POSITIVE TRAIN CONTROL (PTC)

FREQUENTLY ASKED QUESTIONS

DECEMBER 2019

WHAT IS PTC?

Positive Train Control (PTC) is a complex signaling and communications technology that is designed to make commuter rail even safer. It is a federal mandate for railroads across the country to adopt PTC.

PTC serves as a redundancy that overlays with existing safety and signaling systems. PTC is intended to prevent:

- Train-to-train collisions
- Over-speed derailments
- Incursions into established work zone limits and
- The movement of a train through a mainline switch in the improper position

HOW DOES PTC WORK?

PTC is a communications-intense technology that transmits data between trains and communications towers using wireless Internet, GPS, and encrypted radio transmissions. It requires installation of tens of thousands of sensors on train tracks and locomotives and a data center to analyze the information.

PTC uses the sensors and integrated monitoring systems to track key movement on trains and conditions on rail tracks in real time, identifying potentially hazardous situations. If an unsafe situation arises, PTC automatically will trigger a train's braking system in order to prevent an accident, such as a train-to-train collision.

WHAT IS THE STATUS OF CALTRAIN'S PTC PROJECT?

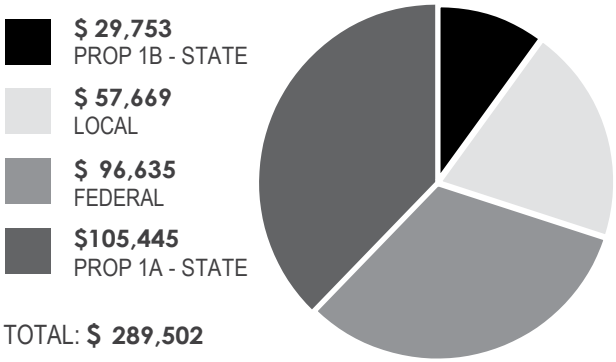
Caltrain has met the following milestones:

- Installed all necessary PTC hardware
- Trained the required personnel
- Leased the required spectrum
- Received FRA approval of Substitute Criteria and have met that criteria
- Commence Revenue Service Demonstration (RSD)
- Interoperable with UPRR and ACE

Caltrain will complete interoperability with all tenants by April of 2020 and receive FRA PTC certification by December of 2020.

HOW IS CALTRAIN'S PTC FUNDED?

The PTC Project is funded through a combination of local, regional, state, and federal sources.



TOTAL: **$ 289,502**

WHAT TYPE OF ACCIDENT WILL NOT BE PREVENTED BY PTC?

While PTC will prevent many types of incidents and will make our safe systems even safer, PTC will not prevent accidents such as collisions at grade crossings due to trespassing on the tracks.

WHAT IS THE FEDERAL PTC MANDATE?

In response to a fatal train collision in September 2008, Congress passed the Rail Safety Improvement Act (RSIA) of 2008, which updated the Code of Federal Regulations (CFR) to require PTC to be installed along every passenger rail corridor prior to December 31, 2015. In October 2015, the statutory deadline for PTC implementation was extended to 2020, provided that certain milestones were met and approved by the FRA by December 2018.

WILL CALTRAIN SERVICE BE INTERRUPTED OR WILL FINES BE IMPOSED?

No. Caltrain operations for passengers are not going to be interrupted. Since Caltrain is on schedule to be fully compliant with the law, no fines are expected.

FOR MORE INFORMATION

www.caltrain.com/PTC ptc@caltrain.com 650.508.7726

Para traducción llama al 1.800.660.4287 如需翻譯,請電 1.800.660.4287 Cần dịch thuật, xin gọi 1.800.660.4287

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The required milestones, as defined in 49 U.S.C. 20157(a)(3)(B), are:

- Install all PTC hardware (wayside and onboard equipment)
- Acquire all necessary spectrum for PTC implementation
- Complete all employee training
- Initiate testing on at least one territory subject to the PTC requirement (or other criteria)
- Submit a plan and schedule to the Secretary of Transportation for implementing a PTC system

INTEROPERABILITY: WHAT IS IT AND WHY IS IT NEEDED?

A key provision of the Railroad Safety Improvement Act (RSIA) is that host and tenant railroads must be equipped with PTC solutions that are interoperable and allow trains to freely and safely move between the different railroads.

The Caltrain PTC project will ensure that Caltrain, the host railroad, is interoperable with its tenant operators, which include:

- Union Pacific Railroad (UPRR), which operates freight rail service
- Passenger rail operators including Capitol Corridor Joint Power Authority, Altamont Commuter Express (ACE), and Amtrak. In addition, the California High Speed Rail Authority (CHSRA) or its designated operating agent is considered a future tenant operator with planned HSR service between San Francisco and San Jose.

Likewise, Caltrain is a tenant on the UPRR between San Jose and Gilroy. Caltrain will need to test its trains on the UPRR track to ensure interoperability with the UPRR system.

WOULD PTC PREVENT AN INCIDENT SIMILAR TO THE DECEMBER 2017 TRAIN DERAILMENT IN WASHINGTON STATE?

Yes. PTC will prevent over-speed derailments by enforcing speed limits. If an operator ignores the speed limit, the PTC equipped train will automatically activate the brakes to slow the train down and prevent unsafe travel.

HOW DOES COMMUTER RAILROAD SAFETY COMPARE TO OTHER FORMS OF TRAVEL SUCH AS AUTOMOBILES?

Per the American Public Transportation Authority, traveling by commuter rail and intercity rail is 18 times safer than traveling by automobile.

SHOULD I WORRY ABOUT RIDING CALTRAIN BEFORE THE IMPLEMENTATION OF PTC?

No. Caltrain has an exemplary safety record. PTC will provide the system with an additional check on potential dangers.

WHO HAS BEEN WORKING ON THE IMPLEMENTATION OF CALTRAIN PTC?

Caltrain originally contracted with the Parsons Transportation Group (PTG) in 2011 for PTC implementation, but had to terminate that contract in February of 2017 due to poor performance. Caltrain then negotiated and entered into a contract with Wabtec Railway Electronics in March of 2018, and the project is now back on a schedule that will keep in compliance with FRA requirements.

WILL PTC CHANGE A CITY'S EXISTING SIGNALING INFRASTRUCTURE?

No. PTC is an overlay system and the existing wayside signal system will remain intact. The interface to the city's traffic signal system from the highway-grade crossing system will remain the same.

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