

**PENNSYLVANIA TROLLEY
MUSEUM
Tour Guide Manual
2021**

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Welcome Aboard!

The Pennsylvania Trolley Museum is dedicated to sharing the compelling story of Pennsylvania's Trolley Era history to a diverse audience through preservation, interpretation, special events, and educational programs.

The streetcar or 'trolley' played a vital role in the growth of 20th century American cities and suburbs. As popularity in trolleys declined due to the advent of the automobile, groups began to form to preserve the Trolley Era's unique history. The Pennsylvania Trolley Museum formed in 1953 with the goal of preserving and passing down the rich heritage of the Trolley Era to future generations. In the ensuing years, the museum has transformed into a nationally significant trolley museum and heritage site.

Visitors to the museum are invited to 'ride into the past' on a scenic 4 mile round trip ride on an antique trolley, take a guided tour of the Trolley Display Building, view pictorial exhibit displays, and experience the trolley simulator. The museum offers an abundance of activities, including behind the scenes tours, special events, birthday parties, field trips, Scouting programs, and trolley operator programs.

PTM has more than 125 regular volunteers who serve in every capacity involved in the day-to-day operation. From trolley maintenance, restoration, and operations to special events, tours, education, and archives, there are many ways to get involved.

The Pennsylvania Trolley Museum has experienced tremendous growth in the last 10 years and launched the *On Track for the Future* capital campaign in 2018 to construct an immersive heritage complex to more thoroughly share Trolley Era history and grow community and educational outreach. With the museum currently engaged in an exciting expansion program, it's a great time to get involved.

Pennsylvania Trolley Museum History

The Pennsylvania Trolley Museum (PTM) is a nonprofit educational organization and nationally significant trolley museum located in southwestern Pennsylvania. PTM is dedicated to sharing the compelling story of Pennsylvania's Trolley Era history to nearly 30,000 visitors annually through preservation, interpretation, special events, and educational programs.

The streetcar or 'trolley' played a vital role in the growth of 20th century American cities and suburbs. This high-speed and efficient form of transportation transformed culture, society, and technology until the success of the automobiles brought an end to the Trolley Era. As trolleys were phased out of cities and towns, organizations nationwide were formed to house, operate, and preserve trolleys.

The Pittsburgh Electric Railway Club was formed in 1946 and acquired three trolley cars between 1949 and 1953. With the assistance of the Pittsburgh Railways Company, the three car collection was motored in on their own power to the future site of the Pennsylvania Trolley Museum in Washington County. Over the next six decades, the museum grew to include a collection of nearly 50 trolleys (about 15 of which are fully operational), a trolley display building exhibit space, maintenance and restoration shop, and a visitor's center. The museum depends on a dedicated staff and upwards of 125 volunteers who are committed to enhancing the knowledge of transportation technology and culture to inspire the next generation of innovators.

Visitors to the museum are invited to 'ride into the past' on a scenic 4 mile ride on an antique trolley, take a guided a tour of the Trolley Display Building, view pictorial exhibit displays, and try the newly developed trolley simulator. The museum offers a plethora of activities including behind the scenes tours, special events, birthday parties, and trolley operator programs. Educational groups are

welcomed to be a part of history through interactive programs that spark history and curiosity about the Trolley Era.

PTM has experienced tremendous growth in the last 10 years and launched the *On Track for the Future* Capital Campaign in the spring of 2018 to construct an immersive heritage complex. The museum is in the process of designing a new Welcome and Education Center and Trolley Street Experience to more thoroughly share Trolley Era history and grow our community and educational outreach.

Pennsylvania Trolley Museum Timeline

1940 - The local chapter of the National Railway Historical Society made an initial attempt to establish a museum to preserve the legacy of the Trolley Era, but the project comes to an end due to members' war time responsibilities. The first car acquired for the "collection" is lost due to vandalism and scrap drives.

1946 - The Pittsburgh electric Railway Club is formed by trolley enthusiasts who had spearheaded the earlier preservation effort.

1949-1952 The group acquires historic streetcar M1 in 1949 and West Penn 832 in May of 1952, both stored at the Ingram Car House.

1953 - Pittsburgh Railways Company announced plans to abandon its Washington and Charleroi interurban lines. The club selects a 2000-foot segment of track for the demonstration museum line, including a 900-foot passing siding that intersects the abandoned right-of-way of a coal mine branch on which additional track can be built. The Pittsburgh Electric Railway Club is reorganized as a non-profit corporation and began beginning of a permanent home for the collection.

1954 - The first two cars (M1 and West Penn 832), and a third one just purchased (3756), were moved to the site operating under their own power, the final movement over the abandoned interurban line.

1963 - Washington County commissioners officially dedicate the Arden Trolley Museum on June 23 and rides are offered to the public.

1992 - The name of the museum is changed to Pennsylvania Trolley Museum to better reflect the collection's scope.

1994-1995- The museum's line is extended to a loop near the village of Arden Mines and the first turning loop is completed at Arden in 1995.

2003- 2004 -A line extension adds a half-mile of track that largely follows the original interurban line back toward Pittsburgh and a second loop (McClane) is completed.

