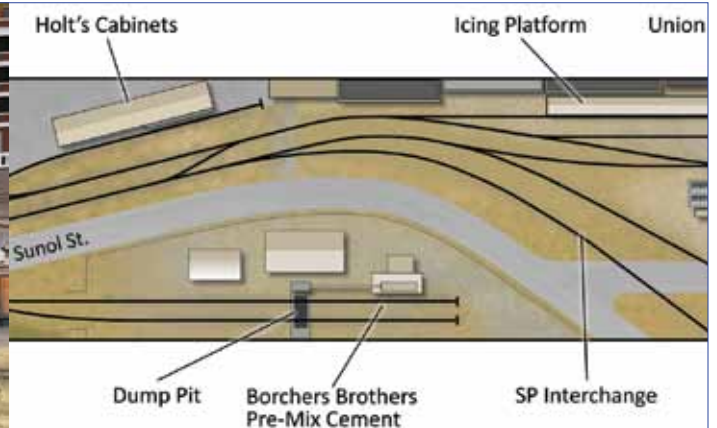
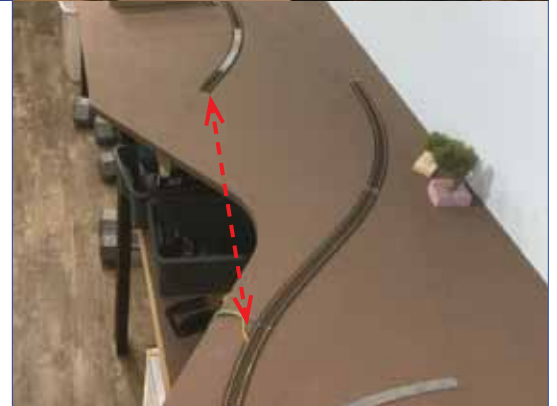


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LAYOUT DESIGN JOURNAL 70



Hands-On 3-D Design
WP Switcher Retrospective
Four Modern Shortlines
Design with Scaled Templates
LDSIG Board Election



LAYOUT DESIGN Journal

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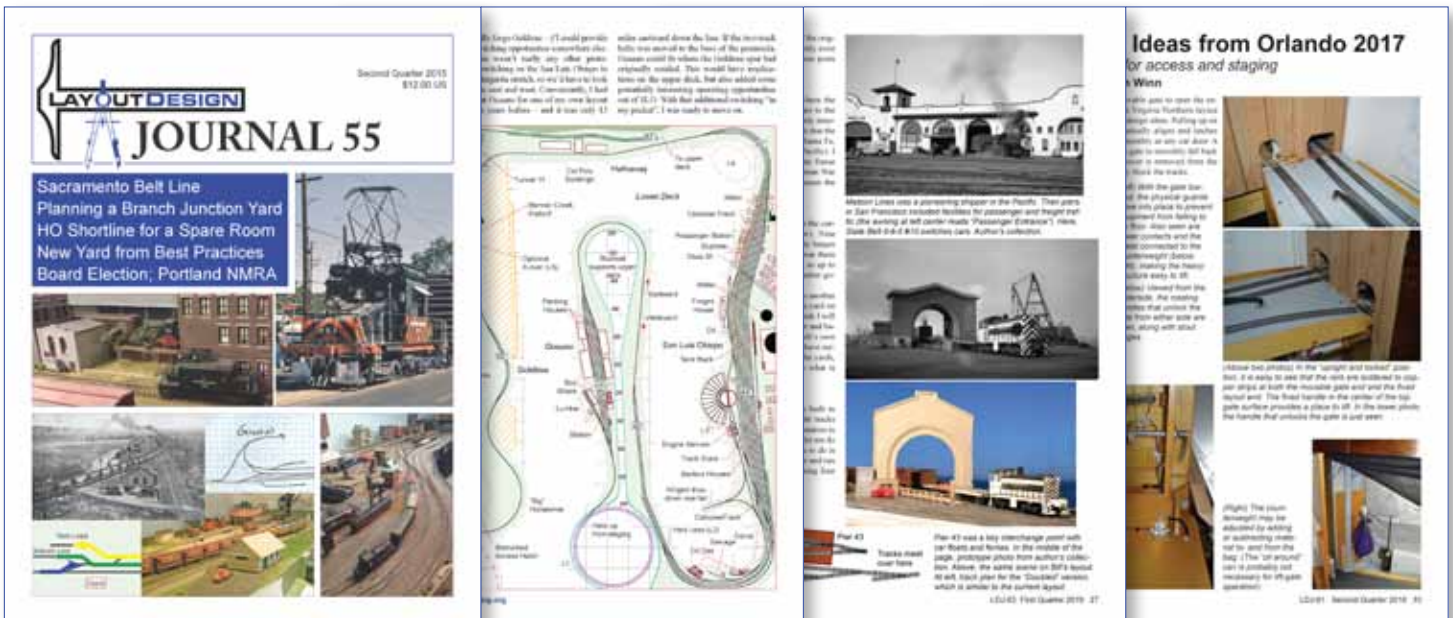
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Figure 10 above. Don quickly began tacking-down track for Design 3, which offered welcome room for spacing and enlarging key industries. Figure 11 below. Moving the branch and runaround even more toward the aisle created more room for Barber-Greene (red dashed lines), but pushed some other desired industries “off the edge of the world” into the aisle.



