All Stations Accessibility Program (ASAP)

Strategic Plan

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GLOSSARY

The following is a list of key terms and their definitions used throughout the All Stations Accessibility Program Strategic Plan:

ACCESSIBLE MEANS OF EGRESS

A continuous and unobstructed way of egress travel from any point in a building or facility that provides an accessible route to an area of refuge, a horizontal exit, or a public way.

ACCESSIBLE ROUTE

A continuous, unobstructed path connecting accessible elements and spaces of a building. Interior accessible routes may include corridors, floors, ramps, elevators, lifts, and clear floor space at fixtures. Exterior accessible routes may include parking access aisles, curb ramps, crosswalks at vehicular ways, walks, and ramps.

ALTERATION

A change to a building or facility that affects or could affect the usability of the building or facility. Normal maintenance, reroofing, or changes to mechanical and electrical systems are not alterations unless they affect the usability of the building or facility.

ENTRANCE

Any access point to a building or portion of a building or facility used for the purpose of entering. An entrance includes the approach walk, the vertical access leading to the entrance platform, the entrance platform itself, vestibule if provided, the entry door or gate, and the hardware of the entry door or gate.

GAP FILLER

A piece of material, generally the width of a train car access door, that fills the void between the edge of the car floor and the platform area so that customers using a wheelchair, scooter, etc. can access to and from the car on a continuous surface.

HIGH BARRIER GATE (HBG)

A protected station entry and/or exit point that controls entry with the use of a fare card reader. A high barrier rotogate only allows entry, with approved payment collection, and exiting.

MEZZANINE

Mezzanines are an intermediate floor at a rail station. Depending on the station configuration (i.e., elevated or subway), the mezzanine may be above or below the station entrance/exit. Not all rail stations have mezzanine levels.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

The National Environmental Policy Act (NEPA) establishes protection of the environment as a national priority and mandates that environmental impacts must be considered before any federal action likely to significantly affect the environment is undertaken.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

The National Fire Protection Association (NFPA) provides specifications related to fire prevention and protection.

NFPA 130

NFPA 130 – "Standard for Fixed Guideway Transit and Passenger Rail Systems" specifies fire protection and life safety requirements for underground, surface, and elevated fixed transit and passenger rail systems. These standards cover the following: stations; trainways; emergency ventilation systems; vehicles; emergency procedures; communications; control systems; and passenger rail systems.

PATH OF TRAVEL

A path of travel is required to connect an altered primary function area to an accessible entrance and is defined in the Americans with Disabilities Act of 1990 (ADA) as "a continuous, unobstructed way of pedestrian passage by means of which the altered area may be approached, entered, and exited, and which connects the altered area with an exterior approach (including sidewalks, parking areas, and streets), an entrance to the facility, and other parts of the facility." The path of travel also includes the restrooms and public telephones, if any, that serve that area.

An accessible path of travel may include:

- Walks and sidewalks;
- Curb ramps and pedestrian ramps;
- Clear floor paths through corridors, waiting areas, mezzanines;
- Parking spaces and access aisles;
- Public elevators; and/or
- Bridges, tunnels, or other passageways between platforms.

PROGRAM ACCESSIBILITY

The ADA's requirement that a public entity's services, programs, or activities, when viewed in their entirety must be readily accessible to and usable by individuals with disabilities. Public entities are not necessarily required to make each of their existing facilities accessible.

RIGHT-OF-WAY

A strip of land that is granted, through an easement or other mechanism, for transportation purposes, such as for a trail, driveway, rail line or highway. A right-of-way is reserved for the purposes of maintenance or expansion of existing services within the right-of-way.

ROTOGATE

A rotogate is a tall turnstile that can be used for either entering and/or exiting a restricted area. A rotogate is within a steel bar enclosure, and is divided to restrict movement.

SLOW ZONE

Slow zones are areas where trains are required to operate at slower than-normal speeds. Slow zones develop along track infrastructure due to age, regular wear and tear, extreme weather conditions, and other factors.

STATE OF GOOD REPAIR

An asset or system is in a state of good repair when no backlog of capital needs exists – hence all asset life cycle investment needs (e.g., preventive maintenance and rehabilitation) have been addressed and no capital asset exceeds its useful life.

STATIONHOUSE

The part of a rail station that provides an entrance/exit and contains the Customer Assistant kiosk, fare array, and vending machines that sell or reload CTA fare cards. Depending on the station configuration, stationhouses may have multiple levels: street, mezzanine, and platform.

WAYFINDING

Wayfinding refers to information systems that guide people through a physical environment and enhance their understanding and experience of the space.

VERTICAL ACCESSIBILITY

The provision of access where an accessible route experiences a change in level through the use of an accessible means of vertical access (i.e., ramps, elevators, and platform lifts).

YEAR OF EXPENDITURE (YOE)

Year of Expenditure dollars are dollars that are adjusted for inflation from a baseline year (e.g., present year) to the expected year of construction or mid-point of construction.

ACRONYMS

ADA – Americans with Disabilities Act of 1990

APPs – Wayfinding Applications

APS – Accessible Pedestrian Signals

ASAP – All Stations Accessibility Program

Blue Vision – Blue Line Forest Park Vision Study

CA – Customer Assistant

CBC – Chicago Building Code

CBD – Central Business District

CDOT – Chicago Department of Transportation

CTA – Chicago Transit Authority

FEIS/ROD –Final Environmental Impact Statement/Record of Decision

DoB – Department of Buildings

DOT – Department of Transportation

FAST Act – Fixing America's Surface Transportation Act

FP – Forest Park

FTA – Federal Transit Administration

IATF – Infrastructure Accessibility Task Force

IDOT – Illinois Department of Transportation

LBMM – Lawrence to Bryn Mawr Modernization

MOPD – Mayor's Office for People with Disabilities

NFPA – National Fire Protection Association

RPM – Red and Purple Modernization

TIF – Tax Increment Financing

YOE – Year of Expenditure

EXECUTIVE SUMMARY

ACHIEVING ACCESSIBILITY AT THE CTA

At the close of the 25th anniversary celebration of the Americans with Disabilities Act (ADA), the Chicago Transit Authority (CTA) President Dorval R. Carter, Jr. announced a new initiative – the All Stations Accessibility Program (ASAP) – to establish a blueprint for making CTA's legacy rail system 100 percent accessible to people with mobility impairments over the next 20 years.

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The CTA is committed to making its system completely accessible to people with disabilities in the next 20 years by becoming the first legacy transit system to make all of its train stations accessible.

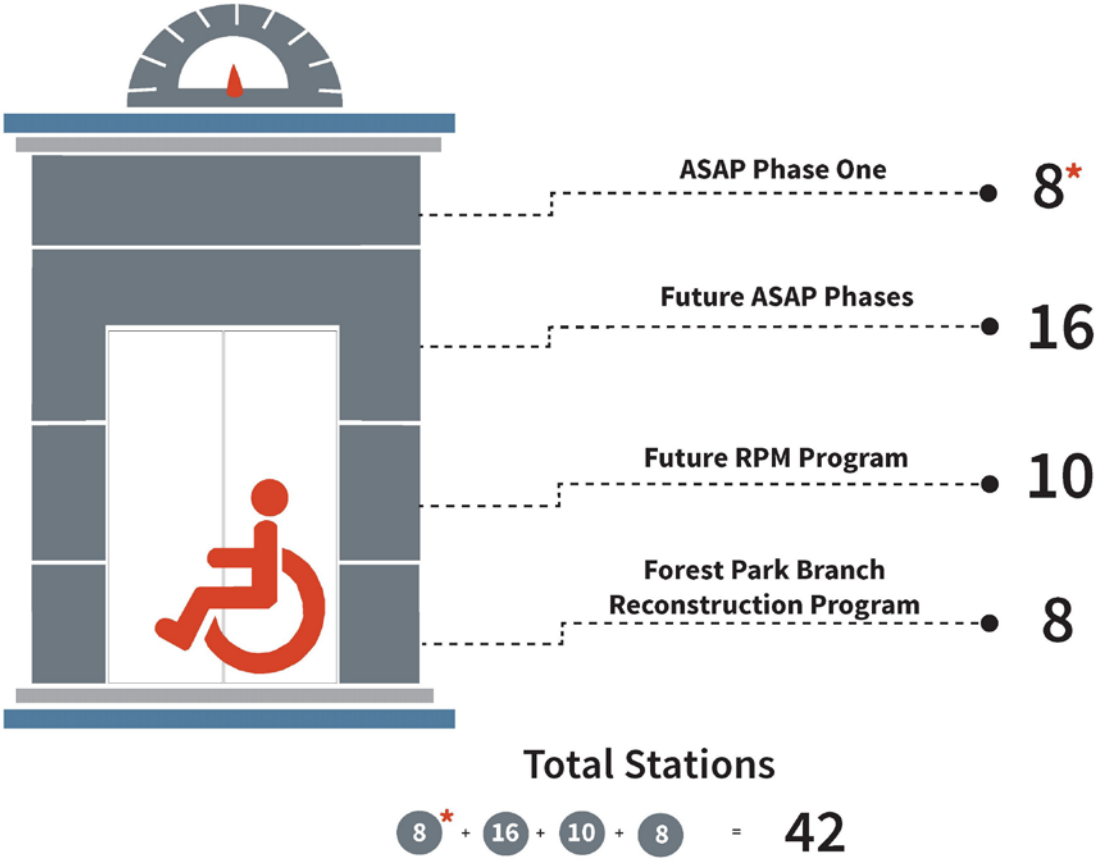
ASAP goes beyond federal requirements to add accessibility across the entire CTA rail system. The ASAP Strategic Plan builds on CTA's most recent successes to add accessibility to the rail system and charts a clear path forward to accomplish the goal of creating a 100 percent vertically accessible rail system within 20 years. The CTA will accomplish this goal by retrofitting or rebuilding its 42 inaccessible rail stations as well as proactively rehabilitating or replacing its 162 existing elevators (as of 2018) throughout the rail system to ensure that those stations maintain their accessibility. The ASAP Strategic Plan includes CTA's proposed station concepts, associated cost estimates, and a phased implementation strategy to steadily add elevators and other accessible features to the rail system and to maintain existing elevators over time.

Accessibility provides greater inclusiveness, benefitting everyone by creating environments that are usable by all people. People come in all shapes and sizes and with a range of physical, sensory, and cognitive abilities. These abilities span a broad spectrum and can also change over the course of a lifetime. ASAP benefits everyone, providing accessibility to all transit riders regardless of one's ability. Though ASAP's emphasis is on making all platforms and stations vertically accessible so that people with mobility impairments can use the rail system, the proposed ASAP upgrades also include accessible entrances/doors, accessible routes from curbs to platforms, improved directional signage, enhanced lighting as appropriate, removal of platform obstructions, and accessible employee facilities. All CTA rail stations include some accessible features and the CTA will continue to examine and improve other accommodations, with the goal of promoting usage of its entire rail system by people of all abilities. The ASAP Strategic Plan also identifies wayfinding options that could make navigating the environment of CTA stations easier and more intuitive for people with a wide variety of disabilities, including people who are DeafBlind, blind, and visually impaired (see Chapter 3).

Given the magnitude of the work that lies ahead, the CTA formulated a phased implementation strategy to achieve accessibility over the next 20 years. Of the 42 stations that are not currently accessible, eight (8) stations are prioritized for ASAP Phase One – over half of which are already partially or fully funded. This means that ASAP will start delivering accessibility to the disability community in the near-term. Sixteen (16) stations are identified for Future ASAP Phases and the remaining ASAP stations are part of two other previously established

CTA program initiatives to modernize and expand capacity of the CTA rail system. These major programs are the Red and Purple Modernization (RPM) Program and the Forest Park (FP) Branch Reconstruction Program, both of which involve substantial infrastructure reconstruction and are currently in various stages of planning and design. The RPM Program is the largest capital improvement project in CTA history and the FP Branch Reconstruction Program requires complete, end-to-end reconstruction of the Forest Park branch. Of the fourteen (14) inaccessible RPM stations, the first four (4) RPM Phase One stations are included in ASAP Phase One, and the remaining ten (10) are considered the Future RPM Program. The FP Branch Reconstruction Program includes eight (8) stations. A summary graphic depicting how inaccessible stations are categorized within ASAP is shown in Figure ES-1.

Figure ES-1 Station Components of ASAP



* Includes four funded RPM Phase One stations and one CDOT-led station.

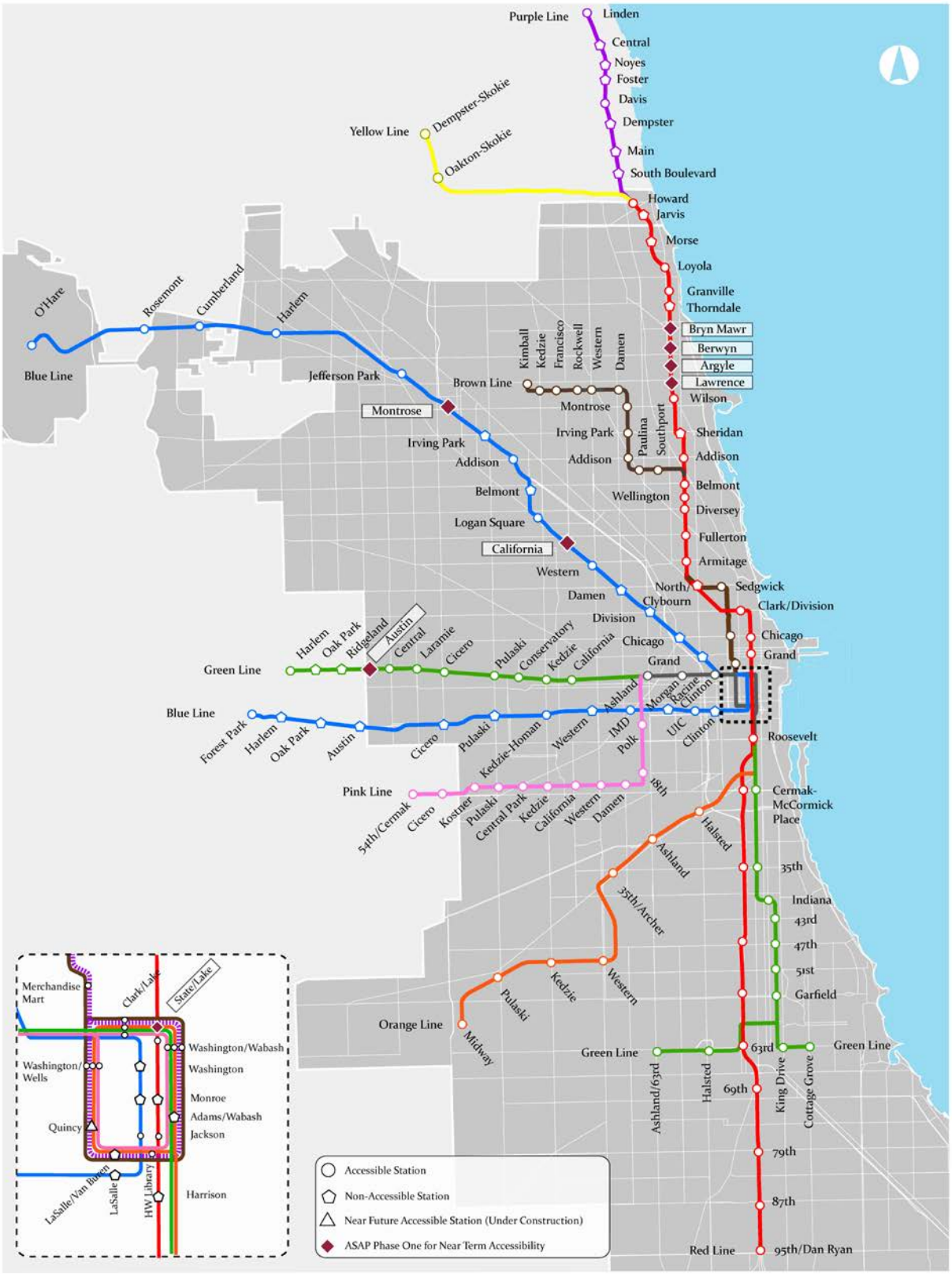
As part of the ASAP effort, the CTA also developed the Elevator Replacement Program to strategically maintain existing passenger elevators across the rail system. The Elevator Replacement Program will rehabilitate or replace 162 existing passenger elevators (as of 2018) within the CTA rail system to ensure the reliability of existing accessible stations. The Elevator Replacement Program prioritization approach provides a near-term roadmap and will be updated every two years to account for new elevators that are added to the system via ASAP as well as respond to current data on system performance and target the highest priority elevators.

ACHIEVEMENTS TO DATE

The CTA executive team has worked closely with Chicago's disability community to pursue a vision of 100 percent accessibility for all customers, making significant progress to improve accessibility throughout the rail system within the City and in neighboring communities that the CTA serves. When the ADA passed in 1990, the majority of the rail fleet was accessible, but less than 10 (about six percent) of CTA's rail stations were accessible, and none of its buses complied with accessibility standards laid out in the legislation's implementing regulation. **Due to CTA's commitment to improving accessibility, today every rail car and bus in CTA's fleet is accessible to people with disabilities and 102 of CTA's 145 rail stations are accessible.** The CTA continues to make progress to add accessibility throughout the system, most recently at the Wilson station (Red Line), the Washington/Wabash station (Loop Elevated), and the Quincy station (Loop Elevated), which is queued up for completion in 2018. After Quincy is complete, 103 rail stations (71 percent) will be accessible.

Figure ES-2 provides a snapshot of how much has been achieved to date and identifies those stations that are accessible, inaccessible, and how the CTA plans to continue this progress into the first phase of ASAP implementation.

Figure ES-2 Station Accessibility Status



APPROACH TO ADDING ACCESSIBILITY

ASAP WORKING GROUP

To develop a comprehensive roadmap to full vertical accessibility, the CTA began collaborating with accessibility experts and third-party architects to develop the ASAP Strategic Plan. The CTA formed a Working Group that included representatives from the Mayor's Office for People with Disabilities (MOPD), the Chicago Transit Authority Board, LCM Architects (a Chicago-based design firm consisting of experts in accessibility and universal design), CTA's Manager of ADA Compliance Programs, and personnel from various CTA Departments (e.g., Law, Planning, Infrastructure). This Working Group met regularly to provide input on the ASAP planning process as well as technical guidance related to the proposed station designs. The CTA also regularly updated its ADA Advisory Committee, which serves in an advisory capacity to the CTA and whose members represent various disability-related organizations and interests within the disability community.

PRIORITIZATION PROCESS

While some branches of the rail system are almost entirely accessible, others include numerous inaccessible stations, leaving sections of the City and neighboring communities that people with disabilities cannot reach via the CTA rail system. To determine the order in which stations should be made accessible, the CTA built on an earlier planning effort (2012 Infrastructure Accessibility Task Force (IATF) Report) to add vertical accessibility (i.e., elevators and ramps) to the CTA rail system based on an assessment of station needs. The CTA updated the prior needs assessment and introduced a new criterion called a "complexity factor" to determine ASAP priorities for the first phase of ASAP implementation. Highly complex stations typically are more expensive as they require complex design and engineering solutions to work within the physical constraints of a station. Moreover, highly complex stations typically require more time for planning, design, construction, agency coordination, public processes related to potential impacts (e.g., historic, environmental), and land acquisitions (see design considerations below and Chapter 7 for a typical project development timeline). The complexity factor accounts for these considerations, which are important as CTA evaluates stations that can be made accessible in the near-term. Overall, each inaccessible ASAP station received a need score and a complexity score, which were used to develop ASAP phases (see Chapter 2).

DESIGN PROCESS AND CONSIDERATIONS

Following the ASAP prioritization process, conceptual designs were developed for all the ASAP stations in order to develop costs and understand approach; these concepts will require additional analysis during design to confirm feasibility and conduct the appropriate coordination. Designs for the ASAP Phase One stations (three in total), were advanced to a 10 percent conceptual level. The remaining 16 stations identified for Future ASAP Phases received more basic schematic designs (see Chapter 3). Of course, as ASAP stations are funded and more detailed designs are developed, there will likely be modifications to the proposed designs described in the ASAP Strategic Plan. This is because more information will become available from future land survey and geotechnical survey reports, in-depth engineering and design work, agency coordination, and public feedback.

A number of complexities and constraints emerged as part of the ASAP design process. The age of the CTA's inaccessible stations ranges from 46 to over 120 years old, with some stations dating as far back as 1895. Stations were built in a few different configuration types, and, as a result, each station has unique design features and constraints, making the simple addition of one or more elevators complicated. These differences create site-specific constraints that require site-specific solutions. Some of the factors that must be considered when developing a design to make a station accessible are shown in Figure ES-3.

Figure ES-3 Complexities and Constraints

Platform Widths and Lengths
Many platforms are too narrow or too short to accommodate an elevator or to allow adequate space for wheelchair passing and turning.

Property Impacts
Some stations are located so close to adjacent buildings that many proposed modifications would only be possible if the adjacent structure is modified or removed.

Space Constraints
The size and layout of stationhouses cannot always accommodate elevators and the required space for elevator machine rooms, which are custom-engineered and specially-fabricated machines that need to fit perfectly into the space where they will operate.

Utility Relocation
Relocating utility lines is often necessary; however, many utilities are over a century old and located in the public way, requiring extensive coordination with other City Departments.

Station Type
Station configuration types (subway, elevated, median, at-grade) have unique characteristics that make some configuration types more complex to design, engineer, and construct than others. For example, subway stations require intensive construction activities, such as excavation, utility relocation, and road closures, which make these projects inherently more complex to design and construct.

Adjacent Freight Rail
The location of adjacent freight rail lines sometimes limits the design options available to modify stations.

Age and Condition
Due to the age and condition of some of the CTA's stations, rebuilding the station to meet modern design standards makes sense rather than retrofitting the existing station.

Historic Resources
Some stations or elements of stations are designated as historic resources and cannot be altered in a manner that impacts their historic significance.

COMMITMENT TO ACCESSIBILITY

ASAP PHASE ONE

AUSTIN (GREEN), MONTROSE (BLUE), AND CALIFORNIA (BLUE)

ASAP Phase One stations have a higher needs score and a lower complexity score based on the ASAP station prioritization. The Austin Green Line (Lake branch) station and the Montrose and California Blue Line (O'Hare branch) stations are included in the first phase of ASAP implementation. Given their priority status, these three stations were advanced to a 10 percent conceptual design stage, including detailed construction cost estimates, to kick-start the unfunded ASAP Phase One stations alongside the five funded ASAP Phase One stations that are actively moving forward to construction (see sections below).

STATE/LAKE STATION (LOOP ELEVATED)

The Chicago Department of Transportation (CDOT) is currently leading a design effort to completely reconstruct and modernize the existing State/Lake (Loop Elevated) station. The project is fully funded through the design phase. In late 2017, CDOT was awarded a $56.9 Million federal Congestion Mitigation and Air Quality (CMAQ) grant by the Chicago Metropolitan Agency for Planning. The CMAQ grant will allow CDOT to accelerate work in collaboration with the CTA to launch the design process for a new station. The $56.9 Million CMAQ grant will not cover the entire projected cost of $119.4 Million. However, CDOT plans to seek additional federal funding for construction in the coming years, so this is not identified as part of the funding needed for ASAP Phase One shown in Table ES-2.

RPM PHASE ONE

Funding in the amount of $2.2 Billion has been programmed for RPM Phase One, so this is not identified as part of the funding needed for ASAP Phase One shown in Table ES-2. RPM Phase One includes full reconstruction of four currently inaccessible stations on the Red Line (Lawrence, Argyle, Berwyn, and Bryn Mawr). Other interrelated infrastructure work beyond station accessibility (e.g., track, support structures, signals, etc.) will also be conducted as part of RPM Phase One. Because accessibility represents just one aspect of the larger infrastructure scope required for RPM Phase One, this translates into a higher cost ($2.2 Billion).

ELEVATOR REPLACEMENT PROGRAM

Along with making inaccessible stations accessible, it is important to ensure that existing elevators on CTA's rail system remain in a state of good repair. When an elevator is unexpectedly unavailable, customers may experience inconveniences and delays; this is especially true in areas of the system where there are long stretches of stations with no elevators. Given the importance of ensuring reliability of CTA's existing elevators, the first five years of the Elevator Replacement Program are included in ASAP Phase One. To meet the 20-year Elevator Replacement Program timeframe, an average of eight elevators per year will need to be rehabilitated or replaced. The CTA has targeted 16 elevators that would be replaced in the first two years of ASAP as shown in Table ES-1.

Table ES-1 Elevator Replacement Program Two-Year Strategy

Line	Station[a]	Number of Station Elevators to be Rehabilitated or Replaced
Loop / Transfer Stations	Clark/Lake Blue, Brown, Green, Orange, Pink, & Purple Line Transfer Station	Rehabilitate or replace all 4 elevators
	Washington/Wells Brown, Orange, Pink, & Purple Line Transfer Station	Rehabilitate or replace 1 of 2 elevators
Red	Jackson	Rehabilitate or replace all 4 elevators
	Loyola	Rehabilitate or replace the only elevator
Blue	Forest Park	Rehabilitate or replace the only elevator
	O'Hare	Rehabilitate or replace the only elevator
	Western (O'Hare branch)	Rehabilitate or replace 1 of 2 elevators
Orange	Midway	Rehabilitate or replace both elevators
Purple	Davis	Rehabilitate or replace 1 of 2 elevators

[a] Stations will be reassessed every two years to ensure that the data remains accurate and the highest-priority elevators are addressed in future years of the Program.

ASAP PHASE ONE COST (UNFUNDED PORTION)

The ASAP cost estimates include financial assumptions that are intended to provide as realistic a picture as possible of future costs given the information at hand. Identifying the exact cost of ASAP is difficult at this early stage of the design process as there are variables for which information is not yet available. As a result, ASAP cost estimates may change as station designs evolve. The same project could also become more expensive to implement due to inflation if funding is not received to maintain the phased implementation strategy that has been identified in Figure ES-4 (see Chapter 7).

As shown in Table ES-2, the total unfunded cost for the ASAP Phase One stations and the first five years of the Elevator Replacement Program is $140.3 Million.

Table ES-2 ASAP Phase One Cost (Unfunded Portion)

	Cost (Year of Expenditure (YOE))
Austin Station	$24.0 Million
Montrose Station	$16.1 Million
California Station	$34.6 Million
Subtotal	**$74.7 Million**
Five-Year Elevator Replacement Program	$65.6 Million
TOTAL Unfunded Cost[a]	**$140.3 Million**

[a] The ASAP Phase One cost includes the first five years of the Elevator Replacement Program. However, the ASAP Phase One cost excludes the partially funded CDOT-led State/Lake station (Loop Elevated) and the four fully funded RPM Phase One stations on the Red Line at Lawrence, Argyle, Berwyn, and Bryn Mawr.

TOTAL ASAP COST

The total estimated cost to implement all inaccessible stations included in ASAP as well as the Elevator Replacement Program is $2.1 billion as shown in Table ES-3.

The Future RPM Program and the FP Branch Reconstruction Program will help the CTA achieve its goal to make the legacy rail system 100 percent accessible. However, given the magnitude – in terms of scope and cost – of these major reconstruction initiatives, planning and design for these Programs is being conducted through separate processes that will address accessibility within the broader context of these Programs. Therefore, cost estimates for these Programs are not included in the total cost of ASAP.