2005 – A 28,000 square-foot Trolley Display Building (TDB) that houses more than 30 cars in a protective environment opens to the public.

2007 – State of the art substation is completed to provide a stable power supply and electricity cost savings.

2011—Events Room is constructed next to the Car barn to serve as a rental space for birthdays and meetings as well as used during special events.

2013—Artifact Preservation Building (APB) was constructed as storage area.

2015—Wexford Station arrives at PTM.

2017—Wexford Station is restored to a historic trolley station and opened to the public as an exhibit space located adjacent to the TDB.

2018—PTM announced the *On Track for the Future* capital campaign to construct an immersive heritage complex, including an 18,000 square-foot Welcome and Education Center, Trolley Street, Barry Stout Park, and expanded parking lot. Anticipated opening date spring 2022.

2020—PTM purchased 320 Reliance Drive to serve as the new archival, maintenance, office, and storage space.



Visitors are our priority!

We want to ensure that all visitors have an enjoyable and rewarding educational experience. As a tour guide, you can help the museum achieve that goal!

We acknowledge that our visitors come from all walks of life and bring different interests, motivations, and prior knowledge to their museum experience. Our visitors range from those who have never ridden a trolley to trolley enthusiasts and rail fans. Anticipate and be prepared to respectfully address the various needs of our visitors.

Our operators, conductors, and tour guides interact directly with the visitor. Remember that as a volunteer, you represent the Pennsylvania Trolley Museum. Your words, actions, and behaviors, both positive and negative, impact the visitor experience and reflect upon the museum. The visitor's experience can determine whether or not a visitor will return to the museum in the future.

We offer the public an immersive experience, not just a tour or a video. A PTM Tour Guide is trained to further the public's understanding of the Trolley Era through our collections and by learning and responding appropriately to our audience's needs. Your enthusiasm and knowledge add much to the experience!

Keeping Visitors Safe

The Tour Guide's first priority at all times is ensuring the visitor's safety in a friendly, helpful way. It is important to bear in mind that the museum includes an active railway. As with any active railway, one should expect equipment and cars to be moving at any time. In addition, there are trip hazards, weather hazards, open pits, and other obstacles that the Tour Guide should be aware of at all times. The Tour Guide is responsible for leading tour groups around or away from these hazards or cautioning visitors about them whenever necessary.

In order to ensure the safe operation of our tour program and help ensure that visitors are not surprised by the elements of our unfamiliar environment, be mindful of the following:

1. Caution visitors at the beginning of tours about any potential hazards, including trip hazards, moving equipment, dirt, noise, and the age of the cars.
2. Try to place yourself between tour groups and obstacles such as drop-offs, curbs, pits, exposed electrical and mechanical equipment, and active tracks.
3. Keep tour groups away from active tracks except when boarding and unloading cars. Keep tour groups on paved walkways wherever possible.
4. Advise tour participants to stay with the group—especially in the shop or TDB, or near operating tracks.
5. Seek safe shelter for your tour participants in the event of an electrical storm.
6. If you see visitors engaged in unsafe activity such as climbing on equipment, fooling with mechanical gear, or getting too close to electrical equipment, respectfully but firmly ask them to stop at once.
7. In any operating environment, the Tour Guide must defer to the dispatcher or operating crew in order to ensure everyone's safety. Elsewhere on the grounds, volunteers should defer to staff or to volunteer department managers, especially during events and emergency situations.

Tour Guidelines

Museum Objectives

- Keep our visitors safe!
- To ensure the public enjoy themselves
- To interpret the Trolley Era to our visitors using
 - Orientation video
 - Exhibits
 - Car Barn and/or Trolley Display Building tours
 - Trolley ride(s)

Tour Objectives

- To provide a brief yet informative tour
 - Tour focus is the **Trolley Era**:
 - **Intertwine the history of streetcars with society and culture of the past**
 - Do not try to cover every car or every fact
- Present well organized and interesting information to visitors who do not know about trolleys
- *Stay on time!*

Theme

Main theme: **Trolleys were a technological development that changed the landscape and culture of 20th century America.**

- Trolleys played a vital role in the growth of 20th century American cities and suburbs.
- Trolleys were a high-speed and efficient form of transportation that transformed culture, society, and technology until the success of the automobiles brought about a decline in trolley popularity.
- Trolleys were a part of everyday life and people depended on trolleys to get to work, school, entertainment, visit family, shopping, etc.

Accuracy Check your information often. You are the face of the museum and visitors will look to you as an authority and ask questions.

