Birmingham Southern Model Railroad

www.bsmrr.com

Birmingham Southern Model Railroad

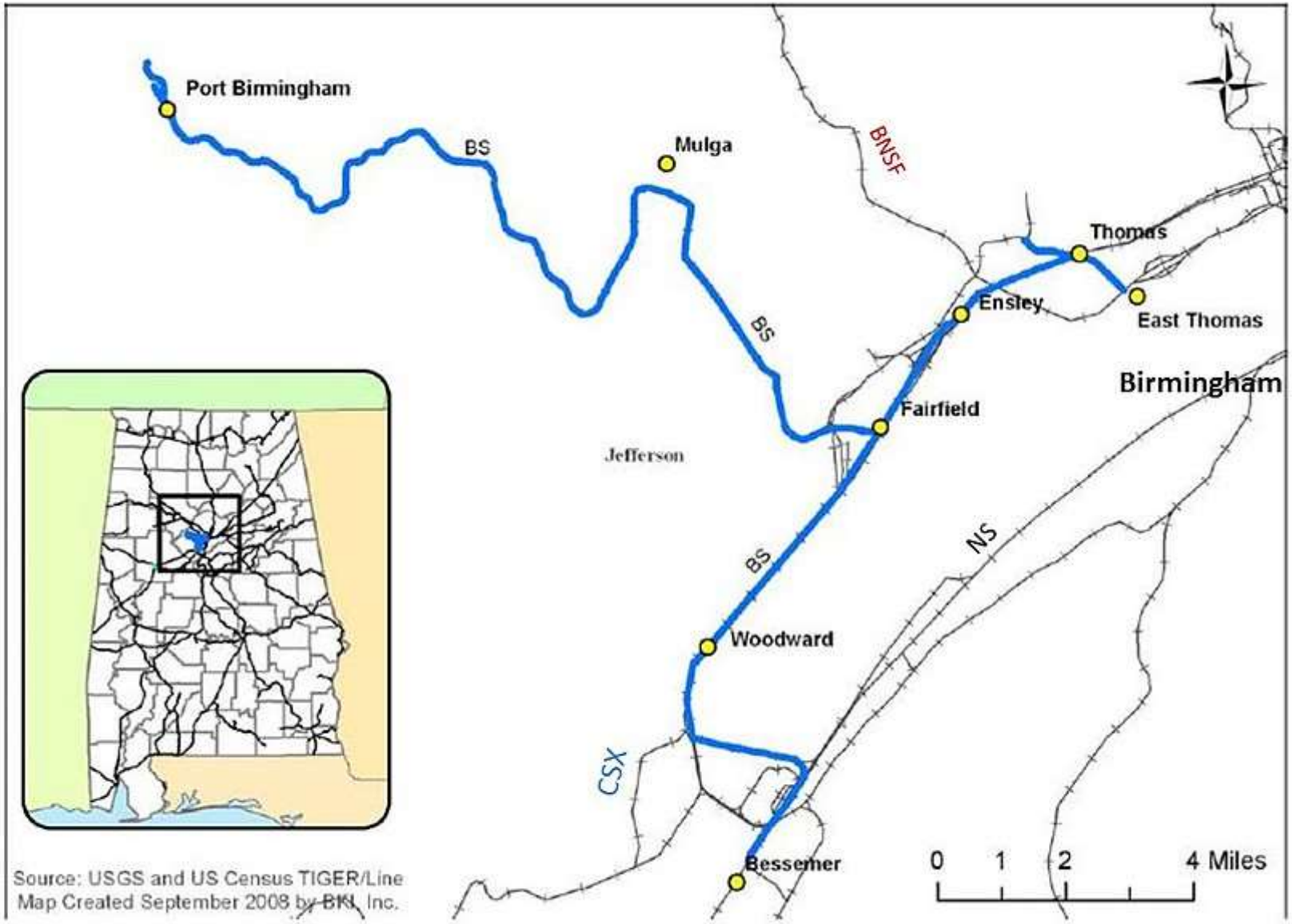
The BSMRR was designed and built to be operational. It represents the real Birmingham Southern and it's customers and operations in the years just prior to it being sold to Watco, Inc. in 2012, and becoming the Birmingham Terminal Railroad.

The real BSRR was an industrial short line serving the steel industries in the western areas of Birmingham and Jefferson County. It also had interchanges with Norfolk Southern, CSX and BNSF.

