

Construction Project Briefing

October 15, 2014



Today's Presentation

- **Traction Power**
 - ✓ **Farwell/Armitage/Hill Substations**
 - ✓ **Kimball/Princeton/State Substations**
- **Bus Hoist Replacement Program**
 - ✓ **Phase 1 – Forest Glen, South Shops, 77th Street Bus Garage**
 - ✓ **Phase 2 – Kedzie Bus Garage**
 - ✓ **Phase 2 – North Park Garage**
 - ✓ **Phase 2 – Chicago and 103rd Garage**
- **O'Hare Blue Line Station Improvements (Damen, Western, California)**
- **95th Street Terminal Improvement Program**



Project Title: Traction Power Systems Upgrades and Improvements Farwell/Armitage/Hill Substations

Justification of Need:	Substation equipment is obsolete and has exceeded its current lifespan
Priority of Project:	High
Total Project Budget:	\$56,918,563.00
Construction Contract Value:	\$46,684,000.00
Earned to Date:	64%
Percent Change Orders to Construction Contract:	0.5%
Percent Time Used to Date:	91% (as of September)
Funding Source:	State Capital Program
Estimated Start Date/Estimated Length of Project:	NTP issued August 30, 2012; substantial completion 810 days after NTP
Designer of Record:	Laramore, Douglass and Popham (LDP)
Construction Manager/General Contractor:	STV (CM), F.H. Paschen (GC)
Project Manager:	Barney Gray (GM); Premal Vora (PM)

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 Farwell/Armitage/Hill Substations

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.

Comparable Projects:

- NA



Project Title: Traction Power Systems Upgrades and Improvements Farwell/Armitage/Hill Substations

Construction Progress

Phase	Description	Status
Construction	<ul style="list-style-type: none">▪ Farwell – Substation was turned over to CTA on September 9, 2014. Substation began powering system on September 12, 2014. Punchlist work is ongoing.▪ Armitage – The last of the CTA track column replacement work is completed. DC building concrete roof slab was installed. Wall installation progresses on the AC building. Courtyard area preparation continues.▪ Hill – Commissioning of the traction power equipment is complete.<ul style="list-style-type: none">▪ Subway rail connections are complete.	Ongoing

Delay Explanation:
<ul style="list-style-type: none">• Unforeseen underground conditions and a high water table have been encountered within CTA Right of Way at Armitage Substation, creating a delay and requiring site dewatering prior to interior column excavation work.



Project Title: Traction Power Systems Upgrades and Improvements Farwell/Armitage/Hill Substations



Hill Substation

Project Title: Traction Power Systems Upgrades and Improvements Farwell/Armitage/Hill Substations



Farwell Substation



Project Title: Traction Power Systems Upgrades and Improvements Farwell/Armitage/Hill Substations



Armitage Substation: DC Building exterior masonry installation

Project Title: Traction Power Systems Upgrades and Improvements Kimball, Princeton, and State Substation Projects

Justification of Need:	Substation equipment is obsolete and has exceeded its current lifespan
Priority of Project:	High
Total Project Budget:	\$34,726,123.00
Construction Contract Value:	\$25,634,144.25
Earned to Date:	11%
% Change Orders to Construction Contract:	0%
Percent Time Used to Date:	17%
Funding Source:	Bonds
Estimated Start Date/Estimated Length of Project:	Design NTP - October 1 st , 2013 Start of Construction (240 days after NTP) – May 29 th , 2014 Substantial Completion (800 days after NTP) – December 10 th , 2015
Designer of Record:	Parsons Transportation
Construction Manager/General Contractor:	STV (CM), / Clark Construction
Project Manager:	Barney Gray (GM); Premal Vora (PM)

Detailed Overview of Scope:

Rehabilitation of existing buildings and building envelopes to a state of good repair at Kimball, Princeton and State. Replace existing AC/DC conversion equipment, getaway cables, enclosures, and switches with new equipment, cables, enclosures, and switches.

Perform an existing conditions survey of feeder cables and section tie switches within the Kimball Yard.

Enhance the negative return system on the ballasted portion of the Brown Line between Kimball Yard and the Western Avenue Incline.



Project Title: Traction Power Systems Upgrades and Improvements Kimball, Princeton, and State Substation Projects

Impact on Customers:	Three single tracks, and two reroutes. Street and lane closures around worksites, Brown Line Crossing impacts.
Benefit to System:	Improve traction power capacity reduced traction power related train defects, improved reliability for revenue service, and improved safety.
Benefit to Community:	Improved reliability and safety.
Impact on Accessibility:	None.
Estimated # of Jobs Created:	49
Customer Communication Need:	Construction activity notices will be needed to alert businesses and residents to weekend, night work and power outages.