Table ES-3 Twenty-Year ASAP and Elevator Replacement Program Cost

	Unfunded Cost (YOE)	Funded Cost (YOE)
ASAP Phase One Stations	$74.7 Million	
State/Lake Station	–	$119.4 Million[a]
RPM Phase One – Lawrence, Argyle, Berwyn, Bryn Mawr	–	$2.2 Billion[b]
ASAP Phase One Five-Year Elevator Replacement Program	$65.6 Million	–
Future ASAP Phases	$1.7 Billion	–
Future Elevator Replacement Program	$253.0 Million	–
TOTAL Twenty-Year Cost	**$2.1 Billion**	

[a] Reflects the projected cost for this CDOT-led project. To date, CDOT has secured CMAQ grant funds in the amount of $56.9 Million, which will not cover the full projected cost. However, CDOT plans to seek additional federal funding for construction, so this has not been identified as part of the funding needed for ASAP Phase One.
[b] Funding for RPM Phase One only has been programmed; the Future RPM Program remains unfunded. The RPM Program includes a larger infrastructure scope beyond accessibility.

PHASED IMPLEMENTATION STRATEGY

Implementing alterations or reconstructing ASAP stations will take time, coordination, and commitment. The proposed phased implementation strategy serves as a roadmap for sequencing stations to meet the 20-year timeframe. ASAP stations are slotted into four phases, which lays out a path for planning, designing, and constructing the proposed accessibility improvements at each station. Construction of the eight ASAP Phase One stations is estimated to begin within the first phase ASAP as shown in Figure ES-4, after which the stations are proposed to be constructed in Phase Two through Four. A full listing of CTA's currently inaccessible stations, by phase and program is shown in Table ES-4.

CALL TO ACTION: ADVOCATING FOR ASAP

Building on the progress and momentum created over the last 30 years, and in partnership with the disability community, the ASAP Strategic Plan lays out the roadmap to deliver complete vertical accessibility to the CTA rail system within 20 years.

ASAP benefits everyone, but funding is a key piece of the puzzle to make ASAP a reality. Funding has already been partially or fully secured for over half of the ASAP Phase One stations (Lawrence, Argyle, Berwyn, Bryn Mawr, and State/Lake). To help secure funding for RPM Phase One, the CTA relied on the support of many individuals and organizations, including those in the disability community, to advocate for funding for this much-needed project. These efforts were ultimately successful, resulting in the creation of the RPM Transit Tax Increment Financing (TIF) District. Funding for transit is in short supply and securing funding for ASAP is no small task. The CTA will look to these strong partnerships again to obtain funding for the remainder of ASAP and move this critical program forward.

Long-term funding solutions are needed at both the federal and state level to allow the CTA to meet the accessibility needs of all riders. The CTA is currently facing extraordinary fiscal pressure, as the State of Illinois has reduced operating funds to support regional transit. The CTA, which carries more than 80 percent of the region's transit rides, has shouldered the largest portion of these cuts: more than $33 Million in reduced funding. Meanwhile, limited state and federal capital funding is not sufficient to address the growing backlog of upgrades and repairs required to keep the CTA system in a state of good repair. The CTA continues investing in upgrading or replacing system assets, yet the unfunded capital need continues to grow with each year.

A new federal funding program is needed to incentivize accessibility improvements beyond the ADA requirements. There are currently no major federal funding programs that directly support accessibility-focused transit projects or programs like ASAP. The CTA – like many other legacy transit agencies throughout the country – has complied with the core requirements of the ADA and continues to meet ADA requirements on new projects. But CTA's ASAP initiative is different. ASAP goes beyond ADA requirements to achieve vertical accessibility across the entire CTA rail system. A good public transportation system is a major asset for all U.S. cities; transit supports economic development by providing access to jobs and businesses, reducing road congestion, and lowering transportation costs for individuals and households by providing an alternative to driving. When a transit system is not fully accessible, the benefits it provides are not available to everyone. A long-term federal funding solution is needed to incentivize legacy transit systems to improve accessibility beyond what is required by law and to create a system that is fully inclusive and accessible, embracing the true spirit of the ADA.

A new state capital bill is needed to support the $140.3 Million projected cost of ASAP Phase One. At their current levels, CTA's existing funding sources are not adequate to support ASAP improvements. In the near-term, ASAP Phase One will need to be funded by the State. If a new federal funding program is created, the CTA will require a revenue stream to match federal funds. This revenue stream does not currently exist because the State has not passed a capital bill since 2009. Therefore, new transportation revenues will be needed from state and local sources to support a state capital bill that would allow ASAP Phase One to move forward.

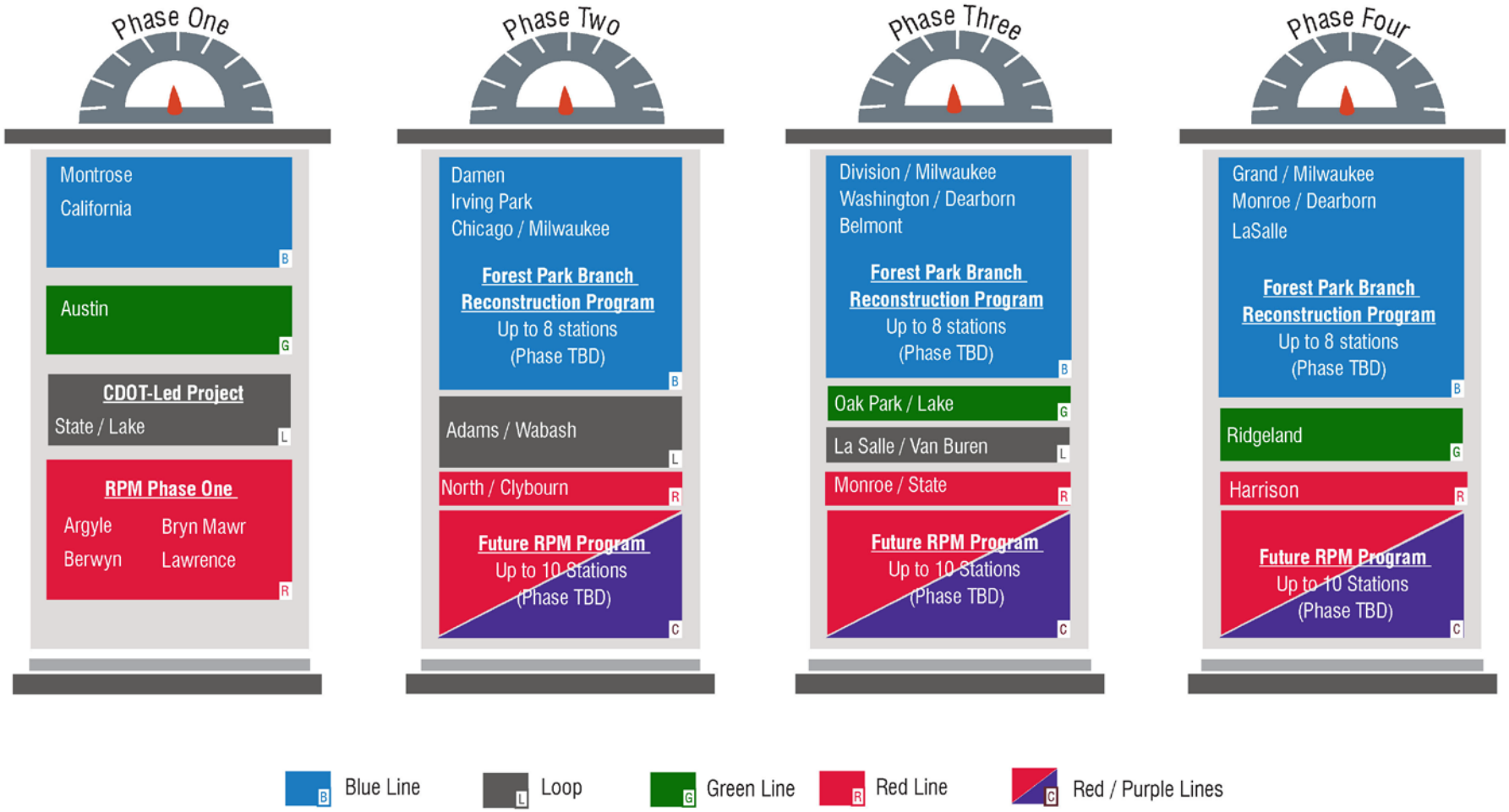
Successful implementation of ASAP Phase One and Future ASAP Phases will heavily rely on a stable and reliable source of state capital funding as well as a new federal funding program. Accessibility will remain a central priority for CTA, even as it seeks to maintain, upgrade, and replace the existing system. Accessibility benefits everyone, and to make ASAP a reality, the CTA looks forward to ongoing collaboration with the disability community, the State of Illinois, and the federal government.

FUTURE ASAP STRATEGIC PLAN UPDATES

The ASAP Strategic Plan will be updated over time to remain consistent with ongoing planning, modernization, and construction work as part of CTA's Capital Program. The following regular updates are currently planned:

- CTA staff will provide annual updates on ASAP to the ADA Advisory Committee;
- The ADA Advisory Committee will include an update on ASAP as part of its annual update to the Chicago Transit Authority Board; and
- CTA staff will update the ASAP Strategic Plan every five years, which will be available on CTA's website: www.transitchicago.com/accessibility/asap.

Figure ES-4 Twenty-Year Implementation Strategy by Phase, Pending Funding Availability



Note: Phases reflect the sequencing in which construction is estimated.

Table ES-4 Inaccessible Stations, by Proposed Implementation Phase

No	Line	Station	Branch	Note / Related Program
Station Currently Under Construction to Add Accessibility				
–	Loop	Quincy	Loop Elevated	Under Construction
ASAP Phase One				
1	Green	Austin	Lake	
2	Blue	Montrose	O'Hare	
3	Blue	California	O'Hare	
4	Loop	State/Lake	Loop Elevated	CDOT-led Project (Partially Funded)
5	Red	Lawrence	North Side Main Line	RPM Phase One (Funded)
6	Red	Argyle	North Side Main Line	RPM Phase One (Funded)
7	Red	Berwyn	North Side Main Line	RPM Phase One (Funded)
8	Red	Bryn Mawr	North Side Main Line	RPM Phase One (Funded)
ASAP Phase Two				
9	Loop	Adams/Wabash	Loop Elevated	
10	Blue	Chicago/Milwaukee	Dearborn Street Subway	
11	Blue	Damen	O'Hare	
12	Blue	Irving Park	O'Hare	
13	Red	North/Clybourn	State Street Subway	
ASAP Phase Three				
14	Blue	Belmont	O'Hare	
15	Blue	Division/Milwaukee	Dearborn Street Subway	
16	Loop	LaSalle/Van Buren	Loop Elevated	
17	Red	Monroe/State	State Street Subway	
18	Green	Oak Park	Lake	
19	Blue	Washington/Dearborn	Dearborn Street Subway	

No	Line	Station	Branch	Note / Related Program
ASAP Phase Four				
20	Blue	Grand/Milwaukee	Dearborn Street Subway	
21	Red	Harrison	State Street Subway	
22	Blue	LaSalle	Dearborn Street Subway	
23	Blue	Monroe/Dearborn	Dearborn Street Subway	
24	Green	Ridgeland	Lake	
Forest Park Branch Reconstruction Program (Phase TBD)				
25	Blue	Clinton	Forest Park	
26	Blue	Racine	Forest Park	
27	Blue	Western	Forest Park	
28	Blue	Pulaski	Forest Park	
29	Blue	Cicero	Forest Park	
30	Blue	Austin	Forest Park	
31	Blue	Oak Park	Forest Park	
32	Blue	Harlem	Forest Park	
Future RPM Program (Phase TBD)				
33	Red	Sheridan	North Side Main Line	
34	Red	Thorndale	North Side Main Line	
35	Red	Morse	North Side Main Line	
36	Red	Jarvis	North Side Main Line	
37	Purple	South Boulevard	Evanston	
38	Purple	Main	Evanston	
39	Purple	Dempster	Evanston	
40	Purple	Foster	Evanston	
41	Purple	Noyes	Evanston	
42	Purple	Central	Evanston	

CHAPTER 1: STRATEGIC PLAN OVERVIEW

DEFINING THE NEED

PROGRAM GOAL AND DEVELOPMENT

The Chicago Transit Authority (CTA) is committed to making the system completely accessible to people with disabilities in the next 20 years by becoming the first legacy transit system to make all of its train stations accessible. To fulfill this commitment, the CTA established the All Stations Accessibility Program (ASAP) to chart a clear path forward to accomplish its goal of creating a vertically accessible rail system within 20 years.

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One of the best ways to get around Chicago is on the CTA. Every bus in the fleet is accessible. Now, with ASAP as a guide, the vision for an accessible rail system can become a reality.

Because some stations on the rail system are not currently usable by people with mobility impairments, ASAP is focused on adding vertical accessibility – i.e., elevators and ramps – at all inaccessible rail stations. The CTA began work on this effort in 2016, culminating in proposed station designs to add accessibility at all vertically inaccessible stations, including those associated with the Red Purple Modernization (RPM) Program and the Forest Park (FP) Branch Reconstruction Program (see Chapter 5), along with associated cost estimates (see Chapter 6) and a phased implementation strategy (see Chapter 7).

Though ASAP's emphasis is on making all platforms and stations vertically accessible so that people with mobility impairments can use the rail system, the CTA remains committed to enhancing accessibility for all users. Therefore, additional accessibility features are incorporated into the proposed designs to make stations more accessible for customers with disabilities at all vertically inaccessible stations.

Beyond the addition of elevators, many of the proposed ASAP upgrades would benefit both people with and without disabilities. For example, all station designs consider sidewalks and crosswalks, power-assisted doors, accessible fare array, braille and signage, accessible Customer Assistant (CA) kiosks and staff toilet rooms, enhanced lighting as appropriate, and expanded platform clearances for wheel chair maneuverability. For each inaccessible station, ASAP evaluates structural changes and the removal of platform impediments, which would be needed to accommodate one or more elevators and allow wider platform clearances for easy maneuverability of a wheelchair or other mobility device.

The proposed station designs consider the right type and size of elevator that would fit within the physical constraints of each station. The CTA reviewed the historic aspects of ASAP stations, adjacent buildings that could be impacted, and additional exits to meet fire safety requirements. The CTA also reviewed the underground utilities that might be impacted and whether these can

be avoided, and considered pedestrian safety and connections outside stations as well as wayfinding upgrades and changes. All this work has been accomplished as part of ASAP to develop proposed design concepts that address accessibility needs while fully addressing the site constraints, so that the CTA has confidence in station concepts that can actually be built.

ASAP COMPONENTS

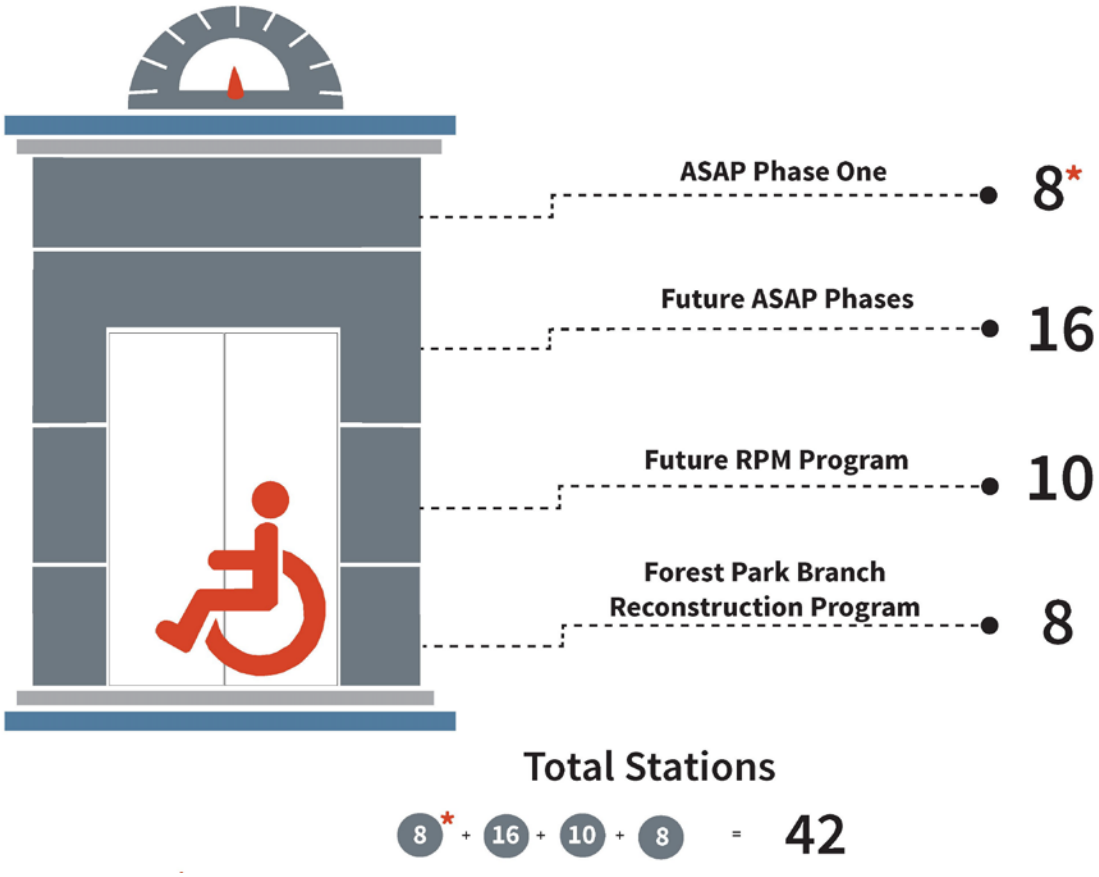
Forty-three of the 145 CTA stations are currently inaccessible as shown in Table 1, one of which is currently under construction to add elevators at the Quincy station (Loop Elevated). The remaining 42 stations are inaccessible and are included either in ASAP or in one of CTA's other major reconstruction programs. Eighteen (18) of the inaccessible stations are part of either a future Red and Purple Modernization (RPM) Program phase (10 stations) or the Forest Park (FP) Branch Reconstruction Program (8 stations). The following eight stations are prioritized for ASAP Phase One – over half of which are already partially or fully funded, setting ASAP up for success to start delivering near-term gains for the disability community:

- Austin – Green Line (Lake branch)
- Montrose – Blue Line (O'Hare branch)
- California – Blue Line (O'Hare branch)
- State/Lake – (Loop Elevated)[a]
- Lawrence – Red Line (North Side Main Line branch)[b]
- Argyle – Red Line (North Side Main Line branch)[b]
- Berwyn – Red Line (North Side Main Line branch)[b]
- Bryn Mawr – Red Line (North Side Main Line branch)[b]

[a] CDOT-led project.
[b] RPM Phase One station.

The inaccessible stations (16 stations) that are not part of any existing program are identified for Future ASAP Phases. The relationship between the ASAP stations and the RPM and FP Branch Reconstruction Programs is shown in Figure 1.

Figure 1 Station Components of ASAP



* Includes four funded RPM Phase One stations and one CDOT-led station.

Table 1 Inaccessible Stations, by Proposed Implementation Phase

No	Line	Station	Branch	Note / Related Program
Station Currently Under Construction to Add Accessibility				
–	Loop	Quincy	Loop Elevated	Under Construction
ASAP Phase One				
1	Green	Austin	Lake	
2	Blue	Montrose	O'Hare	
3	Blue	California	O'Hare	
4	Loop	State/Lake	Loop Elevated	CDOT-led Project (Partially Funded)
5	Red	Lawrence	North Side Main Line	RPM Phase One (Funded)
6	Red	Argyle	North Side Main Line	RPM Phase One (Funded)
7	Red	Berwyn	North Side Main Line	RPM Phase One (Funded)
8	Red	Bryn Mawr	North Side Main Line	RPM Phase One (Funded)
ASAP Phase Two				
9	Loop	Adams/Wabash	Loop Elevated	
10	Blue	Chicago/Milwaukee	Dearborn Street Subway	
11	Blue	Damen	O'Hare	
12	Blue	Irving Park	O'Hare	
13	Red	North/Clybourn	State Street Subway	
ASAP Phase Three				
14	Blue	Belmont	O'Hare	
15	Blue	Division/Milwaukee	Dearborn Street Subway	
16	Loop	LaSalle/Van Buren	Loop Elevated	
17	Red	Monroe/State	State Street Subway	
18	Green	Oak Park	Lake	
19	Blue	Washington/Dearborn	Dearborn Street Subway	

No	Line	Station	Branch	Note / Related Program
ASAP Phase Four				
20	Blue	Grand/Milwaukee	Dearborn Street Subway	
21	Red	Harrison	State Street Subway	
22	Blue	LaSalle	Dearborn Street Subway	
23	Blue	Monroe/Dearborn	Dearborn Street Subway	
24	Green	Ridgeland	Lake	
Forest Park Branch Reconstruction Program (Phase TBD)				
25	Blue	Clinton	Forest Park	
26	Blue	Racine	Forest Park	
27	Blue	Western	Forest Park	
28	Blue	Pulaski	Forest Park	
29	Blue	Cicero	Forest Park	
30	Blue	Austin	Forest Park	
31	Blue	Oak Park	Forest Park	
32	Blue	Harlem	Forest Park	
Future RPM Program (Phase TBD)				
33	Red	Sheridan	North Side Main Line	
34	Red	Thorndale	North Side Main Line	
35	Red	Morse	North Side Main Line	
36	Red	Jarvis	North Side Main Line	
37	Purple	South Boulevard	Evanston	
38	Purple	Main	Evanston	
39	Purple	Dempster	Evanston	
40	Purple	Foster	Evanston	
41	Purple	Noyes	Evanston	
42	Purple	Central	Evanston	

ELEVATOR REPLACEMENT PROGRAM

As part of the ASAP effort, the CTA developed the Elevator Replacement Program to strategically maintain existing passenger elevators across the rail system. Given the importance of ensuring reliability at CTA's existing elevators, the first five years of the Elevator Replacement Program are also included in ASAP Phase One.

The Elevator Replacement Program will rehabilitate or replace all 162 existing passenger elevators to reduce the backlog of elevator rehabilitation and replacement needs and ensure reliability of these accessible stations. The typical useful life of an elevator ranges between 20-30 years, with an elevator's condition varying based on a variety of factors (e.g., location, enclosure type, exposure to weather elements, usage). As of 2018, 47 percent of all passenger elevators on the CTA rail system are over 20 years old and are nearing the end or are past their useful lives. Many CTA customers rely on elevators to access the rail system, and it is critical that these elevators are functioning at all times to ensure that customers can safely and reliably arrive at their destinations. With the necessary funding, as the Elevator Replacement Program is implemented, the backlog will decrease to the point where no backlog exists.

The Elevator Replacement Program provides a roadmap for bringing existing passenger elevators in the CTA rail system into a state of good repair. The initial Elevator Replacement Program is anticipated to be implemented over the same 20-year horizon as the ASAP rail station component. As new elevators are introduced to the system via ASAP they will be automatically incorporated into the Elevator Replacement Program. The intent is that the Elevator Replacement Program continues indefinitely beyond the 20-year ASAP horizon so that all elevator needs are reassessed every two years to ensure reliability at accessible stations. The prioritization process by which the CTA gathered data on the condition of its existing elevators to determine condition levels and evaluate needs is described in Chapter 2.

RELATED PLANNING EFFORTS AND PROGRAMS

ASAP builds on CTA's ongoing planning efforts, described below, and is focused on adding vertical accessibility. In addition, ASAP incorporates inaccessible stations related to two major program initiatives intended to modernize and expand the capacity of the CTA rail system (see Chapter 5).

RED AND PURPLE MODERNIZATION PROGRAM

The **Red and Purple Modernization (RPM) Program** is the largest capital improvement project in CTA history. RPM is a major initiative that will completely rebuild the nearly century old North Red Line from Belmont to Howard and the Purple Line from Belmont to Linden in Wilmette. RPM is part of CTA's Red Ahead Program, a comprehensive initiative for maintaining, modernizing, and expanding Chicago's most-traveled rail line.

The CTA will rebuild stations within the RPM corridor, add much needed capacity to accommodate current and future riders, and provide faster and smoother rides with less crowding and more frequent service. The RPM Program is a multistage program to be completed in phases over time, with RPM Phase One expected to begin in 2019.

RPM Phase One will close the two-mile gap in accessible stations between the Wilson and Granville stations. With RPM Phase One fully funded, the CTA is moving closer to beginning

construction at four RPM Phase One stations on the Red Line (Lawrence, Argyle, Berwyn, and Bryn Mawr). These four stations will be made fully accessible and are included in ASAP Phase One.

The Future RPM Program is in the preliminary planning stage and much more analysis, public outreach, and design work will be necessary to define the implementation strategies for the Future RPM Program. Stations associated with RPM Phase One and the Future RPM Program are listed in Table 1. Chapter 5 provides an overview of the Future RPM Program.

FOREST PARK VISION STUDY / FOREST PARK BRANCH RECONSTRUCTION PROGRAM

The **Blue Line Forest Park Vision Study (Blue Vision)** is a long-term planning study that was initiated in 2013 in collaboration with the Illinois Department of Transportation's (IDOT) I-290 Phase I Study to improve multimodal mobility along the I-290 corridor. The Forest Park branch of the Blue Line is nearly 60 years old and infrastructure assets are either beyond or nearing the end of their remaining useful life. The Blue Vision Study laid the foundation for the FP Branch Reconstruction Program.

As part of the Blue Vision Study, the CTA looked at transit corridor needs from the Clinton to Forest Park stations, specifically evaluating existing infrastructure conditions, transit markets, and service patterns to provide recommendations for the Forest Park branch going forward. Recommendations focused on modernizing the existing branch and identifying near- and long-term transit improvements, including accessibility enhancements. Service recommendations included bringing service back up to design speeds, maintaining the existing two track configuration, and continuing to perform interim slow zone maintenance work on the Forest Park branch as needed in the near-term. Specific station designs will be developed as the FP Branch Reconstruction Program advances. General design recommendations included: keeping existing station layouts for double entry stations; adding auxiliary entrances to single entry stations to increase access to those stations; adjusting track alignment within the station limits to provide wider platform areas; and improving horizontal and vertical geometrics to meet accessibility needs. The FP Branch Reconstruction Program is not yet funded and does not qualify for any federal grant programs. The CTA is currently planning that this work will largely happen in coordination with IDOT's I-290 and bridge projects. Chapter 5 provides an overview of the FP Branch Reconstruction Program.

STATE OF GOOD REPAIR NEEDS

Like other legacy transit systems, the CTA system has many aging components that are either approaching or are past their useful lives (e.g., track, signals, trains, stations, power substations, yards, etc.). The transit industry refers to a transit system as being in a state of good repair when no backlog of capital needs exists, and only routine replacement and maintenance is required to meet daily operations. Given other pressing agency needs and a lack of capital funding (see Chapter 8), the CTA has been unable to conduct some replacement and rehabilitation activities, which means that many capital assets now exceed their useful life. When capital investments are not made, the problem compounds over time and the backlog grows to a point where the quality of service suffers.

Addressing the extensive infrastructure asset needs in the face of limited resources presents a major challenge for the CTA. Balancing competing needs is difficult given scarce local, state, and

federal resources. In addition, infrastructure improvements – from routine maintenance and repair work to major systems work – are fundamentally linked to CTA's ongoing commitment to address the life cycle investment needs of all assets. Therefore, any improvement that the CTA implements now will require continued maintenance and rehabilitation throughout the assets' lifecycle until its eventual replacement.

Both accessibility and state of good repair objectives can be achieved via ASAP. While ASAP's emphasis is on creating a 100 percent vertically accessible rail system within 20 years, select state of good repair improvements will be incorporated within individual projects as ASAP stations are implemented to leverage both objectives. In other words, by coordinating project elements the CTA can capitalize on reducing its state of good repair backlog while also adding accessibility. While achieving both outcomes in one project may increase the overall cost of an ASAP station, it also captures greater cost efficiencies in the long run.

