

**The Pennsylvania State Historic Preservation Office's
Researchers Guide for Documenting and Evaluating Railroads**

October 16, 2015 Final Version

Table of Contents

Introduction	1 – 2
Property Type	3 – 6
Documenting Contributing Resources to Historic Districts	7
Description (Narrative, Mapping and Photography).....	8 - 9
Significance, History and Context Development	10 - 16
Integrity	17 - 19
Additional Avenues of Significance	20 - 22
Glossary of Terms	23 - 27
Appendix I - Naming Standardization Guide	28
Appendix 2 – Aggregate Files	29-30

INTRODUCTION

Railroads in Pennsylvania peaked at 11,693 miles of roadway in 1920, and Pennsylvania was generally considered to be the top third most railroad mileage state in the United States. Today, approximately 35% of all freight commerce in the nation still passes through Pennsylvania, consisting of approximately 5,500 miles of track.

A railroad - which as a single system can be comprised of interrelated buildings, structures, and linear components - transports goods and/or people from one point to another. Pennsylvania's railroads can vary considerably in route length, engineering, setting, and so on. While interurban lines and small-scale, privately-owned mining and industrial rail systems do not necessarily fall under traditional railway networks, we are including them in these Guidelines since research questions may be similar. Nonetheless, for the most part, they will have similar design elements and components common to them all.

In Pennsylvania, three major railroads have been determined to have state-wide significance in transportation, the economy and the development of the state's industries and communities. These are the *Pennsylvania Railroad [Pennsylvania Railroad: Main Line (Philadelphia to Harrisburg) Key # 105675, Pennsylvania Railroad: Main Line (Harrisburg to Pittsburgh) Key # 112369, Pennsylvania Railroad (Pittsburgh to the Ohio State Line) Key 112372, Pennsylvania Railroad: Morrisville Line (Thorndale to Morrisville) Key 100219]*; the *Reading Railroad (Philadelphia to Harrisburg) Key 112375*; and the *Lehigh Valley Railroad (Allentown to Wilkes-Barre) Key 112381*. These railroads were evaluated as part of Conrail's Pennsylvania Statewide Double-Stack Clearance Improvement Project (ER 93-4041-042) in 1993; however no Historic Resource Survey Forms (HRSFs) were prepared as part of that study.¹ The Pennsylvania State Historic Preservation Office (SHPO) has instituted a policy that re-evaluation of National Register of Historic Places (NRHP) eligibility for all types of resources may be necessary when the date of the initial evaluation is over five years (this does not apply to NRHP listed resources or Keeper of the National Register eligibility determinations).²

¹ Recently, documentation has been supplied by various CRM firms. The *Pennsylvania Railroad: Morrisville Line's* (Key Numbers 112378, 100219) portion from Norristown, Montgomery County to Morrisville, Bucks County was determined eligible under Criteria A and C for its statewide significance in transportation, economy, and industrial and community development. The southern terminus for the *Morrisville Line* is the connection with the *Harrisburg Line* in Norristown and the northern terminus is the connection with the *Trenton Line* in Morrisville.

² Other significant railroads in Pennsylvania include the *Pennsylvania Railroad: Enola Branch Low Grade Freight Line (Enola to Parkesburg)*, Key 102143, which was determined by the Keeper of the National Register to be eligible for the NRHP. The entire 66.5 mile Enola Branch line, constructed by the Pennsylvania Railroad between 1902 and 1906, is eligible for its historic and engineering significance. Pennsylvania has three National Historic Landmark rail resources: the *Allegheny Portage Railroad*, Key # 123985, the *East Broad Top Railroad* Key # 000653, and the *Pennsylvania Railroad: Horseshoe Curve*, Key # 001300.

Evaluating railroads can be problematic, whether it is for NRHP eligibility, or for consensus determinations of eligibility for Section 106 of the National Historic Preservation Act reached through consultation between an agency and the SHPO.³

These Guidelines were created to ensure a consistent method of recordation and evaluation of railroads in either case; and to provide guidance in evaluating significance of the railroad using various trends and criterion shown to be widespread in Pennsylvania. If a railroad has already been adequately documented in our files, the researcher does not necessarily have to conduct in-depth research and produce new narration. Rather by using the information already gathered by others, they can supplement and consolidate previous work and update the HRSF to reflect any changes or loss of resources along the line, correct incorrect information, provide current photographs, mapping, etc.

The SHPO has developed two methodologies to help in this effort: the “Naming Standardization Guide” (see Appendix 1) and the “Aggregate File” system (see Appendix 2). The “Naming Standardization Guide” has been applied to all historic and current names of railroads in the Cultural Resources Geographic Information System (CRGIS).⁴ All railroad resources will be identified first by the railroad, then by the type of resource (line, bridge, station, etc.) and then by the location if available. For example, a railroad station located in Harrisburg owned by the Pennsylvania Railroad would be named “Pennsylvania Railroad: Station (Harrisburg).” This enables the researcher to search for all resources related to a particular railroad in CRGIS.⁵

The “Aggregate File” system has also been completed for a number of railroads. Aggregate files are digital files that were created as a means of bringing together - and displaying in CRGIS - any previously surveyed components of a particular railroad noted in the details report as “Associated Resource.” The historic paths of the railroad are also mapped in CRGIS, and a listing of each county and municipality that the railroad traveled through is provided.

However, some defacto findings of eligibility which were based on accumulation of small pieces without the entire railroad having been evaluated will require additional research. There are also situations in which CRGIS recorded decisions for which there are no files. Researchers should not assume the railroad’s eligibility based on previous findings for sections of the line.

³ If you have questions regarding consensus determinations of eligibility or the process itself, please contact the state or federal agency involved in the project.

⁴ CRGIS is the SHPO’s [Cultural Resource Geographic Information System](#), which is a map-based inventory of Pennsylvania’s historic and archeological sites and surveys stored in files at our Harrisburg office. Access to the paper records is free and open to the public by appointment at the SHPO office in Harrisburg. CRGIS is a means of accessing some of this data without a trip to Harrisburg.

⁵ All railroads must use the SHPO naming convention (See Appendix 1) for the historic and current names, however, throughout the narrative the preparer may use the railroad’s abbreviation i.e.: P&LE RR.

In all cases, the significance of the railroad will need to be established. A HRSF will need to be completed to document the history of the railroad for the SHPO to determine the significance of the railroad. This includes mapping the specific line on a U.S. Geological Survey (USGS) map.

A *Railroads of Pennsylvania* website has been developed to act as a companion piece to these Guidelines. The website provides access to primary and secondary documents, scans of HRSFs and NRHP nominations, and additional avenues of research and further discussion of the trends of railroads in Pennsylvania.

PROPERTY TYPE

Railroad Corridor Historic District

The National Park Service (NPS) has stated that SHPOs can establish property types and subtypes for common resources based upon variations in style or form, geographic ranges, time brackets or some combination of meaningful and logical distinctions.⁶

Since Pennsylvania has a diverse transportation history, it is the decision of the SHPO to establish the property type based on function.

Railroad buildings and structures functioned together, thus individual resources are grouped together as one district property type: *Railroad Corridor Historic District*.⁷ Please note that while major built architectural and engineering resources are discussed here as components of the railroad corridor historic district, they can be recorded and evaluated individually. In addition, further research on resources within and adjacent to the corridor may suggest additional areas of significance not covered here in these Guidelines. For additional information on preparing a Historic Context for Individual Properties and Historic Districts, please see [Historic Context Guidelines](#).

The *Railroad Corridor Historic District* shall:

1. Have a justifiable beginning and ending (terminus) point
2. Be evaluated as a historic district
 - a. Railroads will be treated as historic districts – whether or not it is a simple system or more complex. Even a simple system may have historically and/or directly associated resources.⁸
 - b. Evaluating a railroad as a historic district provides the means to identify and designate resources that do not have contiguous boundaries but contribute to the resource.

