

The Return of The Doctor

Doctor Feelgood's Field Guide to Physical
Qualifications in the Northeast Corridor

Version 4 (2/03)

A joint project of Brotherhood of Locomotive
Engineers Division 482 and the Amtrak
Baltimore Road Foreman Office, in the interest
of aiding Train and Engine Service employees.

This Guide is intended as a learning aid only!
Please check Timetables, Special Instructions
and current Division Bulletins for the latest
information.

How to use this guide

The most difficult part of qualifying on physical characteristics is finding a system of study that works for you. Once you have found your system, the process will get easier as you move along.

There is no substitute in this process for riding trains, studying your Timetable and current notices or looking at maps. The Doctor is designed to help you organize your study, providing a single place to refer for physical locations and special instructions related to locations. You may find that writing out information will help you to remember details.

Necessarily, this guide is only as current as the materials current at the time of publication. The railroad property and rules are constantly in flux. As with all materials you will get, **you must review all materials to verify their current accuracy.** Details relating to the area you are studying may be located in Road Foremans Notices, On Board Service Notices, Bulletin Orders, Division Notices or other places.

Obtain current maps and study notes from the appropriate Rules Examiner Office.

The Doctor uses these Conventions

Direction from CP Avenue to Zoo is Northward. Direction from Zoo to New York is Eastward.

Milepost numbers run from Zoo south toward Washington. Signal numbers are even going north; odd coming south.

Switches are assumed to be trailing point for normal direction of travel unless specified otherwise.

Tracks are numbered from East to West from Avenue to Zoo Tower. Tracks are numbered from South to North from Zoo Tower to A Tower.

The standard arrangement for Industrial tracks, Public Delivery tracks, Pickup tracks etc., unless otherwise noted, is: Electric lock switch, trailing point for the traditional flow of traffic, with no overhead wire, and a "toad" type derail (flops over the railhead). There ARE exceptions.

Switches in 251 signal territory generally don't have electric lock switches. Because of this, there are often no references to these switches in the Timetable at all.

Be aware of the procedures for entering and leaving tracks with electric lock switches. Check SI 104 in each section. Some tracks are "out of service" per SI 132 in each section. This SI allows for use of these switches under specialized conditions.

The standard arrangement for passenger platforms, unless otherwise noted, is: low level passenger platforms outside from main tracks, with a fence between 2 and 3 tracks and low level wooden access platforms crossing the outside tracks to 2 and 3. There ARE exceptions.

Most Amtrak, MARC and NJT stops are now High level. Most Septa stops are low.

CETC designations are only shown where they change. CETC Dispatchers control not only interlockings but also the power grid and intervening tracks and you must know who controls the territory in each situation.

Interlockings are shown in **Bold**.

Chapter I: Avenue to Baltimore Penn Station Stations and Breaks-Avenue to Paul

<u>designated place</u>	<u>location</u>	<u>notes</u>
C Interlocking	135	Controlled by K Tower southbound at Avenue. Northbound signal at Avenue is CP Avenue . Union Market switch on east side is out of service by Timetable and removed.
CETC 1 ↓		
CP Avenue	134.6	Controlled Point, northbound only, controlled by CETC 1. Begin Amtrak Northeast Corridor.
MD-DC State Line	131.6	North of Anacostia River
Landover	128.8	Interlocking. Junction CSX Mainline to RO. Northbound signal bridge leaving Landover has Carroll Gauntlet indicators. Pick up Amtrak 1 at south limits. Landover northbound home signal bridge has 4 signals: Amtrak 3, 2,1 and CSX 1F.
Ardwick Industrial track	127.8	1 track.
New Carrollton	127	Amtrak and MARC passenger station, high platform between 2 and 3. Approx. 9.5 cars.
Carroll	127	Interlocking. Extended limits on 2 to include Carroll Gauntlet. High speed crossover. SI 80-S1
Seabrook	124.7	MARC high platform passenger station on 3 and 1. No fence. Low level access to 2 track from 1 on south and 3 on north.
Hot Box Detector	123.3	Hot box detector. This is the actual location. Amtrak current maps are incorrect. SI 72-S7 special restriction.
Home Depot (Merkle Press, Holiday Printers)	122.3 (122.6?)	1 track, incorrectly located at 122.6 in Timetable.
Bowie	120.5	Interlocking. Wye and access to CSX Popes Creek Secondary. Authority on South leg of wye: CETC 1. CSX authority on North leg as far as signal to mainline.
Bowie State (Jericho Park)	119.4	MARC high platform passenger station outside. No fence. Low level access from 1 to 2 at north end. Low level access from 3 to 2 at south end.
UG Bridge 118.09	118.09	UG Bridge. SI 40-P1 special load restrictions. 40/30/20.
Odenton MW Base Short Track	114.9	1 track. South end access to Odenton MW base. Facing point for normal moves. 2 Split rail derails.
Odenton MW Base Long Track	113.9	1 track. North end access to MW base.

<u>designated place</u>	<u>location</u>	<u>notes</u>
Odenton	113.6	MARC staggered high platform passenger station outside. No fence. Low level access 1 to 2 south, 3 north.
National Plastics	113.5	1 track.
Grove	112.4	Interlocking. High speed 2 to 1. SI 80-S1
McMillan-Blodel	111.9	1 track.
Baltimore Commons Industrial	108.1	3 track.
Hot Box Detector	107.5	Hot Box Detectors. SI 72-S7 restriction for cars with 6 axles.
BWI Airport Rail Station	106.3	Amtrak and MARC high platform passenger station outside. Northbound holds 4 cars. No fence. Low level access from 1 to 2 south and 3 to 2 north.
Winans	103.4	Interlocking on 1 and A track only. Southbound Automatic signal for 3 track is on the Northbound Winans signal bridge.
Halethorpe	103	MARC passenger station. Temporary fence currently between 2 and 3. Low level access from A to 2. Rule 121(c)
Washington Aluminum (Union Carbide)	101.7	A track. Currently listed as out of service. SI 132-P1
Filberts (Liptons)	101.6	3 track. Electric lock , split rail AND toad derail. High stand Amtrak signal protecting derail leaving track.
Solo Cup	101.5	A track.
Loudon Park Pickup track	100.2	A track. Bolt lock type electric lock switch. Catenary south of mainline switch must be considered Live and Dangerous.
Frederick Road	99.9	OH bridge
West Baltimore	98.5	MARC passenger station. Rule 121(c) on A. Fence between 1 and 2.
Edmondson	98.3	OH bridge.
Bridge	98.2	Interlocking. Note: Switches have been removed from 3 track, but signals still can display STOP.
Fulton	97.7	Interlocking. Southbound home on 3 esp. hard to see. B&P Gauntlet Indicators in place and illuminated at Fulton . Timetable shows Gauntlet in service, and switches are present, but interim tracks are removed.
		CETC 1 ↑
		CETC 2 ↓
Gilmore St	97.5	South section of B & P tunnel.
Pennsylvania Ave.	97	Opening in B & P tunnel, distant signals for both Fulton and Charles .
John St.	96.2	North section of B & P tunnel.

<u>designated place</u>	<u>location</u>	<u>notes</u>
Charles	95.9	Interlocking. South end of Baltimore station. Northbound home signals are very close to north portal of tunnel . Switch for B & P Gauntlet still in place. Amtrak Cockeyville Industrial track from Pedestal signal to west, NO WIRE. Access Mt. Vernon Runner (SI 132-P1 out of service) off Cockeyville. Southbound Interlocking “hold out” type signals on northbound home signal bridge for Charles on 2 and 3, protecting the former Gauntlet.
Baltimore Penn Station	95.7	Amtrak, MARC and MTA Light Rail passenger station. See notes on Baltimore Station.
Paul	95.2	Interlocking, north of Baltimore Penn Station. Includes switch for north leg of wye. See notes on Balt. Wye.. Note SI 277-P3 regarding movements with less than Clear signal indications.

Notes on Avenue to Paul

- Notice locations of MARC spot markers at all MARC stops.
- The Carroll Gauntlet is still in service. The northbound Gauntlet Indicators are at the Southbound home signal bridge for Landover. Southbound Carroll Gauntlet Indicator signals are on automatic signal bridge 1245 and on the Carroll southbound home signal.. They are not working at the time of this writing. Trains with equipment requiring use of the Carroll gauntlet must know that Carroll is set for the gauntlet or stop before reaching it.
- SI 34-P2: Southward passenger trains not making a station stop at New Carrollton will make a running test of the brakes...before passing Landover.
- Bowie wye south leg is CETC 1 authority and can be occupied from the Main using signal indication as authority. That authority extends only to the junction with the North leg, where CSX dispatcher authority begins.
- SI 19-P3: Passenger trains not making a station stop at BWI or New Carrollton must sound one long blast on their engine whistle or horn when approaching these stations on a track adjacent to the high level platform whenever passengers are observed.
- Amtrak Express Mail cars are limited to 50 mph on 1 track at New Carrollton, Seabrook, Bowie State, Odenton, and BWI.
- When using Filberts (Liptons) track, crews must close both the switch and the derail before locking anything.
- SI 35-P1 to P6: Special braking and consist requirements.
- Notes regarding 5 track at Bridge (SI 43-P1) still in Timetable, are removed by Bulletin Order.
- Make sure to review the procedures for dealing with emergencies and special equipment restrictions in the B&P Tunnel.
- SI 20-S1 requires continuous ring of engine bell within the B&P tunnel.
- Restricted Speed limited to 10 mph unless otherwise restricted on all Amtrak Yard tracks, Industrial tracks, Public Delivery tracks connected to the Main or Running track.