STAKEHOLDER ENGAGEMENT

Throughout the planning process, the CTA committed to engaging with CTA's ADA Advisory Committee whose members represent various interests and disability-related organizations within the disability community. CTA also regularly met with and solicited input from the Mayor's Office for People with Disabilities (MOPD) and CTA Departments via a Working Group to ensure that MOPD guidance and CTA departmental areas of expertise would be considered as part of the ASAP development process.

ASAP WORKING GROUP

The Working Group provided general oversight of the ASAP planning process as well as technical guidance related to station designs. All proposed station designs were shared with the Working Group, and each was reviewed interactively at in-person meetings where representatives engaged in lively discussions concerning station designs and other relevant issues related to the disability community. All proposed station designs reflect an iterative process that incorporates input received from the Working Group. Representatives from the MOPD, the Chicago Transit Authority Board, LCM Architects (a Chicago-based design firm consisting of experts in accessibility and universal design), CTA's Manager of ADA Compliance Programs, and personnel from various CTA Departments (e.g., Law, Planning, Infrastructure) served on the Working Group. The ASAP Working Group met monthly throughout the duration of ASAP planning.

ADA ADVISORY COMMITTEE

The ADA Advisory Committee was established by the Chicago Transit Authority Board and serves in an advisory capacity to the CTA. Its purpose is to provide the CTA with recommendations on the CTA's compliance with the ADA, facilitate a dialogue between the CTA and the disability community, and increase the use of the CTA's services by people with disabilities. The ADA Advisory Committee, along with the CTA's Manager of ADA Compliance Programs and the Vice President of Planning, meet quarterly and meetings are facilitated by the Chair of the Committee. Briefings to the ADA Advisory Committee to share information and solicit input occurred seven times at the quarterly meetings throughout the duration of ASAP planning.

PUBLIC OUTREACH

A webpage on the CTA's website was developed at the beginning of the planning process and serves as an important portal for sharing project updates with the general public.

In addition, the CTA participated in several public events that facilitated direct engagement with the disability community. The CTA developed materials to distribute at and attended the AccessChicago expo event in July 2016. The CTA shared information about ASAP with the public and interested stakeholders present at AccessChicago. Hosted by MOPD, the AccessChicago expo promotes the independence and inclusion of people with all types of disabilities by showcasing Chicago's wide range of accessible venues, products, and services. The CTA also developed materials to distribute at and attended Chicago's annual Disability Pride Parade event in July 2016. The Disability Pride Parade provides an opportunity for all individuals to celebrate and strengthen the pride, power, and unity of people with disabilities, their families, and their allies.

BACKGROUND AND CONTEXT

Title II of the Americans with Disabilities Act of 1990 (ADA) contains numerous provisions that impact the physical accessibility of rail stations owned and operated by public entities like the CTA. First, it requires that newly constructed rail stations be readily accessible to and usable by people with disabilities – meaning that they must be designed and constructed in accordance with rigid accessibility standards promulgated by the United States Department of Justice and the United States Department of Transportation. Second, the ADA requires that when stations are altered, such alterations be done so that the altered elements comply with these standards to the extent it is technically feasible to do so. Where primary function areas are altered, the ADA also requires that an accessible path of travel to the altered area be provided unless it would be a disproportionate cost to that of the alteration itself. Finally, the ADA requires that stations identified as "key" stations be readily accessible to and usable by people with disabilities, requiring public transportation providers to modify them where necessary. In December 2009, the CTA became compliant with ADA key station requirements. Consistent with the ADA, the CTA stations not designated as key stations, or that did not undergo reconstruction or alteration as defined by the ADA[1], were not required to be made accessible. Key stations were determined by the following criteria[2]:

- Stations where passenger boardings exceed average station passenger boardings on the rail system by at least fifteen percent, unless such a station is close to another accessible station;
- Transfer stations on a rail line or between rail lines;
- Major interchange points with other transportation modes, including stations connecting with major parking facilities, bus terminals, intercity or commuter rail stations, passenger vessel terminals, or airports;
- End stations, unless an end station is close to another accessible station; and

[1] Alterations must affect the usability of the station and minor alterations/maintenance activities are not considered alterations.

[2] 49 CFR §37.47

- Stations serving major activity centers, such as employment or government centers, institutions of higher education, hospitals or other major health care facilities, or other facilities that are major trip generators for individuals with disabilities.

Since the ADA passed in 1990, the CTA bus fleet has grown from zero to 100 percent accessible. At the time the ADA was passed, less than 10 (about six percent) of CTA's rail stations met the ADA requirements. Today, the rail system has grown to 145 stations, with 102 stations (70 percent) now accessible. In 2017 alone, the CTA added accessibility at two stations, with one more currently under construction and slated for completion in 2018. After this station is complete, 103 of CTA's 145 rail stations (71 percent) will be accessible. With the implementation of accessibility at key stations, the CTA now meets the program accessibility requirement as CTA services, programs, and activities are readily accessible to and usable by people with disabilities.

PROGRESS TO DATE

The work that CTA has completed to date puts the agency in compliance with the ADA and, in some cases, has gone beyond the ADA's requirements, as CTA has actively sought to add accessibility even when not required by the ADA. The CTA has consistently demonstrated a commitment to accessibility by continuing to upgrade existing stations with accessible features to make stations more accessible for customers with disabilities and building new stations that are fully accessible. For example, in the last ten years alone, the CTA has added accessibility at the following stations:

- In progress (completion expected in 2018) - Quincy upgraded elevated station on the Loop Elevated;
- Completed in 2017 - Wilson upgraded elevated station on the Red and Purple lines;
- Completed in 2017 -Washington/Wabash new elevated station on the Loop Elevated;
- Completed in 2016 - Addison upgraded elevated expressway median station on the Blue Line;
- Completed in 2015 - Clark/Division upgraded subway station on the Red Line;
- Completed in 2015 - Cermak-McCormick Place new elevated station on the Green Line;
- Completed in 2013 - Garfield, 63rd and 87th upgraded expressway median stations on the Red Line (during Dan Ryan Line Track Renewal/Red Line South Reconstruction project);
- Completed in 2012 - Morgan new elevated station on the Green and Pink lines;
- Completed in 2012 - Oakton-Skokie new at-grade station on the Yellow Line;
- Completed in 2012 - Grand upgraded subway station on the Red Line;
- Completed in 2011 - Cermak-Chinatown upgraded elevated station on the Red Line;
- Completed in 2009 - Howard upgraded elevated station on the Red, Purple, and Yellow lines; and
- Completed in 2009 - Chicago, Sedgwick, Armitage, Fullerton, Diversey, Wellington, Belmont, Southport, Paulina, Addison, Montrose, Irving Park, Damen, Rockwell, Francisco and Kedzie upgraded stations on the Brown Line as part of multi-year Brown Line Capacity Expansion project.

As an older transit system, the age of CTA's inaccessible stations range from 46 to over 120 years old. Most of the inaccessible stations are adjacent to an expressway, roadway, freight tracks, and/or dense built environments, which create a unique set of site constraints (see Chapter 3 and Chapter 4). Once the Quincy (Loop Elevated) station that is currently under construction is complete, the CTA will have one of the highest levels of vertical accessibility of its peers. Boston's MBTA currently leads with 76 percent of rail stations that are accessible, followed by the CTA

with 71 percent, next Philadelphia with 26 percent, and finally New York City with 24 percent. Compared to its peers, the CTA has made significant strides to expand accessibility and respond to the needs of a diverse customer base. The CTA is proud of the demonstrated success and steadfast commitment to the disability community, particularly given the state's fiscal challenges in recent years and into the foreseeable future.

Transit agencies nationwide are struggling to maintain aging assets, modernize their systems, and expand capacity to meet their future needs. Like most governmental agencies and other transportation providers, local, state, and federal funding is in short supply. The problem is compounded by the multi-year absence of an Illinois State budget. As a result, the CTA lacked the predictability and funding certainty afforded by a full budget agreement, which only recently passed in July 2017. In addition, the State has not passed a capital funding package since the *Jump Start* and *Illinois Jobs Now*! state capital programs were enacted, both in 2009, which further impacts the CTA's ability to implement capital projects (see Chapter 8).

2012 INFRASTRUCTURE ACCESSIBILITY TASK FORCE

The 2012 Infrastructure Accessibility Task Force (IATF) Report represents CTA's first strategic review and analysis of station accessibility across the entire rail system since the key stations were designated twenty years prior. The IATF began work in the fall of 2010, and the IATF Report was completed in the fall of 2012. The purpose of the IATF was to function as a resource for the CTA in developing initiatives to enhance accessibility for people with disabilities at CTA's rail stations. IATF representatives included members from:

- MOPD;
- CDOT;
- LCM Architects;
- The Chicago Lighthouse;
- Assistive Technology Unit, University of Illinois at Chicago;
- Chicago ADAPT; and
- CTA ADA Advisory Committee.

The goals and objectives of the IATF were to:

- Identify the highest priority stations to make accessible.
- Evaluate concepts for incorporating accessibility into the highest priority stations.
- Identify general planning recommendations and develop design considerations for future accessibility improvements.
- Determine next steps for achieving full accessibility of the CTA rail system.

The IATF Report provided a basis to compare and rank the 51 stations that were not fully accessible at that time. The IATF Report identified the following nine stations as high priorities for accessibility improvements, five of which are now accessible.

Inaccessible

- Adams/Wabash (Loop Elevated)
- Austin (Green Line)
- Damen (Blue Line)
- Racine (Blue Line)

Accessible

- 63rd (Red Line)
- Addison (Blue Line)
- Clark/Division (Red Line)
- Washington/Wabash (Loop Elevated)
- Wilson (Red Line)

Given the spotlight that the IATF Report shined on the 63rd station, the CTA was able to successively implement this recommendation and further capitalize on another CTA initiative to upgrade the Red Line Dan Ryan branch. The CTA added elevators at the Garfield (55th), 63rd, and 87th stations as part of the larger Red Line South Reconstruction project. As a result, all stations south of Roosevelt are now accessible. The IATF Report raised the profile of stand-alone accessibility projects, which led to CTA identifying an opportunity to leverage Tax Increment Financing (TIF) to make the Quincy (Loop Elevated) station accessible. The CTA is currently implementing accessibility at this important downtown station, which is slated for completion in 2018. Since the IATF Report was completed, 103 of the CTA's 145 stations now have elevators or are currently under construction to add elevators.

REGULATORY OVERVIEW

A number of significant federal laws regulate public transportation accessibility for people with disabilities:

- Section 504 of the 1973 Rehabilitation Act (1973);
- Americans with Disabilities Act (1990); and
- Department of Transportation 49 CFR Part 37.

An overview of the federal legislative and regulatory framework relevant to the addition of vertical accessibility at transit stations is described in Appendix A. The design considerations as they relate to federal regulations and guidance that were incorporated as part of the development of the proposed station designs are described in Chapter 3.

In addition, accessibility codes contained in the Illinois Accessibility Code and the Chicago Building Code also apply.

CHAPTER 2: PRIORITIZATION PROCESS

DETERMINING PRIORITIES

NEEDS AND COMPLEXITY

ASAP builds from the IATF planning effort, updating the IATF data, and advancing the IATF methodology. Many of the criteria used to identify needs in the IATF were carried forward and a new criterion, referred to as a complexity factor, was added. Station priority was determined based on a combination of needs and complexity, with each equally weighted, in addition to qualitative considerations. The complexity factor accounts for the existing site conditions present at a station and the level of work necessary to accommodate ADA features. As a result of this methodology, the three unfunded ASAP Phase One stations reflect high need and low complexity stations. The goal in applying both criteria to determine unfunded ASAP Phase One stations was to help ensure successful projects in the first few years of ASAP and to build on that initial success to galvanize support and funding for the whole Program. Only the needs assessment and qualitative considerations were used to inform station phasing within the 20-year timeframe for the 16 stations identified for Future ASAP Phases.

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>
> The ASAP prioritization process provides a high-level screening of inaccessible stations to determine candidates for near-term implementation.

As described in Chapter 1, ASAP Phase One also includes the State/Lake station (Loop Elevated) that is currently being advanced by CDOT, as well as the four RPM Phase One stations on the Red Line (Lawrence, Argyle, Berwyn, and Bryn Mawr). Because planning and design for these stations is currently either fully or partially funded, these five stations represent the first wave of ASAP implementation that will be delivered to CTA customers.

NEEDS EVALUATION CRITERIA

The IATF methodology originally considered 13 evaluation criteria. Two criteria (Connections and Education) were ultimately excluded from the final IATF methodology. The final IATF study included 11 evaluation criteria to define needs and grouped the criteria into three categories: Ridership and Gaps; Origins; and Destinations. In coordination with the Working Group, nine of 11 evaluation IATF criteria were carried forward as part of the ASAP methodology, two criteria (Senior Housing and Senior Services) could not be measured and were eliminated due to a lack of comprehensive data, and one was added (Connections). All modifications to the IATF methodology were discussed and confirmed with the Working Group. The 10 ASAP criteria to define accessibility needs are shown Table 2.

Table 2 Needs Evaluation Criteria

ASAP Criteria[a]	ASAP Data Source / Year	IATF	ASAP
Ridership and Gaps			
Station Ridership		●	●
Total rail station entries recorded for all fare types	CTA, 2015		
Persons with Disabilities Station Ridership		●	●
ADA Paratransit ID Card	CTA, 2015		
Circuit Breaker Disabled Free Ride	CTA, 2015		
Reduced - Disabled, Paratransit, Reduced Fare	CTA, 2015		
Disabled Veterans Free Ride	CTA, 2015		
Senior Station Ridership		●	●
Ride Free	RTA, 2015		
Reduced Fare	RTA, 2015		
Station Gaps		●	●
Distance (in feet) from closest accessible station on the same rail line	CTA, 2016		
Connections[b]			●
Number of CTA and Pace routes, and Metra station boardings and alightings within 1/8 mile of the CTA station	CTA, 2015; Pace, 2015; Metra, 2014		
Origins			
Population		●	●
Actual and 2040 forecast within ½ mile of station	2010–2014 ACS[e]; GO TO 2040[d]		
Paratransit		●	●
Registered Paratransit home addresses within ½ mile of station	Pace, 2016		
Senior Housing[c]		●	
Designated Senior Housing locations within ½ mile of station			
Destinations			
Employment		●	●
Actual and 2040 forecast within ½ mile of station	2013 LEHD[e]; GO TO 2040[d]		
University		●	●
Enrollments for Colleges, Universities, and High Schools within ½ mile of station	National Center for Education Statistics, 2014–2015; Chicago Public Schools, 2014-2015		
Senior Services[c]		●	
Number of Senior Centers, Hospitals, and other healthcare facilities within ½ mile of station			
Points of Interest		●	●
Movie theaters, hotels, courthouses, village/city halls, community centers, police stations, post offices, libraries within ½ mile of station	No change from IATF, 2012		

[a] Some criteria were calculated differently for ASAP than the IATF methodology.
[b] Included in ASAP methodology.
[c] Excluded from ASAP methodology.
[d] GO TO 2040 is the region's comprehensive plan by the Chicago Metropolitan Agency for Planning.
[e] ACS – American Community Survey; LEHD – Longitudinal Employer-Household Dynamics.

COMPLEXITY FACTOR

The ASAP methodology introduces a complexity factor, adding a new dimension to the prioritization of the ASAP Phase One stations. The complexity factor measures a number of high-level cost considerations (e.g., extent of utility work, presence of multiple platforms, station type), and the time needed for planning, design, construction, and agency coordination of accessibility improvements. Highly complex stations typically are more expensive as they require complex design and engineering solutions to work within the physical constraints of a station. Moreover, highly complex stations typically require more time for planning, design, construction, agency coordination, public processes related to potential impacts (e.g., historic, environmental), and land acquisitions. Station and design complexity were assessed across key variables related to station configuration types described in Chapter 3 and illustrated in Figure 3.

As shown in Table 3, subway stations were grouped separately to account for their unique variables. For example, subway stations require intensive construction activities, such as excavation, utility relocation, and road closures, which make these projects inherently more complex to design and construct. The complexity factor, coupled with field reconnaissance, helped to further define the actions necessary to accommodate accessibility at rail stations. The complexity factor also helped to determine the ASAP Phase One stations to advance to a 10 percent design completion level and kick-start the ambitious 20-year ASAP implementation timeframe. ASAP Phase One stations reflect the early years of ASAP as these stations generally are less complex, requiring a shorter timeframe for planning, design, and construction. Since complex stations are more challenging to design, engineer, and construct, these stations are addressed in future phases of the 20-year implementation strategy, which allows more time to work through the complexities.

Table 3 Complexity Factor Penalties

Station Type	Variable	Complexity Penalty
Subway	Subway station configuration	-3
	Number of adjacent buildings/properties impacted	-1
	Presence of a six-corner intersection (e.g., Milwaukee)	-1
	Other station configuration challenges	-1 or -2
Elevated Median At-Grade	Station condition (repairs required)	-1
	Station condition (reconstruction needed)	-2
	Number of adjacent buildings/properties impacted	-1
	Need for land acquisition	-1
	Other station configuration challenges (e.g., site constraints, adjacent to other infrastructure)	-1 or -2

SCORING PROCESS

The ASAP scoring was iterative, with input from the Working Group incorporated and confirmed throughout the planning process. For both the need and complexity assessments, all stations were assigned a score between zero and five, with zero representing the lowest score and five the highest. A zero score was only assigned when the value of the criterion equaled zero (e.g., station is not located within ½ mile of any college, university, or high school). For the IATF Study scores were assigned by percentile, where the top 20 percent of stations with the highest values received a score of five, the second 20 percent received a score of four, and so on. ASAP carries forward the

same scoring process based on percentiles. For example, the top 20 percent of stations with the highest ridership received a score of five and the bottom 20 percent received a score of one.

For the complexity assessment, highly complex stations are more challenging to design, engineer, and construct. Stations with higher complexity scores (5) are less complex and those with lower scores (zero) are more complex. As such, the ASAP scoring process incorporated a penalty to account for various levels of complexity across the station types as shown in Table 3.

Prioritization scores for all 42 inaccessible stations can be found in Appendix B.

WEIGHTS

The 42 inaccessible ASAP stations were assessed using a modified version of the IATF weighting system. The ASAP weighting scheme was developed over time through an iterative process, with input from the Working Group. Table 4 compares the IATF and the final ASAP weighting systems for the needs assessment, including the rationale for the weight applied to each criterion to denote its relative importance. Individual weights were not assigned to the complexity factor variables.

Table 4 Needs and Complexity Assessment Weights

Criteria	IATF Weight (%)	ASAP Weight (%)		Change / Rationale
Ridership and Gaps				
Station Ridership	15%	20%	↑	Linkage to CTA mission to deliver quality, affordable transit services that link people, jobs and communities
Persons with Disabilities Ridership	5%	10%	↑	Linkage to ASAP goal to make all stations vertically accessible within 20 years
Senior Ridership	5%	5%	–	No change
Station Gaps	15%	15%	–	No change
Connections	0%	5%	↑	All buses serving CTA stations are ADA accessible, improving connectivity between modes
Origins				
Population	10%	10%	–	No change
Paratransit	20%	20%	–	No change
Senior Housing	5%	0%	↓	Cannot measure accurately due to lack of comprehensive data
Destinations				
Employment	7%	7%	–	No change
University	7%	4%	↓	Criterion serves a smaller population than employment
Senior Services	7%	0%	↓	Cannot measure accurately due to lack of comprehensive data
Points of Interest	4%	4%	–	No change
Subtotal Needs	100%	100%		
TOTAL Needs	**100%**	**50%**	**ASAP Needs Weight – 50%**	
TOTAL Complexity	**0%**	**50%**	**ASAP Complexity Weight – 50%**	

QUALITATIVE CONSIDERATIONS

The qualitative factors described below were important additional considerations in informing the potential station phasing. They also provided a baseline understanding of how ASAP Phase One and the Future ASAP Phases interface with the funding and timeframe assumptions for implementing the RPM Program and the FP Branch Reconstruction Program.[3]

[3] ASAP fully adopts the preliminary schedules of the RPM Program and the FP Branch Reconstruction Program. The ASAP implementation strategy will be updated as funding for these Programs becomes available.

GEOGRAPHIC EQUITY

As previously noted, all stations from Roosevelt Road and south are already accessible. Elevators were recently installed at the Garfield (55th), 63rd, and 87th Red Line stations on the Dan Ryan branch as part of a larger Red Line South Reconstruction project. Today, all Red Line stations on the Dan Ryan branch have elevators, providing accessibility to many communities on the South Side of Chicago. Additionally, all but three of the Green Line stations that serve communities on the West Side of Chicago have been made accessible. Overall most of the inaccessible stations within CTA's Northern geographic service area will be addressed through the RPM Program. For the remaining geographic service areas with pockets of inaccessibility, the ASAP methodology grouped stations within four geographic service areas to ensure that geographic equity of the inaccessible stations was considered. All 42 stations fell within the following four geographies:

- Central Business District (CBD);
- North;
- Northwest; and
- West.

CONSTRUCTION SEQUENCING

CTA developed a preliminary phased implementation strategy to serve as a roadmap for sequencing stations to meet the 20-year implementation timeframe. The construction sequencing exercise helped the CTA assess the viability of 20-year implementation. As part of this process, the following construction sequencing considerations were factored into ordering stations in four phases. The sequencing of stations (especially in the CBD), coordination, and constructability (i.e., the extent to which station design facilitates ease of construction) are important aspects to ASAP implementation. Another important consideration incorporated throughout the ASAP methodology is the need to balance infrastructure projects across the entire rail system. ASAP sequences construction work to minimize concurrent track-level work, given CTA's track maintenance needs, ongoing construction projects, and new projects that may coincide with ASAP's 20-year horizon (see Chapter 7). To do this, ASAP follows the general rule that no more than one project requiring track outages was scheduled along the same line simultaneously.

COORDINATION

The need to coordinate ASAP projects with external agencies like CDOT, IDOT, and other CTA Departments will be necessary to minimize conflicts with other construction and utility projects. Coordination will also be necessary around station designs and construction activities that could impact the maintenance needs of adjacent structures or affect the public way (e.g., crosswalks, sidewalks, side streets.) Proposed station designs that include impacts to non-CTA owned property (e.g., land acquisition, easements, air rights) was also considered. While the proposed station designs are still at the conceptual level, flagging potential property impacts or real estate needs is typically done early in the planning phase to ensure that they will be handled at a later time in the design phase. Ultimately, the property impacts and real estate needs will be determined by the final design, which may be different from those identified during the planning phase.

SCORING RESULTS

ASAP PHASE ONE STATIONS

The needs and the complexity assessments were equally weighted (50 percent / 50 percent), resulting in a total station score to determine the unfunded ASAP Phase One stations. These stations have higher needs and lower complexity and, therefore, are prioritized for the first phase of implementation. Given their priority status, three of the ASAP Phase One stations were advanced to a 10 percent conceptual design stage, including detailed construction cost estimates (see Chapter 6). As a CDOT-led project that is already in progress, the State/Lake (Loop Elevated) station will be advanced separately. CDOT has developed a projected cost, and an estimate will be developed based on the final design. In addition, planning and design for the RPM and FP Branch Reconstruction Programs is being conducted through separate processes to address multiple interrelated infrastructure upgrades, of which accessibility is just one element. Therefore, RPM and FP Branch Reconstruction stations were excluded from the ASAP design process, which is described in Chapter 3 and Chapter 4.

Apart from the State/Lake (Loop Elevated) station and the four RPM Phase One stations (Lawrence, Argyle, Berwyn, and Bryn Mawr), the Austin Green Line station and the Montrose and California Blue Line stations generally can be retrofitted with elevators and other accessibility improvements without complete reconstruction of the station or significant adjacent land impacts, making construction possible within the initial phase of the 20-year implementation timeframe.[4] As previously noted, highly complex stations will require more time for planning, design, construction, agency coordination, and community input and are therefore addressed in the outer years of the 20-year timeframe. Figure 2 shows the location of the ASAP Phase One stations and Table 5 identifies their scores from the prioritization process.

Prioritization scores for all 42 inaccessible stations can be found in Appendix B.

[4] As part of the design process some high scoring stations were identified as requiring extensive station and track work.

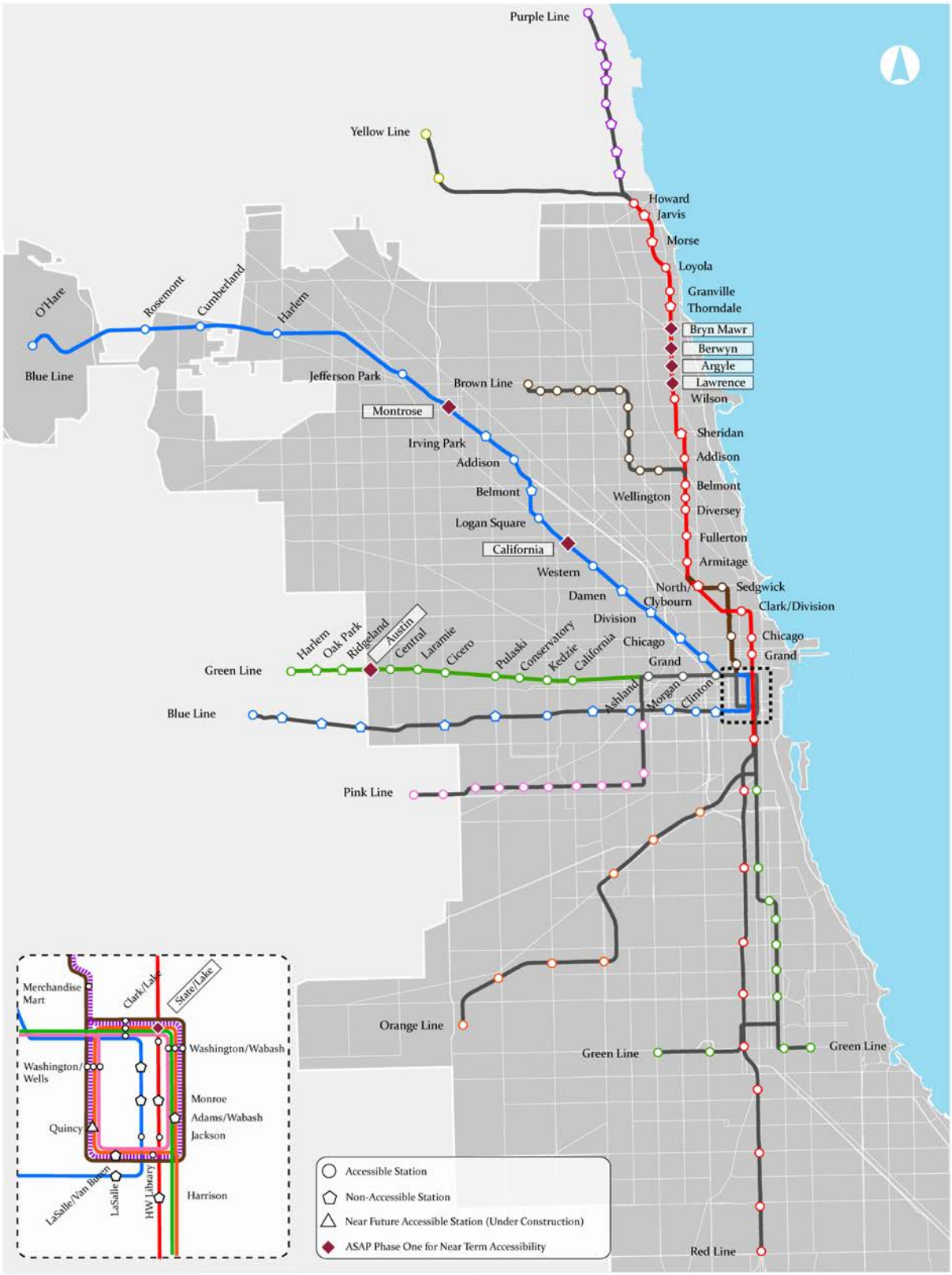
Table 5 ASAP Phase One Station Scores

Line	Station	Branch	Needs Score	Complexity Score[a]	Needs and Complexity Score
Unfunded ASAP Phase One Stations					
Green	Austin	Lake	2.78	4	3.39
Blue	Montrose	O'Hare	2.62	5	3.81
Blue	California	O'Hare	3.18	4	3.59
Partially or Fully Funded ASAP Phase One Stations					
Loop	State/Lake[b]	Loop Elevated	3.70	1	2.35
Red	Lawrence[c, d]	North Side Main Line	3.83	1	2.42
Red	Argyle[c, d]	North Side Main Line	3.83	1	2.42
Red	Berwyn[c, d]	North Side Main Line	4.05	1	2.53
Red	Bryn Mawr[c, d]	North Side Main Line	4.02	1	2.51

[a] For both the needs and complexity assessments, all stations were assigned a score between zero and five, with zero representing the lowest score and five the highest. Stations with higher complexity scores (5) are less complex and those with lower scores (zero) are more complex.
[b] CDOT-led project fully funded through the design phase and partial funding for construction.
[c] The RPM Program includes a larger infrastructure scope beyond accessibility.
[d] RPM Phase One is fully funded.

