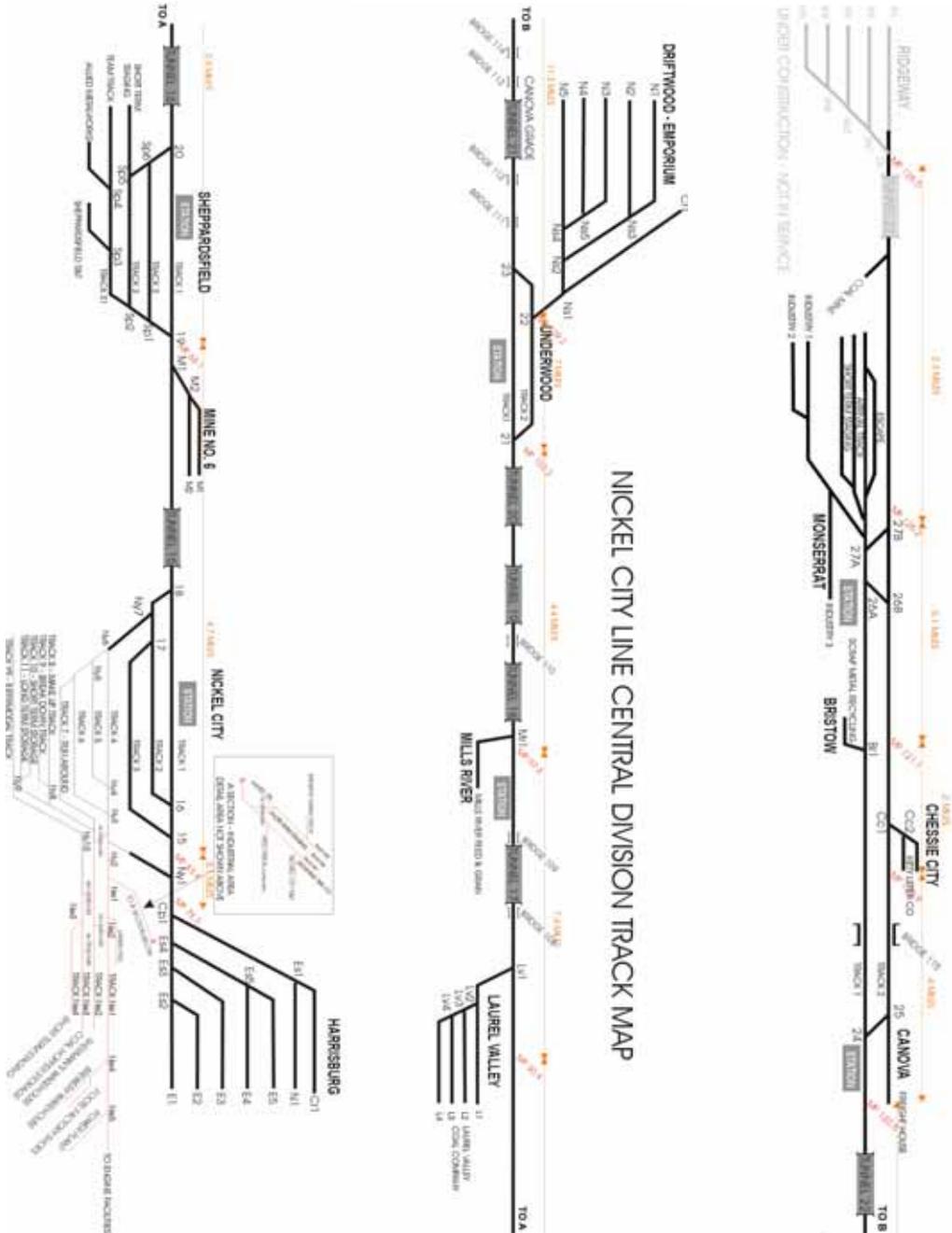


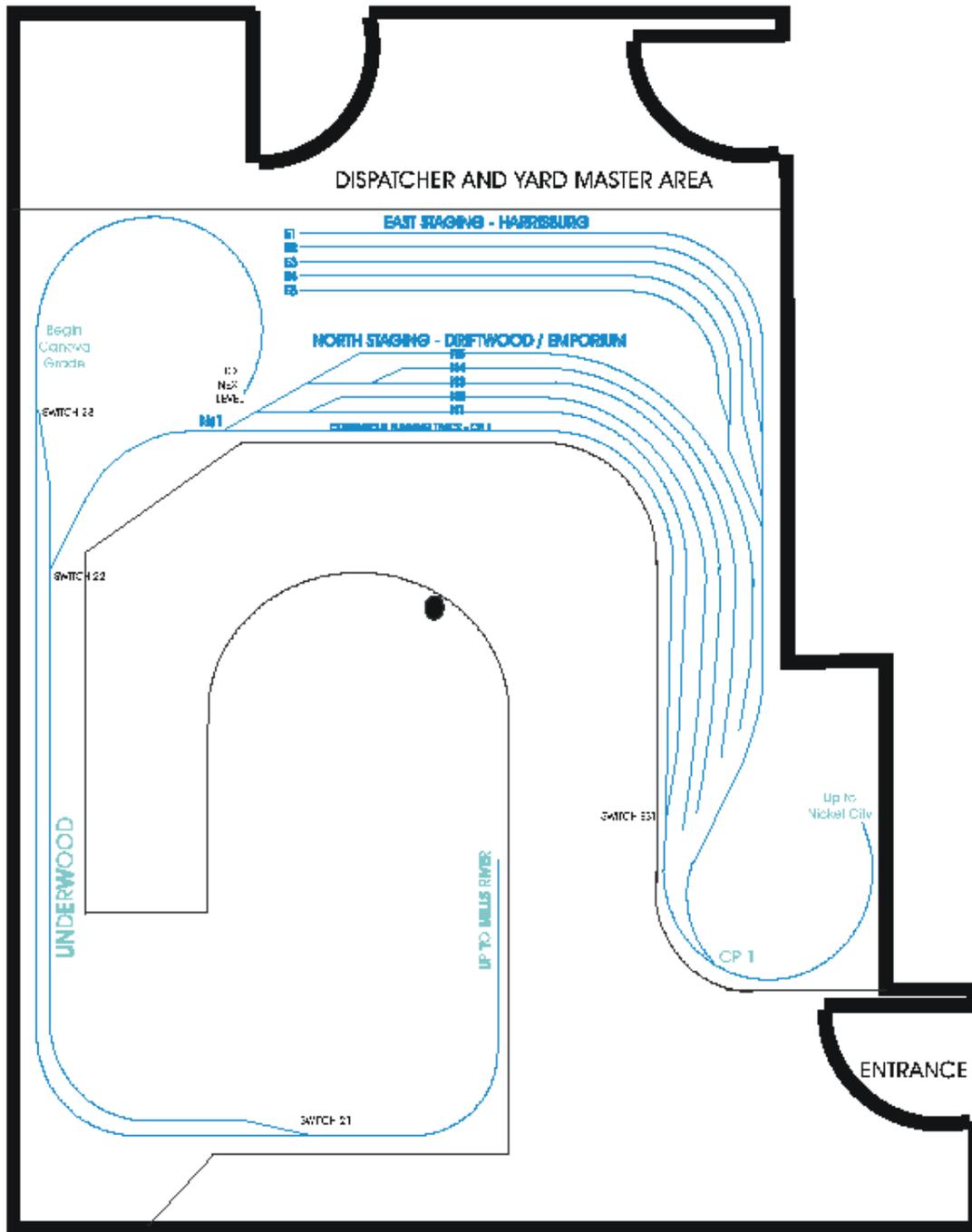
## APPENDICES



# APPENDIX A – SCHEMATIC DIAGRAM OF THE NICKEL CITY LINE

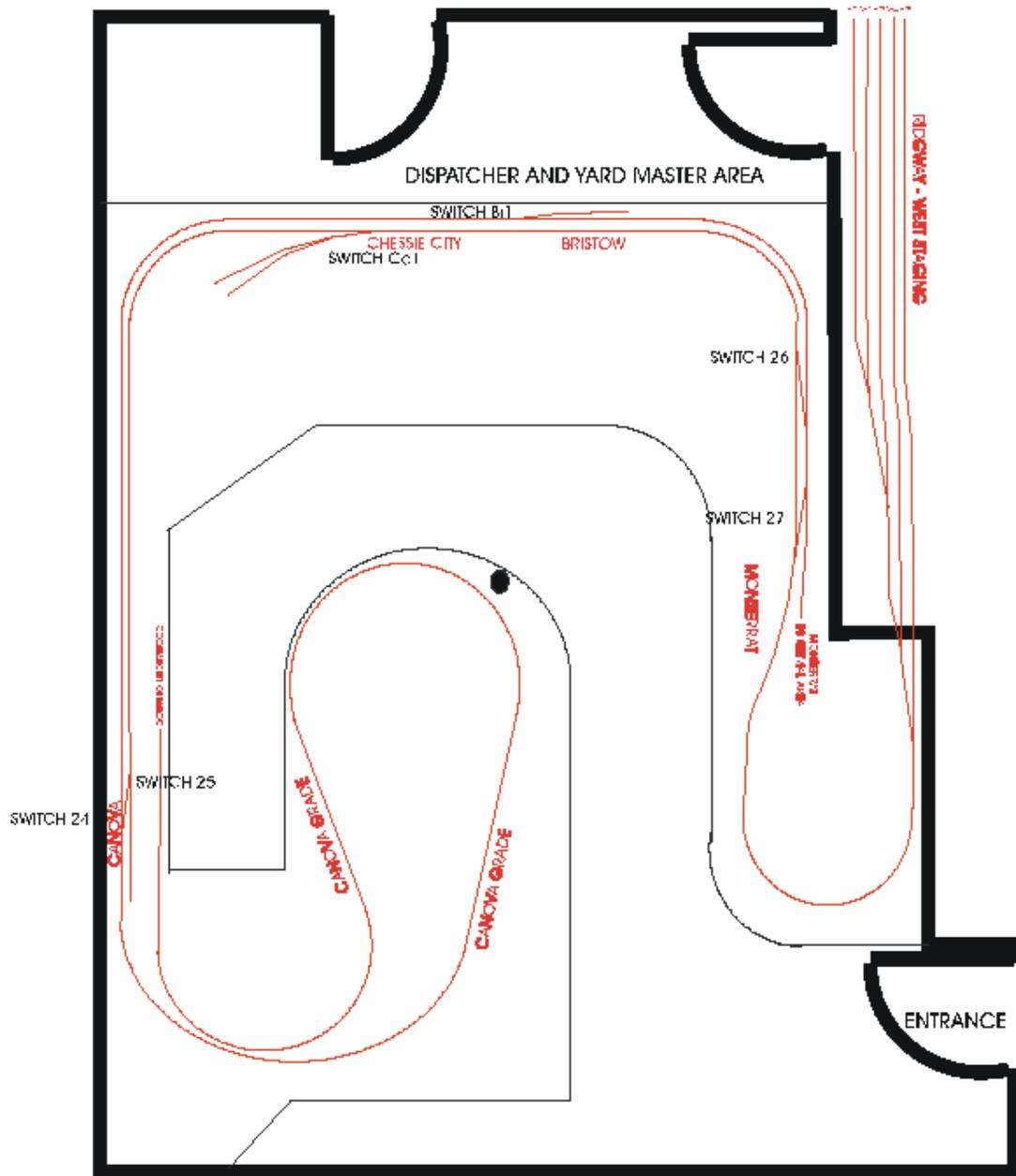


**APPENDIX B – LAYOUT DIAGRAM OF THE NICKEL CITY LINE**



**LOWER LEVEL STAGING DIAGRAM**





**UPPER LEVEL / MODULAR DECK DIAGRAM**

**APPENDIX C – FORMAL OPERATIONS CALL SHEET SAMPLE**

49 MHz Channels  
 (A) 49.830 (D) 49.875  
 (B) 49.845 (E) 49.890  
 (C) 49.860

**NICKEL CITY LINE  
 FORMAL OPERATIONS CREDIT HOURS**

Prototype Railroad Channels  
 CSXT: 161.550, 160.410  
 NS: 160.950, 160.245  
 CONRAIL: 160.800  
 AMTRAK: 160.290

OPERATIONS	EMPLOYEE		SCHEDULED TIME ON DUTY		ON DUTY	OFF DUTY	TOTAL TIME (Real)
			Real	Scale	Real	Real	
Traffic Manager / Road Master			(1:00p)	0001			
Dispatcher - Shift 1			(1:00p)	0001			
Dispatcher - Shift 2			(3:00p)	1200			
Yardmaster-Shift 1			(1:00p)	0001			
Yardmaster-Shift 2			(3:00p)	1200			
Hostler – Shift 1			(1:00p)	0001			
Hostler - Shift 2			(3:00p)	1200			
TRAINS	ENGINEER	BRAKEMAN	SCHEDULED TIME ON DUTY		ON DUTY	OFF DUTY	TOTAL TIME (Real)
			Real	Scale	(Real)	(Real)	
Yard Loco - Shift 1			(1:00p)	0001			
Yard Loco- Shift 2			(3:00p)	1200			
401			(1:00p)	0001			
402			(1:00p)	0001			
501			(1:00p)	0001			
100			(1:45p)	0430			
502			(1:45p)	0430			
99C / 102			(2:00p)	0600			
BF4			(2:14p)	0724			
656			(2:28p)	0848			
BF3			(2:28p)	0724			
302			(2:43p)	1018			
713			(3:03p)	1218			
714			(3:03p)	1218			
503			(3:09p)	1254			
301			(3:20p)	1400			
200			(3:33p)	1518			
101			(3:34p)	1524			
203			(3:45p)	1630			
98C / 103			(3:50p)	1700			
655			(4:02p)	1812			

