



Communication Based Overlay Signal System Project Status

Board of Directors
June 6, 2013



Background

- Issue Communications Based Overlay Signal System Design/Procure/Install Turn-key RFP - August 2010
- Awarded Prime Contact - October 2011
- Executed a Service Agreement with California High Speed Rail Authority (HSR11-04) for Federal Railroad Administration Funding – December 2011
- Issued Notice to Proceed (NTP) to Parson Transportation Group - January 27, 2012
- Executed Fiber Optic Option - April 26, 2012
- Exercised Option 1 (Phase 2) – April 30, 2013

CBOSS Project Requirement

Positive Train Control (Rail Safety Act 2008)

- Prevent Train to Train Collisions
- Prevent Prevent Overspeed Derailments
- Prevent incursions into established work zones
- Prevent movement through a misaligned switch

Additional Requirements

- Enhanced Crossing Safety / Performance
- Enhanced Improved Headways and Operational Flexibility
- Enforcement of Scheduled Station Stops
- Schedule Management
- Employee In Charge

Design/Install System Turn-Key Contractor Scope of Work

- Subsystem and System Design & Integration
- Procurement of Materials and Equipment
- Installation / Testing / Commissioning
- Training, including Cab Simulator
- Backup Central Control Facility
- FRA Certification and Documentation
- Project Management
- Warranty
- Long-term Support

CBOSS Project Solution Overview

- Interoperable Train Control Compliant Solution
- Onboard and Wayside – Interoperable Incremental Train Control System Supplied by GE Transportation - I-ITCS
- Back Office Server Supplied by WABTEC
- Backup Central Control Facility with an ARINC Office System
- PTC Data Communication Network with a Fiber Optic Backbone

Contract Phasing

- Required to Support Project Funding Strategy
- Base Contract (Phase 1) – Notice to Proceed through CBOSS PTC Subsystem and System Critical Design (Includes Bond)
- Option 1 (Phase 2) – Subsystem and System Final Design, Factory Acceptance Test and Installation of Data Communication Subsystem with Fiber Optic Network Backbone
- Option 2 (Phase 3) – Remaining Subsystems and System Procurement, Installation, Testing, Training, Certification, Commissioning, Acceptance and Includes One-year Warranty.

Phase 1& 2 Major Accomplishments

- Completed Project Execution Planning, Preliminary Design, System and Subsystem Critical Design Approval
- Submitted Project PTC Development Plan to FRA (March 2012 and May 2013)
- Secured the lease for the Backup Central Control Facility and commenced BCCF tenant improvement conceptual design
- Continue to work with UPRR and Other Tenant Railroads on the Interoperability Coordination Plan
- Submitted Deliverable Packages (Tasks 1 - 6) to CHSRA/FRA that are in agreement with HSR11-04
- Commenced community outreach for installation of Data Communication Subsystem
- Commenced System and Subsystem Final Design

7

Project Phase 3 Milestones

Description	Completion Date
JPB Board Approval for Option 2 (Phase 3)	Aug 2013
JPB Issue NTP for Option 2 (Phase 3)	Aug 2013
Commence Wayside, Cab, Office Subsystems Installation	Nov 2013
Commence Pilot Segment 3 Testing	Oct 2014
Commence Field Integrated Testing	Jan 2015
FRA Safety Certification	Sept 2015
System in Service	Oct 2015
Final System Acceptance	May 2016

8

Project Total Installed Cost

Description	Turn-key Contractor Cost	Total Project Cost
Project Planning and Procurement	0	\$4.6 million
Phase 1 - Contract NTP – Critical Design	\$16.3 million	\$23.7 million
Phase 2 - Final Design and DCS Installation Including Fiber Backbone	\$35.3 million	\$52.6 million
Phase 3 - Field Installation, Testing and Commissioning through Acceptance & Warranty	\$86.5 million	\$150.1 million
Total	\$138 million	\$231 million

Next Steps

- Approval all Phase 1 Milestones: June 2013
- JPB Award Option 2 (Phase 3) Contract for \$86.5 million: August 2013
- Issue NTP for Option 2 (Phase 3) – Remaining Subsystem Installations, Testing, Training, Safety Certification, System Acceptance: August 2013
- Completion of JPB-CHSRA Agreement of HSR11-04: December 2013
- Commence Fiber Installation: September 2013



Questions?

CaltrainPTC@samtrans.com