

TROLLEY FARE

Volume 65 Number 1

January-February-March 2018



West Penn Railways Exhibit Opens

By Scott R. Becker, Executive Director

As we begin our 55th year of public operation, and 72 years as an organization, there are lots of things to look forward to this year. I am very pleased to announce a new exhibit has just opened about West Penn Railways. Imagine the days when orange interurban cars ran through the Western Pennsylvania countryside. This exhibit features the extensive 300+ mile West Penn Railways system, Western Pennsylvania's second largest (after Pittsburgh Railways) and the state's fifth largest. It operated primarily in Westmoreland and Fayette counties, with bits and pieces in Allegheny, Armstrong and Washington counties, and at one time owned Wheeling Traction in West Virginia. The railway grew up alongside the electric lighting business that became the familiar West Penn Power which today serves the southwest corner of Pennsylvania. At one time the streetcar company owned 100% of the power company. Special thanks go to Ed Lybarger who selected images and wrote the captions, Dennis Cramer for proofreading and Sarah and Bruce Wells for designing the panels. We must also thank Warren Associates of Pittsburgh

for their exacting standards of excellence in producing the panels.

Speaking of West Penn Railways, we plan to celebrate the completion of West Penn Railways streetcar 832 on June 1. This long running restoration of one of the original three trolley cars that began our Museum has been long anticipated and is a treasure to see! Special thanks go to Penn Union Corp. for their recent donations of parts and a crimping tool for use in finishing the car's wiring. That same day we will be publicly announcing our Capital Campaign and I hope you have seen detailed information on this campaign that came in the mail. We look forward to your attendance.

I am very pleased to welcome aboard Sarah Lersch as our new Educator / Volunteer Coordinator. Sarah grew up in Pittsburgh and has a strong Museum background, most recently working as the Education Program Coordinator at The Homeplace, an 1850s working farm and living history site run by the US Forest Service in Tennessee. Sarah has a B.A. in History & Classical Studies from Allegheny



We welcome Sarah Lerch, seen here with the PTM Bunny, and Jessica Garda at the PTM event table, both hit the ground running in their new jobs. Welcome aboard to both of you!
Bob Jordan photos

College and an M.A. in Public History from the University of South Carolina. She is looking forward to meeting our volunteers as well as enhancing our educational programs.

I am also very pleased to welcome Jessica Garda as our new Development Assistant. This new part-time position was created to help with our capital campaign and other development work. Jessica is a Washington & Jefferson College grad who has a good development background working at the Pittsburgh Public Theater and the Whiskey Rebellion Festival & Dinner. Her current focus will be to help coordinate the Roast fund raising event on May 3 and the June 1 event to celebrate the completion of West Penn 832 and the Capital Campaign Public Announcement. She will also be assisting us with other aspects of the capital campaign and development.

Another one of our original three trolleys has also seen a lot of work recently. Our Maintenance volunteers have done wonderful work upgrading Pittsburgh Railways low-floor car 3756. Much of its wiring has been renewed as well as air piping and other brake work. This work will allow 3756 to be used more often in operations.

As you all know, volunteers are key to our success. Last year over 30,000 hours were donated by approximately 150 different people. Please consider volunteering. It's easy to do: Contact Sarah Lerch, educator@pa-trolley.org or call the Museum office.

I do hope you will be able to come out this year and see our new West Penn Railways exhibit and other improvements around the Museum. Stay tuned for more announcements on the future development of your trolley museum!

TROLLEY FARE

is the quarterly publication of the Pennsylvania Trolley Museum Inc.
1 Museum Road, Washington Pennsylvania 15301
Phone: (724) 228-9256 Fax: (724) 228-9675
Email: ptm@pa-trolley.org Online: patrolley.org
(ISSN 1041-9632)

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- Development Assistant** Jessica Garda development@pa-trolley.org
- Educator** Sarah Lerch educator@pa-trolley.org
- Executive Director** Scott R. Becker sbecker@pa-trolley.org
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Annual Membership dues:

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Mission Statement

The Mission of the Pennsylvania Trolley Museum is to communicate the story of Pennsylvania's Trolley Era to a diverse audience through the preservation, interpretation and use of its collection of electric railway and railroad equipment, associated artifacts and photo/document archives, to ensure that visitors have an enjoyable and rewarding educational experience.

PTM Potpourri and Unsung Heroes

Although none would make an article by itself, there are several areas of progress about which I'd like to update you, our members, donors, and friends.

First, after careful consideration, Hayes Design Group has been chosen as the *Program Management Consultant for the East Campus Development*. While much of the basic design is already complete, their job is to fine tune it, verify that the design meets our needs, and to develop actual construction drawings and documents which meet all applicable codes. Another team, Kulak-George associates of Charleroi was carefully considered, and we (especially Larry Lovejoy) went to great effort to make sure the playing field was completely level and the choice was made as to which group is best able to meet our needs. That's not to say anyone lost. To the contrary, we will also be making good use of Kulak-George's expertise for completion of Barry Stout Park design and some project management aspects during overall construction.

