



The Miller Creek & Moss Rock Railway

A creative, half-inch-scale line in a small backyard

by Bruce Longwell | Durango, Colorado | Photos by the author



1. The author blended two distinct qualities in his Moss Rock Depot. The architecture is similar to the Rio Grande Southern's, but with cut red sandstone, which resembles the Denver & Rio Grande Western depot at Glenwood Springs, Colorado. This mature garden displays varying levels of growth, from lichen on the rocks and fully covered ground to trees with stout trunks.

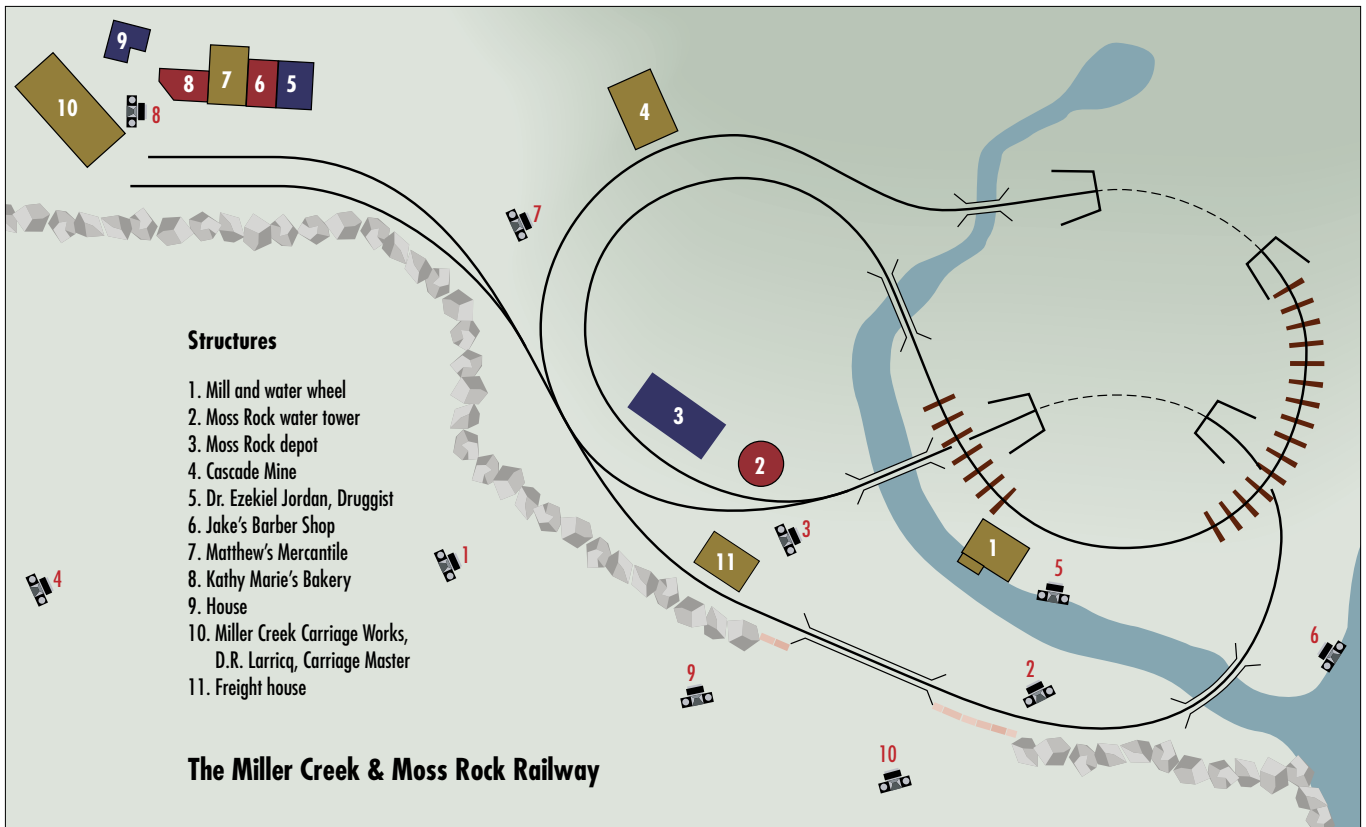
Garden railroading has long held a fascination for me. Combining wonderful aspects of both gardening and model railroading, a garden railroad is something I've long dreamed of having. Model railroading has been part of my life since about the age of 10. I remember my grandfather bringing over a bunch of old boxes one sunny Saturday morning, the result of cleaning his attic. We spread the stuff out on my mom's kitchen table, and three generations of Longwells marveled over the dusty collection of old trains, track, kits, and accessories. The resulting HO layout on a 4 x 8 plywood sheet was my first model-railroad endeavor. Other model-railroading experience has included HOn3 and, more recently, On30 (See the *Narrow Gauge & Short Line Gazette*, July-August 2001 and March-April 2007), so moving my hobby outside seemed a normal progression.