Notes on Baltimore Penn Station and it's Interlockings

- Interlocking Rules apply from Charles all the way to Biddle.
- All Conrail, NS, and CSX Engines are prohibited in Baltimore station tracks other than 1 and F.
- SI 277-P3: Trains approaching Charles or Paul on a signal indication less favorable than Clear must not

exceed 15 mph within Charles or Paul interlocking until it is determined that their route permits a greater speed.

- Charles interlocking on the south end of Baltimore Penn station connects Amtrak 2 and 3 Main and the Cockeysville Industrial with the station tracks 1,3,4,5,6,7 and F. Within the limits of Charles interlocking, southward, the west side pedestal signal protects movements onto the Cockeysville (no wire) and the Mt. Vernon Runner (Out of Service SI 132-P1). Interlocking signals governing southbound moves on 2 and 3 into the B&P are part of Charles, even though they are on the northbound home signal bridge.
- Southbound signals for Charles are short of the south end of the platform on 3 and 7 tracks. The southbound home signals for Charles on 7 and F are high, with poor visibility and well north of the south end of the platform.
- Tracks within Baltimore Penn Station are MTA Light Rail, 1,3,4,5,6,7, and F. The Amtrak tracks have CSS in effect for both directions except for 5 track which has no CSS in effect.
- Equipment restrictions in station tracks. Check SI40-P1.
- The station tracks have a low level crossing all the way across at either end of the station platforms.
- 1 track is mostly a freight track and isn't close enough to its low level platform for normal passenger operation. F track is used for freight and for MARC train storage.
- 3 track has a long low platform.
- 4, 5, 6, and 7 tracks have high platforms with fixed Blue Signal Protection.
- 4 and 5 are restricted to normal passenger equipment except in emergency. 4 will hold approx. 9 cars. 5 will hold approx. 7.
- 6 and 7 track will hold approx. 13 cars.
- Amtrak Express Mail cars are prohibited on station tracks 3,4,5 and 6.
- Paul interlocking on the north end of Baltimore Penn Station connects Amtrak 1, 2 and 3 with the North leg of the Baltimore Wye and 1,3,4,6,7 and F tracks.
- The Baltimore Wye is not mentioned in the Timetable at all but is considered out of service by CETC. A portion of the South Leg is physically removed. There is no wire on any of it. Be aware that it has a working signal in place at the junction of the north and south legs.
- Southbound home signals for Paul are located at the south portals of the Union tunnels. 1 and 2 track are within the East (new) tunnel and 3 track lies within the West (old) tunnel.
- The 5N signal 25 feet south of the block at the north end of 5 track in the station is a Paul interlocking signal, but the most restrictive indication it can display is Restricting.

Chapter II: Baltimore to Perryville Stations and Breaks-Paul to Perry

<u>designated place</u>	<u>location</u>	<u>notes</u>
Paul	95.2	Interlocking, north of Baltimore Penn Station. Includes switch for north leg of wye. See notes on Balt. Wye.. Note SI 277-P3 regarding movements with less than Clear signal indications. North limits are at the south portals of the Union tunnels.
Biddle	94.3	Begin A track. Note that Interlocking Rules apply from Biddle all the way to Charles.
UG Bridge 93.45, N. Linwood Ave.	93.45	Special load restrictions: 35/25/10
Canton	92.9	Former interlocking.
UG Bridge 92.61, Monument St.	92.61	Special load restrictions: 35/25/10
UG Bridge 92.42, Pulaski Hwy.	92.42	Special load restrictions: 35/25/10
Bay	91.9	Interlocking on A and 1 only. Old tower on west side. Access to Bayview yard. North Point Yard track Out of Service per SI 132-P1. Access Orangeville, President St, and North Yard on Norfolk Southern.
Kiekheffer Industrial track	91.5	3 track.
Baltimore Steel Industrial track	90.9	3 track.
Point	90.1	Interlocking on 1,2,3 only. North Point Yard track is out of service for train movements per SI 132-P1.
River	89.3	Interlocking Access NS Bayview Yard.
Chesapeake Industrial Park track	84.9	A track.
Martin	84	MARC Passenger station. Low level platforms on east side only . No fence. Low platforms to 2 track.
Hot box detector	83.7	Hot box detector. Restricted for cars with 6 axle trucks.

<u>designated place</u>	<u>location</u>	<u>notes</u>
MARC Facility switch	83.5	A track.
BG&E (Baltimore Gas & Electric) switch	81.9	A track.
Chase Public Delivery Track	80.9	A track. Out of Service per SI 132-P1
Gunpow	79.3	Interlocking. South end of Gunpowder River bridge. North end of 1 and A tracks.
		CETC 2 ↑
		CETC 3 ↓
Gunpowder river bridge	78.86	Special load I restriction: 35. SI 132-S2 Critical Bridge
Magnolia	76.9	Interlocking. Pick up Edgewood CS (Controlled Sidings) west of 3 and Magnolia CS ,east of 2.
Arsenal Industrial track	75.8	Off Magnolia CS. Out of service per SI 132-P1.
Wood	75.3	Interlocking. North end of Edgewood and Magnolia Sidings. Station spur goes north from Edgewood CS. Tower spur goes north from Magnolia CS.
Edgewood	75.1	MARC passenger station.
Bush river bridge	72.14	Movable bridge. Special load I restriction: 35 SII32-S2 Critical Bridge.
Bush	71.6	Interlocking. Pick up 4 track at No. 33 switch (southward trailing point switch north of northward home signal). Equipment Height detector in Interlocking. Limits are extended south to include the moveable portion of the Bush River bridge which is still in service.
Equipment height detector	71.7	Mast mounted, within Bush interlocking. Protects Baltimore tunnels. Reports to CETC 3.
Price Bros. Industrial track	69	4 track. Restricted speed not exceeding 5 mph .
Channel Lumber switch	68.3	4 track.
Hot box detector	67.4	Hot box detector. Restricted for cars with 6 axle trucks.
POC Michael Industrial track	66	4 track. Out of service per SI 132-P1.
Aberdeen Industrial track	65.6	2 track.
Aberdeen	65.5	Amtrak and MARC passenger station. Fence between 3 and 4. Low level across 2 to 3 track mid station.
Conway Gaddy switch (Harford Gateway)	64.6	2 track. Electric lock and split rail type derail.
Oak	62.9	Interlocking. Havre de Grace Industrial (Old Line) is interlocked off 2, no visible derail.

<u>designated place</u>	<u>location</u>	<u>notes</u>
Grace	61.5	Interlocking. North end of 4 track (at north end of No. 33 switch, southward facing point switch south of southward home signal). Signals are Color only. High Speed crossing . SI 80-S1.
Susquehanna River movable bridge	60.2	MP 60 is on this bridge. Special load I restriction: 25. SI 132-S2 Critical Bridge List.
Perry	59.5	Interlocking. Access to NS Port Road Branch. Port Road wye included in interlocking. Pick up 1 and 4 tracks. Non conforming signal governing northward movements on 4 track, located on left. Perryville MARC station is within limits.

Notes on Paul to Perry

- Union tunnels: West (original “old” tunnel) has 3 track, with southbound Paul pedestal home signal and switch for F track within the portal of the tunnel. East (“new” tunnel) has 2 and 1 tracks with pedestals at the south portal.
- SI20-S1 requires continuous ringing of bell within the Union Tunnels.
- The Baltimore Wye is considered out of service by CETC per “C & S 39 Signal Facility Out of Service Notice”, and the South leg is physically disrupted. This means they will consider it out of service for train movements. However, it isn’t out of service per SI 132-P1 in the Timetable nor in any Bulletin or other document that T&E people have. The switch for the North leg is interlocked at Paul, off 1 track, and the Paul signal at the junction of the North and South legs is still illuminated, so be governed accordingly if being instructed to put equipment on the North Leg.
- SI 35-P3 and P5: Special operating procedures between Fulton and Biddle for freight trains.
- SI 19-P1: Trains on 1 and A must blow one long sound when approaching Bay northward or Point Southward.
- It helps some people to break down the territory mentally into the spaces between the big rivers. Physical Mile Post markers on bridges: Gunpowder river bridge has MP 79. Bush river has MP 72. Susquehanna river has MP 60.
- Tower spur is out of service per SI 132-P1 north of southward dwarf signal.
- Note permanent Whistle Board east of 2 track in the curve north of Grace interlocking, protecting the Susquehanna river bridge.
- SI 35 -P1, Freight train car limit: Freight trains consisting of up to 160 empty hoppers ARE permitted between Perry and Landover.
- All Yard tracks, Industrial tracks and Public Delivery tracks that are connected to the Amtrak Main or Running track: Restricted Speed not exceeding 10 mph unless otherwise restricted.

