Construction Project Briefing

December 11, 2013
Today’s Presentation

• Traction Power - Farwell/Armitage/Hill Substations

• Bus Hoist Replacement Program

✓ Phase 1 – Forest Glen, South Shops, 77th Street Bus Garage
✓ Phase 2 – Kedzie Bus Garage
✓ Phase 3 – North Park Garage
✓ Phase 4 – Chicago and 103rd Garage
## Project Title: Traction Power Systems Upgrades and Improvements
Managing Department: Power & Way Construction

<table>
<thead>
<tr>
<th>Detail</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justification of Need:</td>
<td>Substitution equipment is obsolete and has exceeded its current lifespan</td>
</tr>
<tr>
<td>Priority of Project:</td>
<td>High</td>
</tr>
<tr>
<td>Total Project Budget:</td>
<td>$56,918,563.00</td>
</tr>
<tr>
<td>Construction Contract Value:</td>
<td>$46,684,000.00</td>
</tr>
<tr>
<td>Earned to Date:</td>
<td>17%</td>
</tr>
<tr>
<td>Percent Change Orders to Construction Contract:</td>
<td>0%</td>
</tr>
<tr>
<td>Percent Time Used to Date:</td>
<td>55%</td>
</tr>
<tr>
<td>Funding Source:</td>
<td>State Capital Program</td>
</tr>
<tr>
<td>Estimated Start Date/Estimated Length of Project:</td>
<td>NTP issued September 30, 2012</td>
</tr>
<tr>
<td>Designer of Record:</td>
<td>Laramore, Douglass and Popham(LDP)</td>
</tr>
<tr>
<td>Construction Manager/General Contractor:</td>
<td>STV (CM), F.H. Paschen (GC)</td>
</tr>
<tr>
<td>Project Manager:</td>
<td>Barney Gray (GM); David Heard (PM)</td>
</tr>
</tbody>
</table>

### Detailed Overview of Scope:
- Construct Three (3) New Traction Power Substations namely, Farwell, Armitage, Hill
- Modify Orleans Switch Room
- Modify Weed Switch Room
- Modify Sedgwick Substation
| **Project Title:** Traction Power Systems Upgrades and Improvements  
**Managing Department:** Power & Way Construction |
|---|

| **Impact on Customers:** | Nine single tracks, and six reroutes. Street and lane closures around worksites, curtailed access to resident garages (at Armitage). |
| **Benefit to System:** | Additional traction power capacity reduced traction power related train defects, improved reliability for revenue service, and improved safety. |
| **Benefit to Community:** | Improved safety. |
| **Impact on Accessibility:** | None. |
| **Estimated # of Jobs Created:** | 89 |
| **Customer Communication Need:** | Construction activity notices will be needed to alert businesses and residents to weekend, night work and power outages. |

<table>
<thead>
<tr>
<th><strong>Comparable Projects:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• NA</td>
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</tbody>
</table>
### Construction Progress

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>▪ Farwell – Concrete work continues for the remaining portions of walls to complete the structural work for the substation. The 2&lt;sup&gt;nd&lt;/sup&gt; floor concrete walls and roof have been completed. Work will continue with masonry and site utilities. Roofing work and exterior framing work will continue. The interior work will proceed with painting and dielectric flooring installation.</td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td>▪ Armitage – CTA track column replacement work continues with earth retention installation, excavation, lagging and bracing installation followed by temporary shoring in order to remove and replace twenty-seven column foundations. Initial drilling and H-Pile installation has revealed unknown existing conditions that requires the contractor to re-sequence the work, but has not stopped progress at the site.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Hill – The concrete operating floor has been completed for the majority of the building. Masonry work has progressed rapidly with the concrete block 1&lt;sup&gt;st&lt;/sup&gt; floor structural wall installation. The masonry work will continue with the façade brick and stone finishes. While the building is progressing, site work will also be completed for utilities and getaway ductbank. The pre-cast roof plank installation will also be completed while masonry is being finished.</td>
<td></td>
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<tr>
<td></td>
<td>▪ Sedgwick – Cable support brackets and switch platforms have been installed ahead of schedule and will continue along the rail feeder route.</td>
<td></td>
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### Delay Explanation:
- CDOT OUC has reviewed Hill duct bank earth retention system design and provided permit approval.
- Unforeseen underground conditions has been encountered within CTA Right of Way at Armitage Substation.
Project Title: Traction Power Systems Upgrades and Improvements
Managing Department: Power & Way Construction

