North Jersey Coast Line

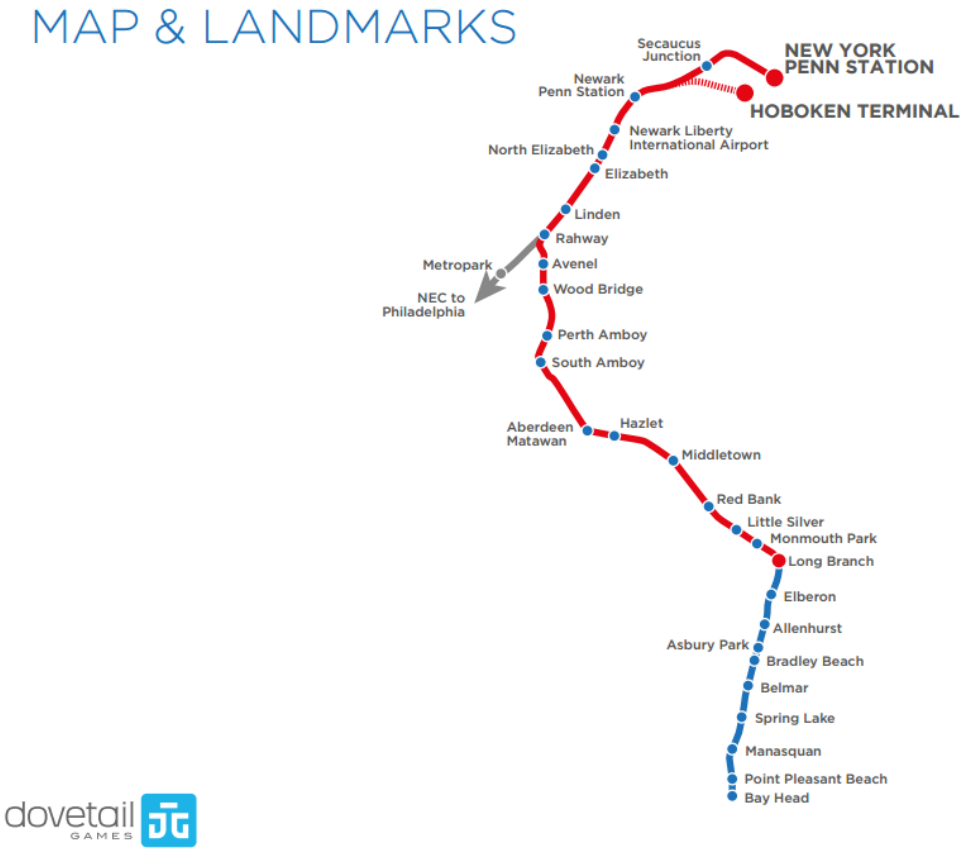
1 ROUTE INFORMATION

1.1 The Route

Forming part of the NJ TRANSIT® commuter network, the 66 mile North Jersey Coast Line follows the New Jersey coast from New York's Penn Station to Bay Head and features 28 stations along its length.

The route South of Rahway is entirely double-tracked, with the exception of the bridge over the Manasquan River at Brielle and is electrified along part of the length as far as Long Branch from the New York end of the line.

There are passenger yards at Long Branch and at Bay Head. While Long Branch Yard is entirely electrified, and mostly interlocked, Bay Head is not electrified and contains a large balloon track where entire trains can reverse direction without backing up or uncoupling the locomotive and removing the need for a turntable.



1.2 Focus Time Period

The time period for this Route DLC is based around the present day (2015).

2 GETTING STARTED

2.1 Recommended Minimum Hardware Specification

The North Jersey Coast Line route is highly detailed, feature rich and incorporates detailed night lighting. Therefore, it will benefit from a higher PC specification.