\*Real Time = Standard Time, not Scale Time. Scale time = Fast Clock Time (Usually 6:1)

**APPENDIX D – HOSTLER CALL SHEET.**

**Hostler**

**Power Desk Assignments**

Date: \_\_\_\_\_

1st Shift (12a – 12p) \_\_\_\_\_ 2nd Shift (12p – 12a) \_\_\_\_\_

Train #	Engineer	Lead Loco	2 <sup>nd</sup> Loco	3 <sup>rd</sup> Loco	Report Time	Depart Time	Scale Depart	Time Off Duty	Time of Day
Yard Engine					12:50p	1:00p	12:00a		NIGHT
501					12:55p	1:05p	12:30a		
401					1:00p	1:10p	1:01a		
402					1:00p	1:10p	1:01a		
100					1:45p	1:55p	5:30a		
502					1:45p	1:55p	5:30a		
102					2:00p	2:10p	7:00a		DAWN
BF4					2:14p	2:24p	8:59a		
656					2:28p	2:38p	9:48a		
BF3					2:28p	2:38p	9:52a		
302					2:43p	2:53p	11:21a		DAY
Yard Engine					2:50p	3:00p	12:00p		
713					3:03p	3:13p	1:20p		
714					3:03p	3:13p	1:20p		
503					3:09a	3:19a	1:55p		
301					3:20p	3:30p	3:01p		
200					3:33p	3:43p	4:18p		
101					3:34p	3:44p	4:24p		
203					3:45p	3:55p	5:31p		
103					3:50p	4:00p	6:01p		
655					4:02p	4:12p	7:15p		EVENING

# APPENDIX E – SAMPLE SWITCH LISTS

## How to Read a Switch List

**Annotations:**

- Train Number, Class of Train, Type of Train:** Train: 501, Class: Third, Type: Through Freight
- Railroad Name:** Nickel City Line Railroad
- Session Number:** Switchlist Session: 7
- Fictional Date for Session:** 3/13/2000
- Date Switch List Printed:** 3002000 833AM
- Departure Time:** 1:00AM
- Arrival Time in Town:** 1:00AM
- Next Destination of Rail Car:** (e.g., Ryeley - 3 (Temp)/Pittsburg Te)
- What the Car is Carrying:** (e.g., Empty, Arts: Freeze, Highamy Brew: Warehouse)
- Location Where Car will be Set Out:** (e.g., Nickel City Yard)
- Location Where Car is to be Picked Up:** (e.g., Arts: Freeze, Highamy Brew: Warehouse)
- Car Data Info and AAR Car Type:** (e.g., NCL, 80003, RP)
- Instructions for Train Crew:** Run Train #501 East from Nickel City to Nickel City East, Switch Nickel City East

**Table 1: Town: Nickel City**

Road	Number	AAR	Pickup	Setout	Lading	Destination(Town/Industry)
NCL	8002	XM	Nickel City Yard		General Merchandise	Nickel City East/Trade Factory

**Table 2: Town: Nickel City East**

Road	Number	AAR	Pickup	Setout	Lading	Destination(Town/Industry)
GELX	7801	LD	Highamy Brew: Gen: Bldg		Empty	Nickel City/Nickel City Yard
NCL	80003	RP	Arts: Freeze	Highamy Brew: Warehouse	Empty	Nickel City East/Highamy Br
WCLX	8380	RP	Arts: Freeze		Empty	Nickel City/Nickel City Yard
GN	42903	FM	NC Lumber		Empty	Nickel City/Nickel City Yard
NCL	8002	XM		Trade Factory	General Merchandise	Nickel City/Nickel City Yard

**Table 3: Town: Nickel City**

Road	Number	AAR	Pickup	Setout	Lading	Destination(Town/Industry)
WCLX	8380	RP		Nickel City Yard	Empty	Ryeley - 3 (Temp)/Pittsburg Te
GN	42903	FM		Nickel City Yard	Empty	Rosemead - 4 (Temp)/Dark Fore
GELX	7801	LD		Nickel City Yard	Empty	Rosemead - 4 (Temp)/Movent G

# How to Read a Yard Arrival List

Railroad Name
Fictional Date for Session
Date Switch List Printed

Session Number
Nickel City Line Railroad
3/13/2000
3292008 18:17AM

Yard Name
Yard Arrival List

Yard/Interchange: Baltimore Yard				Town: Baltimore - 4			
Arrival	Road, Number	Type	Lading	Train	Train Type	Next Destination	Final Destination
4:18PM	CB0 31723	GB	Empty	714	Through Freiq		
4:18PM	GD005 10122	TA	Fuel Oil	714	Through Freiq		

Yard/Interchange: Harrisburg Yard				Town: Harrisburg - 2			
Arrival	Road, Number	Type	Lading	Train	Train Type	Next Destination	Final Destination
11:52PM	FW 8	SM	General Merc	200	Through Freiq		

Yard/Interchange: Nickel City Yard				Town: Nickel City			
Arrival	Road, Number	Type	Lading	Train	Train Type	Next Destination	Final Destination
7:25AM	WGLR 8385	BP	Empty	301	Through Freiq	Rogers - 5 (Temp/Pittsburg Terminal)	
7:25AM	GBLK 7301	LD	Empty	301	Through Freiq	Rocheater - 4 (Temp/Cook Forest Lam	
7:25AM	GN 43615	FM	Empty	301	Through Freiq	Rocheater - 4 (Temp/Cook Forest Lam	
11:21AM	NCL 8031	AMP	Empty	302	Through Freiq	Rogers - 5 (Temp/Rogers Yard	
11:21AM	LP 52100	GB	Grain	302	Through Freiq	Baltimore - 4 (International Metal Equip	
2:22PM	CB0 807218	LD	Grain	714	Through Freiq	Waverly/Waverly Granary	
8:43PM	GBLK 907	SM	General Merc	200	Through Freiq	Nickel City East/Feed Factory	
8:43PM	NCL 8031	SM	General Merc	200	Through Freiq	Nickel City East/Feed Factory	
8:43PM	NCL 8036	SM	General Merc	200	Through Freiq	Nickel City East/Feed Factory	
8:43PM	GBLK 4226-1	BP	Empty	200	Through Freiq	Nickel City East/Highway Brew Ware	
8:43PM	GBLK 1020	BP	Protein Feed	300	Through Freiq	Nickel City East/Grain Press	
8:43PM	MRS 4354-1	AMP	Grain & Feed	200	Through Freiq	Mills River/Mills River Feed & Grain	
8:43PM	NCL 861002	HLS	Empty	300	Through Freiq	Chesee City/Pulver Litter Factory	
8:43PM	GNAB 2342	GB	Empty	200	Through Freiq	Shaw/Grain Scrapworks	
8:43PM	GNAT 8678	TA	Empty	300	Through Freiq	Baltimore - 4/Baltimore Paddock	
8:43PM	FRB 674208	FM	Empty	200	Through Freiq	Rocheater - 4 (Temp/Cook Forest Lam	

