

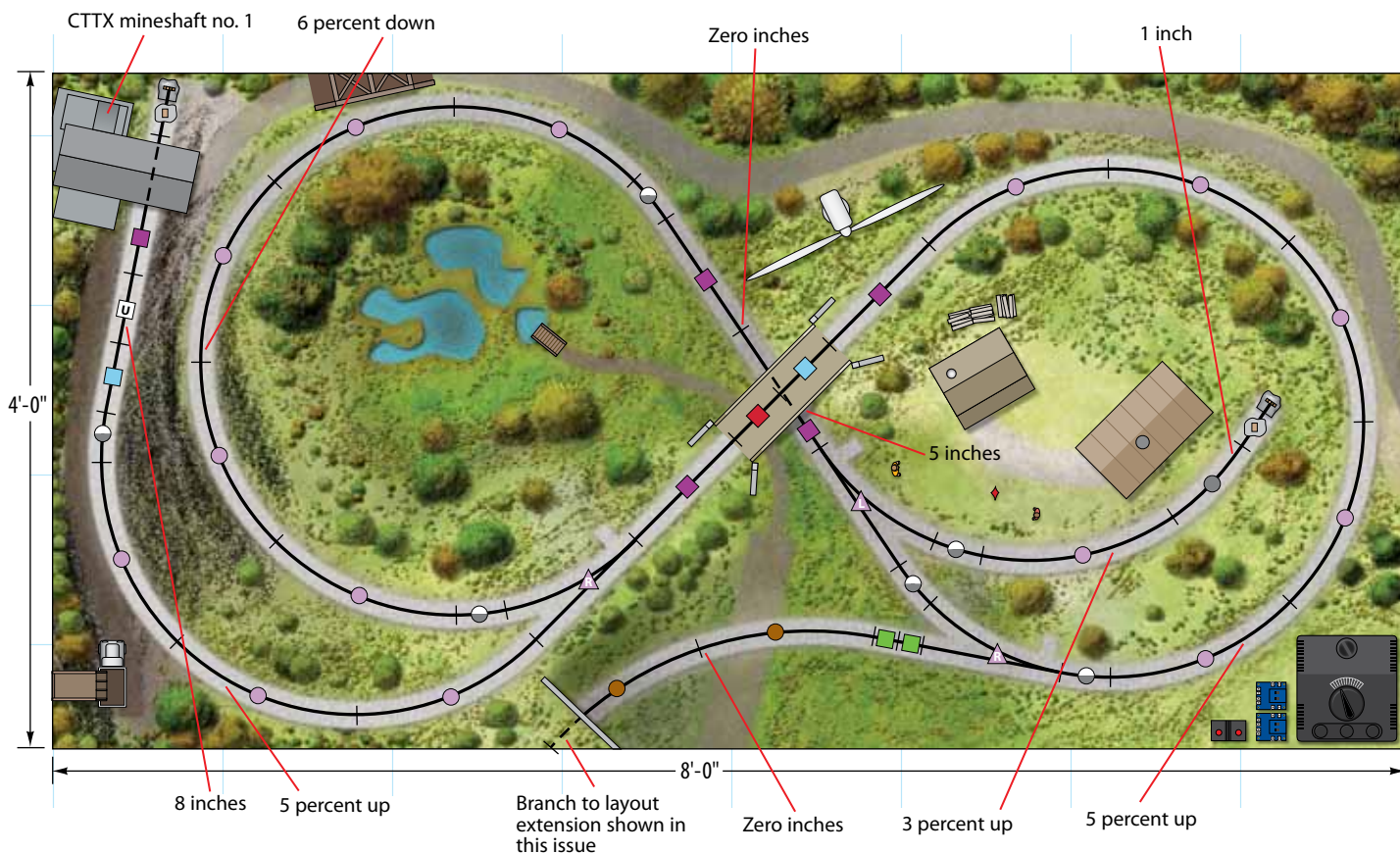
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**CLASSIC TOY
TRAINS**



LIONEL FASTTRACK

**10 PROVEN
PLANS** VOL. 2



4 STEPS TO ADAPTING A TRACK PLAN

THE READERS' CHOICE RAILROAD REWORKED FOR LIONEL FASTRACK – PLUS HELPFUL TRACK-PLANNING TERMS

by Kent Johnson • Illustrations by Kellie Jaeger

Kids used to be able to create a new toy train layout in the blink of an eye. All they needed were a bundle of tubular track, permission to move a few fixtures around the rumpus room, and just a bit of imagination to spawn an endless number of Carpet Central creations. But as youthful builders matured, many learned to appreciate the conveniences of a prescribed plan, much like those in CTT's special-interest publication, *Small & Midsize Track Plans for O Gauge Trains* (To order call 1-800-533-6644 or visit ClassicToyTrains.com).



Based on the favorable responses regarding these and other track plans published in *Classic Toy Trains*, it seems that readers truly do rely on these schemes to inspire and guide their layout construction efforts. But along with the comments, we also receive a fair number of requests to produce alternative versions of a specific plan, including the O gauge Readers' Choice Railroad (see the February 2011 issue of CTT). I designed for traditional tubular track sections. With such a dizzying array of track brands, types, and sizes available,

LIONEL FASTRACK COMPONENTS

Quantity	Description/Number
2	1.75-inch straight (12026)
1	4.5-inch straight (12025)
2	5-inch straight (12024)
5	10-inch straight (12014)
6	0-36 curve, 11.25-degree (12023)
1	0-36 curve 22.5-degree (12022)
14	0-36 curve, 45-degree (12015)
2	0-48 curve, 30-degree (12043)
1	0-36 left-hand track switch (12017)
2	0-36 right-hand track switch (12018)
1	5-inch uncoupler (12020)
2	bumper (12059)

it's no wonder we're a bit more hesitant to simply amass a supply of track and start building or modifying a layout on the fly.

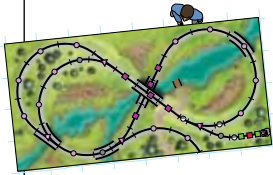
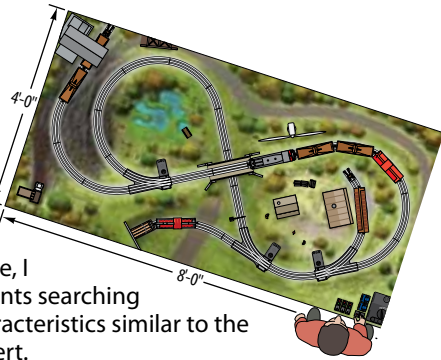
For those of us who prefer to work from a design, I've retrofitted the Readers' Choice Railroad track plan to suit Lionel FasTrack components. Along with the modified plan, I'll share some of the key considerations I made before attempting the task.

Finally, I think you'll also enjoy a brief overview of track-planning terms, tips, and techniques that should make it easier to embrace that youthful urge to design a layout of your own creation!

Readers' Choice Railroad Revamped

1 Check for similar plans

Converting a plan isn't an impossible task, but it does take time. Before I go through the effort to convert a scheme, I spend a few moments searching for a plan with characteristics similar to the one I want to convert.



Perhaps the best source for searching alternative track plans is **CTT's Track Plan Database**. Subscribers visiting ClassicToyTrains.com can easily search nearly 100 plans based on layout size, track type, and minimum curve size.

2 Compare track types

You'd think that track products sold by the same manufacturer would be interchangeable, right? Not always. Before you decide whether to convert a plan to your preferred track type, be sure to explore just how many sections have complementary parts – especially the curves, switches, and crossings. As the chart illustrates, only four sizes match. Essentially, fewer matching pieces equates to more challenges in the conversion process.

In addition to knowing what's available in a product line, you'll want to compare the cost of the two brands. The appearance of contemporary track is remarkable, but it comes at a greater price than 60-year-old tubular rails.

CURVED TRACK DIAMETERS

	Lionel O	Lionel FasTrack
0-31	X	
0-36		X
0-42	X	
0-48		X
0-54	X	
0-60		X
0-72	X	X
0-84		X

TRACK SWITCH DIAMETERS

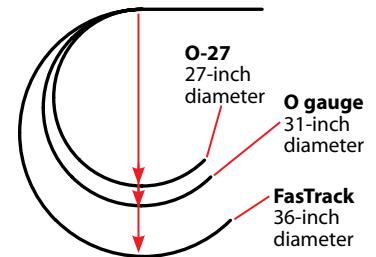
0-31	X	
0-36		X
0-48		X
0-60		X
0-72	X	X
0-72 wye		X

CROSSINGS

22.5-degree	X	
45-degree	X	X
90-degree	X	X

3 Consider the curves and crossovers

After comparing two track systems, I look closely at the shape of the original plan to determine how larger and smaller sections affect the overall design. First, I'll focus on one specific loop or route and examine how swapping out curves may alter the length and width of the scheme. Even a seemingly slight change in the geometry of a curve can have a drastic impact on what fits into a prescribed space. Next, I perform a similar survey of the track switches. I pay particular attention to crossovers, where changes in track geometry can expand or constrict the spacing between parallel routes.



4 Create software sketches

Once I've gathered these critical insights, it's time to start slogging through a conversion. You may think that a no. 2 pencil and graph paper are the best tools for track planning, but I prefer layout-planning software. RR-Track from R&S Enterprises (rrtrack.com) is my favorite application, as it maintains the widest variety of track libraries from which to choose. Software makes it much easier to virtually test-fit sections of track and avoid the inaccuracies that can occur when drafting with pencil and paper. Along with software, I found it helps to keep a FasTrack Length Table as a ready reference (see the October 2009 issue of CTT or download this tool at ClassicToyTrains.com).

Basic Lionel FasTrack figure-eight configuration on a 4 x 8-foot table leaves little space for additional track and scenery...

Draw curves and crossings to confirm fit in available space

Test-fit diverging routes in order of importance

Shift angle and axis of the figure-eight to create more usable space

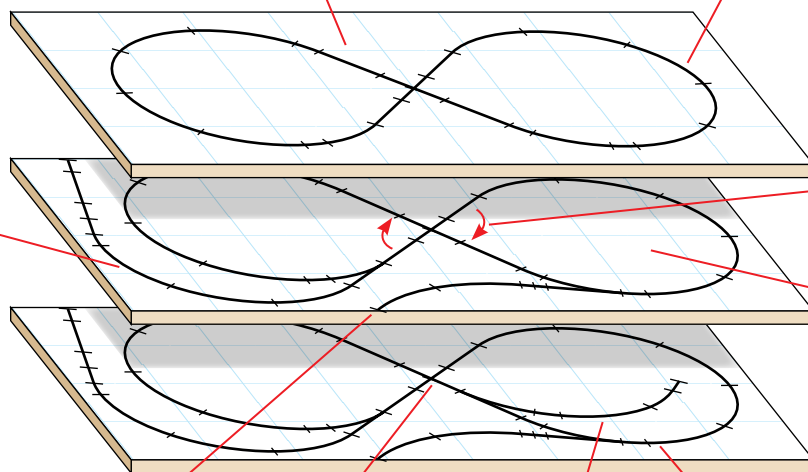
Plenty of space left for scenery at center, edges, and corners of layout

Work from end point back to mainline route

Consider elevations, grades, and clearance

Alternative solution for spur

Suitable Lionel FasTrack switches aren't available to accommodate a spur here



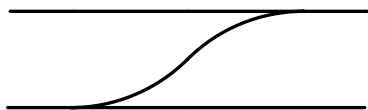
Track-Planning Terms

When it comes to discussing track plans and the process of preparing a new or converted plan, it's easy for me to lapse into jargon that may leave new hobbyists scratching their heads. While CTT editors make a conscious effort to

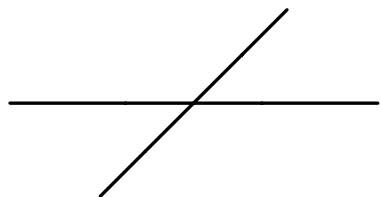
explain any uncommon terms that appear in our features and departments, we can't forget to circle back to define those terms that seem commonplace to us. With that in mind, here's an illustrated glossary of some basic track-

planning terms that will help you better appreciate the intricacies of the plans featured in our Toy Train Track Plans series and our recently launched Track Plan Database – now accessible to CTT subscribers at ClassicToyTrains.com. **CTT**

CROSSING & CROSSOVER



Crossover. Two track switches and a connecting track that allow a train to divert to a parallel track.



Crossing. A section of track that allows one route to bisect another. The most common toy train crossings have 45- and 90-degree angles, but other options are available.

TRACK SWITCH & TURNOUT

O-72 track switch



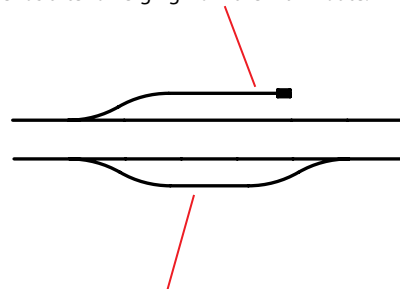
No. 5 turnout with an 11.25-degree angle

Track switch. A section of track featuring movable rails that allow a train to travel from one path to another. A number, such as O-72 or no. 5, designates the curve or angle of the diverting path.

Turnout. A model railroading term that distinguishes a track section from an electrical switch.

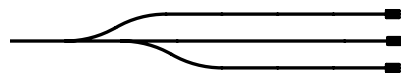
SPUR & SIDING

Stub-end spur. A section of track that dead-ends after diverging from the main route.



Passing siding. This section of track also diverges from the main route, but later reconnects through a second track switch. A passing siding is typically long enough to hold an entire train while another train travels through the main route.

JUNCTION & TERMINAL

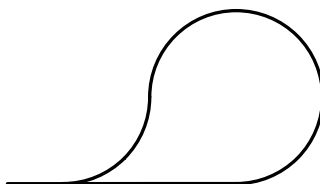


Stub-end terminal. Literally, the ending or starting point of a railroad route. Terminal points exist for freight and passenger trains, and locomotives.

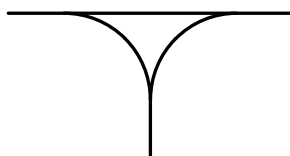


Junction. A point on a layout where two or more routes meet. Some junctions represent nothing more than the joining of two tracks; others include a complex network of track switches and sidings.

REVERSE LOOP & WYE



Reverse loop. A single switch and balloon-shaped track arrangement used to reverse the direction of a train.



Wye. A triangular arrangement of track made of three legs, one of which may be the main route. This track arrangement can be used to change the direction of a locomotive or an entire train.

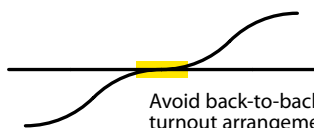
RIGHT-OF-WAY



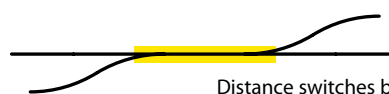
Service road
Line poles
Drainage ditch

Right-of-way. The railroad property that follows alongside the tracks. This Neal Schorr photo captures right-of-way details on his Pennsylvania RR-themed O gauge layout.