- Windows Vista / Windows 7 / Windows 8
- Processor: 2.8 GHz Core 2 Duo (3.2 GHz Core 2 Duo recommended), AMD Athlon MP
- RAM - 2.0GB
- GFX - 512 MB with Pixel Shader 3.0 (AGP PCIe only)

SFX - Direct X 9.0c compatible

3 ROLLING STOCK

3.1 ALP-45DP & Rolling Stock

3.2 Comet IV

3.3 Comet V Cab Car

3.4 Multi-Level Cab Car

3.5 Multi-Level Trailer

3.6 Multi-Level Special Trailer

4 DRIVING THE ALP-45DP

4.1 Cab Controls ALP-45DP

1	Combined Throttle/Brake
2	Reverser
3	Auto Brake
4	Independent Brake
5	Horn
6	Headlights
7	Ditch Lights
8	Cab Light
9	Instrument Lights
10	Fault Acknowledge
11	Wipers
12	Sander
13	Bell
14	Handbrake
15	Pantograph
16	Acknowledge
17	Speedometer
18	Main/EQ Reservoirs
19	Brake Cylinder/Brake Pipe
20	Wheel Slip Light
21	Sander Light

4.2 Cab Controls Comet V Cab Car

1	Combined Throttle/Brake
2	Reverser
3	Train Brake
4	Horn
5	Headlights
6	Ditch Lights
7	Wipers
8	Sander
9	Emergency Brake
10	Acknowledge
11	Speedometer
12	Main/EQ Reservoirs
13	Brake Cylinder/Brake Pipe
14	Cab Light
15	Instrument Lights

4.3 Cab Controls Comet V Cab Car

1	Combined Throttle/Brake
2	Reverser
3	Train Brake
4	Horn
5	Headlights
6	Ditch Lights
7	Wipers
8	Sander
9	Emergency Brake
10	Acknowledge
11	Speedometer
12	Main/EQ Reservoirs
13	Brake Cylinder/Brake Pipe
14	Cab Light
15	Instrument Lights

4.4 Locomotive Keyboard Controls

Key Equivalent	Action
A / D	Increase or Decrease the combined Throttle and Dynamic brake.
W / S	Move reverser control Forward or Backward.
: / @	Increase or Decrease Auto Brake.
[/]	Increase or Decrease Independent Brake.

4.5 General Keyboard Controls

Key Equivalent	Action
T	**Load/Unload.** Press once to load/unload passengers or freight.
Ctrl + T	**Close Doors.** Manually close passenger doors. (When loading timer expires)
Ctrl + Shift + T	**Manual Doors.** Toggle between automatic and manual door operation.
X	**Sander**. Causes sand to be laid on the rails next to the wheels to assist with adhesion. Press to toggle activation.
H	**Headlights.** Repeatedly pressing will cycle through headlight states where appropriate.
J	**Ditch Light.** Toggle the ditch lights.
Ctrl + J Ctrl + Shift + J	**Ditch Light (Comet V).** Increase/decrease the ditch light control cycling between: Off, On and Flashing.
V	**Windscreen Wipers**. Press once to switch on and again to switch off.
Ctrl + V	**Windscreen Wipers (Intermittent)**. Switch wipers between constant and intermittent mode.
Z	**Engine**. Stops and restarts the engine.
Ctrl + Shift + Z	**HEP (Head End Power).** Starts and stops the power generation for passenger car heating and lighting.
Space	**Horn.** Press once to sound the Horn.
B	**Bell.** Sound the Bell
/	**Handbrake.** Press to toggle the train Handbrake on and off.
L	**Cab Lights.** Toggle the Cab main light on and off.
Ctrl + L	**Desk Lights.** Toggle the Cab desk light on and off.
I	**Instrument Lights.** Toggle all Instrument Lights
P	**Pantograph.** Raise and lower the selected pantograph.

Key Equivalent	Action
	Also starts the power changeover process to Electric mode.
Y	**Power Mode.** Start power changeover process.
Ctrl + Y	**Power Mode (Auto)**. Toggle automatic power mode changeover.
Ctrl + D	**ACSES.** Toggle ACSES in cab signalling system. (Advanced Civil Signal Enforcement System)
Ctrl + F	**ATC.** Toggle ATC safety system (Automatic Train Control)
Ctrl + 5 Ctrl + 6	**Destinations.** Cycle destination board displays.
Ctrl + Shift + C	**Couple manually.**
Tab / Ctrl + Tab	Request authority to pass a signal at danger.

4.6 NJ TRANSIT® Electronic Braking System

All driving units featured in this pack utilize the retrofitted NJ TRANSIT® braking system. The system uses a blended mix of dynamic and air braking to achieve smooth and effective braking. The brake notches are as follows;

Release: Releases the brake pressure built up in the brake pipe.

Hold/Lap: Holds the current brake pressure.

Service: Initial brake application.

Handle Off: Full service brake application.

Emergency: Empties the brake pipe and applies full dynamic brake as a last ditch attempt to stop the train in an emergency situation.

