Tour: Overview of the Trolley Era
Suggested Route: Start at the TDB main entrance, go down aisle 1 towards the west side of the building and then back up aisle 2 over the high-level platform.
Time Estimate: 25-30 minutes
Description: This tour will utilize the collection items in the Trolley Display Building to give an overview of the Trolley Era. The tour is designed to talk about the development not only of trolleys and how they changed over time, but also how those innovations affected society.

Suggestions for Planning Your Tour:

- We recommend that you cover stops one through four on most of your tours since they provide a chronological overview of the Trolley Era. However, you do not always have to do this! If your group is in a hurry or is interested in specific cars, feel free to mix things up.

- The additional stops and information in this example can be used to round out your tour. Feel free to choose whatever you or your group is most interested in, and you're welcome to change it up each time. There's also an example conclusion, but you can change this up to fit the rest of your tour.

- Don't feel like you have to say exactly what's written here, in fact, we'd like you not to! Make the tour your own by adding personal stories and observations and asking questions to your group about their experiences with trolleys. Add in stories and facts that you find in your research. See the first page of your binder or pa-trolley.org/training-resources/ (password: Westpenn832) for sources.

- For whatever stops you do choose to include, we suggest you hit all the "primary objectives" so that visitors can fully understand the significance of the car. Plan to hit all the primary objectives and a couple of the secondary ones that interest you most.

- **Feel free to use notes while guiding!** Also, don't feel intimidated by the number of resources provided. There's no deadline for exploring them. Even our most experienced guides are always learning new things! **Before you become an official Museum Guide, we recommend that you read everything in your binder and a couple other sources that interest you.** Then, you can continue researching as your curiosity compels you to. Don't forget one of our most useful resources- other volunteers! They'll be happy to answer your trolley history questions.

- The topics with an asterisk after them are elaborated on in the additional information section.

Introduction: Just inside the Trolley Display Building main entrance

- Primary Objective(s):
    - Review rules and set expectations for the tour
- Before the tour starts:
    - Before formally beginning your tour, make small talk with visitors. Some questions that you might like to ask them include: How's your day been? Is this your first time visiting the museum? Where are you visiting from? How was your trolley ride today? Have you ever ridden a trolley before?
- Example Interpretation:
    - Hello, everyone! Welcome to our Trolley Display Building here at the Pennsylvania Trolley Museum, my name is _____, and I will be your guide today. This tour is going to be about 25 minutes long, and we are going to learn about just some of the trolleys in our 50+ car collection. If you have to head out during the tour, just let me know, that would be totally okay.
    - We have just a few rules that I am going to ask you to follow. Please do not bring any food or drinks inside the trolleys so that we can protect them as historic artifacts. Also, please do not touch any controls on the trolleys. I would also suggest holding the hands of children while you are boarding or deboarding the streetcars.
    - After the tour, you are welcome to explore the building and our trolleys, but please only board the cars that have their doors open and lights on. Okay, now please follow me to the first stop just down here a bit. (move to horsecar)

Stop One: Near the Horsecar

- Primary Objective(s):
    - Life before Trolley Era
        - Large cities or towns surrounded by farmland; no suburbs as we have today
        - Transportation options: walking, horse, carriage (stagecoach, omnibus, etc.)
        - People had limits on where they lived- had to be close to work
        - Electric power not used in everyday life
    - Horsecar Basics
        - Got people quite literally "out of the mud" by using metal wheels on rails in the street
        - Pulled by teams of horses or mules
        - Slow: about 5 mph, up and down the hills of Pittsburgh
        - Costly (food, drink, shelter, medicine, shoes, etc) and messy (horse droppings EVERYWHERE)
    - Frank Sprague
        - Created a system of a spring-loaded pole and wheel; when the wheel touched the electrified overhead wire, it brought power to the trolley