As previously noted, many Green Line (Lake branch) stations are already equipped with elevators and all Red Line stations south of Roosevelt are now accessible. North side communities on the Red Line will receive accessibility upgrades first at RPM Phase One stations, which are fully funded. The CBD still has a large share of inaccessible stations (9 of 42), many of which are highly complex and are destination stations for residents, workers, and visitors. The CDOT-led State/Lake station will be the next CBD station to be made accessible following the Washington/Wabash station that was added in 2017, and the Quincy station that is queued up for completion in 2018. Geographic equity considerations for the three unfunded ASAP Phase One stations focused on expanding accessibility to additional Western communities along the Green Line (Lake branch), the CBD, and to Northwestern communities along the Blue Line (O'Hare branch).

Figure 2 ASAP Phase One Stations



FUTURE ASAP PHASES

A primary goal of the ASAP prioritization process was to identify ASAP Phase One stations to advance to 10 percent design to initiate ASAP. The remaining 16 stations identified for Future ASAP Phases were compared to each other based on the needs assessment only; the complexity factor was excluded as part of this process. Table 6 identifies the 16 stations for future phased implementation and their associated scores, and is ordered by the needs score. Prioritization scores for all 42 inaccessible stations can be found in Appendix B.

In addition to the needs assessment rankings, the construction sequencing considerations described earlier were factored into ordering stations within Future ASAP Phases of the 20-year horizon period. An important consideration is the need to minimize concurrent track-level work given CTA's track maintenance needs, ongoing construction projects, and new projects within the CTA Capital Program. Coordination considerations described earlier in the Qualitative Considerations section were also factored into ordering the 16 stations within Future ASAP Phases, particularly with respect to coordinating with agencies on proposed station designs that impact the public way and those that impact adjacent properties.

Table 6 Future ASAP Phases Scores, by Needs Score

Line	Station[a]	Branch	Need Score	Complexity Score[b]	Needs and Complexity Score
Red	North/Clybourn	State Street Subway	4.27	0	2.14
Blue	Division	Dearborn Street Subway	4.25	0	2.12
Blue	Damen	O'Hare	3.65	2	2.83
Loop	Adams/Wabash	Loop Elevated	3.40	2	2.70
Red	Harrison	State Street Subway	3.35	1	2.18
Red	Monroe/State	State Street Subway	3.30	1	2.15
Blue	Belmont	O'Hare	3.25	2	2.63
Blue	Washington/Dearborn	Dearborn Street Subway	3.25	1	2.13
Blue	Chicago/Milwaukee	Dearborn Street Subway	3.22	1	2.11
Blue	LaSalle	Dearborn Street Subway	3.15	1	2.08
Blue	Irving Park	O'Hare	3.08	3	3.04
Blue	Monroe/Dearborn	Dearborn Street Subway	2.95	1	1.98
Loop	LaSalle/Van Buren	Loop Elevated	2.85	1	1.93
Blue	Grand/Milwaukee	Dearborn Street Subway	2.74	1	1.87
Green	Oak Park	Lake	2.32	4	3.16
Green	Ridgeland	Lake	2.19	3	2.59

[a] Inaccessible stations to be addressed under the RPM and FP Branch Reconstruction Programs are analyzed as part of their respective Program.
[b] For both the needs and complexity assessments, all stations were assigned a score between zero and five,

with zero representing the lowest score and five the highest. Stations with higher complexity scores (5) are less complex and those with lower scores (zero) are more complex.

ELEVATOR REPLACEMENT PROGRAM PRIORITIZATION

The prioritization methodology for the Elevator Replacement Program included three needs-based criteria that are indicative of an elevator's overall condition. These criteria are based on reliable quantitative data points that can be updated to routinely reassess and adjust priorities as the Elevator Replacement Program is implemented. In addition to quantitative criteria, five qualitative factors were also established as guidelines for Program implementation (see Table 7). These qualitative factors were developed to minimize customer impacts as elevators are replaced along the system.

For each of the three needs-based categories, existing elevators were assigned a score between zero and five, with zero or one representing the lowest score and five the highest. A zero score was only assigned when the value of the criterion equaled zero (i.e., elevator had zero hours of downtime). Using this methodology, higher scores were associated with higher needs (e.g., older elevators would have a higher age score than newer elevators). For each elevator, the three scores were added together for a maximum total score of 15 points. Similar to the ASAP prioritization process, scores were assigned by percentile, where the top 20 percent of stations with the highest values received a score of five, the second 20 percent received a score of four, and so on. Unlike the ASAP stations prioritization, the Elevator Replacement Program prioritization process did not apply a weighting scheme as all three of the needs-based criteria were assumed to be equally important. The criteria to define elevator rehabilitation or replacement needs, the qualitative factors considered, and the scoring are shown in Table 7.

Table 7 Elevator Replacement Program Criteria

	Elevator Replacement Program Criteria	Data Source / Data Year	Score Ranges
Needs-Based Criteria	Station Ridership	CTA, 2015	1 – 5
	Elevator Age (years)	CTA, 2015	1 – 5
	Total Elevator Downtime (hours)	CTA, 2015	0 – 5
Qualitative Factors	Prefer that two adjacent accessible stations not be under construction in the same year		
	Prefer that no more than 2 stations in the CBD be under construction in the same year		
	Consider geographic equity to ensure that rehabilitation or replacement would be spread across the rail system		
	Each station will be assessed individually to determine if all elevators in the station should be rehabilitated or replaced concurrently or staggered (e.g., higher priority first followed by lower priority)		
	Consider the station's proximity to other accessible stations when the station is located in an area with a long stretch of stations with no elevators		

The initial results of the prioritization process for the first two years only of the Elevator Replacement Program are shown in Table 8. As previously noted, not all elevators at a single station may be in the same condition because an elevator's condition can vary based on a variety of factors (e.g., location, enclosure type, exposure to weather elements, usage).

Overall, the Elevator Replacement Program prioritization approach provides a near-term roadmap for ensuring reliability at existing passenger elevators in the CTA rail. The Elevator Replacement Program will be updated every two years with new data points to reassess where the greatest elevator rehabilitation or replacement needs are within the rail system and to adjust priorities as needed. The initial results shown in Table 8 will be reassessed and updated once funding for the Elevator Replacement Program is identified.

Table 8 Elevator Replacement Program Two-Year Prioritization Results

Line	Station	Number of Station Elevators	Ridership Score (1-5)	Age Score (1-5)	Downtime Score (0-5)	Total Score
Loop / Transfer Stations	Clark/Lake Blue, Brown, Green, Orange, Pink, & Purple Line Transfer Station	4 elevators	5	5	5	15
			5	5	5	15
			5	5	5	15
			5	5	4	14
	Washington/Wells Brown, Orange, Pink, & Purple Line Transfer Station	2 elevators	4	4	5	13
			Elevator rehabilitated in 2015		N/A	
Red	Jackson	4 elevators	5	5	5	15
			5	5	3	13
			5	3	4	12
			5	3	2	10
	Loyola	1 elevator	4	5	4	13
Blue	Forest Park	1 elevator	3	5	4	12
	O'Hare	1 elevator	5	5	3	13
	Western (O'Hare branch)	1 elevator	4	3	3	10
Orange	Midway	2 elevators	5	4	5	14
			5	4	3	12
Purple	Davis	1 elevator	3	1	5	9

CHAPTER 3: DESIGN APPROACH

DEVELOPING STATION DESIGNS

DESIGN PROCESS

The design process for the ASAP Phase One stations and the 16 stations identified for Future ASAP Phases began by grouping inaccessible stations across common station configuration types as shown in Figure 3. Initial design schemes based on the configuration types were developed to serve as baseline design options before commencing more detailed design work for each individual station. The design schemes were a helpful tool to:

- Identify common technical constraints across the configuration types;
- Assess advantages and disadvantages of different design options;
- Identify preferred design features; and
- Gauge the level of effort to retrofit or rebuild inaccessible stations via rough order of magnitude (ROM) cost estimates. (Chapter 6 describes the cost estimating approach and the total costs for ASAP stations.)

• • •

Some inaccessible stations date as far back as 1895, which requires creative approaches to addressing the many challenges to making an older facility accessible.

The station schemes revealed that, while stations with similar configurations may have similar characteristics, a prototypical station design cannot be applied because of the unique constraints at each station. For example, a station may have: distinctive physical features (e.g., adjacent freight rail, one entry/exit point, historic designation); buildings located adjacent to the station; nearby development patterns and levels of density within the surrounding communities; and inconsistent or insufficient platform lengths and widths. These differences create site-specific constraints that will require site-specific solutions. Moreover, as planning reaches more advanced stages, additional findings regarding each site will likely require further design customization. Therefore, a one-size-fits-all design approach cannot be applied and custom design concepts have been developed for each inaccessible station, regardless of its configuration type.

Figure 3 Station Configuration Types

Embankment

Photo courtesy of Graham Garfield

Median

Photo courtesy of Graham Garfield

Subway – Side Platform

Photo courtesy of Graham Garfield

Subway – Center Platform

Photo courtesy of CTA/Flickr

Elevated

Photo courtesy of CTA/Flickr

As described in Chapter 2, the ASAP prioritization process identified the following three stations for ASAP Phase One: Austin (Green Line), Montrose (Blue Line), and California (Blue Line). The designs for these stations have now advanced to 10 percent design completion. In addition, more basic schematic designs have been developed for the 16 stations identified for Future ASAP Phases.

Table 9 describes the level of design detail incorporated within the 10 percent concept designs developed for the ASAP Phase One stations and the schematic designs developed for the 16 stations identified for Future ASAP Phases. Overall, the ASAP Phase One station designs include more robust engineering and analysis than the schematic designs that were developed for the remaining 16 stations in Future ASAP Phases. As the 10 percent concept designs of the ASAP Phase One stations and the schematic designs for Future ASAP Phases continue to progress through more detailed design completion (e.g., 30 percent, 60 percent, 90 percent), there are likely to be modifications to the proposed designs contained in the ASAP Strategic Plan. This is because more information will become available from future land survey and geotechnical survey reports, in-depth engineering and design work, agency coordination, and public feedback. Moreover, many of the stations proposed for implementation in Future ASAP Phases may require additional modifications to the proposed designs as a result of future changes to land uses, real estate development and density, traffic operations, travel patterns, and roadway configurations.

Table 9 Level of Detail Applied to 10% Conceptual and Schematic Designs

10% Conceptual Design (ASAP Phase One)	Schematic Design (Future ASAP Phases)
Review of property impacts/real estate needs	Review of property impacts/real estate needs
Review of accessible route from curbside to platform	Review of accessible route from curbside to platform
Life safety code requirement analysis, including emergency egress calculations to support the proposed improvements	Limited life safety code requirement analysis, excluding emergency egress calculations to support the proposed improvements
Field reconnaissance, including measurements of as-built conditions	Limited visual field reconnaissance
Utility assessment via the Office of Underground Coordination (OUC), including incorporation of utility relocations within the proposed design	Utility assessment via OUC
Structural analysis of the existing station and proposed improvements, including calculations to support the proposed improvements	–
Clearance analysis (vertical and horizontal) to provide unobstructed wheelchair maneuverability at platform level	–

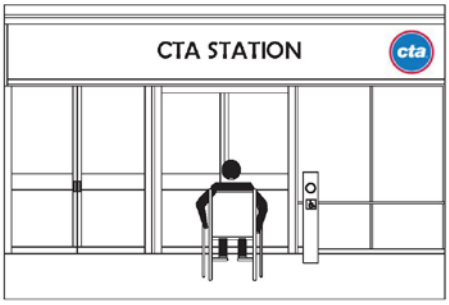
DESIGN REFERENCES

Although ADA standards differ between a retrofit (alteration) or rebuild (new construction), all construction activities must comply with the applicable USDOT ADA regulations[5] as well as the applicable accessibility codes contained in the Illinois Accessibility Code (IAC) and the Chicago Building Code (CBC). In developing the proposed designs, the CTA followed the requirements of the ADA and its implementing regulations as well as the IAC and the CBC. ASAP's goal is to add vertical accessibility to its legacy rail system and the proposed ASAP design plans achieve this goal, including the requirement to incorporate accessible routes from curbs to platforms. In other words, adding vertical accessibility means that stations, by default, are designed to also include accessible routes. Figure 4 provides a simplified illustration of an accessible route.

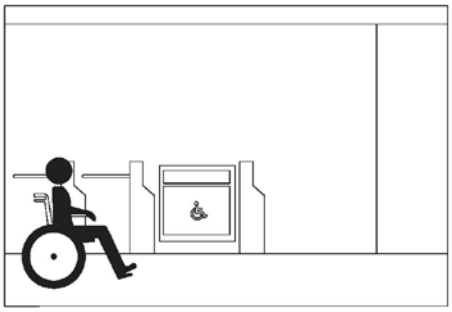
In addition, major alterations and new construction to transportation facilities require plans and permits. Permits are approved by the Chicago Department of Buildings (DoB). The MOPD participates in this process by reviewing all projects for accessibility compliance. The Chicago Fire Prevention Bureau is also involved in permit review. As part of the design process, the proposed station designs consider and meet, where possible, current life safety code requirements under the National Fire Protection Association (NFPA) 130 Standard for Fixed Guideway Transit and Passenger Rail Systems and the CBC for emergency egress. Together Federal Transit Administration (FTA) guidance[6] and life safety requirements provided a roadmap for developing the proposed design plans to achieve accessibility.

Unlike new construction, there are circumstances where adding accessibility at an existing station presents significant challenges. For example, the location of underground utilities may severely reduce the clearances available for an elevator; balancing historic preservation and accessibility priorities may mean that elevators are located outside the general station circulation paths; or sidewalk widths may not have adequate space to accommodate elevators near existing entrances and/or exit

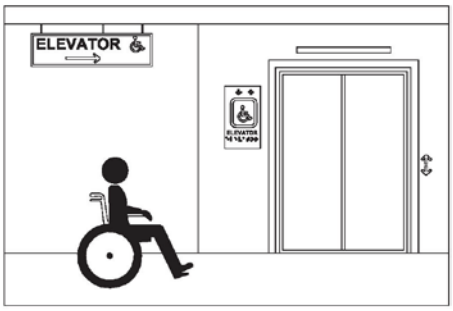
Figure 4 Accessible Route



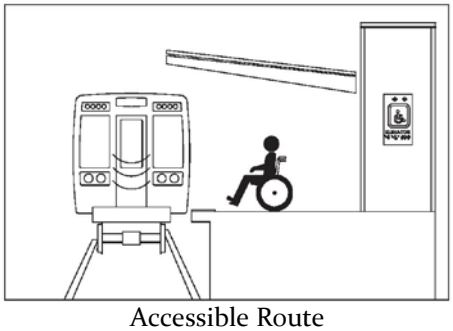
Accessible Route Into Station



Accessible Route
Through Fare Array



Vertical Accessible Route



Accessible Route
Platform to Train

[5] 49 CFR Part 37 - Transportation Services for Individuals with Disabilities (ADA).
[6] FTA Circular 4710.1, "Chapter 3 – Transportation Facilities", (November 4, 2015).
See 49 CFR Part 37 for the relevant regulations.

stairs. Where complexities occur, including those related to an accessible route, preliminary design and engineering solutions have been identified.

Based on the proposed design plans for the three unfunded ASAP Phase One stations, the Montrose station on the O'Hare branch of the Blue Line, and potentially other stations within Future ASAP Phases, does not satisfy all current CBC standards for exiting. (Additional exiting analysis will be conducted during the next phase of design to address emergency egress.) While the ADA technical requirements[7] apply nationally, life safety code requirements are largely under the purview of states and municipalities that regulate and enforce them. Additional coordination with the DoB, Fire Prevention Bureau, and the MOPD will be necessary to determine a suitable egress standard to enable construction permitting in instances where strict code compliance for emergency egress is not attainable.

As shown in Table 10, a core set of design elements identified in the FTA's regulatory guidance, which references the applicable regulations and USDOT ADA Standards, as well as current CBC requirements for exiting were considered (where applicable) when developing station designs for ASAP Phase One and Future ASAP Phases. A discussion of the key complexities and the proposed design solutions for the ASAP Phase One stations and the 16 stations identified for Future ASAP Phases are described in Chapter 4.

[7] United States Department of Transportation ADA Standards for Transportation, November 29, 2006.

Table 10 Design Elements Considered (Where Applicable)

	Altered or New Station Element	10% Conceptual Design (ASAP Phase One)	Schematic Design (ASAP Future Phases)
FTA Guidance[a]	Accessible Parking	●	
	Passenger Loading Zones	●	●
	Bus Boarding and Alighting Areas	●	●
	Accessible Routes	●	●
	Directional Signs	●	●
	Curb Ramps	●	●
	Entrances	●	●
	Doors	●	●
	Ramps	●	●
	Stairs	●	●
	Elevators	●	●
	Platform Lifts	–	–
	Escalators	●	●
	Ticketing and Automatic Fare Vending	●	●
	Platforms	●	●
	Mini-High Platforms	–	–
	Public Address Systems	●	●
	Clocks	–	–
	Telephones	–	–
	Areas of Refuge	●	●
Egress Code Review NFPA 130 Exiting Criteria / CBC Exiting Criteria	NFPA 130 – Evacuate platform occupant load from platform in 4 minutes or less	●	–
	NFPA 130 – Evacuate from most remote point on platform to a point of safety in 6 minutes or less	●	–
	NFPA 130 – Maximum travel distance on the platform to a point at which a means of egress route leaves the platform should not exceed 325'[b]	●	–
	NFPA 130 and CBC – Minimum clear width of 44" should be provided along all platforms, corridors, and ramps serving as a means of egress	●	–
	CBC – Egress stairs should be minimum of 44" wide	●	–
	CBC – Minimum door width should be 36"	●	–
	CBC – Maximum travel distance to exit door shall not exceed 150'	●	–

[a] Identified within the "Optional Facilities Checklist for New Construction and Alterations", Federal Transit Administration Circular 4710.1 (November 4, 2015). See 49 CFR Part 37 for the relevant regulations.
[b] The DoB and the Fire Prevention Bureau have allowed the CTA to use a hybrid of NFPA 130 (2014) and the CBC on past projects as follows: Reduce NFPA 130 (2014) maximum travel distance of 325' by 50 percent to achieve a maximum dead-end travel distance of 162'-6".

CTA'S RELATED PROGRAMS AND THE CDOT-LED STATE/LAKE STATION

To achieve accessibility across the entire rail system, all vertically inaccessible stations will be retrofitted or rebuilt. While the RPM and FP Branch Reconstruction stations and the State/Lake station are included within ASAP, planning and design for these stations is being conducted through separate processes that will address accessibility within the broader context of these Programs and projects. As such, the RPM and FP Branch Reconstruction stations and the State/Lake station will necessarily have a more expansive scope of work that includes other interrelated infrastructure work (e.g., track, support structures, power substations), with accessibility representing just one aspect of the entire project infrastructure scope at these stations.

Design for the CDOT-led State/Lake station on the Loop Elevated Line is being advanced separately by CDOT. Similarly, the inaccessible RPM (Phase One and Future RPM Program) and FP Branch Reconstruction stations are being developed independent of the ASAP effort as part of their respective Programs. An overview of these Programs is described separately in Chapter 5.

DESIGN CONSIDERATIONS

All proposed station improvements will include elevators and/or ramps, accessible entrances, accessible routes from curbs to platforms, improved directional signage, removal of platform obstructions, accessible employee facilities, and enhanced lighting as appropriate. Within the ASAP 20-year horizon period the proposed improvements are in the early stages of project development and will evolve over time as ASAP projects advance through more detailed planning and design, and construction. While preliminary discussions with some agency partners, such as CDOT, IDOT, and MOPD have occurred as part of the ASAP planning process, continued dialogue throughout the project development process will be necessary to ensure that station designs are coordinated with agency partners and approved and permitted by the DoB.

Moreover, adding accessibility has the potential to trigger other operational and policy issues, as design decisions can have cascading effects and implications for the CTA. For example, gap fillers provide a smooth accessible pathway between a platform and a train car. Platform obstructions can negate the use of CTA's standard gap filler. Potential solutions include removing or relocating platform impediments if possible, custom gap fillers at specific locations, or modifications to berthing areas. With the aid of the Working Group, many of these issues have been identified and more comprehensive solutions will need to be analyzed in greater depth in subsequent phases of design.

Within the spectrum of transit accessibility there are a myriad of design features, materials, and applications to enhance accessibility, many of which are not required by regulation. In addition, not all transit accessibility options may be applicable to the CTA, others require further research and public input, and some may not be practical for the CTA from an operational and/or policy perspective. The CTA will need to analyze these issues in more detail. Therefore, additional accessibility enhancements may be incorporated incrementally as designs are refined, coordination with agency partners continues, and operational and policy issues are resolved.

ELEVATOR TYPES

ASAP station designs include three types of elevator configurations. An elevator type was selected for each station based on its relationship to the size and layout constraints of the stationhouse(s) and platform(s). The three elevator types and their minimum dimensions are:

1) Full Turn-Around (9'-10" x 8'-8") – This type of elevator provides a high level of maneuverability within the elevator itself. The stationhouse and platform levels must have space available to accommodate these larger elevators. Full turn-around elevators are incorporated into designs depending on the amount of unobstructed space outside the elevator door at the stationhouse and/or platform level, which can vary between stations.
2) "L" Turn (9'-10" x 8'-8") – This type of elevator provides a high level of maneuverability within the elevator itself. "L" turn elevators are incorporated into designs depending on the amount of unobstructed space outside the elevator door at the stationhouse and/or platform level, which can vary between stations.
3) Pass-Through (6'-6" x 9'-4") – This type of elevator does not allow for wheelchair turning movements within the elevator itself. Pass-through elevators are incorporated into designs when widths are restricted at the stationhouse and/or platform level, which can vary between stations.

As previously noted, the unique constraints of inaccessible stations require individualized design and engineering solutions to add accessibility. The Working Group reviewed the proposed station designs for ASAP Phase One and Future ASAP Phases, and revisions have been incorporated through an iterative process to address feedback.

WAYFINDING FOR ENHANCED ACCESSIBILITY

The ASAP goal is to create a vertically accessible rail system within 20 years. Looking ahead, the ADA Advisory Committee requested that the CTA explore additional opportunities that go beyond legal requirements, to provide enhanced wayfinding for a broader segment of the disability community. The intent of this request was to identify wayfinding options that could make navigating the environment of CTA stations easier and more intuitive for people with a wide variety of disabilities, including people who are DeafBlind, blind, and visually impaired.

In response to the ADA Advisory Committee request, the CTA commenced a high-level review of six wayfinding treatments and technologies that may enhance accessibility and be suitable for application in CTA stations. The CTA is investigating these treatments and technologies by asking other transit agencies who have used them about their experience, gathering input from MOPD, CDOT, and IDOT about these wayfinding options, and coordinating internally with CTA Departments. This information will help the CTA identify potential operational and policy issues in order to develop a recommendation about which wayfinding elements would be suitable for the CTA system.

What must also be considered is that some of the wayfinding options are newer technology and will require additional research on the state-of-the-practice to better understand their benefits, limitations, and appropriateness at key stations, certain types of stations, or system-wide before implementation can occur. The CTA understands that there is no one wayfinding approach that would meet the needs of all transit users and that a combination of different solutions may be needed. Ideally, one or more of the wayfinding options described below could be implemented, either as a separate pilot or as part of an ASAP station concept.

The following six wayfinding options have been identified for future consideration to assist all who use the rail system, and especially customers who are visually impaired, blind, and DeafBlind:

1) Tactile Ground Surface Indicators – The purpose of tactile ground surface indicators is to give pedestrians who are blind or who have a visual impairment a warning of hazards (e.g., warning surfaces at the edge of platforms) and directional information to aid navigation of the environment (see picture at right). Truncated domes at the edge of CTA platforms are in widespread use in the United States on transit platform edges and the bottom of curb ramps. Tactile directional surfaces indicate the direction of travel and are more commonly used in Asia, Europe, and Canada. A common concern with directional ground surface indicators is that they may also create obstructions for wheelchair users when placed in a common pathway.

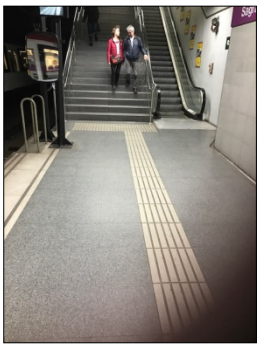


Photo courtesy of Sonali Tandon/CTA

2) Floor Graphics – Floor graphics employ color, contrast, and markings to identify routes through larger complex stations or to transfer connections and to highlight important elements, such as fare arrays or elevators, and to help customers navigate stations safely throughout the accessible route, such as highlighted stair nosings (see picture at right). Floor graphics are helpful for people who have some sight and rely on that sight, as well as other aids, to navigate through the environment. The CTA has used contrasting colors on stair tread nosings and landings in some recent station projects.

Source: Australian Human Rights Commission

3) Directional Signage – Improved directional signage includes signage in more locations, with greater font sizes, in high contrast, and located in well-lit areas. Since 85 percent of the people considered blind or visually impaired retain some vision and rely on that limited vision, it is important to provide information and directional signage that allows people with low vision to navigate independently. The CTA currently provides required directional and informational signage.

Photo courtesy of CTA/Flickr

4) Tactile Maps – Tactile maps are modeled using raised surfaces to help people who are blind or visually impaired and others to plan routes, for example through a rail station, a building, or on bus stop poles to indicate boarding locations.

Source: San Francisco Municipal Transportation Agency (SFMTA)

5) Pedestrian Routes to Bus Stops – Ensuring the pedestrian routes are accessible from rail stations to connecting bus stops is part of full program accessibility. These include treatments related to curb ramps, crosswalks with cane detectable surfaces, color contrasting cross walk borders, and Accessible Pedestrian Signals (see below) that provide information for pedestrians at street crossings through audible signals and vibrotactile surfaces. CDOT is currently analyzing different technologies for Accessible Pedestrian Signals and is working to implement a pilot program.

Source: Chicago Department of Transportation (CDOT)

Accessible Pedestrian Signals (APS) – This wayfinding option is related to pedestrian routes from rail stations to connecting bus stops. APS communicates pedestrian street crossing timing information in nonvisual formats (e.g., audible signals, vibrotactile signaling). Any street level APS technology will require consultation with MOPD as well as coordination with CDOT or IDOT for implementation.