4.7 Power Mode changeover process (ALP45-DP).

The track North of Long Branch has overhead power lines, allowing for electric locomotive operation. The track South of Long Branch is a diesel only operation area because there are no overhead lines. The ALP45-DP is capable of both diesel and electric operation, and can be changed between the power modes whilst on the go.

Switching from Diesel to Electric, is as simple as using the Pantograph switch. Pushing the switch to raise the pantograph will start the changeover process, during the changeover process the pantograph will be raised and the diesel engine will be shut down.

Switching from Electric to Diesel, can be achieved by pressing the Fault Acknowledge button. Pushing the button will start the diesel engine and lower the pantograph during the power changeover process.

Alternatively the keyboard button “Y” can be used to start the changeover process regardless of which power mode the loco is currently running in.

The changeover process can be set to switch automatically when the train passes through the appropriate track area, by pressing “Ctrl-Y”. This will toggle the automatic switchover process. Even with the automatic changeover toggled to active, the process can still be started manually via the cab controls or keyboard.

For the automatic process to work (and for AI units), there are markers placed on the track to indicate the points to start the changeover process. The changeover will show message boxes on the HUD to inform the driver of the changeover process.

The automatic power mode changeover process is disabled by default.

4.8 Manual Door Control

The Comet V Cabcar and Comet IV coaches have been equipped with a manual door control feature. This will allow for manual closing of the doors, instead of the automatic closing process that is default as standard.

The manual door control can be enabled or disabled with “Ctrl-Shift-T” and the doors themselves can be closed with “Ctrl-T”. The doors cannot be closed within the first few seconds of being opened, or before the scenario door timer has expired. The doors must still be opened with the standard “T” keyboard control or HUD button.

The manual door control feature is disabled by default.

5 SCENARIOS

5.1 [ALP-45DP] 1. Hoboken

An introduction to the Hoboken section of the route. Take an early evening service between Hoboken and Newark Penn.

Duration: 15 Minutes
Difficulty: Easy

5.2 [ALP-45DP] 2. Northeast Corridor

You'll be taking a passenger service from Newark Penn as far as Rahway along the Northeast Corridor route. The line ahead is clear and it's a beautiful day so there shouldn't be any delays.

Duration: 25 Minutes
Difficulty: Easy

5.3 [ALP-45DP] 3. To Long Branch: Part 1

You take charge of the ALP-45 DP for a fall evening's run from Rahway to Aberdeen-Matawan, calling at all stations on the way.

Duration: 25 Minutes
Difficulty: Easy

5.4 [ALP-45DP] 4. To Long Branch: Part 2

Picking up where you left off in the first part of this scenario, you carry out the rest of the journey to Long Branch.

Duration: 30 Minutes
Difficulty: Easy

5.5 [ALP-45DP] 5. Ocean Spray

It's been raining heavily all week in New Jersey, making driving conditions difficult. That, and a tight timetable, make this run to Long Branch a challenging one.

Duration: 40 Minutes
Difficulty: Medium

5.6 [ALP-45DP] 6. Frozen to the Core

You take charge of the ALP-45 DP on this wintery morning passenger run, travelling from Elizabeth to New York Penn.

Duration: 30 Minutes
Difficulty: Hard

5.7 [ALP-45DP] 7. New York Night Shift

A busy evening on the Northeast Corridor has you taking this passenger service from Rahway to New York Penn.

Duration: 40 Minutes
Difficulty: Hard

6 RAILFAN MODE SCENARIOS

Railfan Mode provides a unique chance to observe and enjoy the operations of trains without the pressure and involvement of driving them. Railfan Mode scenarios are positioned at various key points along the route and provide camera functionality to sit back and watch the action unfold.

These scenarios are located on the **Drive** screen under the **Career** tab.

6.1 [RailfanMode] Belmar

Duration: 15 Minutes
Difficulty: Easy

6.2 [RailfanMode] Hoboken

Duration: 15 Minutes
Difficulty: Easy

6.3 [RailfanMode] Long Branch

Duration: 15 Minutes
Difficulty: Easy

6.4 [RailfanMode] Newark International Airport

Duration: 15 Minutes
Difficulty: Easy

7 SIGNALLING

7.1 Signalling

The signalling along the North Jersey Coast route is in accordance with the following practices laid out in the NORAC (*Northeast Operating Rules Advisory Committee*) rulebook, which is utilised by a number of North American railroad operators. NJ TRANSIT® are adopters of these rules.