SNAKING CURVES



Avoid back-to-back turnout arrangement

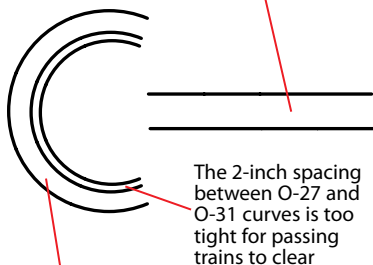


Distance switches by installing car-length straight section

S-curve. Track arrangements where cars passing from one curve to another are forced to bend in opposite directions. To prevent derailments resulting from the force, avoid using this arrangement anywhere on a layout.

TRACK SPACING

Tangent tracks. The common spacing for parallel O gauge straight track is 4 inches, center-to-center (distance between the two middle rails).



Concentric curves. A center-to-center spacing of $5\frac{1}{2}$ inches on tight-radius curves provides adequate clearance for most toy train equipment. Using wide-radius curves helps attain a more realistic 4-inch spacing.

MAXIMUM GRADE & MINIMUM CLEARANCE



Grades. A grade greater than 5 percent (a 5-inch rise over a 100-inch run) can present a challenge to operation. For more reliable running, keep the grade to 4 percent or less.

Clearance. Small O gauge trains can pass under postwar bridges, portals, and trestle sets with a low, $4\frac{1}{2}$ -inch clearance height (from railhead). However, tall modern toy trains may require an additional inch or more clearance height.

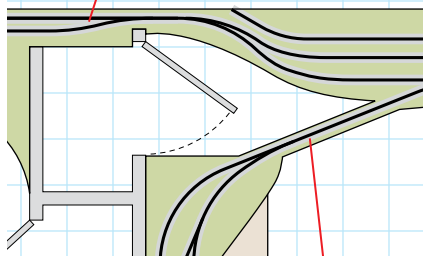
Lionel no. 110 trestle set yields a nearly 5 percent grade



The tallest Lionel "A" trestle stands just $4\frac{3}{4}$ inches high

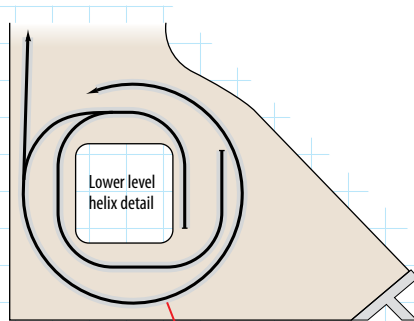
HIDDEN TRACKWORK

Route leads to track in an adjacent room



Mainline route around the room

Staging yard. An out-of-sight area used to hold complete trains before running them over the visible portion of a layout.

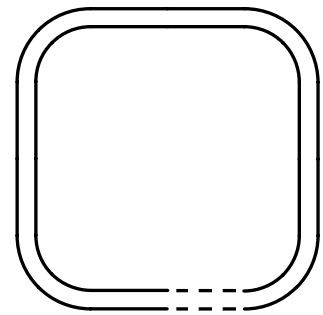


Spiraling track climbs to upper level

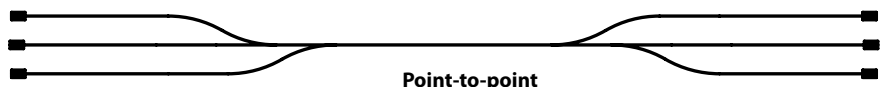
Helix. A rising curve that turns around an axis like a corkscrew. Used on multilevel layouts to allow trains to go from one level to another.

LAYOUT DESIGNS

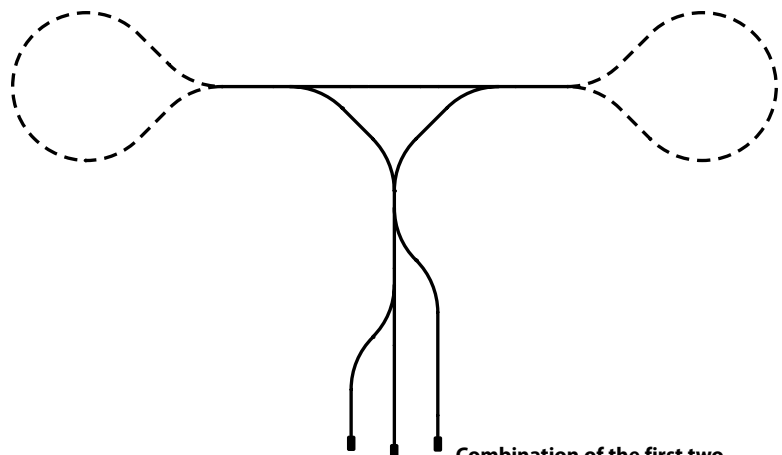
Although the variations are infinite, there are essentially three basic types of layout designs: **continuous**, **point-to-point**, and a **combination of the first two**. All can have provisions for a train to change direction, pass another train, and position cars on sidings, but that doesn't change the basic types. Whether you're considering a published track plan or would rather make your own design, be sure to think about the kind of railroad operation you enjoy most, and what specific type of locomotives and rolling stock you intend to run on your layout.



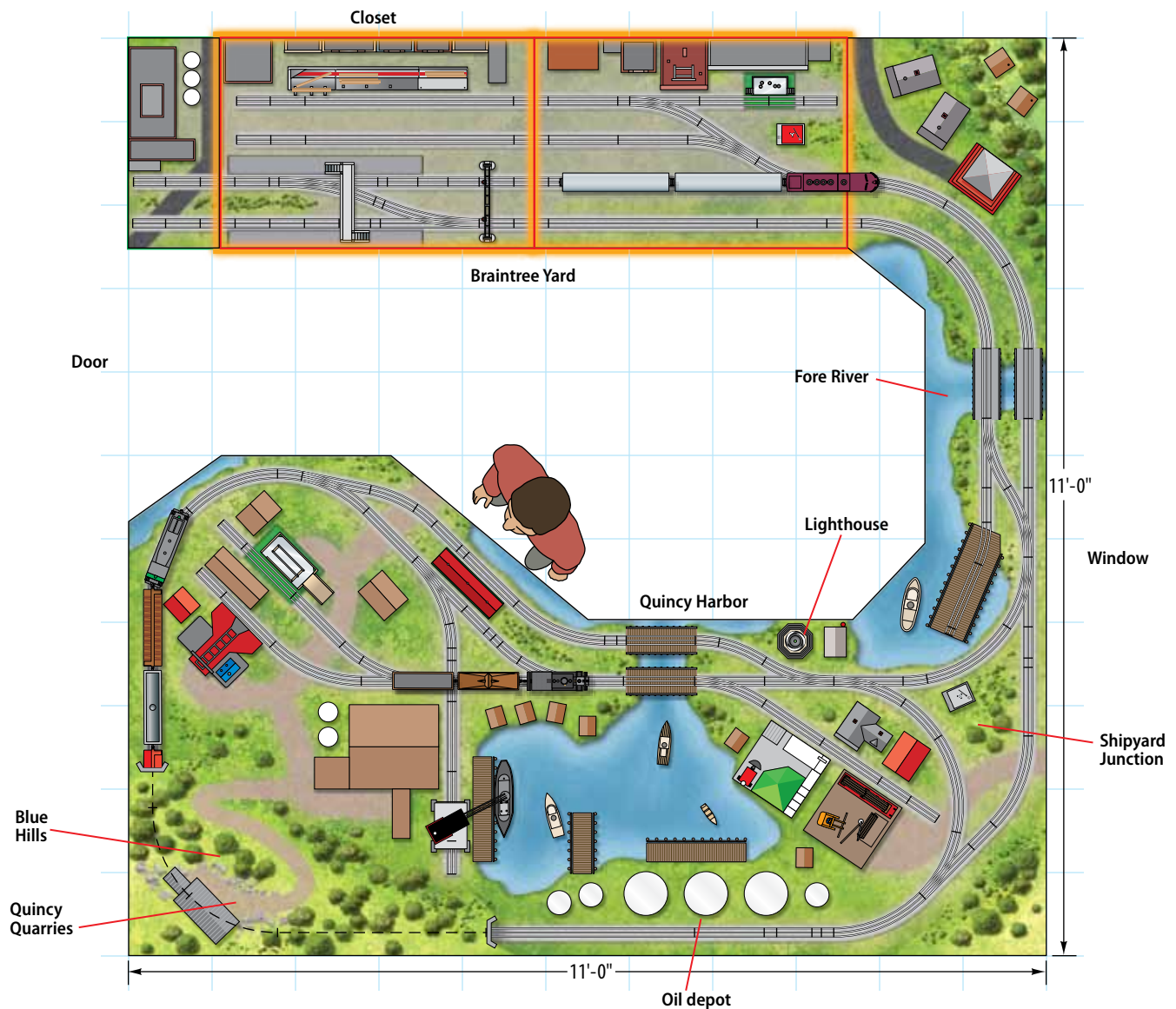
Continuous loop around the walls



Point-to-point



Combination of the first two



An O gauge track plan that **TRAVELS**

THIS 11 X 11-FOOT SCHEME MERGES LIONEL'S NEW
FASTRACK MODULES WITH A PERMANENT PIKE

By Michael Tylick • Illustrations by Kellie Jaeger

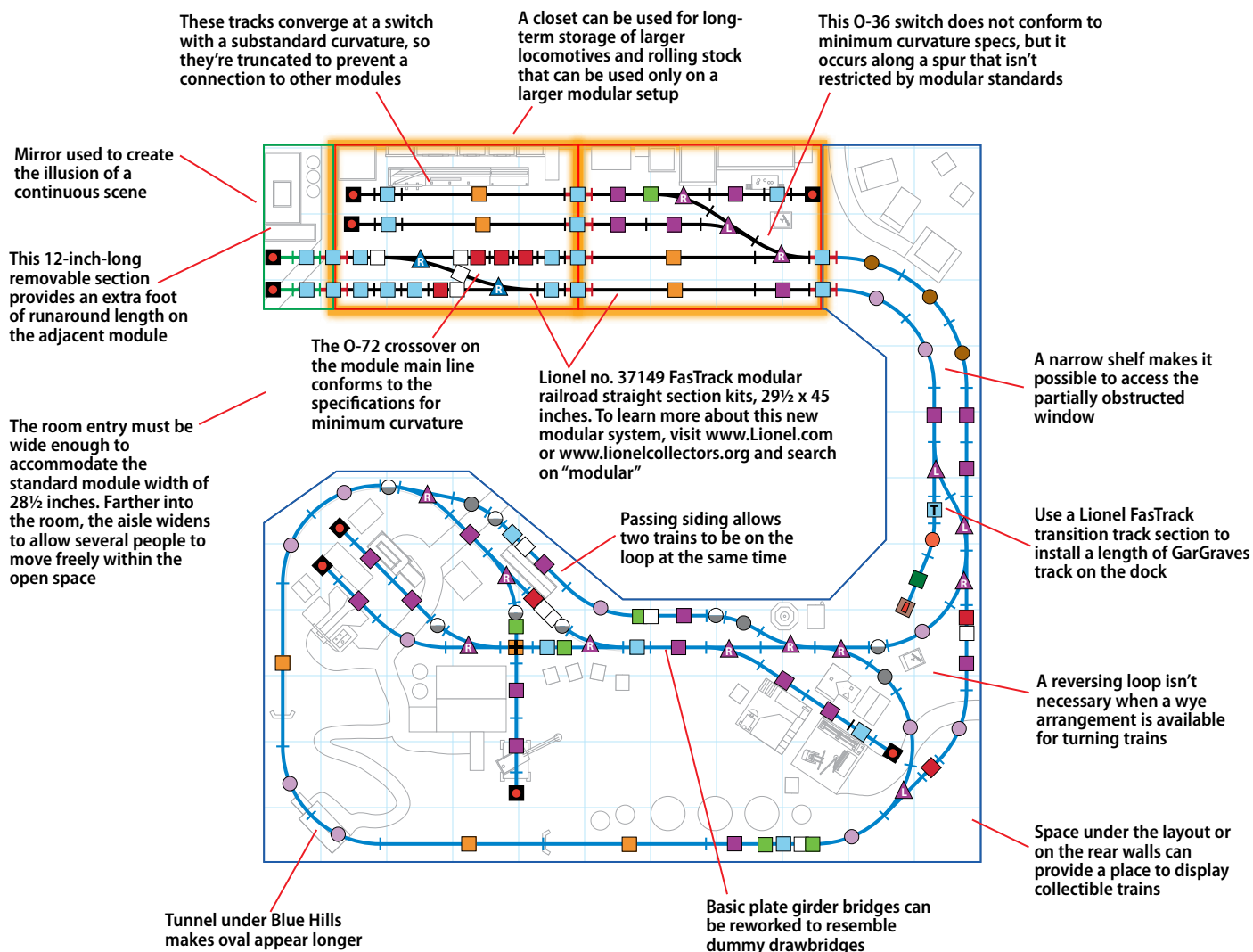
**TRACK PLAN
OF THE MONTH**

Modular model railroads are assembled from a system of uniformly sized sections that can be configured into almost infinite variations. Thanks to lightweight construction materials and clever techniques for making these sections mobile,

many builders are able to join their modules in a common space like a mall or warehouse to form a large layout capable of accommodating some of the longest trains imaginable.

While this form of layout construction has long been popular with the smaller

scale trains, no standards for O gauge builders existed until recently. A committee of representatives from Lionel and the Lionel Collector's Club of America (LCCA) has drawn up a workable set of modular standards for O gauge builders to follow. Even better, Lionel now sells templates,



entire kits, and scenery/structure add-ons you can use to build a single module or a complete addition to an existing layout, just as this 11 x 11-foot O gauge plan depicts.

A layout for home and away

Operating a module as part of a larger layout can provide hours of entertainment, but there's still something to having a fully functional home layout. Even in a guest bedroom, this 11 x 11-foot plan shows there's space for continuous running, a short alternate route, and a wye for reversing the direction a train travels. In addition to providing a good place to install operating accessories, the spur tracks make prototype-style switching operations possible.