Car Data Info and AAR Car Type
Train Dropping Car Off
Arrival Time in Town
Next Destination of Rail Car
Type of Train
What the Car is Carrying

# How to Read a Yard Departure List

Railroad Name
Fictional Date for Session
Date Switch List Printed

Nickel City Line Railroad
3/13/2000
3092005 10:18AM

Session Number

Yard Departure List (Style 2)

**Yard/Interchange: Baltimore Yard** Town: Baltimore - 4

Time	Road Number	Type	Lading	Train	Train Type	Next Destination	Final Destination
4:18PM	BAI 30902	TA	Fuel / Oil	714	Through Frac	Baltimore - 4/Baltimore Rubber Corp	

**Yard/Interchange: Nickel City Yard** Town: Nickel City

Time	Road Number	Type	Lading	Train	Train Type	Next Destination	Final Destination
12:30AM	NCL 8022	XM	General Merc	801	Through Frac	Nickel City Egg/Coke Factory	
1:55PM	CDG 18720	XM	General Merc	503	Through Frac	Carroll/Carroll Freight House	
1:55PM	GGDX 1001	XM	General Merc	503	Through Frac	Carroll/Carroll Freight House	
1:55PM	BAO 532148	WC	Empty	503	Through Frac	Chesse City/Puma Litter Factory	
1:55PM	NCL 80101	NCL	Empty	503	Through Frac	Chesse City/Puma Litter Factory	
2:22PM	NCL 8029	XM	General Merc	714	Through Frac	Baltimore - 4/Baltimore Terminal	
2:22PM	NCL 8040	XM	General Merc	714	Through Frac	Baltimore - 4/Baltimore Terminal	
2:22PM	LP 32100	SS	Stone	714	Through Frac	Baltimore - 4/Baltimore Metal Equip	
9:15PM	WCLX 8360	WP	Empty	203	Through Frac	Rigway - 5 (Temp)/Pittsburg Terminal	
9:15PM	NCL 8001	XMP	Empty	203	Through Frac	Rigway - 5 (Temp)/Rigway Yard	

**Yard/Interchange: Pittsburg Yard** Town: Rigway - 5 (Temp)

Time	Road Number	Type	Lading	Train	Train Type	Next Destination	Final Destination
8:20PM	CAO 20391	XM	Empty	203	Through Frac	Rigway - 5 (Temp)/Pittsburg Terminal	

Train Number Class of Train Type of Train
Yard Name
Car Data Info and AAR Car Type
Departure Time
Train Number which Car is to be Placed on.
Train Type
What the Car is Carrying
Next Destination of Rail Car

**APPENDIX F – ENGINEER RULES**

**Train Signals**

**Rule**

17	<p>The headlight will be displayed on the front of every train by day and by night. It must be dimmed at night</p> <ul style="list-style-type: none"> <li>(a) While passing through yards;</li> <li>(b) Approaching stations at which stops are to be made or where trains are receiving or discharging passengers;</li> <li>(c) Approaching train-order signals, meeting point and when stopped;</li> <li>(d) On two or more tracks approaching a train in the opposite direction;</li> <li>(e) Approaching fixed signals when the view of the signal is improved thereby.</li> </ul> <p>When a train is equipped with an oscillating white light or strobe light on the front of the train, the light shall be turned on from sunset to sunrise and when day signals cannot be plainly seen; approaching public crossings at grade; non-interlocked railroad crossings at grade; also when view is obscured approaching points where work crews may be present.</p> <p>When a train is equipped with ditch lights on the front of the train, the lights shall be turned at all times of day in all types of conditions. The lights shall be set to alternating warning lamps when approaching public crossings at grade; non-interlocked railroad crossings at grade; also when view is obscured approaching points where work crews may be present.</p>
----	--

**Use of Signals**

**Rule**

27	<p>A signal imperfectly displayed or the absence of a signal at a place where a signal is usually shown, must be regarded as the most restrictive indication that can be given at that signal (Stop).</p>
30	<p>The engine bell must be sounded when the engine is about to move; when running through tunnels; while approaching and passing public crossings at grade; and when passing a train standing on an adjacent track.</p>
34	<p>The engineer, when practicable, as soon as the next signal ahead affecting the movement of train or engine becomes visible, shall radio the signal indication by name, and shall thereafter continue to observe the signal and call any change of indication until it is passed. The conductor will repeat the signal indication back to the engineer by radio.</p>

**Movement of Trains**

**Rule**

82	<p>Time-table schedules, unless fulfilled, are in effect for twelve hours after their time at each station.</p> <p>Regular trains more than twelve hours behind either their scheduled arriving or</p>
----	--

	leaving time at any station lose both right and schedule, and can thereafter proceed only as authorized by train order.
S-83	<p>A train must not leave its initial station or any region nor a junction nor pass from one of two or more tracks to a single track, until it has been ascertained whether all trains due which are superior have arrived or left.</p> <p>Note – The dispatcher will confirm the status of superior trains and their related positions within the governed track territory.</p>
84	<p>A train must not start unless a proper indication to proceed has been received by the engineer. This indication will be relayed by signal indication or dispatcher authorization.</p> <p>When a communicating signal is inoperative and cannot be put in working order without detention, the train may proceed after the conductor and engineer have an understanding as to how the train is to be operated.</p>
85	Regular trains may pass other trains and extra trains may pass and run ahead of extra trains.
86	An inferior train must be clear at the time a superior train in the same direction is due to leave the next station in the rear where the time is shown unless otherwise directed by train order.
S-87	<p>An inferior train must keep out of the way of opposing superior trains and failing to clear the main track by the time required by rule must be protected as prescribed by Rule 99.</p> <p>Extra trains must clear the time of opposing regular trains not less than 5 minutes unless otherwise directed by train order and will be governed by train orders with respect to opposing trains.</p>
S-88	At meeting points between extra trains the train in the inferior time-table direction must take the siding unless otherwise directed by train order. The train must pull into the siding where practical; if necessary to back in, it must first be protected as prescribed by Rule 99.
S-89	<p>At meeting points the inferior train must take the siding and clear the time of the superior train not less than 5 minutes, except at schedule meeting points between trains of the same class, where the inferior train must clear the main track before the leaving time of the superior train.</p> <p>The superior train must stop at schedule meeting points with trains of the same class unless the switch is properly lined and track clear. The inferior train must pull into the siding when practicable; if necessary to back in, it must first be protected as prescribed by Rule 99.</p>
92	A train must not leave a station in advance of its schedule leaving time.
95	Regular trains must be designated by both schedule and engine number. They will be identified by schedule number.
S-97	Extra trains must not be run without train orders.
98	Trains must approach the end of two or more tracks, junctions, railroad crossings at grade, and movable bridges, prepared to stop unless switches are properly aligned,