Chapter III: Perryville to Wilmington Stations and Breaks-Perry to Wine

<u>designated place</u>	<u>location</u>	<u>notes</u>
Perry	59.5	Interlocking, includes switches on the Perryville wye at the junction of the North and South legs, NS Port Road Branch. Non Conforming signal north on 4 track. Old tower on east. 2,3 become 1,2,3,4. Pockets on both legs of the wye and on 4 track in the station. Contact CETC 3 for turns on the wye. No wire.
Perryville	59.4	MARC passenger station. No fence. Low wood from 4 to 2. Old low level crumbly platform on 1. Pedestrian underpass in unknown condition.
Signal Bridge 590	59	Northbound position light Phase Break indicator. Same signal bridge as southbound home signal.
Phase Break	58.68	SI 47-S3 tracks 1,2,3,4
Perryville MW Base	58.5	1 track, south end of MW base. Split rail type derail. FACING POINT SWITCH.
OHB Coudon's Road	58.34	Southbound position light Phase Break indicator
Prince	57.3	Interlocking. North end Perryville M of W base. North end of 1 and 4 tracks. Northbound 1 signal is on separate signal mast at different location from others.
Mason-Dixon Sand & Gravel	55.4	3 track. Split rail type derail.
Hot Box Detector	52.4	Hot Box Detector, restriction for cars with 6 axles.
Bacon	51	Interlocking. Pick up 1 northward.
Red Mill Industrial	45.5	1 track.
Elkton	44.9	Former passenger station
Iron	41.5	Interlocking on A and 1 only. HS crossover SI 80-S1
MD-DE State Line	41.4	Maryland-Delaware State Line. Nothing visible.
Delaware Freezer Co.	40.6	3 track.
O Track switch	40.1 (40.4)	A track, FACING POINT for normal movement. Access Chrysler Yard. Timetable mp (40.4) is wrong.
UG Bridge 40.12	40.12	UG bridge restricted for special loads M/I:45/30 Current maps unclear on where and what bridge this is.
Newark DE	38.9	Amtrak and DART passenger station. Amtrak northbound stops may require protection across tracks.
Davis	38.4	Interlocking. NS Delmarva Secondary, route to Bear DE. 5 Yard track and S. leg of Wye track (both SI 132-P1: Out of service) Extended limits to NS Chrysler Yard on O track. Old tower on east. Pick up A track.
General Foods switch	37.4	3 track
Ruthby	36.5	Interlocking on A and 1 only. HS crossover SI 80-S1
Harmony Industrial Park	35.8	3 track.

<u>designated place</u>	<u>location</u>	<u>notes</u>
Hot Box Detector	34.9	Hot Box Detector, restriction for cars with 6 axles.
Churchman's Crossing	34.3	DART passenger station, platform east side only. Wooden platform extending to 2 track.
UG Bridge 33.00	(33)	UG bridge restricted for special loads I:30. Current maps unclear on where and what bridge this is.
Crowell Corp. switch	31.5	3 track.
Ragan	29.7	Interlocking. 1 track extends to northward limits. NS Newport Industrial track, and NS Newcastle Secondary.
		CETC 3 ↑
		CETC 4 ↓
Yard	28.2	Interlocking on 1 and 2 only. West Yard access. 1 track begins northbound.
Brandy	26.9	Interlocking on 1 and 2 only. Interlocking rules from Brandy to Wine inclusive.
Wilmington	26.8	Amtrak, SEPTA passenger station. High platform between 2 and 3. 3 and 1 also have low platforms.
Wine	26.6	Interlocking. Northbound signal on 1 track is located on separate mast. 1 track ends northward.

Notes on Perry to Wine

- In this territory especially, automatic block signals north and south may not be on the same signal bridges for "heritage" reasons as well as preserving the necessary distance from distant signals to home signals.
- Nonconforming signal: Northbound Perry on 4 track, pedestal type, located to west of 4 track.
- Be prepared to describe "pockets" at Perry and requirements for movement around the Perryville wye. Perryville wye in it's entirety belongs to Amtrak, but not west of the north-south leg junction signal.
- Review instructions regarding the Phase Break north of Perryville.
- SI 241-P2: Southbound trains that receive Rule 241 authority to pass Signal 10S at Davis must receive verbal permission from the Dispatcher before operating beyond the southern limits of Davis Interlocking on Track A... Signal 10S is southbound Interlocking signal on A located just north of Newark DE Station.
- Ragan to Perry: ACSES rules in effect for HSTs.
- West Yard has wire. Must be considered live and dangerous.
- Wilmington Station 2 track has equipment restrictions.
- Note location of E signs for Acela Express stops respectively in Wilmington.
- SI 34-S10: Passenger trains turning at Wilmington may reverse to Wine after the Home signal is seen to display a Proceed Indication and the track to the Home signal is seen to be clear. Restricted speed until governed by more favorable.

Chapter IV: Wilmington to Philadelphia

Stations and Breaks-Wine to South St OH Bridge

<u>designated place</u>	<u>location</u>	<u>notes</u>
Wine	26.6	Interlocking. 1 track ends with separate mast signal.
Landlith	25.4	Interlocking. Access O Running track (wired) and South Wye Running track and thereby Wilmington Shops. Also Freight house track and Container Corp.
UG Bridges 24.69-27.85	24.69-27.85	Restrictions M,I
Bell	22.5	Interlocking on 1F and 2F. Access Northbound Yard Lead track, NS. Tower on East side.
Holly	20.3	Interlocking. 3,2F, 1F, and 2 become 4,3,2,1.
Claymont	19.6	Septa passenger station
Citi Steel switch	19.4	4 track.
UG Bridge 18.51 (Phila. And Wilmington Pike)	18.51	Restricted location for most trains on 1 track.
State Line (DE-PA)	18.2	State line. Nothing visible. Close to Signal bridge 181.
Marcus Hook	17.1	Septa passenger station
Hook	16.8	Interlocking. NS Linwood branch, Naught track. Tower on east side. Plug track (South from Naught in interlocking) is out of service SI 132-P1
Hot Box Detector	16.3	SI 72-S7
Naught track switch	15.8	1 track
Highland Ave	15.5	Septa passenger station. No fence.
Lamokin St	14.4	Septa passenger station. Old tower on west side.
Chester	13.4	Septa passenger station
Eddystone	12.3	Septa passenger station
Eddystone Yard switch	12.1	4 track
UG Bridges 12.28-21.98	12.28 to 21.98	Restrictions M,I
Baldwin	11.7	Interlocking. Old tower on east.
Crum Lynne	11.2	Septa passenger station. No fence

<u>designated location</u>	<u>milepost</u>	<u>notes</u>
Ridley Park	10.4	Septa passenger station
UG Bridge 9.56 (Lincoln Ave)	9.56	Restrictions L,M,I
Moore	9.5	Septa passenger station
Norwood	9	Septa passenger station
UG Bridge 8.64 (Chester Pike)	8.64	Restrictions M and I.
Glenolden	8.3	Septa passenger station
Folcroft	7.7	Septa passenger station
Sharon Hill	7.2	Septa passenger station
Curtis Park	6.8	Septa passenger station
Darby	6.1	Septa passenger station
Crystal X switch	6	1 track.
Phil	3.6	Interlocking. Within Phil: 1 Arsenal Connection, 1, 2,3,4,5. Escape track comes off.
MAB Co. switch	3.3	1 Arsenal Connection
Arsenal (Septa)	2.7	Interlocking on Septa, remote from Broad. NOT interlocking on Amtrak 2,3. No longer listed as a CP in stations pages, but CP Arsenal is still a location used in other references. Old tower on East.
Signal bridge 2.0/2.1	2	Restrictions on some equipment from here to Zoo. Speed change location. Home signal bridge for Septa Arsenal southbound.
Switch crossing from 5 Running track and Septa 5	1.9	Controlled by Broad (Septa)
		CETC 4 ↑
South Street OH Bridge	(88.75)	Not a station, but used frequently as a description for the south end of Penn interlocking. Approx. 1.7
		CETC 5 ↓
Penn	1.5	Interlocking. Begin 1 and 4 River line; 5,6,7 Walnut tracks and Dravo siding on southend. Access WY and MH on southend.
30th St-Philadelphia (lower level)	1.5	Amtrak, NJT, Septa passenger station.