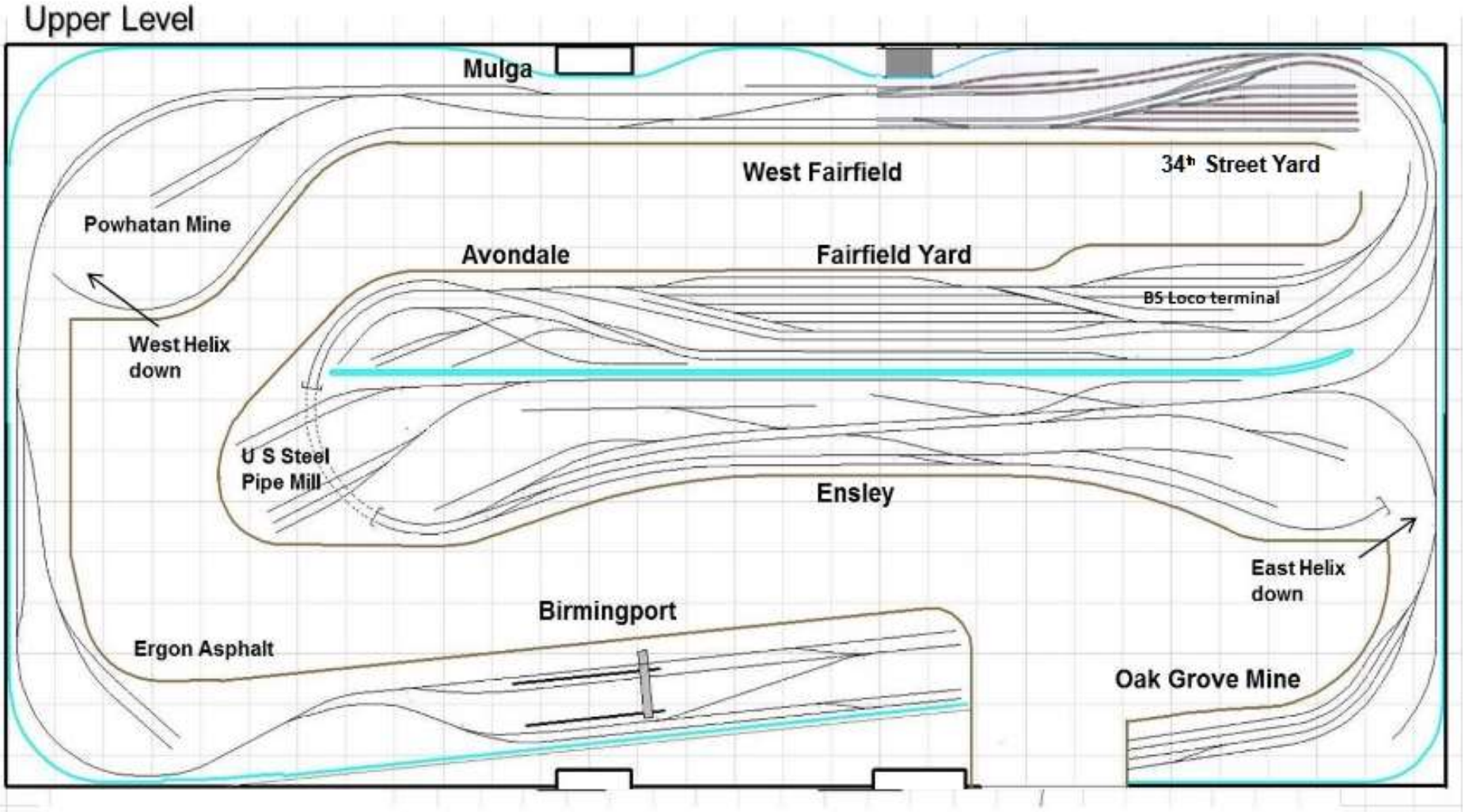
My railroad is an attempt to capture the operations of the real railroad. All of the locations on my railroad represent places in the real world. Although not all of them had rail service in the years I model, they do on my railroad. I have also included some Class I (Norfolk Southern) mainline trains to handle the interchange traffic.

All of the upper main level of the layout has finished scenery. There are still a few details to finish, although I doubt I will ever say it's really finished. The lower level under the peninsula has scenery, but the long shelf under Mulga does not. It will probably never have complete scenery.