	signals indicate proceed, track is clear, and clearance is issued by dispatcher to proceed.
99	<p>Where a train stops under circumstances under which it will be overtaken by another train, a member of the crew must go immediately with flagging equipment a sufficient distance to insure a full stop, and placing two lighted fusee on or near the affected track.</p> <p>When recalled and safely to the train will permit, he may return.</p> <p>The front of the train must be protected in the same way when necessary.</p>
102	<p>When a train is disabled or stopped suddenly due to an emergency condition, all adjacent tracks and junctions liable to be obstructed, must be protected at once in both directions until it is ascertained that they are safe and clear for the movement of trains.</p> <p>Trains approaching from either direction must stop and must not proceed until it is ascertained that it is safe to do so.</p>
104	Conductors and Flagmen are responsible for the position of switches and derails used by them and their train crews except where controlled by the dispatcher. Switches and derails must be properly aligned after having been used.
107	Trains must not pass between a passenger train receiving or discharging traffic at a station and the platform at which the traffic is being received or discharged.
108	In case of doubt or uncertainty, the safe course of action must be taken.
D-151	<p>Where two main tracks are in service, trains must keep to the right unless otherwise provided on the time-table.</p> <p>Where two or more main tracks are in service, they shall be designated by numbers and their use indicated by special instructions.</p>

### Movement by Train Orders

#### Rule

201	<p>For movements not provided by time-table, train orders will be issued by the dispatcher. Train orders will only contain information or instructions essential to such movements.</p> <p>They must be brief and clear; in the prescribed form when applicable; without erasure, alteration or interlineation.</p> <p>Where switch numbers are used, only switches of sidings will be numbered, No. 1 being the most eastward or northward switch, with the numbers increasing towards the westward or southward.</p> <p>When switch numbers are used in train orders, the word "Switch ...." Will precede the name of the station.</p>
202	Each train order must be given in the same words to all employees or trains addressed.

204	Train orders must be addressed to those who are to execute them.
209	<del>Operators receiving a train order must write the order down during transmission.</del> The operator will repeat the train order to the dispatcher for confirmation.

### Yard Operations

#### Rule

600	When operating within yard limits, all trains will operate under the direction of the Yard Master for the designated yard.
601	Yard masters shall clear all switch movements to and from the mainline with the dispatcher prior to initiating any movements or authorizing any trains into or off the main line to the yard.
602	If no Yard Master is assigned to a yard, trains must notify the dispatcher upon entering a yard. Once inside the yard limit, the train will use extreme caution upon approach of all switches. All switches operated within a yard shall be stored to their normal position by the train crew upon clearing the switch.

**APPENDIX G – HORN AND BELL CHART FOR ENGINEERS**

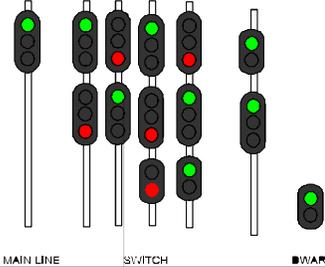
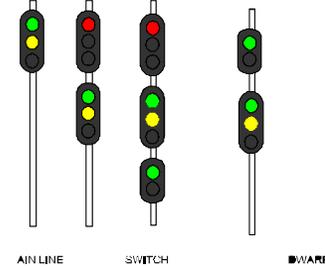
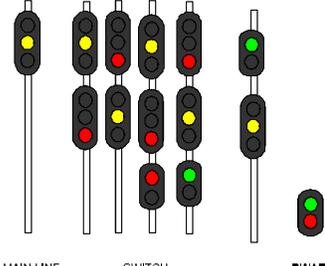
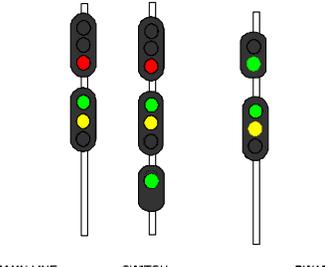
**Engine Horn Signals**

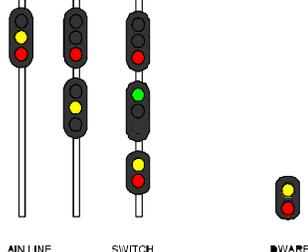
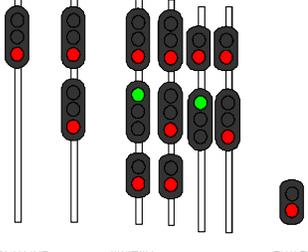
**Rule**

14	Passenger trains – A continuous blast of the engine horn is an emergency signal for the trainmen to apply air and hand brakes on train. Note – The signals prescribed are illustrated “o” for short sounds; “--“ for longer sounds. The sound of the horn should be distinct with the intensity and duration proportionate to the distance signal is to be conveyed.	
	<b>SOUND</b>	<b>INDICATION</b>
	(A) o	Apply brakes. Stop.
	(B) -- --	Release brakes. Proceed.
	(C) -- o o o	Flagman protect rear of train.
	(CA) -- o o o --	Flagman protect adjacent track.
	(D) -- -- -- --	Flagman may return
	(H) o o o	When standing, back.
	(J) o o o o	Call for signals
	(L) -- -- o --	Approaching public crossings at grade, to be prolonged or repeated until crossing is reached. Also when view is obscured by weather or other conditions, approaching interlockings, yards or other points where workmen may be present.
	(M) -----	Approaching station.
	(P) Succession of short sounds	Alarm for persons or live stock on the track.

## APPENDIX H – SIGNAL RULES

At the current time a block detection and signaling system has not been installed. Train movements are dependent on time-tables and train orders. Signals indicate the condition of switches they protect. A **GREEN** signal is not an indication to proceed. You must have clearance from the dispatcher or train order in order to proceed past a **GREEN** signal. The following chart indicates the meaning of each signal.

