The Rail Safety Act of 2008 mandated all rail operators implement life-saving safety systems that would stop collisions and avoid train derailments resulting from speed and signal violations. Left without either the recommended technology or the funding to implement, SEPTA was on its own to find solutions and strategies to meet the nationwide mandate, without impact to rail service or the traveling public.

SEPTA’s 13-line Regional Rail system is extremely sophisticated and complex, spanning 474 track miles and five counties. Burns worked to create innovative solutions for SEPTA’s life-saving Positive Train Control (PTC) system - a program some called “a science project”. Customized software helped automate processes saving SEPTA time, money, and resources. The new PTC system - comprised of a network of seamlessly integrated smart communication systems - is interoperable with other trains, increases system reliability and redundancy, and ensures the safety of the traveling public.

SEPTA’s PTC system has become a prototype for successful PTC implementations on other commuter railroads in the northeast, and protects the nearly 3 million passengers that travel their Regional Rail System annually.

Burns’ innovative engineering helped SEPTA:

- Become the second commuter railroad in the nation to successfully implement PTC on all 474 miles of their Regional Rail System
- Protect 37 million annual passenger trips
- Meet the federally-mandated date of operation for its PTC system, completing system installation on budget and on schedule