But the hidden gem of this scheme has to be the inclusion of two portable modules that become part of the layout when they're not out on the road. The modules' specifications call for Lionel FasTrack, so I've used the same track system throughout the layout. The flat (zero elevation),

LIONEL FASTRACK COMPONENTS		
Quantity	Description/Number	
10	□	1.375-inch straight (12073)
6	■	1.75-inch straight (12026)
7	■	4.5-inch straight (12025)
24	■	5-inch straight (12024)
21	■	10-inch straight (12014)
7	■	30-inch straight (12042)
7	○	O-36 curve, 11.25-degree (12023)
3	○	O-36 curve, 22.5-degree (12022)
12	○	O-36 curve, 45-degree (12015)
3	○	O-48 curve, 30-degree (12043)
4	△	O-36 left-hand track switch (12045)
10	△	O-36 right-hand track switch (12046)
2	△	O-72 right-hand track switch (12049)
1	■	5-inch transition straight (12040)
1	■	90-degree crossing (12019)
9	■	lighted bumper (12035)

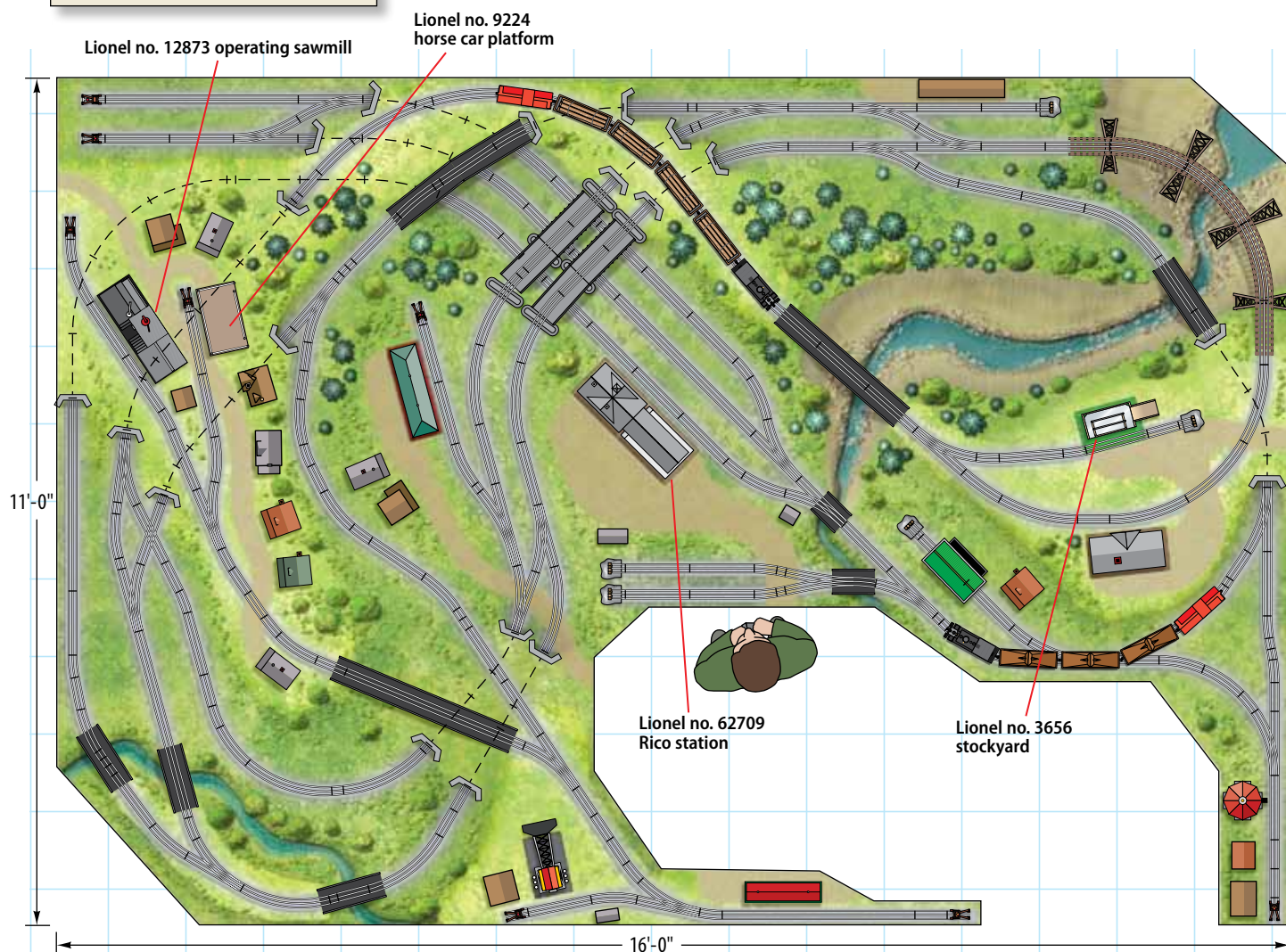
GARGRAVES TRACK COMPONENTS		
Quantity	Description/Number	
1	■	12-inch straight (WT101-12)
1	○	O-32 curve (WT32-101)
1	■	track bumper (300-BK)

permanent section of the layout can accommodate only O-36 curves, which are ample for the majority of available toy train equipment. If you're part of a modular group, you may also have the option to swap modules with other members and enjoy an all-new scene or operating scheme – all without the need to remodel your permanent setup. **CTT**

COLOR KEY

BLACK tracks define the modules.
RED tracks are 5-inch removable sections between each module.
GREEN tracks define the movable non-modular tables.
BLUE tracks define the fixed permanent layout.

TRACK PLAN OF THE MONTH



Curves & climbs track plan

THIS O GAUGE LIONEL FASTRACK SCHEME BRINGS NARROW GAUGE ACTION TO AN 11 X 16-FOOT SPACE

By Michael Tylick • Illustrations by Kellie Jaeger

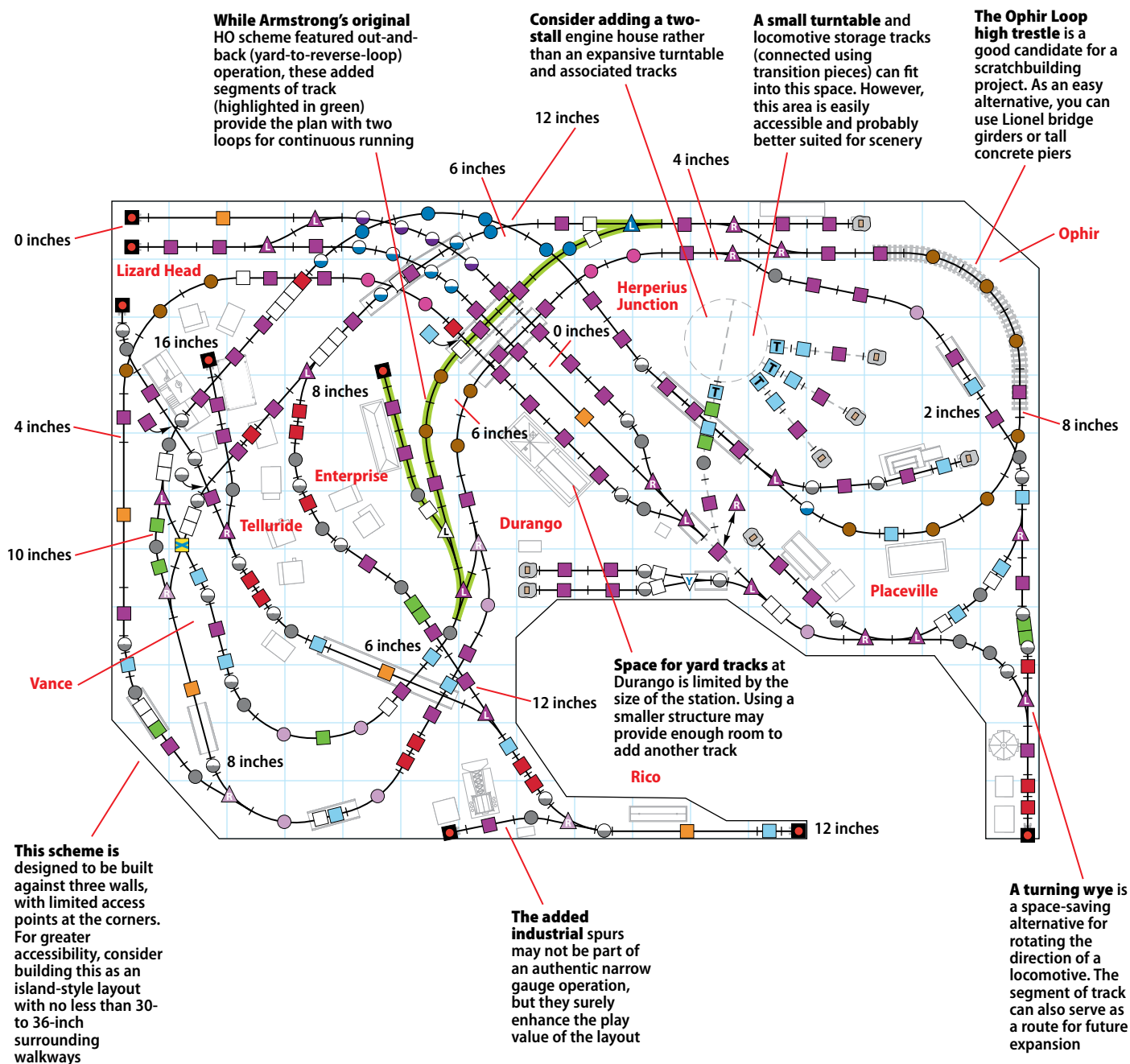
Narrow gauge railroads aren't often modeled on O gauge layouts, as our toy trains are typically able to navigate tight curves without reducing the spacing between rails. But rather than miss out on the features associated with that brand of railroading, I decided to capture many of these charms on this 11 x 16-foot O gauge track plan.

My version of a western narrow gauge railroad was inspired by a scheme from

the late John Armstrong, an innovative contributor to *Model Railroader* magazine. I adapted his original HO scale plan for the Rio Grande Southern (RGS), a railroad serving the silver mining towns in the mountains of western Colorado well into the 1950s, to suit Lionel O gauge FasTrack components.

To represent an appropriate mountain railroad setting, I made generous use of noticeable grades (as much as 4 percent),

tight curves (O-36 minimum), and smaller-portioned equipment and structures. The selectively compressed (O-27) locomotives and rolling stock from Atlas/Industrial Rail, Lionel, MTH, and Ready Made Trains by Arist-O are good options. Structures on this layout are generally associated with the cattle ranching, logging, and mining industries, each of which provides good reason to include operating accessories and freight cars.



The real draw of this layout is the potential for spectacular western mountain scenery. Rail lines are carved out of sheer cliffs and route through numerous tunnels and over tall trestles crossing steep gorges, tumbling rapids, and waterfalls. Depending on what type of mountain range you model, it's possible to get by without adding a large number of trees. The goal is to develop terrain that looks as though it can challenge our toy trains.

While this may not be the route of the *Super Chief*, tiny trains slowly negotiating precarious mountain tackage can be every bit as exciting! **CTT**

LIONEL FASTRACK COMPONENTS

Quantity	Description/Number		
26	1.375-inch straight (12073)	6	0-72 curve, 22.5-degree (12041)
10	1.75-inch straight (12026)	4	0-84 curve, 11.25-degree (12061)
15	4.5-inch straight (12025)	4	0-36 right-hand track switch, manual (12018)
20	5-inch straight (12024)	11	0-36 left-hand track switch (12045)
78	10-inch straight (12014)	8	0-36 right-hand track switch (12046)
6	30-inch straight (12042)	1	0-60 left-hand track switch (12057)
28	0-36 curve, 11.25-degree (12023)	1	0-72 left-hand track switch (12048)
22	0-36 curve, 22.5-degree (12022)	1	0-72 wye switch (12047)
7	0-36 curve, 45-degree (12015)	4	5-inch transition straight (12040)
14	0-48 curve, 30-degree (12043)	1	45-degree crossing (12051)
4	0-60 curve, 22.5-degree (12056)	8	bumper (12059)
8	0-72 curve, 11.25-degree (12055)	8	lighted bumper (12035)

TRACK PLAN OF THE MONTH

Sectional appeal

THIS 20 x 24-FOOT O GAUGE FASTRACK PLAN
STARTS WITH A 4 x 8-FOOT SEGMENT

By **Kent Johnson** • Illustrations by Kellie Jaeger

The concept of combining several small, uniformly built layout segments has long been popular in N and HO scale model railroading. These modular layouts aren't nearly as common with toy train operators, but here's a sectional (segments aren't uniform) scheme that includes two elements – Lionel FasTrack and a 4 x 8-foot sheet of plywood – many O gauge layout builders find quite appealing.

Starting what's intended to become a 20 x 24-foot basement-sized layout on a stand-alone section has its benefits. First, the 4 x 8-foot dimension is universally synonymous with toy trains. Construct the basic framework for the stand-alone section and you have a pattern to repeat as you expand the layout. Next, you can easily complete track-work and scenery skills without getting bogged down perfecting any one task. Also by starting small, you invest less in initial material costs.

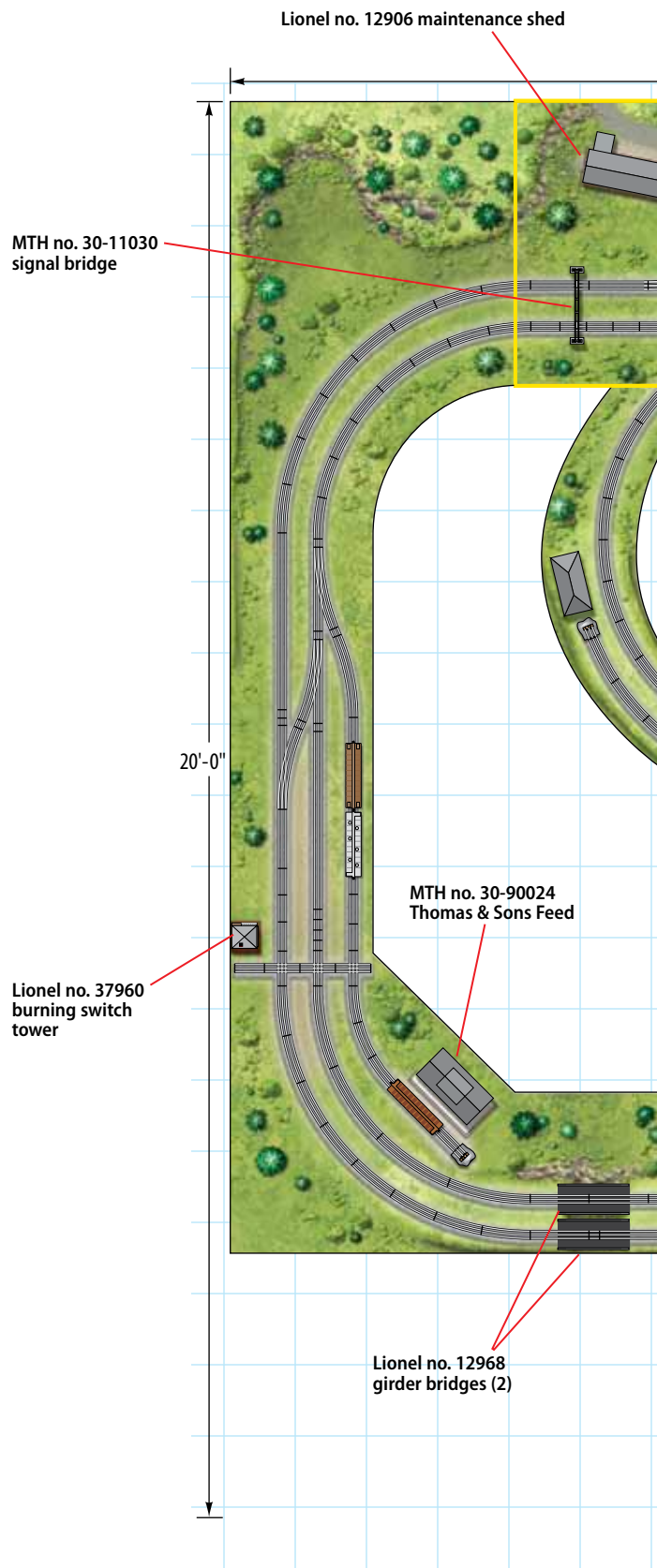
But perhaps the biggest bonus comes from the ability to make your layout portable. If you coordinate your plan with builders operating another modular or sectional layout, you'll have the option of linking two or more segments to form a new layout you can share at train shows or other venues where the public can see the World's Greatest Hobby in action.