This is a map showing the BSRR track in the Birmingham area as it was in 2008.



Birmingham Southern Model Railroad



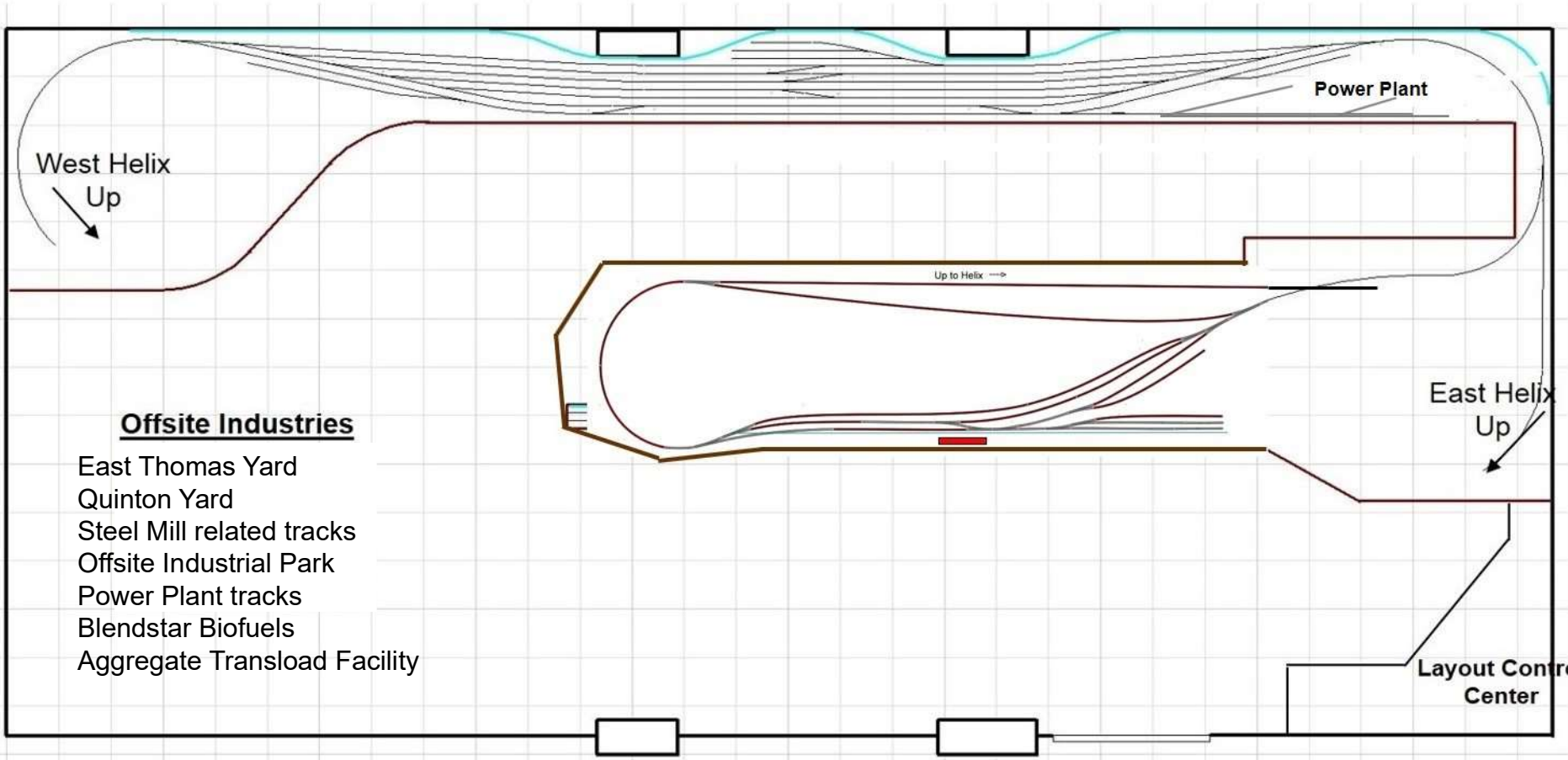
Avondale
Bham Recycle
ERS Transload
SPS Inc.