- Your information is only as good as its source; so **don't say it unless you can back it from a credible source –preferably more than one source.**
- **Do your own research.** It is great to shadow more experienced tour guides, but we encourage you not to simply copy from them. Take the time to ask them about their sources and experiences.
- **This is an acceptable answer: *I am sorry, I am not sure what the answer to your question is, but perhaps I can help you find it after the tour?*** It is better to admit you don't know than to be caught making it up. The visitor deserves the truth, and will forgive you for not knowing it, especially if you are willing to help them find out.
- **Stick to provable information. Avoid opinions, especially ones stated as fact.**
 - **Fact: *Philadelphia car no. 2711 is a PCC streamlined streetcar delivered by St. Louis Car Company in 1947.***
 - **Opinion: *The PCC is an excellent car and the city of ____ never should have gotten rid of them.***

Tour Options

Standard Tour: Tour Guides provide an overview of the Trolley Era utilizing the collection of trolleys in the Trolley Display Building. The tour focus may change based on the interests of the group. (ex: group from Philadelphia)

Group Tours: The Museum offers a private tour for groups of 20 or more. All group tours are pre-registered and are listed on the operation schedule. These tours could be standard tours or focus on a specific topic such as location or car based on the interests of the group.

Extended Tour/Deluxe Tour: These tours include a standard tour of the Trolley Display Building as well as a behind the scenes look at select trolleys in the TDB (beyond the barriers). It can also include a look into the maintenance areas. These tours are by reservation only.

Field Trips: The Education Department books educational programs and tours for student groups. Additional training is required for field trips. Contact the Museum Educator at education@patrolley.org or 724-884-0285 to learn more.

Tour Procedures

Meeting the tour:

Visitors will enter through the Visitor Center to purchase tickets and follow the blue line up to the platform. Be welcoming and engage in general conversation to get a feel for the type of people that are in the group and establish rapport.

- Introduce yourself and thank them for coming. “Hi everyone, and welcome to the Pennsylvania Trolley Museum. My name is _____, and I am a volunteer Tour Guide (or conductor/motorman/operator) at the museum.”
- Ask a question or two to make a connection: “How many of you have ever ridden a trolley?” “Where are you visiting us from today?” “Have you visited the Trolley Museum before?” Use their answers to converse briefly and break the ice, as well as to judge their level of familiarity and interest.
- Welcoming the visitor is extremely important. *Prioritize their needs.* Any visitor coming for the first time may have questions. Be prepared to assist them!
 - *Avoid cell phones, private or loud personal conversations, and crude jokes or comments. When in doubt, use common sense.*
 - When engaging in a personal conversation with another volunteer or staff, unless it is an emergency, immediately **STOP** the conversation and be prepared to address the visitor, even to say “I’ll be right with you.” No one likes to feel ignored!

Boarding the car

- If waiting for a car to arrive, ensure that passengers are in safe areas (on the bricks), away from tracks, and any moving equipment.
- Assist those who need it in boarding. Trolley steps are sometimes higher than normal steps, so please remind visitors to use caution when boarding and disembarking the trolleys. Avoid assuming the level of help needed and never place hands on a visitor without their consent. **Offer an arm instead of a hand.**
- On 1758 (open car), BOTH operator and conductor assist with boarding and unloading of passengers

Ways to Assist in Boarding

- Metal one-step stepstool (located in Richfol shelter and Allison/TDB)
- Wooden angled three steps (located in Richfol shelter and Allison/TDB)
- Manual wheelchair lift (located next to substation and in the TDB)

The conductor/tour guide is the last one to board the trolley.

On the trolley

- Introduce the operations team. If time allows, feel free to say a sentence about the motorman's and conductor's jobs.
- Share a few interesting facts about the car: where it came from, what type of car it is, distinguishing features, etc.
- If applicable, you may punch tickets before or during the trolley ride. If you like, explain to each group that each conductor had his/her own punch, like a signature, with its own pattern.

Safety Speech

Mandatory talk given BEFORE the ride begins

- Remain seated at all time while the car is in motion. The operation team will let passengers know when it is safe to stand and exit the trolley.
- Keep body and personal items inside the trolley at all times. Windows may be open to provide air. Please advise visitors not to close or open any window without assistance.

Open Car 1758 special safety measures

- Keep body and personal items inside the open sides of the trolley at all times.
- Young children must be accompanied by an adult and sit in the middle of the bench with adults sitting on the outside of the bench.

The spoken part of the tour should pause here. Tour Guides cannot address the group while the trolley is in motion due to noise. Visitors will also want to enjoy the ride. Be friendly and available to answer questions if needed.

Disembarking the Trolley

The conductor/tour guide is ALWAYS the first one off the trolley to offer assistance to the visitors.

In the Trolley Display Building and Wexford Station

****Remember that the operations crew is a team. Operators not conducting the tour can assist by unlocking doors, turning on lights, and giving time cues.**

First, let passengers know where the tour will begin. Then, assist them in getting off the car, organize them, and lead them inside. Once out of the heat, cold, or rain, you can begin your tour:

1. Show them where the Porto Potty is and that benches are provided around the building if they need to take a break.
2. Summarize the big idea of what you're about to say.

3. Demonstrate how a trolley works:
 - The trolley wheel is placed on the wire carrying 600 volts DC electricity from the substation.
 - The pole collects power from the wire and carries it to the car motors, permitting the car to move freely over the rails.
4. Focus on themes and ideas rather than facts and details.
5. Guide your group to Wexford Station.
6. Take questions if time permits, and thank the group for participating. Lead them back to the service car.
7. Assist with boarding the car.