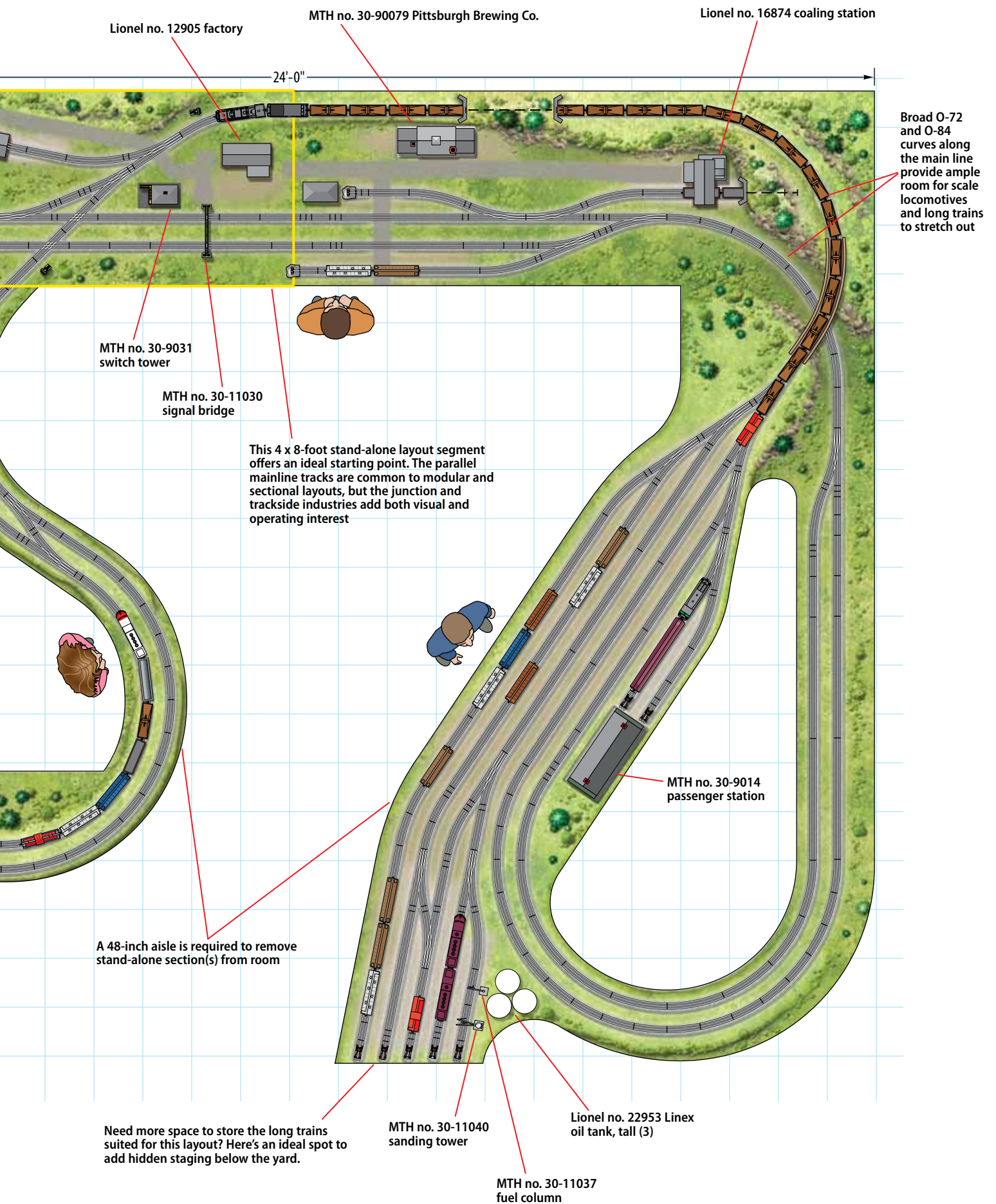
When operators assemble an arrangement of multiple layout sections at a large venue, there's one bonus that's sometimes overlooked. With a large layout comes the possibility of running really long trains powered by some of the largest scale-sized locomotives produced in O gauge! But rather than restricting that option to an occasional get-together for a public display or train show, this plan shows it's also possible to reap the benefits of a modular or sectional layout in your basement.

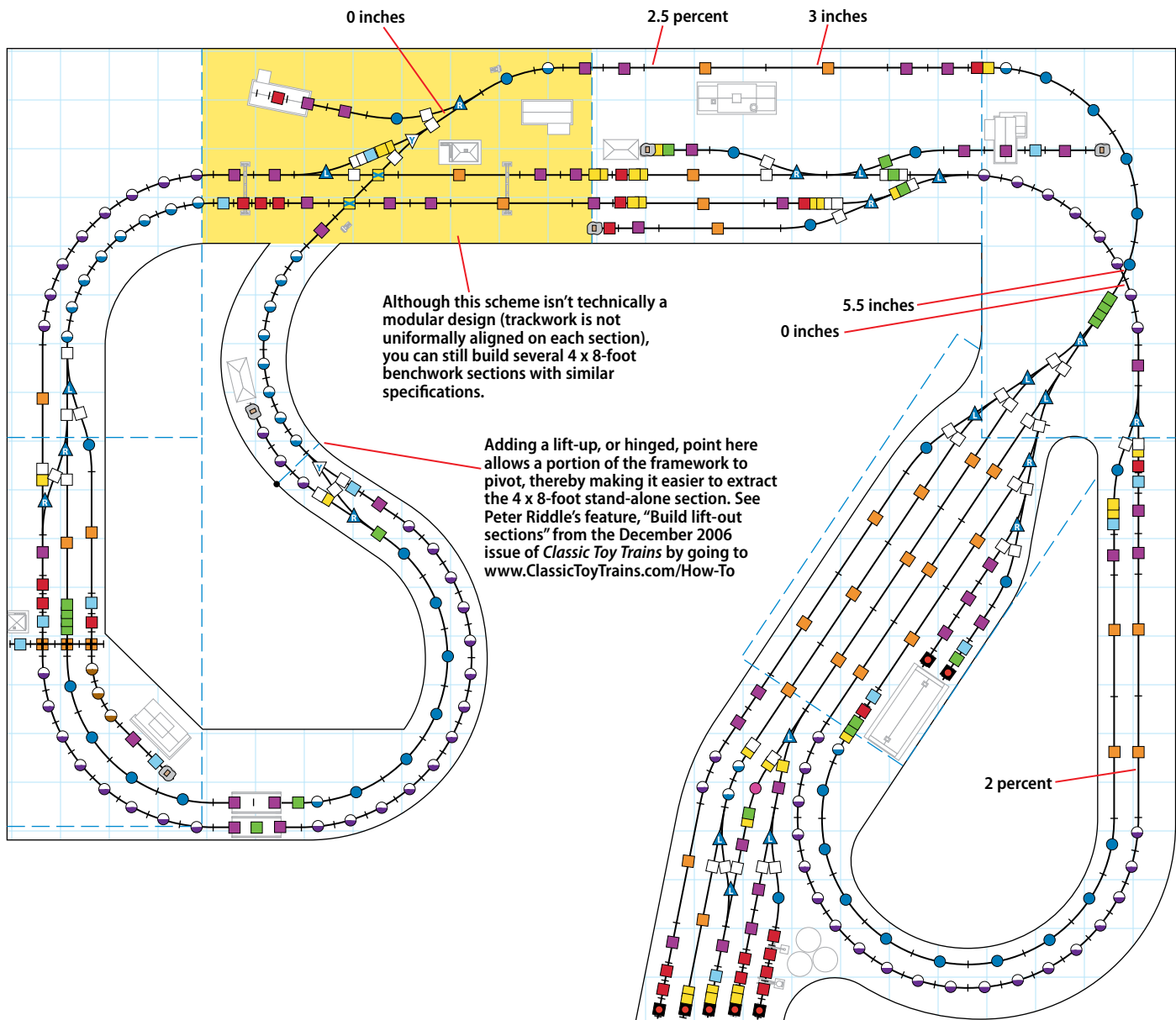
ON THE WEB

In the February 2011 and September 2011 issues of *Classic Toy Trains* magazine, we presented an example of an O gauge layout featuring a sectional design. To view the schemes for the Readers' Choice RR, visit CTT's Track Plans Database at www.ClassicToyTrains.com/TrackPlans. To see both the 4 x 8-foot layout and the 3 x 8-foot extension in action, visit www.ClassicToyTrains.com/HowTo.

CTT+







Multi-directional sectional

From the initial layout section, a full-fledged home layout can emerge from three points. With the aid of the 45-degree crossing used to form a junction, tracks extend from both ends as well as the front side of the original section.

While the trackwork leading from the ends eventually extends to opposing reverse loops, the track from the front side allows you to showcase 20-car trains routing through a gently sweeping S-curve. This meandering single-track route seems to venture off on its own for a bit, but it eventually forms into one of the two reverse loops used to keep trains in constant motion.

To make this route possible *and* keep the original section mobile requires two important design elements – lift-out or

LIONEL FASTRACK COMPONENTS

Quantity Description/Number

44 1.375-inch fitter (12000X)

29 1.375-inch straight (12073)

19 1.75-inch straight (12026)

22 4.5-inch straight (12025)

13 5-inch straight (12024)

44 10-inch straight (12014)

29 30-inch straight (12042)

3 0-48 curve, 15-degree (16834)

1 0-60 curve, 22.5-degree (12056)

22 0-72 curve, 11.25-degree (12055)

34 0-72 curve, 22.5-degree (12041)

61 0-84 curve, 11.25-degree (12061)

11 0-72 left-hand track switch (12048)

10 0-72 right-hand manual switch (12049)

2 0-72 wye track switch (12047)

2 45-degree crossing (12051)

3 90-degree crossing (12019)

5 bumper (12059)

7 lighted bumper (12035)

swing-away benchwork and an aisleway (and doorway) that's wide enough for the section to slip through.

On the other side of the layout, there's a welcome change of elevation and a nifty over-and-under configuration that helps

put the three-track yard at the top of the 2 percent grade and right along the front edge for easy access.

All told, the 200 feet of continuous main line on this track plan rivals that found on some large modular displays! **CTT**

RUNNING & SWITCHING on a FasTrack loop

THIS 12 X 16-FOOT O GAUGE DESIGN FEATURES CONTINUOUS OPERATION AND A FAMOUS SWITCHING SCHEME

by **Kent Johnson** • Illustrations by Kellie Jaeger and Ron Kempke



A basic loop of track is a simple pleasure that nearly every toy train operator can appreciate. Sometimes it's the simplest things that bring the greatest enjoyment. But when that loop expands to include a switching scheme of legendary status, you've got the makings of a layout that elevates toy train operation from simple to the sensational. That's precisely what CTT contributor Ron Kempke accomplished when he adapted his 12 x 16-foot O gauge plan for continuous operation to include a historic switching layout.

At first glance, Ron's track plan may appear to be little more than a basic, single-level oval design that's folded at the center. This folded, dog-bone-shaped scheme helps maintain a compact footprint that should fit within the walls of a large bonus room or basement recreation room. Considering that Lionel FasTrack no. 12056 O-60 curve sections set the minimum standard on this plan, you wouldn't expect to find much space left for anything else, right? Wrong!

In a seemingly impossible transition from simple to sensational, this plan includes no less than a reversing loop, a lengthy passing siding, two industrial spurs, a four-track yard, and a locomotive-servicing area with an Atlas O no. 6910 turntable and three-stall roundhouse. All of this is topped off by an O gauge rendering of John Allen's famous "Timesaver" switching puzzle.

A three-rail Timesaver

John Allen was an inventive model railroader who pioneered numerous techniques and practices still used today in model railroading. In the November 1972 issue of *Model Railroader* magazine, he introduced a small, simple track

plan intended to turn railroad switching into a game.

As John Allen stated, "The object of the game is to make the required switching move in the least amount of time." Though he gave the plan its "Timesaver" moniker, that name is quite a misnomer. It can become quite time-consuming, mentally engaging, and strangely relaxing to work through the Timesaver switching puzzle.

If the Timesaver section of the layout isn't enough to keep you engaged, this plan also includes a small yard with four tracks used to sort cars without fouling the operations on the main line. In fact, whether you're working the yard, the industrial spurs, or the Timesaver section, your switcher doesn't ever need to venture across the main line – even when moving to and from the locomotive-servicing terminal.

Full-service terminal

Though it's hard to imagine there's room for structures as large as an Atlas O 6910 operating turntable or 6904 roundhouse sections, the plan includes both of these. Since this plan is specifically designed for Lionel FasTrack components, you'll need to use no. 12040 transition pieces and Atlas O no. 6095 transition pins to connect track to the turntable. Also consider installing insulating track pins to create electrically isolated storage tracks for your prized motive power.



















An operating Lionel water tower or coaling tower could provide additional intrigue when placed adjacent to the other terminal structures encircled by a ring of O-72 curved track. If you do include more operating accessories, be sure to leave room for an access road that begins at the Lionel no. 12062 grade crossing with gates and flashers.