⁶Barbara Wyatt, “Evaluating Common Resources,” March 11-12, 2009. “Resource” is a NPS term for “any building, structure, site or object that is part of or constitutes a historic property.”

⁷“Property Type” is a NPS term for “a grouping of properties defined by common physical and associative attributes.”

⁸ According to the National Park Service a district is a “geographically definable area that possesses a significant concentration, linkage or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development; may also comprise of individual elements separated geographically but linked by association or history.”

- c. A railroad can be a contributing line to another railroad corridor historic district.⁹
- 3. Have historically provided significant rail service
 - a. For the purposes of evaluating historic significance, a railroad’s status as a mainline (trunk line) is not necessarily a determinant. A branch (spur, feeder, auxiliary), or short line could be historically significant.¹⁰ Generally however if the railroad under consideration was simply a short cutoff, extension or connection to a minor factory or loading area, it would not have individual significance.
 - b. It will be up to the preparer to establish the historical significance and provide documentation that the railroad provided substantial access to communities or areas (for example mining communities or industrial facilities).
- 4. Have a defensible Period of Significance (POS)
 - a. While these Guidelines do not demarcate any specific POS, the researcher will need to provide a defensible POS. Depending on the area of significance, the POS could begin with the date of construction or establishment of noteworthy operations, and end when the railroad no longer played a significant role. Continued use of a railroad does not justify continuing the POS.

Major Built Elements

Contributing resources of a railroad corridor historic district will include all major built elements of the railroad that were constructed within the railroad’s period of significance, and constructed, owned and/or used by the railroad. The location of these elements along a railroad corridor may vary, and some railroad corridors may not have all of these elements.¹¹

Major built elements are defined as those that were associated with the operation of the railroad and were directly related to its function. Contributing resources will be major built elements generally associated with the railroad that have engineering or architectural significance; such as bridges, stations, tunnels, etc. This can also include grades and road beds when there is a

⁹ Case in point: the *Beech Creek Railroad* is significant as the sole carrier of the sole source of coal for the *New York Central Railroad (NYC)*. The railroad was built by the NYC to reach the bituminous coalfields of central Pennsylvania and the Vanderbilts organized the Clearfield Bituminous Coal Company, which owned most of the land along the railroad right-of-way. As a wholly owned subsidiary and only source of fuel for the NYC, the *Beech Creek Railroad* is a contributing line to the National Register eligible *New York Central Railroad*.

¹⁰ “Although, historically, railroad companies identified their railroad corridors as mainlines or branch lines, the definition of mainline varied from company to company, depending on volume of freight, priority on operations time tables, and other factors. In addition, a railroad corridor’s status may have changed over time, depending on operating conditions” Summit EnviroSolutions, Inc. and ARCH, LLC, “Railroads in Minnesota, 1862-1956 MPS,” 183. Definition of industry terms from the *Railway Age’s Comprehensive Railroad Dictionary* include: a) Belt line - a short line railroad operating within and/or around a city; usually organized to be a pickup, delivery and transfer service facility for trunk lines and industrial plants; b) Branch Line – a secondary line of a railway, as distinguished from the main line; c) Main line – a term referring to the primary or most heavily used tracks of a railroad. Primary rail line over which trains operate between terminals; d) Short line – may originate or terminate freight traffic on its track, participates in division of revenue and are usually less than 100 miles in length; e) Side track – a track auxiliary to the main track for meeting of passing trains; f) Spur track – as distinguished from a sidetrack, a spur track is of indefinite length, extending out from main line.

¹¹ The term “element” has been used interchangeably with the term “resource.”

significant engineering achievement involved. Resources will be considered non-contributing if they fall outside the period of significance, lack integrity, or were not built by the railroad.

The following typology for major built elements is based on the classification system developed by Walter Berg during the 1890s and published under the title of [*Buildings and Structures of American Railroads*](#) in 1893.¹²

Major Built Element Type

1. Depots/Stations (Terminal or Union, Combination, Passenger, Flag, Freight, etc.)
2. Freight and passenger platforms if integrated with the depot
3. Bridges and viaducts
4. Tunnels
5. Major built culverts
6. Rail yards and other yards
 - a. Common buildings and structures within a railroad yard can include: engine houses, shop buildings, turntables and transfer tables, yard offices, worker shelters, power houses, coaling stations, ash pits, water stations, ice houses, storage buildings, and safety structures (signals and interlocking towers).
7. Interlocking towers
8. Coaling facilities
9. Catenaries
10. Railroad shops
11. Signal towers
12. Freight house
13. Head or stub stations
14. Train sheds
15. Waterfront terminals, piers and docks

Major Built Elements must:

1. Have been constructed by the railroad and established during the period of significance of the railroad.
2. Retain the character-defining architectural, transportation-related and/or technological or engineering components associated with their construction.
3. Have a demonstrable relationship in order to include them within the railroad corridor district boundary.

¹² “Berg developed his classification system during the time when railroad companies were rapidly expanding their physical plants and erecting a host of functionally specific structures. His purpose was to provide a useful reference book for railroad managers, superintendents, mechanics, engineers, architects, and others with an interest in the existing practices of American railroads. Berg’s work remains the classic treatise on railroad architecture, in large part because he provided a highly rationalized approach to studying the subject, and it is still considered by architectural historians and students of railroad history to be a standard reference work. The typology presented here thus follows existing scholarship and classifies structures by function rather than by association with a particular time period or historical theme. As such, it provides a standard method for identifying and comparing the structures among various railroads” *“The Advent and Development of Railroads in Iowa: 1855-1940 MPS,”* Section F, 1.

4. Stations and yards must retain sufficient buildings and/or structures other than the railroad roadway to be contributing.
 - a. A railroad station stop that only has the platform and the railroad roadway; and the station is no longer extant, would not have integrity and thus would not be contributing to the railroad corridor historic district.
 - b. A railroad yard that only contained the railroad roadway; and the engine house, maintenance shop, and/or repair shops are not extant would not have integrity and thus would not be contributing to the railroad corridor historic district.
5. In order for sections of the railbed to be considered contributing **when there is a significant engineering achievement involved**, they must be on their original alignment and clearly identifiable as a railbed with grading and elevation (See below #1).

By definition, the following elements are determined to be non-contributing to a Railroad Corridor Historic District and thus are excluded from evaluation:

1. The graded line, ballast, tracks, minor built culverts, and small scale elements such as switches, will be excluded from evaluation, **unless** these elements have significance for their design or engineering or for a critical and/or pivotal role in the significance of the railroad.¹³
2. Highway bridges, unless built by the railroad or in coordination with the railroad, will be excluded from evaluation.
3. Resources that may have existed on railroad property, but were not owned or directly used by the railroad are not included as components of the railroad corridor historic district. This could include resources such as grain elevators, stockyards and warehouses.
4. This Researcher's Guide does **not** consider rolling stock to be under the railroad corridor historic district.
 - a. For those interested in researching the NRHP eligibility of rolling stock, the SHPO has on file copies of the *Pennsylvania Railroad Rolling Stock TR* or visit the National Park Service's [Steamtown: Special History Study](#).

¹³Small scale elements include: minor built culverts; signs for train operation which can include mileposts, flanger signs, yard limit, traffic signals, track signs and switching devices; grade crossings and crossing gates; platforms (if there is not a station); and bumpers and car stops.

Documenting Contributing Resources to Historic Districts

Railroads can be evaluated within the context of a *Railroad Corridor Historic District*, and railroads also have the potential to be evaluated as contributing to other historic districts. A railroad, or component(s) of a railroad, should be examined for their potential to contribute to both a Railroad Corridor Historic District as well as other historic district(s).

