



# John DePauw's Fabulous "J"

A Railroad Designed and Built for Operation

article by *Dan Lewis, MMR*

**C**hicago! In the old world, all roads led to Rome. In railroading, all roads led to Chicago...well, maybe not all of them, but there's little doubt that Chicago was the great Midwestern rail hub. Cutting across them all is the Elgin, Joliet & Eastern Railroad, affectionately known as "the J." Circling the city in a 30-mile radius, EJ&E is a Class I carrier only 170 miles long. However, in its run from Gary, Indiana to Waukegan, Illinois, the J interchanges with all the lines that come to or through Chicago. The J's double-tracked main heads due south out of Kirk Yard in Gary, passing through Van Loon, Ivanhoe, and Griffith, Indiana. At Griffith, it turns westward, passing through Hartsdale and Dyer, Indiana, then crosses the state line to head through Chicago Heights, Park Forest, Matteson, Frankfort, and Brisbane.

At Brisbane the line turns from west to northwest where it enters Joliet Yard. From Joliet, the double-track main throttles down to single track as it continues northwest to Rockdale Junction, where the 6 1/2 mile Rockdale Branch starts. Plainfield, Walker, and Normantown, Illinois, are its next stops in succession. Then, the J angles due north through Frontenac, Eola, Warrenhurst, West Chicago, Ingalt, Munger, and Spaulding, Illinois. At Spaulding, the main line turns back northeast, passing through Sutton, Barrington, Lake Zurich, Gilmer, Diamond Lake, Leithon, Rondout, and North Chicago, after which it finally reaches its terminus at Waukegan Yard in Waukegan, Illinois. Sound like going around in circles? You bet! That's why beltlines are called beltlines!

In all this circuit, the J crossed and interchanged with a number of important railroads. At Eola, Illinois, for example, it crosses Burlington Northern Santa Fe and had major interchange activity here. The J interchanged with Chicago & North Western, Soo Line, Gulf, Mobile & Ohio, Illinois Central, Missouri Pacific, Chesapeake & Ohio, Louisville & Nashville, Grand Trunk Western, and several others. Big time railroading doesn't get much better than this!

It might seem that the J would be too ambitious a prototype for a model railroad, but you'd have a hard time convincing John DePauw of that! In 1,800 square feet and a 30x60-foot basement layout — in 750 feet of main line on multiple levels — John, after a 20-year labor of love, has captured the J as it was in 1973 with its heavy traffic patterns and multiple interchanges. With permission from the real EJ&E, John took photos of the entire EJ&E operation. With three of his friends, John documented every detail of operations, cars, and scenery.

**14** Below: EJ&E RS3s. 804 and 803 switch three hot-metal cars into the Aurora Steel rolling mill complex.



# John DePauw's "J"

## Layout Statistics

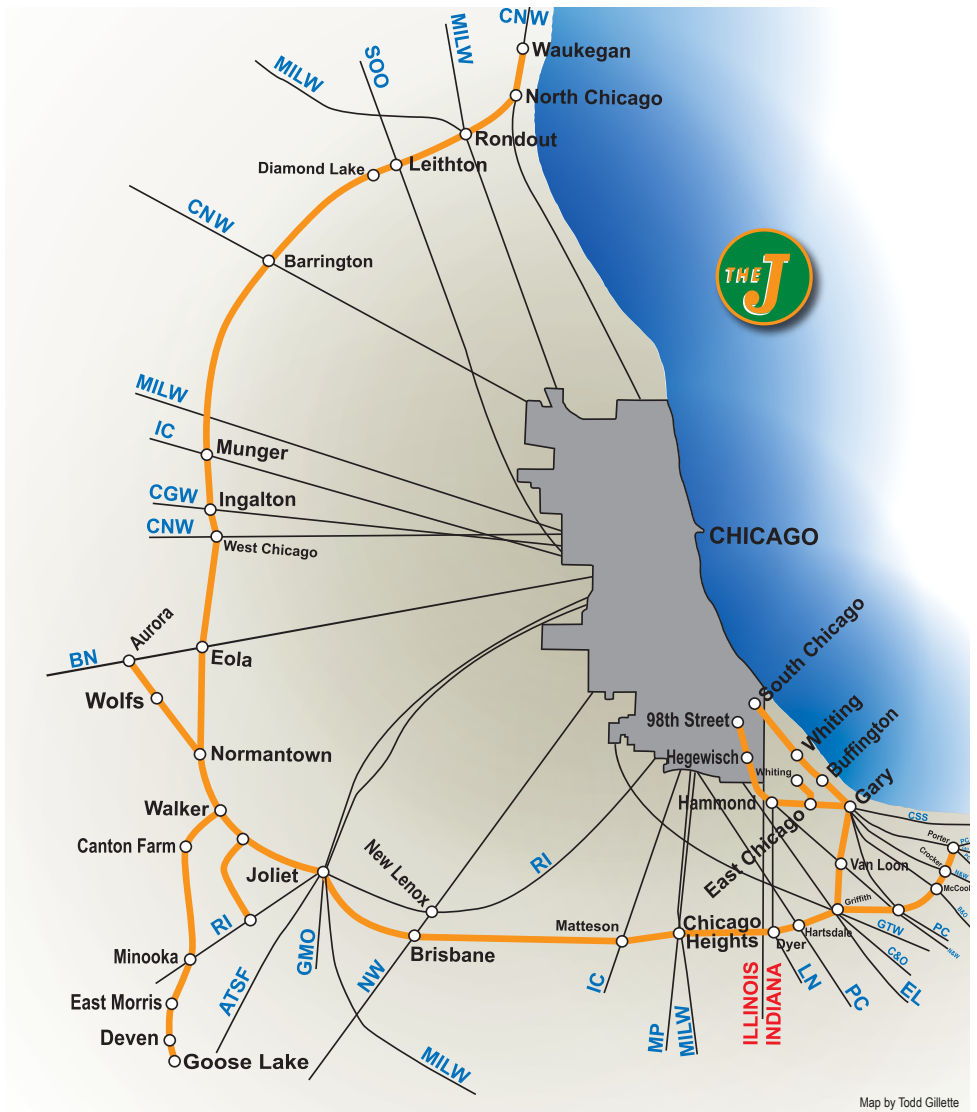
Prototype:	EJ&E Railway
Scale:	HO
Size:	30x60 feet
Era:	Fall 1973
Style:	Multiple levels connected with two helices
Height:	21", 34", 38", 56", 58", 63"
Mainline run:	750 feet
Benchwork:	Unstruct steel with plywood and Upson board
Roadbed:	Cork
Track:	Atlas code 100
Turnouts:	Mostly Peco, some Shinohara and Walthers
Min. radius:	30 inches
Ruling grade:	2% on helices
Backdrop:	¼-inch drywall
Scenery:	60% complete
Control:	North Coast Engineering DCC
Staging:	84 staging tracks