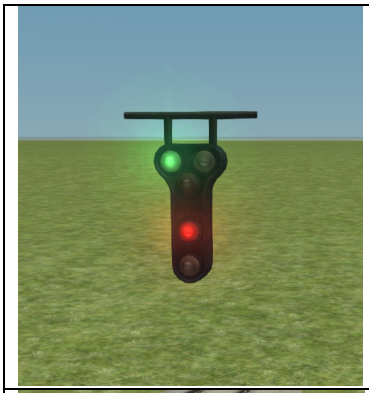
Signalling speeds are defined as follows:

Normal Speed:	The maximum authorised speed for a section of track.
Limited Speed:	Passenger trains not to exceed 45mph, freight traffic 40mph.
Medium Speed:	A speed not exceeding 30mph.
Slow Speed:	A speed not exceeding 15mph.
Restricted Speed:	Movement to permit stopping within one half the range of vision and not to exceed 20mph outside of interlocking limits, 15mph within interlocking limits.

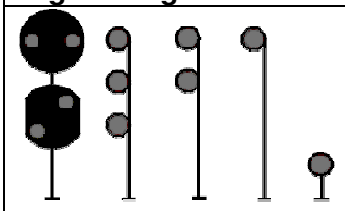
7.2 Multi-Aspect Colour Light Signals

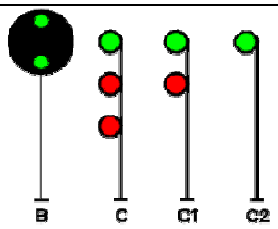
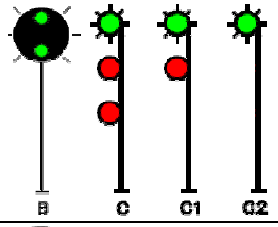
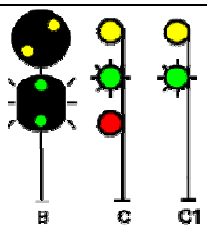
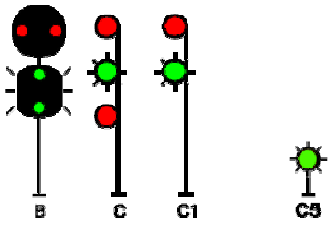
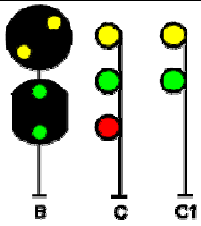
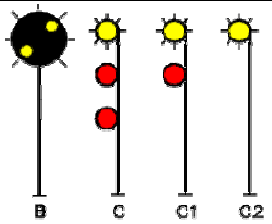
The route features 4 types of signal.

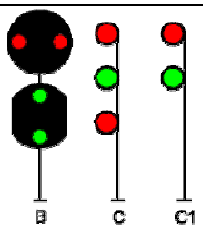
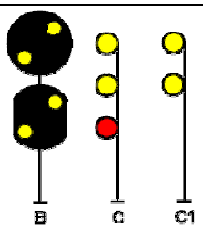
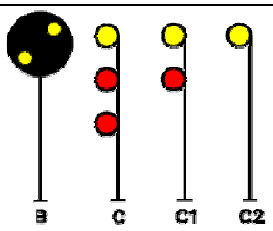
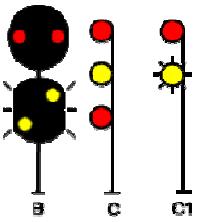
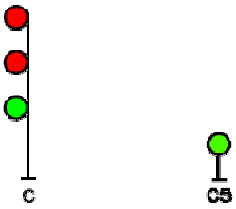
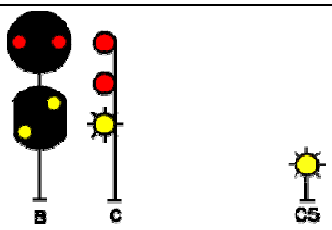
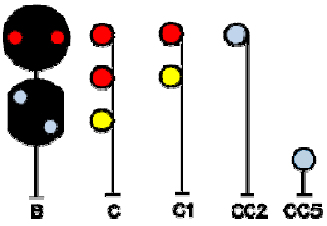
	**'Tri-light' signals** These are prominent along the NJ TRANSIT lines between Hoboken and Bay Head.
	**Pennsylvania Railroad (PRR) position colour light signals** These signals are utilized along the North East Corridor from New York Pennsylvania station.