First however, this undertaking required a healthy dose of diplomacy, as I had to convince my wife Kathy that a train in the garden could, in fact, be quite charming and not utterly ridiculous. I figured that thumbing through some old issues of *Garden Railways* magazine might do the trick. Her eyes began to light up as she gently softened to the idea, and we were on our way.

I had a general plan for the layout of the backyard. Among other things, I knew a nice water feature would look beautiful. I love how well garden railroading segues with this part of landscaping. I actually install ponds and water features professionally, and working in scale for fellow garden railroaders is a company specialty. Naturally, our garden railroad would have to showcase this part of the hobby in a *big* way.

2. *Peggy Sue* approaches bridge N° 2 in Miller Creek Canyon. The old mill and water wheel are in the foreground. The handcrafted brass water wheel turned freely under water power for three years. This year, however, it groaned, in need of a tune-up. Lower left, the yellow, five-petaled flowers amid the five-leaflet leaves are creeping cinquefoil.





3. Engine N° 39 is a battery-powered Delton C-16 Consolidation with SoundTraxx Sierra sound. The NiMH batteries, installed by Battery Back-Shop, will pull a short freight around the line for up to two hours before recharging.

The MC&MRRy. at a glance

- Name:** Miller Creek & Moss Rock Railway
- Size of railroad:** 30' x 40', approximately
- Scale:** 1:24
- Gauge:** 45mm (no. 1)
- Era:** Pre-WWII
- Theme:** Freelance Colorado narrow-gauge branch line
- Age:** 6 years
- Motive power:** NiMH-battery-operated Delton Consolidation
- Length of mainline:** 130', (approximately)
- Maximum gradient:** 3.5%
- Type of track:** Micro Engineering, code 250 nickel-silver rail strung on ME ties, BK #4 turnouts on cedar ties
- Minimum radius:** 4½'
- Structures:** All scratchbuilt
- Control system:** RCS remote control, Soundtraxx Sierra sound
- Web site:** www.DurangoModelTrains.com



4. An overview of the MC&MRRy. The line takes up approximately one third of the author's relatively small backyard. Because of this, extra attention was put into plantings and rock lines so the finished product would enhance the overall landscape and not overpower it. Repetition of groundcover and boulders into the full-scale section ties the yard together, while the pond (upper right) is shared as a natural transition.

In the fall of 2000, we remodeled the house and had the whole backyard pretty dug up. It was easier to make a big mess bigger rather than to think about another mess down the road, so we did some initial dirt work for the railway, including roughing in the pond. We have a nice berm that surrounds our backyard, the result of city planning on flood aversion some 30 years ago. It has made a beautiful, natural slope for landscaping and we worked the pond, waterfall, and, ultimately, the garden railroad all into this slope. Doing the initial pond work early in the scheme of the backyard meant that I had a fair amount of extra dirt available to begin the “Rocky Mountains” on the railway. It was as I began creating mountains and canyons with this extra dirt that Kathy began to suspect something was up. “What are we planning to do with this whole area?”, she asked. “Well, honey, I was thinking. . .”

After gaining her approval, I followed up with 16 yards of topsoil and roughly five tons of rock. I purchased a rock

permit from the National Forest Service and Kathy and I hand-picked every piece of natural moss rock. We found that our taste for ever larger and more beautiful pieces grew exponentially. Some of the rocks we got were just plain outrageous! Truth be told, I'm sure that involving my wife in the process did far more in helping me gain an ally than any illusion I maintain of being a slick talker.