If you have a favorite railroad entering Chicago, you'll probably see some of your preferred motive power on John's layout. The scope is incredible. The two main levels — at 38 inches and 58 inches — are buttressed by the South Chicago staging at 21 inches and U.S. Steel at the 34-inch level from which the railroad climbs all the way to 63 inches by the time it reaches Waukegan. The lower levels are accessed by a three track helix making 3½ loops between the 21-inch, the 34-inch, and 38-inch levels. A second double-tracked helix makes 5½ loops to connect the 38-inch level with the 58-inch level. The entire run from South Chicago to Waukegan features multiple staging tracks to simulate the traffic patterns on the "J". Here's how it works:

### Levels, Towns, and Staging

The lowest level, the 21-inch level staging for South Chicago, features 12 staging tracks. Each track is designated for one of the features of the prototype J.

Up the helix to the 34-inch level brings you to the U.S. Steel Mill area. Here, there are two blast furnaces, 32 coking ovens with coal-unloading and coke-loading facilities, an ingot stripper, and a reheat facility for the open-hearth furnace. There are two rolling mills, along with a couple of power stations. Here, once again, there are 12 staging tracks representing the various steel mill operations.



Climbing to the 38-inch level, again using the helix, one encounters a veritable maze of industries in the various towns on both sides of the Indiana and Illinois state line. Hammond, Indiana, has various industries with switching needs while Gary, (Kirk Yard) Indiana, features four arrival/departure tracks, ten yard tracks, a yard bypass track, four engine facility tracks, and three staging tracks east of Kirk Yard.

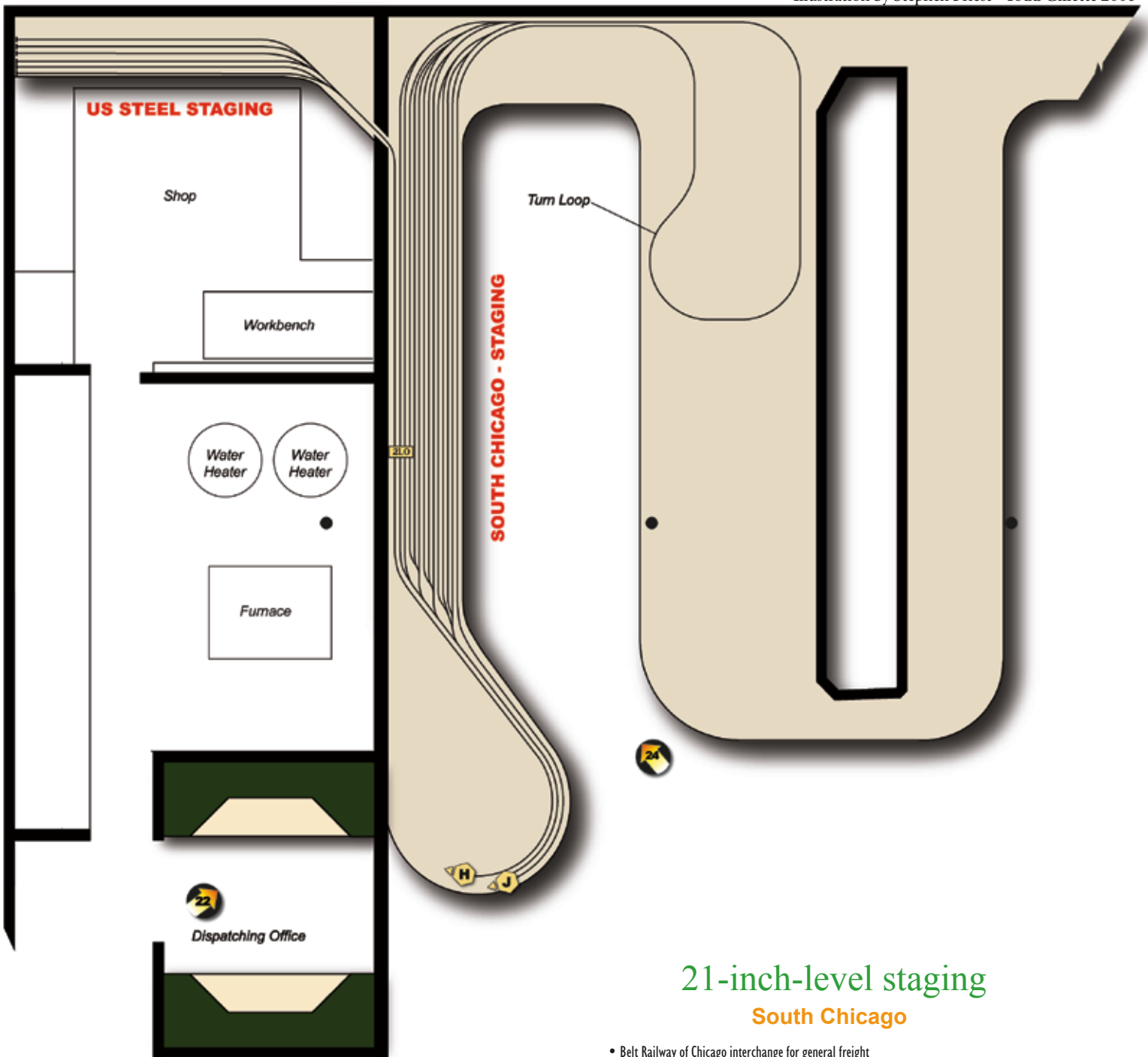
Van Loon and Ivanhoe, Indiana, host various industries with switching needs. Griffith, Indiana, interchanges with the Grand Trunk Western, Chesapeake & Ohio, Erie Lackawanna, and (modelers license) Detroit, Toledo & Ironton using 11 staging tracks. Griffith also sees industrial switching.