Tips ...

- Working hands-on with track, turnouts, and mockups provides a useful perspective for some designers and situations.
- Temporary arrangements may be test-operated to see possible refinements.
- Traditional planning tools still work well for determining benchwork footprint, aisles, and access.

... and Trade-offs

- Benchwork must be mostly complete for hands-on iterations, perhaps more challenging for modeling mountainous terrain than urban scenes.
- Optimizing one scene may impact access and/or operations on another deck in multi-deck designs.
- Planning with actual track and mockups may work best with larger spaces and less-dense track arrangements. – BH

Even better!

I immediately liked the new Design 3 much better (Figures 10 and 11 at left). The receiving, shipping, and scrap tracks at Barber-Greene now had enough length to represent the prototype. Note the (faint) pencil lines showing where the tracks were for the original design in Figure 11. My operations friend, Jerry, would have had me straighten out the curved shipping track to improve coupling, but I wanted to keep the look of the prototype. Of all of the scenes I plan to model on the railroad, this is perhaps the one that I recall the best from real life.

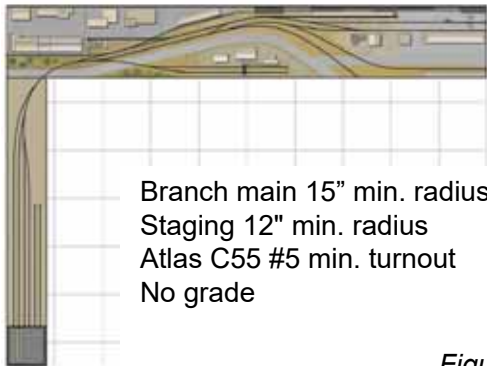
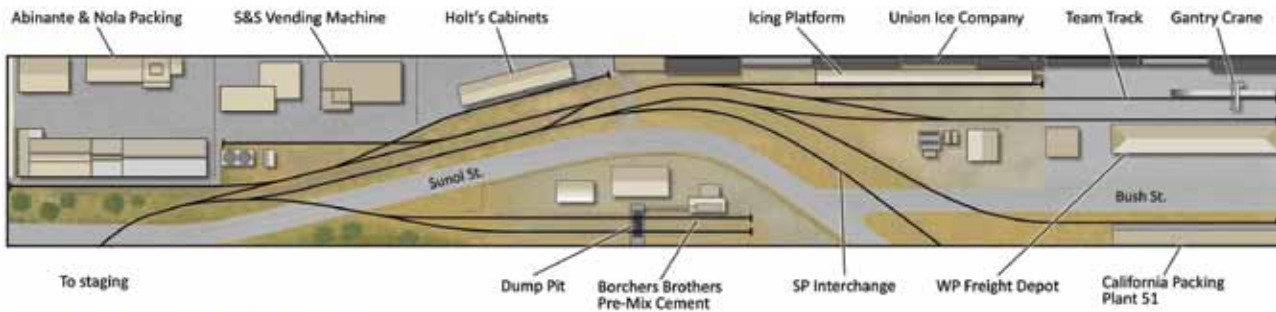
Benchwork and aisles (and cardboard!)