Source: DNAinfo/Ewa Kern-Jedrychowska

6) Wayfinding Applications (APPs) – APPs send signals to smart phones to assist blind or visually impaired users to understand navigation information generally provided in a visual format. APPs are a developing technology. The Washington, D. C. Metro recently implemented a pilot project in one of their stations. One limitation of this system is that it may only be useful to people with smart phones.

Source: Gatwick Airport / Pointr Labs

Some of the wayfinding options described above may be more suitable for application in the CTA system than others, while others may be more suitable for application at certain types of stations (e.g., key stations). As a next step, the CTA will:

- Select pilot station locations for tactile ground surface indicators and additional floor graphics. The CTA will need to analyze both how this works functionally and the materials that could be used.
- Coordinate with CDOT on pedestrian routes outside rail stations that connect with bus stops and potential installation of APS.
- Explore tactile signage at bus stops to assist with exact location.
- Prepare rail station guides to assist with navigation inside rail stations, which will be available online soon and will serve a similar purpose as tactile maps.
- Further enhance directional signage and lighting in stations.
- Seek feedback on wayfinding APPs from users in other systems on adaptability and usability of these APPs. The CTA will remain engaged on the topic with the goal of potentially adopting something similar when the technology is more advanced.

CHAPTER 4: ASAP PHASE ONE AND FUTURE ASAP PHASES

ADDING ACCESSIBILITY

ASAP PHASE ONE

Chapter 1 lists the eight stations in Table 1 that are prioritized for ASAP Phase One, which include:

- Austin – Green Line (Lake branch)
- Montrose – Blue Line (O'Hare branch)
- California – Blue Line (O'Hare branch)
- State/Lake – (Loop Elevated)[a]
- Lawrence – Red Line (North Side Main Line branch)[b]
- Argyle – Red Line (North Side Main Line branch)[b]
- Berwyn – Red Line (North Side Main Line branch)[b]
- Bryn Mawr – Red Line (North Side Main Line branch)[b]

• • •

ASAP includes creative and thoughtful engineering solutions to transform CTA's inaccessible stations.

[a] CDOT-led project.
[b] RPM Phase One station.

As noted above, over half of ASAP Phase One stations are already partially or fully funded, with design for the CDOT-led State/Lake station and the four RPM Phase One stations being advanced independent of the ASAP effort. Therefore, the key site-specific design complexities and constraints for the remaining three ASAP Phase One stations and a brief description of the rationale for selecting the proposed concept design solutions are described in this section. Table 9 describes the level of design detail incorporated in the 10 percent concept designs developed for these three ASAP Phase One stations. Appendix C contains relevant plan sets for the proposed Austin Green Line and Montrose and California Blue Line ASAP Phase One stations.

AUSTIN – GREEN LINE (LAKE BRANCH)

This station is located at 351 N. Austin Boulevard, Chicago, in the northeast quadrant of the Austin/Harlem intersection, and serves the Western geographic service area. The station provides service to residents of both the City of Chicago and the Village of Oak Park. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Embankment
Opened	1901
Upgrades	Reconstructed 1962
Rail Ridership (2016)	598,106

Connecting Bus Route(s)	CTA Route #91 – Austin Pace Route #309 – Lake Pace Route #313 – St. Charles Pace Route #315 – Austin

The stationhouse is located just above street level at the northeast quadrant of the Austin Boulevard/Corcoran Place intersection. The center platform is located above the stationhouse on an embankment. The stationhouse is accessed from the platform level via two sets of stairs and one up-only escalator.

Following is a summary of the proposed modifications and the key design considerations at this station. Appendix C contains a visual representation of the proposed design for this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications between street-level and stationhouse include the addition of an ADA compliant ramp.
- Due to narrow platforms, the escalator from the stationhouse to the platform that is currently adjacent to a staircase is proposed to be removed.
- The existing east stairway, which is currently adjacent to the escalator, will be repositioned to be centered within the existing platform. This will allow wheelchair passing and turning space at platform-level.
- The elevator connecting the stationhouse and platform is proposed to be positioned on the paid side of the stationhouse, and centered between the two sets of stairs that connect to the platform level.
- Stairs at the east end of the platform are proposed to be reopened to the public to provide an emergency exit through an existing corridor under the inbound tracks.

KEY DESIGN CONSIDERATIONS

- ***Embankment integrity.*** The existing embankment is part of the original construction and may be structurally sensitive due to its age. The current design calls for the elevator to be located in the stationhouse to limit the impact on existing embankment structures.
- ***Adjacent freight rail.*** An active Class I railroad operates on the abutting embankment. The elevator is proposed to be located in the stationhouse to limit interfering with the existing abutting embankment structures and railroad operations.
- ***Platform widths.*** Narrow east- and west-end platform widths restrict unobstructed wheelchair passing space and turning without touching the tactile ground surface indicators (i.e., truncated domes). The existing escalator and stairs are located in a narrow section of the platform that cannot accommodate a minimum width of 5' for wheelchair passing and turning. Removing the escalator and centering the stairs significantly increases the wheelchair passing space and improves wheelchair maneuverability by providing an additional 2' on each side of the stairs. As a result, customers can freely maneuver without touching the truncated domes. While the existing escalator is a key amenity for all station users, all other alternatives to incorporate an escalator would disturb the embankment structures and/or impact adjacent freight rail operations, which would have significant cost implications.
- ***Platform obstructions relative to berthing locations.*** The current train berthing markers result in both doors in a single car opening in line with platform obstructions that

interfere with the use of gap fillers. This limits access for some wheelchair users and others who need gap fillers to board or disembark at those rail car doors. Wheelchair access is not possible at these car positions since there is not ample room for the placement of gap fillers. Currently, CTA conductors reposition a train to enable the use of gap fillers when needed. The existing berthing markers are proposed to be relocated so that no more than one door in any car is inaccessible. The use of custom gap fillers is also being investigated by the CTA.

- ***Accessible route impediments.*** The accessible route from curb to the stationhouse is currently impeded by steps at the crosswalk and steps leading to the station entrance. Due to the existing sidewalk and street configuration, the space is currently inadequate to install an ADA compliant ramp unless the pedestrian area is expanded. To implement accessibility improvements throughout the accessible route, the following civil work will be necessary at Corcoran Place: remove the westbound right-turn lane, increase the sidewalk width, and relocate the curb. These proposed changes will require agency coordination with CDOT to provide space for ADA compliant ramps.
- ***Emergency egress.*** An existing set of stairs (currently closed to the public) are proposed to be reopened at the auxiliary Mason Avenue stationhouse at the east end of the platform to meet emergency exiting standards.

RENDERING

A conceptual rendering of the Austin station shows some of the proposed improvements to this station (see Figure 5).

Figure 5 Proposed Austin – Green Line (Lake Branch) Station Artist Rendering (Facing Northeast)

MONTROSE – BLUE LINE (O'HARE BRANCH)

This station is located at 4600 W. Montrose Avenue, Chicago, and serves the Northwest geographic service area. This station is located along I-90/I-94 (Kennedy Expressway). The stationhouse entrance/exit is located at Montrose Avenue, which passes over the Expressway. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Median
Opened	1970
Upgrades	2016 at stationhouse and platform levels
Rail Ridership (2016)	745,152
Connecting Bus Route(s)	CTA Route #78 – Montrose

The station currently has two points of access on Montrose Avenue (on north and south sides of the Montrose bridge structure over I-90/I-94). The stationhouse is at the same level as the center platform. One set of stairs and one up-only escalator serve the platform level from each point of access.

Following is a summary of the proposed modifications and the key design considerations at this station. Appendix C contains a visual representation of the proposed design for this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications will maintain the north stairs and escalator and the south stairs.
- The south up-only escalator is proposed to be removed to accommodate an elevator.
- One elevator is proposed to be added to serve customers accessing the station on the north side of Montrose.
- One elevator is proposed to be added to serve customers accessing the station on the south side of Montrose.
- The proposed elevators will be located on the unpaid side of the station.

KEY DESIGN CONSIDERATIONS

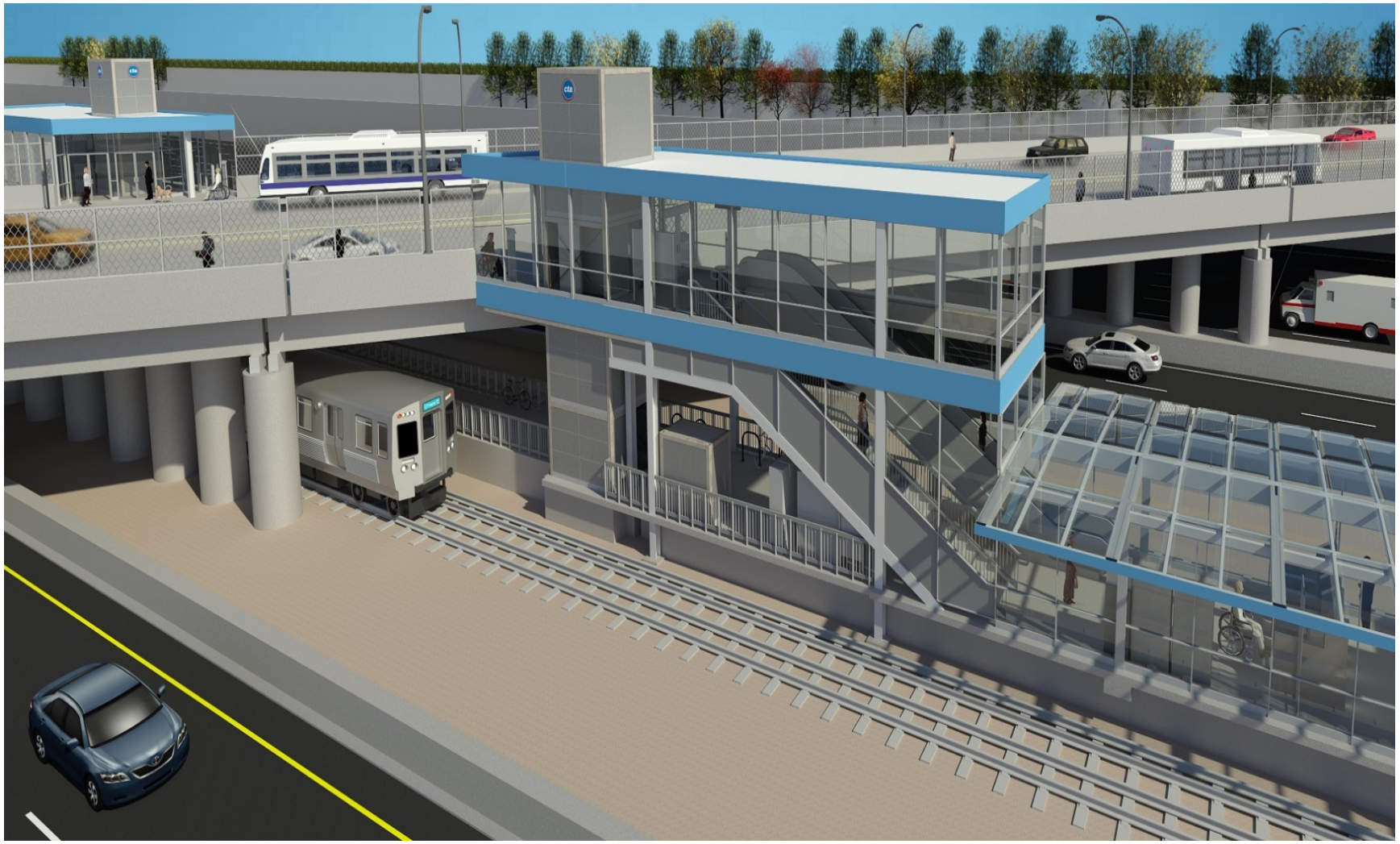
- ***Emergency egress.*** The proposed design will not change the emergency egress conditions that currently exist, which are located at the south end of the existing platform loading/unloading areas. This center platform, located in the median of I-90/94, does not allow safe egress from its north end. Moreover, the station is bounded by general purpose travel lanes, exit and entrance ramps, flyover ramps, and bridge structures that serve I-90/I-94. As a result, the existing station location cannot accommodate the addition of emergency stairs from the platform without major implications to the Interstate facility. Emergency egress cannot be accommodated on the north end of the existing platform and the CTA may need to request a variance for the existing exiting condition.
- ***Ease of stationhouse access.*** Two elevators (one on each side of Montrose Avenue) are proposed at the existing north and south entrances/exits. Placement of the elevators at these locations minimizes the distance to access the station relative to the existing bus stops and eliminates the need to cross Montrose Avenue, which has heavy traffic, for accessible routes from bus stops.
- ***Limited right-of-way.*** Because of I-90/I-94, the rail track alignment and platforms become narrower southeast of the station. Existing electrical and communication huts at

track-level cannot be relocated due to the narrow track alignment southeast of the station. These constraints limit the space available for an elevator at the south entrance next to the existing stairs and escalator. Given these space limitations, the addition of an elevator on the south side of Montrose requires that the existing escalator be removed; however, the escalator on the north side of Montrose will remain.

RENDERING

A conceptual rendering of the Montrose station shows some of the proposed improvements to this station (see Figure 6).

Figure 6 Proposed Montrose – Blue Line (O'Hare Branch) Station Artist Rendering (Facing Southeast)



CALIFORNIA – BLUE LINE (O'HARE BRANCH)

This station is located at 2211 N. California Avenue, Chicago, on the east side of California approximately one block south of Milwaukee Avenue, and serves the Northwest geographic service area. The station is National Register of Historic Places (NRHP) eligible per the CTA 1989 Programmatic Agreement. The station is also identified by the Chicago Historic Resources Survey (CHRS) as an "Orange" rated property, which means that it "possesses potentially significant architectural or historical features" and is therefore subject to the City's Demolition Delay Ordinance.[8] The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Elevated
Opened	1895
Upgrades	1980; 2015 at stationhouse level
Rail Ridership (2016)	1,653,626
Connecting Bus Route(s)	CTA Route #52 – California CTA Route #56 – Milwaukee

The historic street-level stationhouse is located on the east side of California Avenue. A set of stairs leads to each of the inbound and outbound platforms from the stationhouse. Trains operate on center tracks.

Following is a summary of the proposed modifications and the key design considerations at this station. Appendix C contains a visual representation of the proposed design for this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications maintain the two existing stairs.
- One elevator is proposed to be added to access the inbound platform, and one elevator is proposed to be added to access the outbound platform.
- To meet exiting requirements, three new sets of stairs are proposed to be added for emergency exit only. These are proposed to be placed at both ends of the outbound platform and one at the south end of the inbound platform.
- The south ends of the inbound and outbound platforms are proposed to be widened to match the existing loading areas.
- The addition of the emergency exit from the north end of the outbound platform will require the placement of a sidewalk bump-out on the north side of Lyndale Street, which will eliminate two metered parking stalls.

KEY DESIGN CONSIDERATIONS

- ***Historic designation.*** As a historic station, the CTA will seek ways to avoid, minimize, or mitigate any potential adverse effects as a result of station alterations. The proposed design takes into account the public-facing historic elements of the station, principally the stationhouse facade that represents the character defining feature of the station by placing

[8] The Demolition Delay Ordinance establishes a hold of up to 90 days in the issuance of any demolition permit.

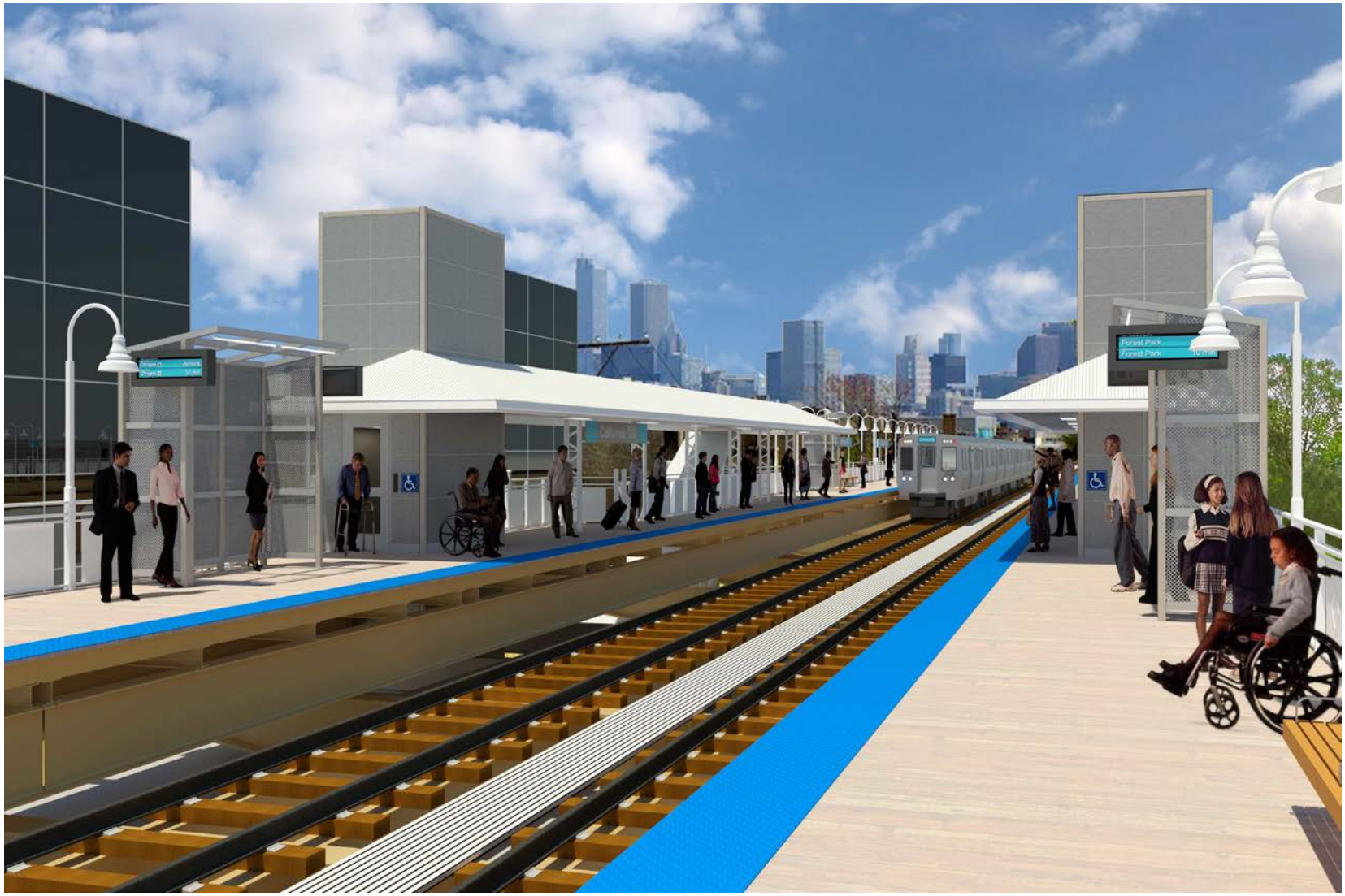
the inbound and outbound elevators in locations that do not necessitate modifications to the historic stationhouse facade.

- ***Platform widths.*** Overall, narrow platform widths restrict customer capacity at this high ridership station. The southeast ends of both the inbound and outbound platforms are narrower than other sections of the platforms. The southeast ends of the inbound and outbound platforms are proposed to be widened to create a consistent platform width of 12'.
- ***Emergency egress.*** An emergency exit stair is proposed to be added to the north end of the outbound platform. This stair is proposed to land at ground level within City of Chicago right-of-way and will require inter-agency coordination. Emergency exit stairs are proposed to be added to the southeast end of both the outbound and inbound platforms.
- ***Property impacts.*** Platform widening and exit stair additions are needed at the southeast ends of the inbound and outbound platforms. The platform widening is needed to better serve and accommodate the high volume of riders at this station. The exit stairs are needed to meet emergency exiting standards. Air rights agreements with adjacent property owners will be needed to accommodate the widened platforms and the additional emergency exit stairs. The two southeast emergency exit stairs will land at ground level within CTA property. For the proposed modifications outside of CTA property, air rights agreements with private landowners will be needed to accommodate the wider inbound platform and exit stairs, and with the City of Chicago to accommodate the wider outbound platform and exit stairs over the existing alley.
- ***Multimodal connections.*** The CTA has initiated discussions with CDOT about potential improvements for pedestrian crossing. Additional inter-agency coordination will be necessary to evaluate crosswalk options, street configuration alternatives, and any traffic study requirements before crosswalk improvements could be implemented.

RENDERING

A conceptual rendering of the California station shows some of the proposed improvements to this station (see Figure 7).

Figure 7 Proposed California – Blue Line (O'Hare Branch) Station Artist Rendering (Facing Southeast)



STATE/LAKE – (LOOP ELEVATED)

This station is located at 200 N. State Street, Chicago, and serves the CBD geographic service area. The station is located above Lake Street at State Street. The station is listed as a contributor to the Loop Retail National Register of Historic Places district. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Elevated
Opened	1895
Upgrades	Renovated 1966; platform expansion 2016
Rail Ridership (2016)	3,146,801
Connecting Bus Route(s)	CTA Route #2 – Hyde Park Express CTA Route #29 – State CTA Route #36 – Broadway CTA Route #62 – Archer CTA Route #146 – Inner Drive / Michigan Express CTA Route #148 – Clarendon / Michigan Express

The current station has two points of access that serve the inner loop via stairways connecting the street to the stationhouse at platform level, and two points of access that serve the outer loop via stairways connecting the street to the stationhouse at platform level. There is no existing sky bridge to enable transfers. The State/Lake station serves the Green, Orange, Brown, Pink and Purple lines, and connects to the Red Line subway station at Lake.

CDOT is currently moving forward a design effort to completely reconstruct and modernize the existing station. The new State/Lake station will be a modern, fully accessible station with wider platforms, and built to current design standards, consistent with the new Washington/Wabash station. Funding is in place to complete the design phase. An estimate will be developed based on the final design. As a partner agency, the CTA will coordinate with CDOT during the design phase; however, the station design will be advanced separate from ASAP as it is a CDOT-led project.

FUTURE ASAP PHASES

Chapter 1 lists the 16 stations identified for Future ASAP Phases in Table 1. This section provides a summary of the key site-specific design complexities and constraints at these 16 stations and a brief description of the rationale for selecting the proposed schematic design solutions. Table 9 describes the level of design detail incorporated in the schematic designs developed for stations within Future ASAP Phases.

ASAP PHASE TWO

ADAMS/WABASH – (LOOP ELEVATED)

This station is located at 201 S. Wabash Avenue, Chicago, and serves the CBD geographic service area. The station is located above the intersection of Wabash Avenue and Adams Street. The station is listed as a contributor to the Loop Retail National Register of Historic Places district and is also encumbered by the 1981 Master Plan for the Loop Elevated: Rehabilitation and Historic Preservation (City of Chicago, CTA) that identifies its trestle as NRHP eligible. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Elevated
Opened	1896
Upgrades	Cosmetically refurbished in 1989
Rail Ridership (2016)	2,808,380
Connecting Bus Route(s)	CTA Route #1 – Bronzeville / Union Station
	CTA Route #7 – Harrison
	CTA Route #28 – Stony Island
	CTA Route #126 – Jackson
	CTA Route #151 – Sheridan

The station currently has four stairways connecting street to the stationhouse at mezzanine level. There are four stairways connecting the paid side of the stationhouse to the platform, and three exit only stairs at platform level. Two sky bridges allow customers to transfer between the inner or outer loop platforms.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed design requires reconstruction of this elevated station, due to the age and condition, significant deterioration of the existing station elements, and issues with maintainability.
- The mezzanine level would be removed, and separate stationhouses are proposed to be located at platform-level to serve inner or outer loop destinations.
- Removal of the mezzanine at stationhouse level will require one additional CA booth so that both the inner and outer platforms are served.
- Each stationhouse is proposed to be served by two sets of stairs, one elevator, and one up-only escalator between street and platform levels.
- One sky bridge at the southern end is proposed to enable transfers, as well as a stairway and one elevator at each platform to access the sky bridge.
- The inner loop emergency exit stairway at the south end of the inner loop platform would be rebuilt.

KEY DESIGN CONSIDERATIONS

- ***Station age and condition.*** Due to the age and condition of existing station components, complete station reconstruction is warranted. Incorporating new elements into the

current infrastructure is not a cost-effective option. The best value for CTA is to rebuild the station to meet modern design standards.

- ***Mezzanine height restrictions.*** In addition to water infiltration and maintainability issues, headroom and vertical clearance requirements cannot accommodate a reconstructed mezzanine; therefore, the two stationhouses are proposed to be located at platform level. Eliminating the mezzanine would shift the stairs connecting the street and platform further from the intersection, which would help alleviate pedestrian congestion at the intersection quadrants. This proposed design also provides central locations for the elevators at street level and minimizes conflicts with customers using the stairs or escalators at platform level.
- ***Escalator access.*** With the removal of the mezzanine, customers will need to travel over 40 steps from street level to the proposed stationhouse at platform level. Given that this is a high ridership station, escalators not only offer a key customer amenity, but also expedite stationhouse access.
- ***Historic designation.*** The existing elevated trestle structure, which is not part of the stationhouse, is a historic element of the station. Therefore, the CTA will seek ways to avoid, minimize, or mitigate any potential adverse effects as a result of new station construction. The CTA will need to mitigate the impact to the trestle before construction of the new station begins, likely through architectural photography, exhibit, or donation.

CHICAGO/MILWAUKEE – BLUE LINE (DEARBORN STREET SUBWAY)

This station is located at 800 N. Milwaukee Avenue, Chicago, and serves the Northwest geographic service area. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Subway Center Platform
Opened	1951
Upgrades	None
Rail Ridership (2016)	1,297,717
Connecting Bus Route(s)	CTA Route #56 – Milwaukee CTA Route #66 – Chicago

The station currently has three points of access via stairs at the Chicago/Milwaukee/Ogden/May intersection. These stairs are located as follows: (1) North side of Chicago between May and Ogden; (2) South side of Chicago west of Milwaukee; and (3) In the center island bordered by Chicago, Ogden, and Milwaukee. One stairway and one up-only escalator connect the midpoint of a center loaded platform with the stationhouse at mezzanine level.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications maintain all existing stairways and the up-only escalator that are currently in use.
- One proposed elevator, located in the intersection island, will provide access between street level and the unpaid side of the stationhouse.
- One proposed elevator will provide access between the paid side of the stationhouse and the platform.

- An emergency stair is proposed at the south end of the platform to provide a street-level exit near the east quadrant of the Milwaukee Avenue/Ogden Avenue intersection.

KEY DESIGN CONSIDERATIONS

- ***Your New Blue Program Improvements.*** ASAP improvements must be coordinated with the *Your New Blue Program* to upgrade Blue Line stations and track from Grand to O'Hare.
- ***Six-corner intersection configuration.*** At street level, the six-corner intersection presents challenges for a centrally located elevator that does not impede sidewalk users. Three existing stairs provide connections between the street and stationhouse level, two of which are located on narrow sidewalks with adjacent buildings where space is inadequate for elevators. The third stair is located on a pedestrian island in the center of this intersection. The island location is optimal for an elevator due to its central location relative to the intersection configuration and landing at stationhouse level at a location close to the CA kiosk.
- ***Potential pedestrian island expansion.*** As part of the ASAP effort the CTA initiated discussions with CDOT related to future roadway configurations in the station area. CDOT is assessing whether to expand the existing island area and reconfigure the roadway. Should these changes materialize at some point in the future, the proposed station design will be updated to utilize more of the expanded island.
- ***Co-location of the stair, escalator, and elevator.*** The stationhouse cannot accommodate the mezzanine to platform elevator within its existing geometry and size. A corridor on the paid side of the stationhouse is proposed to extend southeast under Milwaukee Avenue and directly above and in-line with the existing inbound platform. This corridor will provide access to and from the elevator between the stationhouse and platform levels, landing near the midpoint of the platform to provide centralized access for inbound and outbound trains.