Generally, if major built elements were constructed by the railroad during the period of significance, retains integrity from that period, and relates to the documented significance of the railroad, then those resources would be considered contributing to a Railroad Corridor Historic District.

The following questions are not a checklist, but should be used to inform the analysis and opinion regarding the National Register eligibility of historic districts. Questions to ask when documenting and evaluating the potential for a railroad's major built elements [also referred to as 'resources' or 'elements'] to contribute to a Railroad Corridor Historic District and/or an adjacent historic district:

- 1) Was the resource built by the railroad? If not, was it built in cooperation with the railroad as part of a joint effort for rail and/or roadway transportation improvements? Document any aesthetics associated with the railroad such as markings or insignias, complementary materials, or design. Note if the resource is a standard design employed by the railroad.
- 2) Is there engineering significance associated with the resource or other feature through which the railroad passes or where a bridge spans?
- 3) Was the resource built during the period of significance? Note if the resource was part of a building/improvement/upgrade campaign of the railroad or a joint improvement project with local governments or department of transportation. Typical reasons for railroad improvement campaigns include improvement of operations, overcoming geographic challenges, and/or resolution of traffic issues.
- 4) Does the resource retain integrity from the period of significance? Describe any changes that may have occurred over time. Note if there are any other railroad related resources in the area based on the examination of historic mapping and/or site visits.
- 5) Does the resource have the potential to contribute to a surrounding/adjacent historic district? If yes, was it built within that district's period of significance and retain integrity?

DESCRIPTION

The goal is to provide an understanding of the railroads scale and development, its component parts and how they relate to each other, and the railroad's integrity.¹⁴

Due to the popularity of railroads to the general public, historians and rail fans, there is a large amount of information available to researchers on the Internet, so much so, that field work is not always necessary. When access to the railroad and/or major built elements is limited, railroad resources can be identified through a review of multimedia.¹⁵ If you are conducting field work such as surveying and photographing a railroad, it must only be conducted from public right-of-ways (ROWs) for safety and legal reasons.

1. Narrative (provide a description of the current and historic physical appearance and integrity) including but not limited to:

a. dates of construction and major alterations, locations, materials used, architectural styles, etc. of the major built elements

For engineering significance only:

a. the technological construction techniques; upgrade or removal of features that pertain to its technological/engineering significance;

b. the railroad alignment, re-alignments or reconstruction to straighten curves or reduce grades; changes in trackage (single, double, low grade, standard, narrow-gauge etc.) if pertinent;

c. the local geography and its influence on the location and design of the railroad (the topographic and other natural features);

2. Mapping

See [Standards for the PA Historic Resource Survey Forms: Boundaries, Maps & Photography](#); [How to Complete the Pennsylvania Historic Resource Survey Form](#) and/or [Guidelines for National Register Submissions](#).

¹⁴Per the NPS, historic integrity is “the authenticity of a property’s historic identity, evidenced by the survival of physical characteristics that existed during the property’s historic period. Not only must a property resemble its historic appearance, but it must also retain physical materials, design features, and aspects of construction dating from the period when it attained significance. All seven qualities do not need to be present for eligibility as long as the overall sense of past time and place is evident.”

¹⁵Multimedia includes online mapping websites, including current and historic aerials; digital image archives or websites that have information or photographs about current or demolished buildings, bridges, etc.; full length (free of charge) online books, whether they are primary documents or secondary documents; oral interviews; etc. Please see the *Railroads of Pennsylvania* website for links to various websites that may have the information you are looking to obtain.

The railroad line must be mapped on USGS maps (7.5 minute series) and include the locations of the major built elements keyed to the map. It is not necessary to submit an original USGS quadrangle map – they can be printed from on-line sites;

Provide copies of historic maps and atlases particularly Railroad Atlas Maps (published every ten years between 1871 and 1961) if available and for pertinent time periods;

Provide photocopies of current aerial maps, and historic aerial maps for pertinent time periods.

3. **Photography**

See [Standards for the PA Historic Resource Survey Forms: Boundaries, Maps & Photography](#); [How to Complete the Pennsylvania Historic Resource Survey Form](#) and/or [Guidelines for National Register Submissions](#)

Digital photographs are preferred, printed on 8.5 x 11 paper, with two 4x6 images per page with captions.

Boundary issue

While these Guidelines do not specifically address boundaries and boundary justifications, for the most part, the **engineered** railroad Right of Way (ROW) is the logical boundary. It is understood that legal ROWs can be quite large and include properties not associated with the railroad. There appears to be no typical width per se, 50' width (25' either side of track centerline), 100' width (50' either side of track centerline), 200' width (100' either side of track centerline) or more has been recorded. The objective of the boundary is to capture all railroad built resources.

The boundary can be and in most cases, will be discontinuous (containing two or more geographically separate areas) and per the NPS, a historic district may contain discontinuous elements when “visual continuity is not a factor of historic significance, when resources are geographically separate, and when the intervening space lacks significance.”

SIGNIFICANCE, HISTORY AND CONTEXT DEVELOPMENT

The researcher should not be asking the question “Is this railroad segment eligible for the National Register?” but rather “Is the railroad eligible for the National Register?” or “Is the railroad system historically significant?”

A. CRITERION A

Railroads are often evaluated under Criterion A for their association with events or patterns that have made a significant contribution to the broad historical patterns of the country, the state, or the region. As in Pennsylvania and in other states, railroads played a significant role in the commercial, industrial or agricultural development in a region and played a significant role in the transportation history of a region. In other states, railroads could be demonstrably associated with the settlement of a region or played a significant role in the planning and physical growth of one or more communities along their length.

However, the SHPO will not evaluate a railroad corridor historic district under *Exploration/Settlement*. “Comparatively speaking, the railroad industry started late in Pennsylvania, in part due to the huge investment sunk by the Commonwealth and private investors into the turnpikes and then the Main Line Canal system.”¹⁶ Thus railroads did not necessarily provide the only long-distance transportation option nor did they create a significant increase in the rate of settlement.

The SHPO will not evaluate a railroad corridor historic district under *Community Planning and Development*. All railroads have a local importance and history. Yet, railroads had more of a profound impact on the state’s economy in relation to industrial and commercial activities which fueled the growth of towns, which falls under the area of significance of *Transportation*. A railroad station, bridge or other major built element could be included as a contributing or noncontributing resource to a town’s historic district.

Most if not all railroads were incorporated and/or chartered to acquire, maintain and operate a railroad between point A and point B, and to make extensions to other points in the state. It is the decision of the SHPO that a railroad corridor historic district must have significant and demonstrable association with the *Transportation* area of significance; in other words, “significant railroad corridors can be characterized by the important connections they made or by the types and volumes of traffic they carried.”¹⁷

For a railroad corridor to be eligible for association with *Transportation* it must meet at least one of the following:

¹⁶ Lichtenstein & Associates, “Historic Context for Transportation Networks in Pennsylvania,” 1999, np.

¹⁷Summit Envirosolutions and ARCH, LLC, “Railroads in Minnesota, 1862-1956 MPS,” 194.