The plan

I had a mental trackplan of a folded dog-bone, which I laid out. Two tunnels were created using cinder block and a bit of mortar. One would be on the “lower loop” and one on the “upper loop,” so they were set at approximately 11" difference in elevation. Cuts were made through the mountains at general grades and radii to tie the tunnels together and prepare for the track. These were only rough cuts, however, because, when I finally did begin trackwork, I wanted the mountains to look as if they had been there first, not built afterwards to hold up the track.

More importantly, these mountains were fresh soil and the winter would surely cause things to settle considerably. The next spring, I would make final cuts to accommodate the mainline.

The mainline totals about 130 feet of code 250, nickel-silver track. I used Micro-Engineering's pre-weathered rail, strung on the company's narrow-gauge ties. The track is free floating in a ballast bed of crusher fines. A lot has been written about crusher fines and various ways to lay track, but let me just say that Colorado winters effectively prevent securing track to any sort of sub-roadbed. With a floating bed of crusher fines, I've seen some remarkable frost heaves that simply settle down and disappear with the eventual spring thaw. Besides, if it's good enough for the prototype, it's good enough for me.

The maximum grade is 3.5%, with a minimum radius of 4½'. One fundamental flaw in the design was in having the steepest grade actually occur on the same length of track as the sharpest radius. It



5. The Highline, just past Miller Creek. The author built the cribbing using Gorilla Glue to affix the logs and rubble to a piece of plywood that was heavily soaked in a water-based preservative. This enabled the glue to bond where an oil-based product would not have worked. Thyme flowers have been pruned to prevent obscuring the artistic structure.

seems to have worked out okay though. Trains (albeit short ones) will consistently run for hours during open-house meets with little problem.

Having a loop of track was important to me because I'm not one to do a lot of switching with my trains. My primary joy is in the actual modeling or creation stage. After that, I'm more interested in relaxing and watching the trains, with the occasional whistle blow. The two tunnels, mountainous terrain, and numerous blind spots create small "mini-scenes" or vignettes, and add to the illusion of a longer, more complex mainline. Some folks like to have as much track showing as possible—kind of like they're missing out if they can't see the train all the time. I'm just the opposite. I like the surprise of the ol' *Peggy Sue* popping into view, then disappearing again behind the mountain. By



6. Bridge No 3 is an eight-foot curved trestle on the upper loop. Falling stones (left) call attention to the base of the structure while flowers (right) blend it into the hillside.

the close of the summer season 2001, the track was fairly complete.

Structures

During the winter of 2001, I first tried my hand at half-inch-scale buildings and structures. I again found myself leafing through back issues of *Garden Railways*, looking for construction techniques to use

for large scale. I found a wealth of great ideas! I determined I could successfully scratchbuild everything I wanted for my railway. My structures could be unique, realistic, and considerably less expensive than kits.

I chose to model in 1:24 scale for a number of reasons. First, since I've scratchbuilt all of my buildings, bridges,

and structures, one-half-inch to the foot makes conversions quick and easy. Second, my favorite low-budget locomotive (Delton's Consolidation) and the accompanying rolling stock all happen to be 1:24 scale. Lastly, even though I'm partial to Colorado three-foot narrow gauge, 1:20.3 is just too big for my little railroad and it's really not that important to me that my track be in perfect proportion with everything else. Notwithstanding the track gauge, I've tried to make everything else on my line as realistic as possible.

There are a number of things I wanted to incorporate into my actual modeling. In the various other scales I've worked in, I've focused on a lot of rust and other weathering techniques, so I wanted to make my buildings and other structures as realistic as possible. Hand-laid track over the bridges (complete with guardrails) is one area that can add tremendous realism to any garden line. Peeling paint, worn stair steps, broken windowpanes, and faded signs are just a few of the weathering techniques I have used on my structures and rolling stock to help achieve realism.

