While on a business trip in the historic railroad town of Tehachapi, California, we watched the trains running on the famous Tehachapi Loop. We visited a local large-scale train store for the first time, and soon jumped into this amazing hobby with enthusiasm that is still growing. Garden railroading has become more than just a hobby; it’s mentally therapeutic, physically challenging, and provides a great social activity with diverse and fun people. Over the past five years, we have joined four Southern California garden-railroad clubs and have met a lot of wonderful and talented people.

Before any construction of our large-scale railroad took place, we attended club meetings and national and regional conventions, and toured railroads to get a feel for the hobby. Growing into the garden-railroading lifestyle has become a passion, as well as presenting numerous and fun design, construction, and technical challenges.

During the above-mentioned business trip, we bought a used overhead, suspended-layout system, rushed home to install it in our patio (we thought it would take a week or so) and, after five months of installation, we were hooked! One of the first lessons we learned in this hobby is that nothing goes as quickly as initially anticipated.

**Design concepts and challenges**

Once the hobby bug was well entrenched, we started planning a true garden railroad in our limited space—a typical southern

1. Trains on the TooMuchFun Railroad. Most of the different levels and lines can be seen in this picture. In spite of the drought, dwarf trees persist in scenicking the lines.
California tract-home backyard. A significant challenge for us was determining what we wanted the TooMuchFun Railroad (TMFRR) to reflect: a specific era in time, a geographical area of the world and its trains, a consistent scale, or just have Too Much Fun? We reflected on one of the most popular and diverse train rides in the world—the Disneyland Railroad (DLRR) and its travels through multiple themed areas. We decided to not limit ourselves to a particular time, area, or scale, but have an eclectic railroad, similar to the DLRR and other indoor layouts.

With that in mind, we started designing and building our TMFRR on the fly in 2001. Over the years, we have added dozens of scenes and themes from childhood memories, past travels, and ideas gleaned from visiting railroads throughout the country. Additionally, we wanted the fun to continue after dark, so we added over 20,000 weatherproof, individual and strip LED lights that illuminate every building, landscape area, and scene.

Having an uphill-sloped backyard posed design and construction challenges that initially limited our thinking to the flat areas of the yard. However, after visiting a club member's railroad that was partially built in a similarly sloped yard, we expanded our ideas of what was possible.

Thoughts behind the TMFRR
Not being expert in anything related to designing and building a garden railroad, this hobby has proven many times that Clint Eastwood’s character (Harry Callahan in Dirty Harry) was right when he stated, “A man’s got to know his limitations.” So, with that philosophy in mind, we read instructional books and magazines, bought many back issues of Garden Railways, watched how-to videos, and asked club members lots of questions.

We determined the following design concepts were important to us:
- Separate each line so the track has its own power supply.
- Construct everything (track, scenery, hardscapes) 30” or higher for easier access, maintenance, and better viewing.
- Include the slope area in the multiple levels of tracks and scenes.
- Allow any era, theme, or geographical area.
- Be able to run and enjoy the railroad at night.

2. Night at the canyon. On the Canyon Skywalk (right), tourists get a rare view of a passing nighttime Santa Fe freight train.

3. The double-track helix passes through four Wizard of Oz scenes, complete with animated lightning, thunder, and movie sound snippets.
• Emphasize scenery and themes more than garden plants (neither of us have green thumbs).
• Build the railroad to last using solid construction techniques.
• Have TooMuchFun with the railroad!

We began what would turn into a four-year process of building and adding new areas to the TMFRR. What was initially planned to be a relatively small railroad in one portion of the yard would soon expand to the entire backyard.

**Construction techniques**

Working with sectional track, ropes, marking paint, and cardboard cutouts of building footprints, we began the long process of laying out the basic trackplans. After raising the valley or flat portion of the railroad with over 100 cubic yards of dirt, we used the Split Jaw PVC roadbed system. This was a good decision for us and allowed us to easily add and hide an extensive drip mist system and electrical wires for track power and accessory lighting. We ordered numerous metal bridges for several raised lines from Eaglewings Iron Craft in Arizona.

We hired a local concrete sculptor to construct rock walls, tunnels, and a four level helix to raise the train up to the slope area. We would eventually hire him four more times as we kept expanding the railroad, to eventually include the final project—the Utah-looking canyons and mountains. All of the concrete projects incorporated five steps, after we calculated the track radii and designed the trackplan. First, we poured footings with rebar. To shape the mountains, we tied and formed chicken or galvanized wire to the...
On top of the mesh, we applied one or more scratch coats of cement. After that dried, we then applied one to three coats of sculpting cement, carving in details using photographs as a reference. Painting and final detailing came after the cement work was completed.