1. “A railroad corridor historic district provided transportation between a significant group of resources or a significant manufacturing or commercial connection and a principal transfer point or terminal market for commodities, products, or services. In addition, the railroad corridor historic district either established a railroad connection that did not previously exist or served as the dominant transportation corridor, and establishment of the connection was followed by a significant expansion of an industrial, commercial, or agricultural practice;
2. A railroad corridor historic district was an influential component of the state’s railroad network, or it made important early connections within the network or with other modes of transportation;
3. A railroad corridor historic district provided a critical link or junction between two or more important railroad corridors, and the connection led to significant expansion of operations in the transportation network or in commerce or industry. The corridor directly contributed to the development of the commercial or industrial operations, or it influenced transportation patterns in an area of particularly heavy railroad traffic.”¹⁸

Transportation

Points of consideration and questions to ask when documenting significance and history can include, but should not be limited to:

a. Network

1. According to *Poor’s Manual of Railroads* or *Moody’s Railroads*, how many miles of track did the railroad have? How many branches?
2. What was the original charter and franchise? What is the railroad’s lineage? When did actual construction and rail laying begin? When did it end? What was the actual “as constructed” mileage? Was it only surveyed? Where did the line officially begin and end? Why did it stop and start at those particular locations? Did any town or location not want the railroad built there? Were there any legal problems obtaining the land?
3. Was there an operating agreement with another railroad? How and where did this railroad link to other major rail systems?
4. Was this a freight only railroad or did it also offer passenger service? When did it discontinue either? What were the major commodities shipped over the rail line? What was the percentage of its rail revenue?
5. Was it an early or influential component of Pennsylvania’s transportation network? Did this railroad merely attempt to compete with another line by constructing an alternate or parallel line? Who were its competitors? Did the railroad open the region to new settlement or did it merely connect an existing town to an existing railroad?
6. Did the railroad expand by merging with other railroads? Did they expand by constructing new railroad lines to new areas?
7. How widespread was its use and impact? Why did it decline?

¹⁸Summit EnviroSolutions, Inc. and ARCH, LLC, 196.

Further research avenues include (Please also see the *Railroads of Pennsylvania* website for links to various documents):

American Railroad Journal (1832-1871)

Annual Reports of the Auditor General of the State of Pennsylvania and of the Tabulations and Deductions from the Reports of the Railroad, Canal & Telegraph Companies (various years are available on-line at www.books.google.com)

Annual Volumes on Acts of the Legislature of Pennsylvania

Deeds and bankruptcy foreclosure records

[Mundy, Floyd W., ed. *The Earning Power of Railroads*. New York: Jas. H. Oliphant & Co., 1914.](#)

[The National Railway Historical Society](#)

National Railway Publication Company's *The Official Guide of the Railways*
Bullinger's Postal and Shipping Guide for the United States and Canada

Railroad Annual Reports

Railroad company monthly employee magazines

Railroad History (the oldest railroad journal in North America) published by
[Railway & Locomotive Historical Society](#)

Saylor, Roger B. *The Railroads of Pennsylvania*. Penn State University, 1964.

Taber III, Thomas T. "Unlocking the Unknown: Basic Handbook for Doing Railroad Research." 2009.

Taber III, Thomas T. *A Guide to Railroad Historical Resources, United States and Canada*.
Muncy, PA: Thomas T. Taber III, 1993.

U.S. Supreme Court Reports

Valuation records of the Interstate Commerce Commission

b. Commerce/trade

Points of consideration and questions to ask when documenting significance and history can include, but should not be limited to:

1. What were the major commodities shipped over the rail line?
2. Was the railroad the dominant carrier of the commodity? Did it connect with important transfer points or terminal markets?
3. Was there a significant expansion of the logging, milling and mining industry in that region or part of the state due to the construction of the

railroad? Did the railroad own its own “captive” coal mines? How did the growth of the railroad affect the development of the industries?

4. What is the documentation to support that it carried a substantial volume of commodities?

5. What is the documentation to support the claim that this railroad’s expansion into rural areas set in motion the growth of nearby urban areas?

8. What other transportation competitors challenged the railroad’s dominance and when? Or did the railroad go out of business because the commodity was gone? How was the railroad responsive to changed circumstances?

9. Was this a permanent railroad – or rather was it built and operated for a specific task that extended over a limited time period?

10. How long after it was built was it purchased by a larger railroad and became a branch line of the other railroad? Did it evolve into a different type of rail line?

Further research avenues include (Please also see the *Railroads of Pennsylvania* website for links to various documents):

[Aluminum Industry Resources of Southwestern Pennsylvania MPS](#)

[Anthracite Railroads Historical Society, Inc.](#)

[Anthracite-Related Resources of Northeastern Pennsylvania MPS](#)

[Bituminous Coal and Coke resources of Pennsylvania MPS](#)

Department of Labor and Industry’s *Industrial Directory of Pennsylvania* (various years are available on-line at www.books.google.com)

[Gristmills in Berks County MPS](#)

[Historic Agricultural Resources of Pennsylvania c.1700-1960 MPS](#)

Hunt’s Merchant Magazine (1831-1870)

[Industrial Resources of Huntingdon County, 1780-1939 MPS](#)

[Iron and Steel Resources of Pennsylvania MPS](#)

[Oil Industry Resources in Western Pennsylvania MPS](#)

Railroad Age-Gazette

[Thompson, J.W, Department of the Interior. *Pennsylvania Mining Statutes Annotated*. Washington: Government Printing Office, 1920.](#)

B. CRITERION B

Under Criterion B, a resource may be eligible for the National Register of Historic Places if it is strongly associated with the life of a historically significant person. Since most railroads were essentially corporate undertakings, few railroads will likely possess Criterion B eligibility. While some railroads may reflect the skill of a railroad's engineer, National Register guidelines state that such properties should be nominated under Criterion C. While some major built elements may reflect the skill of an architect, National Register guidelines state that such properties should be nominated under Criterion C.

C. CRITERION C

Properties may be eligible for the National Register under Criterion C (Design/Construction) if they “embody the distinctive characteristics of a type, period, or method of construction or that represents the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.”¹⁹

1. **Engineering:** Some railroad design and construction efforts could be construed as major civil engineering undertakings of their times. Examples of significant railroad engineering feats in Pennsylvania include the *Pennsylvania Railroad: Horseshoe Curve*, Key #001300 and the *Johnstown Inclined Railway*, Key # 001288.

Large-scale construction projects employing representative technologies and designs characteristic of their period, while may be representative are not necessarily significant. Railroads that simply exemplify the standard designs of a railroad company are probably not significant in themselves.

A railroad corridor historic district could represent the evolving technology of railroad transportation. For instance, the PRR's electrification of its *Philadelphia, Baltimore & Washington Division* between approximately 1910 to 1935 (other sources state it started in 1915); and its 1937-1938 electrification of five branch lines out of Philadelphia, Pennsylvania's portion of the Northeast Corridor mainline, and the Trenton Cut-off (Morrisville Line) could be considered a significant feat.

Points of consideration and questions to ask when documenting significance and history can include, but should not be limited to:

- a. Why was it built in the first place? Who was the engineer? Builder? Construction company? Surveyed by? How long did it take to complete?
- b. How did it change transportation in Pennsylvania? Are there others like it in Pennsylvania or the United States? What makes this one significant historically? Was it experimental? “State of the art”?

¹⁹U.S. Department of the Interior, National Park Service, National Register Bulletin “How to Complete the National Register Registration Form,” 1997: 37.

- c. What is its engineering significance? What innovative measures were developed to overcome barriers along the railroad route? How was it an impressive undertaking?
- d. What part did difficult terrain play in its need for engineering? Describe the spatial organization, circulation needs and topography that the line went through or had to overcome.
- e. Was this a city public works project? (intra-urban or interurban). City Beautiful movement? Were ordinances passed to pay for it?
- f. What if any major programs of improvements occurred? When? How did those improvements change its engineering?
- g. If it is a logging railroad, were there special structural and engineering trends and accomplishments associated with it?
- h. Do the major built elements have engineering significance? Why was an engineering effort needed?
- i. How did this railroad exploit the technological advances to its advantage? Did these innovations improve the revenue and traffic gains?