Farwell Substation 2nd floor wall rebar installation
Farwell Substation west wall pour
Armitage Substation earth retention system installation
Project Title: Traction Power Systems Upgrades and Improvements
Managing Department: Power & Way Construction

Hill Substation east and north wall concrete block installation
**Project Title:** Bus Hoist Replacement Program  
**Managing Department:** Facilities Construction

### Justification of Need:
The existing bus hoists are beyond their useful life and many are not functioning.

### Priority of Project:
High

#### Construction Phase

<table>
<thead>
<tr>
<th>Phase</th>
<th>77th/SS/Forest Glen</th>
<th>Kedzie</th>
<th>North Park</th>
<th>Chicago/103rd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Hoist Equipment Contract Value:</td>
<td>$1,668,052</td>
<td>$1,163,892</td>
<td>$779,769</td>
<td>$1,066,901</td>
</tr>
<tr>
<td>Construction Contract Value:</td>
<td>$2,663,345</td>
<td>$3,145,143</td>
<td>$1,869,630</td>
<td>$2,820,651</td>
</tr>
<tr>
<td>Value Earned to Date (Construction and Hoists):</td>
<td>$4,133,816</td>
<td>$2,653,521</td>
<td>$2,199,001</td>
<td>$0</td>
</tr>
<tr>
<td>Percent Change Orders to Construction Contract:</td>
<td>25%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Percent Time Used to Date:</td>
<td>95%</td>
<td>80%</td>
<td>83%</td>
<td>0%</td>
</tr>
<tr>
<td>Designer of Record:</td>
<td>TranSystems Corporation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contractor</td>
<td>Paul Borg</td>
<td>Kiewit</td>
<td>F.H. Paschen</td>
<td>F.H. Paschen</td>
</tr>
<tr>
<td>Project Manager:</td>
<td>Steve Mascheri (GM); Shawn Riley (PM); Jacobs (CM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding Source:</td>
<td>FTA and RTA Grants</td>
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**Detailed Overview of Scope:**

Replacement of bus maintenance lifts including drainage, electrical work, and maintenance pads.  
Project has been sequenced to mitigate interference to CTA Bus Operations.
## Project Title: Bus Hoist Replacement Program – Phase 1
### Managing Department: Facilities Construction

<table>
<thead>
<tr>
<th>Impact on Customers:</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefit to System:</td>
<td>Improved capacity for maintenance facilities and reliable equipment for bus operations.</td>
</tr>
<tr>
<td>Benefit to Community:</td>
<td>N/A</td>
</tr>
<tr>
<td>Impact on Accessibility:</td>
<td>N/A</td>
</tr>
<tr>
<td>Estimated # of Jobs Created:</td>
<td>80 (phases 1 thru 4)</td>
</tr>
<tr>
<td>Customer Communication Need:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Comparable Projects:
- N/A
## Construction Progress

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
</table>
| Phase 1: | - Project has been sequenced to minimize impact to Bus Operations and Maintenance.  
  - Forest Glen – 7 lifts installed. Close out in progress. Underground piping repairs are complete.  
  - South Shops – 4 lifts installed and operational. Close out in progress. Repairs on 4 additional pits underway.  | Construction |
| Phase 2: |  - 77th Garage – 11 lifts installed and in use by the facility. Close out in progress.  | Construction |
| Phase 3: | - Kedzie Garage – 12 lifts total: 8 lifts installed, working on the last 4 lifts. Work on the wash pit and inspection pit are 85% Complete. Concrete pits at the last 4 bays are being completed. Lifts scheduled to be installed by Mid-December 2013.  | Construction |
| Phase 4: | - North Park Garage – 13 lifts total: 5 lifts installed, work ongoing at 4 more lifts. Lifts at bays 6-9 will be installed by Mid-December.  
  - 103rd and Chicago Garages – NTP issued 9/10/13. Demolition for phase 1 has started.  | Construction |

### Delay Explanation:

- Phase 1: Elevation differential in underground drainage has resulted in the requirement to place new drainage lines as opposed to tying into existing drainage lines.
- Phase 2: Phase 2 date extended to better accommodate installation of hoists and minimize impact to bus operations.
- Phase 3: Phase 3 dates extended to better accommodate installation of hoists and minimize impact to bus operations.
- Phase 4: Phase 4 dates extended to better accommodate installation of hoists and minimize impact to bus operations.
Project Title: Bus Hoist Replacement Program
Managing Department: Facilities Construction

Chicago/103rd - Excavation

North Park – Bays 6 – 9 Pit Walls
Project Title: Bus Hoist Replacement Program
Managing Department: Facilities Construction

Kedzie – Bays 1-4 Pit Forming