

Harris Interlocking Tower Fact Sheet

Location: 7th & Walnut Streets, Harrisburg, PA 17101

Opened: April 26, 1930

Ownership:

- 1930 to 1968 - Pennsylvania Railroad
- 1968 to 1976 - Penn Central Railroad
- 1976 to 1992 - Amtrak
- 1992 to Present - Harrisburg Chapter, National Railway Historical Society

Purpose: To control rail traffic through what was once a maze of tracks at the north (railroad west) end of the Harrisburg Passenger Station.

Method: By use of an “Interlocking Machine” to control all switches and signals in the area. The Interlocking Machine functions as an analog computer that ensures that two trains cannot be routed on a collision course. The Interlocking Machine has 113 levers that are used to control the switches and signals.

Territory: Originally 3,250 feet in length extending from the middle of the Harrisburg Passenger Station platforms to approximately Herr Street. The territory varied in width from 4 to 16 tracks wide.

- 1945 - 87 switches and 106 signals
- 1982 - 18 switches and 29 signals
- 1991 - 4 switches and 10 signals

Traffic in the 1930's:

- There were more than 100 scheduled passenger trains per day with multiple sections of many trains greatly increasing that number.
- Approximately 25 freight trains per day.
- Numerous light engine and switching movements.

Traffic Today:

- Two passenger trains per day pass the tower. Several more arrive at the station and reverse, but do not pass the tower.
- Approximately 50 freight trains per day pass Harris Tower in a 24 hour period with this number increasing during the peak freight season in the fall.
- There are also numerous light engine and switching movements.

Historical Significance: Harris Tower marked the western terminus of the Pennsylvania Railroad's electrification of its passenger lines. It was at Harris that westbound trains would have their electric locomotives (like the venerable GG1) removed and replaced with steam or diesel locomotives before continuing their journey westward, with the process reversed for eastbound trains.

Harrisburg was also a point where trains were split and combined. Eastbound trains would be split into a New York & Philadelphia section and a Baltimore & Washington section, with the reverse occurring for westbound trains. Cars would be added and/or removed during this process. All of this combined to make Harris Tower a very busy and very important point on the Pennsy system.

Staffing: The construction of Harris allowed the PRR to close three nearby towers, reducing manpower to 18 men. At its peak, Harris was a three shift, 24/7 operation. It was manned by a Train Director, two Operators, two Levermen and a Maintainer. At the time of its closing Harris was down to one man working a single, 11 a.m. to 7 p.m. shift.

Phase out: Following World War II, with the advent of the Interstate Highway system and passenger jet aircraft, passenger travel by rail diminished sharply. With the decrease in traffic levels, the amount of trackage at Harris was gradually reduced. Switches and signals were removed from service and their controlling levers on the interlocking machine were physically bolted in place.

Although Amtrak operated Harris Tower, passenger traffic had declined to the point where Harris controlled more Conrail trains than Amtrak trains. Eventually Conrail assumed control of the interlocking. The first phase of that project occurred in the summer of 1982. It was called "The Capitol Project" and shifted control of the west end of what had been the Reading Connection from Harris Tower to Conrail's Capitol Tower. Capitol Tower now controlled both ends of the single track rather than just the east end. This eliminated the need for the two towers to coordinate with one another to permit movements.

In 1988 the second phase of the project to transfer control from Harris Tower to Conrail began. The interlocking was reconfigured. Three signal cases interconnected by "express cables" were installed to house control relays. This would allow the interlocking to be controlled from the new computerized dispatch office at 600 Corporate Circle here in Harrisburg (near the Progress Avenue / I-81 interchange) which had been established by Conrail in 1986. Concurrently, the speed of the single track Reading Connector was improved from 10 mph to 30 mph.

This \$9 million rebuild left Harris Tower with very little trackage to control. Amtrak, the owner of the building, subsequently moved the functions of Harris Tower to nearby State Tower, located inside the Harrisburg Passenger Station building.

Harris Tower was closed on November 15, 1991. The Harrisburg Chapter of the NRHS purchased the tower and began its restoration in 1992.

Other History: In 1999 Conrail added a second track to the Reading Co. Connection. However, due to curvature necessitated by a bridge pier supporting the Mulberry Street overhead bridge (just east of the train station) the speed on this second track was initially only 10 mph. Norfolk Southern would later re-grade the entire area and increase the speeds even further.

In 2000 NS changed the name of the interlocking from HARRIS to HARRISBURG to avoid a name conflict with another HARRIS interlocking on the Conemaugh Line. The former Reading Connection is now considered to be part of the NS Harrisburg Line which terminates at CP Harrisburg.

Today: The tracks immediately outside the tower are the western terminus of Amtrak's railroad from Philadelphia to Harrisburg. West of here, Amtrak trains travel on Norfolk Southern owned rails. The two tracks on the opposite side of the railroad property are Norfolk Southern's Harrisburg Line from Harrisburg to Philadelphia by way of Reading, PA. At Reading, the Harrisburg Line continues to Philadelphia while the NS Reading Line branches off and connects to Allentown. From Allentown, trains travel to the northern New Jersey (New York) area by way of the NS Lehigh Line.

In 1927, a train traveling from New York to Chicago passed under the control of over 100 towers like Harris, staffed by 916 men.

Today, towers are rapidly being replaced by Centralized Train Control (CTC) systems that allow a handful of dispatchers to control switches and signals over hundreds of miles of railroad. Norfolk Southern's Centralized Train Control dispatching facility is in Atlanta, GA, controlling the entire railroad from this one single point. Amtrak operates their CTC facility in Wilmington, DE.

Harris was staffed by six men and controlled 0.6 mile of railroad. Today one NS dispatcher in Atlanta controls well over 100 miles of railroad in the surrounding area. The cost savings are enormous!

As railroads continue to transfer control from towers to CTC, more and more towers are permanently closed. Very few operating towers remain. Most decommissioned towers have been or will be demolished. It is for this reason that Harris Tower has been preserved and is retained as an example of railroading in a bygone era.

Harris Tower is listed in the National Register of Historic Places.