



# Construction Project Briefing



March 9, 2022



# Today's Presentation

- Jefferson Park to O'Hare Signals Project
- Jackson Park Line Track and Structure Improvement Project
- Irving Park Station - Escalator and Canopy Replacement
- Traction Power Upgrades - Kedvale, Edmunds, and Sacramento Substations
- Non-Revenue Maintenance
- Red and Purple Modernization Project



# Project Title: Jefferson Park to O'Hare Signals Project

Impact on Customers:	There will be 11 weekend Line Cuts: 1 – 9 Day Line Cut from O'Hare to Rosemont, 2 Weekend Line Cuts from Rosemont to Harlem, and 7 Line Cuts from Harlem to Jefferson Park and 1 – Weekend Line Cut from O'Hare to Rosemont. Bus shuttles will be provided for these line cuts. In addition, there are 90 nighttime single track outages that may affect customers.
Benefit to System:	This will be the last section of the Blue Line to receive upgraded signals and interlocking systems. When completed, these systems will assure consistent, safe and reliable train operations on the entire Blue Line for many years to come. The proposed new equipment will provide bi-directional railway traffic protection and maintain headways at 90 seconds at 35 mph nominal. The Project will be designed with infrastructure provisions for a future Communication Based Train Control (CBTC) system, such as ducts for serial fiber/ cables, ample spare room for hardware in each relay/ audio house and ideal locations for transponders, radio transmitters/ antennae and wayside zone controllers.
Benefit to Community:	Improved Reliability and Safety
Impact on Accessibility:	During the 11 weekend Line Cuts, train stations will be inaccessible.
Estimated # of Jobs Created:	106 Direct, 507 Indirect
Customer Communication Need:	Construction activity notices will be provided to inform customers that Line Cuts will impact their commute.

## Comparable Projects:

- Ravenswood Loop Connector
- Congress Dearborn – Jefferson Park to Forest Park Signal Replacement.



# Project Title: Jefferson Park to O'Hare Signals Project

**Justification of Need:** The existing 39-year-old signal system is approaching the end of its useful life. Maintaining the system has become increasingly difficult in as much as many components are now obsolete and difficult to repair or replace.

Priority of Project:	High
Total Project Budget:	\$ 207M
Construction Contract Value:	\$ 153,696,433.00
Earned to Date:	77%
Percent Change Orders to Construction Contract:	0
Percent Time Used:	100%
DBE:	<p>Goal: 10% Design / 15% Construction          Commitment: 10.1% Design / 15% Construction          Workforce Goals: 10% WIOA / 10% Apprentice</p> <p>Contract is on track to meet the DBE goal          Outreach events conducted: 2 (CTA) 1 (KAJV)</p>
Funding Source:	CTA Bonds, RTA Bonds, Federal Formula Funds, and Federal TIFIA loan
Estimated Start Date/Estimated Length of Project:	NTP: May 21, 2018; Substantial Completion May 20, 2021
Designer of Record:	KAJV – Mott McDonald
Construction Manager/General Contractor:	STV/KAJV

**Detailed Overview of Scope:**  
 This is a design-build project that existing relay houses are going to be replaced with new relay houses on elevated or at grade platforms and existing relay rooms are proposed to be expanded/ refurbished and/or reconfigured to accommodate the new signal equipment. The existing relay houses/ rooms are located at the following locations: Jefferson Park, Central, Foster, Nagle, Harlem, Cumberland, River Road, Rosemont East, Rosemont Yard, Rosemont West, Old Manheim, O'Hare East and O'Hare West. Special trackwork improvements are at Central Interlocking.



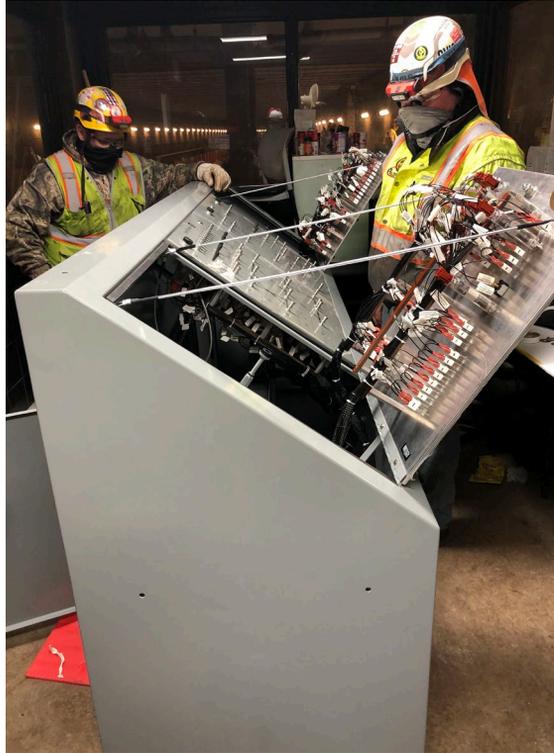
# Project Title: Jefferson Park to O'Hare Signals Project

