What is CBOSS PTC?
CBOSS PTC is an advanced signal system that will monitor and control train movements. It will provide significant safety improvements, expand the rail corridor’s operational capacity, and fulfill the federal mandate that requires implementation of a Positive Train Control (PTC) system by the end of 2015. Equipping the Caltrain corridor with CBOSS PTC will begin in Fall 2013 with the installation of a Data Communications System (DCS) consisting of conduit, fiber optic cable and 14 radio base stations. Installation activities will begin near the Tamien Station in San Jose and will proceed north, terminating at the 4th and King Station in San Francisco.

CBOSS PTC is a key element of the Caltrain Modernization Program, which also includes the electrification of the corridor and the replacement of the system’s diesel trains with high-performance electric trains.

Implementation
In order to maintain daytime train service, Caltrain will be performing most of the Data Communication System installation work during off-peak hours (8pm to 6am). The installation field activities will be broken into one to two mile segments, with several crews working simultaneously in different segments.

Caltrain will install up to 52 miles of conduit and fiber optic cable within the Caltrain corridor from San Jose to San Francisco. The work will begin with boring (trenching in some places); a second crew will lay the conduit and inner ducts, followed by a crew that will install and test the fiber and clean up the area. Caltrain will also install 14 radio base stations within the right-of-way. Most base stations will be located near Caltrain stations. Field activities include preparing the site, laying foundation, assembling the pole and connecting the cable as well as securing the shelter to the foundation, connecting fiber and cables to the shelter, utility inspections, connecting power and testing.

See Data Communications System Installation fact sheet for more information on the conduit and base station installation work.

Noise
Throughout the work window, installation crews regularly monitor the noise from equipment being used on the right-of-way. The typical noise level of the equipment ranges from 76 to 88 decibels. Many residential areas are located farther away than 50 feet and during a night of noise monitoring in San Jose, the closest residential area was recorded at 10-45 decibels, with most of the noise attributed to ambient vehicle/aircraft noise rather than the installation equipment.

The installation team is coordinating with cities along the corridor and will continue to work as quietly as possible.

Light
Caltrain takes specific actions to ensure the equipment required to provide a safe, viable work environment for the installation crew is focused solely on the work area. The lights are positioned to point only at the installation area and away from roadways, residential, and business areas. Lumen readings are also taken throughout the work window using a light meter. There are federal and state OSHA standards on the minimum light requirement to ensure worker’s safety on construction sites.

The installation team is coordinating with the cities along the corridor and will continue to direct light only on the work area, on the Caltrain right-of-way.

For more information: Visit www.caltrain.com/CBOSSPTC; Email caltrainptc@samtrans.com; or Call (650) 508-6499
Field Installation Equipment:
- Noise ~76 to 88 dB @50 ft
- Light ~350 to 450 Lux

Decibel Levels Examples:
- Whisper 30 dB
- Conversational speech 60 dB
- Noisy restaurant 75 dB
- Freeway traffic 90 dB
- Chain saw 120 dB
- Jet plane 148 dB

Light Examples:
- Direct Sunlight: ~32,000 to 100,000 lux
- TV studio lighting: ~1,000 lux
- A bright office: ~320 to 500 lux
- Building corridors: ~100 lux
- Full Moon night: ~1 lux

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