New Driveway – We promised that a new dedicated driveway all our own would provide exclusive access to our East Campus, and indeed that is coming together with help from several entities. Thanks to Eaton, the deed has been executed for their donation of 2.75 acres of land for the right of way; thanks to West Penn Power, we now have an agreement in hand for relocation / raising of their overhead power lines; and thanks to PennDOT, we now have the all-important occupancy permit for the entrance. Also, Fleeher Contracting has been trucking in fill for the project, conveniently enabled by a County project to build new quarters for the Washington County Conservation District offices behind the Health Center, which resulted in a need for someplace to receive the fill. It's a Win Win !

"Trolley Street" – Components are coming together which will enable construction of this important part of the East Campus. Bending of the girder rail has been accomplished by SEPTA and returned to our East Campus by Brownlee Trucking. In addition Bioni Drilling, Inc. has agreed to donate the hole boring for setting of the line poles. The poles are now on site and once the holes are drilled, our P&S volunteers will set them in place with our equipment. And by the way, "Trolley Street" is just the working name. There's still a huge opportunity here for YOU (hint hint) to make a big donation to have the street named for yourself or for someone you would like to have remembered in this way.

Education and Exhibits – I'd like to join Scott in welcoming our two new staffers, Sarah Lerch and Jessica Garda. A large part of Sarah's efforts as Educator

and Volunteer Coordinator are going to be geared toward developing interactive exhibits and programming for our new Welcome & Education Center. Toward this end we will be entering into a contract with The Carnegie Science Center, scheduled to begin in September of this year, and Sarah will be working closely with them in the development of interactive exhibits, the likes of which we haven't even imagined yet.

Trolley Simulator – Speaking of interactive exhibits, we expect the beta version of our "Be an Operator" trolley simulator, being developed by The Magic Lantern of Pittsburgh, to be delivered and installed early this summer. Special thanks to Highmark Blue Cross Blue Shield for partially funding this project! Once installed in the present Visitor Reception area, this beta version will allow extensive testing and further refinement for eventual relocation into the new Welcome & Education Center.



Simulator at Magic Lantern.

Bob Jordan photo

Celebrating our Volunteers – As Scott mentioned, our volunteers put in more than 30,000 hours in 2017 to make PTM the success that it is. If truth be known, there are a lot of undocumented hours as well. I know of at least four volunteers who don't even report all of their hours because, well, they're too modest and they want others to be recognized. In the next issue we'll be featuring more about our unsung heroes, some of whom have put forth a huge effort on the new West Penn exhibit, the roll-out of West Penn 832, and the new *Allegheny Valley Trolleys* book. This book has been over 9 years in the making and is the most complete work ever on this lesser known portion of the West Penn system and smaller companies.

Until then, please return your seat backs and tray tables to the upright and locked position, hold onto the bar, and remain seated until the car comes to a complete stop. On behalf of the entire crew of the Pennsylvania Trolley Museum I'd like to thank you for riding with us, and we look forward to the next time you can pay us a visit in person and marvel at all the wonderful accomplishments.

Stay tuned for the future!

By Sarah Lerch, Museum Educator

I am pleased to join the PTM team as the new Museum Educator and Volunteer Coordinator! I was born and raised in the South Hills area of Pittsburgh. Though I've spent several years outside of Pennsylvania, I've always called Pittsburgh home. I hold a MA in Public History from the University of South Carolina with a focus in interpretation and education.

Among my previous experiences, I worked as a costumed historian and educator at living history museums in Massachusetts, Texas, and Tennessee where I participated in historical demonstrations and presented public and educational programs. Throughout my travels for work, I learned hearth cooking in a 1830s New England village, bunked next to longhorn cattle at a historic cattle ranch, and spun wool and drove a team of oxen on an antebellum farm. While my museum adventures have taken me far and wide, I am excited about the opportunity to trade in my petticoats for a ticket punch.

Ding, ding! Here comes the trolley! One of my goals as educator is to expand the field trip programs at the museum. Pennsylvania Trolley Museum's participatory field trip programs are designed to introduce students to trolleys as a means of transportation through an exploration of the Trolley Era. With an emphasis on critical thinking and making connections, students will discover what a trolley is, what makes it go, and who rode them. Field trips include a guided tour of our Trolley Display Building, where we spark student's imagination and cu-

riosity about the Trolley Era, and a scenic four-mile round-trip trolley ride. Our programs align with Pennsylvania Standards and encompass learning through play, historical analysis and skills development, and Pennsylvania and United States History. We are able to work with specific goals or coordinate with classroom units to provide an exceptional educational and enjoyable experience. Stay tuned for the future! We are in the process of creating new interactive and hands-on programs and exhibits while expanding our current offerings to provide comprehensive STEM based education programs, all designed to better serve the needs of students.