## Construction Progress

Phase	Description	Status
<b>Construction</b>	<ul style="list-style-type: none"><li>• Signal &amp; Traction Power Cable Installation.</li></ul>	Ongoing
	<ul style="list-style-type: none"><li>• Rosemont West Relay House is being manufactured.</li></ul>	Ongoing
	<ul style="list-style-type: none"><li>• Signal Equipment Installation.</li></ul>	Ongoing
	<ul style="list-style-type: none"><li>• Discrepancy Closure at previously cutover houses.</li></ul>	Ongoing
	<ul style="list-style-type: none"><li>• O'Hare East and O'Hare Terminal Cutover has started</li></ul>	Ongoing
<b>Delay Explanation</b>		
N/A		



# Project Title: Jefferson Park to O'Hare Signals Project



**LCP Panel Installation at O'Hare Terminal**



# Project Title: Jefferson Park to O'Hare Signals Project



**Signal Delivery  
for  
O'Hare East**



# Project Title: Jefferson Park to O'Hare Signals Project



**Rack  
Installation  
at  
O'Hare**



# Project Title: Jefferson Park to O'Hare Signals Project



**Rack Installation  
at  
O'Hare**



# Project Title: Jackson Park Track and Structure Improvements

**Justification of Need:**

Currently, there are ties and running rail on the Cottage Grove branch that need replacement. The ties have passed their useful life expectancy and have started to deteriorate. The 90 lb. running rail is the lb. rail that remains in use on the CTA's mainline track throughout the system and needs replacement. The ties and running rail replacement is vital to make sure the Cottage Grove branch remains safe and reliable for CTA customers.

Priority of Project:	P1
Total Project Budget:	\$12,708,268
Expended to Date (thru November):	\$5,760,000
Used last Month:	\$760,000
Funding Source:	60402 (Rebuild IL)
Estimated Start Date/Estimated Length of Project:	Track work schedule: Q1 2021 through Q2 2023 Structure work schedule: Q1 2021 through Q4 2022
Contractor	CTA Forces

**Track:** Replace 2 miles of ties on the Cottage Grove branch including the crossover ties. Replace over a half mile of existing 90lb running rail with new 115lb running rail.

**Structure:** Renew high priority structural components in advance of track installation to extend asset life. Work includes 22 stringers and seven cross girders.



# Project Title: Jackson Park Track and Structure Improvements

<p>Impact on Customers: (Slow zones, single tracks, reroutes, weekends, etc.)</p>	<p>Work is being performed under normal traffic operations on weekdays and some weekends. Occasional single tracks and reroutes will also be utilized to facilitate complex work. Construction slow zones will be implemented while the tracks are being renewed.</p>
<p>Benefit to System:</p>	<p><b>Track:</b> The age of the track ties has resulted in deteriorated/spilt ties that are no longer capable of maintaining proper track geometry resulting in alignment and gage issues and subsequently slow zones. The current 90 lb. rail that exists on the Cottage Grove branch is the only existing 90 lb. rail left in CTA revenue track and is in need of updating to increase reliability during temperature extremes. Replacing the track ties and running rail will bring the Cottage Grove branch up to a state of good repair and reduce travel time and delays.</p> <p><b>Structure:</b> The system will be made structurally sound, by renewing all of the identified P1 defects in the area.</p>
<p>Benefit to Community:</p>	<p>The track ties and running rail play a vital role in track geometry and reliability. Replacing the track ties and running rail on the Cottage Grove branch will eliminate slow zones and provide faster, more reliable service to the community.</p> <p>Rehabilitation of the systems generally provides for the safe transport of passengers, removing any slow zones and restoring the effectiveness of the structure carrying the trains.</p>