        - Successfully implemented in 1888 in Richmond, Virginia
        - Electric railways service opened in Pittsburgh in 1890
- Secondary Objective(s):
    - Cable Cars
    - Inclines*
    - Story of the horse display*
    - Specifics about routes/companies*
- Example Interpretation:
    - In the early 1800's, travel was a nightmare for most people. You basically could choose between walking or horses (with or without carriages). Horse-drawn carriages often broke from the bumpy, uneven roads or got stuck in the mud. A man by the name of John Stephenson was inspired to put steel wheels on carriages and have them drive on smooth rails instead. This changed the transportation game in cities, as people and goods could get around faster and easier. You could go up to 5 mph! Pittsburgh started a horsecar service in 1859 and it ran for almost a decade. This car is from sometime in the 1870s. However, horsecars were not a perfect solution - horses were expensive and messy. So, almost as soon as the horsecar came about, people were trying to find a way to improve it.
    - There were numerous attempts (including battery power, steam power, compressed air, and even a combustion engine) but nothing seemed to work quite right. Early on, Andrew Hallidie, from San Francisco, developed a system of powered pulleys laid underneath a track. This allowed cars to grip on to the cable to move along, and let go to slow down and brake. While successful, this system was costly and only a step in the path to a solution.
    - A man named Frank Sprague was working to develop an electric powered streetcar that used a spring loaded pole to feed power from an overhead wire. He opened the first successful electric streetcar operation in Richmond, VA in 1888. The cars designed for these early systems were small like a large carriage, but soon enough designs developed to increase capacity.

Stop Two: Near 3487 - high-floor car

- Primary Objective(s):
    - Growth of trolleys/dependence on trolleys
    - Inconvenience of high-floor design
- Secondary Objective(s):
    - Specifics about routes/companies*
    - Large wheels/motors
    - Suburbs*
    - Trolley Parks
    - Advertising*
    - The Model T and automobiles*

- Example Interpretation:
    - This style of car is referred to as a “high-floor car.” If you take a look at the height of the step into the car, you can easily see where the name came from. These cars were taking over the streets in major cities during the early 1900s.
    - The long body let you hold lots of passengers, and in order to carry all these people through the steep Pittsburgh hills, sometimes even with a motorless car attached at its back, you needed a powerful motor. Due to the technology of the time, that meant the motors had to be very large, and so the floors had to be high off the ground.
    - This big step did cause some inconvenience to passengers. It was difficult to board the trolleys if you were wearing a long skirt, injured, elderly, a small child, or carrying your groceries or other packages. However, that inconvenience didn’t slow down the streetcars’ boom in popularity. People took the trolley to all sorts of places- to school, to work, to shopping, to see friends or family.
    - Where there were once large cities and rural farmland, a third type of community began to develop - the suburb. For the first time, people could live farther away from where they worked because streetcars offered a faster, easier way to get there. This was especially nice for those who worked in Pittsburgh’s steel mills.
    - To encourage people to take the trolley on their days off, some companies began to feature special service on weekends to places like parks or cemeteries (At the time, cemeteries were leisure destinations similar to how parks are today.) Other companies purchased pieces of land that they could turn into their own parks - adding dance halls, pavilions, and even amusement rides. Has anyone been to Kennywood? It was started by the Monongahela Street Railways Company in 1898.

Stop Three: Near 3756 - this is directly across from 3487, so you just need to move yourself to the other side of the group and have them turn around

- Primary Objective(s):
    - Focus on ease, comfort, and efficiency
    - Interurbans
    - Peak of the Trolley Era
- Secondary Objective(s):
    - Specifics about routes/companies*
    - Small wheels/motors, change in color for visibility
    - Trolley trailers
        - The first low-floor cars were trailers pulled by high-floor cars. The trailers usually filled up first because they were easier to board, so Pittsburgh Railways Company bought new ones with motors.
    - PN Jones (visit patrolley.org/collection/pittsburgh-railways-co-4398/)
    - Advertising*
    - Rolling melting pot/ immigration*

        - You could meet new people with all different backgrounds on the trolley. Trolleys brought neighborhoods and even whole cities closer together.
    - Mister Rogers
- Example Interpretation:
    - This car is an example of what came after the high-floor models. As you can see, the step to climb in was significantly lower. I bet you can guess what it was called. (**Wait for someone to say low-floor… if they don't you can say it**) Inventors figured out how to make a smaller motor that was still powerful. This meant people could get on and off quicker and easier. For riders, this meant convenience, for trolley companies, it meant more efficiency and making more money. People liked these trolleys because they were more comfortable and they offered service to new places.
    - During the early 1900s, travel had become quite accessible for people going long-distances on locomotives and traveling around in a city using trolleys. However, a gap remained for those who lived in smaller cities to get into the major ones nearby. Trolley companies found a way to fill that gap by adding interurban routes that went from city to city. For example, our Museum lies along the original interurban line that ran between Washington, PA and Pittsburgh. This car ran on that line along with the interurban line from Pittsburgh to Charleroi.
    - These lines allowed people to spread out even more, and trolleys became even more popular. 1918 was the peak of the Trolley Era in Pittsburgh. That year, the Pittsburgh Railways Company had more than 600 miles of city and interurban track and almost 2,000 streetcars.
    - With so many people riding trolleys, companies of all kinds began to buy up ad space in and on the cars. If you look inside, you'll see some of the ads that were displayed in trolleys in the 1920s with their catchy phrases and bright colors.
    - This trolley was one of the three original trolleys in the museum's collection. It's also notable because Mister Rogers took a picture with it when he visited here to film an episode in the 1980s. After we finish up with the tour, I would be happy to help you recreate the image.