Further research avenues include (Please also see the *Railroads of Pennsylvania* website for links to various documents):

[Atkinson, Philip. *The Electric Transformation of Power and its Application by the Electric Motor, Including Electric Railway Construction*. New York: D. Van Nostrand Company, 1893.](#)

Conrail. "List of Undergrade and Overhead Structures." Office of the Chief Engineer-Maintenance of Way. Philadelphia, 1988.

[Fox, Charles Douglas and Francis Fox. *The Pennsylvania Railroad with Remarks on American Railway Construction and Management*. London: William Clowes and Sons, 1874.](#)

[Hay, William W. *The Elements of Railroad Engineering*. New York: John Wiley & Sons, 1982.](#)

[Raymond, William Galt. *The Elements of Railroad Engineering*. New York: J. Wiley & Sons, 1909.](#)

[Tratman, Edward Ernest Russell. *Railway Track and Track Work*. The Engineering News Publishing Company, 1901.](#)

[Watkins, J. Elfreth. *The Development of the American Rail and Track, as Illustrated by the Collection in the U.S. National Museum*. Washington: Government Printing Office, 1891.](#)

2. Architecture

Railroad corridor historic districts will be eligible for the National Register under Criterion C if its major built elements are significant and distinguishable entities that embody the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master.

Points of consideration and questions to ask when documenting significance and history can include, but should not be limited to:

- a. Are the major built standard railroad design? What was the railroad company's distinctive architectural element (paint colors, etc.)? How were the uniform designs modified to serve a particular need or location? How were they modified to address topography and/or or site requirements?
- b. What architectural styles or periods are represented? What are their character-defining features? Were they commissioned architect designed? Designed by the railroad engineers? Designed by the railroad's in-house architects?
- c. Was this part of the railroad program to replace first or second generation buildings or structures? Was the building or structure modified to handle changing technology (tunnel widened to handle more tracks, bridge replaced to handle heavier locomotives, etc.)?

Further research avenues include (Please also see the *Railroads of Pennsylvania* website for links to various documents):

[Berg, Walter G. *Buildings and Structures of American Railroads: A Reference Book for Railroad Managers, Superintendents, Master Mechanics, Engineers, Architects, and Students.* New York: John Wiley and Sons, 1893.](#)

[Droege, John A. *Passenger Terminals and Trains.* New York: McGraw-Hill Book Company, 1916](#)

[Droege, John A. *Freight Terminals and Trains.* New York: McGraw-Hill Book Company, 1912.](#)

[Orrock, John Wilson. *Railroad Structures and Estimates.* New York: J. Wiley & Sons, 1909.](#)

D. CRITERION D

Under Criterion D, a railroad may be eligible for the National Register of Historic Places if it has the potential to yield important information. Railroads typically fall under large scale industrial archaeology (the study of sites and structures reflecting changing industrial processes and practices). Please contact the SHPO for further guidance.

Further research avenues:

McVarish, Douglas C. *American Industrial Archaeology: A Field Guide.*
Walnut Creek, CA: Left Coast Press, Inc., 2008.

National Park Service's [Steamtown: Special History Study.](#)

INTEGRITY

The National Park Service has stated that for common property types, the integrity requirements are more stringent, and the context statement may specify that individual properties must meet all seven aspects of integrity to be evaluated as significant. The SHPO considers the railroad to be a common property type. The abandonment of a railroad or the conversion to Rails to Trails does not necessarily constitute loss of integrity - as long as the major built elements along the corridor still convey the feeling and association of the historic railroad and the majority of major built elements still have integrity and convey significance.

Seven Qualities of Integrity for the Railroad Corridor Historic District²⁰

The railroad corridor historic district must retain sufficient integrity of location, setting, design, materials, and association for Criterion A. The railroad corridor does not need to retain its alignment for Criterion A.

The railroad corridor historic district must retain sufficient integrity of location, setting, feeling, association, design, workmanship and materials for Criterion C. Major built elements must retain integrity of location, design, workmanship, association, and materials to be contributing.

The presence of a railroad graded line is not needed to convey significance or integrity **unless it has engineering significance under Criterion C**. Thus major alterations of the original alignment, grade and roadbed width do not affect integrity since the bed is not a considered part of the resource **unless it has engineering significance under Criterion C**.

Only removal of historic bridges, stations and other distinctive railroad major built elements and related structures are considered a loss of integrity (Criterion A and C – Architecture).

Location is the area where the components of a railroad corridor historic district were constructed and operated, and it is the most important aspect of integrity.

- b. If the historic railroad alignment is shifted or moved to a new alignment, this would constitute loss of location for Criterion C (Engineering). If this was done during the period of significance, and does not substantially alter the railroad's historic association or technological distinction, a case will need to be made to counter this loss of integrity of location.
- c. A major built element must occupy its historic site.

²⁰Summit Envirosolutions, Inc. and ARCH, LLC, 198-201.

Design is the assembly of planned, developed and constructed elements within a railroad corridor historic district that created its form, plan, and structure. Railroads need to retain their historic design and materials through their major built elements including bridges, tunnels and stations, all of which convey the relationship of the railroad to the landscape and topography.

- a. The major built elements must retain sufficient presence to convey their historic functions.
- b. A sufficient number of contributing major built elements within the district must retain adequate integrity of design to effectively convey the district's historic appearance.
- c. Sections of engineered right-of-way that reflect significant engineering achievements must reflect those conscious engineering decisions made during their conception, planning and building campaign. Ground modifications - extensive cuts, fills and grades - that reflect technological significance will need to be extant and have integrity.
- d. Removal of one major built element may not affect overall integrity of design; however the removal of several can collectively compromise the railroad's integrity.
- e. Changes in the alignment may constitute loss of design for Criterion C (Engineering).²¹

Setting is the surrounding area and wide-ranging landscape through which railroads passed. The setting - whether rural, urban, natural or even cultural - are linked to the railroad corridor due to engineering considerations, its design, function, and the role of the railroad. All elements of the landscape should be considered in an evaluation of setting.

- a. A railroad corridor historic district does not need to retain integrity of setting if it has integrity of location, design and materials, and alterations to adjacent properties do not significantly interfere with the district's ability to convey its period of significance.

Materials The group of contributing major built elements must retain sufficient overall integrity of materials to convey the character and appearance of the district during its period of significance.

- a. Tracks are not being evaluated therefore their being upgraded, replaced, or removed does not constitute a loss of material.
- b. The railroad bed (layers of soil to create a flat surface for the tracks) and ballast (material between the railroad bed and the tracks) are not being evaluated, therefore their presence or lack of presence does not constitute a loss of material (unless being evaluated under Criterion C – Engineering).

Workmanship Railroad corridor historic district's major built elements can be utilitarian or have a standardized nature of design; however they should retain workmanship to some degree. Some major built elements may exhibit high degrees of workmanship, in such cases; evidence of the craftsmanship used to work the materials should be evident.

²¹ “The horizontal alignment (both the general route and the degree of curves) and the vertical alignment (particularly the degree of gradient within specific segments) affected the markets served; distance traveled, motive power required, and speeds attainable” Summit EnviroSolutions, Inc. and ARCH, LLC, 199.

Feeling is the ability of a railroad corridor historic district to convey its historic function and feel as a railroad during its period of significance and its area of significance. It is the collective total of the railroad corridor historic district's character defining features.

Association is the direct link between the railroad corridor historic district and the transportation and/or significant services it provided, or the significant engineering embodied in its design.

Integrity Considerations for contributing resources (Major Built elements)

To be considered contributing, major built elements must have integrity of design, materials, workmanship, location, and association. The most important consideration is whether the major built element is still recognizable in its function, use and/or architectural style. It must still be able to convey a sense of time and place that can be associated with any historical period of railroad construction and/or operation within the period of significance of the railroad.