Since starting in mid-March, I have hit the ground running. I have scheduled group visits and field trips, recruited volunteers, and participated in special events. Most recently, I completed New Operator and Tour Guide Training. I want to extend a huge thank you to the excellent instructors (Dennis Cramer, Chris Golofski, Laura Wells, Jeff King, and Alex Bruchac) for their guidance (and patience). I am pleased to welcome aboard the new student operators. The volunteers at the museum are truly an exceptional group of individuals, and I have learned a tremendous amount from them in such a short time. Interested in volunteering? Come join us! Please contact me at educator@pa-trolley.org or 724-228-9256 x 302.

I am thrilled to be joining the PTM team at such an exciting time with a bright future ahead and look forward to working with everyone!



Ding, ding! Here comes the trolley...to welcome Sarah!



Dispatcher Alex Bruchac reviews the day's operation plan with the crew for Bunny Trolley. Maddy Cline photo



Barrie Baker and the PTM Bunny pal around during a lull in the action at the Trolley Display Building. As Maddy reports our volunteers are our greatest asset. Please consider coming down and joining in the fun!

Maddy Cline photo

Winter is over, the bunny has already hopped through the Museum and we are jumping into the summer season of events! These events are a huge success for the Museum and we are so honored to have your support in continuing to grow our events schedule. With this being said, I commonly focus my article on the events themselves, but I want to take this opportunity to tell you about our volunteers before, during and after our events.

The events start getting planned a year in advance, sometimes even more than a year. These plans involve getting all the decorations, local partnerships, ordering food, decorating, helping customers, creating the marketing and scheduling the volunteers. As a Volunteer-based Museum, many of our visitors see our Operators and Conductors as the faces of the Museum. But there are many volunteers

prepping and doing a lot of hard work behind the scenes as well.

Prepping for events involves everyone at the Museum. Our Restoration Crew steps up and commonly helps with large-scale outdoor decorations all while continuing restoration progress on multiple trolleys. The Museum Maintenance Crew makes sure the trolleys are in tip-top shape and ready to roll down the tracks with our excited visitors on board. Our Education and Interpretation Committee with members of our Artifacts team make sure our exhibits and tours are ready to teach eager minds about the Trolley Era. Way & Track and our Power & Signals make sure all of our tracks and signals are in working condition for a safe visit. Lastly, our Grounds team meticulously cuts grass and cares for our plants.

But the team that can be seen here the most during our events is our Events Committee. We truly stand by making every experience fun for both our volunteers and guests. This committee meets once a month and uses their creative minds to develop the events. These are the same people you see selling tickets, welcoming you at the entrance, making announcements, handing out snacks and crafts, and looking over the game areas. The smiling faces of our Events Committee are always trying to ensure the customers have a fantastic visit to the Museum. Once the events end, the same group of individuals can be found tearing down the event decorations and preparing for the next.

The Event Committee usually meets during multiple days leading up to the events to decorate, prepare brochures and make the event everything it needs to be! All of the Museum's committees are dedicated volunteers. Some of our volunteers have full time jobs and will volunteer on the weekends and others are retired and can be found at the Museum at different times throughout the week. It's because of these volunteers that the Museum is successful. As the Museum continues to grow, we hope to grow our number of volunteers. That's why I would like to extend an invitation to you to visit our website www.patrolley.org to learn more about the Museum and maybe become one of the smiling faces that make us "More than a ride...it's an Experience."



Donna Becker, Katie Imler, Kris Rosenwald, Diana Myers and Dave Woods pose with Maddy's creation after setting up the Bunny decor before this year's event. Maddy Cline photo



Pittsburgh Points

By Chris Walker

Port Authority's new Chief Executive Officer started work in mid-January. Katharine Eagan Kelleman comes to Pittsburgh from the sunshine state, where she served as head of Tampa, Florida's transit system (Hillsborough Area Regional Transit). Prior to serving as HART's CEO, she worked in the field of service planning in both Baltimore and Dallas. Needless to say, just about any new transit executive in the steel city gets off to a running start, and Ms. Kelleman was no exception.

In April, Port Authority held a second round of public meetings on its bus rapid transit project. The meetings were organized primarily in response to community concerns in the Mon-Valley in relation to service levels that would be implemented as part of the BRT. You may recall from last summer's plans that only two (61D, 71B) of the current eight routes that link Downtown with Oakland and the east end would continue to the golden triangle. The routes that remained (61A-B-C, 71A-C-D) would terminate in Oakland. The 61-series routes (with the excep-

tion of the D) would see a service level reduction in the neighborhood of 45%.

The riders in the Mon-Valley (along with their elected officials) decided to get organized and voice their concerns over the proposal. Strong turnout at the Port Authority's board meetings (among others) led to Ms. Kelleman announcing a new round of public meetings to discuss more potential options for the area's service.

A revised plan for the BRT corridor was released in April, and contained several tweaks to the original ideas. For starters, more direct Downtown access was retained by including routes 61A, B and C as part of the BRT routing structure – effectively restoring the proposed service reductions to the valley. Route 61D would terminate in Oakland, but on its eastern end be extended to the current terminal at the Homestead Waterfront shopping center. The original BRT plan had it terminating in Greenfield.