At the end of the ride

The conductor/tour guide is ALWAYS the first one off the trolley to offer assistance to the visitors.

You are the ambassador for the museum, and the visitor's last impression of you is as important as their first.

- Welcome visitors back to Richfol and the Museum. Thank them for visiting.
- Remind them that tickets are good for rides all day. Summarize the schedule.
- Direct them back to the Visitor Center for the orientation video, simulator, exhibits, restrooms, and museum store.

PREPARING YOUR PERSONALIZED TOUR

1. *Remember the theme: Trolley Era*

- Don't try to cover every car or every fact
- Avoid highly technical language unless asked
- If appropriate and relevant, incorporate your experiences
- Ask what visitors remember, too

2. *Write yourself notes or make an outline*

- It's ok to use notes or an outline to help guide you through the tour learning process!
- Visit the building and look at the cars
- What information will you include to make your point?
- Make notes on things you want to say and use them until you can work without them

3. *Ask for information and utilize available resources*

- PTM staff and experienced volunteers are excellent resources and welcome questions or advice on tours. We are more than willing to help you prepare or listen to a sample tour
- Reference materials available upon request. Make an appointment to visit the archives!
- Attend training sessions and presentations offered at PTM
- Visit the Trolley Era Resources on the Learn page at www.patrolley.org/education/learn

4. *Practice!*

- Observe tours given by experienced guides
- Consider asking to give a tag team tour with an experienced guide or have them shadow you. Take the time you need to be comfortable with the tour flow and information.
- When you are ready, go for it! But remember that everyone learns at their own pace; it's not a race!

5. *Self-Evaluation*

- Take a few moments after your tour to reflect. Did it go well? Were people interested? If not, can you determine why? Did they ask questions?
- It is encouraged to adapt your tours as you learn new information and get feedback from visitors
- Not every tour will be a roaring success. Sometimes, despite our best efforts, it's a flop. Whatever the reason, dust yourself off and try again. It happens to everyone.

Resources

Rules of the Trade

- **Look good, act the part.** Wear the PTM uniform, and keep it clean and tidy. Display a friendly, welcoming demeanor and tone of voice. You want to look like and be a person who visitors will readily approach for information. Be ready to answer questions and provide directions. Always thank them for visiting.
- **Ensure their safety & comfort.** Do not keep them standing out in inclement weather, including heat, rain, cold, etc. Avoid or warn of trip hazards and other obstacles. Steer clear of drop-offs, moving vehicles, etc.
- **Know your audience & build rapport.** Introduce yourself and welcome them to the museum. Make lots of eye contact. Engage the visitors with a few simple questions: Where are they from? How old are they? Are they members or first-time visitors? Have they ever seen or ridden a trolley? How do they respond to the information you give?
- **Introduce your topic slowly.** Start general – don't be afraid to give away the big idea right at the start. It helps most audiences to know what they're listening to. Then, gradually build detail and get more specific, until you have satisfied the interest and/or intellectual level of your audience.
- **Involve your audience.** Don't stop asking questions after the program begins. Instead of telling them information, ask if they know answers to *your* questions. This keeps them engaged and shows you what they know and like.
- **Keep it simple, clear, and easy.** They won't remember everything you say. If you say things that relate to your theme, repeat judiciously, and be concise, they will remember the things that are most important to them.
- **Stay credible.** *Be accurate.* Admit when you don't know answers, and be willing to help find out. Don't get caught up in theatrics in order to keep their interest. *Be professional.* Jokes and gimmicks can help engage an audience, but won't necessarily keep it or earn you good points: Never insult your audience, or make inappropriate jokes or comments. *Be objective.* Avoid value judgments in your talk. If your information is accurate and well presented, they will stay interested and draw their own, informed conclusions.
- **Be professional.** A Tour Guide should *never* confront or correct another publicly. Keep your cell phone silent, and don't use it in front of the public or on a tour. Talk carefully, and pause for questions (and for air). Always wear a nametag. Don't touch every visitor—help people use trolley steps *only when needed.*

Guided Tours

1. Start on time and return to the starting point when promised.
2. Take charge. You are the leader of the group, and the visitors depend on you to get them from start to finish safely.
3. Greet the group and tell them what to expect.
4. Stay ahead of your group between stops.
5. Make sure everyone is focused on you before you begin speaking at every stop.
6. Be conversational-but be heard.
7. Repeat questions if necessary so all can hear.
8. Share discoveries and take advantage of teachable moments.
9. Have a definite dismissal point. Avoid abrupt endings, but make it clear that you're done.
10. Thank everyone and offer to answer any questions. Invite them to join you again.

Diverse Audiences

Mixed interest groups

- Consider the visitors' *experience* as opposed to age.
 - An adult who has never seen a trolley has no more experience than a child who has never seen a trolley. Conversely, some children are extremely knowledgeable about transportation and their experience should not be discounted.
- Both individuals need the basics first. The difference lies in their ability to process the information.
 - The information you give children is going to work with the adults in the group, but the reverse may not be true.