Notes on Wine to South St OH Bridge

- Wilmington Shops: All tracks, Restricted Speed, not exceeding 5 mph.
- There are restrictions on many types of equipment on tracks in Wilmington Shops. See SI 40-P1.
- Electric motors, diverting from 1 track to the O track at Landlith are limited to 10mph.
- Freight Trains (except Amtrak work trains) are prohibited from making diverging movements onto or off of the O track at Landlith.
- At Wilmington Shops, the O track and the South wye are Running Tracks.
- O Running track, between Landlith and NS New Castle Secondary: Restricted Speed, not exceeding 10 mph.
- O track is controlled by CETC 4 between Landlith and MP 24 (Edgemoor). Trains clearing at the North leg of the wye at Wilmington Shop must obtain permission to use the North leg from the Back Shop Foreman.
- South wye Running track between Landlith and the north switch of the Wreck Train track controlled by CETC 4.
- Passenger trains turning at Marcus Hook may reverse back to Hook after the home signal is shown to display a proceed indication and the track ahead is seen to be clear. Movement must be made at Restricted Speed until governed by more favorable.
- MP designations get messed up starting south of Philadelphia, esp. for OH and UG bridges , due to RR heritage. Be careful, esp. when using a UG or OH bridge designation for speed restrictions. These designations can be VERY far off.

Chapter V: Philadelphia: South Street to Mantua

Stations: Penn, Zoo, Girard and Mantua

Direction changes at Zoo Tower. South from Zoo tower towards Washington. East from Zoo Tower towards New York. West from Zoo Tower towards Harrisburg. On 36th St Connection, the direction **from** Zoo to Penn is eastward.

<u>designated place</u>	<u>location</u>	<u>notes</u>
CETC 5 ↓		
South Street OH Bridge	(88.75)	Not a station, but used frequently as a description for the south end of Penn interlocking. It's MP designation, painted on the bridge, is not in sequence with the current way of measuring Mileposts. Approx. 1.7 according to the current system.
Penn	1.5/0.9	Interlocking. Contains 30th St Penn Station within it. On the south end: Begin 1 and 4 River line; 5 Running track, 6 & 7 Walnut tracks, Dravo siding. Access WY and MH tracks. 11 Running track is contained within Penn Interlocking. On the north end: "N Routes, 36th Street Connection, River line 1 and 4, the Spur, Race Street Engine house (and the "Pit"), via 1 lead. Penn Coach Yard via lead and hand thrown switch to 2 lead.
30th St-Philadelphia (lower level)	1.5	Amtrak, NJT, Septa passenger station. 5 High level platforms, 1 low.
Spring Garden St OH Bridge	(87.44)	Speed change location. Designation is out of MP sequence.
34th St OH Bridge	(86.93)	Speed change location. Out of sequence MP.

CETC 5 ↑

<u>designated place</u>	<u>location</u>	<u>notes</u>
CETC 6 ↓		
Girard	87.7	Interlocking connecting the River line with the N routes at Penn , the Berrys, Suburbans, EJ, the NY&Pgh Subway and the Tail track at Mantua .
Girard Ave UG Bridge	87.24	Speed change location.

<u>designated place</u>	<u>location</u>	<u>notes</u>
Zoo Tower Section C Dispatcher ↓		
Zoo	0.0/88 1.9 from Septa Suburban Station	Interlocking connecting Penn with points west and east on Amtrak and Septa. Controls 36th St Connection, NY&Pgh Subway, 2,3 Suburban and 2,3 Berry.

<u>designated place</u>	<u>location</u>	<u>notes</u>
	CETC 6 ↓	
Mantua	87.2	Interlocking. Joins 1,2,3,4 Main to NY with 1,4 River, 2,3 Berry, 2 Suburban at Girard Includes Tail track.

Notes for the entire Philadelphia Terminal area (Penn, Zoo, Girard, Mantua and associated tracks

The railroad around Philadelphia is complicated by geography, and history. In order to learn it, it may be best to break it down into component parts, but it still remains to understand how it works together. Philadelphia connects mainlines from the south with those from the west (Harrisburg) and New York (which is considered east from Philadelphia). In addition, there are local commuter routes which connect here, and freight mainlines south, east and west as well.

Conductor Rich Bernhardt has prepared an excellent guide for the Philadelphia Terminal area, and conducts walkarounds. The guide can be gotten from your Rules Department and they can tell you how to arrange for a walkaround. The Doctor will not even attempt to duplicate the content of that guide or the walkarounds. The Doctor is also not as thorough concerning movements towards Harrisburg or Septa at this point. However, what is presented here should be considered a review to supplement your other studies of this area.

Consider **Penn** interlocking separately, for the moment. It encompasses 30th St Amtrak/Septa/NJT passenger rail station, and connects the mainlines from the north, south, and west to Race Street Enginehouse and Penn Coach Yard.

Zoo interlocking was designed to allow SEPARATE SIMULTANEOUS moves by both passenger and freight trains in each of the possible directions. The main freight routes have now been separated out. There is no longer a connection at **Zoo** to the High Line or the Belmont. But there is still duplication of routes, each route (except one-NY &P Subway, which is single track) consisting of two tracks, one in each direction. The 36th Street Connection connects **Penn** and **Zoo**.

With the coming of CETC and modernization of switching control, **Zoo** interlocking was broken down somewhat and **Girard** and **Mantua** interlockings were separated out to expedite the process of centralizing the mainline Northeast Corridor train control process. Today, **Zoo** is less connected with day to day operations south to Washington and east to New York. It's control is mostly (but not exclusively) connected with moves from Philadelphia to Harrisburg, Septa connections, and Yard moves.

Each of the different routes through this area have numbered tracks. To help differentiate, duplicate numbers on different routes have added names to help identify them. Thus, Amtrak's mainline in the NEC between DC and NYP is called the River Line from **Penn** to **Mantua**. Septa's mainline and it's connecting tracks from **Zoo** are called the Suburban line. The tracks that run beneath Zoo tower connecting **Zoo** with **Mantua** called the Berry tracks .

While Amtrak trains would not ordinarily be called upon to operate over the Septa Suburban Line, those lines DO have connections with Amtrak here and a basic knowledge of those connections is necessary. Likewise, even those qualifying for jobs that never work to Harrisburg could still be called upon to use the 36th Street connection or work to and from Penn Coach Yard or Race Street. Common moves like bringing or taking trains from Penn Coach Yard, taking/getting "Power from the Pit", and turning trains will be covered later.

Here are some of the basics:

- **Penn** interlocking is complete.
- **Zoo**: incomplete, can't get to 1 track from K ladder.

- **Girard** and **Mantua** are complete together, but not separately.
- Column 3 and 5 Engines restricted between **Zoo** and Arsenal, with certain exceptions.
- Be aware that the designated milepost locations for many things, especially bridges, in this area, are not sequential with the currently used Amtrak Mileposts. Be sure to know the locations of important bridges like Spring Garden St or 34th St, because their MP designations will NOT help you find them.

Notes on Penn interlocking south end

- From the south, Amtrak mainline 2 and 3 become, respectively, 1 and 4 River Line at **Penn**.
- 7 Lead, going south in **Penn** becomes 5 Running track at the southernmost dwarf signal on that track (8s) and continues as 5 Running track out of **Penn** to a connection with Septa 5 at a hand thrown crossover south of South ST OH bridge.
- 11 Running track has no platform and runs through the station from one end to the other. It begins at a hand thrown non signaled switch to the MH. It has a signaled crossover at the southend of the station connecting it to 10 track within the Station Overbuild. It has split derails at either end.
- There are two connections to **Penn** south that access Penn Coach Yard and/or Race St Enginehouse. They are called the WY and the MH.
- WY: an extension of 37 track from Penn Coach yard. It connects to **Penn** south at the west end of the ladder crossing **Penn** south and continues on as 6 Walnut in **Penn** south. Using the WY, you can access 28-37 directly and (via “the Junction”- a hand thrown crossover) Race St Enginehouse and tracks to 26. CETC 5 controls access to and from the WY at **Penn**.
- 6 Walnut has an AC motor stop sign past the hand thrown switch to 7 Walnut, and is only wired to that point
- MH: Connects with a hand thrown switch to 11 Running track and continues to a **Penn** south dwarf signal to the interlocking. Using the MH, you can access directly Race Street Enginehouse tracks through 26 track. Indirectly, via the “Junction”, 28 through 37 can be accessed. The MH has a split rail derail. CETC 5 controls access to and from the MH at **Penn**.
- Dravo siding connects to **Penn** at a northbound dwarf signal on the east side. It has “rusty rail” and probably won’t shunt if you use it. From the Dravo, you can directly access only 1-4 tracks.
- Most of the southbound signals leaving 30th Street are beneath the Station Overbuild.