Hartsdale, Indiana, interchanges with Penn Central with a single staging track and services a variety of businesses. Dyer, Indiana, has two staging tracks, interchanges with Louisville & Nashville and

has local switching for various industrial spurs.

Across the state line at Chicago Heights, Illinois, there are various industries, and an interchange with Missouri Pacific and Baltimore & Ohio Chicago Terminal using two staging tracks. Matteson, Illinois, serves various industries and interchanges with Illinois Central Gulf using two staging tracks. Brisbane, Illinois, also serves various





## 21-inch-level staging South Chicago

- Belt Railway of Chicago interchange for general freight
- Baltimore & Ohio Chicago Terminal interchange for general freight
- Indiana Harbor Belt interchange for general freight
- Chicago South Shore & South Bend interchange for general freight
- Norfolk & Western coal train, rail to water transfer
- North Chicago & Pacific coal train, rail-to-water transfer
- Chicago & North Western coal train, rail-to-water transfer
- South Chicago industrial turn
- Chicago, West Pullman & Southern interchange for general freight
- Butt Mine & Eastern (modelers license) coal train, rail-to-water transfer
- Gulf, Mobile & Ohio coal train, rail to water transfer
- North Chicago & Pacific (modelers license) coal train (NORX)
- Burlington Northern coal train (NORX)



## 21 inch level (LEVEL 1)



4 Above: Train No. 56, J/MFB, is a local that switches Marble Falls and Brisbane, Illinois. Alco RS-3 804 is delivering building materials to Rogers Construction.

1 Below: A J center-cab pulls mixed freight No. 10, G/J, up to Joliet Yard past Chornell Cement in Marble Falls. Covered hoppers are being loaded at the cement plant.



# 38-inch-level staging

## Brisbane, Illinois

- N&W coal train for US Steel/Gary Works
- N&W coal train for Hammond Commonwealth Edison
- N&W interchange for general freight

## Marble Falls, Illinois

- BME coal train for Hammond Commonwealth Edison
- BME coal train for rail to water transfer via BRC, South Chicago
- BME interchange for general freight

## Chicago Heights, Illinois

- B&OCT interchange for general freight
- MP interchange for general freight

## Kirk Yard

- Gary industrial
- Whiting industrial turn
- East Chicago industrial turn

## Dyer, Indiana

- L&N interchange for general freight
- L&N coal train for Gary Works (U.S. Steel)

## Matteson, Illinois

- IC coal train for Plains Commonwealth Edison
- IC interchange for general freight

## Griffith, Indiana

- EL interchange for general freight
- EJ&E Porter industrial turn
- GTW interchange for general freight
- C&O interchange for general freight
- C&O (E&M) interchange for general freight
- C&O coal train for Hammond Commonwealth Edison
- C&O coke train from US Steel/Gary Works
- GTW coal train from BN for Detroit Edison
- DT&I interchange for general freight
- GTW/BN auto train
- GTW coal train from NC&P for Detroit Edison

industries but uses three staging tracks to interchange with Norfolk & Western. Marble Falls, Illinois, also with three staging tracks, interchanges with Butt Mine & Eastern (modeler's license railroad) and hosts several local industries.

From Marble Falls, the railroad climbs up a second double-tracked helix, making 5½ loops that link 38-inch level to the 58-inch level. At the 58-inch level, the line reaches its namesake, Joliet, where there are yet more interchanges and industries.

Joliet features four arrival/departure tracks, a yard bypass, eight yard tracks, four engine facility tracks, various industries, Joliet Yard, an interchange with Gulf,

Mobile & Ohio, Atchison, Topeka & Santa Fe, and Chicago, Rock Island & Pacific. In addition, there are five staging tracks at Bridge Junction, just west of Joliet.

West of Joliet Yard, and after passing through Walker and Normantown, the line crosses the triple-track Burlington Northern main into Chicago. Here at Eola, the J interchanges with BN. This is a major interchange, and it features multiple movements. BN's Eola Yard has three arrival and departure tracks, seven yard tracks, three engine facility tracks, and several industries. Four staging tracks feed directly into the yard simulating traffic from Chicago.

After crossing BN's main line, the J reaches West Chicago (east), Illinois, with various industries and an interchange with Chicago & North Western in two staging tracks. At West Chicago (west) there are various industries and an interchange with C&NW with three staging tracks. At Ingaltion, there are various industries, and interchanges with NC&P and the Milwaukee Road. At Forest Lake, the J interchanges with NC&P and the MILW with eight staging tracks. At Diamond

**6** Below: EJ&E 440, an NW2, spots a Seaboard boxcar for Riverdale Chemical at Chicago Heights, Illinois.





**11** Above: Train No. 77, G/GH, with EJ&E NW2s 415 and 405 on the point is just rolling into Griffith, Indiana, to switch the local industries. Package Corporation of America will be receiving two box cars, and Griffith Grain will get six covered hoppers for grain shipments.

Lake, the J interchanges with Soo Line and the MILW with two staging tracks. At Leighton there are various industries and an interchange with Soo. Finally, at Rondout, there are various industries and an interchange with the MILW.

Finally, John's J reaches its highest level, 62 inches. Representing North Chicago, the line here terminates at Waukegan Yard. It has three arrival/departure tracks, eight yard tracks, and four engine facility tracks. Several industries plus an interchange with C&NW and Duluth, Missabe & Iron Range are featured in five staging tracks that feed directly into the yard.