Children:

- Remember that even the littlest visitor is part of the tour.
- Engage with children and make direct eye contact
- Ask questions to help draw them in, such as: "What color is this trolley" or "Can you read this number for me." If they ask a question, you can lower your body to their level and make eye contact.
- The younger the child (especially under 4) the more they learn by *doing*. They can board the trolley, ring the bell and answer simple questions like "Have you ridden a trolley before?"
- From 6-9, they still like to do things but can also handle more complicated questions. Talk to them like young adults.
- Teenagers are half-child, half-adult. Speak to them as young adults but do not insist on their participation. They may be listening intensely even if it doesn't look like it.

Rail Fans

- A persistent rail fan may "know" everything or only be interested in a specific car, or may try to monopolize the tour.
- If it becomes a problem, offer to talk with them afterward, or if another volunteer or staff is available, offer them a separate conversation.
- Encourage them to come during other events at the museum, such as the West Penn Trolley Meet, or to schedule a behind-the-scenes tour.

PTM Facilities

The **West Campus** includes the visitors' center, restoration shop, car barn, and education room. The **East Campus** includes the Trolley Display Building, the Artifact Preservation Building, and the future sites of the new Welcome & Education Center and Trolley Street.

Visitors' Center

The Visitors' Center parking lot on the West Campus is where most visitors will park to visit the museum except during the Washington County Fair. Amenities at the Visitors' Center include public restrooms, water station, vending machines, tourist information, orientation film, museum gift shop, Education Room, and exhibit areas including the trolley simulator. All of these spaces are air conditioned for visitor comfort.

Restoration Shop

The restoration shop is the primary area for all trolley maintenance and restoration. This is not a public space! Tour Guides who wish to show interested visitors the restoration shop must check with shop volunteers or be familiar with the shop. Good views of ongoing work are also available during the summer when the large doors are open at the end of the building. The restoration shop affords visitors a chance to see the kind of work it takes to restore and maintain our fleet.

Car House

Operating service cars usually stay in the Car House. Where practical, and without interfering with schedules or construction, Tour Guides may wish to show visitors the cars in the car barn. The track furthest from the Visitor Education Center (Track 11) was the Pittsburgh Railways interurban line to Washington until 1952. Visitors must stay on the black rubber mats in the car barn for their safety.

Shelters

Shelters were often placed at trolley stops that were farther away from city streets to protect waiting passengers from the weather.

- Richfol Shelter: Constructed around 1909, this shelter served workers of the Standard Tin Plate Company in Canonsburg. It was historically located on Adams Avenue across from present day Sarris Candy. Located now at the main platform.
- Brown Shelter: Of very distinct construction, it was constructed for the Pittsburgh & Butler Street Railway (Butler Short Line). Based on initials carved into the woodwork, the shelter dates from at least 1910. Located next to the main parking lot.
- West Shelter: Built in 1908, this shelter was located on and named for the West family farm. It served the northern district of Pittsburgh on the Pittsburgh, Harmony, Butler, and New Castle Railway. Located across from the main platform.

- Alison Shelter: Similar style to Richfol, it was built around 1909 and was located on Pike Street, near today's Race Track Road in Meadow Lands. It serviced passengers on the interurban line from Washington to Pittsburgh. Located along the tracks near the Trolley Display Building.

The Trolley Display Building (TDB)

The Trolley Display Building opened to the public in 2005. It houses more than 30 cars in a protected environment, and is the location for all regular tours and select special events. A portable toilet is available for anyone requiring such facilities at the Trolley Display Building.

The museum has been operating on solar power since 2009. A bank of solar panels atop the roof of the Trolley Display Building feeds electricity back into the power company system, reducing the museum's electric bill and making it greener at the same time. The system employs a 36-kilowatt solar photovoltaic system and has its own substation. Estimates put the savings at \$5,000-\$6,000 in electricity cost per year. An exhibit inside the Trolley Display Building explains to visitors in simple terms how the system works.

Wexford Station

This 1908 interurban station is an extremely rare survivor of the Trolley Era. Built for the Pittsburgh, Harmony, Butler, and New Castle Railway, Wexford station was an important stop for the railway, situated a short distance west of Perry Highway.

The original station was divided into three sections; a station agent in the center of the building sold tickets to passenger who waited on one side while freight shipments were handled on the other side. Shippers relied on horse drawn wagons and later motor trucks to get materials to and from the station whereas passengers walked or rode their horse.

The railway closed in 1931 and station agent William P. Brooker purchased the building, moving it up the hill into the heart of Wexford where it served as the post office until 1964. Following that, it served as an antique shop and finally as the Wexford Post Office Deli from 1983 to 2014.

The late Trudy Brooker Purvis, granddaughter of William Brooker, managed the building for many years. She championed for the Pennsylvania Trolley Museum to acquire the station when it could no longer be a revenue-producing property to preserve the building's historical integrity. When the last deli owner ceased operation in 2014, the Brooker heirs donated the building to PTM and sold the land it had occupied for 82 years. The station came to the museum in 2015 and was placed on a new concrete foundation with heating and air conditioning systems added to building. Volunteers, staff, and contractors worked to restore the building and transition it to an exhibit space. The interior features two 1898 mahogany waiting room benches from the Pittsburgh train station, now known as the Grand Concourse Restaurant in Station Square Plaza.