Notes on 30th St. Station

- Within 30th St. Station, tracks 1 through 10 are designated Main Tracks.
- Trains equipped with an engine bell must sound it continuously while moving within the confines of 30th St Station overbuild. **BUT** trains must not sound their engine whistle or horn while within the confines of the overbuild, except in emergency.
- Special instructions regarding Diesel engines running HEP. SI 34-P3.
- There are high level passenger platforms between tracks 1 through 10. 11 track has no platform, and 1 track has one on each side, with the east side being low level except for a section of raised mail dock on the north end about 5 cars long.
- Red flashing lights in service on the east side of 1 track on support columns at the north and south ends of the loading dock platform located at the north end of 30th St Station. When red flashing lights are displayed, crews must not couple to or move the cars until they have contacted the Baggage Foreman and he has turned off the lights.
- There are no signals within the 30th St platform area. Some of them are obscured for trains platforming and that means you must take extra caution in knowing their locations when leaving 30th St.
- Signals to watch for on **Penn** south: 1 and 4 track southbound signals are not visible from the south end of the platform. 2 track southbound is obscured somewhat by a pillar. 3 southbound is a “raised dwarf” signal.

- Trains originating here must check with CETC 5 to verify Form Ds, and TSRB changes. Through trains don't have to do this. 165-S1.
- There are a couple routes through 30th St station that allow for speeds greater than Slow speed. These are 3, 4 going north; and 5,6 going south. Leaving 30th Street going north, 7 track also allows the possibility of greater than Slow speed. Everything else will leave 30th Street station no better than Slow speed.
- There is a dwarf signaled crossover from 8 to 9 track just north of the platforms.

Notes on Penn interlocking north end

- There are 4 "N" routes connecting **Penn** on the north end with the River Line North; and the 36th Street Connection to **Zoo**. They are N1, N2, N3, and N5.
- Each station track (1 through 11 Running track) can connect with either track of the River Line or either track of the 36th Street Connection, by at least one routing.
- Only tracks 1 and 2 can get to the Spur.
- Only tracks 7 through 11 Running track can make a direct move to 1 Lead without a reverse move.
- Speed change location designated as 1035 ft. south of Spring Garden OH bridge can be considered as the location of the southbound pedestal signal on N3 route to **Penn**, just before the ladder route across north end of **Penn** interlocking (84s signal).

Notes on Penn Coach Yard and Race Street Engine House

- SI 1-P1: Penn Coach Yard-Yard Bulletin: Penn Coach Yard Bulletin contains instructions for crews who will operate in Penn Coach Yard and Race Street Enginehouse. It is issued as necessary and numbered sequentially. Current bulletin is posted in the Yardmaster's Office. Before operating in Penn Coach Yard, employees must be familiar with the contents of the current Bulletin. Otherwise, they must contact the Yardmaster for instructions.
- 1 Lead from Penn leads to Enginehouse territory
- 2 Lead comes off a hand switch at 1 lead signal to **Penn**.
- The Engine bell must be rung continuously during any movement in the yard or engine house territory. Engines not equipped are exempt.
- Engines must not be left standing within the limits of sections breaks. Location of section breaks in Penn Coach Yard identified by section break signs (territory between yellow signs with black letters "SB" and red signs with no lettering) in the Catenary
- Normal position for switch connecting Car Washing Track to Run Down & 37 Track is for movement through on the Car Washing track.
- Trains operating in Penn Coach Yard must stop before passing over the access road crossing and sound engine bell (if so equipped) until the crossing is occupied. On ground protection must be provided if crew does not have a clear view in both directions. SI 138-P1.

Notes on Zoo and the 36th St Connection

- Interlocking Rules apply on the 36th Street Connection, which extends from the connection with the Amtrak PH line to the PW line at **Penn**.
- The direction from **Zoo** to **Penn** on the 36th Street connection is eastward.
- Due to close clearance, crews must request protection from CETC 5 TD, before riding the side of a material handling car to direct a shoving move southward from the 36th St Connection to 30th St Station. Crews must then notify CETC 5 when the move is complete.
- Amtrak Express Mail cars are prohibited in the NY & P Subway or the 36th St Tunnel at **Zoo**.
- **Zoo** Interlocking Station in service on Mainline Philadelphia to Harrisburg, the 36th Street Connection, NY & Pittsburgh Subway and Septa Suburban line with the 36th St tunnel included. Includes Berry tracks. **Section C Dispatcher controls Zoo.**

- The EJ and the WBY are said to be Running tracks but are not listed as such in the Timetable. Their in-service is unclear. They are not listed as out of service in the Timetable. The Rundown is said to be a Running track. It isn't listed in the Timetable that way either.
- MP 0 from **Zoo** to Washington. MP 88 from NY to **Zoo**. MP 1.9 from **Zoo** to Suburban Station.

Notes on Girard and Mantua

- Amtrak Express Mail cars are prohibited from the “Duck under” on 4 River line (the Timetable incorrectly still refers to this as being part of **Zoo** interlocking).

Glossary of some terms

PR: Dwarf signal governing movements north in **Penn** on 11 Running track (86n)

U: Dwarf signal governing movements north into **Penn** on 1 Lead coming from Race St Enginehouse tracks. (98w)

J: Dwarf signal governing movements southward on 1 lead either crossing towards the Station tracks or moving straight on 1 lead towards Race. (98e)

X: Dwarf signal governing northward moves off either 1 or 2 lead into **Penn** (104w).

QA: East end of “pocket” on 4 36th St Connection (92sb).

Divider: switch on 4 River line, below **Zoo** Tower, allowing switching to 3 Suburban (84).

Tail Track: track on Schuylkill river bridge in Mantua, beginning at 23 crossover switch and ending at 3AW at Girard Ave UG Bridge.

Rundown: track beginning on the K Ladder and continuing to become the Car Wash track

The Junction: The hand thrown crossover between the MH track and 37 Lead/WY track.

K Ladder: The diagonal route crossing from Septa 2 Suburban to 3 Berry track in **Zoo**.

The Pocket: There are different pockets (areas between signals used for holding moves temporarily “out of the way”) but the one usually referred to in north **Penn** between the QA signal and the 108w on 4 36th St Connection.

Notes on some common movements in the Philadelphia Terminal area

- Crews of trains en route to Penn Coach Yard from **Zoo** or **Penn** must not proceed beyond 1 or 2 Lead, the Car Wash on the Rundown, or north of the Junction Crossover between the MH and 37 Leads unless they have contacted the Yardmaster to 1) Confirm that the crew is familiar with the contents of the current Penn Coach Yard Bulletin, or 2) Receive specific movement instructions from the Yardmaster. All crews must receive authority from the Yardmaster before operating on Engine Servicing tracks 1-4 Race or the Pit Track.

Turning equipment at 30th Street

There are 3 routes to turn equipment here. All 3 use the NY&P Subway for that leg. Equipment must clear the reverse signals for the NY&P Subway at JO (**Zoo**) and **Girard** or **Zoo** at **Mantua**. At least one other leg will have to be the 36th St Connection. The other can be the River line, or via the Berry tracks.

“Power to/from the Pit”

Engineers instructed to take their power to/from the Pit must OK their moves at Race St with the Race Street Enginehouse Foreman. Coming from the Station on the north end, the equipment must clear the “**J**” signal if possible, or else clear all the way to **Penn**'s home signal on the 36th St Connection (106e) for the reverse move to the Pit off 1 lead

Engineers getting their power from the Pit at Race St must Ok their move with the Enginehouse Foreman AND contact CETC 5 after approaching the U signal at Penn on 1 Lead.

Equipment moves from mainline to Penn Coach Yard

- CETC 5 controls all access to Penn Coach Yard, via the WY and MH on the south end and via 1 Lead, 2 Lead from north Penn, so moves from the mainline headed to the Coach Yard would have to communicate with CETC 5, who would clear the moves with the Yardmaster.
- When everything is done and equipment is secured, contact the Yardmaster and report clear.

Tracks with no wire		
Track	location	
6 Walnut	Past an AC motor stop sign south of the switch to 7 Walnut	
7 Walnut	Hand thrown switch off 6 Walnut	
Race St. Pit (oil) Spur	Race Street Enginehouse	
EJ	From Tail Track at Mantua to Stiles but considered out of service	
WBV	Hand thrown switch off the EJ: out of service	
Wall track	Hand thrown switch off Rundown track	
maximum speeds of various tracks		
Track	location	Restricted Speed, not exceeding:
11 Running track	Within Penn interlocking	10 mph
5 Running track	Between Penn and MP 1.9 (Crossover to Septa 5 track)	10 mph
Car wash track		2 mph as posted at trackside
All tracks	Penn Coach Yard	5 mph

Chapter VI: Mantua to Morris

Stations and Breaks-Mantua to Morris

Direction to NY is now Eastward from Zoo tower

<u>designated place</u>	<u>location</u>	<u>notes</u>
	CETC 6 ↓ from Girard	
Mantua	87.2	Interlocking Limits extended on 4 track.
UG bridge Columbia Ave.	86.49	Restricted, 4 track only. Column 4,5 equip. prohibited.
UG bridge 25th St	(85.76)	Restricted for special loads and certain column 3,5 and 6 equip. MP out of sequence.
North Philadelphia	85	Interlocking and Amtrak/Septa passenger station. High platforms between 1,2 and on 4. Amtrak 1,2,3,4, Westward (out of service and partially removed) and 5 tracks (out of service SI 132-N1 and partially removed at present.). Connect to Chestnut Hill Branch (1 and 2 Chestnut Hill (Septa)) and 16th St. Jct. (Stifftown branch). Tower on south (1 track) side, still in service, with Operator. Special equipment restrictions apply on different tracks. Several low (dwarf) signals within the interlocking.
UG bridge 12th St.	(84.3)	Restricted for special loads and certain column 3,5 and 6 equip.
UG bridge Germantown Ave.	(84.16)	Restricted for special loads and certain column 3,5 and 6 equip.
UG bridge Allegany Ave.	(83.93)	Restricted for special loads and certain column 3,5 and 6 equip. MP out of sequence.
Shore	82.1	Interlocking. Connect to NJT Atlantic City Single track, and NS Trenton Line. 5 track. Old tower on south.
NS Trenton Line (Delair Branch) switch	82	Access Delair (NS Trenton) Branch from NJT Atlantic City Single track. Electric lock is controlled by CETC 6.
UG bridge Castor Ave.	(81.53)	Restricted for special loads and certain column 3,5 and 6 equipment.