Altogether, the massive size of the J's operations sort of makes one's head swim! How does John operate such a complicated railroad? First, some of his crew have real railroad experience, so their expertise on prototype railroading is invaluable. Second, he has a large crew base, as you might expect. It takes a crew of 20, including two dispatchers, to handle all the train movements. When you operate with John, one thing you don't have to worry about

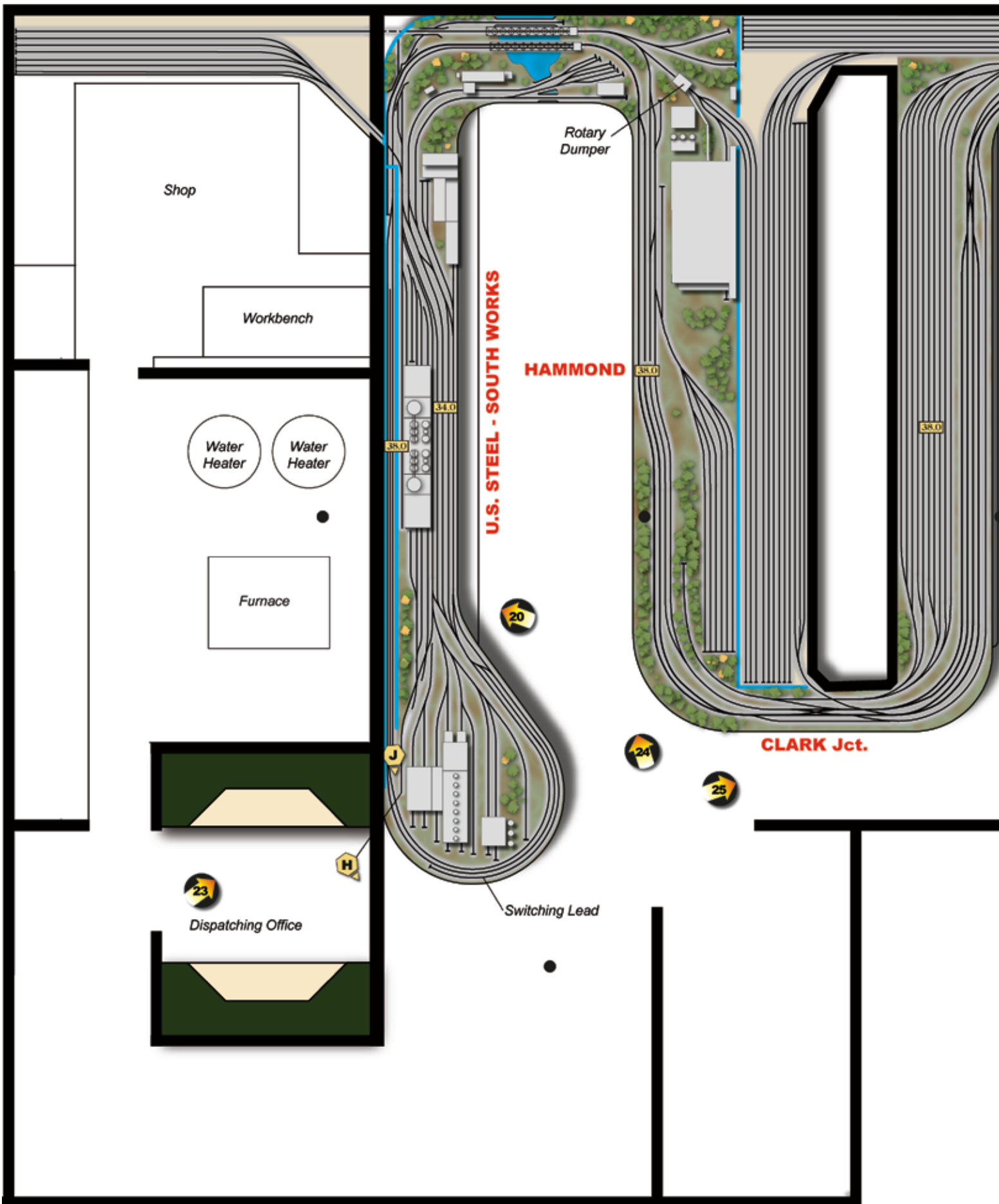


**12** Above: EJ&E locomotive 415, an NW2, has just picked up a hopper from Griffith Grain.

is whether you'll get a train. Believe me, you'll get a train — and then some! In addition to living personnel, John's J sports more than 100 active locomotives and 1,500 pieces of rolling stock. The theme of the layout, as is apparent, is multiple interchange and industrial switching.

How much of this is prototypical and how much free-lanced? It's prototypical enough that John's model railroad has

been featured in the prototype EJ&E publication *Milepost* (July 2004, Vol. 5, No. 4), something not many model railroaders have achieved. When Tom Hunter, electrical engineer of the EJ&E, and Adam Robillard, a J fan from Lake Zurich, Illinois (known as the "unofficial Lake Zurich station agent"), visited John's layout, both were impressed, especially with the towers that formerly guarded the rail-