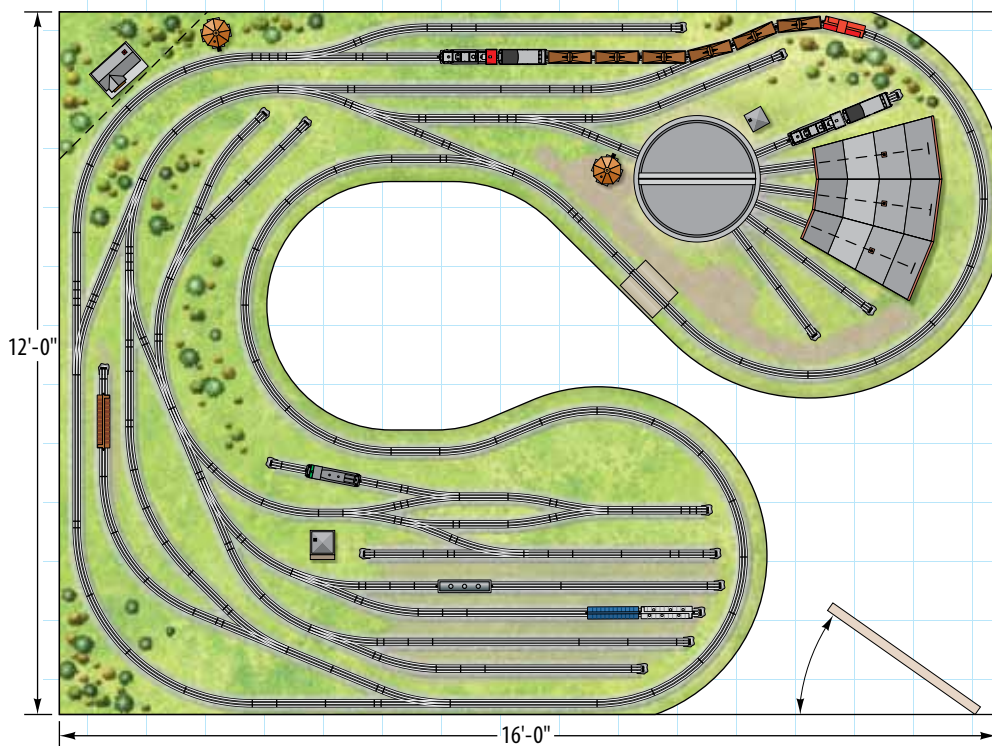
Working the railroad

Fitting all of these features into the 12 x 16-foot confines requires a few small concessions. The ideal location for running the layout is from a control panel at the center of the layout. Perhaps even three control panels – one for the main line, another for the terminal, and the third for the Timesaver/yard area – will be best, but access to this point is rather constricted.

The area just inside the room is a good secondary operating location, but you'll still want to create a pop-up access area at the center of the layout to reach any derailments. More likely, you'll just want a place where you can immerse yourself in all the Timesaver switching or the smooth-sailing action over the continuous mainline loop. **CTT**

LIONEL FASTRACK COMPONENTS

Quantity	Description	Number
9	 1 3/8-inch straight	(12073)
42	 1 3/8-inch straight without roadbed	(12074)
16	 1.75-inch straight	(12026)
2	 4.5-inch straight	(12025)
19	 5-inch straight	(12024)
39	 10-inch straight	(12014)
10	 30-inch straight	(12042)
33	 0-60 curve, 22.5-degree	(12056)
22	 0-72 curve, 22.5-degree	(12041)
8	 0-84 curve, 11.25-degree	(12061)
4	 0-72 wye track switch	(12047)
9	 0-72 left-hand track switch	(12048)
9	 0-72 right-hand track switch	(12049)
14	 5-inch uncoupler	(12020)
2	 5-inch isolated block	(12029)
4	 5-inch transition	(12040)
1	 grade crossing with gates and flasher	(12036)
16	 bumper	(12059)

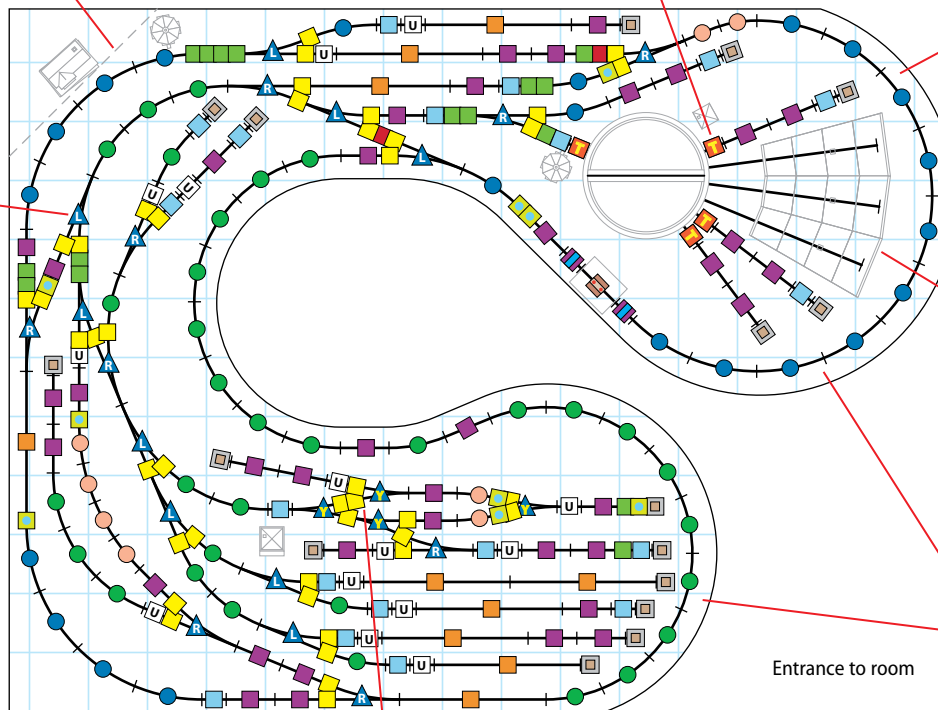


Pop-up hatches or lift-out sections in the corners provide easy access to tracks at the rear of layout

Atlas O no. 6910 turntable requires Lionel no. 12040 transition track and Atlas O no. 6095 track pins to align with Lionel FasTrack sections

All switches are O-72 for smooth operation. Each switch is supplied with two Lionel 1 3/8-inch straights with a partial roadbed section

Track is on the same level across the layout. However, you can easily create a grade (rising or descending) along this curve. Adding a hill with a cut or mountain with a tunnel will help disguise this end of the continuous loop



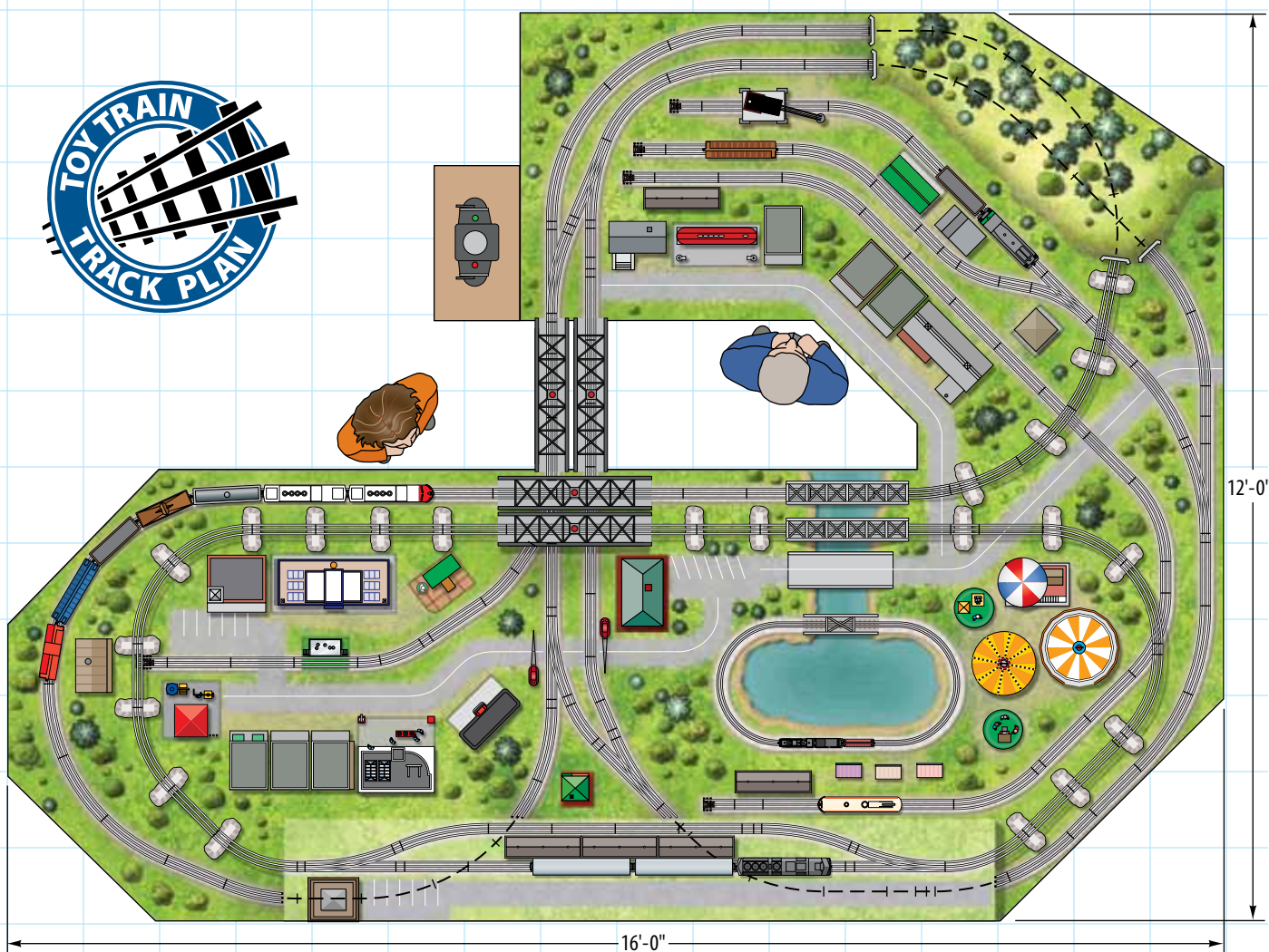
A full-featured locomotive-serving terminal, complete with an Atlas O turntable and three roundhouse sections, is easily accommodated inside the broad bend of O-72 curves

Entrance to room

Separate control panels for the yard, main line, and engine terminal could fit at the center of the layout. However, restricted access into this area makes placement along the perimeter more desirable



John Allen's famous "Timesaver" switching scheme is cleverly integrated with a yard, industrial spurs, and a continuous loop of track with wide-radius curves. To purchase information on the HO Timesaver layout, go to ModelRailroader.com and click on "Articles" Then click on "Downloadable Articles"



A full-sized, full-featured Lionel FasTrack layout

THIS 12 X 16-FOOT O GAUGE PLAN MAKES ROOM FOR A MULTITUDE
OF TRAINS AND OPERATING ACCESSORIES

by **Mario DiFede and Kent Johnson** • Illustrations by Kellie Jaeger

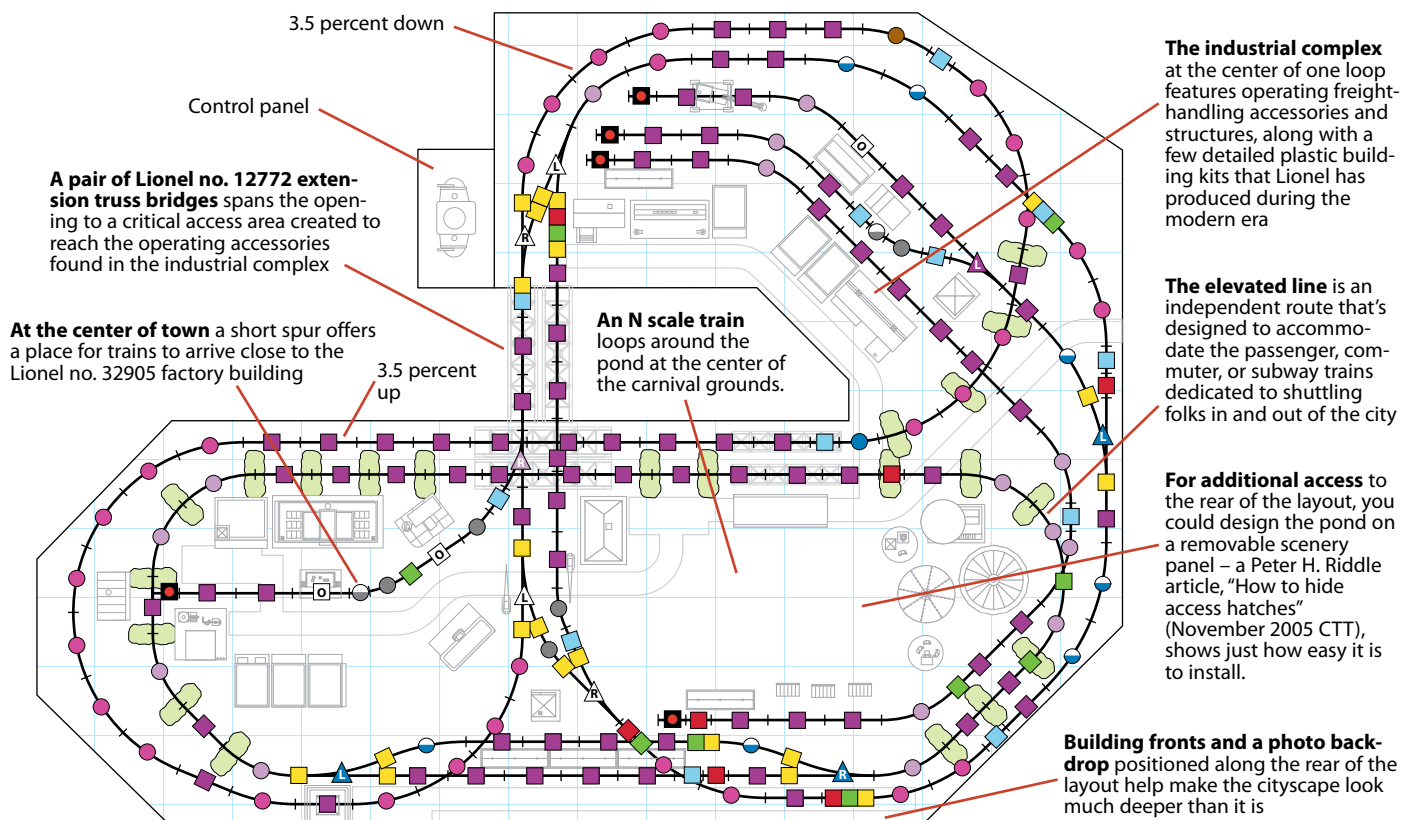
While it's true that the Lionel FasTrack sectional track system is bundled in Lionel starter sets, you'll find many uses for it on larger, permanent layouts. If you have any doubts, you'll want to take a close look at the track plan that Mario DiFede designed to simultaneously run three trains over as many loops of FasTrack. Mario best describes the whole affair in his own words.

FasTrack fury

My underlying objective was to design an all-Lionel layout that included plenty of action both on and off the rails. At the core of the layout you'll find one over/under figure-eight loop of track and another oval loop that are connected by two pairs of Lionel nos. 12057 and 12058 O-60 track switches. These loops primarily use no. 12056 O-60 curves to accommodate

scale-length locomotives operated under command control.

A third loop, elevated by no. 12038 FasTrack trestles, is intended for passenger or commuter trains operating under conventional transformer operation. In addition to this elevated route, I've included a point-to-point line that hosts a trolley. Just when you think there's no more room for another train, I've added a loop of N scale track to



LIONEL FASTRACK COMPONENTS

Quantity	Description/Number
21	1.375-inch fitter (12073)
9	1.75-inch straight (12026)
7	4.5-inch straight (12025)
12	5-inch straight (12024)
81	10-inch straight (12014)
15	0-36 curve, 45-degree (12015)
5	0-36 curve, 22.5-degree (12022)
2	0-36 curve, 11.25-degree (12023)
1	0-48 curve, 30-degree (12043)
29	0-60 curve, 22.5-degree (12056)
7	0-72 curve, 22.5-degree (12041)
1	0-72 curve, 11.25-degree (12055)
1	0-36 left-hand switch (12045)
1	0-36 manual right-hand switch (12018)
2	0-60 left-hand switch (12057)
2	0-60 right-hand switch (12058)
2	0-72 left-hand switch (12048)
1	0-72 right-hand switch (12049)
5	lighted bumper (12035)
21	trestles (12038)
3	operating track (12054)

model a miniature ride-on train for the kids gathered at the carnival grounds.