Some other minor changes occurred as well, mostly in relation to service levels – you can check out all the details at: brt.portauthority.org.

Philadelphia Notes

By George Gula

A newspaper article posted on March 18 noted the start of the year-long Woodland Avenue Bridge replacement project. This badly deteriorated 1920s-era span is located on Woodland Avenue at 47th Street and crosses the electrified Amtrak mainline in Southwest Philadelphia. The project will have major impacts on both automobile traffic and streetcars. SEPTA's Route 11 trolley will be detoured around the work by using Chester Avenue between the 40th Street Portal and 49th Street and then 49th Street between Chester and Woodland Avenues. Buses will provide service from the bridge to the portal along the affected portion of Woodland Avenue. Construction is scheduled to last through the summer of 2019. This project will also affect Route 36 trolleys once trackwork on Elmwood Avenue has been completed.

On March 18, SEPTA also began a three-month project to replace track originally laid in the 1970s along the Route 36 trolley line on Elmwood Avenue between 59th and 65th Streets. Through June 9, track crews will excavate and renew the track bed, replace about 3,100 feet of rail and repave the track area. The new rail will be encased in an insulated rubber boot, designed to reduce sound and vibrations. While work is being carried out, buses have replaced the trolleys along the entire surface portion of Route 36 from 88th Street and Eastwick Avenue to the 40th Street Portal. Route 36 eastbound

buses are routed to operate around the closed Woodland Avenue Bridge via 49th Street, Kingsessing Avenue, 47th Street and Woodland Avenue; buses will operate westbound using the reverse routing. This provides the service between 47th & Woodland Avenue and the Portal. Route 36 trolley service will continue running through the subway from Juniper Street in Center City to the Portal.

On Saturday, January 13, someone abandoned a U-Haul truck on the Route 36 private right-of-way along the 5500 block of Lindbergh Avenue in Southwest Philadelphia, blocking streetcar service. With trolley service delayed, a supervisor was dispatched to the scene to untangle the mess and get service moving again. After he left his Ford Escape to speak with the trolley operator and neighbors, someone hopped into his vehicle and drove it off. It was later recovered by Philadelphia Police officers at 55th and Wheeler Street.

A new report from the Delaware Valley Regional Planning Commission, which was released in mid-March, previewed how modernization will change not only how people ride, but also how they drive, bike, and park along the city's six streetcar routes. Details included plans for stops with platforms raised above street level to make them accessible to people with disabilities. Along with proposed longer cars, the combined 68-mile system, which includes the Southwest Philadelphia lines and the PCC-op-



Kawasaki streetcar 9043 poses just beyond the west end of the Girard Avenue bridge over the Schuylkill River. The car is specially wrapped to celebrate the 125th anniversary of the electric streetcar in Philadelphia (1892-2017). Here the 15 line goes under the Amtrak mainline and then passes the Philadelphia Zoo. Bill Monaghan photos

erated Girard Avenue line running through North and West Philadelphia, would eventually resemble something more like light rail. Under the current plan, the new cars would be introduced by 2024 as part of an estimated \$1 billion overhaul that rivals the proposed rail line to King of Prussia in both cost and scope. Plans for the new service include lengthening the distance between stops instead of using the current system where trolleys stop an average 642 feet, closer than any other big city's surface rail lines which average a stop every 1,157 feet. The current 112 car fleet consists of 53-foot long equipment that was manufactured by Kawasaki during the Reagan administration, along with 18 PCC cars built in 1948 and used on Route 15. They would be replaced by 120 cars at least 80 feet long designed to carry twice as many riders. The cars' floors would be 14 inches off the ground and all new stops would need platforms high enough to be nearly flush with the trolley car doors. Some would have shelters installed. Buttons located on the outside of the cars would allow people with mobility issues to automatically extend a ramp. But while the lower floors should allow faster boarding for everyone, it won't be enough to make the trolleys completely accessible as the tracks wouldn't bring the cars close

enough to the curb to make ramp boarding easy. Streetscapes would have to be altered as well. "This is a game-changer for really an entire section of the city," said Erik Johanson, SEPTA's director of business innovation. The 29 trolleys used on two routes in Delaware County would also be replaced, but for now the focus is on the city trolley lines. SEPTA anticipates that the larger cars would allow it to reduce its fleet by 39 cars. Almost 80,000 people each work day use the trolleys, and half of SEPTA's 10 most used routes across all modes of travel are trolley lines.

The Shore Line Trolley Museum at East Haven, Connecticut will send cars 18 and 21, both ex-Philadelphia Suburban Transportation Company double ended St. Louis cars built in 1949, to Brookville Corporation (Brookville, PA) to be converted into double end PCC cars for use on Muni's E-Embarcadero route. In exchange Shoreline will receive an original San Francisco cable car for display at their museum.

On Friday, January 7 at about 11:30 a.m., a pick-up truck sporting a snowplow collided with a Route 101 Media trolley at the Beatty Road crossing in Nether Providence. Nobody was injured in the accident but a pole supporting a crossing warning

light was knocked over. SEPTA and Nether Providence police investigated.