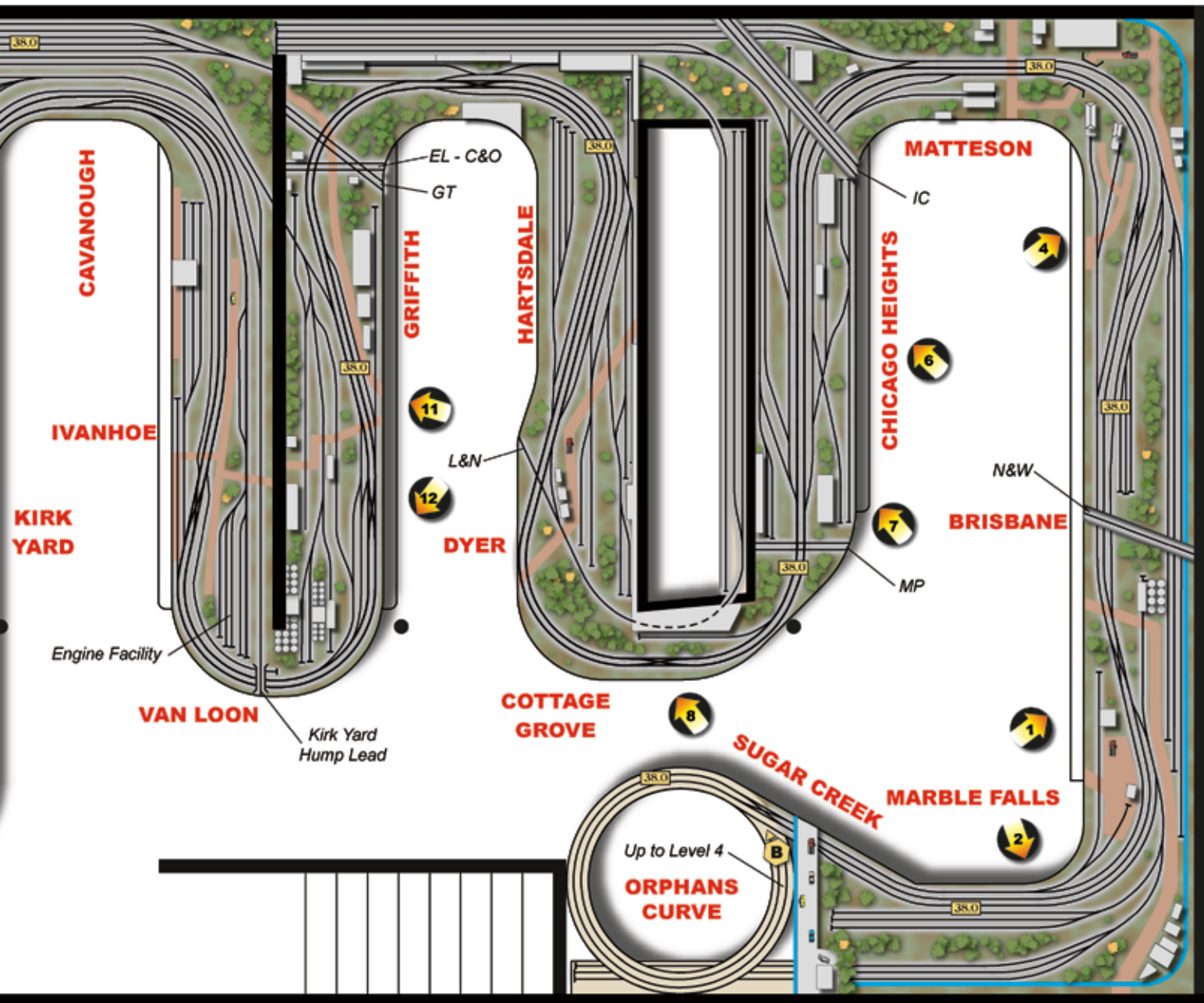


Illustration by Stephen Priest - Todd Gillette 2006



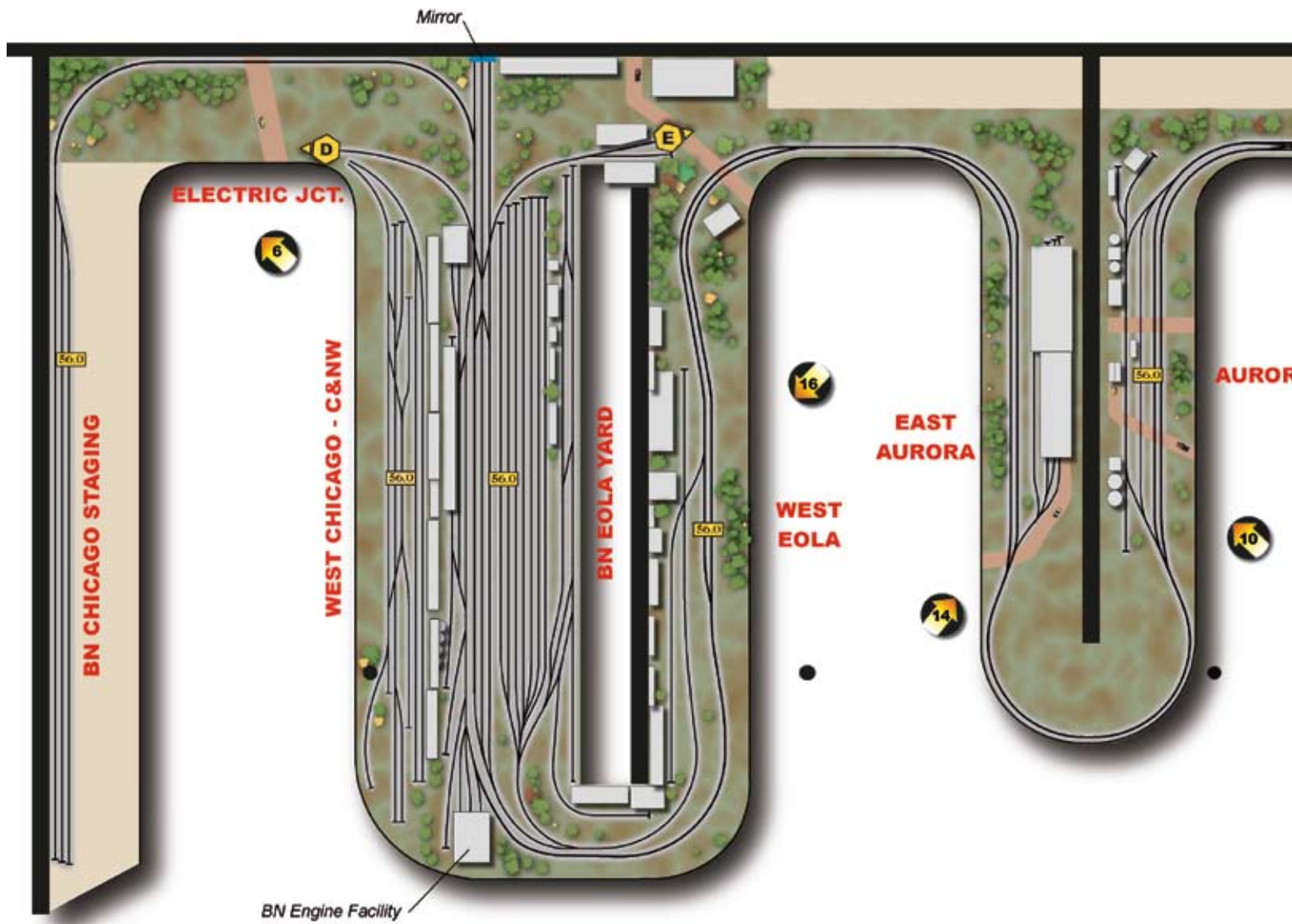
## 38 inch level

(LEVEL 2)



7 Above: Train No. 51, J/WCM, has just delivered these three boxcars to Columbia Tool & Steel in Chicago Heights, Illinois.