Trolley Era Transportation Timeline

- 1832 Horsecar era begins in cities, debuting in New York.
- 1840 First omnibus in Pittsburgh.
- 1858 Pennsylvania's first horsecar service begins in Philadelphia
- 1859 Pittsburgh's horsecar service opens in August along Penn Avenue.
- 1869 Pittsburgh boasts 22.7 miles of horse-powered street railway lines.
- 1870 The Monongahela Incline, Pittsburgh's first opens.
- 1873 The world's first cable car opens in San Francisco.
- 1886 Pennsylvania's first electric street railway opens in Scranton.
- 1888 The first cable cars in Pittsburgh operate along Fifth Ave.
- 1888 Frank Sprague opens the first successful electric railway system in Richmond, Virginia. Trolleys are eventually used in 850 American towns and cities.
- 1890-1 Successful electric railway service opens in Pittsburgh. There are approximately 114 miles of street railway tracks – horse, cable and electric – in the Pittsburgh area.
- 1893 The first interurban line opens in Oregon, connecting major cities to towns.
- 1896 Cable car operation closes in Pittsburgh.
- 1898 Kennywood Park is opened by Monongahela Street Railway Company.
- 1907 Pennsylvania allows trolley freight service. The U.S mail, ice cream, produce, bread, macaroni, caskets, petroleum, mail, and newspapers are some of the goods transported.
- 1908 Henry Ford begins selling his Model T.
- 1909 Interurban line connecting Pittsburgh and Washington completed.
- 1914 The first motor low-floor cars enter service in Pittsburgh.

- 1918 With over 600 miles of city and interurban track serviced by almost 2,000 streetcars, PRCo is experiencing the peak of the Trolley Era.
- 1923 The last Pittsburgh horse-drawn streetcar – the Sarah Street line in the South Side – closes; it was one of the last animal-powered railways in the U.S.
- 1927 Last order for low-floor cars for Pittsburgh is received.
- 1936 PCC cars, streamlined and updated trolleys, arrive in Pittsburgh.
- 1941 Freight service is discontinued in Pittsburgh.
- 1950s Pattern of steady decline of streetcar use.
- 1951 The last production of PCC streetcars in the U.S. signal the end of an era.
- 1953 Washington County interurban streetcar lines are abandoned.
- 1964 Port Authority Transit (PAT) takes over from the Pittsburgh Railways Co. and independent bus companies.
- 1985 First phase of the Light Rail Transit (LRT) opens.
- 1999 Drake Line in the South Hills is taken out of service along with PCC cars.
- Today PAT continues to operate three light rail lines in the South Hills, serving Overbrook, Castle Shannon, Library, Mt. Lebanon, South Hills Village, and the Arlington Warrington neighborhood.

The Trolley Era and the Electric Age

Written and edited by volunteer Archivist Emeritus Edward Lybarger

The invention of electric motors, electric lighting, the telephone, electric generation and distribution systems, and the electric streetcar in the late nineteenth century marked the start of the “Electric Age.” The early growth and development of electricity and the street railway industry were tightly intertwined and had great impact on the lives of Americans.

The Time Before Trolleys

Prior to electricity, travel was an ordeal done only when it was unavoidable because mud roads were the norm, and often impassable at certain times of the year. During the 1850s horse railways were huge improvements over early mode of travel, as the rails made passage independent of the road surface. Boston had a fleet of 8000 horses and in 1858 Pennsylvania’s first horsecar service opened in Philadelphia. Pittsburgh’s horsecar service opened in August of 1859 along Penn Avenue and by 1869 boasted 22.7 miles of horse powered street railway tracks. The use of animal power created a serious waste problem and contributed to disease. Horses were expensive due to the cost of acquisition, care and food, not to mention the limited daily use of each animal.

Cable car technology offered relief from these expenses. In 1873 Andrew Hallidie opened the world’s first cable car in San Francisco and the technology was adopted in numerous large cities including Pittsburgh. Beginning in 1888 the first cable cars in Pittsburgh began operating along Fifth Ave. During this era, lines ran 5-6 miles out from the city center.

In the Beginning

The electric streetcar was an experimental proposition until 1888 when Frank Sprague put everything together in the right way in Richmond, VA. But it took several years of operation to prove that Sprague was right and the others wrong. As a consequence, some of the competitors remained in the business into the early 1890s. Edward Bentley and Walter Knight were a Cleveland team commissioned in 1888 by the Observatory Hill Passenger Railway Company to electrify a route in the City of Allegheny (now Pittsburgh’s North Side, annexed in 1907). The Bentley and Knight system used underground (conduit) power collection using a slot in the street. The propulsion system and conduit used to move these cars were not efficient and this system was replaced with the proven Sprague technology.

One of the vital forces in the development of American cities was the arrival of the electric streetcar at the end of the nineteenth century. Its quiet, efficient propulsion was far ahead of the transport of the time, and its higher speeds made it possible for people to live much farther from their work than when they had to depend on

walking or on the slow horse and cable cars of that era. In 1890 electric railway service as we know it opened in Pittsburgh.

