

CMC and ATC Build Historic Staircase at Green Corner Road

These steps were built with heart and soul. May they be enjoyed forever!

In June 2025 a torrential flood raced down Green Corner Road from a microburst on Snowbird Mountain. The flood destroyed the road, unearthing 8 foot diameter culverts. It inundated the Standing Bear hostel, damaging some buildings and destroying others. It overwhelmed I-40 closed it for 10 days. And it heavily damaged the bottom of a masonry staircase rising from Green Corner Road on the Appalachian Trail (A.T.) near the beginning of the Carolina Mountain Club (CMC) section.



Originally, we planned to hire a stone mason to simply repair the steps. However, a new plan emerged after discussion with the Appalachian Trail Conservancy (ATC). Regional Manager Anne Sentz proposed a whole new approach. The existing steps required periodic maintenance to repair the masonry joints. The steps were steep to the point of being unsafe when not in good repair (some hikers referred to them as the Steps of Death). And any repair would still be vulnerable to another flood.



Anne envisioned building stone steps, and bringing in trail stonework experts to teach CMC in modern step building techniques in a collaborative process. The training would be offered to any trail workers who wanted to learn. But where would we find ~70 stones to build these steps? We wouldn't. Anne arranged funds from the Appalachian Trail Resiliency Fund to deliver cut stones to the worksite, which was conveniently right next to the road.



Anne got to work organizing our project. She contacted Artie Hidalgo from the Jolly Rovers to put on a class. The Jolly Rovers are a New York based trail crew, and the stonework experts on the East Coast. They were only available the first week of December, which was rolling the weather dice, but we took what we could get. She also got Tom and Murray Lamb from the Georgia Appalachian Trail Club (GATC) to help with training and to provide tools CMC did not have. Then she arranged other ATC staff to support the work on the ground, including Franklin Tate, Jake Stowe, Sarah Adams, Jayson Koscielniak, and Alexis de Seze, as well as former ATC SWEAT Crew members Dylan Burgess, Megan Juneau, and Tim Roberts. Tim made many visits to the site and was greatly appreciated by CMC.



All CMC crew leaders were invited to bring their crews to learn from this project. The training lasted a week. On Monday Buzz Kass and Burnsville crew showed up. On Tuesday it was Jan Onan, Dale Gerhardt, and the Section Rovers. On Wednesday Chris Werbylo brought the Waynesville crew. Thursday brought Ken Hummel, Dale Gerhardt, and David Pizzalato and the Asheville Thursday crew. Finally on Friday it was Paul Curtin, Chris Werbylo, and the Asheville Friday crew. Also joining CMC and the trainers were other A.T. club personnel from GATC and the Smoky Mountains Hiking Club (SMHC).

However, prior to the training we needed to get some stones in place to do the work. Anne had several pallets of stones delivered, and for 3 workdays CMC crews prepared the ground along the side of the old stairs, made crush out of the old stairs (the foundation was left in place to be a barrier to keep hikers away from the very steep slope), and moved the 450 lb stones up the hill. After one attempt to use a griphoist to pull up a stone took nearly 3 hours, we knew we had to switch tactics. We purchased a motorized capstan winch to lift the stones on a highline. Unfortunately, its delivery was delayed, so the first day we substituted Dave Roberts' truck. We attached a line to the truck, a pulley to a tree at the top, and pulled the stones up by backing the truck up the road. That was quite an adventure, but we did move more than a dozen steps that way. After the delivery of the hoist we could move the rest of the stones up with that tool.



We also found another new CMC tool very useful. The Rotary Club of Asheville showed its appreciation for the work CMC did during Helene recovery by purchasing a motorized wheelbarrow and trailer for us. This allowed us to move stones from the pallets and up the hill to position them under the highline, from where they could be rigged and flown uphill.

So when the crews arrived for the training week a few dozen stones were positioned, ready to be installed. Each morning we greeted all the new folks, and spent time on safe methods for doing the work as well as how to use all the rock tools. The crew was broken into 5 groups for the different work areas and then given detailed instructions to perform the work. A highlight was a birthday party complete with cake for Artie on Monday! David Huff came out each day to documents the progress with his camera.



The stones available were an 18" depth, but we could only use 14" to make the rise over run work, so each stone had to be cut before it could be put in place. Originally we cut them using the wedges and feathers method, but that was very slow and we could only do a handful of stones per day that way. We rented a concrete saw for the rest of the work and a circular saw later for some other stones needed.



One particular challenge the first week was a project to build a culvert to allow water to pass under the new steps in the event of another flood. Two stones were set on edge, and two more were cut to fit as a cap over them to create the culvert. The concrete saw was very useful for cutting the capstones.





Great progress was made during the training week, but the staircase was not half finished. CMC would need to finish the rest of the work using its own resources and some help from ATC. Week after week crews came out, primarily the Asheville Friday crew. In all 17 workdays were needed to finished the steps, with a total of 2100 hours spent. Incredibly, not one workday was postponed due to weather.

We were fortunate to discover early on that these steps were actually on TN DOT land, not Forest Service land. That means we had more flexibility in the layout, which proved to be critical. The desire to make these steps less steep meant we bought 7- to 9-inch-thick steps to keep the rise reasonable, and a 14" tread length after cutting. The top of the hill was a near cliff that would have caused us to cut very deeply through it with enormous effort, had we not been able to swing the stairs first to the right and then to the left to connect back to the A.T.



However, this created another major challenge when the crews encountered a stone shelf 2 to 3 feet thick underground in the path the steps needed to take. With great effort swinging sledges and using a hammer drill with a chisel, they cut through the rock. For four consecutive workdays only one step was put in, with progress measured in inches per hour. There was great rejoicing when we got past that rock! You will be able to see it forever on the sides of the cut next to the steps.



Putting in the steps was only part of the job. We also needed to “shield” the steps on both sides with local stones placed vertically to lock in the stones and keep dirt from washing down onto the steps. The handrail was removed and cut into pieces for transport away from the road. The old steps were used for crush and to discourage hikers from using them. And one of the largest water diversions you will ever see was cut across the entire top of the hill to channel water away from the steps.



Friday January 23 the Asheville Friday crew finished this project. 72 steps were installed over 17 workdays totaling 2100 hours to make it happen, during the dead of winter. This could not have been done without the support of the ATC, both in money from Appalachian Trail Resiliency Fund to purchase the cut stone steps, and personnel to help us dig and install the steps shoulder to shoulder. Stones and delivery totaled \$14,825. Instructor contract and some miscellaneous small supplies were \$3,850. We believe this cost is comparable to what a stone mason would have charged to fix them.

This is what volunteerism and stewardship look like in action!