## 56 inch level (LEVEL 3)

**16** Right: Train No. 30, M/E, a BN freight with SD40 6535 and U30C 5749, faces eastward toward the BN's Eola Yard. It is seen here at West Eola and waiting for permission to enter yard limits.



## 56-inch-level staging

### Eola Yard

#### Clyde Yard (Chicago Yard)

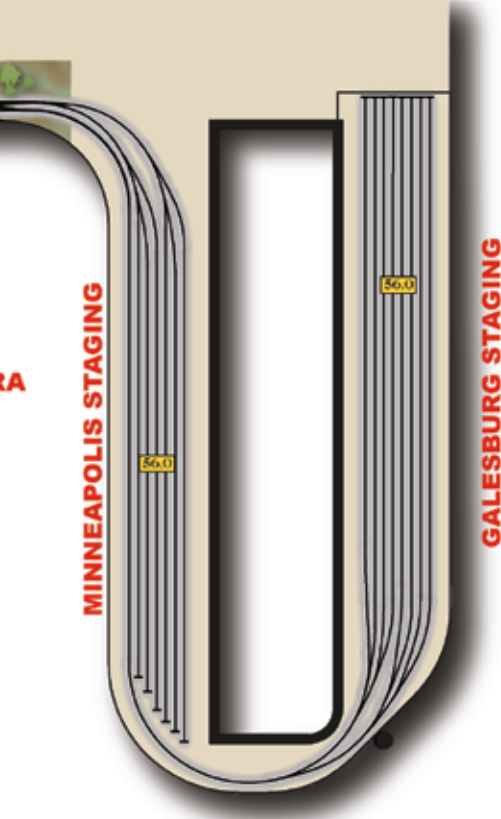
- Clyde Yard transfer
- BN coal train for Chicago Commonwealth Edison
- IHB interchange
- C&NW interchange

#### Minneapolis: six staging tracks

- Minneapolis transfer
- Rochelle turn
- BN / GTW auto train
- BN ore train for Gary U.S. Steel
- West Chicago turn
- Fox River turn

#### Galesburg: eight staging tracks

- Galeburg transfer
- BN coal train for U.S. Steel, Gary works
- BN coal train for Hammond Commonwealth Edison
- BN coal train for Waukegan Commonwealth Edison
- BN coal train for Chicago Commonwealth Edison
- BN coal train for Detroit Edison via GTW at Griffith
- BN coal train (NORX) via South Chicago
- Mendota turn



road crossings. John tries to model EJ&E's interchanges with other railroads accurately, but most of the rest of the layout is free-lanced. In addition, John belongs to the Michigan Prototype Operators — Oakland Division (with round-robin op sessions on several layouts), and he's the North Central Region (NMRA) regional coordinator for the OpSig as well as the coordinator for Detroit 2007 OpSig events at the NMRA national convention. Friends have helped John build the layout. Friends helped him move part of it (back in 1996), and friends help him run it today. The combination of a love for prototype operation and the social side of the hobby are bound tightly together in John's world of the fabulous J.

**10** Below: Train No. 34, GB/E, a westbound BN freight for Eola Yard, passes the Farmers Grain and Aurora Grain Co-Op in Aurora, Illinois.