NAME	INDICATION	SIGNAL
Clear	Proceed.	 <p>The diagram shows three signal types: MAIN LINE, SWITCH, and DWARF. MAIN LINE has one green light. SWITCH has two green lights. DWARF has one green light.</p>
Medium Clear	Medium speed through crossovers, turnouts, sidings. Then proceed at maximum authorized speed.	 <p>The diagram shows three signal types: MAIN LINE, SWITCH, and DWARF. MAIN LINE has a yellow light on top and a green light on the bottom. SWITCH has a red light on top and a green light on the bottom. DWARF has a green light on top and a yellow light on the bottom.</p>
Approach	Proceed prepared to stop at next signal.	 <p>The diagram shows three signal types: MAIN LINE, SWITCH, and DWARF. MAIN LINE has a yellow light on top. SWITCH has a red light on top and a yellow light on the bottom. DWARF has a green light on top and a red light on the bottom.</p>
Slow Clear	Slow speed through crossovers, turnouts, sidings. Then proceed at maximum authorized speed.	 <p>The diagram shows three signal types: MAIN LINE, SWITCH, and DWARF. MAIN LINE has a red light on top and a green light on the bottom. SWITCH has a red light on top and a green light on the bottom. DWARF has a green light on top and a yellow light on the bottom.</p>

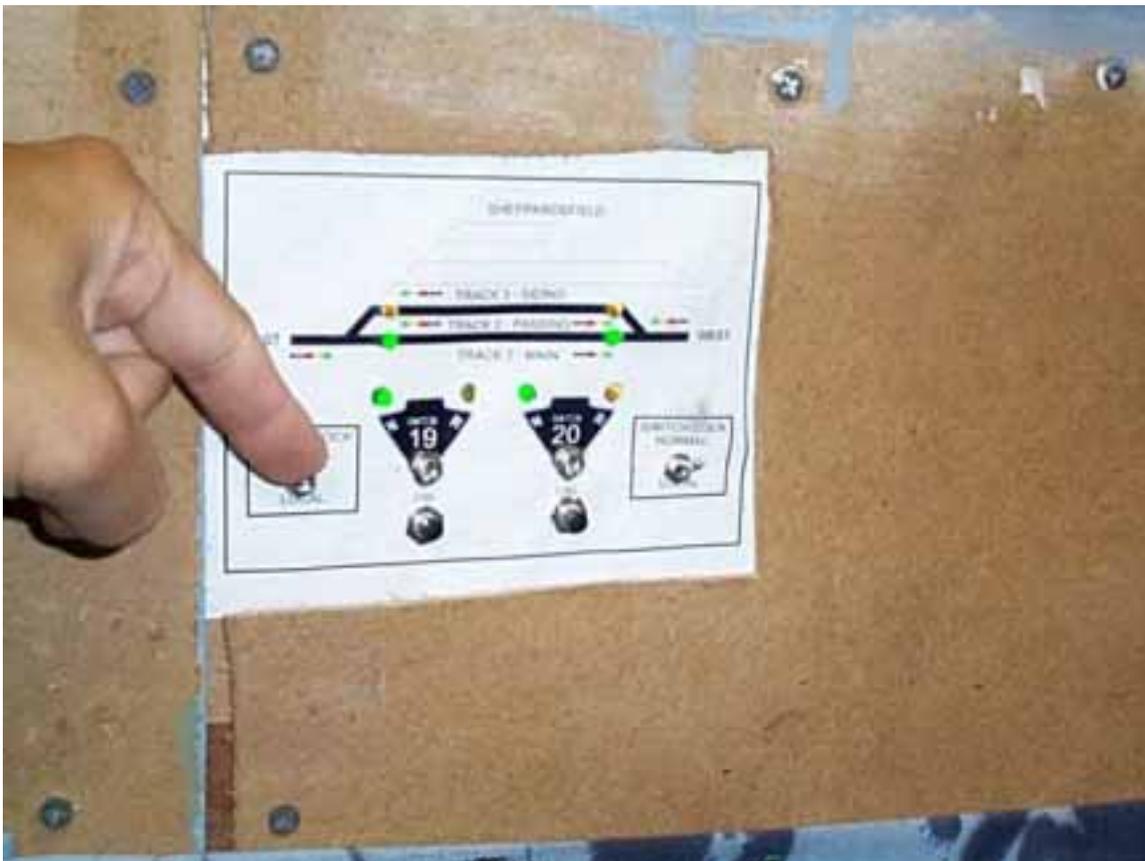
Restricting	Proceed restricting speed	 <p>AIN LINE      SWITCH      WARP</p>
Stop	Stop	 <p>MAIN LINE      SWITCH      WARP</p>

## APPENDIX I – OPERATION OF TURNOUT CONTROLS

This section describes the operation of mainline and siding turnouts by the Dispatcher, Yardmaster and Brakeman.

### MAINLINE FASCIA PANELS

These panels provide local control for mainline turnouts. Each panel has a diagram of the turnouts affected by each panel. The diagram is illuminated by LEDs that indicate turnout position of the affected turnouts. Green indicated a turnout is in the Normal position. Amber indicates the turnout is in the Reverse position. Below the diagram are turnout controls for each turnout. Each control has amber and green LEDs which correspond to the LEDs on the track diagram. A double throw toggle switch and a momentary push button switch are located at the bottom of the turnout control. The toggle switch is moved left or right to the desired position of the turnout. The turnout motor is activated by depressing the momentary push button at the bottom and holding it for 3 seconds until the LEDs change to the requested position.



**1) Place Switch Lock in Local Position.**



**2) Slide toggle switch on turnout control to either Normal or Reverse. 3) Activate switch motor by depressing momentary push button below turnout control for 3 seconds.**

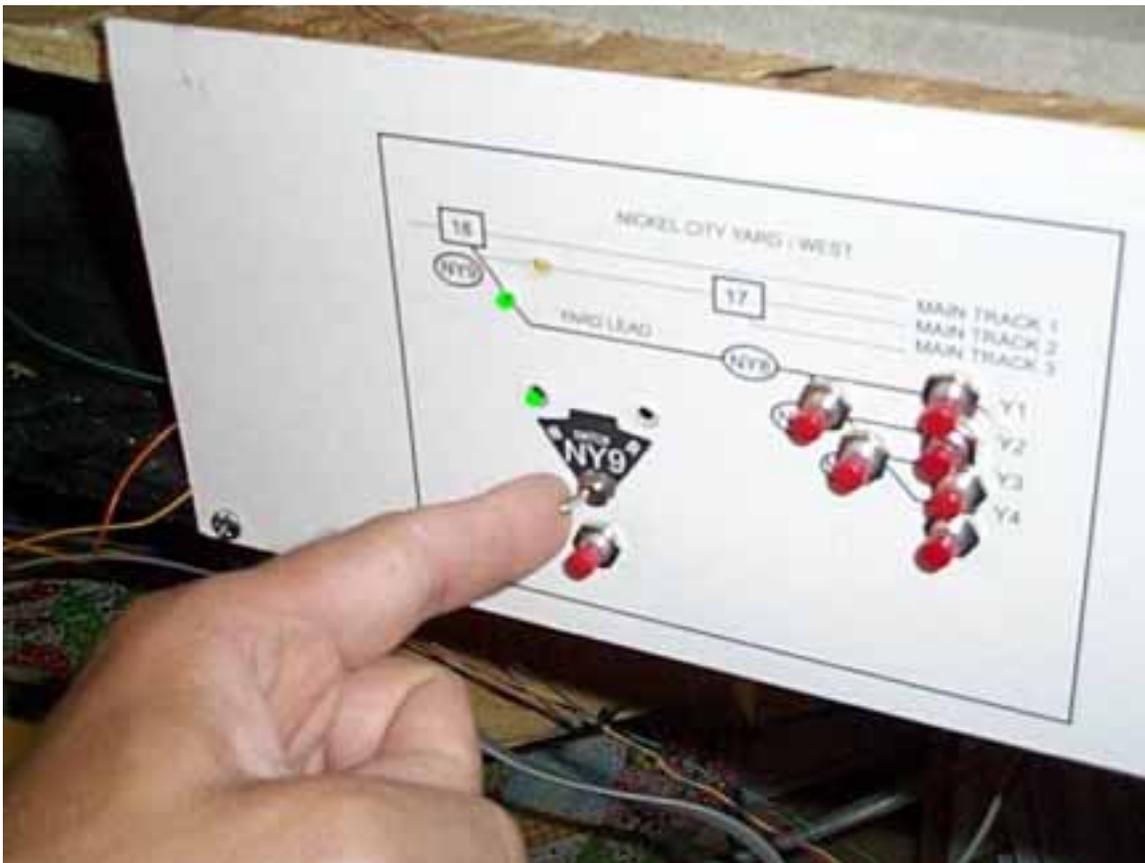
To the side of the turnout control is a toggle switch labelled Switch Lock. When the toggle switch is in the up (Normal) position, the Dispatcher has turnout control. When the toggle switch is in the down (Local) position, the Brakeman or Engineer can control the turnout from the Fascia Panel.