Beginning March 18, trackless trolley Route 66 Frankford Avenue became a bus operation so the old stone arch bridge spanning Frankford Creek, that was built in the time of William Penn, can be rehabilitated. The replacement buses will detour around the bridge from Frankford via Rhawn Street, Torresdale Avenue, and Blakiston Street to Frankford Avenue in both directions. Using buses means that operators will not have to pull down and replace poles when traveling through the work site. SEPTA is also loathe to use the trackless trolleys EPU motors as they are wearing out from overuse already. Additionally, there is a major project at Arrott Street near the Frankford Transportation Center where the use of tall equipment has caused the removal of much of the overhead wire, including wire underneath the El.

SEPTA will soon take delivery of 100 Xcelsior diesel-electric hybrid, forty-foot heavy-duty transit buses that are currently being manufactured by New Flyer of America, Inc. This U.S. subsidiary of New Flyer Industries, Inc. (NFI Group) is the largest transit bus and motor coach manufacturer and parts distributor in North America. This

will be the third delivery of a five-year contract for a total of 525 hybrid buses that was approved by SEPTA in May 2016. Upon delivery, the buses will be deployed throughout SEPTA's five-county service area comprised of the City of Philadelphia and the surrounding counties. Upon completion of the contract, hybrids will comprise 95 percent of SEPTA's bus fleet.

SEPTA indicated that its bus ridership had dropped 10 percent during the last year, a loss that represents one of the biggest drops in the country. This information comes from a Federal Transit Administration report issued as SEPTA finishes up a nearly yearlong review of its existing bus network. The authority's buses and trackless trolleys provided more than 159 million trips in 2017, 18 million fewer trips than the year before. Colin Wright, an advocacy associate with Transit Center, a New York City philanthropic foundation that supports research and advocacy for transit reform, stated that, "It's down pretty much across the country; it's not an outlier in that regard." According to Federal Transit Administration data, Philadelphia's 10% bus ridership drop was worse than most nationally, bus ridership on public transit has declined about 4.7 percent.



January 21, Laura Wells, Kevin Zebley, Jeff King and Sarah Wells repaired the direct short in the trolley power caused by a wire break at the McClane Loop spur. Sarah Wells photo

We'll start with the auxiliary generator project. The relay panel for the W1 transformer soft start controls are complete, installed and wired to the outside world. The area in the East Substation where the panel was constructed has been swept clean and left over parts and materials stored away and the interior walls painted. In April Kevin Zebley rerouted and installed the plumbing to the volunteer patio sink and wiring was restored to the outside outlets and light.

As time and weather permits the generator will be leveled and anchored to its concrete foundations. As a sideshow, the ethernet switch in the west substation decided to fail. This switch controls the substation remote, archives internet, and the connection to the automatic transfer switch. A new switch is currently on order.

Construction has commenced on replacing the bridge at Fairgrounds Siding. The Nachod crossing signal next to the bridge had to be removed from the site as it was in the path of the bridge demolition. As luck would have it, the auger truck quit while run-

ning in the weeks before the truck would be needed to help lift the signal from its base. The problem was traced to a bad injector pump. Cleveland Brothers rebuilt and re-installed the pump in time to remove the signal. I might add that their repair bill was very reasonable.

During my time working for the Port Authority's Power and Signal Department I was able to collect a mass of drawings and correspondence related to the operations of the Power and Incline Department as it was then known. The material dated from around 1901 to about 1970 and filled a bankers box end to end. With the improvements made in the Archives, I felt it was time to hand this material over. Over the winter, I read and sorted through everything, organized, sorted it all, and placed it in acid free file envelopes for proper storage.

As always, many thanks to all the volunteers who make this progress possible: Jeff King, Kevin Zebley, Laura Wells, Sarah Wells, Ralph Ciccone and Chris Walker.

Trolley Maintenance*By Bernie Orient*

This new year began with PRT 5326 in for scheduled service plus the on-going folding step repair. During inspection we found two of four brake release springs with worn ends. The ends are a forged combination of an eye bolt and clevis that could not be replicated easily but could be repaired by Douglas Kirkpatrick. Progress on the step repair was somewhat delayed by the fact that the particular step used one right and one left wound springs and only left hand springs were ordered. The car was shifted to track 22 for WP 832 to move to the pit. The car lingered there until the first week in February when the correct springs arrived and that job was completed. Brett attended to center bearing lube and I noticed that the door on the same side but opposite ends had a top roller out of track, normally not a big ticket item but in this instance there is something skewed with the door shaft. The engagement of the top roller into the track would recede while opening and pop from the track. On March 7 Brett Freithaler removed the roller and I machined a longer one plus a pin. This is an example of treating the symptom. To keep up with the scheduled maintenance I had 5326 shifted for 2227 as '26 would need pit time to reinstall the springs and king pin retainer.