We have included the topics below for those interested in other research avenues and topics that can be included in the History narrative. However, they are not considered to be Areas of Significance for a Railroad Corridor Historic District.

Regulations/Legislation/Consolidation

1. How did the Pennsylvania Railroad's 1860s acquisitions of hundreds of smaller lines affect this railroad? In other words, how did it handle industry consolidation – did it survive because it merged? Did it go on its own and fail?
2. How did the Interstate Commerce Commission Act of 1887 affect this railroad's operations? The Elkins Act of 1903? The Hepburn Act of 1906? The Transportation Act of 1920?
3. How did the Regional Rail Reorganization Act of 1973 – part of which was the reaction of the Consolidated Rail Corporation (Conrail) affect this railroad? How did the creation of the National Railroad Passenger Corporation (Amtrak) in 1971 affect this railroad?
4. Were there any changes to state legislation or regulation that affected this railroad? How did Pennsylvania legislature regulate taxes? Regulate fares? Regulate tolls for passengers and transportation of freight over railroads?

Further research avenues include:

Nice, David C. *Amtrak: The History and Politics of a National Railroad*. Boulder, CO: Lynae Rienner Publishers, 1998.

Stone, Richard D. *The Interstate Commerce Commission and the Railroad Industry: A History of Regulatory Policy*. New York: Praeger Publishers, 1991.

[Weimer, Albert B. *The Law of Railroads in Pennsylvania Including the Law Relating to Street Railways*. Philadelphia: T&J W Johnson & Co., 1893.](#)

[Drinker, Henry S. *General Railroad and Telegraph Laws of the State of Pennsylvania, including the Acts Relating to Incline Plane Railways and Street passenger Railways and Such Acts Relative to Corporations as Affect Railroad and Telegraph Companies, 1816-1883*. Philadelphia: Allen, Lane & Scott, 1884.](#)

[Brightly, Frank F. *A Digest of the Statute Law of the State of Pennsylvania from the year 1700 to 1894*. Philadelphia: Kay and Brother, 1895.](#)

Ethnicity

1. Did the railroad recruit or employ African Americans? What ethnicities were laborers who were building the railroads?
2. What was the relationship between ethnic groups and the Brotherhoods (Brotherhood of Locomotive Engineers, 1863; Order of Railway Conductors of America, 1868; Brotherhood of Locomotive Firemen, 1873; Brotherhood of Railroad Trainmen, 1883)? Were they excluded due to their nationality?
3. While Pennsylvania did not have Jim Crow laws, how did other states' Jim Crow laws affect African Americans travel in Pennsylvania (did they have to get out of an integrated car when at the border, and then get into a segregated one when passing out of

Pennsylvania?)? Was this advertised as an “immigrant train” (transporting from seaboard to Western Pennsylvania mining communities)? Was it associated with the Great Migration?

Further research avenues include:

[Bell, Kurt B. Tears, Trains and Triumphs: The Historical Legacy of African-Americans and Pennsylvania’s Railroads.](#)

Pennsylvania State Archives. Guide to African American Resources. [MG-286 Penn Central Railroad Collection.](#)

Railroads and the Making of Modern America. [The Origins of Segregation.](#) (primary documents)

Labor

1. What is the direct association of this railroad to the event?
2. Does the railroad currently reflect the event and period of significance?
3. Were railroad companies in Pennsylvania more benevolent than in other states?
4. Did Pennsylvanians strike more or less than other states?

Further research avenues include:

Foner, Philip S. *The Great Labor Uprising of 1877*. Atlanta, GA: Pathfinder Press, 2002.

[Humphrey, Douglas L. “Reading’s Place in the Great Strike & After.” *The Historical Review of Berks County*. Fall 2000.](#)

Railroads and the Making of Modern America. [The 1877 Railroad Strike](#) (primary documents including the *Pittsburgh Daily Post* and other national sources)

National Historic Landmark Theme Study, American Labor History (Draft) – While it does not discuss railroad lines, it is a good overview of labor history in the US and includes a bibliography.

Interurban (can be classified as urban streetcar lines, intra-city street car rail, elevated lines, commuter rail or light rail)

Per George W. Hilton and John F. Due’s *The Electric Interurban Railways in America*, an interurban system may have these characteristics: a) electric power, b) passenger service as primary emphasis, c) heavier, faster equipment than urban streetcars and d) operated on street trackage in cities, but on roadside tracks or private right-of-ways in rural areas.

1. Did the City use consulting engineers and architects or did they design the project in-house?
2. Was it privately owned? Was it a single integrated transit system? Was it chartered by the State Legislature?

3. What local ordinances were put into place for its construction and operation? Did the city reserve the right to regulate the rate of speed and the time of running cars? What was the municipality's control? Was there anything in the Constitution of Pennsylvania regarding the legislature from granting street railway rights in any city, town, or incorporated village without the consent of the local authorities? How did it fit into the transportation planning edicts of the day?
4. Was the company required to receive consent from competitors to construct new tracks? Who was its' competitors?
5. Was it built to provide freight transport or only as commuter rail?
6. Was this an excursion- only railroad? Or did it maintain business throughout the week (goods or passenger services) and created ridership opportunities for the weekends?

Further research avenues include:

[*A Pleasant Peregrination through the Prettiest Parts of Pennsylvania. Performed by Peregrine Prolix. Philadelphia: Grigg and Elliot, 1836.*](#)

[*Wellington, Williams W. The Traveller's and Tourist's Guide through the United States of America, Canada, etc. Containing the Routes of Travel by Steamboat, Stage and Canal; Together... Philadelphia: Lippincott, Grambo & Co., 1851.*](#)

Electric Railway Journal

City Transit Departments

Hilton, George W. and John F. Due. *The Electric Interurban Railways in America*. Stanford University Press, 1960.

[*Philadelphia Trolley Tracks.*](#)

[*Railroad.Net*](#). General Discussion: Fallen Trolley and Interurban Lines.

[*Pennsylvania Trolley Museum*](#)

Henwood, James N.J. and John G. Muncie. *Laurel Line: An Anthracite Region Railway Trolley Service*. Tribute Books, 2005.

GLOSSARY OF RAILROAD TERMS

(Courtesy of the [Railroads in Minnesota, 1862-1956 MPS](#))

Alignment: The position of track in a horizontal or vertical plane.

Ash pit: Shallow pit used for the dumping of ash and cinders from locomotives.

Ballast: Material, such as crushed stone, gravel, cinders, burnt clay, or slag, that functions to distribute the load of the track and trains over the roadbed and drains water from the track.

Branch line: A secondary line that branches off of a main line.

Bridge: A structure that replaces the roadbed for some distance to provide passage over a body of water, chasm, road, or other feature that cannot support or interrupts the roadbed. It usually consists of two parts—substructure (abutments and piers) and superstructure.

Classification yard: A freight yard where trains are broken up and assembled by shifting cars with a switcher locomotive or by using a hump.

Coaling facilities: Coal storage and handling structures and equipment positioned near the track to deliver coal to steam locomotives.

Coaling station: A structure for storing coal and transferring it into locomotive tenders.

Culvert: A structure, usually a single-unit (a stone box or pipe), which creates a small opening in the roadbed (with some amount of roadbed above it) for the drainage of water.

Cutoff: A rail line constructed off of another to provide a shorter route to a given destination.

Cut: That part of the right of way which is excavated to provide a more gentle gradient for ascent or descent of a hill or mountain.

Depot: A building positioned parallel to the tracks used to receive, sort, and load any combination of passengers and freight.

Depot, Combination: Depot designed to receive both passengers and freight in locations where the amount of freight or the volume of passenger business does not warrant the construction of a separate freight-house or passenger depot.

