

# **Construction Project Briefing**

**April 20, 2015**



# Today's Presentation

- **Traction Power**
  - ✓ **Farwell/Armitage/Hill Substations**
  - ✓ **Kimball/Princeton/State Substations**
- **95<sup>th</sup> Street Terminal Improvement Program**
- **Wilson Transfer Station, Track, and Structure Reconstruction**
- **Ravenswood Loop Connector Track Reconstruction**



# 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Justification of Need:	Substation equipment is obsolete and has exceeded its current lifespan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:	88%
Percent Change Orders to Construction Contract:	1%
Percent Time Used to Date:	100.0% (as of 12/10/2014)
Funding Source:	State Capital Program
Estimated Start Date/Estimated Length of Project:	NTP issued August 30, 2012; substantial completion 833 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"><li data-bbox="324 297 1528 368">▪ Farwell – Substation was turned over to CTA on September 9, 2014. Substation began powering system on September 12, 2014. Punch list work is ongoing.</li><li data-bbox="324 411 1528 446">▪ Armitage – Working on remaining work list items for Substantial Completion.</li><li data-bbox="324 489 1528 561">▪ Hill – Substation was turned over to CTA on September 30, 2014. Punch list work is ongoing.</li></ul>	Ongoing

### Delay Explanation:

- Two DC Switchgear breakers were damaged during short circuit testing and need to be replaced and re-tested.
- Contractor has missed the substantial and final completion dates for the Project; the Authority is withholding funds for potential liquidated damages.



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



**Armitage Substation: Removing Switchgear with PPE**

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



**Armitage Substation West Facade**

# 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:	16%
% Change Orders to Construction Contract:	0%
Percent Time Used to Date:	66%
Funding Source:	Bonds
Estimated Start Date/Estimated Length of Project:	Design NTP - October 1 <sup>st</sup> , 2013 Start of Construction (240 days after NTP) – May 29 <sup>th</sup> , 2014 Substantial Completion (800 days after NTP) – December 10 <sup>th</sup> , 2015
Designer of Record:	Parsons Transportation Group
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"><li>▪ Kimball – Installation of wall foundations, bus tie modifications, interior mechanical work ongoing.</li><li>▪ Princeton - Fabrication and testing of traction power equipment ongoing. Demo electrical, remove transformer #3 and pour new pad. Painting and testing of dielectric flooring ongoing.</li><li>▪ State – Exterior masonry rehabilitation punchlist work remains. Lead based paint abatement in building interior continues. Demo of traction power equipment has started and is ongoing. Fabrication and testing of traction power equipment ongoing.</li></ul>	Ongoing

### Delay Explanation:

- N/A



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



**State Substation: U.G. Installation for New Electrical Service**

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



**State Substation: Removal of Existing DC Rectifier**

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



**Kimball Substation: Caisson Installation for New Foundations**

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



**Princeton Substation: Installing New AC Switchgear**



# Project Title: 95<sup>th</sup> Terminal Improvement Program

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 Through End of February:	Advance Package 1: 90% Advance Package 2: 40%
Percent Change Orders to Construction Contract:	0%
Percent Time Used Through End of March:	Advance Package 1: 100% Advance Package 2: 83%
Funding Source:	Federal, State, Bond
Estimated Start Date/Estimated Length of Project:	Advance Package 1: NTP Issued June 6, 2014 / 180 days Advance Package 2: NTP Issued July 24, 2014 / 300 days
Designer of Record:	Parsons Brinckerhoff
Construction Manager/General Contractor:	Walsh/II In One JV
Owners Representative:	Jacobs/SQN 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: 95<sup>th</sup> Terminal Improvement Program

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 <sup>th</sup> 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.

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



# Project Title: 95<sup>th</sup> Terminal Improvement Program

## Construction Progress

Phase	Description	Status
<b>Design</b>	<ul style="list-style-type: none"> <li>▪ South Terminal Foundation Only Package submitted to City of Chicago for permit review</li> <li>▪ Preparing overall permit package for submittal in May 2015</li> </ul>	Ongoing
<b>Pre-Construction Services</b>	<ul style="list-style-type: none"> <li>▪ CTA is negotiating with Walsh/II in One JV the contract value and schedule for a potential agreement on a Guaranteed Maximum Price contract.</li> </ul>	Ongoing
<b>Construction</b> Advance Package 2: Dan Ryan Retaining Walls	<ul style="list-style-type: none"> <li>▪ Work continued on the southwest quadrant retaining wall (Wall 1)</li> <li>▪ Excavation continued for northwest quadrant retaining wall (Wall 2).</li> <li>▪ Placed concrete for 3 canopy columns at the southwest retaining wall.</li> <li>▪ Completed potholing to verify the location of the gas lines.</li> <li>▪ Completed jacking and receiving pits on the east and west sides for the fiber optic and electrical lines.</li> </ul>	Ongoing
<b>Close-Out</b> Advance Package 1: Dan Ryan Tower Lights and Sign Relocation	<ul style="list-style-type: none"> <li>▪ Punch list work in progress and expected to be complete in 2<sup>nd</sup> Quarter 2015</li> </ul>	Ongoing

**Delay Explanation:**

Work on Advance Package 2 is currently behind schedule and the contractor did not meet the milestone 1 date of November 25, 2014. This delay is not anticipated to affect the main construction schedule on the project.