Local Control of any mainline turnout must be requested by the Train Crew to the Dispatcher. Once approved by the Dispatcher, the Train Crew can position turnout control to the Local position and make their necessary moves. When switching operations by the Train Crew are complete, the crew must restore each turnout control to Normal and advise the Dispatcher that turnout has been returned to the Dispatcher.

## NICKLE CITY YARD FASCIA PANELS

These panels provide local control of powered turnouts in Nickel City Yard. Powered turnouts are only provided for yard leads and arrival / departure tracks. All other turnouts are manually controlled by ground throws.

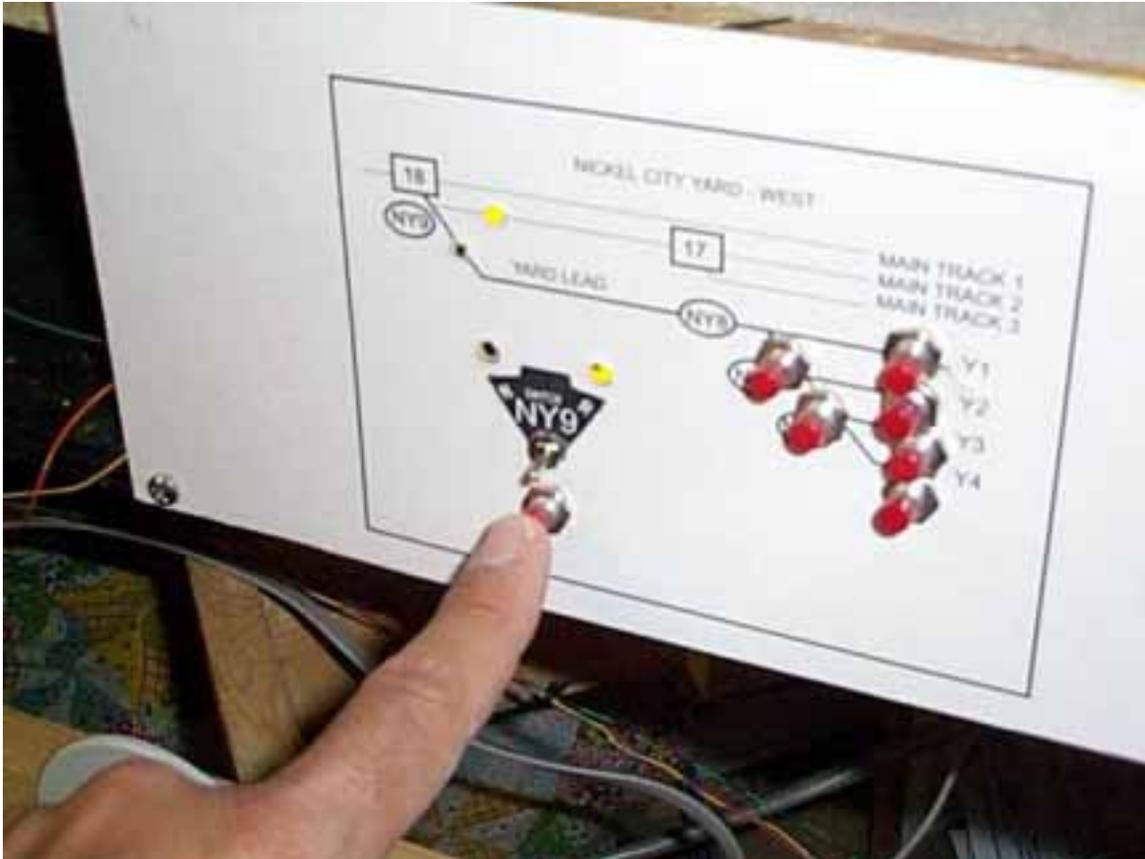
Unlike mainline fascia panels, yard fascia panels require the Yardmaster to transfer power to the panels. This is accomplished by switching the power toggle switch on the Yardmaster's panel from Normal to Local control. The Yard Fascia Panels operate differently than the mainline fascia panels in that the turnout controls seen on the mainline panels are only provided for yard lead turnouts. Operation of these turnout controls is the same as with mainline turnouts.



### 1) Slide toggle switch on turnout control to either Normal or Reverse.

A double throw toggle switch and a momentary push button switch are located at the bottom of the turnout control. The toggle switch is moved left or right to the desired position of the turnout. The turnout motor is activated by depressing the momentary push button at the bottom and holding it for 3 seconds until the LEDs change to the requested position. Amber and green LEDs on the yard fascia panel operate in the same way that they do on the mainline fascia panels.

Arrival / Departure turnout operation differ from the operation of the yard lead turnouts. Momentary push buttons are located on the panel over the direction they control. To change turnouts for specific directions, simply press and hold for 3 seconds each push button along the route you desire a train to run. This will align the turnouts to that route.



**2) Activate switch motor by depressing momentary push button below turnout control for 3 seconds.**

Normally, powered turnout control is maintained by the Yardmaster. However, when ops sessions are short staffed or complex maneuvers are required by the Yard Crew, the Yardmaster's panel can transfer control of these turnouts to the fascia panels.

## STAGING YARD FASICA TURNOUT CONTROL

Staging yard turnout control is maintained by a series of Digitrax DS54 stationary decoders. These decoders provide turnout routing as well as remote control by Digitrax throttles. To control turnout routes from the fascia panel, simply dial up the desired route on the red rotary switch and depress the momentary push button below the dial for a second to activate the route. All turnouts for the affected route will engage in a pre-programmed order to set up the route.



