Design/Procure/Install a Communication Based Overlay Signal System (CBOSS)/ Positive Train Control (PTC) System

Recommendation for Contract Award

JPB Board of Directors

October 6, 2011
Background

- Caltrain Initiated the Development of a Specification to Upgrade its Signal System in January 2008
  - Improve Operating Safety, Efficiency and Capacity
  - Communications Based Overlay Signal System (CBOSS)
- Rail Safety Improvement Act 2008
  - Required Positive Train Control (PTC) System Implementation by December 31, 2015
- Caltrain “Mixed-Use” FRA Conditional Waiver Granted in May 2010
- PTC CBOSS RFP Issued in August 2010
Rail Safety Act Requirements

- Prevent Train to Train Collisions
- Enforcement of Civil Speed Limits
- Enforcement of Safety Zones in the Track Area
- Interoperability
CBOSS Functional Requirements

• Enhanced Crossing Safety / Performance
• Improved Headways and Operational Flexibility
• Enforcement of Scheduled Station Stops
• Schedule Management
• Employee In Charge
CBOSS PTC RFP Scope

- A Turn-Key Solution that Shares Risk with the Contractor
  - Design and System Integration
  - Procurement of Materials and Equipment
  - Installation / Testing / Commissioning
  - Training including a Cab Simulator
  - Backup Central Control Facility
  - FRA Certifications
  - Warranty
  - Long Term System Support Services
Evaluation Criteria

• Technical (50 points)
  – Project Execution and Management
  – System Safety Certification
  – Integration and Interoperability Solution
  – CBOSS PTC System Requirements
  – Communication Subsystem
  – Proposed Critical Path Method Project Schedule
  – Backup Central Control Facility
  – Warranty/Long Term System Support

• Qualifications/Commercial/Work Experience (30 Points)
  – Company Qualification
  – Financial Qualification
  – Project Team/Work Experience

• Pricing (20 points)
  – Total Fixed Price Proposed Amount
  – Completeness and Accuracy of Pricing Form
  – Pricing Form Detail
  – Base Contract Proposed Payment Schedule and Cash Flow
  – Long Term Support Service Pricing
## Final Scores – June 2011

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Maximum Point</th>
<th>Alstom Signaling Inc.</th>
<th>Parsons Transportation Group</th>
<th>Wabtec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical</td>
<td>50.0</td>
<td>19.1</td>
<td>39.8</td>
<td>26.3</td>
</tr>
<tr>
<td>Qualifications, Commercial and Work Experience</td>
<td>30.0</td>
<td>15.0</td>
<td>22.4</td>
<td>16.1</td>
</tr>
<tr>
<td>Price</td>
<td>20.0</td>
<td>11.2</td>
<td>11.6</td>
<td>12.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0</strong></td>
<td><strong>45.3</strong></td>
<td><strong>73.8</strong></td>
<td><strong>55.3</strong></td>
</tr>
</tbody>
</table>
Why Parsons Transportation Group

• Highest Ranked Overall Score
  – Proposed Incremental Train Control System Solution is Well Suited for Caltrain Application
  – A Solid Understanding and Commitment to Meet Caltrain Requirements
  – Interoperable Train Control Standards and Architecture are Well Understood and Explained

• Best Value
  – Full Turn-Key Solution
  – Local Presence
  – Commuter Rail PTC Implementation Experience
    – Caltrain Benefits from the Value of Lessons Learned
  – Strong Subcontractors
  – Favorable Contract Terms and Conditions
Final Technical Proposal

- Interoperable Train Control (ITC) Compliant Solution
- On Board and Wayside – Incremental Train Control System (ITCS) Supplied by GE Transportation (Off the Shelf Product)
- Back Office Server (BOS) Supplied by WABTEC
- Backup Central Control Facility (BCCF) that houses the Training Facility
- PTC Data Communication Network (with a Fiber Optic Backbone Option)
- Spectrum and License Fee
Fiber Optic Network Benefits

• Immediate Benefits are for CBOSS PTC
  – Faster Data Transfer Capability between all PTC Subsystems
  – Increase Bandwidth for Greater Data Capacity

• Medium to Long Range Benefits for JPB
  – Improve Communication Reliability by Replacing Leased Lines along the Right of Way (ROW)
  – Supports Numerous High Bandwidth Data Applications at Stations and JPB Facilities (Passenger Information, Security, Fare Collection);
  – Supports Future Traction Power System for Electrification

• Revenue Generation Opportunities for JPB
  – Fiber/Conduit Lease
Final Proposal - Contract Price

Contract Price
- Original Proposal – $160 Million (Includes Two Year Warranty)
- Negotiated Final Proposal – $124 Million (Includes One Year Warranty)

Contract with Fiber Option
- Negotiated Final Proposal - $138 Million (Includes One Year Warranty)
## Final Proposal - Project Schedule

<table>
<thead>
<tr>
<th>Milestones</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete Critical Design</td>
<td>September 2012</td>
</tr>
<tr>
<td>Complete Final Design</td>
<td>January 2013</td>
</tr>
<tr>
<td>Commence Field Installation</td>
<td>February 2013</td>
</tr>
<tr>
<td>Commence Integrated Testing</td>
<td>May 2014</td>
</tr>
<tr>
<td>Receive Safety Certification</td>
<td>September 2015</td>
</tr>
<tr>
<td>Revenue In Service</td>
<td>October 2015</td>
</tr>
</tbody>
</table>
Contract Phasing

• Required to Support Project Funding Strategy
• Base Contract – Notice to Proceed through Critical Design - $16.3 Million
  • Includes Bond -$1.71 Million
• Option 1 – Final Design, Factory Acceptance Test and Installation of Data Communication Subsystem with Fiber - $35.3 Million
• Option 2 – Remaining Subsystems and System Procurement, Installation, Testing, Training, Certification, Commissioning, Acceptance and Includes One Year Warranty - $ 86.5 Million
Recommendations

• Authorize Award of a Contract to Design/Procure/Install a CBOSS PTC System for Caltrain to Parsons Transportation Group Contingent upon JPB Execution of a Service Agreement with California High Speed Rail Authority for Federal Railroad Administration Funding

• Award a Base Contract of $16.3 Million

• Authorize the Executive Director to Exercise Options 1 and 2

• Authorize the Executive Director to Execute a CBOSS PTC Long Term System Support Agreement
Questions?