

## Methodology

Written by Paul Marston

Saturday, 08 March 2008 14:22 - Last Updated Friday, 29 August 2008 10:45

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Trying to determine which railroads were in existence from the first permanent railroad in 1826 through the end of 1850 and where they went is truly a monumental task. Part of the problem is that the United States Census Bureau did not start collecting statistics on railroads until the 1860 Census. It was not until the 1880 Census, with the assistance of Railway Age Magazine and Poor's Railroad manuals, they attempted to reconstruct what had happened during the past fifty-five years. By that time railroads had come and gone in some areas especially in mining and timbering operations such as in the coal fields of Pennsylvania. As a field played out, the tracks were torn up and new ones were built to where new diggings had been developed. Thus even to determine which railroads had ever been built and how many there were was a daunting task even in 1880. Needless to say, the situation has gotten even more difficult 180 years after the first permanent railroad was constructed. By now there have been so many consolidations of railroads and so much trackage torn up, that most railroads that existed in 1850 no longer exist although there is some railroad running trains over pretty much the same railbed in the vast majority of cases.

A great deal of exhaustive historical research from many different sources reveals that there were 285 railroads that constructed track and ran trains over them between 1826 and 1850. In the early days of the country, to incorporate a business you did not go to some corporation commission office and fill out the paperwork. It literally took an act of congress or at least a state legislature to do that and a business could not do business in another state without permission of that state legislature. Hence in the list of those 285 railroads, you will find the same name or a very similar name in a neighboring state when the railroad crossed a state line. Once that information was gathered, it came down to exactly where these railroads constructed their tracks and how much track they laid down. That in turn brought a whole new host of problems. You might know that a railroad went from Baltimore to Endicott Mills (now Endicott City), but it certainly did not go as the crow flies so where exactly along the ground were the tracks laid? The problem was complicated by the fact that we wanted to construct digitized maps of these railroads using Mapinfo™. To do that, one

needs to have the latitude and longitude of the beginning and ending point of each segment of track laid down. While one can register topographical maps or aerial photos showing such tracks in Mapinfo™ and then trace where the tracks go and thus create those needed coordinates, these are maps from the last fifty years or so. This is going to only work if the railbed is still in use or at least was until fairly recently.

What about abandoned railroad beds? Fortunately, railroads have to be constructed so that there is not much of a grade and do not go around very sharp bends. This means that the construction process requires a lot of cutting, filling and grading. That process leaves scars on the landscape that still show up even as much as 180 years later. Of course, if the tracks were torn up a long time ago and there is a housing development sitting right on top of where the tracks used to go, then life gets a lot more difficult. Still, since railroads tend to run in straight lines whenever possible and you can see the scars entering one side of the subdivision and leaving another side, it is not too difficult to figure out where they used to go. Surprisingly enough, places where we just had to guess the location of the old railbed constitutes an extremely small percentage of the total tackage laid down between 1826 and 1850.

The problem was made easier by the fact that the United States government has been digitizing maps of railroad beds since 1990 in the TIGRE file. These files can be downloaded and we were able to use these as our starting point. Of course, this only worked if the railbed was laid down between 1826 and 1850 and was still present when it was placed into the TIGRE file. That meant eliminating a great deal of trackage that was built after 1850. It also meant registering thousands of topographical maps and aerial photos in Mapinfo™ and tracing old railbeds to enter these abandoned railroads. It also meant entering the name of the railroad track segment as it existed in 1850 and the year in which that portion of the track was constructed on all of this data.

That brings up the question of exactly where a railroad began and ended. Today this is usually in a railroad yard where there are sidings

**all over the place. Originally, the tracks usually ended at a railroad station where passengers could get on or off the train. Since passenger traffic is now limited to Amtrak, railroad stations are few and far between so where where they located over 150 years ago when most of them are long gone? This information is rather critical where constructing a digitized map because you want to know where to stop the line you are drawing. Mapping software such as Mapinfo™ is accurate to six decimal places of a degree and length of the railroad can be given in miles to those same six decimal places. Since a mile is 5,280 feet, a difference of .000001 miles in the length of a railroad constitutes .00528 feet or .06336 inches. Obviously this kind of accuracy applied to the amount of trackage laid over 180 years ago is nothing short of ridiculous. That is why trackage is not given to an accuracy of more than .01 miles, but even that is 52.8 feet.**

**So where in Baltimore did those tracks going to Endicott Mills begin? It is possible to figure out where the railroad station was located but that is where the last railroad station was built with several spurs into the station. Which one was the original line and how far into the station did it go? An accuracy of 52.8 feet requires that you know the answer. The problem is that the answer is simply not readily available any more if it ever was. That is why the amount of trackage shown in the tables that the Census Bureau is invaluable since you know where the railroad bed went and what the total mileage between the two points was. Now you can make a reasonable estimate of how far into the station the loading spur went. Unfortunately, the railroads back then did not exactly get out a tape measure and report the amount of track they had laid down to the nearest .01 miles. Often they gave the amounts only to the nearest mile. In other cases, only to the nearest .25 miles. It is only when the trackage is reported in a figure that does not end in .00, .25, .50, or .75 that one can give some credence to the reported figure. In all other cases, you know that figure can be as much as a half mile off. This makes figuring out exactly where a railroad line terminated a major problem.**

**Fortunately, figures are available for the amount of track in an entire state as of 1850 and if your trackage comes out to that figure then you**

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**know that the pluses and minuses have pretty much cancelled each other out. Amazingly enough, we were able to make our figures for the states come out exactly to the figure given in these tables in the vast majority of cases and when they did not, we could clearly account for the difference as being due to an error in the original tables such as not counting the anthracite railroads in Pennsylvania. The bottom line is that we believe that the location and amount of trackage given on this website are as accurate as it is possible to be at this late date. Indeed, we believe that these figures are far more accurate than even those compiled in 1860 when the required information was much more readily available.**