We highly recommend extensive research on construction techniques that work for you, your climate, weather, and anticipated durability of your railroad. Our approximately 1,800 feet of track rests on metal bridges, concrete, or the PVC roadbed system; nothing is on dirt or unstable ground.

**A busy day on the TMFRR**

The TMFRR is spread out over seven outdoor lines and three suspended railroads. There are more than 150 buildings and other structures depicting 15 different themes. Murals on both ends of the TMFRR bookend the railroad, with the north mural reflecting a medieval dragon theme and the south mural extending the mountain and valley scenery.

Passengers have four separate loop lines and three point-to-point excursions to choose from on the TMFRR, offering different views of various towns and themes.

**Helix Loop.** The 250’ double-helix loop travels through western towns and up a four-level mountain helix, passing dragons, medieval castles, and jousting scenes, before crossing a 40’-wide mountain and canyon that look like Utah. Passengers continue on this cog line, down past a ski slope before a steep, 25% descent on a double-line helix through a four-scene Wizard-of-Oz diorama, complete with train-activated lightning, thunder, and musical snippets from the iconic movie.

**Pond Loop** is a 200’-long excursion that takes passengers around the base of the TMFRR, passing two lakes, through the outskirts of a detailed Route 66-themed area, western towns, industrial spurs, and through a covered bridge that crosses a roaring stream.

**City Loop** is 175’-long, traversing central valley scenes, including the TooMuchFun Dog Park, an N-scale garden railroad within the TMFRR, and a large circus area, looking down Route 66 in its heyday. The Pond and City Loops offer great views of the various scenes along the highway.
complete with rides, games, and vendors. This loop provides a close look at the Route 66 scene, which starts in Santa Monica, California, and ends at the famous Meramec Caverns in Missouri. On its return leg it passes bars and restaurants, the TMF Airways Airport, an exciting little-league game, outdoor theater, and trailer parks.

“L” Loop (elevated train) provides a quick overview of the TMFRR. It rises above the City Loop, giving riders an aerial view of the entire TMFRR valley.

Streetcar Line. A point-to-point streetcar line passes a haunted house with sound effects of ghouls and ghosts, a barn with livestock, and a bustling 50s diner.

South Point-to-Point Helix Line offers a steep ascent to the top of the five-level southern helix, the Banff Helix Hotel, and Madison Mountain Ski Area. Riders begin their journey with a tight loop around four Wizard of Oz scenes.

Tree Line is a short, 20' point-to-point line providing views of the TMFRR high above the valley.

Controlling it all
Since our electronics expertise is limited, our home electrician, Kevin, designed and built a portable roll-around control center to run the seven trains and all accessories. His prior expertise in designing large industrial command and control centers was helpful with this unique project. The cabinet was custom built, with steel framing and redwood siding. All components were built to industrial/military-grade specs. We hope this will provide many years of worry-free use.

The original concept was to have around 10-12 lighting and accessory circuits to drive what would eventually turn out to be more than 20,000 LED lights. Many of these are in strips of 100–300 or more lights. As we discussed the plans, Kevin suggested increasing the number of fuse-protected circuits to 40, so we could quickly identify a short-circuit based on a geographical area. An Astron 50-amp power supply provides pure 12V DC current to all the lighting and accessories for the entire railroad, supplying clean, flicker-free DC power to the LEDs.

Locomotives and rolling stock
Having an eclectic multi-themed railroad doesn’t restrict us to steam, diesel, or...
modeling a certain railroad line. We enjoy changing the overhead trains on a weekly basis. Who our guests are for open houses help to determine what trains we deploy. Young guests and grandkids seem to enjoy the Disney, Peanuts, or whimsical trains, while we operate more traditional trains for club open houses.

**Buildings**

There are more than 150 buildings and other structures on the TMFRR, made of various materials. Desiring unique buildings, we discovered Rainbow Ridge in...
Lakeside, California, and their Precision Board buildings. This material is durable and lightweight, and custom design is one of the company’s many strengths. They are able to take our rough plans and, with their computer-aided-design software, transform our ideas into reality. Many of our buildings are one of a kind and add character to the TMFRR.

**Where do we go from here?**

With all of the major TMFRR construction completed, we look forward to adding many more details, sound, and animation effects. We also look forward to the time when our grandkids are old enough to help with adding to the TMFRR.

**About the authors**

Vic and Sue Thies have been married for 42 years, living the entire time in southern California. Vic retired after 30 years in law enforcement and was CEO/president of a company formed after the tragic events of 9/11 to help train governments at every level to better respond to natural and man-made disasters. Sue ran their personal seminar business for 15 years. When not working on the railroad all day, they both enjoy time with their three grandchildren—future railroaders!

Both Sue and Vic work on the TMFRR, with Vic doing most of the field work while Sue specializes in the buildings, characters, and detailing of scenes.