PCTA Trail Skills College Curriculum

Field Reference

Course 208. Trail Sign Installation & Inventory

STUDENT SKILL OUTCOMES:

- Understand why clear trail signs are important.
- Understand the two important kinds of trail signs: guide signs and reassurance markers, and the standards for each.
- Understand the difference between signs outside and inside wilderness.
- Correctly install the different kinds of signs at trailheads and junctions.
- Learn effective sign post installation.
- Practice paper sign inventory and understand the importance of accuracy.
- Understand the variations in sign design, inventory, and installation among the different land management agencies along the PCT.

KEY TERMS:

Guide Signs: term used by Forest Service Sign Manual to describe trailhead and junction signs that include trail name and/or number, and if outside ***Wilderness***, trail destinations and mileages.

Reassurance Markers: (aka blazes, blazers, diamonds, tags, markers) on the PCT these are 3 1/2", 9", 18" plastic triangles or 5 1/2" wood squares (used in wilderness areas) all with the PCT logo imprinted. They are installed north and south of each side trail junction, and occasionally in unclear locations along the trail. On other trails they may be colored diamonds, notches cut in a tree, or painted stripes.

Sign Inventory: a comprehensive list of every sign in a given area that provides the details of sign location, message, and material. In the past they were hand written and stored in notebooks. Today they are more likely entered into a computer and include digital photos as well as text. The US Forest Service includes sign inventory as part of its INFRA and TRACS (TRail Assessment Condition Survey) systems.

Pressure-treated Wood (posts & lumber): (aka PT) round logs and dimensional lumber that has been through an industrial process to penetrate the wood with chemicals to prevent rot and thereby extend the useful life of the post. For trail work material rated for "ground contact" must be used. Industry standards claim such materials will last 50 years, whereas most untreated wood lasts only 5-10 years in contact with dirt. Some native materials, such as juniper or locust, can last considerably longer because of naturally occurring chemicals in their fibers. Native wood can also be hand-treated (usually only the portion in the ground) with a preservative such as Copper Napthenate.

Copper Napthenate: a chemical solution, in 2010, commonly available in hardware stores used to hand treat wood to reduce rot and thus extend the life of wood in contact with soil. Over the years, the chemicals used for wood preservation have changed to reduce potential harmful effects on humans and other organisms. Thus, copper napthenate may be replaced at some point. Whatever chemical treatment is used, eye and skin protection should be provided and the solution stored, carried, and utilized with caution.

Cairn: (aka ducks or rock ducks) a carefully stacked 3' cone of quality rocks (similar to a rock wall) built only in open rocky areas where the tread is impossible to make distinct. It may have a post built into it to extend its height if late lying snow regularly obscures the trail. "Rock ducks", small piles of rocks, may be used for a short time to clarify new tread, but should be removed as soon as the tread becomes clear. In general and especially in Wilderness, rock ducks are inappropriate and should be removed whenever found.

Right of Way: (aka ROW) the corridor followed by roads and trails across property not owned by the agency responsible for the road or trail. The manager of the trail or road has legal rights and responsibilities for maintaining their facility, but does not own the property. When one ROW crosses another ROW, the authority is ceded to the larger facility. Thus when the PCT crosses a highway, the agency managing the road has the

responsibility for any signing and maintenance inside its ROW. Note: ROW usually extends 10-50’ beyond the edge of the road; the larger the roadway the further it likely extends.

Wilderness: with a capital “W” refers to named Federal lands designated by the U.S. Congress under the Wilderness Act of 1964. They may be designated within any category of Federal public land, such as Forest Service, BLM, or Park Service, though management regulations may vary slightly among them. Much of the PCT passes through such Wilderness areas. Most important to trail workers, motorized tools and mechanized transport such as chainsaws, wheel barrows, and bicycles are prohibited, unless a waiver is obtained from land managers (generally not easily granted). Signs in Wilderness intentionally provide less information, to require more skill of their visitors. Group sizes, including volunteer trail crews, are usually limited to no more than 12 people. Heavily used areas such as alpine lakes may have additional regulations such as no campfires. More can be read about the topic of “Minimum Requirements” and “Minimum Tool Analysis” in Wilderness at http://www.wilderness.net/MRDG/.