The beginning of the mobile America we know today has its roots in the trolley, and trolley cars ushered in the Electric Age. Cities expanded along the streetcar routes built out from their centers. Local examples of this expansion are the communities of Beechview, Brookline, Dormont, Mt. Lebanon, Forest Hills and West View. Bradford Woods is an example of a community founded by the trolley company itself.

Also, in Pennsylvania, trolleys connected many of the mining communities with nearby towns and were extended to industrial facilities near the cities. Because much of the labor for the mills and mines came from the nations of Eastern Europe, the trolleys became a veritable rolling melting pot and helped to expedite that process known as Americanization.

Through this vital time, the trolley blended cultures and people on a daily basis. As the telephone came into popular use during this time, people could arrange impromptu visits with relatives and friends while merchants could phone an order to city supplier for immediate shipment via the trolley company's freight service. The farmer could ship his milk to market on those same freight cars, too. Advertisements in the trolleys here at the Pennsylvania Trolley Museum let us catch a glimpse of America of yesterday with the trends and prices.

Trolleys became a way of life during the early 1900s. Automobiles, no longer a novelty, were still not practical for everyday urban travel as roads, parking and costs were still a deterrent. The trolley was the preferred means of getting around, and ridership was still growing. Theatres, amusement parks, schools, and stores were served best by the trolley, as were the industrial plants that provided so many jobs. In 1898 Kennywood Park opens and is still in operation today, as is Dorney Park near Allentown. Cascade Park in New Castle, Luna Park in Scranton, and West View Park in West View are other examples of electric trolley parks.

By the 1920s though, things began to change. The advent of radio, which kept people home at night, and the growing popularity of the auto led very quickly to a falloff in non-work-related travel. The street railways' early construction shortcomings became horribly evident, as the 20-year track built with 50-year financing fell apart. Cities began paving streets for the growing pack of automobiles. Many transit operators faced with declining patronage and increased maintenance costs began to convert to busses or go out of business. The Great Depression beginning in 1929, made a grave situation even worse, killing off most of the interurbans and many of the small-town systems. It was during this time that urban operators banded together to develop a genuinely modern streetcar.

Birth of the PCC

During the early years of the Great Depression, leaders of trolley companies across the country realized that they needed truly modern vehicle if they were to compete in any way with the automobile. They formed what was known as the Presidents' Conference Committee to develop that vehicle, which in its ultimate form came to be universally known as the PCC car.

Pittsburgh Railways was an enthusiastic supporter of the project. One of its engineers, Dan Bell, was granted the patent for the body design. The company was the first to haul passengers in one. Before the car entered regular service early in 1937, it was taken around the town for demonstration rides on many of the company's routes.

World War II

The wartime years and beyond brought temporary prosperity to the electric railway industry, largely due to government rationing of fuel and especially rubber. Employment boomed, and meant heavily increased traffic for transit companies. Motormen shortages led to the employment of women as "motorettes." Transit systems strained to handle the demands, which continued after the war's end until autos, gasoline and tires again became available.

Impressed that passenger counts on its interurban routes to Charleroi and Washington were as high in 1945 as they were in the mid-1920s, Pittsburgh Railways ordered 25 new streamlined PCC type streetcars fitted for interurban service. By 1949, however, enough automobiles were available, mine employment was down, and the volume of passengers carried on the interurbans dropped precipitously. In 1953, with the new cars only four years old, the company abandoned all service south of Library and Drake and reassigned the cars to Pittsburgh suburban service.

The Decline of the Trolley

Many trolley systems were simply worn out by the time World War II came to a close. Most often cities bought fleets of cheap new buses, since the industry was again having trouble meeting the costs of new track and paving. From the mid-1950s, the thrust of transportation development was directed at expressways, shopping malls, and fast food outlets – all things which seemed to require an automobile in order to be used. New appliances and entertainment media – especially television – added to the spectrum of recreational life, but again caused significant declines in non-rush hour transit riding. The number of North American cities retaining the use of trolleys as a means of public transport was reduced to eight.

Renaissance

From the 1980s it was recognized that due to so many automobiles that roads were becoming hopelessly clogged and the air in urban areas dangerously polluted from the overabundance of personal transportation, and urban planners began to recognize the merit in reviving the trolley technology – now calling it light rail. Cities such as Boston and Toronto modernized their trolley lines, leading other cities such as Pittsburgh and Philadelphia to follow suit. Computer technology has dramatically speeded up our lives and is now extensively used in light rail technology.

Summing it up

The streetcar served well through two world wars and a depression. Around the beginning of the twentieth century, when a person saw an electric street car for the first time, it was most likely also the first time that person saw electric lights, felt electric heat, or saw any vehicle moving along quietly that wasn't pulled by an animal or powered by a loud, chugging, smoking steam engine. Thousands of people relied on the trolley to get to work every day as well as to visit friends in nearby towns or to spend a Sunday afternoon at an amusement park.