DAMEN – BLUE LINE (O'HARE BRANCH)

This station is located 1558 N. Damen Avenue, Chicago, on the west side of Damen approximately one-half block south of Milwaukee and North Avenues, and serves the Northwest geographic service area. The station is NRHP eligible per the CTA 1989 Programmatic Agreement. The station is also listed as contributor to Wicker Park National Register of Historic Places district and as a contributor to the City of Chicago Milwaukee Avenue Landmark District. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Elevated
Opened	1895
Upgrades	1980; 2015 at stationhouse level
Rail Ridership (2016)	2,226,378
Connecting Bus Route(s)	CTA Route #50 – Damen CTA Route #56 – Milwaukee CTA Route #72 – North

The historic street level stationhouse is located on the west side of Damen Avenue. A set of stairs leads to each of the inbound and outbound platforms from the stationhouse. Trains operate on

center tracks. An existing, exit-only, stairway is located from the north end of the outbound platform to the north side of North Avenue.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications maintain the existing stairways.
- One elevator is proposed to be added to access the inbound platform and one elevator is proposed to be added to access the outbound platform.
- Two new stairs are proposed to be added for emergency exit only. These are proposed to be placed on the east side of Damen Avenue to serve both the inbound and outbound platforms.
- The non-loading area located at the north end of the outbound platform is proposed to be widened.

KEY DESIGN CONSIDERATIONS

- ***Historic designation.*** As a historic station, the CTA will seek ways to avoid, minimize, or mitigate any potential adverse effects as a result of alterations. The proposed design takes into account the public-facing historic elements of the station, principally the stationhouse facade that represents the character defining feature of the station by placing the inbound and outbound elevators in locations that do not necessitate modifications to the historic stationhouse facade.
- ***Platform widths.*** Overall, narrow platform widths restrict customer capacity at this high ridership station. The southeast ends of both the inbound and outbound platforms are narrower than other sections of the platforms. The southeast ends of the inbound and outbound platforms are proposed to the widened to create a consistent platform width of 12'. Moreover, the existing outbound platform between the loading platform and North Avenue includes a narrow passageway with the 2' wide tactile warning tiles along the platform edge, resulting in only a 2'-5" smooth walkway within this section. The proposed station design increases this section of platform width to 7' to accommodate a minimum width of 5' for wheelchair passing and turning space without touching the truncated domes.
- ***Property impacts.*** The outbound elevator may be placed within the back of an adjacent building, which will require an agreement with the owner or land acquisition. Widening the north end of the outbound platform will also require air rights agreements with several private landowners. The widening of the south end of the inbound platform occurs over a public alley.
- ***Emergency egress.*** Two emergency exits (one for the inbound and one for the outbound platforms) are proposed to be added on the east side of Damen Avenue. The outbound exit will be within CTA property at ground level and the inbound exit will require a sidewalk bump-out on the east side of Damen Avenue, which would eliminate two metered parking stalls.

IRVING PARK – BLUE LINE (O'HARE BRANCH)

This station is located at 4131 W. Irving Park Road, Chicago, and serves the Northwest geographic service area. This station is located along I-90/I-94 (Kennedy Expressway). The stationhouse entrances/exits are located at Irving Park Road on the north end of the platform, and N. Pulaski Road on the south end of the platform. Irving Park and Pulaski both pass under the Expressway. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Median
Opened	1970
Upgrades	2016 at stationhouse and platform levels
Rail Ridership (2016)	1,359,908
Connecting Bus Route(s)	CTA Route #54A – 55th / Austin
	CTA Route #80 – Irving Park
	CTA Route #53 – Pulaski

The station has three entrances and one exit-only rotogate: one stationhouse with a CA kiosk on the south side of Irving Park Road; one high-barrier gate (HBG) entrance on the north side of Irving Park Road; one unmanned stationhouse with an HBG on the west side of Pulaski Road; and one exit-only rotogate on the east side of Pulaski Road. Each of these egress and ingress points for the platform are located under the bridge structures that support I-90/I-94 and the Blue Line center platform over Irving Park Road and Pulaski Road.

The proposed design concept will require extensive coordination with multiple transportation partners to ensure that the design adequately meets their requirements. There is a special need for coordination with IDOT related to the proposed design concept outlined below to allow for bridge maintenance of IDOT's bridge structure. The CTA will actively work with IDOT during the design phase to ensure that the stationhouse design meets IDOT's bridge maintenance and other needs.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications include two new stationhouses each with a CA kiosk and elevators providing access to the north and south ends of the platform (one on the north side of Irving Park Road and one on the east side of Pulaski Road).
- To add accessibility at this station, the existing stationhouse on the south side of Irving Park Road is proposed to be converted to a stationhouse without a CA kiosk.
- The stationhouse on the west side of Pulaski Road will remain unchanged.

KEY DESIGN CONSIDERATIONS

- ***Platform width.*** The narrow platform width prevents the placement of elevators at the center of the platform. The center loading area platform width is 12'-2", which is too narrow to accommodate an elevator with safe passing room on either side. This would eliminate access to both the north side of Irving Park Road, and the east side of Pulaski Road and thereby eliminate direct access to westbound buses on Irving Park and northbound buses on Pulaski. Widening the platform is not practical due to the presence

of the I-90/I-94 Expressway. Therefore, elevators are proposed to be located at platform end points to accommodate wheelchair passing and turning.

- ***Stationhouse size and site constraints.*** The size of the existing stationhouses cannot functionally accommodate elevators. New stationhouses on the north side of Irving Park Road and on the east side of Pulaski Road are proposed to include an elevator and stairs. The new Irving Park and Pulaski stationhouses will require an easement from IDOT. The proposed Pulaski stationhouse will also require a permit/agreement from the City of Chicago since one of the dedicated bus lanes will be eliminated to accommodate the proposed stationhouse and relocated sidewalk area. IDOT will also require bridge maintenance of IDOT's bridge structure. Given the various needs of the transportation partners, all proposed changes will require extensive inter-agency coordination between the CTA, CDOT, and IDOT.
- ***Multimodal connections.*** There are multiple pedestrian crossings and bus connections that provide access to the existing station. While the existing bus stop locations would not be impacted by the proposed stationhouses, pedestrian access will need to be enhanced. Due to the presence of Expressway on and off ramps, there is a large amount of vehicular traffic and turning movements in the area. The CTA has initiated discussions with CDOT and IDOT about potential pedestrian improvements to address operational and safety concerns. Additional inter-agency coordination will be necessary to evaluate crosswalk options, street configuration alternatives, and any traffic study requirements before crosswalk improvements are implemented.
- ***Emergency egress.*** The platform length in relation to the existing and proposed entrances is too long to meet emergency exiting standards and additional emergency exits cannot be added without major implications to the Interstate facility.

NORTH/CLYBOURN – RED LINE (STATE STREET SUBWAY)

This station is located at 1599 N. Clybourn Avenue, Chicago, and serves the Northern geographic service area. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Subway Side Platforms
Opened	1943
Upgrades	None
Rail Ridership (2016)	2,128,272
Connecting Bus Route(s)	CTA Route #8 – Halsted CTA Route #9 – Ashland CTA Route #72 – North CTA Route #132 – Goose Island Express

The subway station currently has one point of access located at street level at the northeast corner of the North/Clybourn intersection. The stationhouse at street level connects to the mezzanine level via stairs where customers can transfer between and traverse to inbound and outbound platforms. The inbound and outbound platforms are each connected to the mezzanine level with one stairway and one up-only escalator. Trains can be accessed at dual platforms, with trains operating on center tracks. This subway configuration is not commonly found on the CTA rail system.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- A new elevator is proposed to be added within the existing street-level stationhouse at North/Clybourn, providing access to the mezzanine and the outbound platform.
- A second elevator is proposed at mezzanine-level to access the inbound platforms.
- In order to increase capacity and provide additional egress, a new access point is proposed on the east side of Dayton Street, south of North Avenue. The new mezzanine-level Dayton Street stationhouse would be accessed from street level by a new elevator, stair, and up-only escalator.
- The paid side of the Dayton Street entrance would connect at the mezzanine level with the existing stairs and escalators and the two new elevators to and from the platforms.
- To meet egress requirements, a new stair is proposed at the northwest quadrant of the Halsted/Clybourn intersection to serve the southeast end of the platform.
- Overall, the proposed modifications maintain the existing stairs and escalators.

KEY DESIGN CONSIDERATIONS

- ***Side platform configuration.*** The side platform subway configuration requires multiple levels of access: stationhouse at street level, mezzanine corridor, and platform. This configuration presents challenges for the placement of elevators. At North/Clybourn, one elevator is able to serve the street-level stationhouse, the mezzanine-level corridor and the outbound platform, with a second elevator from the mezzanine level corridor to the inbound platform. A third elevator from street level to the new Dayton mezzanine-level entrance will allow customers to access the two elevators from the mezzanine-level corridor to the two platforms.
- ***Limited entrance/exit points.*** There is currently only one point of egress and ingress to the station from the existing street-level stationhouse at the southeast corner of North Avenue/Clybourn Avenue. This single point of access means that all travelers must funnel through the same route to enter and exit the station, which often becomes congested at this high ridership station. A previously closed auxiliary entrance/exit south of Clybourn Avenue on the east side of Dayton Street is proposed to be reopened. Unlike the main stationhouse at North Avenue/Clybourn Avenue that is located at street level, the Dayton auxiliary access point would be located at mezzanine level and would be accessed from street level via a new stair, elevator and an up-only escalator. All operations, including the CA Kiosk, are proposed to be located at mezzanine level. To meet exiting requirements, a third stair-only exit at the Halsted/Clybourn intersection is proposed via an existing corridor at mezzanine level above the tracks. This corridor will be reopened to a new stairway leading up to street level at the northwest quadrant of Halsted/Clybourn.
- ***Property impacts.*** Tenant space is currently leased in a portion of the stationhouse building. Access to the tenant space may be impacted due to the placement of one of the elevators within the existing main stationhouse.

ASAP PHASE THREE

BELMONT – BLUE LINE (O'HARE BRANCH)

This station is located at 3355 W. Belmont Avenue, Chicago, and serves the Northwest geographic service area. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Subway Center Platform
Opened	1970
Upgrades	None
Rail Ridership (2016)	1,653,626
Connecting Bus Route(s)	CTA Route #77 – Belmont CTA Route #82 – Kimball / Homan

The subway station currently has one point of access located at street level at the southeast quadrant of the Belmont Avenue/Kimball Avenue intersection. The stationhouse at mezzanine level is accessed from platform level via one stairway and one up-only escalator. One stairway, and one up-only escalator, connects the stationhouse with the north end of a center loaded platform.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications maintain all existing stairways and escalators.
- One proposed elevator will provide access between street level and the unpaid side of the stationhouse.
- One elevator will provide access between the paid side of the stationhouse and the platform.
- An emergency stairway is proposed to be placed at the south end of the platform, and provide a street-level exit at the northeast quadrant of Barry Avenue/Kimball Avenue.

KEY DESIGN CONSIDERATIONS

- ***Your New Blue Program and Belmont Gateway Project coordination.*** The street to stationhouse elevator must be coordinated with the *Your New Blue Program* to upgrade Blue Line stations and track from Grand to O'Hare and the Belmont Gateway project that is currently being planned at this station. The proposed "gateway" is an architectural canopy that will expand the covered area for customers and protect the existing stairs and escalator from the elements. The street level elevator is proposed to have an independent enclosure and would be located away from the gateway structure.
- ***Limited entrance/exit points.*** The existing station has one point of egress and ingress. An emergency exit-only set of stairs is proposed to be added at the southern end of the platform, with the street level exit located in the parkway on the north side of Barry Avenue and east of Kimball Avenue.

DIVISION – BLUE LINE (DEARBORN STREET SUBWAY)

This station is located at 1200 N. Milwaukee Avenue, Chicago, and serves the Northwest geographic service area. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Subway Center Platform
Opened	1951
Upgrades	None
Rail Ridership (2016)	1,929,330
Connecting Bus Route(s)	CTA Route #9/X9 – Ashland CTA Route #56 – Milwaukee CTA Route #70 – Division

The station currently has two points of access via stairs on the east and west sides of Ashland Avenue and between Division and Milwaukee. Two sets of bi-directional stairs and one set of exit only stairs connect the center loaded platform with the stationhouse at mezzanine level.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications maintain the stairway between street and stationhouse on the west side of Ashland Avenue, but the stairway on the east side would be removed.
- The stationhouse is proposed to be expanded to extend under the intersection island at street-level known as Polonia Triangle. This expansion will provide a direct connection between Polonia Triangle and the unpaid side of the stationhouse via an elevator, stairway, and an up-only escalator.
- On the paid side of the stationhouse there are proposed to be two stairs and one elevator between the stationhouse and platform, and one exit-only stair and one exit-only escalator from platform to stationhouse.

KEY DESIGN CONSIDERATIONS

- ***Your New Blue Program Improvements.*** ASAP improvements must be coordinated with the *Your New Blue Program* to upgrade Blue Line stations and track from Grand to O'Hare.
- ***Six-corner intersection configuration.*** At street level, the six-corner intersection presents challenges for a centrally located elevator that does not impede sidewalk users. Two existing stairs provide connections between the street and stationhouse level. One stair is located on a narrow sidewalk with adjacent buildings where space is inadequate for an elevator, and the other stair is located on a pedestrian island, known as the Polonia Triangle, in the center of this intersection. Polonia Triangle is an optimal location for an elevator due to its: central location relative to the intersection configuration; location of bus stops around the island to support multimodal connectivity; size and available space to accommodate stairs, an escalator, and an elevator next to each other; and landing at stationhouse level at a location close to the CA kiosk. Over time Polonia Triangle has evolved into a space for various community uses. Further coordination with community groups and Special Service Area representatives to gather input and incorporate potential

design modifications, including relocating the existing fountain within the Polonia Triangle, will be necessary to ensure that the proposed station design is responsive to community needs.

- ***Potential street reconfiguration and island expansion.*** Based on initial discussions with CDOT, the existing island area may be expanded in the future and the number of travel lanes may be reduced prior to the proposed station upgrades. The potential expansion of this island presents an attractive opportunity to add accessibility at this central location without impacting the community uses of the Polonia Triangle space. However, reducing travel lanes on Ashland is not consistent with other CTA transit planning efforts.
- ***Stationhouse size and layout.*** The existing stationhouse size and layout cannot functionally accommodate elevators. The stationhouse layout is proposed to be reconfigured and its footprint expanded to accommodate the addition of elevators, to provide an unobstructed accessible route, and generally enhance circulation and customer capacity at this high ridership station.

LASALLE/VAN BUREN – (LOOP ELEVATED)

This station is located at 121 W Van Buren Street, Chicago, and serves the CBD geographic service area. The station is located above Van Buren Street. The station is identified by the CHRS as an "Orange" rated property, which means that it "possesses potentially significant architectural or historical features" and is therefore subject to the City's Demolition Delay Ordinance. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Elevated
Opened	1897
Upgrades	None
Rail Ridership (2016)	806,851
Connecting Bus Route(s)	CTA Route #36 – Broadway
	CTA Route #132 – Goose Island Express

The station currently has two stationhouses, one on each side, and four stairways connecting street level to the stationhouses at mezzanine level. There are two stairways connecting the mezzanine transfer level to the unpaid sides of the inner and outer stationhouses at platform level. There are two stairways each on the paid sides of the inner and outer platforms to the mezzanine transfer level.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed design requires reconstruction of this elevated station, and maintains the basic vertical geometry of this station.
- The stationhouses are proposed to be repositioned to provide wider platform areas.
- One proposed elevator will provide access between the street, mezzanine, and inner platform.
- One elevator will provide access between the street, mezzanine, and outer platform. Transfer between these two elevators would occur via a mezzanine transfer level, which eliminates the need for a sky bridge.

KEY DESIGN CONSIDERATIONS

- ***Station age and condition.*** Due to the age and condition of existing station components, complete station reconstruction is warranted. Incorporating new elements into the current infrastructure is not a cost-effective option. The best value for CTA is to rebuild the station to meet modern design standards.
- ***Space constraints.*** Due to sidewalks and adjacent buildings, elevators are proposed to be placed in the northwest and southeast pedestrian quadrants of the LaSalle/Van Buren intersection to access the station. Unlike the Adams/Wabash station, vertical clearance is not as restricted at this station. Therefore, the proposed station design maintains a mezzanine level. Accessible transfers between the inner and outer loop platforms can be made via the mezzanine level. The curb line on the east side of LaSalle Street, south of Van Buren, is proposed to be bumped out to provide a protected area to access the elevator. The bump-out would also shorten the distance for pedestrians crossing the street. Further coordination with CDOT on this issue will be necessary.
- ***Historic designation.*** The CTA will need to conduct additional historic analysis and documentation at this station to identify the historic elements. The CTA will seek ways to avoid, minimize, or mitigate any potential adverse effects to the historic elements before construction of the new station begins, likely through architectural photography, exhibit, or donation.

MONROE/STATE – RED LINE (STATE STREET SUBWAY)

This station is located at 26 S. State Street, Chicago, and serves the CBD geographic service area. The stationhouse entrances/exits are located at mid-block between Madison and Monroe, and between Monroe and Adams. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Subway Center Platform
Opened	1943
Upgrades	None
Rail Ridership (2016)	3,453,506
Connecting Bus Route(s)	CTA Route #2 – Hyde Park Express CTA Route #6 – Jackson Park Express CTA Route #10 – Museum of Science & Industry CTA Route #29 – State CTA Route #36 – Broadway CTA Route #62 – Archer CTA Route #146 – Inner Drive / Michigan Express CTA Route #148 – Clarendon / Michigan Express

The station currently has two points of access on State Street: one is located at mid-block between Madison and Monroe and the other between Monroe and Adams. Both stationhouses are at mezzanine level and are accessed at platform level via two stairs and two up-only escalators. Both stationhouses are connected to the platform in the same manner by two sets of stairs and one up-only escalator.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications maintain all of the existing stairs and escalators between the street and stationhouse levels, and between stationhouse levels and the platform.
- One elevator is proposed to be added between street level and each stationhouse.
- One elevator is proposed to be added between each stationhouse and platform.

KEY DESIGN CONSIDERATIONS

- ***Adjacent pedestrian traffic.*** Potential conflict with pedestrian traffic could occur on State Street. The existing two stationhouses (mid-block between Madison and Monroe, and Monroe and Adams) on State Street are each served by two stairs and two escalators. To minimize conflicts with the existing stairs and escalators, elevators are proposed to be located at the midpoint between them. For the Madison/Monroe entrance, the elevator is proposed to be located on the west side of State Street because of existing property lines on the east side of the street. For the Monroe/Adams entrance the elevator is proposed to be located on the east side of State Street, due to an active alley on the west side of State Street.
- ***Co-location of the stair, escalator, and elevator.*** The platform loading area is located between the Madison/Monroe stationhouse (north) and the Monroe/Adams stationhouse (south). The stationhouses cannot accommodate the mezzanine to platform elevator within their existing geometry and size. A corridor on the paid side of the Madison/Monroe stationhouse is proposed to extend to the south under State Street directly in-line with the existing inbound platform. A corridor on the paid side of the Monroe/Adams stationhouse is proposed to extend to the north under State Street directly in-line with the existing outbound platform. These corridors will provide access to and from the elevators that serve customers between the stationhouse and platform levels, landing near the midpoint of the platform to provide centralized access for inbound and outbound trains.

OAK PARK – GREEN LINE (LAKE BRANCH)

This station is located at 100 S. Oak Park Avenue, Oak Park, in the northeast quadrant of the Oak Park/South Boulevard intersection, and serves the Western geographic service area. The station provides service to the residents of the Village of Oak Park. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Embankment
Opened	1901
Upgrades	Reconstructed 1962
Rail Ridership (2016)	472,143
Connecting Bus Route(s)	Pace Route #311 – Oak Park

The stationhouse is located just above street level at the northeast quadrant of the Oak Park Boulevard/South Boulevard intersection. The center platform is located above the stationhouse on an embankment. The stationhouse is accessed from platform level via two sets of stairs and one up-only escalator. The existing station is similar to the Austin Green Line; therefore many of the design constraints are similar.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications between street level and the stationhouse include the addition of a ramp.
- The escalator from the stationhouse to the platform is proposed to be removed in addition to repositioning one set of stairs to allow wheelchair passing space and turning at platform level.
- The elevator connecting the stationhouse and platform is proposed to be positioned between the two sets of stairs.
- Stairs at the east end of the platform are proposed to be reopened to the public to provide an emergency exit through an existing corridor under the inbound tracks.

KEY DESIGN CONSIDERATIONS

- ***Embankment integrity.*** The existing embankment is part of the original construction and may be structurally sensitive due to its age. The current design calls for the elevator to be located in the stationhouse to limit the impact on existing embankment structures.
- ***Adjacent freight rail.*** An active Class I railroad operates on the abutting embankment. The elevator is proposed to be located in the stationhouse to limit interfering with the existing abutting embankment structures and railroad operations.
- ***Platform widths.*** Narrow east- and west-end platform widths restrict unobstructed wheelchair passing space and turning without touching the tactile ground surface indicators (i.e., truncated domes). The existing escalator and stairs are located in a narrow section of the platform that cannot accommodate a minimum width of 5' for wheelchair passing and turning. Removing the escalator and centering the stairs significantly increases the wheelchair passing space and improves wheelchair maneuverability by providing an additional 2' on each side of the stairs. As a result, customers can freely maneuver without touching the truncated domes. While the existing escalator is a key amenity for all station users, all other alternatives to incorporate an elevator would disturb the embankment structures and/or impact adjacent freight rail operations, which would have significant cost implications.
- ***Platform obstructions relative to berthing locations.*** The current train berthing markers result in both doors in a single car opening in line with platform obstructions that interfere with the use of gap fillers. This limits access for some wheelchair users and others who need gap fillers to board or disembark at those rail car doors. Wheelchair access is not possible at these car positions since there is not ample room for the placement of gap fillers. Currently, CTA conductors reposition a train to enable the use of gap fillers when needed. The existing berthing markers are proposed to be relocated so that no more than one door in any car is inaccessible. The use of custom gap fillers is also being investigated by the CTA.
- ***Accessible route impediments.*** The accessible route from curb to the stationhouse is currently impeded by steps leading to the station entrance. Due to the sidewalk and street configuration, the space is currently inadequate to install an ADA compliant ramp unless the pedestrian area is expanded. To implement accessibility improvements throughout the accessible route, the following civil work will be necessary at South Boulevard: reduce lane widths, increase the sidewalk width, and relocate the curb. These proposed changes will

require agency coordination with the Village of Oak Park to provide space for ADA compliant ramps.

- ***Emergency egress.*** An existing set of stairs (currently closed to the public) is proposed to be reopened at the auxiliary Euclid Avenue stationhouse at the east end of the platform to meet emergency exiting standards.

WASHINGTON/DEARBORN – BLUE LINE (DEARBORN STREET SUBWAY)

This station is located at 19 N. Dearborn Street, Chicago, and serves the CBD geographic service area. The stationhouse entrances/exits are located at mid-block between Randolph and Washington, and between Washington and Madison. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Subway Center Platform
Opened	1951
Upgrades	Rehabilitated 1982 to 1984
Rail Ridership (2016)	3,804,955
Connecting Bus Route(s)	CTA Route #22 – Clark
	CTA Route #24 – Wentworth
	CTA Route #36 – Broadway
	CTA Route #62 – Archer

The station currently has two points of access on Dearborn Street: one at mid-block between Randolph and Washington and one between Washington and Madison. The Randolph/Madison stationhouse at mezzanine level is accessed from the street by three sets of stairs, and the Washington/Madison stationhouse at mezzanine level is accessed from the street by four sets of stairs. Two sets of stairs and two up-only escalators connect the platform level to the Randolph/Washington stationhouse. The Washington/Madison stationhouse is connected via one stair and one up-only escalator to the north loading area platform, and a double-wide exit stair from the south non-loading area platform.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications maintain all of the existing stairs and escalators between the street and stationhouse levels, and between stationhouse and the platform.
- One elevator is proposed to be added between street level and each stationhouse.
- One elevator is proposed to be added between each stationhouse and platform.

KEY DESIGN CONSIDERATIONS

- ***Co-location of the stair, escalator, and elevator.*** The platform loading area is located between the Randolph/Washington stationhouse (north) and the Washington/Madison stationhouse (south). The stationhouse cannot accommodate the mezzanine to platform elevator within its existing geometry and size. A corridor on the paid side of the Randolph/Washington stationhouse is proposed to extend to the south under Dearborn Street directly in-line with the existing inbound platform. A corridor on the paid side of the Washington/Madison stationhouse is proposed to extend to the north under

Dearborn Street directly in-line with the existing outbound platform. These corridors will provide access to and from the elevators that serve customers between the stationhouse and platform levels, landing near the midpoint of the platform to provide centralized access for inbound and outbound trains.

- ***Impacts to the Daley Center.*** Placement of the street-level elevator between Randolph and Washington would be coordinated with the underground pedestrian walkway (the Pedway) that connects with the Daley Center and the stationhouse. The street-level elevator is proposed to connect with the Randolph/Washington stationhouse west of the stairs, connecting the street and mezzanine levels on the west side of Dearborn. The elevator would not interfere with the existing security booth that monitors traffic to the underground parking facility.
- ***Impacts to the George W. Dunne Cook County Office Building***. Placement of the street-level elevator between Washington and Madison, and immediately north of Calhoun Place would be coordinated with the underground pedestrian walkway (the Pedway) that connects with the George W. Dunne Cook County Office Building and the stationhouse. The street-level elevator is proposed to connect with the Washington/Madison stationhouse north of the Calhoun Place (alley) on the west side of Dearborn.

ASAP PHASE FOUR

GRAND/MILWAUKEE – BLUE LINE (DEARBORN STREET SUBWAY)

This station is located at 502 N. Milwaukee Avenue, Chicago, and serves the Northwest geographic service area. Due to low ridership and safety concerns, this station was closed from February 1992 until June 1999. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Subway Center Platform
Opened	1951
Upgrades	None
Rail Ridership (2016)	866,865
Connecting Bus Route(s)	CTA Route #8 – Halsted CTA Route #56 – Milwaukee CTA Route #65 – Grand CTA Route #132 – Goose Island Express

The station currently has two points of access between the street and the stationhouse, which is located at mezzanine level, at the Grand/Halsted/Milwaukee intersection. One stairway, and one up-only escalator, connects the midpoint of a center loaded platform with the stationhouse at mezzanine level.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications maintain all existing stairways and the escalators that are currently in use.
- One elevator is proposed to be located within an existing mixed-use building at the northwest corner of Milwaukee/Halsted to provide access between street level and the unpaid side of the stationhouse.
- One second proposed elevator will provide access between the paid side of the mezzanine-level stationhouse and the platform.
- To facilitate transfers, a new stairway is proposed on the south side of Grand Avenue, west of Halsted, to connect with a previously closed corridor, which leads to the stationhouse.
- One proposed stairway is proposed on the east side of Grand Avenue, west of Halsted, to connect to a previously closed corridor to access the stationhouse.
- One proposed elevator will provide access between the paid side of the stationhouse and the platform.
- To meet exiting requirements, an emergency stair is proposed at the south end of the platform. This stair will connect the platform to a mezzanine level walkway under and to the south side of Milwaukee, and another stairway from mezzanine to street level in the southeast quadrant of Milwaukee and Halsted.

