

Coordination, collaboration, trust and respect are all factors that played a role in reducing risk and stress surrounding the six-mile separation of operations between SEPTA and CSX.

by Micha Waneck-Libman, editor  
All photos by Matt Courchain, SEPTA

# SEPTA, CSX WORK THROUGH SEPARATION ANXIETY

Good planning and communication are the usual contributing factors cited for the success of a track project. For CSX and South-eastern Pennsylvania Transportation Authority (SEPTA), those two elements, along with a hefty dose of trust and respect, served as catalysts, resulting in the successful completion of the West Trenton Separation Project within a two-year time frame.

"This project shows that when people sit down, roll up their sleeves and are all in on both sides, you can work to make something happen," said SEPTA General Manager Jeff Kneueppel.

SEPTA and CSX partnered on the \$38.8-million project, which separated operations between the passenger and freight provider between Woodbourne and West Trenton Stations on CSX-owned track.

## To separate or not?

This section of track has been experi-

encing sustained growth in both passenger and freight operations. SEPTA runs 57 passenger trains a day along this segment and ridership on its West Trenton Regional Rail Line has increased 60 percent during the past decade. In addition, CSX runs more than 20 freight trains a day along this segment, which serves as a key freight route to moving goods throughout the Greater Philadelphia region and provides an important link in CSX's north-south network.

With train levels increasing, congestion was one of the big factors driving the separation project along. Congestion contributed to potential service issues, but it also made maintaining the infrastructure more difficult. CSX was responsible for maintaining track, C&S and bridge infrastructure, while SEPTA was responsible for maintaining the electrified catenary. As Kneueppel explains, maintenance practices an electrified railroad should perform

more often, such as tree trimming, aren't always an easy sell when looking to secure a maintenance window.

In addition to the potential conflicts that arose with congestion, SEPTA handled dispatching for both the passenger and freight operations. For CSX, that meant if a hot shot train reached the Philadelphia area around rush hour, that train would have to wait due to passenger operations having priority.

"It was tough for both sides," said Kneueppel. "We were helping CSX where we could, but we had to get our customers around and it was putting a lot of pressure on the two entities. We were having more and more calls to discuss hot spots that were delayed."

Perhaps the biggest issue to push the separation project forward was Positive Train Control (PTC).

"The goal of the project was to improve both freight and passenger service in that corridor and to address the

OPPOSITE PAGE: The track could be a busy place during this project. SEPTA says that between its in-house forces, CSX's in-house forces, third-party forces and train traffic, safety was a critical focus in the project design and execution.

federal PTC mandate. CSX and SEPTA are installing different PTC systems and, therefore, the best option was to separate the passenger and freight operations over the last segment of shared track on the Trenton Line," said Pete Delfox, manager - network planning with CSX.

Kneueppel says that SEPTA, as the tenant, was concerned with the slew of unknowns surrounding PTC and the possibility of not being able to operate over this section of track after the implementation deadline was a real threat.

"[CSX and SEPTA] initially tried to come up with a technical solution for interoperability that would have kept the tracks in the same configuration, but if we were going to be serious about meeting the deadline, coupled with the problems concerning congestion and maintenance, it became apparent that we were going to have to separate," said Kneueppel.

## Getting to work

Plans for the project were finalized in April 2013. However, Act 89, which provides dedicated transportation funding, had not yet been enacted in Pennsylvania. At least on SEPTA's part, finding a way to pay for the project was a big question. The boost needed came with the awarding of a \$10-million Transportation Investment Generating Economic Recovery (TIGER) grant in September 2013.

"We were in dire financial straits at the time," said Kneueppel. "We had made the decision to separate, but we weren't sure where to come up with the money, at least to start. So, the timing of the TIGER grant was perfect. When you look at it, it's amazing that we were able, both parties, to achieve this in less than two years. It's a model of cooperation."

The scope of work included building 3.75 miles of new SEPTA-dedicated track along the existing right-of-way, upgrading six miles of track,

separating the "Trent" interlocking, building a new SEPTA-maintained "Iron" interlocking and separating the "Wood" interlocking. This section of track was originally a four-track railroad, but Kneueppel notes that a lot of things happened over the years, which resulted in fundamental work, such as placing signal power plants in proper spots and building a retaining wall where a rock cut had deteriorated, needing to be done to get the right-of-way ready for the project.

Additionally, SEPTA's West Trenton Yard played an interesting role in the project.

"We had a yard, West Trenton Yard, that was on the wrong side of the tracks," explained Kneueppel. "Originally, we were worried we would have to do a follow on phase (after the completion of the initial separation project) to move the yard. However, both railroads worked on a great idea that got rid of that issue by morphing Trent interlocking around and, basically, fly the CSX line around the yard. We pulled our yard in, made it longer and narrower, and the two mainlines have now become yard tracks. There was an old wye that went off to Trenton, which gave them enough room to fly the freight line around our yard at 50 mph. Everyone was thrilled that both entities were able to come up with a solution that got us away from having to do anything with the yard in the future."