Comparable Projects:

- NA



Project Title: Traction Power Systems Upgrades and Improvements Kimball, Princeton, and State Substation Projects

Construction Progress

Phase	Description	Status
Construction	<ul style="list-style-type: none">▪ Kimball – OUC permit approved. Work plans being developed for construction activities.▪ Princeton -- Fabrication of traction power equipment has started. Transformer and anode bus duct have been successfully tested. Rectifier redesign ongoing.▪ State – Asbestos abatement work has been completed on both the second floor and basement/cable vault. Demolition work on second floor has been completed and is ongoing in the basement.	Ongoing

Delay Explanation:

- The Design-Build Contractor did not complete the design by the expected milestone, delaying the start of construction-phase activities by approximately one month.
- The traction-power equipment being supplied for the project did not pass its required design-level tests at KEMA Labs. Rectifier redesign is in progress, with a re-test tentatively scheduled for late November / early December.



Project Title: Traction Power Systems Upgrades and Improvements Kimball, Princeton, and State Substation Projects



Rectifier Control Cabinet for Princeton Substation in Factory

Project Title: Traction Power Systems Upgrades and Improvements Kimball, Princeton, and State Substation Projects



Bus Duct Assembly for Princeton Substation at Factory

Project Title: Bus Hoist Replacement Program

Justification of Need:	The existing bus hoists are beyond their useful life and many are not functioning.:			
Priority of Project:	High			
Construction Phase	Phase 1: 77 th /SS/ Forest Glen	Phase 2: Kedzie	Phase 2: North Park	Phase 2: Chicago/103 rd
Bus Hoist Equipment Contract Value:	\$1,668,052	\$1,163,892	\$779,769	\$1,066,901
Construction Contract Value:	\$2,663,345	\$3,145,143	\$1,869,630	\$2,820,651
Value Earned to Date (Construction and Hoists):	\$4,288,084	\$4,309,035	\$2,551,989	\$3,690,106
Percent Change Orders to Construction Contract:	25%	3%	0%	6%
Percent Time Used to Date:	99%	100%	99%	93%
Estimated Start and Completion Date:	NTP 11/21/12 Projected Final Completion 9/26/14.	NTP 3/4/13 Final Completion 8/27/14	NTP 6/24/13 Projected Final Completion 9/26/14	NTP 9/10/13 Projected Substantial Completion 9/26/14
Designer of Record:	TranSystems Corporation			
Contractor	Paul Borg	Kiewit	F.H. Paschen	F.H. Paschen
Project Manager:	Steve Mascheri (GM); Jacobs (CM)			
Funding Source:	FTA and RTA Grants			

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

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

Comparable Projects:
<ul style="list-style-type: none">N/A



Project Title: Bus Hoist Replacement Program

Construction Progress

Phase	Description	Status
Phase 1:	▪ Forest Glen – Close Out, final paperwork being reviewed.	Close Out
	▪ South Shops – Close Out, final paperwork being reviewed.	Close Out
	▪ 77 th Garage – Close Out, final paperwork being reviewed.	Close Out
Phase 2:	▪ Kedzie Garage – Complete	Complete
	▪ North Park Garage – Close Out, final paperwork being reviewed.	Close Out
	▪ 103 rd and Chicago Garages – Phase 2 for Chassis Wash and Inspection Bays at 103 rd Garage is 90% complete. Chassis Wash and Inspection Bays at Chicago Garage were turned over September 11 th . Overall project will be substantially complete by September 26 th , final completion to follow soon after.	Construction

Delay Explanation:

Phase 1: Work Complete

Phase 2: Earth retention system constraints for Bays 13 & 14 forced Phase 2 work at 103rd to be split into two separate phases which added an estimated 5 weeks to the final schedule.



Project Title: O'Hare Blue Line Station Improvements (Damen Western California)

Justification of Need:	The existing stations have undergone varying degrees of repair since they opened in 1895. The objective of this project is to bring the stations up to a state of good repair while retaining historic elements.
Priority of Project:	High
Total Project Budget:	\$33,000,000
Construction Contract Value:	\$26,613,238 (Design/Build)
Earned to Date:	11.3% (design) thru August 2014
Percent Change Orders to Construction Contract:	4%
Percent Time Used to Date:	62.5% thru September 18, 2014
Funding Source:	IDOT (Jump Start)
Estimated Start Date/Estimated Length of Project:	NTP Issued March 19, 2014; Substantial Completion January 6, 2015 (NTP + 293 Days)
Designer of Record:	Ross Barney Architects (for F.H. Paschen)
Construction Manager/General Contractor:	Parsons Brinckerhoff (CM), F.H. Paschen (DBC)
Project Manager:	John Titzer (GM); William Polacek (PM)

<p>Detailed Overview of Scope:</p> <ul style="list-style-type: none"> California and Damen: Replace platform decking, station house roofing , interior flooring, structure painting, interior station house renovation, sidewalk/plaza paving, tuck point masonry, LED lighting, new signage, bike racks, CA Booth, additional fare turnstiles and new art work. Western: New entrance canopy, paint stairs, LED lighting, bike racks and art work. Damen Tower: Replace roofing, doors, windows, tuck point masonry and install new station electrical service.