Accessory action

Beyond the track, I've separated the layout into three areas. Within one loop I've established a downtown scene. In one of the remaining two loops you'll find an industrial complex. Then in the

SUGGESTED LIONEL ACCESSORIES

Number/Product

2152 crossing gate (2)	12943 illuminated station platform (5)	24161 Test O'Strength
2315 coaling station	12961 newsstand with diesel horn	24172 balancing man
2319 watch tower	14109 carousel	24176 Irene's Diner
2324 operating switch tower	14134 (no. 282) portal gantry crane	24177 hot air balloon ride
9220 milk car platform	14152 (no. 133) station	24182 fire station
12701 fueling station	14160 hotdog stand	24183 gas station
12770 arch-under bridge (2)	14161 hobo shack	32905 Lionel factory
12772 extension truss bridge (4)	14170 swing ride	34126 market
12802 lighted roadside diner	14231 cotton candy booth	34127 O'Grady's Tavern
12818 animated freight station	22915 municipal building	34128 pharmacy
12905 factory	22933 section gang shed	34129 Kiddie City Toys
		34130 Five and Ten
		34131 Al's Hardware
		34159 camel ride stand

last loop there's plenty of space for a carnival and all the rides and attractions associated with the festivities.

Ranging from a Lionel no. 12802 lighted roadside diner to a full-action no. 282 portal gantry crane to a no. 14109 spinning carousel, there are nearly two dozen operating accessories on the layout that keep pace with the action on the rails.

It's hard to believe, but even with these components compressed into an 12 x 16 space, there's room for scenery and the ever-important access points

required for resetting accessories or re-railing a wayward train. You can easily add a hidden pop-up hatch at the center of the carnival grounds.

Installing space-saving photo backdrops along the back and/or sides of the layout will help keep scenery clutter to a minimum and provide the illusion that there's much more depth to the layout, especially the city scenes.

Most likely, layout visitors will be too enthralled with the fast-paced, FasTrack action to pay much attention to the simple scenery! **CTT**

FasTrack up-and-over oval

This legendary 8- by 14-foot O gauge plan recalls model railroading's origins



by Neil Besougloff | Illustrations by Kellie Jaeger

THE TRACK PLAN SHOWN on these pages is famed model railroader John Allen's first HO scale Gorre & Daphetid layout, which dates to the late 1940s.

John, as many hobbyists know, was a groundbreaking model railroader who inspired literally tens of thousands of layout builders over two generations with his serious, yet whimsical Gorre & Daphetid Railroad (pronounced "Gory and Defeated").

While many hobbyists recall his rugged floor-to-ceiling scenery and soaring bridges thanks to dozens of photos published in model railroading magazines over three decades, not all realize that the origin of his 24- by 32-foot empire was an up-and-over oval smaller than a sheet of plywood. John built it before he moved to a hillside California residence that became home to the ultimate Gorre & Daphetid.

This Lionel FasTrack O gauge plan, fitting into an 8- by 14-foot space, is fairly faithful to the original (featured in the Kalmbach book *101 Track Plans for Model Railroaders*). However, some small tweaks were necessary to adopt John's plan to sectional track.

Enlarging the original HO plan to O gauge has put the center of the layout well beyond arm's length. At the very least, you'll want to make the lake bed a hinged access hatch or omit the "water" material as a matter of convenience.

FasTrack is tricky to work with for this plan. FasTrack curves, like other types of sectional track, follow a specific geometry in which standard curve sections are measured in increments of 22.5, 30, or 45 degrees. For example, four 45-degree curves would equal a half circle (180 degrees) and six 30-degree curves would equal a half circle. But a rambling half circle made of three 45-degree curves and two 30-degree curves will never equal a complete 180-degree turn without turning to a hacksaw.

Keeping faithful to the original Gorre & Daphetid requires an asymmetrical mix of FasTrack O-48 (30-degree) curves and O-72 (22.5-degree) curves. Mixing those sections means everything doesn't always add up to 180 or 360 degrees, resulting in some joints where the track needs to be "fudged" just a tiny bit to connect.

Track without built-in roadbed can be "fudged" more easily than FasTrack and MTH's RealTrax. On this plan, there are enough track joints surrounding the "fudged" areas (in front of the Gorre depot and just to the right of the turntable) to get the job done. **CTT**



For information on John Allen's first HO scale Gorre & Daphetid layout, go to classictoytrains.com and click on "Train Layouts." Then click on "Layout visits."

Suggested accessories

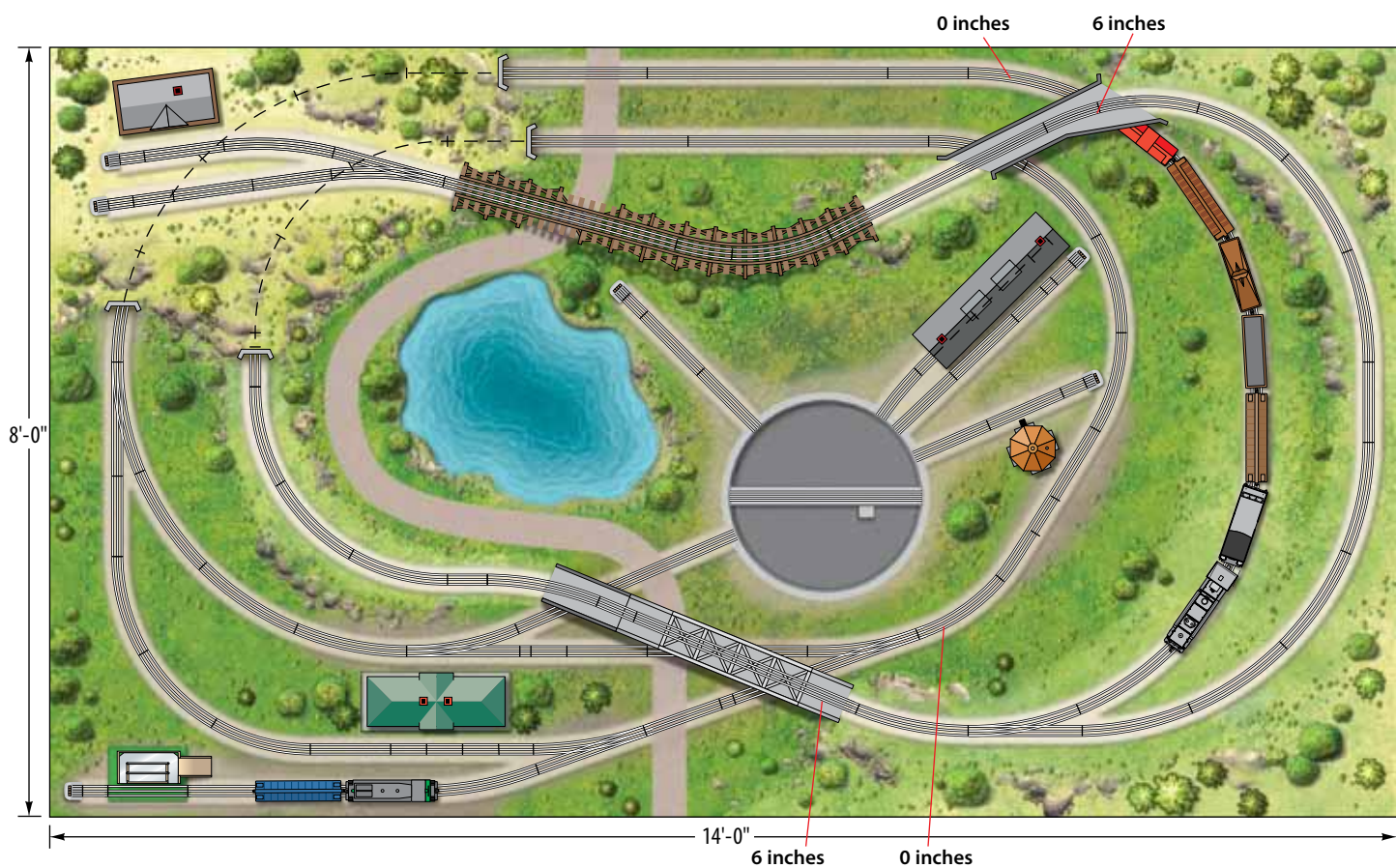
ATLAS O
Number/Product
6910 turntable

LIONEL
Number/Product
12734 passenger/freight station
12773 freight platform
12897 engine house
14086 no. 38 water tower

MTH
Number/Product
30-9087 country train station
40-1013 30-inch truss bridge
40-1014 10-inch girder bridge

LIONEL FASTRACK COMPONENTS

Quantity	Description/Number
1	□ 1.38-inch fitter
3	■ 1.75-inch straight (12026)
5	■ 4.5-inch straight (12025)
6	■ 5-inch straight (12024)
23	■ 10-inch straight (12014)
9	■ 30-inch straight (12042)
17	● O-48 curve, 30-degree (12043)
4	● O-72 curve, 11.25-degree (12055)
24	● O-72 curve, 22.5-degree (12041)
4	▲ O-72 left-hand track switch (12048)
2	▲ O-72 right-hand track switch (12049)
7	■ track bumper (12059)



Make sure there are at least 5½ inches of vertical clearance here, and don't forget to compensate for the height of the FasTrack roadbed

This curve is the site of John's wooden trestle overlooking a lake. See the July 2007 issue of CTT for a fast way to build O and S gauge trestles

John's scratchbuilt two-stall engine house won a modeling award for its groundbreaking interior details. MTH has produced a two-stall engine house in O gauge, but combined with the 24-inch turntable it was just too massive for this part of the track plan. A Lionel no. 12897 one-stall engine house was substituted

DAPHETID

Daphetid, pronounced "Defeated," is at an elevation of 8½ inches. If space allows, one or both of the spur tracks should be lengthened

The lake surface offers a good place to create an access hatch. The edges of the hatch can be hidden by the shoreline

GORRE

Gorre is pronounced "Gory." The small town was one of two on John Allen's original HO layout. An MTH no. 30-9087 country train station is narrow enough to fit between the siding and main line, and a Lionel no. 3656 stockyard substitutes for John's scratchbuilt stockyard

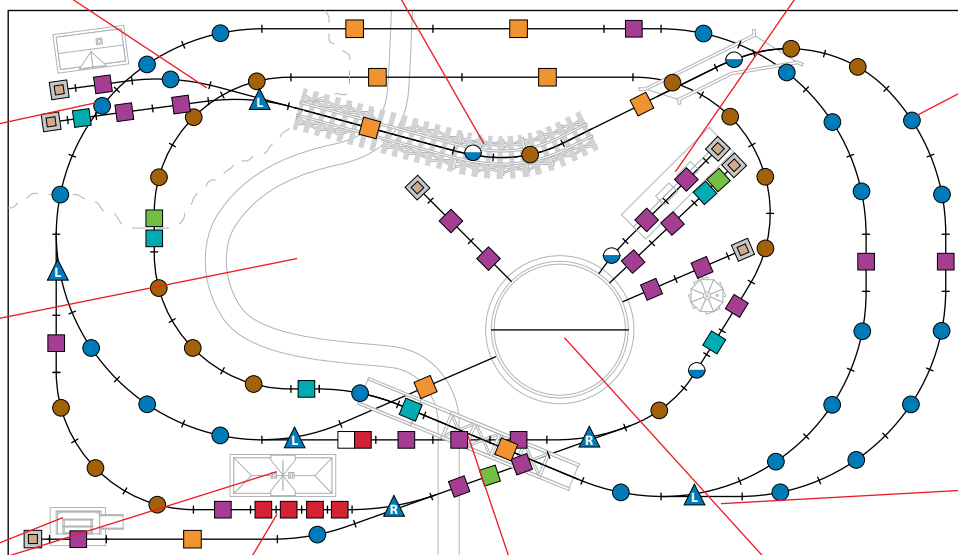
Four 4½-inch FasTrack sections are used to fill an 18-inch gap. If a 10-inch straight section were used, there is no combination of fitter sections that would complete the remaining 8 inches

Here John scratchbuilt a stone-arch viaduct. For this O gauge plan, we've substituted an MTH no. 40-1013 30-inch truss bridge and an MTH no. 40-1014 10-inch girder bridge

Atlas O no. 6910 turntable may require transition tracks to align with Lionel FasTrack sections

This curved spur track must climb continuously to the depot at Daphetid to clear two sections of mainline track below that are descending and ascending

All switches are O-72 for smooth operation



The Wild West

in a 5- by 9-foot space



Lionel FasTrack helps tame this frontier railroad

by Kent Johnson | Illustrations by Kellie Jaeger

THE VAST EXPANSE of America's western regions probably isn't the first thing you'd expect to recreate in a space that's only slightly larger than a sheet of plywood. But before you dismiss the possibility of an O gauge layout that's born of the Old West, you'll want to explore the features of this 5- by 9-foot track plan.

Based on an HO scale scheme for the Hazard County Short Line (featured in the Kalmbach book, *48 Top-Notch Track Plans*) and inspired by several new O gauge models of 19th century American railroad equipment, this plan features rugged western scenery and plenty of rootin', tootin' railroad action to boot. Aside from the hills that are full of "gold" (copper, in this case), a bubbling mountain brook, and hearty, high-country landscape dotted with Ponderosa pines, there's a railroad battling the terrain, the elements, and sometimes even renegades and robbers!

Although this plan features a continuous oval design, it's not likely you'll forget the railroad exists to keep supplies, people, and livestock headed into the new frontier. Take a close look at the shifting "high line" route – assembled from O-36, O-48, and O-72 FasTrack curve sections and laid on a variable 2 to 4 percent grade – and you'll begin to

appreciate exactly how wild the ride into the Old West must have been.

On a route this treacherous, you'll want to be sure you're operating the appropriate equipment. Lionel's postwar General old-time 4-4-0 steam locomotives and mixed train sets (featured in the July 2006 issue of *CLASSIC TOY TRAINS*) may have been the first to suit the period and western locale, but there are now countless others built to even higher standards.

If it's museum-quality detail you're after, then SMR Trains (smrtrains.com) offers historically accurate, scale versions of the 4-4-0 American-type locomotive. MTH's RailKing and Premier lines offer the broadest range of items that would've worked the western rails in the mid to late 19th century, including 4-4-0, 4-6-0, and 2-8-0 steam locomotives, assorted freight car types, and Overton passenger cars.