## Comparable Projects:

- Previous Jackson Park Girder reconstruction 2018
- South Loop Track Renewal



# Project Title: Jackson Park Track and Structure Improvements

## Construction Progress

Department	Description	Status
<b>CTA Power &amp; Way Maintenance</b>	Track Renewal	
	<ul style="list-style-type: none"> <li>Renew ties and fasteners 59th Street to 61st Street on the Southbound Track</li> </ul>	Complete
	<ul style="list-style-type: none"> <li>Renew ties and fasteners 59th Street to 61st Street Northbound Track</li> </ul>	Complete
	<ul style="list-style-type: none"> <li>Replace rail NBT between 59th Street to 61st Street</li> </ul>	Complete
	<ul style="list-style-type: none"> <li>Replace rail SBT between 59th Street to 61st Street</li> </ul>	Complete
	<ul style="list-style-type: none"> <li>Renew Ties and Plates between 61st and 62nd NBT</li> </ul>	Complete
	<ul style="list-style-type: none"> <li>Renew Ties and Plates between 61st and 62nd SBT</li> <li>61<sup>st</sup> Interlocking 2-DSS and a Lefthand turnout</li> </ul>	Ongoing
Structure Renewal	<ul style="list-style-type: none"> <li>Renew Stringers &amp; Cross Girders 59th Street to 63rd Street</li> </ul>	Ongoing

### Delay Explanation:

N/A



# Project Title: Jackson Park Track and Structure Improvements



**61<sup>st</sup> Special Trackwork Tie Renewal**



# Project Title: Jackson Park Track and Structure Improvements



**Structural Renewal**



# Project Title: Irving Park Station Escalator and Canopy Replacement

**Justification of Need:**

The existing escalator at the Irving Park station entrance has experienced excessive wear due to water and road salt infiltration. It has been determined the Irving Park escalator is approaching the end of its useful life and requires replacement. The escalator at the Pulaski entrance has reached its useful life and has been removed. The existing platform level canopy which has been in place since the original construction of the station will be replaced with a new translucent polycarbonate system, this will mitigate water infiltration and better protect passengers and the replacement escalators. This work is required to return the station to a state of good repair.

Priority of Project:	Medium
Total Project Budget:	\$12,025,856.00
Construction Contract Value:	\$ 7,497,000.00
Earned to Date:	20.4% (through December)
Percent Change Orders to Construction Contract:	0
Percent Time Used:	69%
DBE:	Goal: 20% Commitment: 20% Contract is on track to meet the DBE goal Outreach events conducted: 7 Mid-Con events (CTA)
Funding Source:	State of Illinois Transportation Program
Estimated Start Date/Estimated Length of Project:	NTP: March 22, 2021/ Estimated Duration 510 days /Substantial Completion August 2022
Designer of Record:	CTA Engineering
Construction Manager/General Contractor:	WSP / John Burns Construction

**Detailed Overview of Scope:** This is a design-Bid -Build project. The primary scope of work for this project includes:

- Furnishing and installing new Escalator at Pulaski Road stationhouse and Furnishing and installing new Escalator at Irving Park Road stationhouse
- Rebuilding escalator supports
- Furnishing and installing new translucent insulated single panel polycarbonate canopy system
- Providing new roofs at Irving Park and Pulaski station houses



# Project Title: Irving Park Station Escalator and Canopy Replacement

Impact on Customers:	Temporary sidewalk, traffic lane, and parking lane closures during construction phasing. 2 Station entrance closures 150 days per entrance. Customers will use the Irving Park entrance while the Pulaski Entrance is closed and a temporary CA booth will be constructed and used during the closure of the Irving Park Entrance.
Benefit to System:	The Project will replace roofs at CTA stationhouses and rail platform canopy that are worn, damaged and beyond their useful life. This will improve safety for customers and employees.
Benefit to Community:	Improved customer safety by providing reliable vertical circulation to the Irving Park Platform. The new translucent canopy panels will provide weather tight protection of the customers as they enter and exit trains.
Impact on Accessibility:	During the 150-day station entrance closures escalators will be inaccessible.
Customer Communication Need:	72 Direct / TBD Indirect