Orientation Video Overview

Early City Transportation (1800s)

- Walking was the only means of transportation available to the ordinary working person.
- This affected the size of cities and limited it to walking distance so cities were small.
- The first form of citywide transportation was the omnibus and the horsecar.
- Cities began to grow, but horses were a slow and expensive form of power.
- Next came steam, elevated cars, and cable cars
- All of these were expensive and limited to only the largest of cities.

Early Electric Streetcars

- Pittsburgh hosted two early pioneering attempts to use electricity to power the streetcar.
- Frank J. Sprague refined details and designed the first successful electric streetcar system in 1888 in Richmond Virginia, using overhead wire and a patented motor mount.
- This started an industry that was as important to the economy of its day as the automobile is to ours.
- The electric trolley was a revolutionary improvement in urban mobility and filled the gap between the horsecar and rapid transit.
- The electric trolley allowed villages to grow into cities.
- Between 1890 and the start of WWI, horsecars and cable cars disappeared and the electric streetcar systems expanded at an astonishing rate.
- Suburbs also grew because of the reliable, all weather trolley transportation.

Use of the Streetcar

- Streetcars were originally used for workers to get to and from work.
- To increase use of the streetcars in the evenings and weekends, trolley companies developed attractions like amusement parks and trolley tours.

Dangers

- Accidents with both pedestrians and especially automobiles became problems.
- Education was necessary and education films were created to teach the public.
- Inventions such as the lifeguard fender were developed for safety.

Growth

- Electric streetcar use grew and grew until WWI.
- The city streets became busier and busier with trolley and it seemed like the trolley era would never stop.

Competition

- Ford's assembly line and the Model T in 1908 marked the first threat to the streetcar industry.

- For the first time automobiles became affordable and convenient.
- Trolley ridership declined after the early 1920s.
- In response to this competition, the trolley companies fought back with the return of smaller more efficient streetcars operated by one person.
- Publicity stunts like breakfasts cooked to order and airline style hostesses did not work.
- A radical new approach was needed, and an industry-wide effort began to redefine the trolley car.
- The PCC car was the result, released in 1936.
- The streamliner, as it was often called, was quiet, fast, comfortable, efficient and stylish.
- It rejuvenated the trolley industry for a while and over 4000 ran in 29 American cities.

Public Transit Industry Lost the Battle with the Automobile

- Many streetcars were scrapped due to the decline in use.
- Trolleys were stripped, burned and recycled.
- Not every streetcar was torched; in 1949 the Pennsylvania Trolley Museum was formed to preserve these structures. M1 was the first streetcar to be acquired.

Streetcars in Pennsylvania

- Pennsylvania had more trolley companies than any other state and fought off the competition of the automobile until after WWII.
- The streetcar companies were transferred to public ownership in Pittsburgh and Philadelphia. Portions of the systems were rebuilt according to modern light-rail standards.
- Today at the Pennsylvania Trolley Museum, you can “ride into the past” and experience the “trolley era.”
- Pennsylvania cities mentioned; Reading, Lancaster, Wilkes Barre, Connellsville, Allentown, Scranton, Johnstown, Philadelphia and Pittsburgh.

FAQs

Where did people ride the trolleys? The same places we go to today: work, school, church, appointments, shopping, amusement parks, and visiting friends and family!

How fast can a trolley go? That depends on how the cars were built, track condition, or a city car vs. an interurban car. A trolley in the city with traffic may average speeds of 5-15 mph.

How much did it cost to ride the trolley? It depends on the time period and how far one went. Trolley fares in the early days were a nickel; many people still remember ten-cent fares or three for a quarter. There were also Ride-All-Day Sunday passes.

Do the terms trolley, streetcar and interurban all mean the same thing? In many places trolley and streetcar are used to mean the same thing. An interurban is a car that traveled between two cities.

Who are the workers on a trolley? Cars with two-man crews had a motorman and a conductor. The motorman ran the car and the conductor collected the fares. A one-man crew is responsible for all duties. Female operators, or motorettes, worked on the cars during WWII and beyond.

How do you operate a hand control trolley? The left hand is on the controller and the right is on the brake. There is also a “key” that has to be in place.

How do you operate a foot control trolley? The right pedal is the accelerator, the middle is the brake and the left is the deadman. The car will stop if this last pedal is not pushed down.

What do the different bells mean? One bell means stop. Two bells means go. Three bells mean reverse. You may hear repeated rings or horn blasts if going over a road crossing.

What are ad cards? The trolleys have ad cards above the seats. Companies paid to have their ad cards placed in the trolleys, providing visibility for their products and good sources of revenue for the trolley companies.

What is that noise? Often the potentially loud and startling noise the visitor is referring to is the air compressor that is compressing air for the brake system.

Why is the loop named McClane? The site is named for the McClane family farm located nearby at the turn of the 20th century. The original path of the interurban and the station stop were located within the loop site until 1953 when the line was abandoned. McClane School stood nearby.

Why is the loop named Arden? The village of Arden Mines was a thriving coal patch at the beginning of the 20th century. The community also had company houses, a company store, and a post office. The path of the trolley line follows the railroad access to the mine. In the 1920s the mine was closed when there was no more coal.