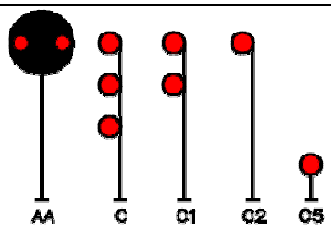
	**Pennsylvania Railroad high level signals** Featured in the New York Pennsylvania station, these compact heads are hung from the ceiling.
	**Ground signals** Used in sidings and other non-mainline sections.

7.3 Signal Aspects

Signal Legend	
	NEC aspects 3 Head 'tri-light' signal 2 Heads 'tri-light' signal Single Head 'tri-light' signal Ground Signal

RULE	ASPECT	INDICATION
281 Clear		Proceed at line speed.
281a Cab Speed		Proceed in accordance with cab signal indications. Reduce speed to not exceed 60mph if Cab Speed cab signal is displayed without a signal speed, or if cab signals are not operative.
281b Approach Limited		Proceed approaching the next signal at Limited Speed.
281c Limited Clear		Proceed at Limited Speed until the entire train clears the interlocking, then proceed at Normal Speed.
282 Approach Medium		Proceed approaching the next signal at Medium Speed.
282a Advance Approach		Proceed, being prepared to stop at the second signal. Trains must begin reduction to Limited Speed as soon as the engine passes the Advance Approach signal.

283 Medium Clear		Proceed at Medium Speed until the entire train clears the interlocking, then proceed at Normal Speed.
284 Approach Slow		Proceed approaching the next signal at Slow Speed. Trains must begin reduction to Medium Speed as soon as the engine passes the Approach Slow signal.
285 Approach		Proceed, being prepared to stop at the next signal. Trains must begin reduction to Medium Speed as soon as the engine passes the Approach signal.
286 Medium Approach		Proceed, being prepared to stop at the next signal. Trains must begin reduction to Medium Speed as soon as the Medium Approach signal is clearly visible.
287 Slow Clear		Proceed at Slow Speed until entire the train clears the interlocking, then proceed at Normal Speed.
288 Slow Approach		Proceed, being prepared to stop at the next signal. Slow Speed applies until the entire train clears the interlocking, then proceed at Medium Speed.
290 Restricting		Proceed at Restricted Speed until the entire train has cleared the interlocking (if the signal is an interlocking signal) and the leading wheels have passed a more favorable fixed signal. Trains with operative cab signals must not increase speed until the train has run one train length or 500 feet (whichever distance is greater) past a location where a more favorable cab signal was received.

292 Stop		Stop.

7.4 In-Cab Signalling

The ALP-45 and the Comet Driving Cab features ACSES In-Cab Signalling to interpret signals on the North Jersey Coast. The device informs the driver of any track restrictions through a series of buttons and displays. ACSES can be enabled by pressing Ctrl + D on the keyboard.
When enabled the current signal speed limit is displayed.

In the ALP-45 the speed restriction is displayed above the speedometer. In addition to this, the corresponding button surrounding the speedometer will light up to indicate the current signal restriction the driver is operating under.

1 – Stop (292)
2 – Restricting (290)
3 – Approach (285)
4 – 30 (Medium Speed)
5 – 45 (Limited Speed)
6 – 60 (281a)
8 – 80 (80 mph)
9 – 100 (100 mph)
10 – Maximum Permitted Speed

In the Comet Cab Car the restricted speed is indicated through the green bar around the speedometer and black text in the centre of the dial. In a non-restrictive zone the text becomes green and the green bar disappears. In the event of over-speeding while under a speed restriction, the bar becomes red and tracks the current speed of the driver to inform them they are speeding.

7.5 ATC

ATC or Automatic Train Control is featured in both the ALP-45 and the Comet Cab Car. It can be activated with Ctrl + F on the keyboard. ATC is a safety system that will trigger if an over-speeding operation is carried out. The driver has 8 seconds to drop the throttle to 0, apply the train brake to 40% or higher and press the Acknowledge button in the cab (Q on the keyboard) or an emergency brake application will take place.

8 CREDITS

Dovetail Games would like to thank the following additional contributors for their input in the creation of North Jersey Coast Line:

Outsource:
Ricardo Rivera

Special Thanks:
The members of our Beta forum and community.