KEY DESIGN CONSIDERATIONS

- ***Your New Blue Program Improvements.*** ASAP improvements must be coordinated with the *Your New Blue Program* to upgrade Blue Line stations and track from Grand to O'Hare.
- ***Six-corner intersection configuration.*** At street level, the six-corner intersection presents challenges for a centrally located elevator that does not impede sidewalk users. Two existing stairs provide connections between the street and stationhouse level. A new stairway from street to the stationhouse is proposed to be located on the south side of Grand Avenue west of Halsted Street. This new stairway is proposed to connect to the stationhouse via a corridor that is currently closed to the public. All stairs are located on narrow sidewalks with adjacent buildings where space is inadequate for an elevator. The intersection does not contain a pedestrian island; therefore, an elevator connecting to the stationhouse cannot be centrally located within this intersection.
- ***Utility location.*** An easement has been provided by the real estate developer of the building at the northwest corner of Milwaukee and Grand Avenues (bordered by Milwaukee, Grand, and Green). The easement would have enabled the addition of an elevator to access the stationhouse from inside the building at this location. The elevator would have connected to an existing stationhouse corridor that is located under the sidewalk on the north side of Grand Avenue and to the north of the existing stairway. This corridor would have connected with another existing corridor that currently provides pedestrian access to the southwest side of the stationhouse. However, an existing 5' diameter gravity sewer on the west side of, and parallel to, Milwaukee Avenue, between the existing mezzanine and the top of the subway tube, causes a grade change. The presence of the sewer line is the reason for a short flight of stairs (four steps) that currently connect the corridor to the stationhouse. There is not sufficient space for a ramp, and a small lift or an elevator (for the four-step rise) was considered but not recommended. Since relocating the sewer line would be exceptionally complicated and

cost prohibitive, the best option is to locate the elevator outside the affected area, rather than using the dedicated easement.

- ***Property impacts.*** The existing sidewalk at the northwest quadrant of Halsted/Milwaukee is inadequate to accommodate an elevator, and a bump-out into Milwaukee is not possible due to tight lane configurations, significant bus service and a designated bike lane currently in place. To avoid street impacts within the public way along Milwaukee Avenue, the street to mezzanine elevator is proposed to be located within an existing building. The use of this space would require agreements and/or land acquisition with private landowners.

HARRISON – RED LINE (STATE STREET SUBWAY)

The Harrison Street station is served by two separate stationhouses. The manned stationhouse is located at 608 S. State Street, and an unmanned stationhouse is located at 800 S. State Street (at Polk Street). This station serves the CBD geographic service area, and also provides access to an educational, residential, and commercial area. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Subway Center Platform
Opened	1943
Upgrades	2014 Harrison entrance and Polk entrance
Rail Ridership (2016)	1,474,391
Connecting Bus Route(s)	CTA Route #2 – Hyde Park Express CTA Route #6 – Jackson Park Express CTA Route #29 – State CTA Route #62 – Archer CTA Route #146 – Inner Drive / Michigan Express

The station currently has two points of access (on State Street slightly south of Harrison Street and on the south side of Polk Street west of its intersection with State Street). The Harrison stationhouse at mezzanine level is accessed from street level via two sets of stairs, and the Polk stationhouse at mezzanine level is accessed from street level via one set of stairs. One stairway, and one up-only escalator, connects the midpoint of a center loaded platform with the Harrison stationhouse. One stairway, and one up-only escalator, connects the midpoint of a center loaded platform with the Polk stationhouse.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications maintain all of the existing stairs and escalators between the street and stationhouse levels, and between stationhouse levels and the platform.
- One elevator is proposed to be added between street level and each stationhouse at Harrison and at Polk, facilitating equivalent entries and paths of travel. This was deemed necessary since the Harrison and Polk entrance points are separated by 700'.
- To complete these accessible routes, one elevator is proposed to be added between each stationhouse and the platform.

KEY DESIGN CONSIDERATIONS

- ***Ventilation shafts.*** Existing ventilation shafts on State Street limit elevator placement at the Harrison entrance. Ventilation shafts are located on both the east and west sides of State Street and immediately south of the stairs connecting the street and stationhouse levels. Since the shaft openings on the west side of State Street are larger and would block the accessible route from an elevator to the stationhouse, the elevator connecting the street to stationhouse levels is proposed to be placed on the east side of State Street. As a result, the elevator would impact one of the four driveways accessing an adjacent parking lot. Further coordination with the property owner on this issue will be necessary to potentially relocate the parking lot entrance. Additional inter-agency coordination will be necessary to evaluate curb cuts before improvements are implemented.
- ***Space constraints.*** Limited space within the public way on Polk Street affects options for elevator placement. A narrow sidewalk between the existing stair and property line on the south side of Polk Street provides inadequate space for an elevator. Therefore, the elevator is proposed to be placed in a protected bump-out, which will require the removal of one of two existing eastbound right-turn lanes. Placement at this location will also shorten the distance for pedestrians crossing Polk Street on the west side of State Street. Coordination with CDOT on this issue will be necessary as design for these improvements progresses.
- ***Co-location of the stair, escalator, and elevator.*** The geometry of the Harrison and Polk stationhouses cannot accommodate the mezzanine to platform elevator within their existing geometry and size. A corridor on the paid side of the Harrison stationhouse is proposed to extend to the south under State Street and directly above and in-line with the existing inbound platform. A corridor on the paid side of the Polk stationhouse mezzanine is proposed to extend to the north under State Street directly above and in-line with the existing outbound platform. These corridors will provide access to and from the elevators that serve customers between the stationhouse and platform levels, landing near the midpoint of the platform to provide centralized access for inbound and outbound trains.

LASALLE – BLUE LINE (DEARBORN STREET SUBWAY)

This station is located at 150 W. Congress Parkway, Chicago, and serves the CBD geographic service area. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Subway Center Platform
Opened	1951
Upgrades	None
Rail Ridership (2016)	981,506
Connecting Bus Route(s)	CTA Route #22 – Clark
	CTA Route #24 – Wentworth
	CTA Route #36 – Broadway

The subway station currently has two points of access between the street and stationhouse at mezzanine level via stairs on each side of Congress Parkway, west of Clark Street. One stairway, one up-only escalator, and one down-only escalator connects the mezzanine level stationhouse with the east end of a center loaded platform. East of Financial Place and on the south side of Congress Parkway, approximately 400' west of the existing LaSalle Blue Line entrance, the LaSalle

Metra station can be accessed by one set of stairs and one elevator from street level up to the train platforms on the 2nd floor.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications maintain all of the existing stairs and escalators.
- One elevator is proposed to be added between street level and the unpaid side of the stationhouse.
- One elevator is proposed to be added between the paid side of the stationhouse and the platform.
- East of Financial Place, a new entrance would be created with a new mezzanine-level stationhouse on the west end of the platform.
- The addition of a new stationhouse to serve the west end of the platform will require one additional CA.
- The existing Metra station elevator is proposed to be modified so as to enable access between the unpaid side of the west-end of the new stationhouse, the street, and the LaSalle Metra station train platforms on the 2nd floor.
- A stair to provide access between the street and the west-end of the stationhouse will also be added.
- On the paid side a stairway, one up-only escalator, and an elevator will provide access between the west end of the stationhouse and the platform.
- In addition to resolving egress issues, the new entrance would facilitate multi-modal connectivity, direct access to the Blue Line (and O'Hare) for Metra Riders on the Rock Island District Line to Joliet, IL, and would serve a growing area along Wells Street.

KEY DESIGN CONSIDERATIONS

- ***Connectivity to Metra.*** A new stationhouse is proposed to be added east of Financial Place to serve the west end of the platform, to improve connectivity to Metra's LaSalle station, and to provide a secondary emergency exit. The existing elevator to access Metra is proposed to be retrofitted to also serve the new mezzanine-level stationhouse, and new stairs are also proposed to be added.
- ***Co-location of the stair, escalator, and elevator.*** The existing stationhouse cannot accommodate the mezzanine to platform elevator within its existing geometry and size. A corridor on the paid side of the stationhouse is proposed to extend to the west under Congress Parkway directly in-line with the existing inbound platform. This corridor will provide access to and from the elevator that will serve customers between the stationhouse and platform levels, landing near the east end of the platform to provide access for inbound and outbound trains.
- ***Property impacts.*** There is an opportunity to shift the location of the street-level elevator on Congress south to minimize impacts to the public way. This would require using plaza space that belongs to the U.S. Immigration and Customs Enforcement at the southwest quadrant of Clark and Congress and would require extensive agency coordination. Security concerns could potentially negate this option as an opportunity, but it is worth exploring as design continues.

MONROE/DEARBORN – BLUE LINE (DEARBORN STREET SUBWAY)

This station is located at 114 S. Dearborn Street, Chicago, and serves the CBD geographic service area. The stationhouse entrances/exits are located at mid-block between Madison and Monroe, and between Monroe and Adams. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Subway Center Platform
Opened	1943
Upgrades	None
Rail Ridership (2016)	2,324,240
Connecting Bus Route(s)	CTA Route #22 – Clark CTA Route #24 – Wentworth CTA Route #36 – Broadway CTA Route #62 – Archer CTA Route #151 – Sheridan

The station currently has two points of access on Dearborn Street: one is located at mid-block between Madison and Monroe and the other between Monroe and Adams. The Madison/Monroe stationhouse at mezzanine level is accessed from street level via three sets of stairs, and the Monroe/Adams stationhouse at mezzanine level is accessed from street level via four sets of stairs. Both stationhouses are connected to the platform in the same manner by two sets of stairs and two up-only escalators.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications maintain all of the existing stairs and escalators between the street and stationhouse levels, and between stationhouse levels and the platform.
- One elevator is proposed to be added between street level and each stationhouse.
- One elevator is proposed to be added between each stationhouse and platform.

KEY DESIGN CONSIDERATIONS

- ***Space constraints.*** Due to the existing property lines and sidewalk widths, elevators are proposed to be located on the west side of Dearborn Street. The two westernmost lanes on Dearborn are used for parking and a bi-directional bike lane adjacent to the curb. To minimize disruptions to motorists and bicyclists, and to create a buffer from automobile traffic, the elevator serving the Madison/Monroe stationhouse is proposed to be located adjacent to and west of the curb, north of the south entrance to the Chase Bank Building, and adjacent to the bike lanes. The elevator serving the Monroe/Adams stationhouse will also be located on the west side of Dearborn Street.
- ***Adjacent pedestrian traffic.*** Potential conflicts could occur with pedestrian traffic on Dearborn Street. The placement of the Madison/Monroe elevator at street level provides adequate space for pedestrians to comfortably maneuver between the elevator and Chase Bank Building. Even though this elevator is adjacent to the back of the west curb, it allows 6'-2" of clear sidewalk width within the public right-of-way and a minimum passage width of 19' between the Chase Bank Building and the elevator. Similarly, the elevator at street

level to the Monroe/Adams stationhouse is proposed to be aligned adjacent to the pedestrian sidewalk with adequate space for pedestrians to maneuver.

- ***Co-location of the stair, escalator, and elevator.*** The platform loading area is located between the Madison/Monroe stationhouse (north) and the Monroe/Adams stationhouse (south). The stationhouses cannot accommodate the mezzanine to platform elevator within their existing geometry and size. A corridor on the paid side of the Madison/Monroe stationhouse is proposed to extend to the south under Dearborn Street directly in-line with the existing inbound platform. A corridor on the paid side of the Monroe/Adams stationhouse is proposed to extend to the north under Dearborn Street directly in-line with the existing outbound platform. These corridors will provide access to and from the elevators that serve customers between the stationhouse and platform levels, landing near the midpoint of the platform to provide centralized access for inbound and outbound trains.

RIDGELAND – GREEN LINE (LAKE BRANCH)

This station is located at 36 N. Ridgeland Avenue, Oak Park, in the northeast quadrant of the Ridgeland/South Boulevard intersection, and serves the Western geographic service area. The station provides service to the residents of the Village of Oak Park. The station history as well as rail ridership and bus routes serving this station are as follows:

Station Configuration Type	Embankment
Opened	1901
Upgrades	Reconstructed 1962
Rail Ridership (2016)	389,944
Connecting Bus Route(s)	CTA Route #86 –Narragansett / Ridgeland Pace Route #314 – Ridgeland

The stationhouse is located just above street level at the northeast quadrant of the Ridgeland Avenue/South Boulevard intersection. The center platform is located above the stationhouse on an embankment. The stationhouse is accessed from platform level via one stairway. The existing station was built concurrently with the Austin and Oak Park Green Line stations; therefore many of the design constraints are similar. Unlike the Austin and Oak Park stations, the Ridgeland station is not configured with an access point on the east end of the platform. Instead, the station currently has a single access point through the stationhouse. The platform begins to the east of the stationhouse, so the clearance issues around the stairs are not an issue. Further, there is currently no escalator at Ridgeland, so there would be no need for removal.

Following is a summary of the proposed modifications and the key design considerations at this station.

PROPOSED STATION MODIFICATIONS

- The proposed modifications between street level and stationhouse will include the addition of a ramp.
- The elevator connecting the stationhouse and platform is proposed to be positioned near the base of the stairs to access the platform.

- An access point on the east end of the platform is proposed to provide an emergency exit through an adjoining exit corridor under the inbound tracks and through the embankment wall.

KEY DESIGN CONSIDERATIONS

- ***Embankment integrity.*** The existing embankment is part of the original construction and may be structurally sensitive due to its age. The current design calls for the elevator to be located in the stationhouse to limit the impact on existing embankment structures. (Embankment impacts are described as part of the emergency egress design constraint.)
- ***Adjacent freight rail.*** An active Class I railroad operates on the abutting embankment. The elevator is proposed to be located in the stationhouse to limit interfering with the existing abutting embankment structures and railroad operations.
- ***Platform extension and loading.*** At the stationhouse level, the proposed elevator will be placed in a central location adjacent to the north structural wall, which will require that the platform be extended 51' west to connect with the elevator landing at platform level. The west end of the platform is proposed to be located in a protective enclosure west of the loading area. In addition, the platform loading area is proposed to be shifted 7' east from the top of the existing stairs to allow for unobstructed wheelchair maneuverability. This will require a platform extension at the east end to maintain an overall platform loading length of 425'.
- ***Stationhouse layout.*** The existing stationhouse layout limits the ability to implement accessibility improvements throughout the accessible route. The stationhouse layout is proposed to be reconfigured to accommodate a wheelchair accessible route, which can be accomplished within the existing stationhouse footprint, including sidewalk and planting areas. However, the size of the planting areas would need to be reduced, and the bus shelter repositioned to allow for a 5' sidewalk. The proposed changes will require agency coordination with the Village of Oak Park.
- ***Emergency egress.*** Unlike the Austin and Oak Park stations, the Ridgeland station is not configured with an access point on the east end of the platform. Therefore, emergency exit stairs are proposed to be added from the platform in addition to a new exit corridor under the inbound tracks. A secured opening through the abutment wall is also proposed for emergency exiting only. Due to the age of the embankment wall and its unknown condition, there is a higher level of risk with respect to disturbing the embankment structure. In case the embankment wall has stability issues, a second option was investigated. This option adds an exterior stair and walkway over the inbound tracks, embankment wall, and lands at ground level.

CHAPTER 5: RELATED PROGRAMS

INTEGRATING INITIATIVES

RED AND PURPLE MODERNIZATION PROGRAM

The RPM Program is the largest capital project in the CTA's history, and is greatly needed in order to expand capacity on its most utilized rail lines. The RPM Program is proposed as a massive, multistage program to be completed in phases, allowing CTA to make the greatest number of improvements while meeting the public's expectations for timely delivery of the improvements. The RPM Program includes the North Red and Purple lines that run from just north of Belmont station to the Linden station. This corridor is currently:

- 9.6 miles long;
- Includes 21 stops;
- Operates on structure built over 90 years ago; and
- Carries one out of five CTA train rides.

• • •

ASAP brings together other major modernization and capacity expansion programs at the CTA into one comprehensive initiative to add accessibility at all vertically inaccessible stations.

The purpose of the RPM Program is to improve capacity, travel time, ride quality, and safety in one of CTA's highest ridership corridors. This Program will also improve access to the system for people with disabilities through expanded and modernized stations that will accommodate more passengers more comfortably. RPM will allow CTA to increase functional capacity to meet ridership demands while improving the quality, speed, and passenger comfort of each ride and improving access to job markets and destinations. The capacity expansion will have the added benefit of bringing this critical infrastructure into a state of good repair, thereby improving efficiency and service reliability while extending the overall life of the transit system by 60 to 80 years.

PROGRAM COST AND FUNDING CONSIDERATIONS

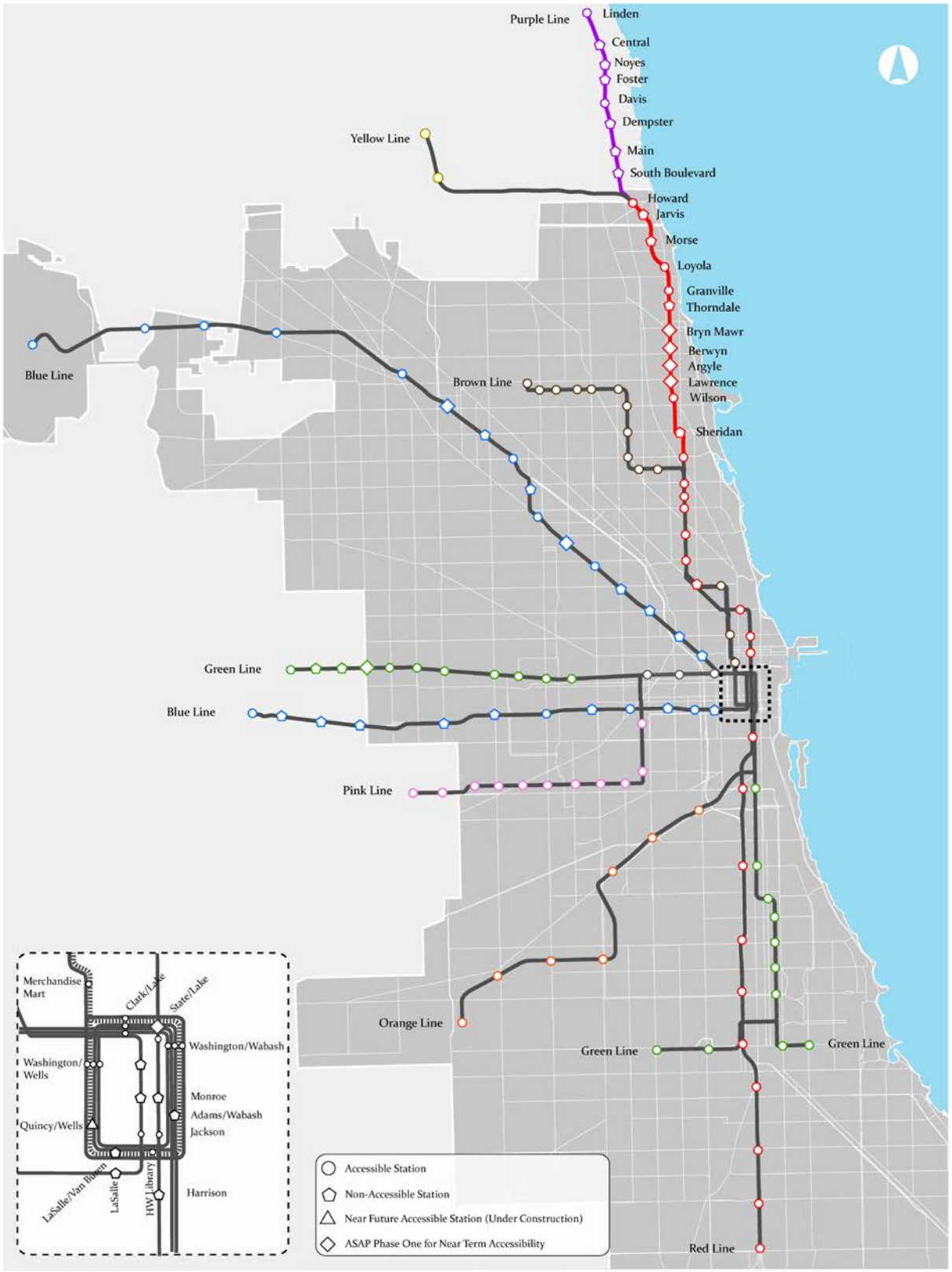
Federal legislation known as Moving Ahead for Progress in the 21st Century Act (MAP-21) created a new category of projects eligible for funding under the Section 5309 Capital Investment Grant Program, Core Capacity. Projects eligible for funding under the Core Capacity category are defined as substantial corridor-based capital investments that expand existing corridor capacity by at least 10 percent in corridors that are already at or above capacity today, or are expected to be at or above capacity within the next five years. The eligibility of Core Capacity projects was extended in the Fixing America's Surface Transportation (FAST) Act of 2015.

The RPM Program has been developed consistent with the eligibility for Core Capacity. The RPM Program is a substantial corridor-based investment in an existing fixed guideway system, is

located in a corridor that is at or over capacity or will be in five years, and will increase capacity by 10 percent.

To maximize eligibility for these federal funds, station projects are packaged together with other improvements in the corridor, in order to demonstrate the 10 percent capacity increase. Additionally, some segments of the corridor must be packaged together for constructability reasons (such as the embankment section of the Red Line). Inaccessible RPM stations are shown in Figure 8.

Figure 8 Inaccessible RPM Program Stations



RPM PHASE ONE

The CTA is moving closer to beginning construction on the first phase of RPM, referred to as RPM Phase One, which is fully funded. As described below, RPM Phase One will provide numerous improvements, including elevators and accessible infrastructure, at four Red Line stations: Lawrence, Argyle, Berwyn, and Bryn Mawr. The momentum and excitement the CTA generated by successfully funding RPM Phase One means that the CTA is poised to start delivering accessibility to the disability community over the next several years at half of the ASAP Phase One stations.

DESCRIPTION OF IMPROVEMENTS

CTA is in the early stages of implementation of RPM Phase One, which is planned to be procured as a single design-build contract. This procurement is currently underway. The RPM Phase One project includes the following main components:

- **Lawrence to Bryn Mawr Modernization** (LBMM) – Modernization, expansion, and ADA accessibility at four Red Line stations (Lawrence, Argyle, Berwyn, and Bryn Mawr), and reconstruction and expansion of approximately 1.3 miles of track, structures, and viaducts to accommodate expanded stations and platforms from Leland Avenue on the south to near Ardmore Avenue on the north.
- **Red-Purple Bypass** – Construction of a grade-separated bypass for the Brown Line at Clark Junction, just north of the Belmont station, removing the largest physical capacity constraint in the RPM corridor, where three separate services on six tracks merge onto four tracks. This work will also realign and replace approximately 0.3 miles of associated mainline (Red and Purple lines) tracks from the Belmont station on the south to the stretch of track between Newport and Cornelia Avenues on the north, increasing speed, reliability, and capacity in the project corridor.
- **Corridor Signal Improvements** – Installation of a new higher-capacity signal system from approximately Belmont Avenue to Howard Street, allowing for increased throughput of trains and greater operational reliability.

In addition to these main components, RPM Phase One will also include additional infrastructure improvements (e.g., substation upgrades and utility relocations) to support the project. To increase train service, RPM Phase One also includes a projected fleet expansion of 32 rail cars.

RPM Phase One will provide numerous benefits to the corridor including:

- Removing the largest physical constraint to increasing train capacity in the RPM corridor by constructing the Red-Purple Bypass, allowing for reduced passenger crowding even as ridership grows;
- Allowing CTA to increase peak service by 30 percent, including adding up to eight more Red Line trains per hour during rush periods, and accommodating up to 7,200 additional customers per hour ultimately on all services;
- Improving station access and capacity by widening platforms, adding elevators and stairways, providing accessibility, and improving passenger and emergency access;
- Improving speed, reliability, and reducing delays on the Red and Purple lines, saving customers a half-million travel hours each year;
- Modernizing over 5.8 miles of signals, by increasing flexibility through bi-directional operation capability, and increasing capacity through reduction in allowable headway;

- Modernizing and expanding over 1.5 miles of the Red and Purple lines, increasing asset life by 60 to 80 years;
- Increasing transit-oriented development opportunities within the corridor; and
- Assisting in addressing CTA's commitment to invest in state of good repair projects. While RPM Phase One's primary purpose is to increase capacity, the result of these planned infrastructure and operating improvements and enhancements will reduce CTA's state of good repair backlog by approximately $850 Million.

RPM PHASE ONE COST AND FUNDING CONSIDERATIONS

RPM Phase One was the first project in the country to receive a Full Funding Grant Agreement (FFGA) under the Core Capacity category. The $2.2 Billion project is funded through a combination of federal and local funds, with the Core Capacity FFGA totaling $957 Million. The total project cost includes certain FTA required financing costs in addition to the design, construction, and management costs. Additional funding sources include:

- Federal Congestion Mitigation and Air Quality Improvement (CMAQ) Program;
- City of Chicago TIF and Transit TIF; and
- CTA Bonds.

DESIGN CONSIDERATIONS

Following is a brief summary of the key design considerations related to the station elements of the LBMM as part of RPM Phase One.

- ***General.*** The primary design consideration for RPM Phase One is to increase the capacity of the North Red and Purple lines and widening platforms to add accessibility and accommodate more customers. In the LBMM portion of the project, which includes the station and structure reconstruction, the primary considerations were increased station capacity to alleviate congestion in stations and reduce dwell times as well as lengthening platforms to accommodate longer trains. These considerations resulted in changes to the track, platform, and station configurations.
- ***Track configuration***. The existing rail infrastructure is a four-track, embankment supported system. The retaining walls that support the embankment restrict opportunities for increased platform size necessary to reduce congestion. As a result, this embankment-supported track system from Leland Avenue to near Ardmore Avenue will be completely reconstructed. The proposed structure will be a closed-deck, aerial structure with widening over adjacent alleys along the east side of the alignment to minimize property displacement and/or impacts.
- ***Platforms.*** Features to improve ADA accessibility will include elevators and improved communications and tactile features. The existing LBMM stations have short and narrow platforms that restrict customer capacity and accessibility. Reconstructing the track infrastructure allows for wider, longer platforms. Platform widths of approximately 22' are proposed, nearly double the size of existing platforms, to provide increased safety and capacity, improve circulation on the platform, and improve passenger boarding and alighting (leaving a train). Platforms will be lengthened (to 520'compared to an existing length of 420') to provide more waiting areas and improve circulation for passengers. These longer platforms could also accommodate ten-car trains in the future. Wider and longer platforms support increased capacity and decreased travel times. Wide platforms

will also greatly reduce the existing interference of passengers boarding and alighting at narrow platforms, thereby reducing the time trains are stopped at each station and leading to an overall reduction in travel time. In addition, other amenities, such as enhanced passenger security features, longer canopies, more benches, and windscreens will be installed.

- ***Stations***. The rail line opened in phases from 1900 to 1912 as a freight rail system, and was later elevated in the 1920s when the existing passenger rail stations were originally built. Features, such as elevators and wider stairways, will increase capacity, provide ADA accessibility, and improve access from the ground floor of each station to the platform. Existing LBMM stations are small spaces with low ceilings and limited space for circulation. The stations are restricted by the current retaining walls, embankment fill, and shorter span viaducts. Drainage of the retained fill is not performing. Poor drainage exacerbates leaks, a frequent concern of below-grade structures, and water infiltration accelerates deterioration. The Lawrence, Argyle, Berwyn, and Bryn Mawr stations will be completely reconstructed as part of RPM Phase One after portions of the embankment are removed. New stairways will be wider for greater safety and capacity, meeting emergency entrance and exit requirements for the larger stations. Additional stationhouse square footage will permit installation of accessible CA kiosks and restrooms, where there were none previously, as well as allow queuing space for automated fare card vending, which meets current standards. Informational signage will be replaced as a part of the reconstruction and enhanced lighting, as appropriate, will be installed.