<b>Comparable Projects:</b>
Jefferson Park



# Project Title: Irving Park Station Escalator and Canopy Replacement

## Construction Progress

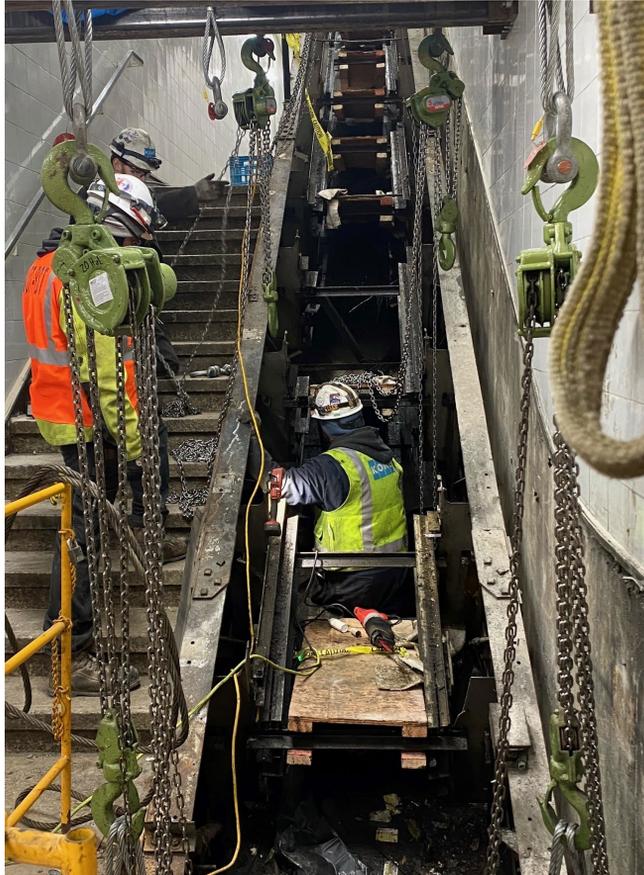
Phase	Description	Status
<b>Construction</b>	<ul style="list-style-type: none"><li>• Close Irving Park Entrance 1/17-5/3/22 (150 days)</li><li>• Irving Park Escalator Delivery (night work)</li><li>• Start installation of new canopy materials</li><li>• Pulaski Closure</li></ul>	Ongoing February 28 Planned late Q1 Planned mid Q2

### Delay Explanation:

N/A



# Project Title: Irving Park Station Escalator and Canopy Replacement



**Demo of Irving  
Park Escalator  
– Lower Truss**



# Project Title: Irving Park Station Escalator and Canopy Replacement



**Irving Park  
Installing  
Lifting Beams  
and chain-  
Falls for  
Escalator  
Demolition**



# Project Title: Irving Park Station Escalator and Canopy Replacement



**Irving Park  
Galvanized  
Escalator  
Truss at  
Factory**



# Project Title: Traction Power Upgrade Kedvale, Edmunds, and Sacramento Substations

### Justification of Need:

The CTA has identified additional traction power needs based on results from the Blue Line Load Flow study it was determined the existing equipment is beyond its useful life and needs to be replaced. The new equipment will increase reliability and reduce frequency of periodic maintenance. This project targets replacement of oil transformers and rectifiers at the Kedvale and Sacramento substations also AC breaker replacement at the Kedvale, Edmunds, and Sacramento substations. The Sacramento and Kedvale Substations will also receive new roofs with all three locations getting new stainless-steel doors with frames and incidental masonry repairs.

Priority of Project:	Medium
Total Project Budget:	\$12,029,342
Construction Contract Value:	\$7,372,000
Earned to Date:	15% (through December)
Percent Change Orders to Construction Contract:	0
Percent Time Used:	61%
DBE:	Goal: 25% Commitment: 25% Contract is on track to meet the DBE goal Outreach events conducted: 7 Mid-Con events (CTA)
Funding Source:	GTTLOC-2018 (Line of Credit)
Estimated Start Date/Estimated Length of Project:	NTP: May 4, 2021/ Estimated Duration 550 days /Substantial Completion November 5, 2022
Designer of Record:	CTA
Construction Manager/General Contractor:	WSP /John Burns Construction



# Project Title: Traction Power Upgrades Kedvale, Edmunds, and Sacramento Substations

Impact on Customers:	Temporary bus turnaround traffic lane, and parking lane closures during construction phasing, disposal and delivery of equipment.
Benefit to System:	The new equipment will increase service reliability and reduce frequency of weekly maintenance of substation equipment.
Benefit to Community:	Safer more reliable service and improved building envelope presence along the community's streetscape.
Impact on Accessibility:	N/A
Customer Communication Need:	Community announcements for temporary Bus turnaround closures during equipment removal and delivery to substations.