PAT 1711 found itself in a somewhat similar situation. We were unable to salvage the extension

springs from the damaged track brake carriage and ordered new ones that arrived late in January. Another holdup was that we were not able to remove the long 1" mounting bolts from one of the brake magnets. Dan and Larry came to assist with their pneumatic spike driver which eventually succeeded in removing the bolts. I shifted 1711 into the shop on March 19 after pre-positioning the replacement track brake carriage in the pit. The carriage nested neatly between the pit rails and was easily movable with our transmission jack. Wayne Wickes installed the new extension springs that mate the carriage to the truck frame. Brett Freithaler and I mounted the heavy brake magnets on the carriage the same day. Fred Cooley did the wiring hookup and the car was back in the line-up on March 24. The out-of-service time for the car was 94 days, virtually all of which occurred while the Museum was closed. Actual labor time was a mere 46 hours. Another management decision (mine) was to complete the scheduled maintenance on this car as it was on the pit although 1 month premature.

Our project for this winter continues to be Pittsburgh 3756. Begun officially on Nov 22, 2017 it has to date consumed around 700 volunteer hours. Presently the shopping list identifies 25 tasks, some of which will not be attempted. The vast majority of tasks tackled uncovered work needed in an adjacent



Fred Cooley installs new wiring under Pittsburgh Rys 3756. Fred's efforts on and under the platform and to rewire the HL control boxes are described here in Bernie's article.
Scott R. Becker photo

area to be done as well. Big ticket items here are front cab rewiring at 144 hours and air tank and piping replacement, 250 hours. I had re-mounted the sole surviving concave (swaged) head tank in mid-January to aid in clearance checks for piping replacements, the new tanks arrived in late February when actual tank replacement began. The new tanks had convex or outwardly dished heads so I had the overall length reduced slightly. This, in turn, made the existing hanger strap locations fall into the curvature of the heads so the hanger hardware supports had to be modified. As the piping system had been completed to the main reservoir pipe connected the shop air to the end and checked for integrity. By mid-March 11 the four tanks in place and proceeding with the plumbing work. Once this is complete we hope to lower the car back to the trucks and pursue more lofty adventures, such as the roof wiring and accessories.

Another point of interest with 3756 is that it has no permanent headlight. Our operations regulations specify a headlight is required to traverse road crossings so the "hang-on" golden glow bucket light needs to be attached. But 3756 was probably built with a 56 watt headlight then adapted for the

hang-on or possibly had both. The old wiring that we removed included a dimmer switch for the 250 watt hang-on but the wiring was not configured for any such function, allowing either high-beam or no beam. We devised a scheme that could accommodate all of the above headlight scenarios although the car will "roll-out" with only the hang-on golden glow. Fred Cooley accomplished most of the re-wiring and removed two bushels of old materials from the two front cab panels.

The large switch group box covers under the back end of the car had large holes and splits. We remanufactured three of the four while maintaining as much of the existing accoutrements as possible, the fourth being serviceable. Eric Weinbrenner, Ray Hatfield and Ken Ringer did much of this work, totaling 75 hours.

As February ended we moved P&WCT 78 for scheduled maintenance. Two of the sixteen brake hanger assemblies were in need of repairs so that was my immediate focus. My dream of having on-the-shelf spares of the ball-and-socket castings instead was shelved as those obtained from a parts trade last year were worse than I had been dealing with from 78. The parts are more complex than



Bernie working on the step for 5326.

Scott R. Becker photo

those I had replicated in the past for cars 14 and 4398 and a solution remains elusive. As you may recall, most every fastener on the brake parts on 78 had been tack welded by the former car owner-operator. Additionally, this was probably done with the car body not on the trucks so the access to the welded threads now is not always convenient, much less the removal. Although my former skills on the removal side of the job have been well honed, advancing age ensures no flat-rate repair times will be exceeded. At least now there is one less to worry about. While one hanger assembly required a total rebuild, 22 hours start-to-finish, the second one only required cleaning and tightening plus some newer shoulder bolts from the parts room. We had to remove the welded fasteners on this particular assembly in an earlier rebuild. Kate Imler accomplished this repair in 4 hours. Brett Freithaler helped wrap up the first hanger job and did some lubrication including one center bearing.

We also removed the worst controller fingers from the car and sent it for replication. We have no spares and, even though cam controllers are very

low maintenance, it would be prudent to have a one unit supply. Wiring expert Fred Cooley handled this plus repaired some bad wiring on one door interlock plus tightened one door engine plate and adjusted another. Another area of activity was the PC 19 automatic accelerator. One arc chute needed a patch plus I added a needle valve in the internal piping of the advancing motor to try and control the step-up speed. The operating fluid in the PC 19 is ethylene glycol pressurized by reduced car air pressure. The modification appeared to function but a road test will be needed to confirm. The new controller fingers arrived and Fred put them in but the car still needs a road test as of the end of March.

