

# Memorandum

**To:** CHAIR AND COMMISSIONERS

**Date:** March 23, 2010

**From:** BIMLA G. RHINEHART  
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**File:** Reference No. 4.17  
INFORMATION

**Ref: Positive Train Control Implementation Update**

The Rail Safety Improvement Act of 2008 requires all Class I railroads and intercity passenger and commuter railroads to implement a positive train control (PTC) system by December 31, 2015, on all mainline track where intercity passenger railroads and commuter railroads operate and where toxic-by-inhalation hazardous materials (such as chlorine) are transported. PTC refers to technology that is capable of reducing or eliminating the potential for human error in the operation of trains, thereby preventing train-to-train collisions, overspeed derailments, and casualties or injuries to roadway workers as a result of unauthorized incursion by a train. PTC is also capable of preventing train movements through a switch left in the wrong position. PTC systems use global positioning satellite technology and digital communications to automatically bring wayward trains to emergency stops. PTC systems vary widely in complexity and sophistication based on the level of automation and functionality they implement, the system architecture utilized, the wayside system upon which they are based, and the degree of train control they are capable of assuming.

The four leading Class I railroads have reached agreement on establishing interoperability standards for PTC, paving the way for a wider implementation across the North American rail network. In addition, both Union Pacific and Burlington Northern Santa Fe Railway – the two major freight rail lines in Southern California – have publicly stated their intent to deploy PTC in the Los Angeles basin by 2012. Passenger rail operators must do the same, but current economic conditions and the lack of funding opportunities makes this a concern. Nationwide, the cost of implementing PTC is estimated to be in excess of \$10 billion. HR 2095, however, authorized only \$250 million over five years and only \$50 million has been appropriated.

The current emphasis in California is on the Los Angeles Basin and San Diego. The stated goal of all operators (BNSF, UP, Metrolink and Coaster) is to have a PTC system operational by the end of 2012. Metrolink currently estimates its cost to implement PTC at approximately \$202 million. This estimate includes implementing PTC technology on the 330 track miles that Metrolink maintains/operates and equipping 114 locomotives and cab cars, but assumes that it is not responsible for PTC implementation in the freight territories in which Metrolink operates. The estimated cost of implementing PTC on the

Coaster commuter rail line between Oceanside and San Diego is between \$30 million and \$60 million.

Furthermore, the Department of Transportation's estimates its proportional share at \$10 million for PTC implementation costs on the San Joaquin Corridor owned by BNSF between Port Chicago and Bakersfield, in addition to approximately \$5 million for the cost of equipping 17 locomotives and 17 cab cars.

The Commission recognizes that the implementation of such badly needed safety features on public transit systems is critical to ensuring the safety and efficiency of passenger and freight operations. At its February 2010 meeting, the Commission requested that staff identify state funding opportunities to facilitate the implementation of PTC. Staff has identified the following potential funding sources that may be available through existing State administered programs:

- **Proposition 1A /Commuter Rail** – Under the funding formula contained in Proposition 1A, Metrolink is eligible to receive \$124 million, which could potentially be used for PTC. These funds require a dollar-for-dollar match. In its application to the Commission, Metrolink proposed \$45 million for PTC implementation, which equates to \$90 million given the matching requirements.
- **Proposition 1A/Intercity Rail** – Proposition 1A includes \$190 million for intercity rail, which represents \$47.5 million per corridor (Capitol, San Joaquin and Pacific Surfliner) and \$47.5 million for a competitive program. In its application to the Commission, the Department proposed a total of \$75 million for PTC implementation on the Pacific Surfliner between San Diego and Moorpark.
- **Proposition 1B/Transit System Safety, Security, and Disaster Response Account** Proposition 1B included a ten year, \$1 billion Transit Security and Safety Program. Of that amount, \$150 million is dedicated to commuter and intercity rail programs. The first three funding cycles are essentially complete, leaving a total of \$105 million available. Approximately \$55 million is available to Metrolink, which is proposing to use these funds for their “sealed corridor” safety program and for safety retrofit of their existing equipment. Of the funds remaining in the program, approximately \$14 million is available for the Pacific Surfliner and \$16 million is available for the San Joaquin Corridor. Discussions to advance the remaining funding cycles are ongoing.
- **Proposition 1B/PTMISEA** – A total of \$83.7 million is available of which \$49.7 million is available to Metrolink. The Coaster does not qualify for funding under this program.
- **State Transportation Improvement Program (STIP)** - The STIP may be used to fund positive train control, however there may be some limitations in the future. Although PTC is not addressed specifically in the STIP guidelines, the guidelines state that STIP projects "may include... transportation system management" projects, noting that "non-capital costs for transportation system management... may be

included where the regional agency finds the project to be a cost-effective substitute for capital expenditures." The guidelines state that "for rail, the interregional program should emphasize the preservation and improvement of the existing system of State-sponsored intercity passenger rail routes, including compliance with safety and accessibility standards..." Currently, STIP funding comes from the Transportation Investment Fund (TIF) and the Public Transportation Account (PTA). Both of these fund types may be used to fund transit projects. Legislation has recently passed that would change STIP funding to State Highway Account (SHA). This will likely be implemented (through the budget) in a way that will also lead to some federal funding for the STIP (the federal funds and SHA may be fungible). Federal funds could be used for PTC on commuter rail lines but not intercity rail lines. PTA funding may be available through existing balances in the PTA (the certainty of this has not yet been evaluated). In addition, it may be possible, through the budget process, to appropriate PTA funds for the STIP for use on intercity PTC; however, this would come at the expense of other PTA funded activities (most likely State Transit Assistance).