Stop Four: Near 94 (Shaker Heights)

- Primary Objective(s):
    - Transition to PCCs
    - WW2 effects
    - Decline in Trolleys
    - Trolleys today
- Secondary Objective(s):
    - Specifics about routes/companies*
    - Single-end v.s. Double-end*
    - Peter Witt door arrangement*

    - Women and People of Color in Transit*
- Example Interpretation:
    - The last major change to trolleys came in the 1930s. In the late 20s, automobiles and buses became more popular, so less and less people were riding trolleys. Then, in 1929, the Great Depression began, and most Americans began to experience economic hardship. People had no jobs to ride the trolley to or money to spend on outings, so trolley ridership decreased again.
    - Trolley companies knew they had to do something to survive. Some company leaders formed the Presidents Conference Committee, a group of railways presidents and trolley manufacturers to design a trolley that was faster, quieter, and more comfortable.
    - Soon, Pittsburgh Railways was the first company to transport passengers in the new PCC car, nicknamed after the committee.
    - This car ran in Shaker Heights, a community outside of Cleveland, starting in the late 40s. It is larger than the average PCC. Pittsburgh PCCs are smaller and more modern looking, you might see our two with red and cream paint schemes while you are here today (1711, 1138, you can point them out in the TDB if they're in the building).
    - Soon, WWII created a huge boost in trolley ridership, as the rations on gas and rubber discouraged people from using cars, and more people had work to take the trolley to. In 1945, the passenger count on the route from Pittsburgh to Washington was just as high as it was during the mid 20s.
    - The war also meant many men going off to fight and leaving their jobs in the trolley industry. This created opportunities for female operators, known as motorettes, and for people of color to move from positions like track crew or maintenance to the operating force.
    - Despite the brief resurgence, after the war, trolley companies saw a sharp decline in ridership. Transit companies shifted into public ownership and started to focus on buses instead of streetcars. By the 70s, only seven cities in the country still used trolleys for public transportation.
    - Pittsburgh continued its trolley service, and even though it decreased throughout the years, the city's last PCC trolleys ran all the way until 1999. Today, Pittsburgh Regional Transit operates light-rail lines in the South Hills and part of the city, mostly on former trolley routes and also in newer subway tunnels. These vehicles don't have the signature trolley pole, but they do have a part called a pantograph that collects electricity from an overhead wire.
    - Our Museum exists as it is today partly because trolleys played such an important role in Pittsburgh culture- they brought together people from all different backgrounds and neighborhoods. We also find much support from our community because the trolleys here stuck around for so long- many people still remember riding the Pittsburgh trolleys. I'm glad you all are here today to experience this history with us.

Stop Five (Additional): Toledo and West Penn Railways 739

- Primary Objective(s):
    - Private/Parlor Cars
    - What happened to the cars after they stopped being trolleys
- Secondary Objective(s):
    - Popular Culture
    - Trolley adventures (children riding all day, people "stealing" the cars, etc.)*
    - Dangers (accidents, derailments, etc.)*
- Example Interpretation:
    - This car (Toledo) is an example of a private car, or a parlor car, think of today's corporate jets. These cars were owned by the private trolley companies or their top executives and were used for meetings and to ride the line for inspections. The cars were never available to the general public and often had more comfortable amenities. For example, this car has a small kitchen and a bathroom. After the car was taken out of service, it had a second life as a cabin. (Feel free to pause and let them explore the car!)
    - Many trolleys that are still around today had a second life after their time in service. As the Trolley Era came to an end, the majority of cars were scrapped, burned, and recycled. Not all, but many of the ones that were saved, were turned into something else. For example, 739, which is across the aisle there, once served communities southeast of Pittsburgh, but then became someone's home. But why would people want to save them?
    - Despite no longer being a popular source of transit, trolleys captured the hearts and minds of people all over the world. Movies like *Meet Me in St. Louis* and plays like *A Streetcar Named Desire* came out in the 1940s after streetcars had already started to disappear from cities. Even Mister Rogers, who we talked about before, started his show that featured a toy trolley in 1968, when only a handful of US cities still had trolley lines.