# Project Title: 95<sup>th</sup> Terminal Improvement Program



AP2: Southwest Quadrant (Wall 1)



# Project Title: 95<sup>th</sup> Terminal Improvement Program



AP2: Southwest Retaining Wall



# Project Title: Wilson Transfer Station, Track & Structure Reconstruction

Justification of Need:	The Station is functionally obsolete and does not allow for optimal transit operations
Priority of Project:	High
Total Project Budget:	\$206 M
Construction Contract Value:	\$ 152,370,000
Earned to Date:	9%
Percent Change Orders to Construction Contract:	(0.8 %)
Percent Time Used:	21%
Funding Source:	Federal, State, Bond and TIF
Estimated Start Date/Estimated Length of Project:	NTP 7/25/14; Substantial Completion 1/10/18
Designer of Record:	HNTB
Construction Manager/General Contractor:	Arcadis/Walsh/II In One JV
Project Manager:	Pedro Hurtado (PM), John Titzer (GM)

**Detailed Overview of Scope:** The station will replace the badly deteriorated station that was built in 1923. The station will have multiple entrances/exits and will include the following features:

- Two (2) new 26 foot – 10 car concrete island platforms with full canopies
- New main station located on the south side of Wilson Ave, new auxiliary entrance/exit at Sunnyside Ave. and a new auxiliary entrance/exit on the north side of Wilson
- New elevators, escalators, lighting, signage, fare control, security cameras and art work
- Replace old existing elevated track structure with new track structure to accommodate the new station platform and the necessary infrastructure to support the new track alignment.



# Project Title: Wilson Transfer Station, Track & Structure Reconstruction

Impact on Customers:	There will be minimum impact to CTA customers
Benefit to System:	<ul style="list-style-type: none"> <li>• New modern, more spacious and accessible stationhouse with three (3) entrances</li> <li>• Upgraded track structure infrastructure and signals for more reliable service</li> <li>• New transfer point between Red and Purple express rail lines</li> </ul>
Benefit to Community:	<ul style="list-style-type: none"> <li>• Modern facility with new system upgrades</li> <li>• Easy access entrances through three (3) entry points</li> <li>• Bigger platforms that will accommodate higher capacity for passengers to avoid overcrowding</li> <li>• Platform canopies to protect customers from elements</li> <li>• New ADA accessible station</li> </ul>
Impact on Accessibility:	Station will be fully accessible upon completion
Estimated # of Jobs Created:	560
Customer Communication Need:	<ul style="list-style-type: none"> <li>• Construction activity notices will be provided to inform businesses and residents regarding temporary stations and construction impacts (noise, dust, street/alley impacts) throughout the project.</li> </ul>

<b>Comparable Projects:</b>
<ul style="list-style-type: none"> <li>• 95<sup>th</sup> Station – Red Line</li> </ul>



# Project Title: Wilson Transfer Station, Track & Structure Reconstruction

## Construction Progress

Phase	Description	Status
<b>Construction</b>	<ul style="list-style-type: none"> <li>• ComEd rerouting underground utilities at Leland and Broadway</li> </ul>	Completed
	<ul style="list-style-type: none"> <li>• Pulled new section 80 traction power cable from Clifton to Leland</li> </ul>	Completed
	<ul style="list-style-type: none"> <li>• Cut-Over track and signals occurred on March 6<sup>th</sup> in preparation for 3-track operation (3/9/15)</li> </ul>	Completed
	<ul style="list-style-type: none"> <li>• Remove Rail, cross ties and ballast from track 1 track bed</li> </ul>	Ongoing
	<ul style="list-style-type: none"> <li>• Begin demolition of Track 1 structure in late March</li> </ul>	Ongoing
	<ul style="list-style-type: none"> <li>• Planning to start demolition of elevated steel structure in mid-April</li> </ul>	Planned
<b>Delay Explanation:</b>		
N/A		



# Project Title: Wilson Transfer Station, Track & Structure Reconstruction



Removal of Track 1 Cross Ties – Bent 7102

# Project Title: Ravenswood Loop Connector Track Reconstruction

Justification of Need:	Ties and rail beyond their useful life and require replacement
Priority of Project:	High
Total Project Budget:	\$57,243,294
Construction Contract Value:	\$40,346,442
Earned to Date:	3%
Percent Change Orders to Construction Contract:	0%
Percent Time Used to Date:	35%
Funding Source:	FTA/IDOT/CTA
Estimated Start Date/Estimated Length of Project:	NTP issued 10/3/14; substantial completion 12/22/15
Designer of Record:	T.Y. Lin
Construction Manager/General Contractor:	Kiewit Infrastructure Company (GC) Parsons Brinkerhoff (CM)
Project Manager:	Steven Mascheri (GM) Bill Polacek (PM)

## Detailed Overview of Scope:

Replacement of ties and rail between from the south limit of the Armitage station to the south limit of the Merchandise Mart station. Work will be performed under a series of weekend line cuts.



# Project Title: Ravenswood Loop Connector Track Reconstruction

Impact on Customers:	Thirteen (13) weekend line cuts in 2015. Two (2) weeknight single tracks. Limits of line cuts will vary between Armitage and the Merchandise Mart/Clark and Lake.
Benefit to System:	Improved reliability of track conditions, smoother ride for passengers.
Benefit to Community:	Improved reliability and travel times.
Impact on Accessibility:	None.
Estimated # of Jobs Created:	80
Customer Communication Need:	Construction activity notices will be provided to alert businesses and residents to weekend, night work.

<b>Comparable Projects:</b>
<ul style="list-style-type: none"> <li>Blue Line (Milwaukee) Track Renewal</li> </ul>