If you're willing to relax the rules of period accuracy, then you might just consider the Lionel no. 31990 Copper Range Mine set. This starter set comes complete with FasTrack sections, a transformer, and an appropriately named steam-powered mine train.

The only other necessity for constructing this Old Wild West layout is your imagination – westward ho! **CTT**

Suggested accessories

Lionel

Number/Product

2175	gravel loader
12718	barrel shed
12734	passenger/freight station
12773	freight platform
12828	stockyard
12889	motorized windmill
22944	semaphore
62716	short extension bridge

MTH

Number/Product

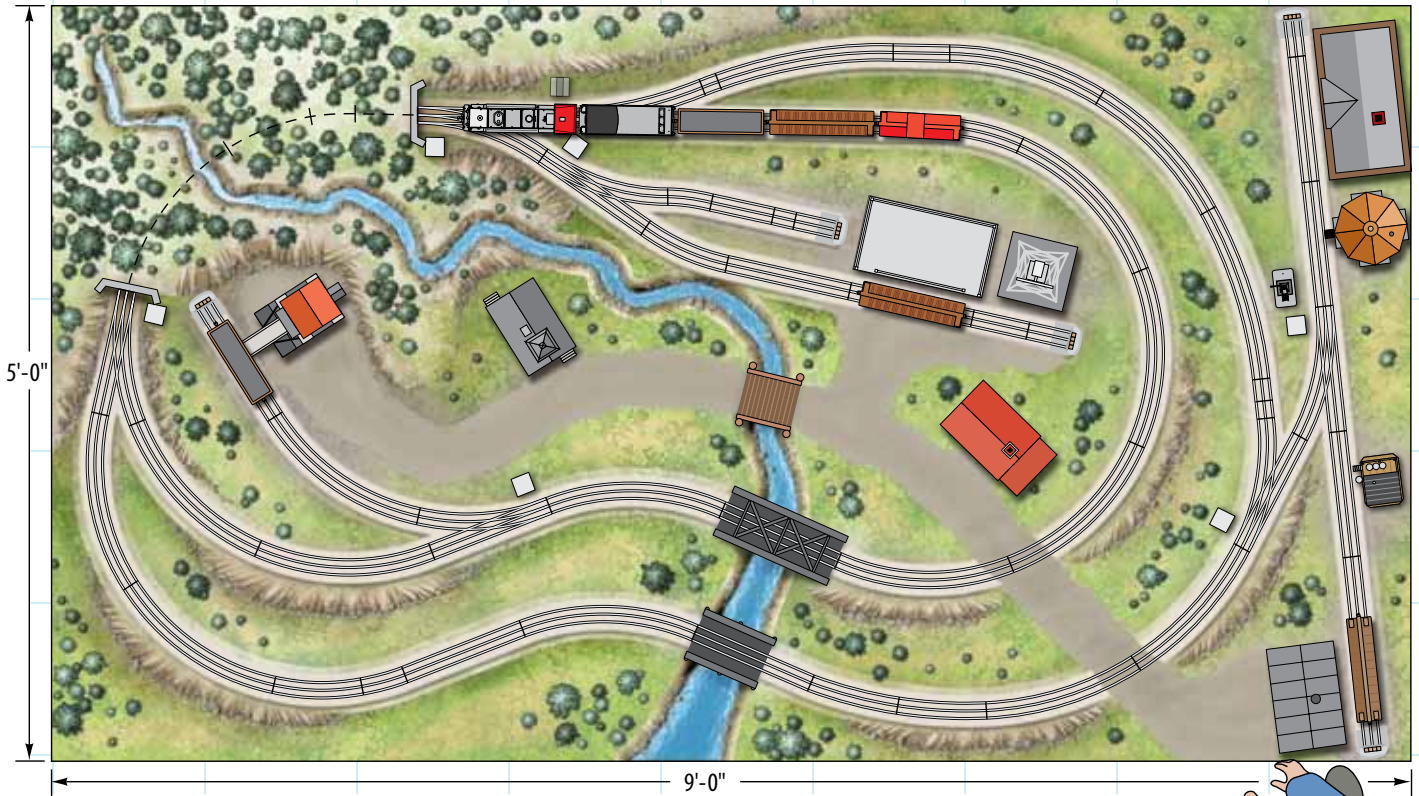
30-9002	country church
30-11028	water tower
30-90008	work house

LIONEL FASTRACK COMPONENTS

Quantity	Description/Number
3	1.38-inch fitter
5	1.75-inch straight (12026)
2	4.5-inch straight (12025)
4	5-inch straight (12024)
9	10-inch straight (12014)
3	0-36 curve, 11.25-degree (12023)
4	0-36 curve, 22.5-degree (12022)
4	0-48 curve, 30-degree (12043)
2	0-72 curve, 22.5-degree (12041)
2	0-72 curve, 11.25-degree (12055)
12	0-36 curve, 45-degree (12015)
3	0-36 left-hand track switch, manual (12017)
3	0-36 right-hand track switch, manual (12018)
1	0-60 left-hand track switch (12057)
1	operating track (12054)
5	track bumper (12059)



PHOTO BY WILLIAM ZUBACK



COPPER VALLEY (The High Country)

Set at an elevation 6 inches above the valley floor (tabletop height), the upper reaches of the town are accessible only by rail or a steep dirt trail. Creating this lofty elevation and a rising grade for the track comes easily using foam-board components from the Woodland Scenics SubTerrain system (woodlandscenics.com).

Copper Mountain Mine is a dangerous place to earn a day's keep. Aside from hauling mineral loads out, the railroads have the dubious task of hauling boxcars loaded with the explosives used for blasting.

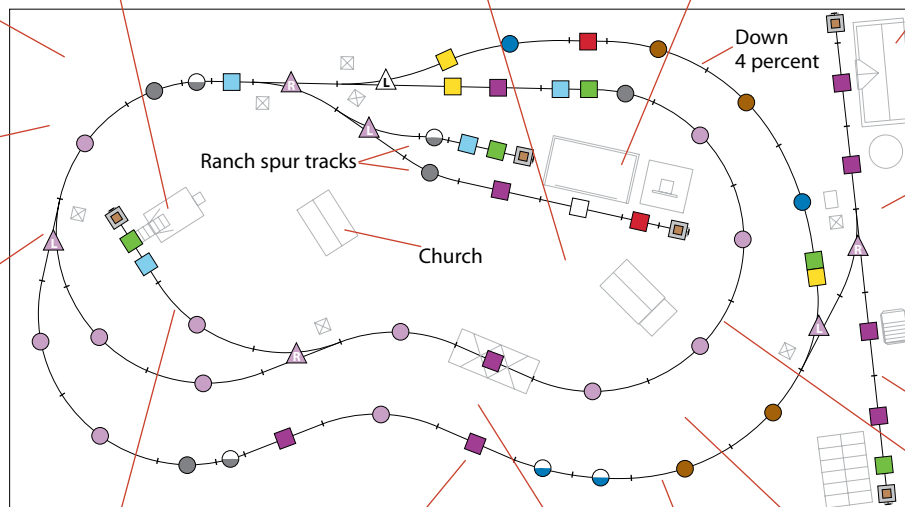
Copper Mountain Ranch keeps them doggies corralled when it's time to bring 'em down out of the high country.

Copper Valley Depot

Copper Mountain

Beware of bandits! Trains cautiously climbing or descending are particularly vulnerable to bandits waiting to jump the train as it breaches the tunnel.

Portals and retaining walls on each end of the short tunnel should be timber assemblies. Hunterline (hunterline.com) offers basswood kits for these locations, in addition to timber truss bridges, trestles, and tunnel liners.



COPPER VALLEY

Thanks to the endless riches Copper Mountain has offered since the mid 1800s, this frontier town continues to thrive. A pair of track switches connects the main line to the ascending high line. Remove the bumpers at the ends of the mainline route and you can expand the railroad to towns farther west or back east.

Mine spur tracks

Copper Creek Trestle can be assembled from a Lionel no. 12038 FasTrack elevated trestle set or constructed using pre-assembled wooden bents and bridge decks from Grand Central Gems (grandcentral-gems.com).

Copper Creek

Up 2 percent

Copper Mountain Trail

Main line

High line



FasTrack *FLASHBACK*

A plan from 1940 incorporates Lionel's new track system

by Neil Besougloff

HERE'S AN O GAUGE track plan taken from Lionel's *Handbook for Model Railroaders* from 1940, but with a 2005 twist: The plan is redrawn with Lionel's new FasTrack.

Lionel's 65-year-old plan uses traditional tubular track and O-31 curves and switches. Today's version follows the original's design,

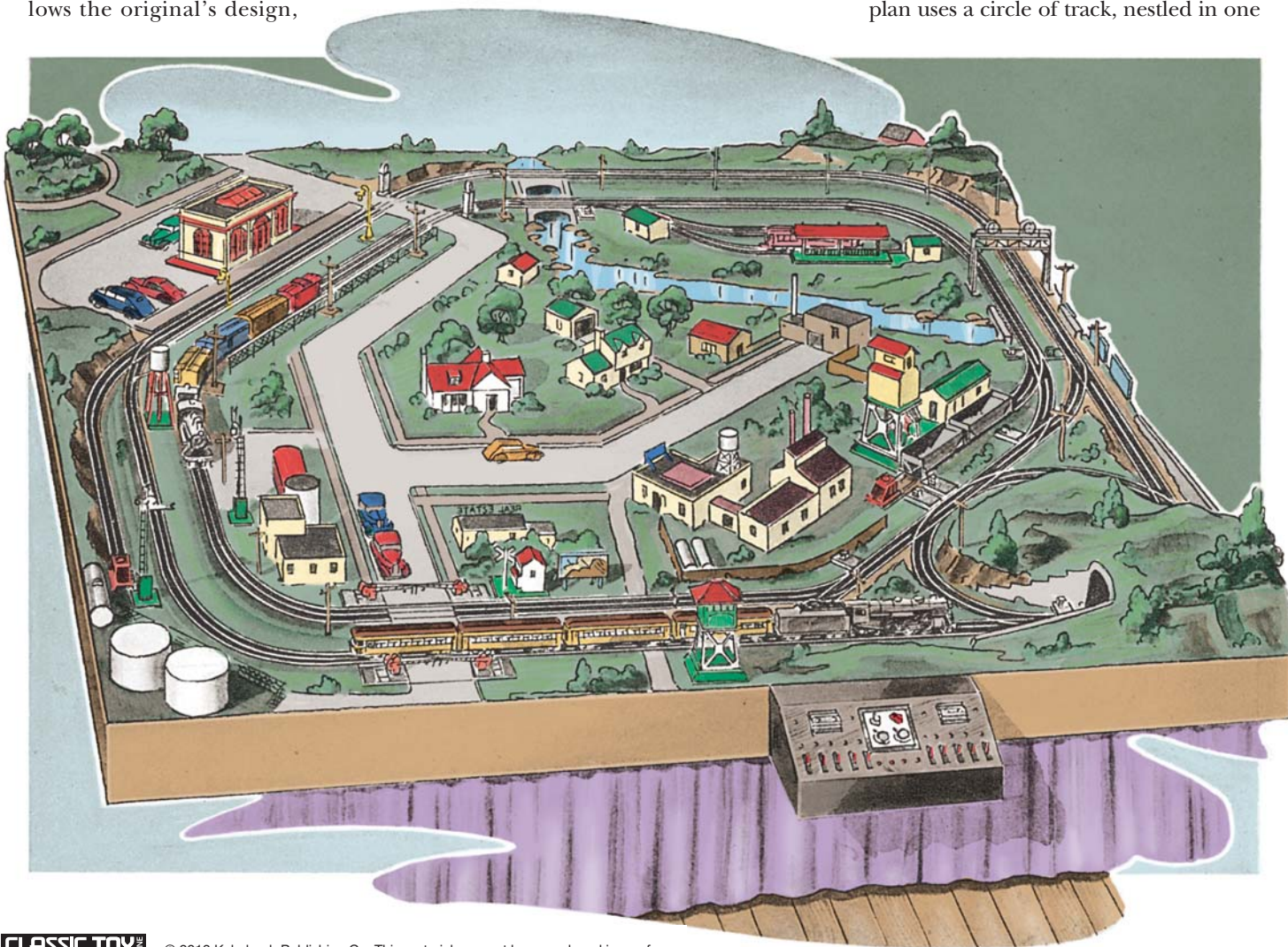
but uses broader FasTrack O-36 curves and switches. It measures 10 by 12 feet.

Two trains and a reverse circle

This track plan lets you operate two trains "hands free," each in a clockwise or a counterclockwise direction. If you divide each of the loops into two electrical

blocks (allowing you to temporarily "park" a train on one half of the loop by toggling off the power while a second train enters or leaves the other half of the loop), you'll be able to move trains from the inner loop to the outer loop and vice-versa.

That's not a new concept, but what may be new to you is the way this track plan uses a circle of track, nestled in one



corner of the layout, to allow trains to reverse direction. If you follow a train clockwise along the outer loop, it can use the circle to reverse itself and travel counterclockwise on the outer or inner loop.

Trains running on the inner loop also can use the circle to reverse direction. To rejoin the inner loop, they need to make one circuit around the outer loop and take the diverging route of a track switch to rejoin the inner loop. Spend a few moments tracing your finger around the track plan in clockwise and counterclockwise directions and you'll see what I mean.

Using Lionel FasTrack

On the FasTrack plan, I've drawn the four spur tracks as depicted in the original diagram. If I were to build this layout, I'd rearrange them for more length.

You'll note lots of small straight sections of FasTrack on the track plan, particularly along the approaches to the circle. At present, Lionel has cataloged FasTrack straight sections in lengths of 30, 10, 5, 4.5, and 1.75 inches. FasTrack cannot easily be cut like tubular track without regard to electrical connections, so to adopt the 1940 plan to FasTrack requires the use of nearly two dozen 1.75 "fitter" sections.

All the curves are O-36, and the track switches are O-36 remote-control switches. FasTrack O-36 curves come in full (45-degree), half (22.5-degree), and quarter (11.25-degree) sections, and all are used on this plan.

Lionel catalogs its remote-control O-36 switches with a separate quarter-curve section to complete a 45-degree turn. Only seven of these quarter-curves are required to build this layout, so you'll be able to substitute four of the leftover quarter-curves for two of the half-curves specified in the list of track components.