There was now as much room as I could possibly get for Barber-Greene without moving into the aisle. I had compromised the industries across the tracks from Barber-Greene to the point that they were almost falling off the end of the benchwork. So they would have to be fascia flats*, although I still need to extend the benchwork a little to make even that work. The plywood had been cut to a nominal 30” depth with the intention that it could be further cut back to 24” in most areas (the limit being the location of the already-constructed L-girder). But now I needed more than 30” in some areas.

The next step, which I consider important, was to build mockups of the structures to further check the scene (Figure 12, top of page 9). I had been saving cereal boxes to convert into temporary structures. The cardboard is very easy to work with – and it’s a free resource. Besides giving a sense of size, the mock-ups help to point out potential problems for the operators in either seeing car numbers or reaching in to uncouple or to throw a switch.

I temporarily modeled the fascia flats with pieces of hardboard. I then learned that the

* Although most LDJ readers are probably already familiar with the concept, Fascia Flats are similar to background flats, but are built along the aisle. Often the fascia is extended up to form the cross-section of the structure viewed from the aisle, while the inner side is modeled as a thin wall. Viewing model railcars along these Fascia Flats can be tricky, so some modelers cut doors through the flat or, as in Don’s case, use a loading dock to move the industry track away from the aisle a bit for easier viewing. – BH



Western Pacific San Jose Branch

N scale (1:160)

Layout Size: 10'-0" x 7'-6"

Scale of plan: 12" grid

Location modeled: San Jose, California

Era: 1962

Figure 1 (above). The author's layout combines a modeled shelf of two sections with an additional removable unscenicked fiddle/staging yard representing the connection of the WP branch to William Street Yard, Niles Junction, and Stockton. The light gray lines are chain-link fences helping to divide scenes.

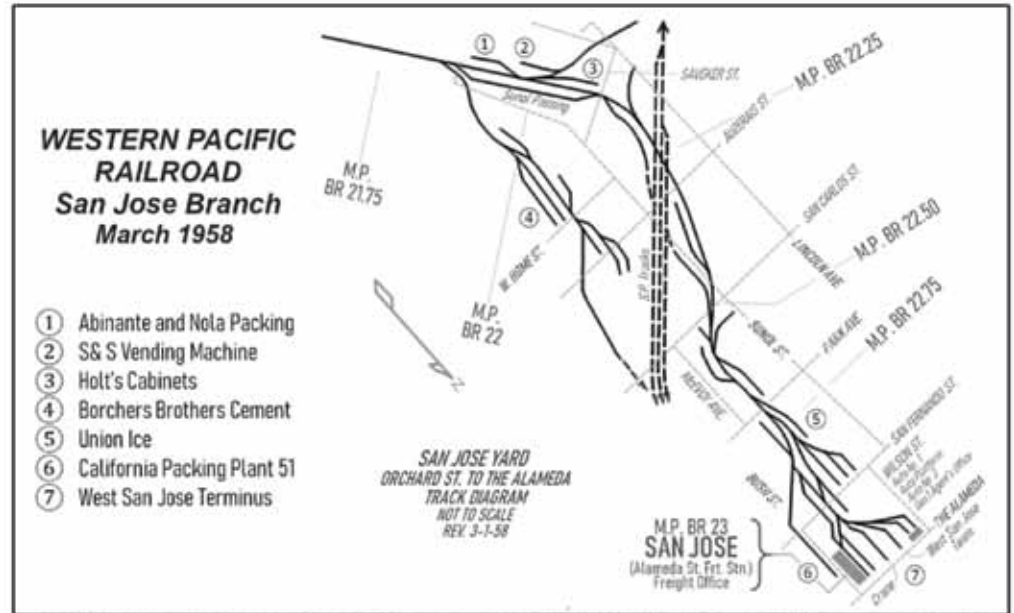
Figure 2 (below). The layout highlights two specific areas near the end of the 23-mile-long branch. The final design focuses on local switching activity and eliminates the complex crossing of the Southern Pacific tracks between the two selected Layout Design Elements.

where they are going, and how they will get there. Knowing that the WP connected with the Denver & Rio Grande in Salt Lake City and with the Great Northern in Bieber, CA got me started – but I need to research other connecting railroads to complete the routes.

Staging (and “yarding”)

As planned, trains are staged on a six-foot annex from the east end of the main layout (timetable direction). For fun, a friend and I created a manifest that required building the train in staging, effectively using it as a classification yard. I really enjoyed building the trains in what I imagined to be the Stockton Yard prior to their journey to San Jose, an unexpected learning.