An opportunity to work on one of the trucks beneath West Penn 832 presented itself in mid-February. The car had been moved to the pit after one of several road tests in order to examine the traction motors. We had done some work on May 27, 2015 with the big brake levers, linkages and brake cylinder, but had not studied the smaller items, specifically the brake shoe hangers. Virtually all of the cars I have worked on that have arch-bar trucks use

a parallelogram type hanger arrangement to hold the brake shoe in a fixed alignment with the center of the wheel regardless of the diameter of the wheel or thickness of the brake shoe. The hangers on 832w were not configured like that although all of the hardware and pivot points were there. Wear marks on the unused brackets confirm that the links were at one time installed that way (parallelogram) but the painted over dirt and old bushings suggest that they were not being used at the time of the truck rebuild. We converted the front truck to what we think is better and proper in 40 hours and now have the hardware and knowledge to convert the rear truck as time permits. While the vast majority of pin and bushing components have tightly pressed in place bushings machined to the pin diameter with a controlled clearance, the “floating bushing” technique we found on both Cincinnati 2227 and 832w use oversize bushings in the components but insert a loose fitting second bushing inside with a pin or bolt passing through all. While this scheme obviates any hope of periodic lubrication, that’s the way it was done. New-to-us volunteer Wayne Wicks helped out greatly with this job.

Our inventory of new trolley wheels dipped under ten late last year so I began the process of ac-

quiring additional supplies. As these items are custom cast and must be purchased in quantity I need to allow sufficient time to permit finance to fall into place. There is normally a six week delivery time and all of the wheels received require finish machining for our needs. This year’s procedure began on November 7, 2017 and the wheels were delivered and Ray Hatfield had six finished machined on January 31, 2018. New wheels cost around \$180 each and can last 3 years each. We last purchased trolley wheels in 2011 and I expect the present purchase to carry the fleet to 2026. Hopefully those in charge at that time will be mindful of the 13 week process!

The quarter finished with my filling in for a missing man in the 8042 riveting squad. Four people is the optimum minimum and maximum rivet team size. Besides the obvious gun operator and the buck holder, the rivets need to be heated and kept hot but not melting and the individual rivets needed delivered to the proper location and orientation within seconds using tongs or pliers. I don’t know how much hot riveting is done outside the trolley and rail museums and I had no prior experience with the iconic process before coming to PTM. So quite possibly these venues are the last places to learn this old trade!



Bruce Wells heats rivets while Bernie sticks the hot rivet in the hole, Ralph Ciccone bucks them up and Keith Bray forms the other end of the rivet using a pneumatic hammer during PTC 8042 platform reconstruction at the end of March. Robert Jordan photo

Car restoration has proceeded full steam ahead on West Penn 832 while at the same time supporting the contract work being done on Philadelphia Transportation Company 8042. In the last issue I pushed ahead and showed work on 832 that spilled over into April. As this is written we have successfully “rolled out” 832 and it is truly a thing of beauty! In the next issue I’ll have more time to write up a complete wrap up of that effort. In this issue we’ll concentrate on 8042.

The work on 8042 with contractor Keith Bray ran through the end of April when he needed to move on to other obligations. His work this winter was broken into 2 sessions. Keith arrived to get started at the beginning of February and continued the disassembly work accomplished by our Wednesday and Saturday warriors, Jack Sutherland, John Habak, Jim Ott, Barrie Baker and Art Rizzino. In Bernie’s report (p.12) you see the end stage of the reconstruction of the platform side wall. This work began with removal of the side sheet which was covered with a badly rusted patch that appears in inservice photos from 1957. Removal revealed additional large dents that were probably made by a delivery truck as they are about 4 feet above ground level. These extended onto the first side panel and body corner post.

Keith and I decided that the repair needed to extend to the body and he suggested that could be done with a larger gusset plate. It also entailed removing the sandbox seat and bulkhead trim. We had planned to rebuild the failing floor in front of this seat so the removal of it all was already as they say, in the cards. The photos at the right show the progression on disassembly. With the controller, brake valve and associated piping, handbrake and door mechanism removed by our expert volunteers all that was needed was to support the bonnet roof and remove all of the supporting posts.

The next step was to remove the flooring. Care was taken to save certain wooden components for future reference. These include the base for the equipment cabinet which is wedge shaped to match the slope of the platform floor and the floor section that allows the motorman position to be raised above that of the main platform. This allows the operators’ foot position to remain dry during inclement weather.

During the entire process Keith repeatedly took measurements that would allow straight and accurate reconstruction with all new parts true to their original shape and size. The final step in dismantling the car was removal of steel ties that connect the main body floor to the platform. This photo



Barrie, John, Jack and Jim finished removing the platform components by the end of January and this allowed Keith continue the disassembly when he returned at the beginning of February. Bruce Wells photo



February 1 Keith began his work on the structure of the car. This included removing the remaining pieces of the equipment and electrical cabinet and stripping off the sheetmetal side. Bruce Wells photo



February 2 the bonnet roof was supported and the posts were removed. Bruce Wells photo



Platform to body floor connection, before and after.