Stop Six (Additional): Near 07 (Freight)

- Primary Objective(s):
    - Moved more than people
- Secondary Objective(s):
    - Specifics about routes/companies
    - Example of freight service (specifics about goods - i.e. produce, refrigerated cars, ordering from stores)
- Example Interpretation:
    - This car is another example of a special car. Recently restored, this is an example of a freight trolley. This one is from Philadelphia and started service in 1911.

    - As companies grew and found ways to improve their passenger cars, they also realized they could increase their profits by providing other services. By adding freight cars or combine cars (combination of freight and passenger), companies not only increase their bottom line but they improved the lives of their patrons. People living in cities suddenly had better access to fresh produce, allowing farmers to expand their customer base.
    - Additionally, department stores could offer remote-ordering. Sounds modern, doesn't it? Someone could call into the store and ask them to send their purchases to the nearest trolley stop without having to go into town. In fact, if you called early enough in the day, you might even get your items the same afternoon - that's better than Amazon!

Stop Seven (Additional): 606 (subway) and 209 (bullet car)

- Primary Objective(s):
    - Modern transit systems
- Secondary Objective(s):
    - 606's Almond Joy nickname- looks at the bumps on its top!
    - Light Rail vs Heavy Rail*
    - Specifics about routes/companies*
- Example Interpretation:
    - (Pointing to 606) This car is one that we often hear people say they recognize because it is the one that most closely resembles a modern public transit car. It's a subway car that started service in Philadelphia in the 1960s. This car (pointing to 209) is a bullet car that started service in the Philly area in the 1930s. It could go more than 75 mph. Both of these cars aren't technically trolleys as they don't have a trolley pole. However, they are powered by electricity through an electrified third rail on its track.
    - Though the end of the Trolley Era meant that rails were ripped out or covered up almost everywhere, populations continued to grow and cities became increasingly congested with traffic. For many city planners and government officials, the solution to this problem was public transit systems. Cities around the country have installed modern rail systems, for example, light-rail called the "The T" in Pittsburgh.
    - Many cities have moved their transit systems underground into subways. But the historic trolleys are also making their way back as not only public transit options, but as tourist attractions. Cities like New Orleans and San Francisco often attract tourists hoping to ride the streetcar named desire or a famous San Francisco cable car. Some cities such as Philadelphia and San Francisco also still run trolley cars from the later years of production.

Stop Eight (Additional): Work Cars

- Primary Objective(s):
    - Work cars*
- Secondary Objective(s):
    - Point out specific function of some of the work cars
- Example Interpretation:
    - Up this aisle you will see a sampling of our maintenance cars. Trolley companies not only had to build and maintain their trolleys, they also had to build and maintain their tracks. Maintenance equipment kept the line running reliably and economically.
    - For example, this car, 3618, is a dump car. It carried ballast, the gravel bed that stabilizes the tracks, and could dump it out as it moved along the tracks. This one is unique in that most dump cars were built to dump out of the side but this one has the ability to dump underneath itself.

Conclusion: Wherever you would like to conclude

- Primary Objective(s):
    - Conclusion
    - What can you do now?
- Secondary Objective(s):
    - Future of transit (do you drive a car?)
    - How to help the Museum (volunteer, donate, etc)
- Example Interpretation:
    - When you look at the Trolley Era overall, it is quite impressive that the streetcar was able to adapt and survive through not one, but two world wars, and the Great Depression. It also took a new technology, electric power, and turned it into something that made people's lives easier and more exciting. For some people, riding on a trolley may have been their first or only interactions with electric power - lights, heat, the power to the electric motors - it would have been really thrilling for people.
    - In fact, trolleys can be said to be the forerunner of the green-energy movement in transit. Today, companies race to build electric powered vehicles and cities install electric mass transit systems - some along the same lines where they tore out trolley tracks. Bus companies are even striving to create successful electric buses to replace the gasoline powered ones that pushed trolleys aside.
    - That concludes my guided tour. You are welcome to explore further and go into any of the cars with their lights on and doors open. Please remember, for your safety and for the safety of our artifacts, please do not touch any of the controls, including the bells, horns, and anything in the operator areas.

- On behalf of the Pennsylvania Trolley Museum, we thank you so much for coming to visit us. If you have any questions, I will be happy to answer them and I will be sticking around in the building here.

Additional Topics

Single-Ended vs. Double-Ended Cars

- Ability for forward operation at either end of the trolley; "changing ends"
- Loops existed since horse car days, but became very popular in the 1920s, 30s and 40s because they saved equipment costs by eliminating a set of controls and a pole, and reduced dwell time at the endpoints of each route. They also kept the motorman from having to go outside to change ends during bad weather.