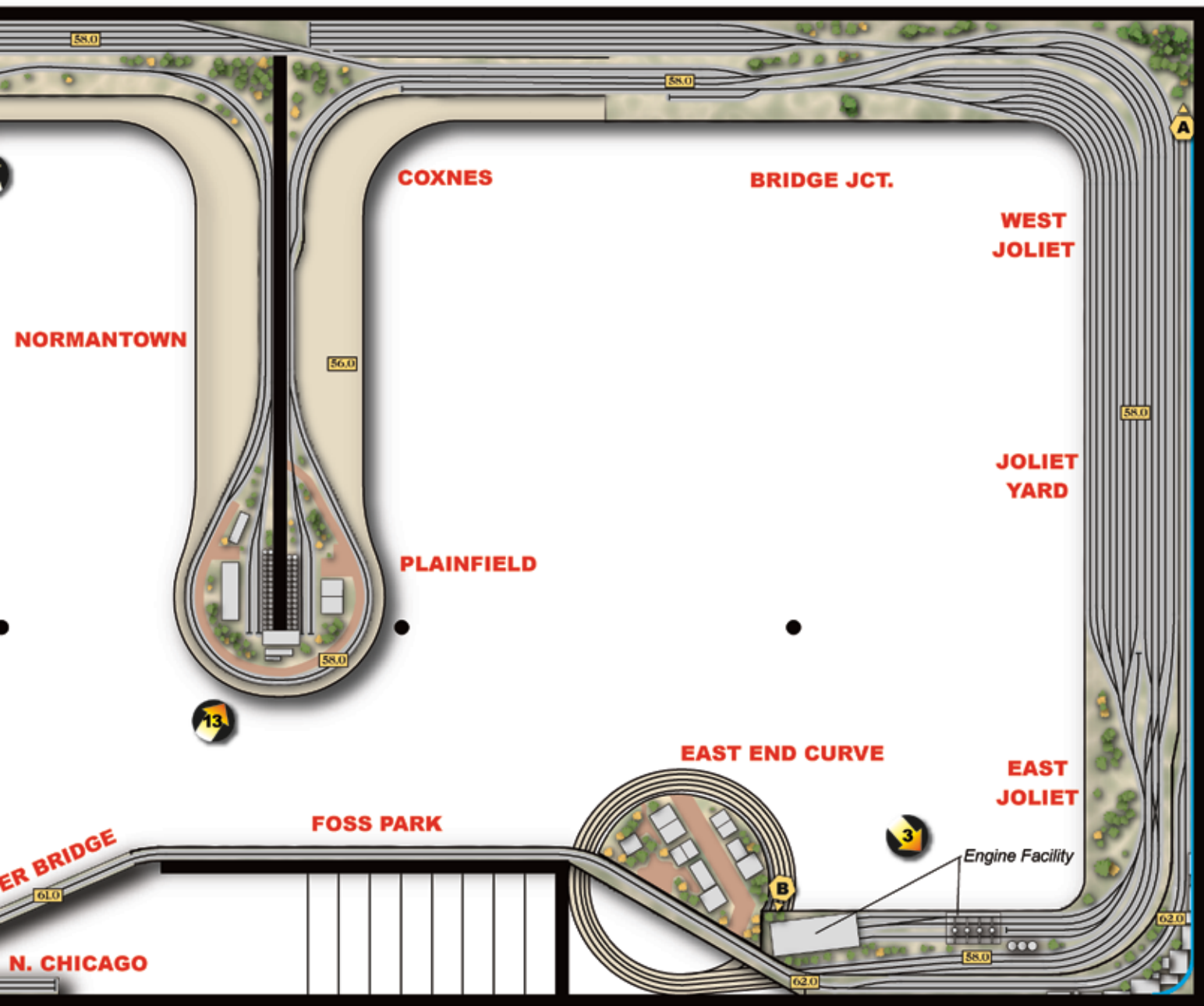


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**58 inch level**  
(LEVEL 4)



**20** Above: Train No. 97, USS/I, a slag train heading to Ivanhoe, Indiana, with slag for Black Beauty Slag, drifts by blast furnaces KayC and Carrie Lynn. Caboose No. 525 is on the rear of a hot metal train going over to South Chicago bar mill No. 2.

**8** Below: EJ&E 655, an SD38, is hauling train No. 16, J/G, eastbound to Gary as it passes Thrall Manufacturing in Chicago Heights.

## 58-inch-level staging

### West Chicago (east)

- C&NW coal train for Waukegan Commonwealth Edison
- C&NW transfer between West Chicago and Waukegan via EJ&E

### West Chicago (west)

- C&NW coal train for Hammond Commonwealth Edison
- C&NW coal train for rail to water transfer via BRC
- C&NW coal train for US Steel

### Forest Lake, Illinois

- NC&P interchange for general freight
- NC&P coal train for Hammond Commonwealth Edison
- NC&P coal train for U.S. Steel
- NC&P coal train for rail to water transfer via South Chicago
- NC&P coal train (NORX) via South Chicago
- NC&P coal train for Detroit Edison via GTW at Griffith
- NC&P ore train for U.S. Steel
- MILW interchange for general freight





2 Above: Train No. 58, J/BME-MF, is a transfer working out of Joliet Yard and here is interchanging nine cars for the BME interchange yard and picking up cars destined for J industries.

3 Below: Here is the engine facility at the Joliet Yard. Tracks at the back are the main line coming from Gary. The signals (left side) control westbound traffic into Joliet Yard and its bypass track.

## 58-inch-level staging

### Joliet, Illinois

#### West Staging Tracks

- Plainfield industrial turn
- Rockdale industrial turn
- Clay pit industrial turn
- Joliet industrial turn
- GM&O and AT&SF interchange for general freight

#### East Staging Track

- RI interchange for general freight

### Bridge Junction

- GM&O coal train for U.S. Steel
- IC Plaines Commonwealth Edison turn
- GM&O coal train for rail to water transfer via BRC, South Chicago
- GM&O coal train for Inland Steel
- Plaines industrial turn

### Diamond Lake, Illinois

- SOO interchange for general freight
- MILW interchange for general freight





## 62-inch-level staging

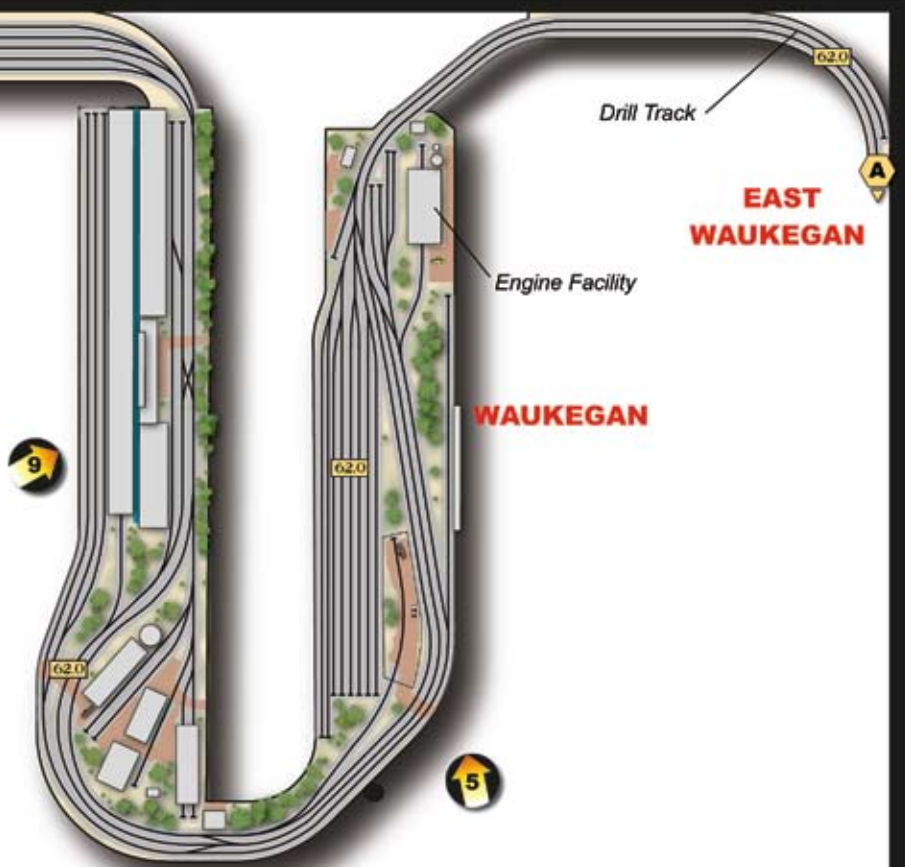
### Waukegan Yard

- C&NW interchange for general freight
- C&NW transfer between West Chicago and Waukegan
- C&NW ore train for U.S. Steel
- DM&R ore train for U.S. Steel
- EJ&E ballast train

**9** *Opposite page top:* EJ&E SD9s 608 and 602, each sporting a different paint scheme, have just switched a coal train into Waukegan Commonwealth Edison. The 602 is still in the early green-and-orange livery.