## Comparable Projects:

Systemwide - Traction Power Upgrades



# Project Title: Traction Power Upgrade Kedvale, Edmunds, and Sacramento Substations

## Construction Progress

Phase	Description	Status
<b>Construction</b>	• Testing of Kedvale Line-up #2 (KEMA)	Completed
	• Site Survey at Sacramento (Plat of Survey)	On-Going
	• Destructive diode testing - England	Planned mid Q1
	• Extension of transformer pads and bus duct masonry	Planned late Q1
	• Delivery of new equipment at Kedvale	Planned late Q1



# Project Title: Traction Power Upgrades Kedvale, Edmunds, and Sacramento Substations



**Sacramento  
Substation –  
Taking  
Measurements  
from exiting  
bus duct**



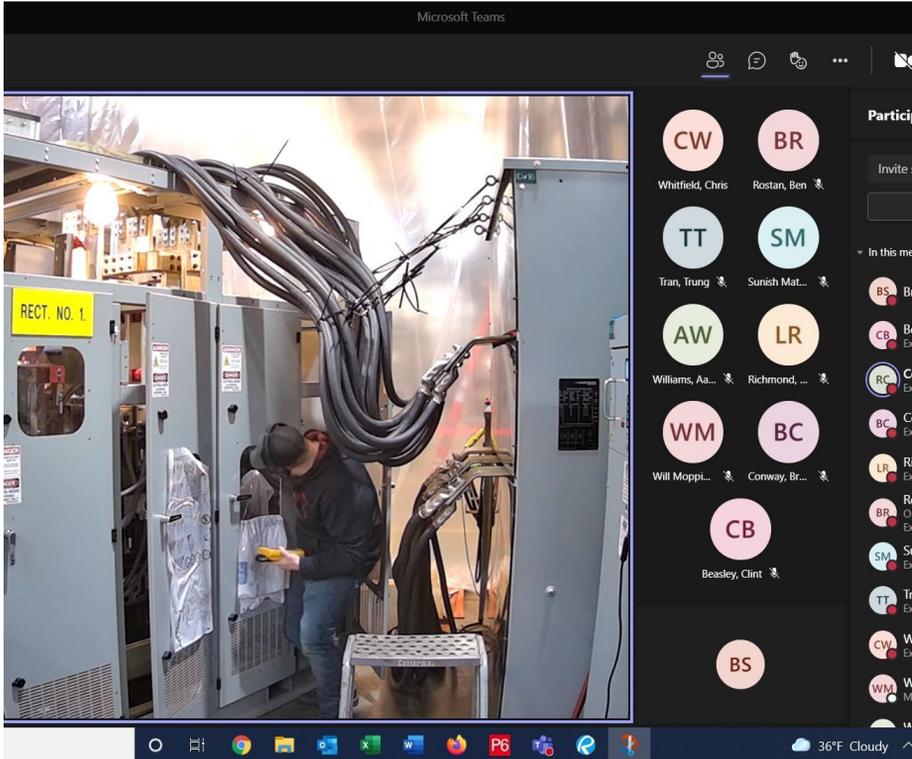
# Project Title: Traction Power Upgrades Kedvale, Edmunds, and Sacramento Substations



**New  
Kedvale  
Bus Duct  
at  
Factory**



# Project Title: Traction Power Upgrades Kedvale, Edmunds, and Sacramento Substations



**Kedvale  
Rectifier #2  
Factory  
Acceptance  
Testing Remote**



# Project Title: Non-Revenue Rail Vehicle Facility

## Justification of Need:

Priority of Project:	Medium
Total Project Budget:	\$65,902,503
Construction Contract Value:	\$42,676,222
Earned to Date:	19% (thru Jan 2022)
Percent Change Orders to Construction Contract:	0%
Percent Time Used:	39%
DBE:	Goal: 30% Design / 27% Construction Commitment: 30% Design / 27% Construction Workforce Goals: 10% Career Opportunity/ 10% Apprentice/ 35% EDA Outreach events conducted: 1 (Clark) Contract is on track to meet the DBE goal
Funding Source:	IDOT - Rebuild Illinois
Estimated Start Date/Estimated Length of Project:	NTP: 3/24/21 Project Duration 730 Days
Designer of Record:	STV Inc.
Construction Manager/General Contractor:	WSP/Clark Construction

**Detailed Overview of Scope:** Perform Design/Build Services to design and construct a new maintenance facility at the CTA's 63<sup>rd</sup> Lower Yard. This facility will be utilized to repair and maintain CTA's Non-Review Rail Mounted Equipment Fleet. This facility will include three maintenance and inspection tracks, a vehicle wash track with equipment, a paint booth, a welding room, a multipurpose lunchroom and classroom, locker and washroom facilities, supervision offices, and storage facilities.