<u>designated place</u>	<u>milepost</u>	<u>notes</u>
Frankford Jct.	81.8	Designated place, former Interlocking
Frankford Jct. Yard switch	81.3	Formerly Ford interlock switch, now electric lock.
Frankford	80.9	Designated place, former passenger station.
UG bridge Tacony St? Adams Ave.?	(80.71)	Restricted for columns 4,5. 3,6 (certain equip.) and special loads. MP is out of sequence and street designation is possibly incorrect.
Bridesburg	80.1	Septa passenger station. no fence
Wissinoming	79.3	Septa passenger station. No fence.
Tacony	78.2	Septa passenger station. No fence.
UG bridge Magee St	(78.29)	Restricted for columns 4,5. 3 and 6 (certain equip.) and special loads.
UG bridge Princeton Ave.	(77.68)	Restricted for columns 4,5. 3 and 6 (certain equip.) and special loads. MP is out of sequence.
Holmes	77.2	Interlocking. Bustleton Branch. Bliagh St Yard off O track. 5 track. Old tower on north.
Holmesburg Jct.	77.2	Septa passenger station.
Prison Siding switch	76.7 (76.5?)	4 track. Split rail derail.
Linden Ave. switch (Waterworks)	75.7	1 track. NOT electric lock.
Torresdale	74.6	Septa passenger station.
UG bridge 74.10	74.1	Restricted bridge for M and I special loads.
Paxon switch (Coventry Industrial, Torresdale Siding)	74	1 track. NOT electric lock.
Andalusia	73.7	Designated place, former passenger station.
Hot Box Detector	73.4	Restricted for 6 axle equip.
Cornwells Heights	72.5	Amtrak and Septa passenger station. Handicapped access on 4 track, low platforms are staggered, with an abandoned platform area fenced off on 4 track.
Eddington	71.3	Septa passenger station. No fence.
Eddington Station siding switch	71.2	1 track, NOT electric lock.
I-95 switch	70.2	1 track, NOT electric lock.

<u>designated place</u>	<u>milepost</u>	<u>notes</u>
Croydon	69.6	Septa passenger station.
Croy	68.3	Interlocking on 1, access to Croydon Yard. Non conforming signal for westbound move on 1. SI 277-N2.
Bristol	66.5	Septa passenger station. No fence.
Grundy	65.3	Interlocking. Bristol Yard. Access O (Naught) Running track (between Morris and Grundy under control of CETC 6. 5 track out of service per SI 132-N1 between MP 64.8 and end of track. Old tower on south.
Levittown-Tullyville	63.3	Septa passenger station.
Bucks County Courier Times (Bristol Press) switch		4 track, NOT electric lock.
Division Milepost	58.4	Divides Amtrak's New York and Mid Atlantic Divisions. West end of Morris Interlocking. Amtrak Road Radio Frequency change point. SI 707-S1.
CETC 6 ↑		
CETC 7 ↓		
Morris	58.3	Interlocking. Access O running track (CETC 6 to Grundy) Thorofare Running track, Middle Running track, and Morrisville Single track.. Old tower on south side.

Notes on Mantua to Morris

- Many of the UG and OH bridges in this territory have “heritage” MP locations that don’t jibe with current MPs. There is a current project under way to renumber these bridges with metal signs. The Timetable identifies some of these locations with different names and MPs than the current maps. The result for now is confusion. Do the best you can to identify the restricted bridges. NOTE: Regarding MP designation problems, See SI 132-S2.
- O running track no longer runs from Grundy to Morris. It runs from Grundy east to Levittown. Overhead wire must be considered live and dangerous, but may not be energized for electric equipment.
- O running track picks up again at approximately 58.9 and runs east to Morris. Control CETC 6.
- Special restrictions: There are engine restrictions between MP 76 and Mantua. Amtrak Express Mail cars are prohibited on 2 track at N. Philadelphia.
- Maximum speeds: E60 locomotives on 1,2,4 and Westward station, 40 mph. 5 track at Holmes and O running track between Grundy and Morris, restricted speed not exceeding 5 mph.
- Freight and MW height restrictions on 4 track between N. Philadelphia and Eastward limits of Mantua. SI 42-N1.
- Amtrak Express Mail cars must not exceed 50 mph on 2 track N.Philadelphia and are prohibited from running on 4 track between N. Philadelphia and Zoo.
- At Shore, the most restrictive indication possible on the 5 track dwarf signal governing westward move-

ments on 5 west of the crossover is Restricting.

- All yard tracks, Industrial tracks, and Public Delivery tracks connected with the Amtrak Main Line or connected with Running tracks: Restricted Speed not exceeding 10 mph unless otherwise restricted.

Signal Rules

Between Mantua and Morris, there is some Rule 251 directional track. From Mantua to N. Philadelphia, and from Shore to Holmes, 1,2,3 and 4 tracks are Rule 261 tracks. 2 and 3 tracks are 261 tracks all the way from Mantua to Morris WITH THE EXCEPTION of North Philadelphia to Shore.

All four tracks from North Philadelphia to Shore are Rule 251 with 1,2 coded eastward and 3,4 coded westward. 4 track is coded westward from Holmes to Morris. 1 track is coded eastward from Holmes to Croy, then Rule 261 from Croy to Grundy, and back to Rule 251 eastward the rest of the way to Morris.

Chapter VII: Morris to County

Stations and Breaks-Morris to County

Direction to NY is now Eastward from Zoo tower

<u>designated place</u>	<u>location</u>	<u>notes</u>
CETC 7 ↓		
Morris	58.3	Interlocking. Access O running track (CETC 6 to Grundy) Thorofare Running track, Middle Running track, and Morrisville Single track.. Old tower on south side. Road Channel 60-60 in effect east of Division Milepost (MP 58.4). SI 707-S1.
UG Bridge	58.15	West of Morrisville. Restricted for special loads M and I.
UG Bridge	58.03	East of Morrisville. Restricted for special loads M and I.
State Line (New Jersey-Pennsylvania)	57.7	Delaware River divides the two States.
UG bridge 57.54 S. Warren St.	57.54	Second bridge east of Delaware River. Restricted for special loads M and I.
Trenton	56.7	Amtrak, Septa and NJT passenger station within Fair interlocking, high level platforms on South High track, 1, 4 and 5. Low platform on North Low track. No fence.
Fair	56.4	Interlocking on Hill track (Bordentown Secondary) ,1,2,3,4,5 and 7, also encompassing the North Low, South High, Wall track and Trenton passenger station. Old tower on south side. Naught (O) running track and 5 track run from Fair through Ham . Non conforming signal governing eastward moves on 4 track, on the left side at the east end of the high level platform at Trenton. Interlocking rules with CSS in both directions from Ham (inclusive) through Fair (inclusive, including 5 track.)
Ham	55.7	Interlocking. 5 Running track and Naught Running track as well as 1,2,3,4. Access East Barracks Yard off Naught Running track. Limits extended eastward on Naught (O) Running track. ACSES rules in effect eastward from Ham to west limits of County on 2,3 tracks for HSTs ONLY.

CETC 7 ↑

<u>designated place</u>	<u>milepost</u>	<u>notes</u>
CETC 8 ↓		
Hamilton	53	NJT passenger station. High platforms on 1 and 4.
Hot Box Detector	51.9	Restricted for certain equipment with 6 axles.
Princeton Junction	47.1	Amtrak and NJT passenger station, High platforms on 1, and 4. Low level wood on west end.
Switch to Nassau Running track (NJT)	46.6	4 track
Midway	41.3	Interlocking. Amboy Secondary off 4. Midway Yard (Monmouth Junction Yard-Rock Hill Branch). Old tower on north.
Deans	38.4	1 track, Not electric lock.
Adams M of W Base	35	1 track, Not electric lock.
Jersey Avenue	33.1	NJT passenger station on 4 only. Low level platform. No fence. Low wood platform crossings in the middle of the station from 4 to 2.
County	32.8	Interlocking. Millstone Running track, and 5 Running track, both controlled by CETC 8. Non Conforming signals at County . See SI 277-N8. Delco lead. County Yard.