**15** *Opposite page bottom:* Train No. 15, G/JW, headed by a brace of SD38s 653 and 656, is westbound for Waukegan Yard after setting off cars at Joliet Yard. Gosselin Automotive System and Rusty Rails Manufacturing will be switched by the local No. 48, W/WS, job waiting in the siding in West Chicago.

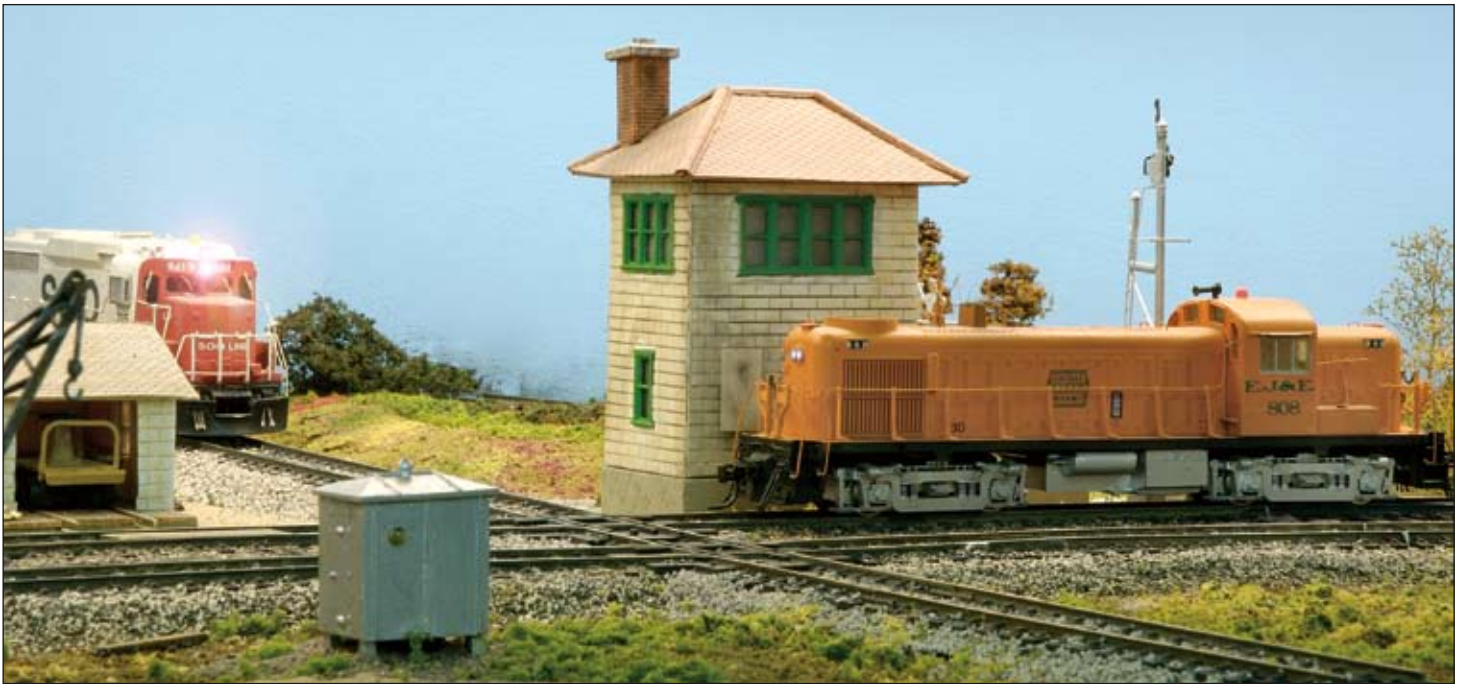
**5** *Below:* Waukegan Yard looking south (railroad east) is usually busy, as it is today! Train No. 10, W/J, sits on departure Track 1 waiting on a crew scheduled for an 8:00AM call. A seven-track classification yard is on the left, while the engine facility is at the top right of the picture.



**62 inch elevation**  
(LEVEL 5)







**21** Top: At Leithton, Illinois, EJ&E RS-3 808 crosses the diamonds at the tower protecting the Soo Line crossing. Soo Line GP30 715 heads toward the Soo Line Schiller Park Chicago Yard. The tower is scratchbuilt.

**22** Above: At Rondout, Illinois, EJ&E F7 721 waits at the tower for Milwaukee Road F7 113 to cross over the J main line. The Milwaukee freight is bound for their Chicago yard in Bensenville, Illinois. The tower is scratchbuilt.

**19** Right: Train No. 15, G/JW, headed up by a pair of SD38s 653 and 656 is west bound for Waukegan Yard and is just going through West Chicago, Illinois.





**24** *Above left:* Looking up aisle one: On the lower left is the South Chicago, Indiana, staging. The U. S. Steel Gary Works is on the middle level, while West Chicago is on the upper level. On the right side, Hammond is on the lower level, and the C&NW West Chicago area is on the upper level.

**25** *Left:* This view shows the walkway at the end of the aisles. At the bottom left, where the F-units are sitting, the main line heads west from Gary to Marble Falls, Illinois. The F-units are facing east. The No. 3 helix is out of the picture on the right side. At the top of the helix, the line enters Joliet Yard. From Joliet Yard the line comes back toward the front of the picture, and heads to Eola on the upper level at the left.

**23** *Below:* John is the afternoon shift dispatcher for the West Sub. The CTC machine controls signals and mainline turnouts.