The volume of traffic in the area complicated the construction of the project. Kneueppel says both parties approached the project in phases.

"We were moving toward this quickly and we had to make sure that properly trained people were maintaining the infrastructure. This is a busy stretch; we're talking 80 trains a day in a condensed time period. Couple that with the fact that CSX and SEPTA both use the combination of in-house and third-party sources and we had to make sure there was safety of operations," said Kneueppel.

To enforce the focus on safety, Kneueppel says SEPTA utilized a diagram that was on a single piece of paper displaying where all parties would be working.

"These diagrams were key to making sure, during these busy weekends and different phases of the project,

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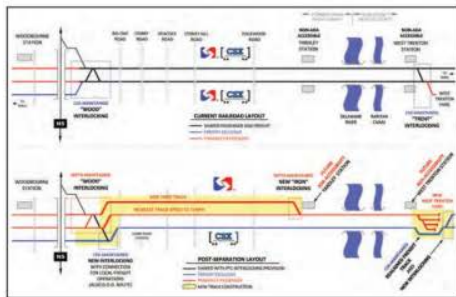
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## SEPTA/CSX WEST TRENTON SEPARATION



that everybody knew what was going on. Also, every morning, we held face-to-face coordination meetings out on the line before anybody went out because we had multiple entities out there, maintaining safety was a top priority," said Kneueppel.

Coordinating a project such as this was its own challenge. Kneueppel says SEPTA has a good working relationship with CSX and said both entities took a leap of trust to see that this project would proceed. SEPTA and CSX had worked together on a much

The shared SEPTA, CSX alignment can be seen at top in the diagram on the left. The new separated alignment is displayed below. There is still one connection between the entities at Wood interlocking to accommodate a military route.

smaller separation project on the Fox Chase Line in 2004, which set a precedent for the larger West Trenton Separation Project.

"There was a certain level of trust that allowed both parties to move forward aggressively. It was not always the type of project where every last detail was figured out. Face-to-face interactions were incredibly important. I think there were eight or nine phases throughout the two-year time period and everyone had to hit things or we were done. CSX did a great job of constantly meeting, constantly working and making sure that we could advance things," said Kneueppel.

## SEPTA/CSX WEST TRENTON SEPARATION

SEPTA and CSX performed the final work to separate operations at the end of August and both railroads are already seeing the benefits.

Kneueppel says the congestion relief primarily, during rush hour, was immediately apparent following completion of the project. He also points out that, as of the writing of this article, SEPTA is still in the hunt to meet the PTC implementation deadline of Dec. 31, 2015, a goal that would not have been possible without the separation project.

Additionally, Kneueppel says the separation clears the way for SEPTA to make ADA improvements at the two stations located on the stretch that was separated, Yardley and West Trenton.

"It was very hard for us to make cost-effective ADA improvements the way we were running out there. We are working on projects for both stations where we will be able to put in high-level platforms and do it cost effectively. We may have spent money on the separation, but it helped us save on the ADA work that we will do later,"

said Kneueppel. "Also, track speeds are coming up to 70 mph, which is an increase on the passenger line; we had been at 60 mph. The turnouts we installed are pretty high speed, No. 20s, so we've done things to make sure we can move quickly."

Dispatching has now returned to each entity. Kneueppel says SEPTA measures delays in seconds and minutes and having surety of dispatching is a relief. For CSX, regaining dispatching capabilities in this area plus a six-mile hole that will improve its ability to coordinate train movements.

"This was a true collaborative effort between CSX and SEPTA and the benefits of separating CSX freight and SEPTA passenger operations have been immediate. Both CSX and SEPTA are enjoying the freedom to operate their respective services more efficiently and without conflict. The PTC effort is ongoing, but will be much easier to install and maintain as separate passenger and freight rail systems," said Delfox.

Kevin Jurgelewicz, SEPTA project manager, added, "I think the real key to it was an understanding and a respect of each other's strategic business initiatives and business priorities. We also did most of this while keeping trains running. It was only during select cutovers that we would suspend service. We did all this safely, while keeping things moving."

"In the end, I think this was a forward looking project for both companies and it was a solution for so many things. The exciting thing was the teamwork within each other's companies and that leap of trust. We built a relationship enough where we both moved before every last detail could be worked out and people just kept moving. I think this ensures a long and improved future for both SEPTA customers and for the freight carrier in this region. I'm just incredibly proud of my own forces, our construction manager, Gannett Fleming and our designer, HNTB and what they were able to accomplish. They did a fantastic job," said Kneueppel.

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