A minor annoyance is that the switch lead extends well into the Sunol Passing area of the layout, which dims any impression of distance between the two. I'm now toying with the idea of extending the staging leg to incorporate a small yard with staging to its east. I've heard the “stage when you can, yard when you must” philosophy, the message of which is to be in-



Layout Design with Scaled Templates

A quick way to start designing buildable track plans

by Steve Moore with Byron Henderson

Patterns or templates have been around since anyone ever wanted to make more than one of something. They are used for everything from dress-making to prototype railroad steam engine parts. They are especially handy for model railroad layout design – and have been used, in one form or another, from the earliest days of the hobby. Many of the legendary layout designs of years past (including all of John Armstrong’s designs) were hand-drawn with templates of one sort or another.

Templates speed up the design process and make your work consistent – no cheating on the angle of a turnout, the radius of a curve, or the length of a given track. They cut down on mistakes and improve accuracy. Consistency, repeatability, time saving, ease of creativity, these are but a few of the advantages of using templates.

Alternative to computer tools

Model-railroad-specific Computer-Aided-Design (CAD) and other computer drawing programs are widely available today – some are even free. So why would anyone still choose to go “old school” by hand-drawing with templates? The short answer is: time and simplicity.

For a modeler who is only going to design one layout to build for themselves, the many

hours required to become proficient in any CAD program may be overkill for the situation. Folks want to design, not read manuals! Especially for layouts that don’t require large areas of complex trackwork (like the multiple slips and turnouts of a complicated passenger-yard throat, for example), the extreme precision of a computer may not be necessary.

Some prefer to use any paper track plan as only a rough guide, making changes and improvements on the benchwork itself hands-on with track and turnouts (see story beginning on page 4). And still others lack the computer skills (and interest!) to make model railroad CAD practical in any case. In addition, many people find that drawing by hand allows them to be more imaginative and creative because when they are not burdened by the intricacies of computer programs incorporating more “bells and whistles” than needed for a 2-Dimensional track plan.

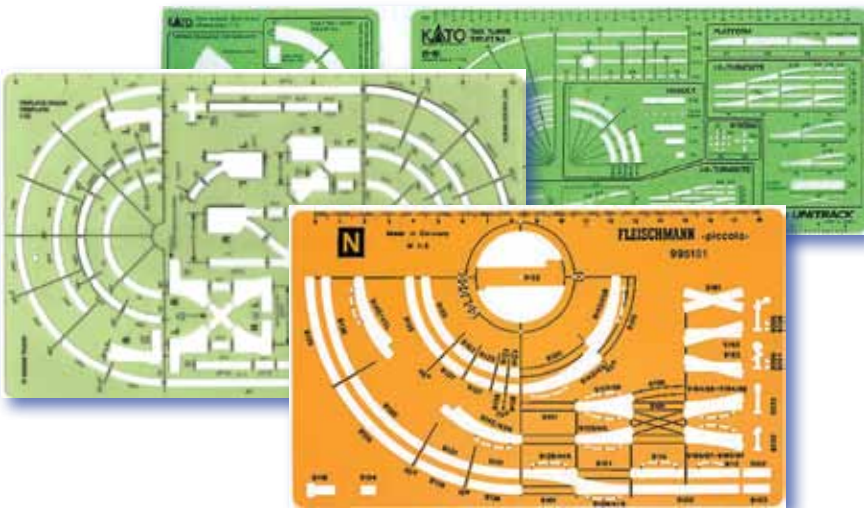
Keeping it real

But even for these designers, the walls and negotiated boundaries of the space must still be honored. Totally free-form hand sketches of track plans often fail to take into account the realities of turnout angles and minimum radii. The result is a fantasy drawing that will lead only to disappointment when attempted in plywood and plaster.

Templates are a boon to keeping hand-drawn layouts practical and buildable. Circle templates maintain consistent radii throughout the drawing and accurate turnout angles keep yards and industrial areas from being drawn too optimistically to be constructed.

Types of templates

While some designers (especially back in the day) created their own templates from various thin, stiff materials, commercial fixed-configuration templates for hand-drawing have been available for many years. Some are matched to specific manufacturers and lines of track components, others more generic. A number are shown at left. For sectional track such as KATO Unitrack or Lionel O-27 an en-



Self-contained plastic templates have been available for specific sectional track manufacturers and lines as well as generic styles. These may be less useful for flextrack or hand-laid track designs.