Ensley
Hanna Steel
DeCarlo Warehouse
Performance Minerals
Engineered Fillers
Vulcan Painters
Shelby Steel Fabricators
Precoat Metals

BSRR and Class I
Interchanges at West Fairfield and Ensley

Birmingham Southern Model Railroad

Lower Level



Offsite Industries

East Thomas Yard
Quinton Yard
Steel Mill related tracks
Offsite Industrial Park
Power Plant tracks
Blendstar Biofuels
Aggregate Transload Facility

-

Birmingham Southern Model Railroad

- Industrial switching layout based on Birmingham Southern RR
- Includes Class 1 trains for interchange traffic
- Digitrax DCC with simplex radio; Wi-Fi is available if you have a smart phone with a JMRI throttle app.
- Approximately 240’ of mainline track (120’ of it in two helixes)
- Approximately 420’ of yards and sidings
- Over 30 different industries and yards to switch
- 25 different trains can be run
- JMRI is used to build trains

Birmingham Southern Model Railroad

As I mentioned, I use JMRI (Java Model Railroad Interface) to operate my railroad. Many people are familiar with JMRI as a means to program their DCC decoders. It also has many more features that allow you to develop an operations scheme, create switch panels and control signals.

The following is a description of the Operations Module from their website. It does a better job of explaining the program than I can.

"The JMRI Operations program allows you to create computer generated train Manifests for your railroad. A train Manifest details the work that a crew will perform during an operations session. The Manifest provides a list of car pick up and set outs and shows where the cars are located and where they should be eventually positioned on the railroad. The program allows you to enter a roster of cars and locomotives, define locations (stations) on the railroad, and routes for trains to travel. The car roster includes information about the car, including road, number, type of car, color, length, weight, load, date built, and owner. Trains are assigned routes that define locations or stations where cars can be picked up or set out.

cont.……

Features include the ability to control what car types, roads, and car loads a location or industry can service, the available track space for a location, and the maximum length the train can be between any two locations in the train's route. Locations can have spurs, yards, staging and classification/interchange tracks. Spurs are used to service industries, and can optionally have schedules assigned to them which allows for very fine control over car movement and loads. The program generates Manifests for each train and switch lists for any location. A switch list for a location shows the work for all of the trains that will visit that location."

You will be running your trains according to a manifests created by JMRI. The one on the next pages is an example of a simple manifest for one of the trains that might be run during an operating session. It tells you where the train starts, which direction it will go, where to stop and do work and where it will end. Cars to be picked up are shown in red and those to be set out are shown in blue. There is even one train that may tell you to move a car between tracks at a location. It will be printed in green.

Many, if not most, operational model railroads use staging tracks where trains are built prior to an operating session, and then run out onto the layout, do work at several locations and then return to a staging track.

I do things differently. There are no staging tracks. This is an industrial switching layout (I like switching), so all trains are built in yards, or other locations, on the layout, are given a route and cars to switch at locations on the layout by JMRI and then return to a yard. Operators do all their own switching – there are no yard masters or switch crews.

This may increase the time it takes to run a train, but I think it helps to improve an operator's overall ability to run a train and perform the tasks necessary to complete the train's assignment. I think it's much better than just picking up a train in staging, running it out on the layout, maybe switch a few cars and then return to staging. I've seen many "operational" layouts where a train starts in staging, runs around the layout, does no work, and returns to another staging track. That's not for me.

There are currently 25 trains that can be built in my JMRI operations plan. They are set up to run in a specific order. This is done because some trains require cars that may have been set out by previous trains.

We try to have at least 1 operating session per month. Operators are assigned trains in the order they arrive for the session. During a normal session we will run 4 trains at a time. On average we will have 4 or 5 operators for each session, so someone my have to wait their turn before they can run a train. It is common for us to run at least 2 trains per operator during a session (8 to 10 total trains per session).

Since trains are run in a sequence, each session picks up where the last one leaves off. This cycle continues until such time as I might want to change the sequence or modify how some of the trains do their work. In that case I will pick a new starting point in the schedule following any changes I have made.

As I mentioned before, operators will be running trains according to a manifests created by JMRI. The next page shows a sample manifest created by JMRI that the operator will use to run his train.