Platform floor removal exposed rotted platform ties to main body. This before and after photo shows what was removed for replacement. *Bruce Wells photo*

shows how much was removed. Not clear in the photo is how much of the original was rusted away. This deterioration was a major contributing factor to the sagging of the platform end. If you look closely the photo at the bottom of this column shows the replacement steel in place ready for riveting.

In addition to sagging the platform floor suffered from in service accidents. Keith calculated that it was pushed in 1-1/4", evidenced by the movement of the collision plate attached at the front of the bumper. After cutting a new plate he set about pushing the bumper back to its original position before attaching the plate. The next step was to push



Keith cuts steel for the new collision plate upon his return to PTM on March 19. *Bruce Wells photo*



March 23, some of Keith's work to straighten the frame.

the floor sideways in relationship to the platform bonnet by a larger amount.

The home stretch for Keith's most recent visit was the reassembly of the car's end framing, detailed in the photos below. This followed the riveting discussed and shown on page 12. The photos below show how the end framing went together. Keith installed the pine T&G flooring and finished up by prime painting, applying the green topcoat to the new metal and reattaching the steel end panels. He will return this summer to complete the work.



The end of 8042 before and after. *Bruce Wells photo*



June 10, this is how the car looks at the time of preparation of this issue. *Bruce Wells photo*

On February 16, 17 and 18 a large group of our regular volunteers traveled to Guelph, Ontario, Canada for the annual Winterfest hosted by the Halton County Radial Railway group at their museum near Rockwood, Ontario. Volunteers there rolled out the red carpet for fellow volunteers with outstanding operations, tours and meals. Saturday was a day of

fellowship at the museum followed by dinner at the Canadian Legion hall in Guelph. Sunday a one hour drive to the new Leslie Carbarns in Toronto gave participants the opportunity to see this new streetcar shop and to ride around the complex in a new Bombardier Flexity tram. The shop tour capped off the magnificently planned and executed weekend event.



Snow plow TP 11 and Toronto Peter Witt car 2894 were just two of the beautifully restored streetcars available for guest operation at this year's Winterfest/Cabin Fever weekend at Halton County Radial-Railway <https://hcry.org>. Laura Wells photos



PTM gang enjoying a ride on Toronto Peter Witt car 2894. Ned Apalakian photo

The group posed for a photo at Leslie Barns.

The downside of the season is frequently weather related. This year's 'noreasters' provided large rain events and that combined with con-

struction in the area caused water to mass near the Yanavich and Fairgrounds stops, washing out the tracks.



Washout at Yanavich.

Larry Lovejoy photo

February 24th is one of the days that M551 and GE loco 89 were used to ferry ballast to the washouts.

More winter damage occurred behind the Founders' Car House. Two separate problems occurred here as the flow of Traverse (Arden) eroded the hillside supporting our tracks. At the same time the tarps protecting SEPTA 24 (Red Arrow) were blown off the car exposing it to the weather. The decision was made to move 24 to the Trolley Display Building and a car arrangement was developed to provide space for the car indoors.



The failed tarps on 24 as seen in January.



24 looked pretty good after emerging from years under a tarp.

When not making repairs to the line the track crew spent the winter months continuing the gathering and preparing rail for the Trolley Street project. Larry Lovejoy has spent countless hours moving and assembling the pieces in one location. The pieces sent to Philadelphia for bending were recently returned and work began to recondition the track switches that will be used for the passing siding. Uncredited photos taken by the author.

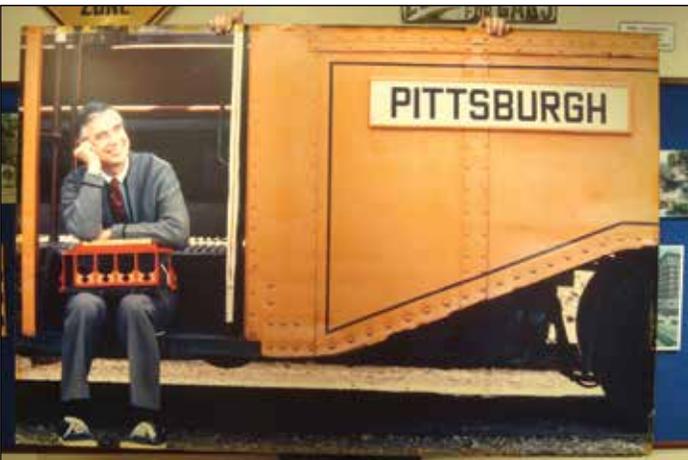


Larry Lovejoy and Dan Bower unload a truckload of girder rail bent by SEPTA on Feb 28, 2018

Scott R. Becker photo



Douglas Kirkpatrick and Dan Bower along with Larry Lovejoy have been busy working on Trolley Street switches.



This photo from the former Greater Pittsburgh Airport concourse has been returned to exhibit in honor of the 50th anniversary of the Mr. Rogers' Neighborhood program on PBS. Bob and Mary Jordan photo



Ned Apalakian tries out fire extinguisher training during operations re-qualifaciton in March. We thank Chartiers Township VFD for their assistance.

Scott R. Becker photo