Small “w” wilderness generally refers to any remote area largely undisturbed by motorized vehicles. If not designated by Congress, such areas usually do not limit group sizes or use of mechanized equipment, though may have some interim management restrictions to protect the potential for future designation as Wilderness.

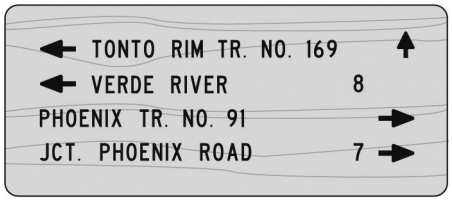


Figure 1. Typical non-Wilderness trail “guide” sign. Wilderness junction guide signs do not indicate mileages. (IMAGE COURTESY OF USFS)

KEY CONCEPTS:

1) Safety Documents and Concerns: Personal Protective Equipment (PPE), Job Hazard Analysis (JHA), Tailgate Safety Session (TSS), Emergency Action Plan (EAP)
2) Types of Trail Signs:
   - guide
   - reassurance markers
   - Wilderness
3) Sign Inventory: Standard forms and digital images
4) Sign Installation: pressure-treated versus native posts versus trees
5) Specifications:
   - 24” deep
   - 5’ to sign
   - 3’ from trail edge
   - 3/8” lag screws
   - spacers
   - notching
6) Reassurance Markers: for trail junctions, road crossings and unclear sections
   - plastic versus wood PCT logo markers
   - mounting locations:
     – trees
     – posts
     – Carsonite
   - rock cairns and ducks
7) Sign Maintenance and Ordering
8) Report work promptly

Figure 2. The key to solid posts is vigorously tamping the rock and soil with a rockbar, as you fill the hole. Spikes or lag screws can be used at the base of the post to improve anchoring. Top off the hole with mounded soil to accommodate settling and prevent water from puddling around the post. (IMAGE COURTESY OF USFS)

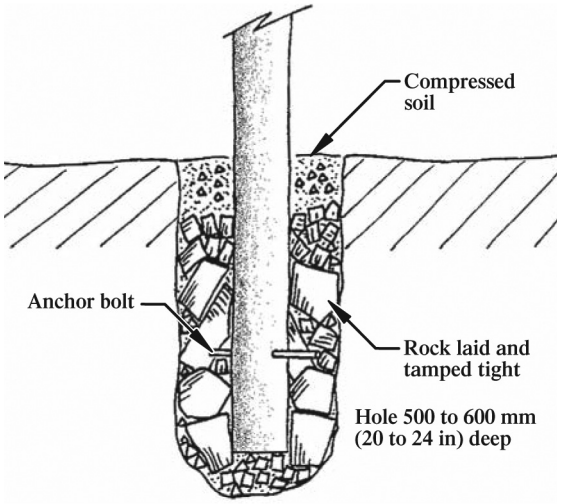
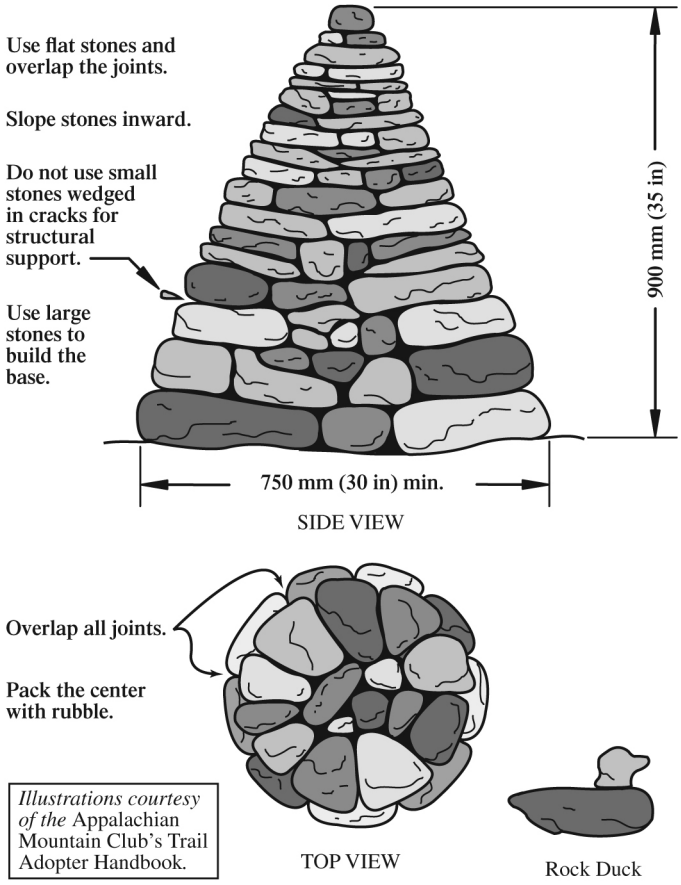