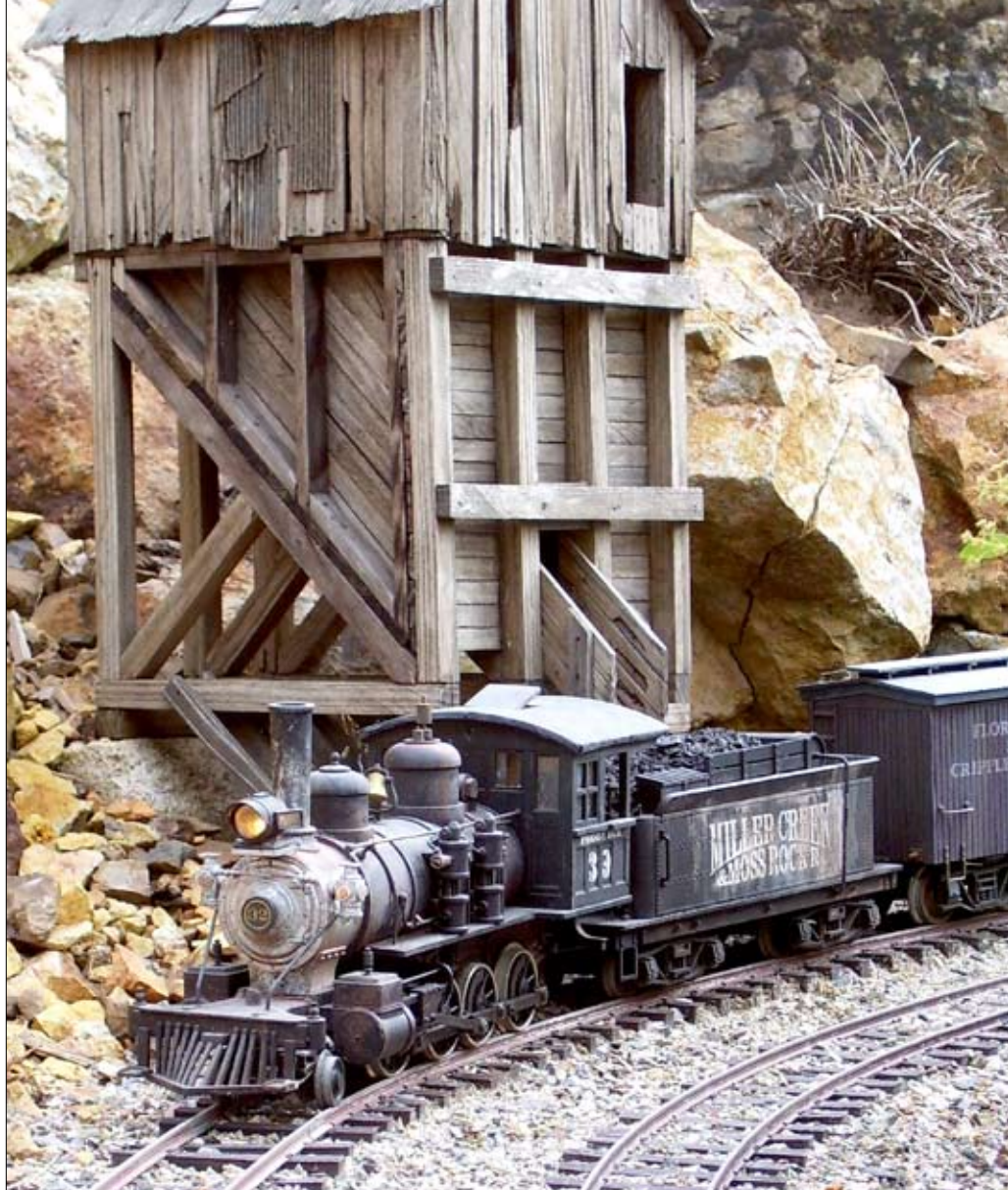
The big drawback to these structures is that they do not hold up well to Mother Nature. The only structures left out all year on the MC&MRRy are the bridges, the ore tibble, and the mill with the waterwheel. I understand why many folks like UV-resistant plastic kits. It's really nice to just walk outside and view your creation. Furthermore, some of the masterpiece railways I've seen are just too big to re-assemble each time one wishes to run them. Still, a scratchbuilt general store with weathered old advertisements on the side is hard to beat, even if it does spend a lot of time in the garage.

Plantings

A lot has been written about plants, plantings, trees, etc., so I won't go into excessive detail here. I will say, though, that dwarf Alberta spruce trees are by far the least expensive and most easily acquired of all dwarf trees in my area. I find these trees to be most enjoyable to work with but they do require extensive butchering every spring.

A couple other notes on trees: For goodness sake, don't tear out a tree if it

8. Main Street in Moss Rock, Colorado. All structures were scratchbuilt by the author. Correct plant choice and elevation give us the Rocky Mountain-town feel.