Print Preview: Fairfield / Ensley west morning loca

Previous Page | Next Page | Page 1 / 2 | Close

My JMRI Railroad

Manifest for train (BS 20) Fairfield / Ensley west morning local
Choose any single diesel from Fairfield Engine Terminal

No work at Fairfield Engine Terminal, departure time 09:30

Scheduled work at Fairfield Yard, arrival time 09:35

	Road	Number	Type	Color	Load	Track
[ ] Pick Up	TILX	260482	Tank	Black	L	34th Street
[ ] Pick Up	NATX	302813	Tank	Black	L	34th Street Annex
[ ] Pick Up	1		Gondola		Steel plate	FFY East Mixed
[ ] Pick Up	NS	550064	Boxcar	Tuscan	E	34th Street
[ ] Pick Up	SOU	98042	CovHopper	White	L	34th Street
[ ] Pick Up	C&O	601388	CovHopper	Gray	L	34th Street
[ ] Pick Up	1		Gondola		L	FFY East Mixed
[ ] Pick Up	2		Gondola		E	FFY West

Train departs Fairfield Yard Westbound with 9 cars, 500 feet, 633 tons

Scheduled work at Norrel Jct, arrival time 09:58
Spot any tanks cars for Jarden Home Products at end of track.

	Road	Number	Type	Color	Load	Track
[ ] Pick Up	CIRR	2163	Boxcar	Gray	L	Jarden Home Brands
[ ] Set out	TILX	260482	Tank	Black	L	Jarden Home Brands
[ ] Set out	NATX	302813	Tank	Black	L	Jarden Home Brands

Train departs Norrel Jct Eastbound with 8 cars, 439 feet, 535 tons

Ensley/Fairfield Loop, Continue through loop Westbound to Ensley

Scheduled work at Ensley, arrival time 10:14

	Road	Number	Type	Color	Load	Track
[ ] Pick Up	RUSX	483445	CovHopper	Gray	E	Performance Minerals
[ ] Pick Up	NS	400037	Boxcar	Tuscan	L	Precoat Metals
[ ] Pick Up	NS	400005	Boxcar	Tuscan	L	Shelby Steel Fabricators
[ ] Pick Up	3		Gondola		E	Precoat Metals
[ ] Pick Up	KCS	160130	Boxcar	Tuscan	L	Shelby Steel Fabricators
[ ] Set out	1		Gondola		Steel plate	Precoat Metals
[ ] Set out	NS	550064	Boxcar	Tuscan	E	Precoat Metals
[ ] Set out	SOU	98042	CovHopper	White	L	Performance Minerals
[ ] Set out	C&O	601388	CovHopper	Gray	L	Performance Minerals
[ ] Set out	1		Gondola		L	Shelby Steel Fabricators
[ ] Set out	1		Gondola		E	Shelby Steel Fabricators

Train departs Ensley Westbound with 9 cars, 503 feet, 507 tons

Scheduled work at Ensley Interchange, arrival time 10:45

	Road	Number	Type	Color	Load	Track
[ ] Pick Up	2		Gondola		E	Ensley Interchange
[ ] Pick Up	1		Flatcar		L	Ensley Interchange
[ ] Set out	1		Gondola		E	Ensley Interchange

Train departs Ensley Interchange Westbound with 11 cars, 612 feet, 624 tons

Most trains tell you to pick any locomotive from an engine terminal.

Some trains will ask you to pick one 6-axle
or two 4-axle locos depending on the number of cars moved.

A few trains ask for a specific locomotive(s).

BS BP S1 - Morning Birmingport switch job
BS BP S2 - Afternoon Birmingport switch job
BNSF 35 - Miller Power Plant train
BS USS 14 – Local Pipe Mill job
MP S1 – Local Miller Power Plant switch job

My locomotives are shown on the following pages. I have tried to use the same locomotive models and road numbers used by the real Birmingham Southern. The NS and BNSF models are representative of what may be seen in the area.

- 17 Birmingham Southern locomotives

BS 261 - MP15DC (MU'd with BS 261)
BS 222 - MP15DC (sound)
BS 354 - SW1500 (MU'd with BS 260 - used at Power Plant)
BS 260 - MP15DC
BS 370 - MP15DC (sound)
BS 411 - MP15DC (used at US Steel Pipe Mill)
BS 630 - SD9
BS 700 - GP38-2 (sound)
BS 701 - GP38-2 (sound) (MU'd with BS 705)
BS 705 - GP38-2
BS 702 - GP38-2 (MU'd with BS 703)
BS 703 - GP38-2
BS 704 - GP38-2
BS 711 - GP35E (MU'd with BS 743)
BS 743 - GP35E
NSW 4840 – 48 Class Australian loco (used at Birmingport)
Given to me by a friend from australia

