

# Laminated Trail Junction Signs

In 2012 the Gloucester Land Trust was requested by our insurance company (RI Interlocal Trust) to post signs at trail intersections that would inform visitors of the name of the trail, how it was blazed (color/symbol); and when it made sense, the distance to a parking area, next major trail junction, or landmark. This was already under consideration because although visitors had a map in hand, and the trails were clearly blazed, at times they were confused where they were on the property and the direction to take to return to a trailhead or other destination.

Creating traditional brown wooden signs with routed lettering as seen on the Appalachian Trail, US Forest Service property, and state management areas was considered. But with over 50 trail junctions on the 13 trails in the seven mile trail system at one property, such signs would be time consuming to make. Thus we opted to try a laminated sign system that we could produce on a home computer using Microsoft Word and a color ink jet or laser printer. Our signs use Helvetica-Bold font in a size range of 48 to 72 for trail names and Times New Roman font for other text in size 20.

Laminated signs are also easy to replicate if an existing sign is damaged or needs replacing with updated information. These signs are also small enough so their presence does not visually detract from the natural surroundings.

We started by walking all the trails and at each trail junction taking notes as to what a sign should say at the junction and how many signs were needed. We also noted on which trees the signs would be placed.

Ivory colored cardstock paper was chosen because the color would blend in with the natural surroundings and the plywood backing much better than common white paper. And the cardstock paper weight would last longer if the protective lamination was damaged.

An inexpensive laminator was bought, but rather than use the common 2 mil laminating pouches available in local stores we opted to order 5 mil pouches which are much thicker, stronger and should last much longer in the field. Also some laminating pouches have a stronger adhesive and clarity than others. 10 mil pouches are available, but they cannot be laminated with inexpensive laminators.

We generally were able to fit two or three signs in each laminating pouch. After laminating, when cutting the sealed sign sections take care to leave at least a 3/8" laminated border around the cardstock.

1/2" thick pressure treated plywood was cut into rectangles of various sizes, depending upon the laminated sign size. If the laminated sign was 6" wide and 4" tall, the plywood was cut 6" wide by 5" tall. We added 1/2" to the top and bottom to allow for the screw hole that would hold the sign to the tree.

We affixed the sign to the plywood with adhesive and staples. Coated the plywood and back of the laminated sign with 3M Hi-Strength 90 Spray Adhesive, allow the adhesive to set up for a few minutes, then place the sign onto the board and press together. We chose this adhesive because according to a conversation with a 3M representative, it creates a stronger bond and should last longer in the outdoors than the other spray adhesives in the 3M product line. Then as insurance against adhesive failure, four stainless steel staples are placed within the 3/8" laminated border at each corner of the sign. Be careful not to get within 1/8" of the paper, otherwise water will get in and damage the paper sign.

Two 5/32" pilot holes for the mounting screws were drilled into the plywood – one top and one bottom. We used star (aka Torx) drive screws to minimize the possibility that a vandal could unscrew the sign, and coated screws should be used with pressure treated plywood.

All that needed to be done in the field was to post the sign, as all the prep work had been done in the workshop. The only tool necessary was a cordless screwdriver. Whenever possible, signs were placed on trees that were at least as wide as the signs. This is to minimize the chance that a vandal could get fingers behind the sign and tear it off. Also post the sign approximately six feet off the ground.

On the first batch of signs we drilled the mounting holes so the screws would be covered by the lamination. The idea was the sign would be harder to remove by vandals and the sign would have a cleaner appearance. We did this by first mounting the plywood to the tree with screws, then sprayed adhesive to the board and lamination, and then placing the lamination onto the board which covered the screw heads. That is a mistake because the lamination has to be removed to get access to the screw heads in order to loosen them to allow for tree growth. Also dealing with the spray is a messy business on a breezy day.

The cost of supplies to mark a trail is an expense eligible for funding through DEM's RI Trail Advisory Council small grant program. Up to 80% of the cost can be reimbursed, and the 20% match can be the value of volunteer time used to mark the trails, which as of this writing is \$18.18 per hour. The basic procedure is that a group applies for a grant, and once they receive written approval and instructions from DEM, then they can purchase the supplies. Expenses incurred prior to receiving DEM grant approval are not eligible for reimbursement.

In October 2012 all the signs were erected and six months later they are all still in place and look fine. The photos that follow are some of the signs as they appeared in March 2013.

Roy Najecki  
 Gloucester Land Trust  
 March 2013

The following are the items we bought to make the signs.



3M Hi-Strength 90 Spray Adhesive \$13 Home Depot or Lowes.  
 1 can for approx forty 6" x 6" signs.

Scotch Thermal Laminator model TL902  
 \$26 BJ's and Walmart.



Arrow T50 Stainless Steel Staples 1/4" or 3/8"  
 \$14 Home Depot or eBay.

Deckmate brand coated star (aka Torx) drive screws  
 #9 x 2 1/2" \$10 for 1 lb box, \$30 for 5 lb box at Home Depot. Approx 70 screws per pound.



1/2" thick pressure treated plywood.  
 4ft x 8ft sheet \$35 Home Depot or Lowes.



5 mil thickness glossy 9" x 11" laminating pouches  
 Oregonlam.com Item LR5AM \$59 for 100 sheets.

Wausau brand 90 lb Ivory  
 index card stock paper  
 8 1/2" x 11"  
 eBay \$17 for 250 sheets.

<b>Exact<sup>®</sup> Index</b>		<b>Ivory / Marfil</b>		<b>Wausau PAPER<sup>®</sup></b>	
Smooth Finish / Acabado Liso		Made in U.S.A. / Hecho en E.U.A.		FSC MIX Paper from responsible sources FSC® C011238	
90 lb. Index / Cartulina Index 163 g/m <sup>2</sup>	250 Sheets / Hojas 21.64 M Wt.	8.5 x 11 in 216 x 279 mm	<input type="checkbox"/> Copier / Copadora <input type="checkbox"/> Inkjet / Chorro de Tinta <input type="checkbox"/> Laser / Láser	<input checked="" type="checkbox"/> Offset / Offset <input checked="" type="checkbox"/> Acid-Free / Sin ácido <input checked="" type="checkbox"/> 30% PC Recycled / 30% Fibra PC	49181 49181