7. The mine complex is one of only two structures that age naturally with each Colorado winter — the other is the old mill. All other buildings are kept in the garage most of the time, but can be set up in a matter of minutes. The theme of aging is mirrored in nature by the weathered wood of a bygone bush to the right of the mill.





Plants on the Miller Creek & Moss Rock Railway

Durango Colorado
USDA Hardiness Zone 5

CONIFERS

Dwarf Alberta spruce
Picea glauca 'Conica'

SMALL SHRUBS

Japanese meadowsweet
Spiraea japonica 'Little Princess'

GROUNDCOVER

Creeping or moss phlox
Phlox subulata
Creeping cinquefoil
Potentilla reptans

Irish moss
Sagina subulata
Scotch moss
Sagina subulata 'Aurea'
Rock soapwort
Saponaria ocymoides
Spruce-leaved stonecrop
Sedum reflexum or *S. tripmadam*
Lemon thyme
Thymus citriodorus
Woolly thyme
Thymus pseudolanuginosus
Mother of thyme
Thymus serpyllum
Elfin thyme
Thymus serpyllum 'Elfin' or 'Minus'
Creeping speedwell
Veronica repens

9. The little freight building was the last structure built for the MC&MRRy. The author finished this just before RailFest 2006 in order to conceal two garden spotlights that shine out the back of the building onto the depot and water tower. Bringing nightlights to the railroad for evening viewing was a last-minute idea that turned out quite well. Elfin thyme, one of the handiest micro groundcovers, must still be clipped, as shown (lower left), to prevent its climbing up walls, track and cribbing.

doesn't survive! There's nothing that adds realism to a natural forest better than some old standing (or falling) dead-tree skeletons. Also, don't get caught in what I call the "curse of order." Force yourself to plant some of your trees very close together—even crowded—and leave other areas as open meadows. Remind yourself of this frequently throughout your forest creation. There's nothing that can ruin the realism of a forest quicker than having all trees a perfect nine or 12 inches apart.

About the author



Bruce and Kathy Longwell live in Durango, Colorado, where gardening and trains are only part of their busy life. With three of six children still at home, life is never boring. They are active in their church and community, enjoy anything outdoors, and recently had their first taste of diving and became instantly addicted.

Lighting

The National Narrow Gauge Convention came to Durango in August 2006 and I wanted to do something special for the many guests who came to Southwest Colorado. I decided to wire my railroad for night viewing. I altered some Malibu plastic fixtures from my local hardware store, using these simple, 12-volt landscaping lights inside the buildings. I also used better-quality metal spots throughout the railway in inconspicuous places. Lastly, I splurged for some large-scale street lights for the main drag.

I had not planned to light my building interiors, so they were not only unfinished and without detail, they were raw, exposed construction materials. I decided to experiment with painting the inside flat black, which worked out quite well. If someone does actually look inside the windows, everything is obscured and the illusion is maintained.

The various spotlights throughout the railroad showcase special viewing areas, such as the depot and water tower, the water wheel and mill, the mine tibble, canyons, and so forth. As the lights shine beyond their intended targets, they cast long shadows in the trees and hillside.

As I did this, I was worried that it might look a bit silly, as the viewer would question the source of the light and then see these relatively large spots sitting



10. Bridge No 5 (foreground) is a compression-truss bridge, scratchbuilt from Garden-Texture plans. All bridges on the MC&MRRy are made from strips of cedar cut from cheap fence pickets. The author searched everywhere for authentic creosote to protect them, finally finding it in tree-patch at the local hardware store. Mountainsides would erode without the gripping power of roots from trees, shrubs, and groundcover planted among deeply buried rocks.

behind a rock or nestled in a grove of trees. My fears were unfounded. The eye focuses on what's being illuminated, not the source of the illumination. The result is striking.

Creating a garden railroad has been a truly rewarding experience. Kathy and I host many summer guests in our backyard and the Miller Creek & Moss Rock

Railway is always a hit with kids of all ages. We open our line for public viewing at various times throughout the season, including the Durango & Silverton Narrow Gauge Railroad's RailFest each August.

Check out our web site: www.DurangoModelTrains.com for more information, links to e-mail, and lots more. ▀