Locomotive addresses are the road number. MU'd locos 222 and 261 use 261; 354 and 260 use 354; 702 and 703 use 702; 701 and 705 use 701; 711 and 743 use 711

13 NS and other RR locomotives

Most used

NS 1702 - SD45-2
NS 3468 - SD40-2
NS 3571 - SD40-2 (sound)
NS 6814 - SD60M (sound)
NS 3544 - SD40-2
NS 6804 - SD60M
NS 6805 - SD60M (sound)
NS 7213 - SD80MAC
NS 4610 - GP59 (Southern colors)

BNSF 2377 - GP38-2 (used only for power plant train)
BNSF 2703 - GP38-2 (MU'd with BNSF 2377 & 338)
BNSF 338 - GP60B (MU's with BNSF 2337 & 2703)
IC 8217 - GP10 (used only at Oak Grove mine)
TSRX 3301 - GP35 (used at Offsite Industrial Park)

Locomotive addresses are the road number.
MU'd locos 2377, 2703 and 338 use 2377.

Birmingham Southern Model Railroad

Freight cars used on the BSRR

These cars are identified by road name and number:

- Boxcar
- Tank
- Covered hopper
- Flat

These cars are considered “utility” and are identified only by type:

- Gondola
- Hpr BS, SOU (open hopper with BS or SOU markings)
- Hpr NS, JH, BN (open hopper with NS, JHMX or BNSF markings)

The Manifest will indicate how many of each type of utility car in the Road column.

Birmingham Southern Model Railroad

Manifest for train (CW 130) Class 1 westbound afternoon interchange train
Choose any Norfolk Southern diesel from Class 1 Engine Terminal.

Scheduled work at Offsite Industries, departure time 12:25
After leaving Offsite tracks, back up to Blendstar if pickups are required, then continue West.

	Road	Number	Type	Color	Load	Track
[ ] Pick Up	RUSX	483312	CovHopper	Gray	E	Trk1
[ ] Pick Up	NS	550064	Boxcar	Brown	E	Trk1
[ ] Pick Up	RELS	350128	Boxcar	Green	L	Trk2
[ ] Pick Up	HOKX	111601	Tank	Gray	E	Trk2
[ ] Pick Up	RUSX	483312	CovHopper	Gray	E	Trk2
[ ] Pick Up	1		Gondola		L	Trk2
[ ] Pick Up	RBOX	33624	Boxcar	Yellow	E	Trk1
[ ] Pick Up	C&O	601398	CovHopper	Gray	L	Trk2
[ ] Pick Up	TOGX	13072	Tank	Orange	E	Trk1
[ ] Pick Up	PROX	75373	Tank	Green	L	Trk2
[ ] Pick Up	PROX	23049	Tank	White	L	Trk2
[ ] Pick Up	GATX	91713	Tank	Black	L	Trk2

Train departs Offsite Industries Westbound with 12 cars, 652 feet, 708 tons

Identified by Road, Number and Type

No work at Blendstar
No work at East Helix

Scheduled work at Ensley, arrival time 12:40
Class I trains not allowed to set out any cars on BS track during interchange switching.

	Road	Number	Type	Color	Load	Track
[ ] Pick Up	FP&S	35160	Boxcar	Brown	L	Ensley Interchange
[ ] Pick Up	RBOX	10572	Boxcar	Yellow	E	Ensley Interchange
[ ] Pick Up	N&W	297301	Boxcar	Black	L	Ensley Interchange
[ ] Pick Up	1		Flatcar		Steel plate	Ensley Interchange
[ ] Set out	RUSX	483312	CovHopper	Gray	E	Ensley Interchange
[ ] Set out	NS	550064	Boxcar	Brown	E	Ensley Interchange
[ ] Set out	RELS	350128	Boxcar	Green	L	Ensley Interchange
[ ] Set out	HOKX	111601	Tank	Gray	E	Ensley Interchange
[ ] Set out	RUSX	483312	CovHopper	Gray	E	Ensley Interchange
[ ] Set out	1		Gondola		L	Ensley Interchange

Train departs Ensley Westbound with 10 cars, 540 feet, 703 tons

No work at Avondale

Birmingham Southern Model Railroad

Manifest for train (BS ET 02) East Thomas morning turn
Pick up one 6-axle - or -
two 4-axle locomotives if picking up more than 12 cars at East Thomas

No work at Fairfield Engine Terminal, departure time 08:55

Scheduled work at Fairfield Yard, arrival time 09:00

	Road	Number	Type	Color	Load	Track
[ ] Pick Up	6		Gondola		E	FFY Track 1 or 2
[ ] Pick Up	3		Hpr BS,SOU		BP Coal	FFY Track 3
[ ] Pick Up	13		Hpr BS,SOU		BP Coal	FFY Track 4, 5 or 6

Train departs Fairfield Yard Westbound with 22 cars, 1,159 feet, 1,540 tons

Identified only by Type and number to pick.