# Project Title: Non-Revenue Rail Vehicle Facility

Impact on Customers:	While no direct impact to rail service, this facility will allow CTA Rail Maintenance to efficiently maintain the CTA's non-revenue fleet. This will result in equipment being in good working order and ready to perform necessary repairs and upkeep to the CTA system. This will allow CTA to maintain reliable service to our customers.
Benefit to System:	The ability to effectively and efficiently maintain the CTA's non-revenue fleet will result in equipment being in good working order and ready to perform necessary repairs and upkeep to the CTA system.
Benefit to Community:	This facility will be design to compliment the surrounding neighborhood from an aesthetic perspective. It will also bring additional activity to the immediate neighborhood.
Impact on Accessibility:	The building will obtain City of Chicago Building permits, which included accessibility reviews.
Customer Communication Need:	Customer impact will be minimal. Community outreach efforts are ongoing with local elected official and the neighboring school to discuss and minimize impacts during construction. Communications will continue with the surrounding residences and business regarding any upcoming impacts to the surrounding area during construction.

## Comparable Projects:



# Project Title: Non-Revenue Rail Vehicle Facility

## Construction Progress

Phase	Description	Status
<b>Construction</b>	<p><b>Design Phase</b></p> <ul style="list-style-type: none"> <li>• Design Validation</li> <li>• Intermediate Design</li> <li>• Permitting</li> <li>• Final Design</li> </ul> <p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>• Earthwork</li> <li>• Foundation Work</li> <li>• Exterior Wall and Roof Installation</li> <li>• Inspection Pit &amp; Track Installation</li> <li>• Electrical Work</li> <li>• Plumbing Work</li> <li>• Building Mechanical Work</li> <li>• Interior Buildout Work</li> <li>• Fencing &amp; Landscaping</li> </ul>	<p>Complete</p> <p>Complete</p> <p>Ongoing</p> <p>Ongoing</p> <p>Upcoming</p> <p>Upcoming</p> <p>Upcoming</p> <p>Upcoming</p> <p>Upcoming</p> <p>Upcoming</p> <p>Upcoming</p> <p>Upcoming</p> <p>Upcoming</p>

### Delay Explanation:

N/A



**Project Team Presenting Project to Students  
at Dulles Elementary**



# Project Title: Non-Revenue Rail Vehicle Facility



**Yard Restoration Work**



# Project Title: RPM Phase One Design-Build Contract

<b>Justification of Need:</b>	The RPM Phase One Project is greatly needed in order to expand capacity on CTA's most utilized rail line and to replace aging infrastructure.	
Priority of Project:	High	
Total Project Budget:	\$ 2.1 Billion (excludes Transit TIF interest payments)	
Construction Contract Value:	Original - \$1,272,275,929    Current - \$1,268,818,124	
Earned to Date:	48%	
Percent Change Orders to Construction Contract:	-0.25%	
Percent Time Used:	54%	
DBE:	Design: Goal: 20% / Commitment: 20.64% Construction Goal: 20% / Commitment: 20% Workforce Goals: 10% WIOA / 15% Apprentice / 35% EDA	Contractor is on track to meet the DBE goal
Funding Source:	CTA Financing, FTA Core Capacity Grant, CMAQ, TIFs	
NTP / Construction Start / Estimated Completion:	February 8, 2019 / October 2019 / 2025	
Design-Build Contractor:	Walsh-Flour Design-Build Team	
Owners Representative:	Elevated Solutions Partners	
<b>Detailed Overview of Scope:</b>	RPM Phase One consists of the following elements that will allow CTA to expand service along the Red and Purple lines:	
	<ul style="list-style-type: none"> <li>• Lawrence to Bryn Mawr Modernization (LBMM) – complete reconstruction and addition of ADA accessibility at four Red Line stations (Lawrence, Argyle, Berwyn, and Bryn Mawr) and reconstruction of 6 miles of track, structures, and viaducts from Leland Ave. to Ardmore Ave.</li> <li>• Red-Purple Bypass (RPB) - Construction of a grade-separated bypass for the Brown Line at Clark Junction, just north of Belmont Ave. Includes realignment and reconstruction of 1.4 miles of mainline tracks and structure between Belmont station and south of Cornelia Ave.</li> <li>• Corridor Signal Improvements (CSI) – Installation of new higher-capacity signal system on 23 miles of track between Belmont and Howard stations.</li> </ul>	



