 feet at 190°.

Trail Marker 5.

“h” is located on a 45° bearing. Your best bet is from the road. Can you derive a bearing from the nearest shelter, marked as a square on the map?

“i” is located at a bearing of 85°, fairly far across a steep gully. But note: You’d be on the road anyway for “h”. It’s a cinch to take the road/path down the nose of the ridge east from Shelter 2 to the pond (the circular dot above “i”), and then follow a 180° bearing from the pond to the control.

Do you see how using Scout Ridge as a handrail to get to the pond allows you to navigate that whole distance accurately, without using the compass? This technique is vital for the advanced course.

ADVANCED ORIENTEERING COURSE

If you have successfully found all the controls on the compass course, then you may want to give the advanced course a try. You may find it much harder to find these controls, especially if you are inexperienced in map reading. Use handrails to simplify the navigation! As you walk, keep the map properly oriented , and compare the terrain to the map as you go so that you are continuously sure of your location. Even experienced map users find Hoosier hollows all look alike. Once you lose your place on the map, you may find it hard to get located again.

GOOD LUCK! If you have comments or suggestions, or if markers are missing or damaged, please leave a note at the Forest Office. To learn more about the sport of orienteering in your area, visit www.orienteeringusa.com.

OUR MISSION

The Indiana Department of Natural Resources’ Division of Forestry promotes and practices good stewardship of natural, recreational, and cultural resources on Indiana’s public and private forest lands. This stewardship produces continuing benefits for present and future generations.

COMPASS COURSE KEY: a=99, b=11, c=105, d=125, e=13, f=140, g=15, h=165, i=179
ADVANCED COURSE KEY: i=AB, j=CD, k=EF, l=GH, m=JK, n=MN, o=PR, p=ST, q=NP, r=KM, s=WX, t=YZ, u=BC, v=DE, w=HJ, x=FG