Peter Witt Door Arrangement

- Passengers boarded at the front door and left through the center one, where a conductor collected fares.
- Passengers who hadn't paid yet waited in the front section so the car could get underway while fares were still being collected.
- Boarding at the front also enabled loading before an intersection, so the car could take advantage of stoplight time, and again, get underway sooner.

Maintenance of Way (MOW) Equipment- Construction Cars

- Maintenance equipment kept the line running reliably and economically. Unlike rubber-tired vehicles on public streets, trolley companies had to maintain their own track and infrastructure with no public support. Street maintenance jobs like snow removal were often required for a franchise.

Immigration

- Trolleys were considered a "rolling melting pot" as different neighborhoods interacted and blended as a direct result of the trolley.
- In Pennsylvania, trolleys connected many of the mining communities with nearby towns, and lines were extended to industrial facilities near the cities. Much of the labor for the mills and mines came from countries in Eastern Europe.

WWII and Industry Changes

- With many of the company's motormen serving in the armed forces during World War II, Pittsburgh Railways, like many other companies across the nation, made a concerted effort to hire women for the job. These female operators were known as "motorettes." Some women continued to operate after the war; one even went on to operate the first car on Pittsburgh's new light rail line through Beechview and Mt. Lebanon in 1987.

- Similarly, many trolley companies sought to remedy their lack of employees by allowing Black men, previously limited to menial jobs in the rail industry, to train as motormen and conductors.
- When the Philadelphia Transportation Company (PTC) announced in 1944 that eight African American men were hired as motormen and conductors, white transit employees went on strike and refused to work with these new hires. This strike brought transit in Philadelphia to a halt for two days, which in turn stalled its war production. The Federal Government stepped in and threatened the striking employees with service in the war, and the strike ended several days later. (Visit our Volunteer Resources webpage or explore the books in our gift shop to learn more about Black Transit History.)
- Watch Trolleyology: Women in Transit and Jim Crow Streetcars: Challenging "Separate but Equal."

Trolley Suburbs

- Trolleys made it possible to have distinct and separate districts in an urban area where people could travel between work, shopping, and home.
- Cities expanded along the streetcar routes built out from the city center. Local examples include Beechview, Brookline, and Mt. Lebanon.

Car Cards

- Companies began advertising their products and services on streetcars nationwide in the early 1900s. By 1918, approximately 50,000 trolleys displayed advertisements or car cards in nearly 3,000 cities and towns to an average of 500 passengers a day. The most successful streetcar advertisements had catchy phrases, colorful images, and could be seen by the most riders.
- Much of this success can be attributed to one person, Barron G. Collier, who formed the Consolidated Street Railway Advertising Company of New York City in 1893.

Wexford Station

- Built in 1908
- Served Pittsburgh, Harmony, New Castle, and Butler Short Lines (1908-1931)
- Was a post office until mid-1970s
- Was a few hobby type shops before finally becoming Wexford Deli
- Was Wexford Deli up until 2013 when developers wanted the land that the building was sitting on
- The daughter who owned the deli was the granddaughter of the original stationmaster. She didn't want to see the building demolished, so she reached out to the museum to donate it.
- It came down I-79 in 3 pieces (the roof was cut in half and the building) with original windows intact, and we built the foundation to rest it on.
- We restored the inside back to what we believe is the original trolley station scheme (three section dividers: tickets, waiting area, baggage area).

- Read about Wexford on our website (patrolley.org/collection/wexford-trolley-station) or watch our Trolleyology on Wexford Station.

Topics for Your Research

- Inclines
    - WESA's story: "The Rise and Fall of Pittsburgh's Inclines"
    - *Pittsburgh Inclines and Street Railways* can be found in our gift shop
- Story of the horse display: patrolley.org/wont-you-be-my-neigh-bor/
- Specifics about routes/companies
    - Check out our Trolleyology playlist or explore the books in our archives
- The "war of the currents" and the development of electric power
    - *The Electric War: Edison, Tesla, Westinghouse, and the Race to Light the World* can be found in our gift shop
- Trolley adventures (children riding all day, people "stealing" the cars, etc.)
    - Watch Trolleyology: Car Line Adventures
- Dangers (accidents, derailments, etc.)
    - Trolleyology: When Good Things Happen to Bad Trolleys and The Mount Washington Tunnel Transit Disaster (you can also read the book by Mary Jane Kuffner Hurt. It's available in the gift shop and for loan in our archives.)
- Light Rail vs Heavy Rail
- Trolley and electric-powered transit in various modern cities
- The Model T and automobiles