Figure 3. PCT reassurance markers: 9” plastic or metal (top) and 5 1/2” wood sign for use in Wilderness areas (bottom).

Figure 4. Properly constructed rock cairn to mark a trail. (IMAGE COURTESY OF USFS)



Illustrations courtesy of the Appalachian Mountain Club’s Trail Adopter Handbook.

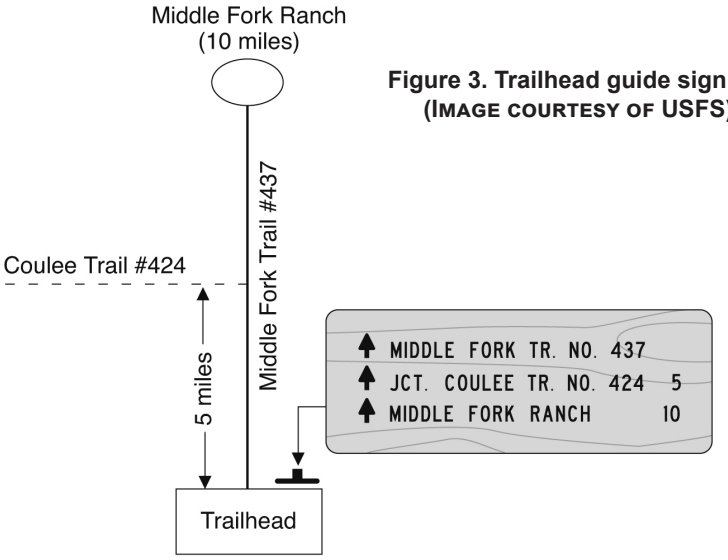


Figure 3. Trailhead guide sign. (IMAGE COURTESY OF USFS)

Note: Wilderness signs would show no mileages, and rarely destinations, rather simply trail names and numbers.

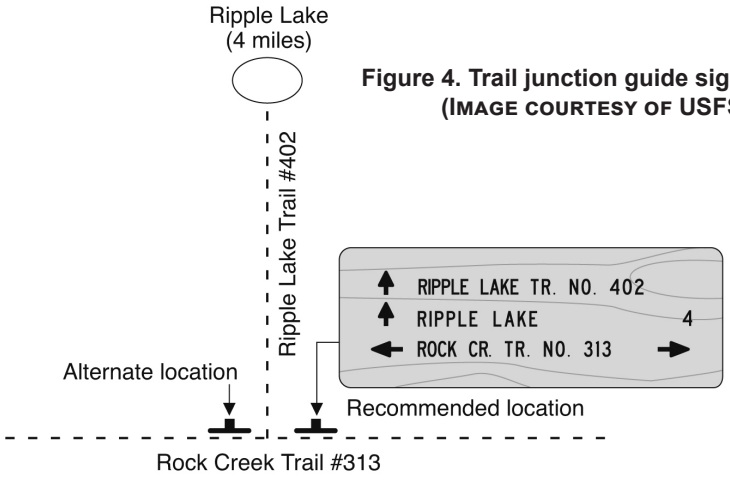


Figure 4. Trail junction guide sign. (IMAGE COURTESY OF USFS)

Figure 5. Left "L" trail junction guide sign. (IMAGE COURTESY OF USFS)