Scheduled work at West Fairfield, arrival time 09:49

	Road	Number	Type	Color	Load	Track
[ ] Pick Up	1		Flatcar		E	West Fairfield Interchange

Train departs West Fairfield Westbound with 23 cars, 1,216 feet, 1,571 tons

No work at West Helix

Scheduled work at Steel Mill, arrival time 10:01

	Road	Number	Type	Color	Load	Track
[ ] Set out	6		Gondola		E	Steel Mill

Train departs Steel Mill Westbound with 17 cars, 874 feet, 1,385 tons

Scheduled work at East Thomas, arrival time 10:18

	Road	Number	Type	Color	Load	Track
[ ] Pick Up	1		Gondola		E	East Thomas 2
[ ] Pick Up	12		Hpr BS,SOU		E	East Thomas 2

Tracks are either numbered or named, and some locations have multiple tracks.

If a manifest names a particular track, use that track.

If a manifest says to set out or pick up at tracks “2 - 6” in Fairfield Yard, you can choose which tracks to use for the appropriate cars.

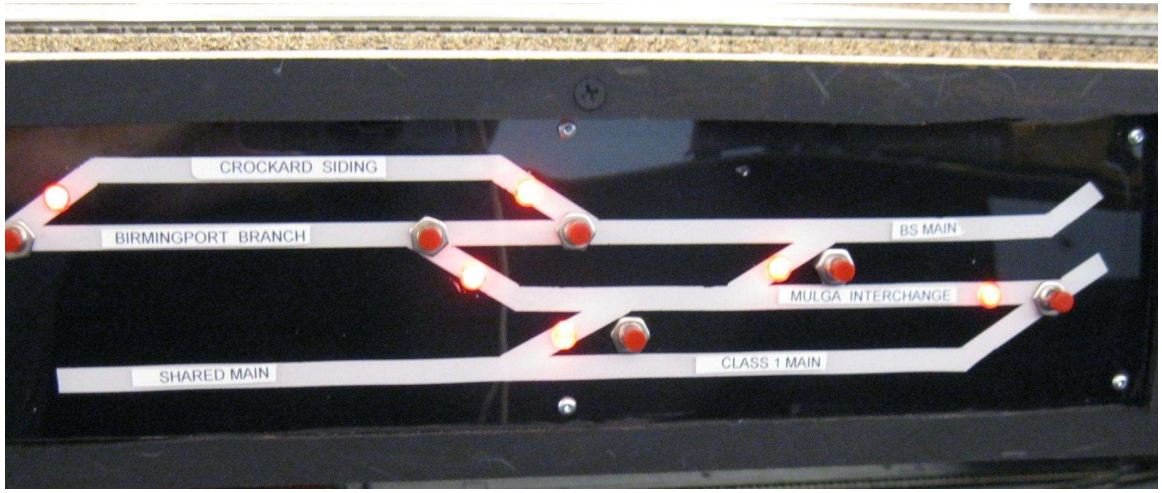
Tracks in Fairfield Yard have names, and are in two locations. The main yard has tracks labeled East, East 1, East 2-6, and West 1, 2 or 3. The 34th Street location has tracks named 34th Street 1, 2, 3 or 4, or 34th Street Annex. The manifests will tell you which tracks to use.