Project Title: O'Hare Blue Line Station Improvements (Damen Western California)

Impact on Customers:	<p>California Station will be closed for a period of 42 days beginning in 3rd quarter 2014.</p> <p>Damen Station will be closed for a period of 63 days in the 4th quarter of 2014. Western will remain open during construction.</p> <p>Only one station will be closed at a time to minimize customer impacts.</p>
Benefit to System:	<p>Reduced maintenance costs; New infrastructure, improved lighting and customer interfacing, including train tracker system</p>
Benefit to Community:	<p>Modern, well lit station with additional security cameras that will improve safety and security.</p>
Impact on Accessibility:	<p>None.</p>
Estimated # of Jobs Created:	<p>70</p>
Customer Communication Need:	<p>Construction activity notices will be needed to alert businesses and residents regarding station closures and construction impacts (noise, dust, street/alley impacts)</p>

<p>Comparable Projects:</p>	
<ul style="list-style-type: none"> • North Main Line Seven Station Renovations • Harrison Station Renewal Project 	



Construction Progress

Phase	Description	Status
Design Design	<ul style="list-style-type: none"> ▪ Milestone A – RFP Validation and presentation boards ▪ Milestone B – 90% Design 	Complete Complete
Pre-Construction	<ul style="list-style-type: none"> ▪ Contractor Soliciting and awarding bids for various trades. 	On-Going
Construction	<ul style="list-style-type: none"> ▪ Mobilize for construction work late August 2014 	Complete
Construction	<ul style="list-style-type: none"> ▪ Close California Station 42 days for construction work (9/4 -10/16/14) ▪ Close Damen Station 63 days for construction work (10/20-12/22/14) 	Ongoing Planned

Delay Explanation:
<ul style="list-style-type: none"> • N/A





Interior Station Work at California



Project Title: 95th Terminal

Justification of Need:	The Terminal is functionally obsolete and does not allow for optimal bus operations and pedestrian flow.
Priority of Project:	High
Total Project Budget:	\$240 M
Construction Contract Value:	Advance Package 1 (AP1): \$2,491,291 Advance Package 2 (AP2): \$23,058,838
Earned to Date:	0
Percent Change Orders to Construction Contract:	0
Percent Time Used Through End of September:	Advance Package 1: 64% Advance Package 2: 23%
Funding Source:	Federal, State, Bond
Estimated Start Date/Estimated Length of Project:	Advance Package 1: June 6, 2014 / 180 days Advance Package 2: July 24, 2014 / 300 days
Designer of Record:	Parsons Brinckerhoff
Construction Manager/General Contractor:	Walsh/II In One JV
Project Manager:	Grace Ohs (PM), Brittany Dyra (GM)

Detailed Overview of Scope:

The 95th Terminal Improvement Project will create new South and North Terminal Buildings at 95th on the Dan Ryan Red Line. The new terminal buildings will create a functional and efficient intermodal facility to enhance bus service and improve pedestrian safety. Scope includes the replacement and expansion of the terminal and platform and the addition of bus and pedestrian bridges. New administrative office space will be built and new bus bays will be provided around the terminal buildings.



Project Title: 95th Terminal

Impact on Customers:	Track closures and weekend station closures during construction. Temporary relocation of certain bus operations to nearby streets during construction phasing.
Benefit to System:	Improved customer circulation and safety by relieving congestion. Improved bus service and improved pedestrian safety.
Benefit to Community:	Improved pedestrian safety with new pedestrian bridge over 95 th Street, longer train platform extending to the new South Terminal Building.
Impact on Accessibility:	New South and North Terminal Buildings with improved accessible routes to buses.
Estimated # of Jobs Created:	3,120 (Direct, Indirect and Induced), 652 (Direct)
Customer Communication Need:	Requires periodic track closures and possible station closures with bus shuttle service. Bus Operations may be relocated to adjacent streets during certain phases of construction.

Comparable Projects:
<ul style="list-style-type: none"> Wilson Station



Project Title: 95th Terminal

Construction Progress

Phase	Description	Status
Design	<ul style="list-style-type: none"> ▪ 85%/Value Engineering 	Ongoing
Pre-Construction Services	<ul style="list-style-type: none"> ▪ Walsh/II in One JV participates in Design Meetings and provides constructability reviews, schedules, and estimates for each Design Phase. 	Ongoing
Construction Advance Package 1: Dan Ryan Tower Lights and Sign Relocation	<ul style="list-style-type: none"> ▪ Approved at April 2014 Board, NTP issued June 6, 2014. ▪ Initial project submittals reviewed and approved ▪ Staging area set-up work has started ▪ Wood pole installation for temp electrical/fiber optic cable work in progress 	Ongoing
Advance Package 2: Dan Ryan Retaining Walls	<ul style="list-style-type: none"> ▪ Approved at June 2014 Board, NTP issued July 24, 2014. ▪ Initial project submittals reviewed and approved ▪ Utility locates and coordination is in progress ▪ First stages of Maintenance of Traffic in progress 	Ongoing

Delay Explanation:
NA





New Foundation Work





Installation of Steel Piles