Scenery and suggestions

On the two-dimensional track plan, the circle looks odd. But note in the

FasTrack Components

Number/Description and Quantity

- 12014 10-inch straight (24)
- 12015 O-36 45-degree curve (16)
- 12022 O-36 22.5-degree curve (3)
- 12023 O-36 11.25-degree curve (7)
- 12024 5-inch straight (8)
- 12025 4.5-inch straight (7)
- 12026 1.75-inch straight (20)
- 12042 30-inch straight (6)
- 12045 O-36 remote-control left-hand switch (6)
- 12046 O-36 remote-control right-hand switch (6)
- 12059 Bumper (4)

Plan is 10 by 12 feet

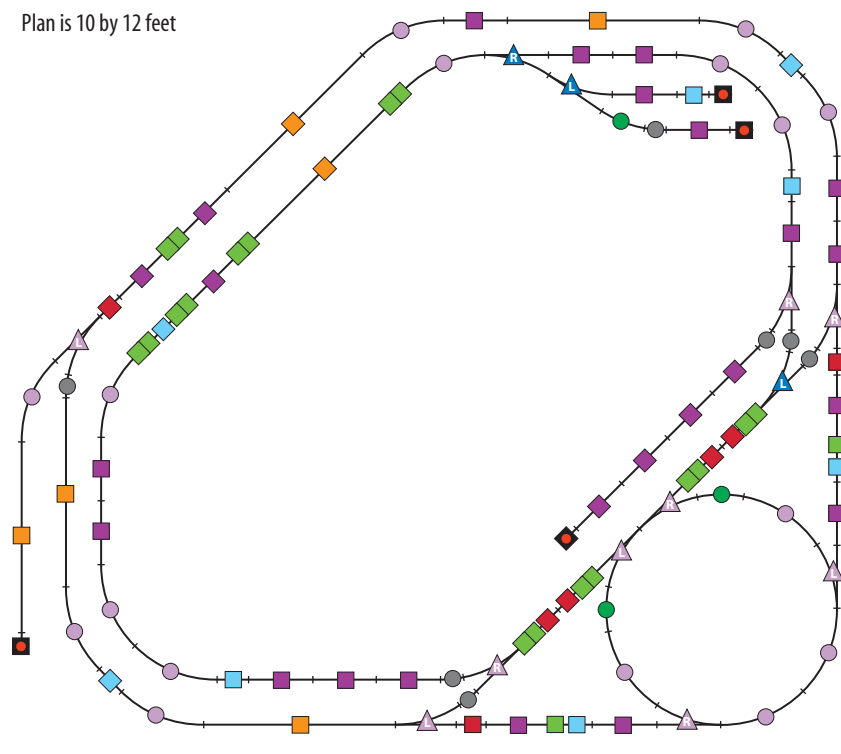


Illustration by Kellie Jaeger

FasTrack components

Quantity	Description
6	30-inch straight (No.12042)
24	10-inch straight (No.12014)
8	5-inch straight (No.12024)
7	4.5-inch straight (No.12025)
20	1.75-inch straight (No.12026)

Quantity Description

16	0-36 45-degree curve (No.12015)
3	0-36 22.5-degree curve (No.12022)
7	0-36 11.25-degree curve (No.12023)
6	0-36 remote-control left-hand switch (No.12045)
6	0-36 remote-control right-hand switch (No.12046)
4	260 track bumper

three-dimensional drawing (penned by an unnamed Lionel artist) that a quarter of the circle is hidden inside a tunnel. This small scenery trick goes a long way toward making the circle look more presentable if your goal is greater realism.

Typical of prewar and postwar track plans, there's a lot of empty real estate beyond arm's reach in the center. (Look at the three-dimensional drawing, behind the no. 45N automatic gateman in the foreground, to see a building with the words "Real Estate" in reverse outline on its roof!)

If I were building this O gauge layout today, I'd either make a removable hatch in the center or leave the middle open and construct a hinged lift-up section to gain access.

Given when this track plan was originally designed, it's no surprise that the key accessories on this layout are all prewar Lionel: nos. 98 coal bunker, 115 city station, and 438 signal tower. Also on the drawing are two no. 46 crossing gates; several no. 060 telegraph poles; and one each of the nos. 93 water tower,

156 station platform, and 440N signal bridge. All can be replaced with postwar or current pieces from any manufacturer.

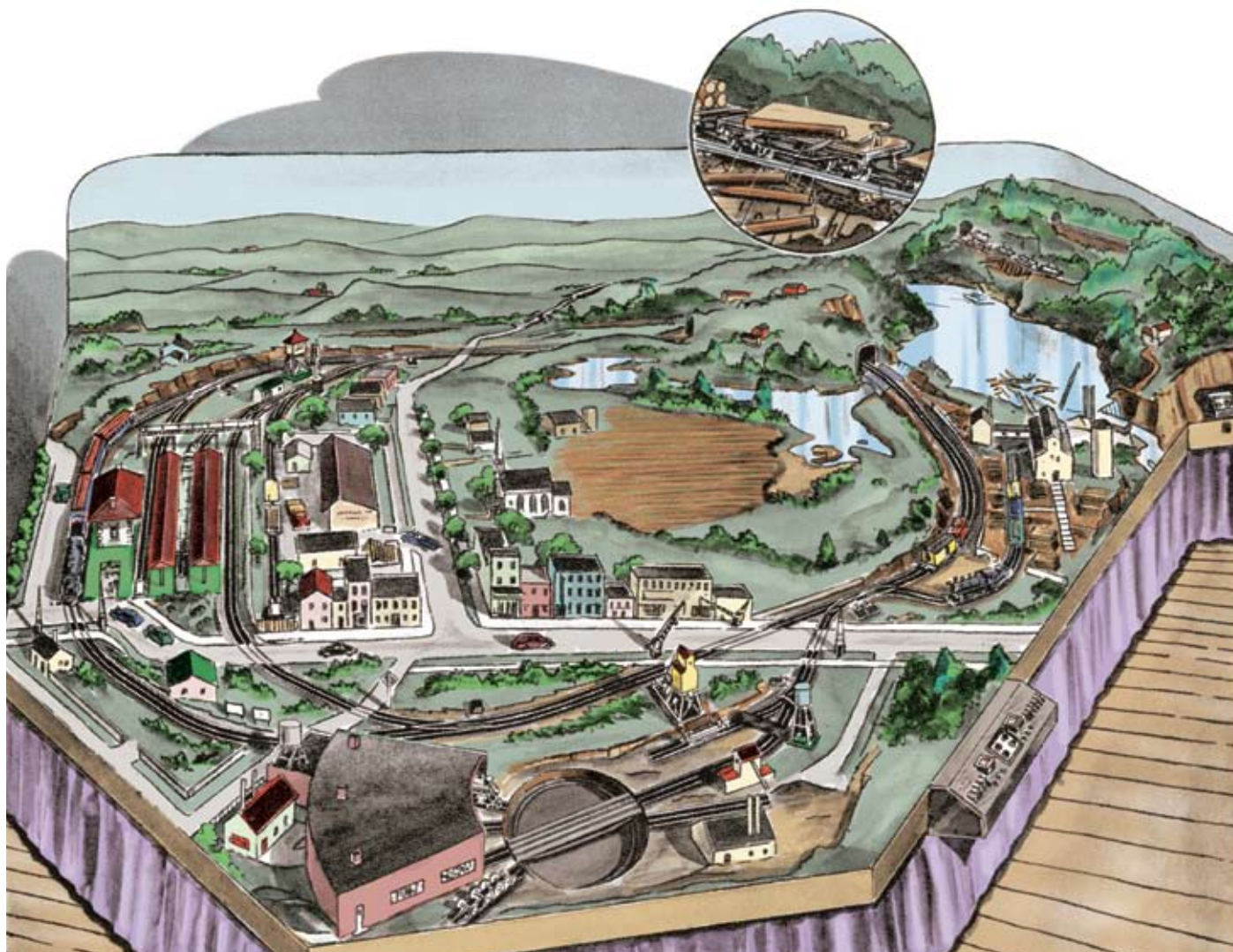
Back in 1940, much of the town in the center of the layout would have been scratchbuilt. Today, it can easily be constructed from seemingly dozens of residential and commercial structures that are manufactured by Design Preservation Models, Downtown Deco, Korber, Lionel, MTH, Walthers, and others.

There you have it, 65 years in the making, a classic O gauge plan built from Lionel's modern FasTrack. **CTT**

More of the author's track plans for O gauge trains appear in his brand-new 80-page book, Creative Toy Train Track Plans (item no. 10-8350), which is available from Kalmbach Publishing Co. by calling 800-533-6644 or by checking cttbooks.com



Go to classictoytrains.com and click on "Information Station" to purchase downloadable PDF track plans like this.



Logging Lines Central

Get in the middle of FasTrack action

by E. A. Engebretson and Kent Johnson

track-section illustration by Kellie Jaeger



FROM LOG-DUMP CARS to log loaders to sawmills, this track plan serves as the basis of a layout that covers the functions of a big-time logging operation. It also keeps you right in the middle of the railroad action.

This O gauge layout is derived from a track plan called the "Lumber City Limited" that originally was published in the 1940s in Lionel's *Model Builder* magazine. Even though the 14- by 17-foot dimensions of this O gauge plan match those

of the original Lumber City Limited layout, there are two significant changes.

First, it's redesigned to use Lionel FasTrack, rather than tubular track.

Second, rather than maintain the original tabletop design, the new Logging Lines Central features a stoop-under, or movable, lift-out section that provides access to an operating area in the middle of the layout. With this "around-the-walls" scheme, operators using a wireless control system can easily

follow and access the trains that are moving about the perimeter of the layout.

One benefit to having the main operating area in the center of the layout is the additional space now available for more track and scenery. The logging branch that was once only a simple loop of track can now become a steep, mountainous switchback route that's ideal for showcasing a Shay, Heisler, Climax, or another type of geared steam locomotive. Although the logging operation will

keep you plenty busy, there's still another complete railroad to run.

The mainline action starts right as you walk through the door. There you'll find a locomotive-servicing terminal designed to use a 20-inch turntable, a large backshop, coal elevator, water tower, and three stalls to hold semi-scale (LionMaster or RailKing) steam locomotives and their tenders. If contemporary railroading is more to your liking, you can easily swap the steam power for moderate-sized diesels.

With the motive power ready for action, the work of the railroad awaits. Located on a spur just a few FasTrack O-36 switches away from the servicing facility, the operating sawmill and forklift platform provide plenty of lumber loads to haul. Couple your engine to the flatcars or boxcars spotted on the mill spur, and you're set to move 'em out.

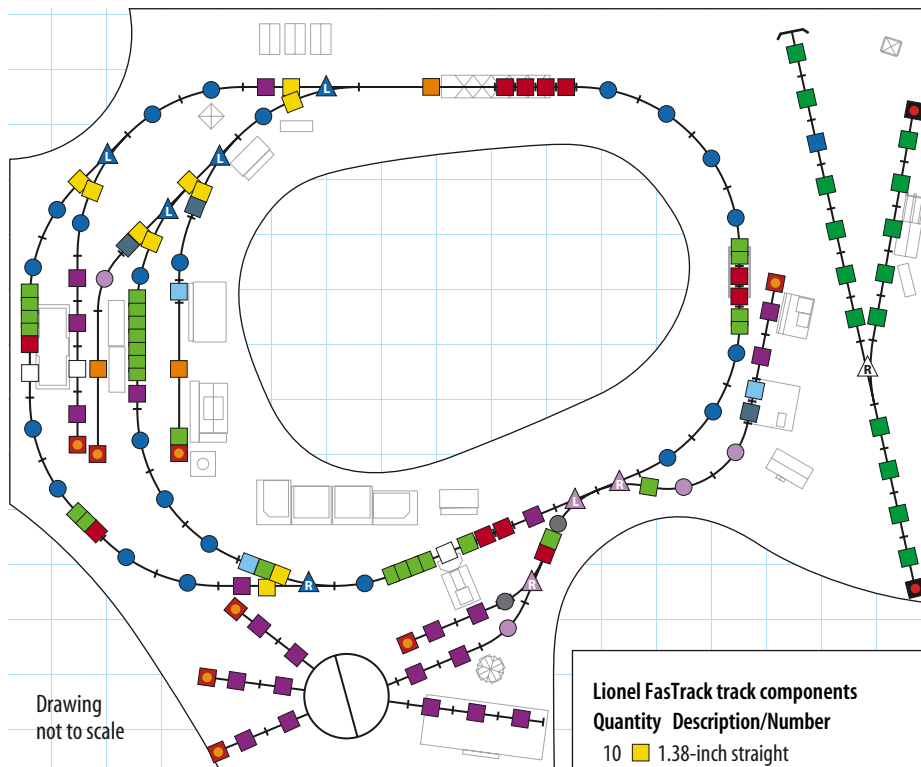
But before you leave the mill, you may want to venture up into the high country. There, a geared steam locomotive from K-Line, Lionel, or MTH, or even an SW8 diesel switcher from Atlas O brings tall timber down from an upper mountain logging camp. When the train of log-dump cars reaches the bottom of the switchback route, it dumps the logs into the mill pond and heads back up to repeat the process.

If you think the view from the base of the mill operation is interesting, just duck under the layout and move into the center of the room. From this location you'll be able to follow a train through forested, mountain scenery, into tunnels, and over waterways, on its way around the gently sweeping FasTrack O-72 curves.

The busy mill town on the far side of the layout isn't large, yet it still maintains a serviceable warehouse, company feed and supply store, and a few sidings ideal for dropping off freight cars bound for industries farther down the line.

Upon arrival, loggers and their families will appreciate the quaint, but respectable depot and platforms. For those who have escaped the row house accommodations at the outskirts of town, a daily MTH Doodlebug or Williams Budd RDC special arrives and departs from the station's two passenger train sidings. Trains rolling out of town will pass only a handful of stores on main street, but each business, like the railroad, serves the town well.

Even though the best vantage point is from the center of the room, there's still space in three corners to access your trains, add a workbench, or just enjoy a new perspective of the Logging Lines Central on the go! **CTT**



Suggested accessories

Bowser

20-inch turntable

Lionel

96/97 coal elevator
12772 extension truss bridge
12774 lumber loader
12878 illuminated control tower
12916 water tower
14000 "264" forklift platform
14154 "193" water tower
22907 die-cast girder bridge
22918 locomotive repair and backshop
49806 "23796" sawmill

MTH

30-9006 passenger station platform
30-9023 row house
30-9024 row house
30-9051 Myersville station
30-9076 row house
30-9088 vegetable stand
30-9093 fireworks stand
30-9098 warehouse
30-9107 operating station platform
30-90005 mobile home (two)
30-90006 yard tower
30-90019 Lombardi's Pizza
30-90020 Katz's Deli
30-90022 Jenny Lee Bakery
30-90023 Soda Fountain
30-90024 Thomas & Sons Feeds
30-90037 Elk River Logging Co.

Lionel FasTrack track components

Quantity	Description/Number
10	1.38-inch straight (with 12048/49)
26	1.75-inch straight (12026)
11	4.5-inch straight (12025)
3	5-inch straight (12024)
3	5-inch uncoupling track (12020)
22	10-inch straight (12014)
3	10-inch uncoupling track (12054)
3	30-inch straight (12042)
4	0-36 curve, 45-degree (12015)
2	0-36 curve, 11-degree (12023)
23	0-72 curve (12041)
1	0-36 left-hand track switch (12045)
2	0-36 right-hand track switch (12046)
4	0-72 left-hand track switch (12048)
1	0-72 right-hand track switch (12049)
6	lighted bumper (12035)

Lionel tubular track components

15	0 gauge straight (12840)
1	0 gauge uncoupling track (65530)
1	0-72 right-hand track switch (65165)
2	track bumper (12715)



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