Notes on Morris to County

- In the State of New Jersey, Engineers will blow one long sound on the engine horn or whistle when approaching passenger stations on adjacent tracks during daylight hours and in darkness if passengers can be observed on or near that platform.
- In the State of New Jersey, Engineers who have not made a trip in Road Service within 12 months may not operate in the State of New Jersey until they have been re-examined and qualified by the proper officer. Engineers, Conductors and Assistant Conductors absent from all railroad duty for thirty days must not operate within New Jersey until they have notified the Dispatcher or Rules Examiner, and been examined by them regarding their knowledge and understanding of any changes that have occurred during that period of absence. SI 950-N1.
- In the State of New Jersey, review SI 606-N1 regarding Rusty Rails.
- Interlocking rules in effect between Ham and Fair, but 261 between Fair and Morris.
- 2 and 3 tracks are Rule 261 from Ham to Edison east of County. 1 track in this area is Rule 251(E) and 4 is Rule 251(W).
- Normal position for the switch on the Naught Running track between Ham and Fair connecting to the West end of East Barracks Yard is set for through moves on the Naught.
- Naught Running track from Fair to MP 54.8 controlled by CETC 7. SI 241-N1. At MP 54.8, in order to pass a signal displaying stop, authority must be obtained from CETC 7.
- 5 track is a Running track from Eastward limits of Ham to MP 55. After that, it is 5 track.
- Amtrak Express Mail cars are restricted to 50 mph on 1 track at Trenton, Hamilton and Princeton Junction.
- Midway interlocked switch to Yard: 10 mph.
- Special rules regarding Septa and NJT trains. See SI 43-N1+2.
- All Yard tracks, Industrial tracks, Public Delivery tracks connected to Amtrak Main or Running tracks: Restricted Speed not exceeding 10 mph.

Maximum speeds for various tracks

Track	between	and	Restricted speed not exceeding:
Millstone Running track	County	Jersey Ave road crossing	10 mph
5 Running track	County	End of track	5 mph
5 Running track	Eastward Limits of Ham	MP 55	5 mph
5 track	MP 55	East End of track	5 mph

Chapter VIII: County to Hunter

Stations and Breaks-County to Hunter

Direction to NY is now Eastward from Zoo tower

<u>designated place</u>	<u>location</u>	<u>notes</u>
County	32.8	Interlocking. Millstone Running track, and 5 Running track, both controlled by CETC 8. Non Conforming signals at County. See SI 277-N8. Delco Lead off Millstone. County Yard 1-4 (no wire on 4) between Millstone and 5 Running tracks.
New Brunswick	31.4	NJT and Amtrak passenger station. Low level platform access on west end.
Hot Box Detector	29.7	Hot Box Detector.
General Tire	29	Off 4 track.
Edison Station	28.9	NJT passenger station. Low level platform access on west end.
Edison	28.1	Interlocking on Tracks 0,1,2 only. Extended interlocking limits on west end. Access Metuchen Yard off O track. O track runs from Edison to Lincoln . Split rail derail on west end of O.
MP 28	28	Speed change location on A,B and E trains.
National Can	27.6	Off 4 track.
O Track Switches		West of MP 26, 3 switches; 2 facing point (for eastward move) from O track to Metuchen Yard tracks, electric lock. 3400 ft. west of Lincoln for the wye track. 4100 ft. west of Lincoln for 5-9 yard tracks. 8150 ft. west of Lincoln for 5-9 yard tracks.
Lincoln	26	Interlocking. Access Metuchen Yard via O track (extended limits on O and 1). Wye track access to Ford Yard. Lehigh Valley spur off 4.
Metuchen	25.8	NJT passenger station. Station is within limits of Lincoln interlocking. Low level access on west end all the way across. No fence.
Menlo	23.7	Interlocking. Interlocking Rules apply between Menlo and Iselin
Metro Park	23.2	NJT and Amtrak passenger station. Low level access 1 to 2 and 4 to 3 on the east end.
Iselin	22.8	Interlocking

CETC 8 ↑

<u>designated place</u>	<u>location</u>	<u>notes</u>
	SECTION B Dispatcher ↓	
MP 20	20	Speed change location for C-E trains.
Union	19.7	Interlocking. West end limits are called Six Roads. Union tower still in service . Begin tracks A and B. Access NJT North Jersey Coast Line (via Eastward connecting track, and eastward and westward tunnel tracks) and Graw interlocking with interlocking rules in effect between them. Union interlocking has extended limits on B and 4 tracks on west end; and extended limits on A eastward to access O track and Linden Yard. Grief Brothers AKA Virginia Barrel off B track within interlocking. Moveable point frog switches. (SI 90-S1)
Rahway	19.5	NJT passenger station. High platforms between B and 4 track and off A track. A track side is within the limits of Union .
North Rahway	18.8	Former NJT passenger station. Still listed in Timetable.
Automatic signal 176	17.6	Speed change location on A.
Linden	17.3	NJT passenger station. High outside platforms. Fence between 3 and 4.
Linden Station Switch	17.3	Off A track accessing O track. Not electric lock. O track runs to Union .
Automatic Signal 158	15.8	Speed change location on A.
Linden Park Industrial Track	15.5 (15.2)	Out service and removed, but listed in the timetable with speeds and incorrect location.
UG Bridge 14.71	14.71	East end of Elizabeth Station. Special Load restrictions column M and I.
Elmora	14.7	Interlocking. End Tracks A and B. Remotely controlled from Union .
UG Bridge 14.59	14.59	Special Load restrictions column M and I.
Elizabeth	14.1	NJT passenger station. Low level access on west end.
UG Bridge 14.05	14.05	Special Load restrictions column M and I.
North Elizabeth	13	NJT passenger station. Low level access 1 to 2 on the west end.
UG Bridge 12.98	12.98	East end of N. Elizabeth, Special Load restrictions column M and I.
Lane	12.3	Interlocking. Lane Running Track (Conrail) off 2 track running under 1 track jumpover. It is protected with a split rail type derail. Remotely controlled from Dock . Access Greenville Branch (P&H) from Lane Running Track. A and 5 tracks from Lane to Hunter. Durant Yard off 7 track (A track there is currently out of service per Bulletin Order). Moveable point frog switches. (SI 90-S1).

<u>designated place</u>	<u>location</u>	<u>notes</u>
UG bridge 12.37	12.37	First UG bridge west of Lane , Special Load restrictions M and I.
Waverly Jumpover UG Bridge	12.12	Special load restriction column M and I on 1 track.
Haynes	11.3	Interlocking on tracks 1,2 only. Remotely controlled by Dock . Moveable point frog switches. (SI 90-S1)
Newark Int'l Airport	11.2	NJT and Amtrak passenger station. High level platforms between 1 & 2 and 4 & 5. Low level access on the east from 1 to 2 and on the west from 4 to 5. No fence.
Alumet Industrial Track	10.9	5 track hand thrown switch, electric lock. Facing point for westward move.
Hunter	10.5	Interlocking. Remotely controlled by Dock . MP 0 on Lehigh line connection (Raritan Valley) off 5 track. A and 5 track from Lane to Hunter. Scale track off A accessing Hunter Street Yard. Moveable point frog switches (SI 80-S1). Non Conforming signal Hunter westbound 3 and 4 tracks. (SI 277-N7)

Notes on County to Hunter

- In the State of New Jersey, Engineers will blow one long sound on the engine horn or whistle when approaching passenger stations on adjacent tracks during daylight hours and in darkness if passengers can be observed on or near that platform.
- In the State of New Jersey, Engineers who have not made a trip in Road Service within 12 months may not operate in the State of New Jersey until they have been re-examined and qualified by the proper officer. Engineers, Conductors and Assistant Conductors absent from all railroad duty for thirty days must not operate within New Jersey until they have notified the Dispatcher or Rules Examiner, and been examined by them regarding their knowledge and understanding of any changes that have occurred during that period of absence. SI 950-N1.
- In the State of New Jersey, review SI 606-N1 regarding Rusty Rails.
- Non Conforming signal in service: County SI 277-N8.
- Non Conforming signal in service at Hunter: SI 277-N7.
- All UG Bridges Rahway to 1300 feet west of Lincoln: Special Load Restrictions column M and I.
- There are special speeds in effect for “equipment not authorized to exceed 90 mph” from Hunter to Elmora on 1 and 4.
- Amtrak Express Mail cars are restricted to 50 mph on all tracks adjacent to high platform station platforms
- All Yard tracks, Industrial tracks, Public Delivery tracks connected to Amtrak Main or Running tracks: Restricted Speed not exceeding 10 mph.

Main Tracks without Rule 261 in effect

Track 1 from Ham to Elmora is Rule 251 (E) EXCEPT: Edison to Lincoln (to access Metuchen Yard) where it is Rule 261; and Menlo to Iselin, where Interlocking rules apply.