1) Dial up the desired route on the staging yard fascia panel.



2) Press the momentary push button for 1 second to activate the desired route.

## **GROUND THROW CONTROL**

Ground throws are manually operated turnout controls. Ground throws are located in all yards and on leads to small industries along the mainline. Some ground throws not only route a turnout in a specific direction but they also activate dwarf signals to indicate switch positions on the mainline.

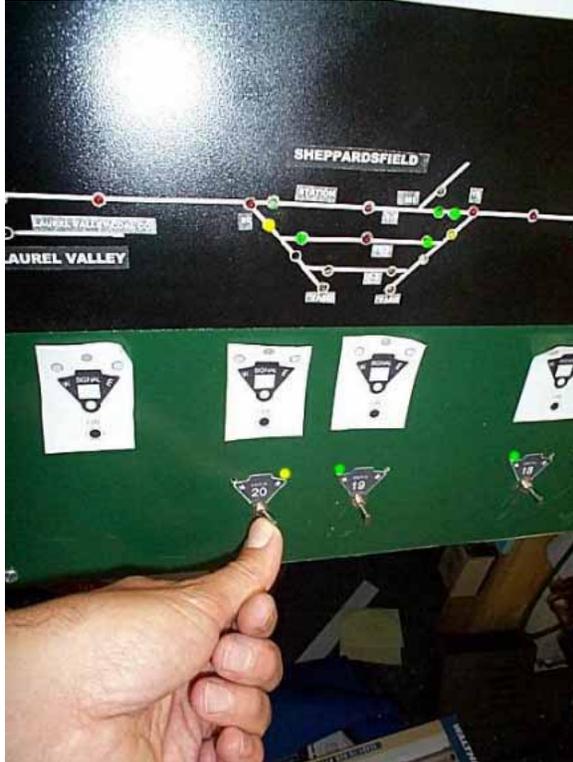
Regardless of what type of ground throw is used, operation is a simple matter of moving the lever of the ground throw from one position to the other. This will change the position of the turnout.

As a general rule, when finished with a ground throw, always return the turnout to the Normal (straight) position.



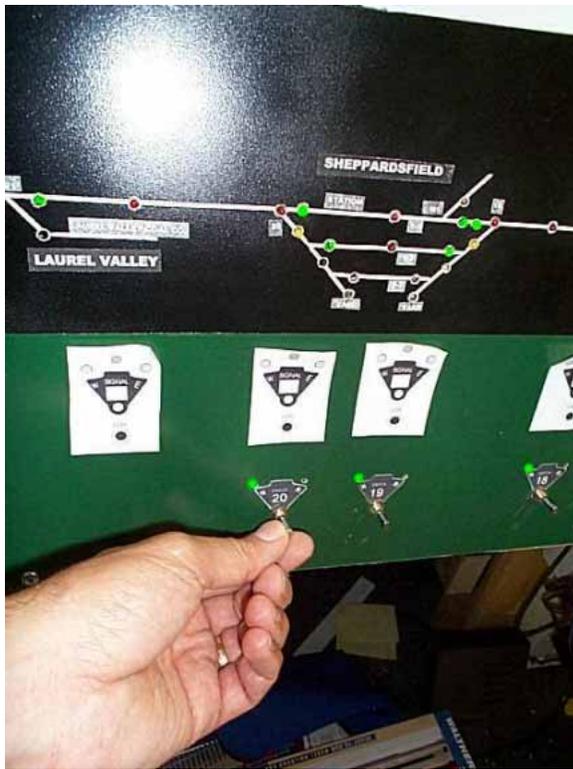
**Simply move the lever of the ground throw from one position to the other to change the route of the turnout.**

## DISPATCHER TURNOUT CONTROL



Dispatchers control mainline turnouts from the Dispatcher's Panel. The panel shows a graphic of the entire physical area modeled for the railroad. Like the mainline fascia panels, the diagram is illuminated by LEDs that indicate turnout position of the affected turnouts. Green indicates a turnout is in the Normal position. Amber indicates the turnout is in the Reverse position. Below the diagram are turnout controls for each turnout. Each control has amber and green LEDs which correspond to the LEDs on the track diagram. A double throw momentary toggle switch is located at the bottom of the turnout control. The toggle switch is moved left or right to the desired position of the turnout by depressing it and holding it for 3 seconds until the LEDs change to the requested position.

**1) Select the appropriate switch control.**

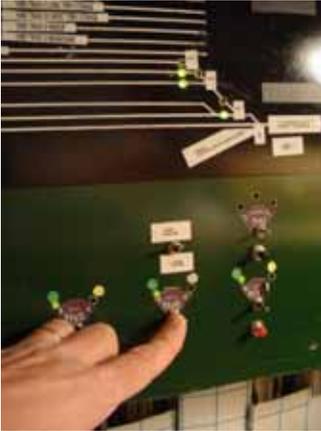


**2) Push and hold the toggle switch in the desired direction for 3 seconds to change the turnout direction and the LEDs.**

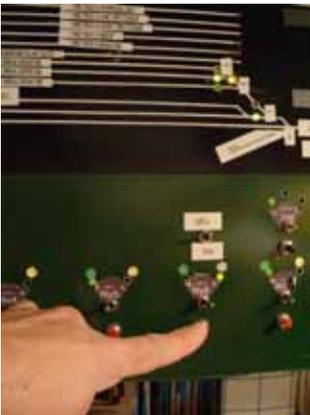
## YARDMASTER TURNOUT CONTROL

Yardmasters control yard leads and arrival / departure track turnouts in Nickel City Yard from the Yardmaster's Panel. The panel shows a graphic of the entire physical area of Nickel City Yard. Like the mainline fascia panels, the diagram is illuminated by LEDs that indicate turnout position of the affected turnouts. Green indicates a turnout is in the Normal position. Amber indicates the turnout is in the Reverse position. Below the diagram are turnout controls for each turnout. Each control has amber and green LEDs which correspond to the LEDs on the track diagram. A double throw momentary toggle switch is located at the bottom of the turnout control. The toggle switch is moved left or right to the desired position of the turnout by depressing it and holding it for 3 seconds until the LEDs change to the requested position.

If control of the yard lead and arrival / departure track turnouts is needed on the fascia side of the layout, the Yardmaster can relinquish control by switching the Yard Power toggle switch from Normal to Local control. This process will reroute all power to the fascia panels and render the Yardmaster's panel inoperative. Power to the Yardmaster's panel can be restored by switching the Yard Power toggle switch back to the Normal position. (Note: all fascia panel toggle switches for the Yard shall be in the neutral (center) position while operating from the Yardmaster's panel. Otherwise a circuit conflict can occur in one or more turnout controls preventing turnouts from properly aligning themselves due to a feed back loop in the power system.)



**1) Select the appropriate switch control.**



**2) Push and hold the toggle switch in the desired direction for 3 seconds to change the turnout direction and the LEDs.**