Designing Four Modern Shortlines

Class I connections and lots of switching

by Olaf Melhouse

When one considers modeling the modern era, miles-long unit trains on the few remaining Class I's come to mind. But a large number of shortlines are thriving in the modern era and may be of a more modelable scope – some

even with individual-car industry switching options. Olaf describes a few of these and offers track plans for mid-sized rooms in N and HO scales. – BH

Fort Worth & Western Mainline in N Scale

The Fort Worth & Western Railroad (FWWR) began operation in 1988 when it purchased 6¼ miles of trackage in Fort Worth from Burlington Northern. It gradually added another 10¾ miles of trackage and in 1996 it leased 28½ miles of track from the Dallas Area Rapid Transit (former Cotton Belt line from Fort Worth to Carrollton). In 1998 the FWWR purchased 134 miles of track from the South Orient Railroad (former Santa Fe) from Birds to Ricker, TX including branch lines from Cresson to Cleburne and Dublin to Gorman (see page 27).

The railroad now operates over 276 miles of track through eight counties in north-central Texas, from Carrollton to Brownwood. FWWR interchanges with three Class I railroads, Union Pacific, Burlington Northern Santa Fe (BNSF) and Kansas City Southern – and one short line railroad, Texas Pacifico. Headquarters for the railroad is in Fort Worth, Texas. Interchange is made at Fort Worth with BNSF, UP, and KCS; at Cleburne and Ricker with BNSF, and at San Angelo Junction with Texas Pacifico via BNSF trackage rights.

Variety of commodities and trains

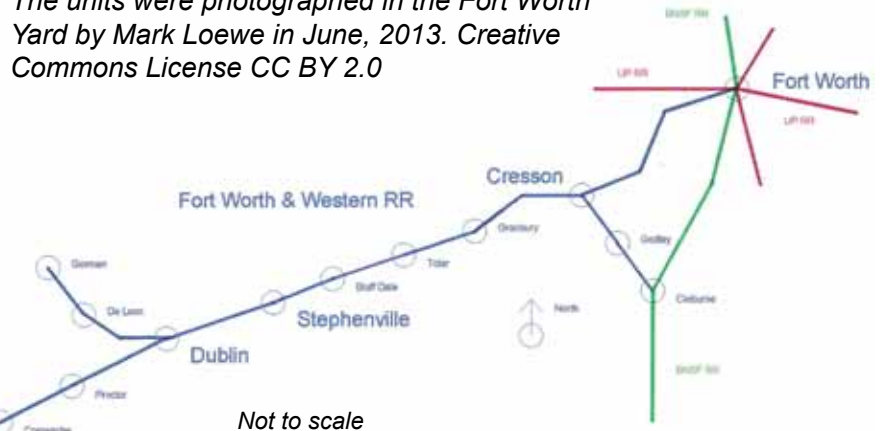
The portion of the railroad represented in this layout is the former Santa Fe trackage between Cresson and Dublin. The FWWR runs long trains with two or more engines and multiple cars of frac sand, oil and chemical tank cars, covered hoppers of agricultural commodities, and steel products. The Class III shortline railroad maintains the track for 40 mph travel. The line has signals but trains are operated using track warrants.



The N scale track plan (page 26) represents a portion of the FWWR Dublin Subdivision between Cresson and Dublin around



Along with its striking livery, the FWWR gives colorful names to all of its locomotives. #2002 is named “Cowtown” (referencing Fort Worth’s long cattle-industry history) and is classified by the railroad as a GP38-1. #2000 “Miss Molly” is called a GP38-3 by the railroad. The units were photographed in the Fort Worth Yard by Mark Loewe in June, 2013. Creative Commons License CC BY 2.0



The FWWR is made up of former Santa Fe, Burlington Northern, Missouri-Kansas-Texas (MKT), and Cotton Belt lines.

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Do you model a specific prototype? Yes No Prototype(s) modeled: _____

What specific areas or locale of railroading do you model (location) ? _____

Era modeled: _____ Scale(s): _____

Other interests (Main line, branch, yards, division, multi-scales, etc.) _____

Status of layout: _____

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