Track 4 from Ham to Elmora is Rule 251 (W) EXCEPT: Menlo to Iselin, where Interlocking Rules apply.

Track A is Rule 251 (E)

Track B is Rule 252 (W)

Maximum speeds for various tracks

Track	Between/at	and	Restricted speed not exceeding:
Millstone Running track	County	Jersey Ave road crossing	10 mph
5 Running track	County	End of track	5 mph
Lane Running track	Lane	To and from track	10 mph (Not restricted speed though)

Chapter IX: Hunter to A

Stations and Breaks-Hunter to Penn Station NY

Direction to NY is now Eastward from Zoo tower

<u>designated place</u>	<u>location</u>	<u>notes</u>
Hunter	10.5	Interlocking. Remotely controlled by Dock . MP 0 on Lehigh line connection (Raritan Valley 6 and 7 tracks) off 5 track. A and 5 track from Lane to Hunter . Scale track off A, accessing Hunter Street Yard. Moveable point frog switches (SI 80-S1). Non Conforming signal Hunter westbound 3 and 4 tracks. (SI 277-N7)
Cliff	9.7	Interlocking. Remotely controlled by Dock . Interlocking on 1, 2, and 3 only.
UG bridge 9.65	9.65	Special load restrictions L, M, and I. East end of South Street.
Automatic Signal 96/97	9.6	Speed change location.
MP 9	9	Speed change location.
Newark	8.8	Amtrak, NJT, PATH passenger station. Within the limits of Dock interlocking. High level platforms on all tracks A to 5. No fences.
Dock	8.5	Interlocking. A and 5 tracks within interlocking. Passaic River Moveable bridge (Speed change location). Dock tower in service. 1,2,3 only exiting Dock eastward. Critical Bridge SI 132-S2 .
West end of Passaic River Br.		Speed change location.
Harrison	8.3	PATH passenger Station. No passenger access from Amtrak. Within Dock interlocking.
300 ft. east of west limits of Hudson.		Speed change location. East of curve between Hudson and Harrison.
Hudson	8.6 (NY) 7.2 (JC)	Interlocking. Access Hudson NJT line. 5 and 6 Running tracks (off 3 track) 10 and 11 Running tracks (between 1 and 2) all controlled by Hudson . Hudson tower in service. 13,14,15,16 yard tracks between Dock (West end control) and Hudson (east end control) off 1 track. See notes about dual mileposts in this area.
Section B Dispatcher ↑		
Section A Dispatcher ↓		
UG Bridge NY 7.9	NY 7.96	Speed restricted bridge for E60 Locomotives
UG Bridge NY 7.8	NY 7.85	Speed restricted bridge for E60 Locomotives.

<u>designated place</u>	<u>location</u>	<u>notes</u>
Swift	NY 7.2	Interlocking. Remote from Section A Dispatcher. 5 and 6 tracks to Kearney Junction on NJT. SI 277-N3 (Non Conforming Signals). SI 562-N2 (Rule 562 Territory) begins eastward. Moveable point frogs.
UG Bridge 6.8	6.86	Speed restricted bridge for E60 Locomotives.
Portal	6	Interlocking. Remote from Section A. Moveable bridge (speed restricted location). Moveable point frogs. Critical Bridge SI 132-S2. SI 277-N4: Non conforming signal on western limit signal mast (W63)
UG bridge 5.6	5.65	Speed restricted location for E60 locomotives.
Lack	5.1	Interlocking currently in service on 2 and 3 only.
Erie	4.7	Interlocking currently in service on 2 and 3 only.
MP W4.5	4.5	Speed change location for type C trains with <90 mph equipment.
Allied	4	Interlocking. Remote from Sec. A. Moveable point frogs.

Section A Dispatcher ↑

Penn Station Central Control (PSCC) ↓

Bergen	3.7	Interlocking. Remote PSCC
Phase break	3.44	Catenary phase break, 200 ft. each side of Pole W3.44. Position light phase break indicators within Bergen Interlocking and approx. 300 ft. west of MP 3. Review AMT-2 rules (3.202) regarding operations through Phase Breaks.
MP 3	3	Speed change location.
Weehawken Shaft	1.8	Access, ventilation and emergency exit shaft. See notes.
CP Mid	1.5	Controlled point for eastward moves. Controlled by PSCC. Non Conforming signal. SI 277-N6.
New York-New Jersey State Line	1.2	State line. Within North River tubes between CP Mid and 11 Ave. Shafts.
11th Ave Shaft	1000 ft. from east portal of N.R. Tunnel	Access, ventilation and emergency exit shaft. See notes.
A	0.2	Interlocking. Controlled by PSCC. New York Terminal District. Empire Connection. Home signals at east portal of North River tunnels. Begin Rule 562 territory westward at 10th Ave signal bridge. 2 and 3 join 1-6X.
New York Penn Station	0.0	Penn Station NY. Amtrak, NJT, Path passenger station.

Notes on Hunter to A

- SI 19-N2: Permanent whistle signs at each end of Secaucus Transfer Project (West end of Portal, MP 6.39 to Bergen, MP 3.63). Trains must also sound short sounds on the horn throughout the work area.
- Many equipment restrictions in effect between Hudson and A. Review SI 40-N1 (Hazardous –Newark) and SI 41-S16 (Amtrak Express Mail cars).
- SI 161-N1: Duplicate milepost numbers between MP 7.2 and MP 8.6. Any MP designation in this area must be preceded by either NY or JC.
- SI 298-N1: Review Distant Signal Markers. In place at east limits of Hudson and west of CP Mid.
- SI 562-N1, 2,3: Rule 562 territory in effect between Swift and A (see tables below).
- In the State of New Jersey, Engineers will blow one long sound on the engine horn or whistle when approaching passenger stations on adjacent tracks during daylight hours and in darkness if passengers can be observed on or near that platform.
- In the State of New Jersey, Engineers who have not made a trip in Road Service within 12 months may not operate in the State of New Jersey until they have been re-examined and qualified by the proper officer. Engineers, Conductors and Assistant Conductors absent from all railroad duty for thirty days must not operate within New Jersey until they have notified the Dispatcher or Rules Examiner, and been examined by them regarding their knowledge and understanding of any changes that have occurred during that period of absence. SI 950-N1.
- In the State of New Jersey, review SI 606-N1 regarding Rusty Rails.
- All electrified tracks from Penn Station NY to MP 76 (NYP line) are controlled by the Power Director at Penn Station NY.
- SI 47-N1: Tracks equipped for DC Electrical Operation. These instructions are modified by current Bulletin Order.
- SI 34-S7: Direct Release trains controlled by an AEM-7 locomotive must not exceed 30 mph between Bergen and F interlocking.

Maximum speeds for various tracks		
Track	Location	Speed limit
Turnouts between 5 and 6 tracks	Hudson	10 mph

Notes on A Interlocking

Non Conforming signals (SI 277-T2: these signals have letters and numbers attached) in service within A. Note W04 signals on 1X and 2X are automatic signals which can't display Stop.

Notes regarding North River Tunnels

The North River Tunnels consist of 2 separate tunnels, approx. 2.5 miles long, designated as South Tube (track 2) and the North Tube (track 3). There are bench walls on both sides of both tubes.

Review SI 41-S1 regarding movement and storage of equipment in the North River tunnels.

The overhead catenary and the DC 3rd rail system within the tunnels must be considered live and energized. Contact the Power Director to de-energize.

Cross passageways connect the North and South Tubes in 10 locations.

There are two exit shafts. The 11th Ave shaft is approx. 1000 ft. west of the eastern portals of the tubes. The Weehawken shaft is approx. 6000 ft. east of the west portals.

Obtain a copy of the North River Tunnel evacuation procedures (Yellow NEC Timetable Appendix A) from the Rules Department and review them..

Main Tracks without Rule 261 in effect		
location	track	signal rules in effect
Cliff & Dock	1	251(E)
Hudson & Swift	2 & 3	Interlocking rules
Swift & Allied	2 & 3	562 AND Interlocking rules
Allied & A	2 & 3	562

562 Territory

Between Washington and New York, the first area designated as being governed by Signal Rule 562 is within this section (see table above).

Rule 562: Movements in territory where Cab Signals are used without Fixed Automatic Block Signals. Between Swift and A interlockings, there are no wayside signals other than Interlocking signals and Controlled point signals.

SI 562-N2: “No Fixed ABS signals” signs in place mark the beginnings of 562 territory eastward at Swift and westward at 10th Ave.

Pay special attention to SI 562-N1 (inoperative cab signals) and N3 (braking in 562 territory) regarding modifications of Rule 562 in this area.

Note SI 298-N1 (Distant Signal Markers) as regards operation of trains with inoperative cab signals. In this regard, make sure to review NORAC Signal aspect and indication 280a (Clear to the next Interlocking).

SI 277-N5: Review Bergen to “A“ cab signal change point signs.