Depot, Flag: Small, passenger depot at which a limited number of trains stop, usually on the signal of a flag. Historically, a flag depot may have been an open-air or enclosed, gable- or shed-roofed building with a simple platform.

Depot, Passenger: Depot designed solely for the accommodation of passenger business. Historically, small passenger depots consisted of a waiting room, ticket office, and baggage room. Larger, first-class passenger depots provided space for many additional functions, including restrooms, smoking rooms, dining rooms, offices for mail, telegraph, and wire services, news stands, supply rooms, lounges for conductors and trainmen, and administrative offices.

Depot, Union: A union depot united all of the railroads serving a city in a single facility, consolidating the various railroads' station facilities within a building or complex.

Division point: The location in a railroad corridor where one administrative and operational unit of a railroad ends and another begins. Division points often include railroad yards and maintenance shops.

Double track: Main line constructed of two tracks, in which one track supports traffic flow in one direction, and the other track supports traffic flow in the opposite direction.

Engine house: A railroad shop building used to provide the regular mechanical maintenance for a railroad's locomotives. Historically, these buildings were of the "square-" or "round-" house variety.

Freight house: The station facility of a railroad line for receiving and delivering freight.

Grade or gradient: The ratio of elevation gained or lost per distance traveled measured in feet, expressed as a percent.

Grade Separation: A railroad crossing where the grade of the railroad bed or bridge is separated from another railroad line, a vehicular roadway, a water course, or a topographic feature.

Hinterland: The region situated beyond metropolitan centers but linked to those centers through lines of economic exchange and interaction.

Hump yard: A switching yard with an elevated track or hump over which cars are pushed by a switch engine so that they travel by gravity to classification tracks.

Ice House: Insulated building used to store ice for use in refrigerated and passenger cars.

Interlocking tower: A structure positioned at the point where two tracks intersect in order to house the automated switches that control the crossing of the two tracks.

Intermodal: The use of more than one type of transportation system or vehicle to move freight and passengers.

Interurban (routes): Between two cities.

Limited service: Express passenger or freight service with no stops between major terminals.

Lead track: Railroad track used to connect the through tracks with yard tracks.

Main Line: Rail line used for through trains or as the principal artery of a system, to which branches, yards, and spurs are connected. Main line tracks are typically constructed for the operation of trains at higher speeds, and these trains are typically given preference in time tables over branch lines. Main lines are also maintained to a higher standard than yards and branch lines.

Maintenance shops: A group of several use-specific shop buildings located at junctions and division points for the provision of maintenance on railroad rolling stock. The types of buildings that comprise a maintenance shop complex include machine shops, oil houses, blacksmith shops, carpentry shops, wheel foundries, and mill rooms, and shops for painting, carpentry, electrical, and special work could be completed.

Motive power: The locomotives owned and operated by a railroad.

Rail yard: A system of tracks branching from a common track used for switching, making up trains and storing cars.

Railroad bed: A layer of soils applied to the ground surface to provide a smooth regular plane for the tracks and to uniformly distribute loads from trains, tracks, and ballast.

Railroad corridor: The linear area that encompasses the right of way within which a railroad operated and all of the buildings, structures, and objects that worked together for the dedicated purposed of running trains to transport freight and passengers.

Railroad roadway: The portion of the railroad right of way modified to support the railroad tracks.

Railroad shops: Structures and buildings in which the building and repairing of railroad equipment is performed.

Railroad station: Dedicated stopping points within the right of way where trains load or unload passengers or freight.

Railroad track: A structure consisting of a pair of parallel lines of rails with their crossties, on which a railroad train runs. Standard-gauge railroad tracks are typically 4 feet, 8 ½ inches in width, while narrow gauge tracks are 3 feet wide.

Railroad yard office: Building occupied by employees working in a transfer or freight yard.

Retarder yard: A switching yard in which the movement of cars, after they are released from a locomotive, are controlled by an employee in a control tower.

Right of way: The area owned by a railroad for the purpose of operating a railroad.

Roadway bridge: A bridge that carries a road over water, another road, a railroad, or other physical, natural or manmade impediment.

Rolling stock: The various types of freight and passenger cars owned and operated by a railroad.

Roundhouse: A form of engine house constructed with multiple engine berths in a radial pattern; it could have a segmental plan with the berths occupying a segment of a circle or be a closed or full-circle plan.

Section house: Dwelling erected along the rail line used to house the section maintenance crew.

Short line: A rail line that operates over a limited distance.

Siding: Side tracks that connect to through tracks at both ends.

Signal: A manual or automated device that indicates to the driver of a train information about the line ahead.

Sorting yard: See classification yard.

Spur: Side tracks that connect to through tracks at one end.

Station platform: A structure that facilitates movement between railroad cars and railroad depots and warehouses; it may be a low platform, at grade, or a structure raised to the height of approximately 4 feet above grade.

Stub line: A railroad corridor that terminates at a point with no through service.

Tender: A car that carries extra fuel or water for rolling stock.

Through route: Railroad corridor that provided through service.

Through service: When railroads offer transportation between major destination points without needing to transfer passengers or freight.

Through tracks: The tracks that continue through a railroad station or yard area where there are several sidings and/or spurs.

Tie or Cross-tie: Ties are pieces of timber that measure 6-by-8 inches to 7-by-9 inches in cross section and 8 to 9 feet in length that are laid perpendicular to the rails and are bedded in the upper portion of the ballast.

Toe: The base of an embankment where the slope levels off to the naturally occurring ground surface.

Trackage rights: The legal right of one railroad company to use the tracks of another, as agreed to by the companies concerned or their predecessors.

Transfer line: A railroad corridor whose primary function is to transfer trains between through routes, to connect to large classification yards, or to provide a bypass around heavy traffic areas.

Transfer table and turntable: Structures used to maneuver into engine houses.

Trestle: A structure used to cross a deep river valley or to cross minor streams and gullies; usually a braced framework with 12- to 14-foot spans of wood piles or framed lumber.

Truss: A geometric framework of iron or steel members in various states of tension or compression, used for railroad bridges.

Viaduct: A structure used to cross a deep river valley or to cross minor streams and gullies; usually a structure of iron or steel members.

Water tank: A wood or metal tank used to fill locomotive steam boilers, generally located near or within to railroad stations and yards, and accompanied by a pump house.

Worker shelter: Small structure in which watchmen, flagmen shanties, and signal maintainers could take shelter.

APPENDIX 1

Standardization of Naming Procedure

Current Examples		New Format			Details	
Conemaugh & Blacklick R.R.		Conemaugh & Blacklick Railroad			Spell out Railroad, Railway or Rail line. Do not use abbreviations.	
N.Y. Central Railroad	P&LE Railroad	New York Central Railroad	Pittsburgh & Lake Erie Railroad		Spell out full names. Do not use abbreviations.	
Bangor and Portland Railway	Lewisburg, Centre and Spruce Creek Railroad	Bangor & Portland Railway	Lewisburg, Centre & Spruce Creek Railroad		Use “&” instead of “And.”	
Baltimore and Ohio Railroad (Philadelphia Branch)		Baltimore & Ohio Railroad: Philadelphia Branch			Do not use parentheses when not stating destinations or location.	
Beech Creek-Clearfield-Southwestern Railroad Depot	Philadelphia & Reading Railroad – Delaware River Branch	Beech Creek & Clearfield Southwestern Railroad: Depot	Philadelphia & Reading Railroad: Delaware River Branch		Do not use dashes. Note: Unless it is in the official name of the railroad, for example: Erie-Lackawanna Railroad.	
Philadelphia & Reading Railroad, Pickering Valley Branch		Philadelphia & Reading Railroad: Pickering Valley Branch			Do not use commas to separate the railroad name from the branch name	
Bridgeville & McDonald Branch of Chartiers Railroad		Chartiers Railroad: Bridgeville & McDonald Branch			State the name of railroad first, then the branch name after punctuation mark (colon)	
Car Repair Building, P & LE Railroad	Pittsburgh Junction Railroad Tunnel	Pittsburgh & Lake Erie Railroad: Car Repair Building	Pittsburgh Junction Railroad: Tunnel		State the name of railroad first, then resource type after punctuation mark (colon)	
Pittsburgh & Shawmut Railroad	New York & Erie Railroad	Reading Railroad: Lancaster Branch	Pittsburgh & Shawmut Railroad (Coder to Piney, mileposts 00 to 23.8)	New York & Erie Railroad (Shohola Twp. Segment)	Reading Railroad: Lancaster Branch (Lancaster City Segment)	Include points of destination or location that have been evaluated (municipalities, mileposts, etc.) of the railroad line. This is especially important when the entire line has not been evaluated.
Stenton Station of the Reading Railroad	Valley Rd. Bridge, Stewartstown Railroad	Reading Railroad: Station (Stenton)	Stewartstown Railroad: Bridge (Valley Road)		Include the location (municipalities, streets, rivers, mileposts, etc.) of the station, bridge, tunnel, etc.	