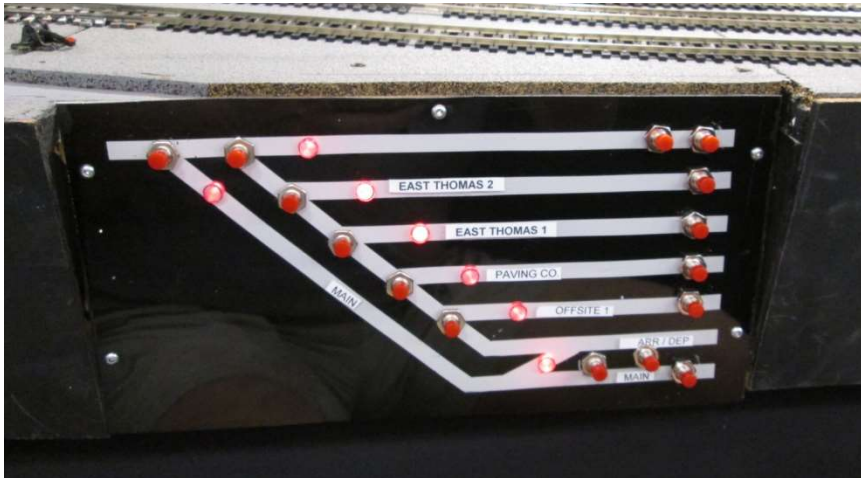
Most industry tracks have names.

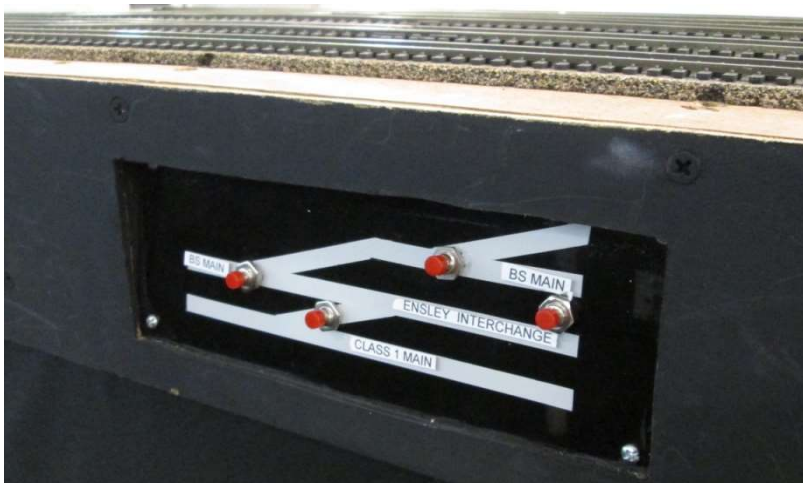
Birmingham Southern Model Railroad

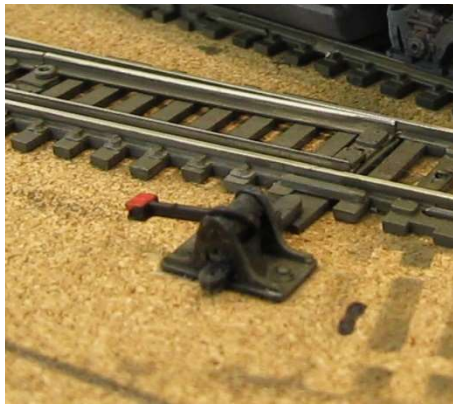
General operating rules:

- There is no dispatcher.
- You build, switch and break up your own trains.
  No staged trains.
- Operators work out train meets with each other.
- Slow down and watch for other trains
- BS trains have priority over Class 1 (hey, it's my railroad)
- Try to keep main lines clear
- Throw your own switches. Most mainline ones are powered. Return all switches you throw to original position.


CROCKARD SIDING
BIRMINGPORT BRANCH
BS MAIN
MULGA INTERCHANGE
SHARED MAIN
CLASS 1 MAIN


EAST THOMAS 2
EAST THOMAS 1
PAVING CO
OFFSITE 1
ABR / DEP
MAIN
MAIN


BS MAIN
BS MAIN
ENSLEY INTERCHANGE
CLASS 1 MAIN



Birmingham Southern Model Railroad

- Both helixes have occupancy detectors. If you see a red light, do not enter helix. If light goes out and you do not see a train, you are following one so proceed with caution. If you see a train wait for it to get past you. The BS and the Class 1 share the helix tracks and there is a chance two trains may want the same helix.

- The Class 1 trains have trackage rights on the BS mainline to switch interchanges

- Handle cars and locos as little as possible. Use wooden skewers to uncouple cars.

- Please dispatch loco from throttle after running your train.

- Please don’t lay clipboards, throttles, anything on layout.

- Please no drinks or snacks in train room, except by door.