# Project Title: RPM Phase One Design-Build Contract

Phase	Description	Status
<b>Administrative / Design:</b>  <b>Construction:</b>	<ul style="list-style-type: none"> <li>▪ Continued submittal/revisions of required management plans</li> <li>▪ Continued Design Development in support of Red-Purple Bypass, Lawrence to Bryn Mawr Modernization, and Corridor Signal Improvements</li>   <li>▪ Pre-Stage Work               <ul style="list-style-type: none"> <li>– Punchlist work</li> </ul> </li>   <li>▪ Red-Purple Bypass (RPB).               <ul style="list-style-type: none"> <li>– Ravenswood structure rehabilitation</li> <li>– Factory wiring of Kenmore and Clark Relay Houses</li> <li>– CTA witness testing of Kenmore Relay House</li> <li>– Track, traction power and signal reconfigurations for RPB Stage 2 phasing</li> <li>– Continued work on Kenmore #7 crossover</li> <li>– Micropile foundations for North Main Line reconstruction</li> <li>– Demolition of decommissioned rail, ties, signal, communications and traction power cabling along NM1 and NM2 tracks</li> </ul> </li>   <li>▪ Corridor Signal Improvements (CSI)               <ul style="list-style-type: none"> <li>– DGTrack Circuit Testing</li> </ul> </li>   <li>▪ Lawrence to Bryn Mawr Modernization               <ul style="list-style-type: none"> <li>– Drilled Shaft Installation</li> <li>– Continued production of Pre-cast Box Girder Segments</li> <li>– Embankment wall demolition</li> <li>– Construction of concrete columns and caps</li> <li>– Segmental Box Girder installation</li> <li>– Embankment drainage installation</li> </ul> </li> </ul>	<p>Ongoing Ongoing</p> <p>Ongoing</p> <p>Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing</p> <p>Ongoing</p> <p>Restarted Ongoing Complete Ongoing Ongoing Ongoing</p>
<b>Delay Explanation:</b>		



**LBMM –  
Segmental Box  
Girder  
Installation**



**LBMM –  
Cable  
Tensioning for  
Segmental Box  
Girder Spans**



# Project Title: RPM Phase One Design-Build Contract

	Outreach type	Major Activities	Timing
Community	 <p>CTA mini-train in the 2022 Lunar New Year parade</p>	<ul style="list-style-type: none"> <li>• Weekly Red-Purple Bypass Project updates for 44<sup>th</sup> ward</li> <li>• Lawrence to Bryn Mawr project updates for 48<sup>th</sup> ward</li> <li>• Lunar New Year parade – CTA mini-train</li> <li>• RPM Virtual Office Hours – constituent questions answered</li> <li>• RPM Lawrence to Bryn Mawr tour with 48<sup>th</sup> ward</li> <li>• Announcement of “Elevating Futures Scholarship Program” accepting CPS student applications</li> <li>• RPM Scoop newsletters, RPM social media promote Valentine’s Day specials at area businesses as part of “Open for Business” program</li> <li>• Roscoe-Newport Neighbors construction update</li> </ul>	<p>Weekly</p> <p>Bi-weekly</p> <p>Feb. 5</p> <p>Feb. 7</p> <p>Feb. 8</p> <p>Feb. 10</p> <p>Feb. 11</p> <p>Feb. 16</p>
Workforce & SBE/DBE	 <p>CHICAGO COOK WORKFORCE PARTNERSHIP A proud partner of the American Job Center network</p> 	<ul style="list-style-type: none"> <li>• Monthly DBE/Workforce Outreach &amp; Compliance Meeting</li> <li>• DBE and Workforce Numbers as of 02/28/2022</li> <li>• Dollars Awarded To Date: \$185,899,604             <ul style="list-style-type: none"> <li>• Unique DBE Firms To Date: 71</li> <li>• Unique Firms New to CTA: 27</li> </ul> </li> <li>• Total Labor Hours Produced: 638,906</li> <li>• Total Dollars Earned: \$36,385,276</li> <li>• Jobs created to date (construction trade labor on the design-build team): 1,362 individuals</li> </ul>	<p>Ongoing</p>