APPENDIX 2

Aggregate Files

The SHPO has mapped all major historic railroad lines in CRGIS. Users will notice long linear resources on the maps that may overlap shorter segments. In the AskReGIS database search, you may see the same key number for many entries in different counties and/or municipalities. When you view the details for these features, their historic name will include the words “Aggregate File.”

Aggregate Files are intended to help file/database users better understand the history and significance of individual railroad lines. They do **not** represent historic resource surveys and we do not have paper files for these Aggregate File key numbers. Aggregate Files are digital files that were created as a means of bringing together - and displaying in CRGIS - any previously surveyed components of a particular railroad line, noted in the details report as “Associated Resources.” The historic paths of the lines are also mapped in CRGIS, and a listing of each county and municipality that the rail line traveled through is provided. This will allow surveyors to quickly identify any previously surveyed resources in our files that are related to rail properties they are researching. Brief railroad histories and lineage files have also been created from various sources, and will appear as a Portable Document Format (PDF) documents within the CRGIS Aggregate File report display to further assist the user.

Example of Aggregate File (screenshot from CRGIS)

The image displays two screenshots from the CRGIS web application. The left screenshot shows the details for a specific historic resource with Key # 078945. The right screenshot shows the details for an Aggregate File with Key # 156109, which lists numerous associated resources across various counties and municipalities.

Historic Resource Information (Left Screenshot)

Identification

- Key #: 078945
- Property Name: Lehigh Valley Railroad: Station (Sayre)
- Resource Type: Building
- Approximate # of Resources: 1

Location

- Bradford County: Sayre Borough
- Address: Lehigh Ave.,
- USGS Quadrangle: Sayre

Status

- NR Status: SHPO: Eligible
- Owner: Unknown
- Condition: Unreported

Historic Information

- Year Built: 1881
- Architect/ Engineer: Fleming, J.E.

Physical Description

- Style: Queen Anne
- Width: 6 Bays
- Height: 1 Stories
- Other: Brick

Historic Resource Information (Right Screenshot)

Identification

- Key #: 156109
- Property Name: Lehigh Valley Railroad (aggregate file)
- Resource Type: District
- Approximate # of Resources: 1

Location

- Lehigh County: Allentown City
- Northampton County: Bethlehem City
- Lehigh County: Fountain Hill Borough
- Luzerne County: Hazle Township
- Carbon County: Jim Thorpe Borough
- Bradford County: Ulster Township
- Lehigh County: Whitehall Township
- Sullivan County: Colley Township
- Luzerne County: Dennison Township
- Luzerne County: Duryea Borough
- Schuylkill County: East Brunswick Township
- Northumberland County: Mount Carmel Borough
- Luzerne County: Newport Township
- Luzerne County: Penn Lake Park Borough
- Schuylkill County: Rush Township
- Luzerne County: Yatesville Borough
- Carbon County: Lehighton Borough
- Northampton County: Lower Saucon Township
- Luzerne County: Exeter Borough
- Luzerne County: Fairview Township
- Carbon County: Kidder Township
- Wyoming County: Tunkhannock Township
- Schuylkill County: West Mahanoy Township
- Luzerne County: Wilkes-Barre City
- Carbon County: East Penn Township
- Susquehanna County: Montrose Borough
- Luzerne County: Pittston City
- Bradford County: Wyalusing Borough
- Luzerne County: Laurel Run Borough
- Luzerne County: Ashley Borough
- Bradford County: Athens Township
- Susquehanna County: Bridgewater Township
- Luzerne County: Fairmount Township
- Northampton County: Forks Township
- Northampton County: Glendon Borough

Historic Function

Function	Sub Function	Particular Use
Transportation	Rail-Related	

Current Function No Data Present

Inventory Items No Data Present

Ancillary Features No Data Present

Associated Resources

ResourceName	Association
078945 Lehigh Valley Railroad: Station (Sayre)	Historically Associated
083616 Lehigh Valley Railroad: Station	Historically Associated
086386 Lehigh Valley Railroad: Station (Bethlehem); Union Station	Historically Associated
086598 Lehigh Valley Railroad: Headquarters Building	Historically Associated
086698 Central Railroad of New Jersey: Car Shops	Historically Associated
097296 Packerton Railroad Repair Shops; Lehigh Valley Railroad: Shops	Historically Associated
103133 Lehigh Valley Railroad: State Line & Sullivan Branch (Towanda)	Historically Associated
104201 Lehigh Valley Railroad: Freight Depot	Historically Associated
104214 Bridge 178.C; Lehigh Valley Railroad: Bridge	Historically Associated
104215 Lehigh Valley Railroad: Bridge; Bridge 178.22	Historically Associated
110630 Lehigh Valley Railroad: Depot	Historically Associated
111770 Lehigh Valley & Pennsylvania Railroad: Depot	Historically Associated
112381 Lehigh Valley Railroad (Allentown to Wilkes-Barre); Reading Railroad: Lehigh Line (Allentown Wilkes-Barre)	Historically Associated
116317 Lehigh Valley Railroad (Allentown to Whitehall Twp)	Historically Associated
119251 Lehigh Valley Railroad (Wilkes-Barre)	Historically Associated
126161 Lehigh Valley Railroad: Engine House;	Historically Associated

LEHIGH VALLEY RAILROAD
Key# 156109

- Delaware, Lehigh, Schuylkill & Susquehanna Railroad founded – 1846
- Delaware, Lehigh, Schuylkill & Susquehanna Railroad name changed to Lehigh Valley Railroad – 1853
- Line from Easton to Jim Thorpe (Mauch Chunk) opened – 1855
- Line extends through Wilkes-Barre - 1868
- Lehigh Valley Railroad reaches New York state border through subsidiary line the Pennsylvania & New York Railroad, emanating from Towanda – 1869
- Lehigh Valley Railroad reaches Perth Amboy, NJ – 1872
- Line reaches Buffalo, NY – 1892
- Lehigh Valley Railroad is leased to the Philadelphia & Reading Railroad (key# 155708) for 999 years – 1892
- Philadelphia & Reading Railroad files for bankruptcy. The Lehigh Valley Railroad ends lease and continues operation of line – 1893
- Pennsylvania Railroad gains majority stock control of Lehigh Valley Railroad – 1962
- Lehigh Valley Railroad files for bankruptcy – 1970
- Lehigh Valley Railroad operates Central Railroad of New Jersey (key# 155754) lines in Pennsylvania after the CR of NJ declares bankruptcy – 1972
- Most of the remaining Lehigh Valley Railroad line is absorbed by Conrail - 1976

Example of PDF document