TIMEFRAME AND APPROACH

In late 2017, the CTA selected three qualified contracting teams to develop proposals to design and build RPM Phase One. The CTA expects major construction to begin in 2019. Construction is estimated to be complete in the mid-2020s.

FUTURE RPM PROGRAM

DESCRIPTION AND STATION PACKAGING

Completion of future phases of the RPM Program would bring the same level of infrastructure and station improvements, including accessibility, to the Red and Purple lines from north of the Red-Purple Bypass area near the Belmont station to south of Wilson station and from north of Bryn Mawr station to the Linden station in Wilmette. Future phases would also need to expand capacity in order to be eligible for the federal Core Capacity funding stream. Work on the Future RPM Program began in 2009 as part of the Vision Study; however, extensive analysis, planning, public outreach, and design will be necessary to further develop a blueprint for implementing the Future RPM Program. The inaccessible stations that will be evaluated in greater detail as part of the Future RPM Program include:

- Thorndale (Red);
- Morse (Red);
- Jarvis (Red);
- Sheridan (Red);
- Main (Purple);
- South Boulevard (Purple);
- Dempster (Purple);
- Foster (Purple);
- Noyes (Purple); and
- Central-Evanston (Purple).

COST AND FUNDING CONSIDERATIONS

Phases of the Future RPM Program will be developed through a series of studies and public outreach processes. While much more work is necessary to define the scope of the Future RPM Program throughout the rest of the corridor and the construction timeframe, preliminary cost estimates suggest that the cost to implement the Future RPM Program will be $6.0 – $8.0 Billion in Year of Expenditure (YOE) as shown in Table 11. As previously described, the RPM Program requires extensive infrastructure work that includes other interrelated infrastructure beyond station accessibility (e.g., track, support structures, signals), which explains its higher cost. CTA anticipates that the Future RPM Program will be funded through a mix of federal, state, and local funds, pending funding availability.

Table 11 Red and Purple Modernization Program Cost

	Cost (YOE)	Funding Status	Estimated Construction Timeframe
RPM Phase One	$2.2 Billion, including Red-Purple Bypass	Funded	Major construction anticipated to begin in 2019
Future RPM Program	$6.0 – $8.0 Billion[a]	Unfunded	Construction phasing to be determined
TOTAL Cost	**$8.1 – $10.1 Billion**[a, b]		

[a] Costs depend on the final scope and project phasing.
[b] The RPM Program includes a larger infrastructure scope beyond accessibility.

DESIGN CONSIDERATIONS

Each phase of the RPM Program will present new design considerations. All phases are anticipated to address capacity, which is evaluated by train and passenger throughput at stations. The balance of the Future RPM Program area includes both elevated and retained embankment structures located in both the City of Chicago and the City of Evanston. Each type of structure and each municipality will bring unique requirements, complexities, and considerations for planning and design. Early planning suggests some station consolidation may be appropriate to decrease operation and maintenance expenses and increase speeds. Strategies to minimize the impacts of property acquisition will have an impact on final designs as will compliance with USDOT ADA regulations, State of Illinois and City of Chicago accessibility codes, and CBC standards for exiting.

TIMEFRAME AND APPROACH

Construction phasing for the Future RPM Program will be determined once more information becomes available. Construction assumptions for the Future RPM Program made as part of ASAP may be modified based on future analysis.

FOREST PARK BRANCH RECONSTRUCTION PROGRAM

The CTA recently completed a long-term planning study, known as the Blue Line Forest Park Branch Vision Study (Vision Study), to examine the Forest Park branch as a whole and determine the best way to serve future ridership. Much of the Forest Park branch operates within the median of I-290 (Eisenhower Expressway) and this branch was one of the first multimodal corridors in the United States to incorporate both a rapid transit line and an expressway within the same right-of-

way. Because the Forest Park branch shares the same space as the Eisenhower Expressway, future improvements to the Forest Park branch will need to be made in coordination with IDOT's planned reconstruction of I-290.

CTA's work as part of the Vision Study laid the foundation for the current FP Branch Reconstruction Program. While specific station designs will be developed as the FP Branch Reconstruction Program advances, major components identified to date include:

- Rebuilding stations, including adding accessibility;
- Widening station platforms;
- Replacing track and related infrastructure;
- Adding a turn-back track west of the Illinois Medical District station;
- Upgrading power substations; and
- Redesigning and expanding the Forest Park yard, shop, and customer terminal.

VISION STUDY

As part of the Vision Study, the CTA evaluated existing conditions, station layout alternatives, and neighborhood connections along 9.2 miles of the Forest Park branch from the Clinton subway station to the Forest Park station. There are 12 stations on the Forest Park branch; of the original 15 stations, three were closed over forty years ago. Stations along the Forest Park branch are approximately one-mile apart and include concrete-surfaced center platforms and long ramps connecting to major, and in some cases intermediate, cross-streets. Some stations also have auxiliary entrances. The two stations at either end of the Forest Park branch (Clinton and Forest Park) are not located in the median of the Expressway, and the Austin, Oak Park, and Harlem stations are located on the south side of I-290. The Vision Study evaluated the following 12 stations on the Blue Line Forest Park branch, four of which are already accessible. Inaccessible FP Branch Reconstruction Program stations are shown in Figure 9.

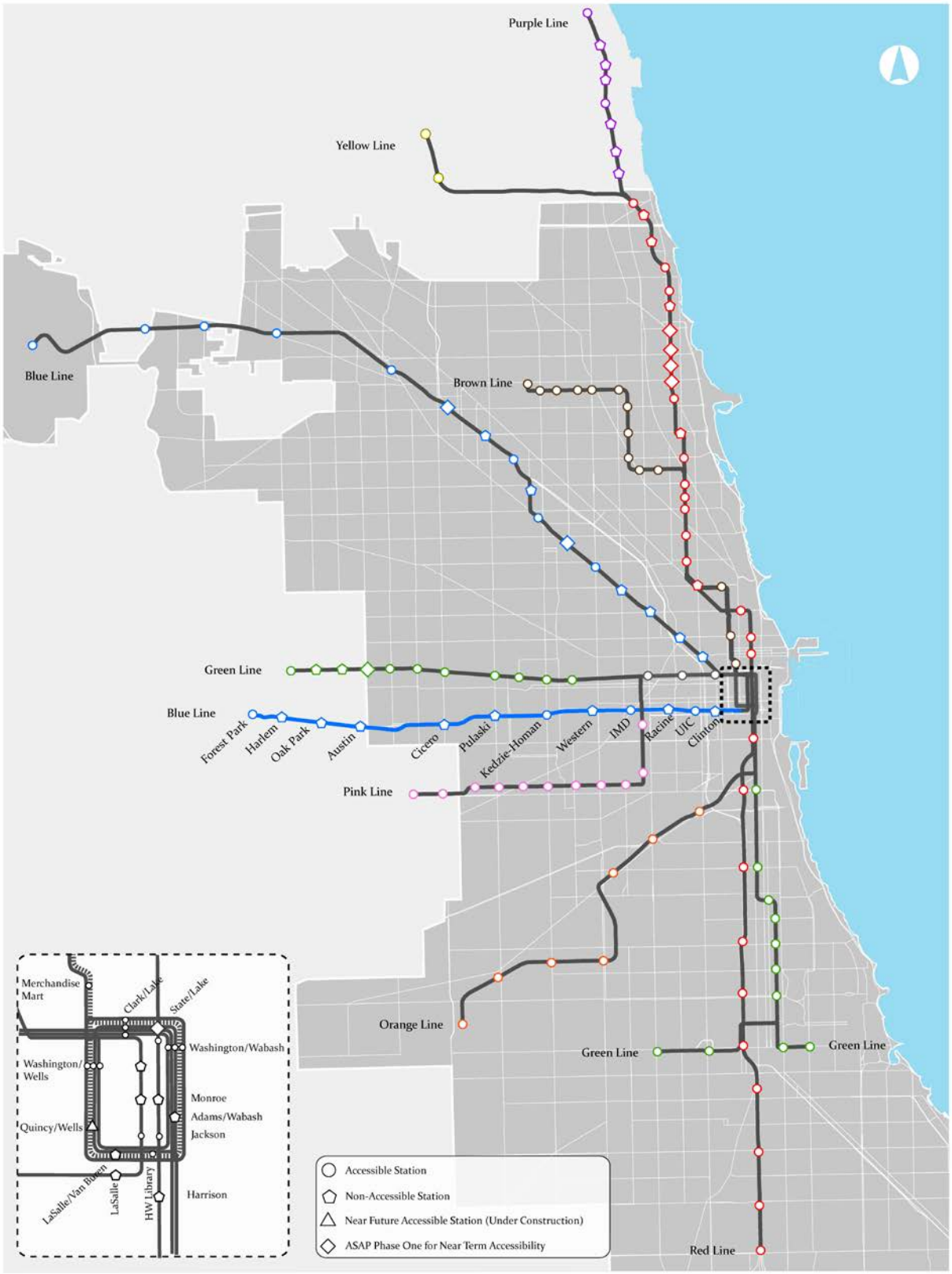
Inaccessible

- Clinton
- Racine
- Western
- Pulaski
- Cicero
- Austin
- Oak Park
- Harlem

Accessible

- Halsted
- Illinois Medical District
- Kedzie-Homan
- Forest Park

Figure 9 Inaccessible FP Branch Reconstruction Program Stations



The Vision Study organized the 12 stations into six categories based on their recommended future design. In general, the initial planning-level concepts envision that stations will generally maintain their existing layout and auxiliary entrances will be opened and/or added to improve neighborhood connections. A representative station for each of the six station types was explored in detail to develop a variety of improvement alternatives and make recommendations for layout improvements and neighborhood connections. The six representative stations and their related station types are:

- Austin (double-entry, asymmetrical) – Station accessed from two street entrances at opposing ends of the platform, with trains berthing closer to the more heavily used primary entrance;
- Kedzie-Homan (double-entry, symmetrical) – Station accessed from two street entrances at opposing ends of the platform, with trains berthing centered between the two entrances;
- Western (double-entry, compact) – Station accessed from two entrances on both sides of a single overpassing street, with trains berthing under the street as close as possible to the entrances;
- Illinois Medical District (triple-entry) – Station that has a middle entrance and ramp entrances at both ends, with the trains berthing under the middle entrance.
- Clinton (subway); and
- Forest Park (end terminal station).

While upgrades to the signal system and minimal upgrades to portions of track have been completed, much of the current infrastructure assets (e.g., track, stations, structures, power substations) along the branch are original. For example, less than 10 percent of all track has been replaced since its original installation. All assets have a useful life, and the original track is 15 to 30 years beyond its useful life. As a result, the CTA has determined that complete, end-to-end reconstruction of the Forest Park branch is warranted via the FP Branch Reconstruction Program (similar to the Dan Ryan Branch Track Renewal/Red Line South Reconstruction Program).

I-290 IMPROVEMENTS

In June 2017, IDOT and the Federal Highway Administration released a combined Final Environmental Impact Statement/Record of Decision (FEIS/ROD) document which outlined their plan to improve the I-290 (Eisenhower Expressway) from Mannheim Road (US 12/20/45) to Racine Avenue, which is one of the oldest sections of the region's highway network. The FEIS/ROD calls for full reconstruction of the Eisenhower Expressway from west of Mannheim Road to Cicero Avenue to accommodate mainline capacity and interchange improvements, and restriping east of Cicero Avenue to Racine Avenue. The condition of the overhead bridges in the section east of Cicero Avenue is being addressed as part of a separate IDOT study. The 2017 FEIS/ROD evaluated potential expansion alternatives to improve mobility for regional and local travel, improve access to employment, improve safety, improve transit connections and opportunities, and improve facility deficiencies. Alternatives evaluated as part of the FEIS/ROD accommodate improvements to the Blue Line where it exists today, and provide for a westward expansion of transit to Mannheim Road. Overall, the CTA and IDOT coordinated their respective planning efforts, including CTA's participation in IDOT's outreach along the I-290 corridor. Future IDOT improvements to I-290, including bridge work, should be coordinated with the FP Branch Reconstruction Program.

PROGRAM DESIGN

The design complexities and considerations that have been addressed by the improvements recommended in the Blue Vision study include the following issues:

- Platform Width – Tracks will need to be relocated to accommodate widening platforms to comply with current CTA design guidelines;
- Slow Zones – The original track is 15 to 30 years beyond its useful life. As a result, the CTA has determined that complete, end-to-end reconstruction of the Forest Park branch is warranted to bring the tracks into a state of good repair and eliminate slow zones – areas where trains must travel at reduced speeds; and
- Accessibility – Add accessible routes from curbs to platforms.

As previously noted, stations were organized into six categories and a range of alternatives were developed for each station type. Of the 12 stations on the Forest Park branch, four have elevators. The eight inaccessible stations represent the following station types: double-entry, asymmetrical; double-entry, compact; and subway. Following is a brief summary of the proposed designs for the eight inaccessible stations as part of the FP Branch Reconstruction Program.

- ***Double-entry, asymmetrical stations.*** The Racine, Pulaski, Cicero, Austin, Oak Park, and Harlem stations reflect a double-entry, asymmetrical station type. These stations can be accessed from two streets, but have one primary entrance that is used more heavily. With the exception of Racine, these stations also have bus service on only one of the streets between which they are located. For this reason, when these stations are rebuilt, trains will berth close to the primary entrance. People walking and bicycling will be accommodated at both entrances. ADA access will be made available from the primary entrance via an elevator and, from the secondary entrance via a sloped concourse. Bicycle parking is also proposed at both entrances.
- ***Double-entry, compact stations.*** The Western station reflects a double-entry, compact station type. This station, when rebuilt, will have two entrances, one on either side of Western. This will facilitate multimodal transfers between bus and train service. This is especially important at Western Avenue, which has frequent and high ridership bus service, including new express service. Traffic signal prioritization is also underway for Western Avenue buses. ADA access will be made available via an elevator at both entrances. Trains will berth under the street and be as close as possible to the entrances.
- ***Subway station.*** The Clinton station is the only subway station type within the Forest Park branch. The primary improvements to the station include the addition of an entrance at Jefferson Street and elevators between the street, mezzanine, and platform levels at both entrances. An additional improvement for consideration is a connection with Union Station via an underground pedestrian walkway. This concept is currently being studied as part of the Union Station reconstruction project.

PROGRAM COST

Similar to the RPM Program, cost estimates as well as the implementation strategy for the inaccessible stations that are part the FP Branch Reconstruction Program are being developed independent of the ASAP effort. Costs were developed based on standard cost categories and include the following major work elements:

- Track and related infrastructure;
- Reconstruction of the Forest Park yard, shop, and customer terminal;
- Upgrade stations from UIC-Halsted to Forest Park (including the Clinton station); and
- Six power substations.

These work elements were defined as part of the high-level Vision Study and will be refined as part of the project development process. While much more work is necessary to define the scope and advance the design of stations contained within this Program, preliminary cost estimates suggest that the cost to implement the FP Branch Reconstruction Program will be $2.6 Billion (YOE), as shown in Table 12, pending funding availability. As previously described, the FP Branch Reconstruction Program requires extensive infrastructure work that includes other interrelated infrastructure beyond station accessibility (e.g., track reconstruction, signals, power substations, Forest Park yard, shop and terminal), which explains its higher cost.

Table 12 Forest Park Branch Reconstruction Program Cost

	Cost (YOE)
TOTAL Cost	**$2.6 Billion**[a, b]

[a] The FP Branch Reconstruction Program includes a larger infrastructure scope beyond accessibility.
[b] Construction phasing to be determined.

IMPLEMENTATION TIMEFRAME

The FP Branch Reconstruction Program is not yet funded and does not qualify for any federal grant programs. The construction sequencing will be developed as the Program progresses. For the purposes of the ASAP phased implementation strategy, construction was anticipated to begin in 2023 and conclude by 2033. The CTA is currently planning that this work will largely happen in coordination with IDOT's I-290 and bridge projects. Work could be compressed into a narrower window, depending upon the approach that is ultimately employed.

CHAPTER 6: COSTS

ESTABLISHING BASELINE COSTS

COST ESTIMATE APPROACH

Cost estimates are an important part of developing a roadmap and understanding the level of funding required to deliver ASAP. Since most of the proposed station improvements to achieve accessibility are in the early stages of project development, development of exact cost estimates is difficult at this stage. The proposed designs are likely to change as ASAP projects advance toward construction, and there are many variables where information is not yet known that could impact design and construction (e.g., existing infrastructure conditions, other competing project schedules, non-project related events). For example, selective demolition to assess the condition of transit infrastructure not visible from field inspections may reveal significant infrastructure deficiencies. While these deficiencies have not been specifically accounted for in the preliminary cost estimates, potential cost impacts are addressed by adding a contingency within each project cost estimate.

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The cost assumptions developed for ASAP are intended to provide a realistic picture of future costs, taking into account planning, design, and construction durations.

Overall, planning-level project cost estimates for the three unfunded ASAP Phase One stations and the 16 stations identified for Future ASAP Phases are based on available information. In addition, cost estimates reflect capital costs only. New elevators, additional CAs, expanded station footprints, and other station changes will result in added operating costs that must be accounted for in future CTA operating budgets. As station designs evolve and more information becomes available, the project cost estimates will be refined and updated accordingly.

In addition, CDOT is currently leading a design effort to completely reconstruct and modernize the existing State/Lake (Loop Elevated) station. CDOT has developed a projected cost, and an estimate will be developed based on the final design. CDOT expects that the cost will exceed the construction cost of the new Washington/Wabash station in the Loop. Estimates for the inaccessible stations undergoing planning and design as part of the RPM and FP Branch Reconstruction Programs have been developed separately as part of those Programs and are described in Chapter 5. As previously described, these Programs address multiple interrelated infrastructure upgrades, of which accessibility is just one element, which explains their higher cost.

Cost estimates for the ASAP Phase One stations were generated from designs produced to a 10 percent design completion. Cost estimates for the 16 stations identified for Future ASAP Phases were generated from high-level schematic designs. The project cost estimates follow a conventional, summary-level project cost breakdown that identifies the direct costs (e.g., construction) and associated soft costs (e.g., engineering). At the summary-level, estimates include an accounting of direct costs for construction-related work, with contractor mark-up

elements for overhead, insurance, and other typical direct costs. Soft costs were then applied to address other project costs such as professional services, CTA resources, and project contingency. Table 13 itemizes the direct and soft costs included in the station cost estimates for both ASAP Phase One and Future ASAP Phases.

Table 13 Direct and Soft Cost Components for ASAP Phase One and Future ASAP Phases

Direct Costs	Soft Costs
Existing Conditions (Demolition)	CTA Engineering
Concrete / Foundations	CTA Field Forces (Non-Contract)
Masonry	Contract Purchases
Metals (Stairs)	Professional Services (Architecture, Engineering)
Platform	Real Estate (Land, Right-of-Way Acquisition)
Thermal / Moisture Protection	Contingency
Openings (Power Entrance Doors, Windows)	CTA Store Room / Inventory Materials
Finishes (Benches, Paint)	Travel
Specialties (Signage, Directories)	Miscellaneous Expenditures
Elevator / Escalator	CTA Support Services
Plumbing	
Heating Ventilation, Air Conditioning	
Electrical	
Communications	
Earthwork	
Paving (Curbs, Sidewalks)	

ESCALATION

The baseline year for all of the estimates is 2017 to provide relative ease of comparison of each project's component costs. Base year cost estimates were escalated to the YOE for all of the ASAP Phase One stations and the 16 stations identified for Future ASAP Phases by using an escalation rate of 3 percent per year compounded to the estimated midpoint of construction, reflecting standard industry practice. The escalation rate is based on a historical average of 3 percent per year. The YOE estimate reflects the current phased ASAP implementation strategy (see Chapter 7) and reasonable assumptions for future inflation.

CONTINGENCY

Project cost estimates typically have contingency costs associated with the estimated work and are usually quantified as a percentage of the direct costs. Since conceptual estimates have much higher contingency factors than advanced designs, the overall project contingency for the ASAP Phase One stations and the 16 stations identified for Future ASAP Phases is 40 percent of the total direct costs (2017 baseline).

COST ASSUMPTIONS

As previously noted, all cost estimates have been developed at an early stage of the design process; therefore, there are many variables where information is not yet available and costs are subject to change as station designs continue to progress. The initial cost estimates include

engineering judgment and many assumptions specific to individual stations. The key assumptions common to all estimates are described in Table 14.

Table 14 Key Cost Assumptions Applied to 10% Conceptual and Schematic Designs

Assumption	10% Conceptual Design (ASAP Phase One)	Schematic Design (Future ASAP Phases)
Contingency	40%	40%
Labor	Union labor rates Production rates by work activity Premium time (overtime) Efficiency factor	Union labor rates Production rates by work activity Premium time (overtime) Efficiency factor
Assumed (or forecast) Procurement Strategy	Design Build	Design-Bid-Build

ASAP PHASE ONE

Development of the cost estimates for the three unfunded ASAP Phase One stations (Austin, Montrose, and California) included a higher level of detail about cost items than those developed for the 16 stations identified for Future ASAP Phases.

Estimates for the three unfunded ASAP Phase One stations were based on the proposed designs at a 10 percent completion level. Estimates also relied on supplemental data derived from multiple on-site field investigations, and from an appropriate review of existing conditions and as-built design plans to understand the context and constraints involved with constructing the proposed improvements. High-level quantity takeoffs measuring the amount of materials and labor for the proposed improvements were developed, providing the basis for the direct construction cost of each estimate.

CDOT is currently leading a design effort to completely reconstruct and modernize the existing State/Lake station (Loop Elevated) station. In late 2017, CDOT was awarded a $56.9 Million federal CMAQ grant by the Chicago Metropolitan Agency for Planning. The CMAQ grant will allow CDOT to accelerate work in collaboration with the CTA to launch the design process for a new station. The $56.9 Million CMAQ grant will not cover the entire projected cost of $119.4 Million; however, CDOT plans to seek additional federal funding for construction in the coming years, so this is not identified as part of the funding needed for ASAP Phase One.

In addition, $2.2 Billion in funding has been programmed for RPM Phase One, which includes four stations on the Red Line (Lawrence, Argyle, Berwyn, and Bryn Mawr). As previously described, accessibility represents just one aspect of the larger infrastructure scope required for the RPM Program, which translates into a higher cost.

Because planning and design for the State/Lake (Loop Elevated) station and the four RPM stations on the Red Line are currently either fully or partially funded, these five stations represent the first wave of ASAP implementation that will be delivered to customers in the near future.

FUTURE ASAP PHASES

Estimates for the 16 stations identified for Future ASAP Phases were based on the proposed schematic designs. As-built plans, photos, and desktop tools were used to augment the limited

schematic drawing information to assist in further delineating the proposed improvements. On-site field investigations were also conducted for a select number of stations on an as-needed basis. In addition, information from other CTA projects with similar scopes and/or configurations, historical lump sum costs, actual bid costs (where available), and cost items extrapolated from the ASAP Phase One estimates served as resources to develop the quantity takeoffs for the 16 stations identified for Future ASAP Phases.

COST IMPLICATIONS

Construction work often causes disruptions to service, which creates unavoidable inconveniences to customers. When this occurs, the CTA makes every effort to mitigate service impacts to customers, for example by operating shuttles, increasing services on parallel routes, or opening auxiliary entrances to minimize inconveniences. Measures to minimize the impacts to CTA customers are an added expense as well. Another way that the CTA attempts to mitigate service disruptions to customers is by placing limits on contractors regarding when work can be conducted, for example by limiting construction hours to weeknights. This tradeoff creates construction inefficiencies because performing work on weeknights reduces productivity and increases costs.

In addition, station configuration is a key factor that determines the level of investment necessary to retrofit or rebuild inaccessible stations. As previously described, highly complex stations are more expensive to retrofit or rebuild. They require complex design and engineering solutions to work within a station's physical constraints, and also require more time for planning, design, construction, agency coordination, public processes related to potential impacts (e.g., historic, environmental), and land acquisitions.

Subway (side and center platform) configurations are highly complex. The following are key configuration constraints that increase the cost of adding accessibility at subway stations:

- Excavation to provide ample structural support space for elevator pits;
- Conflict with utilities, requiring utility relocation;
- Above-ground street configurations (e.g., six-corner intersections) that limit possible elevator locations from street level to the stationhouse and/or mezzanine;
- Location in dense areas where adjacent buildings and properties are impacted; and
- Platform configurations that result in the need to install more than one elevator: stations with side platforms require a minimum of three elevators and stations with center platforms require a minimum of two elevators.

Elevated stationhouses in the Loop (Adams/Wabash, LaSalle/Van Buren, and State/Lake) are located above street level at mezzanine or platform level. Because of the age and condition of these structures, complete reconstruction often is a more cost-effective long-term solution than a retrofit to add accessibility. The following are key configuration constraints that increase the cost of adding accessibility at elevated stations:

- Two-sided platforms require more than one elevator;
- Two-sided platforms require transfer bridges for bi-directional travel; and
- Location in dense areas often impact adjacent buildings and properties.

ASAP PHASE ONE

As previously noted, CTA developed more detailed design concepts to kick-start the unfunded ASAP Phase One stations alongside the five funded ASAP Phase One stations that are actively moving forward to construction within the first phase of ASAP's 20-year timeframe (see Chapter 7). The first five years of the Elevator Replacement Program are also included in ASAP Phase One. When escalated to the YOE (calculated to the midpoint of construction), the total unfunded cost of ASAP Phase One is $140.3 Million. YOE accounts for annual inflation, which makes the same project more expensive to implement in future years.

A summary of the total estimated cost for ASAP Phase One is shown in Table 15.

Table 15 ASAP Phase One Cost Estimates

Line	Station	Branch	Cost (2017$)	Cost (YOE)	Funding Status
Green	Austin	Lake	$21.3 Million	$24.0 Million	Unfunded
Blue	Montrose	O'Hare	$14.3 Million	$16.1 Million	
Blue	California	O'Hare	$29.8 Million	$34.6 Million	
Subtotal			**$65.4 Million**	**$74.7 Million**	
Five-Year Elevator Replacement Program			**$60.0 Million**	**$65.6 Million**	
TOTAL Unfunded Cost: ASAP Phase One			**$125.4 Million**	**$140.3 Million**	
Loop	State/Lake	Loop Elevated	–	$119.4 Million[a]	$56.9 Million[b]
Red	Lawrence	North Side Main Line	–	$2.1 Billion[c]	100% Funded
Red	Argyle	North Side Main Line	–		100% Funded
Red	Berwyn	North Side Main Line	–		100% Funded
Red	Bryn Mawr	North Side Main Line	–		100% Funded

[a] Reflects the projected cost for this CDOT-led project.
[b] To date, CDOT has secured CMAQ grant funds in the amount of $56.9 Million, which will not cover the full projected cost. However, CDOT plans to seek additional federal funding for construction, so this has not been identified as part of the funding needed for ASAP Phase One.
[c] Funding for RPM Phase One only has been programmed; the Future RPM Program remains unfunded. The RPM Program includes a larger infrastructure scope beyond accessibility.

FUTURE ASAP PHASES

The 2017 baseline cost of the 16 stations identified for Future ASAP Phases is $1.2 Billion. When escalated to the YOE (calculated to the midpoint of construction), the cost of Future ASAP Phases is $1.7 Billion. A summary of the total estimated cost for the stations identified for Future ASAP Phases is shown in Table 16.

Table 16 Future ASAP Phases Cost Estimates

Line	Station	Branch	Cost (2017$)	Cost (YOE)
Loop	Adams/Wabash	Loop Elevated	$128.5 Million	$167.7 Million
Blue	Belmont	O'Hare	$44.5 Million	$67.3 Million
Blue	Chicago/Milwaukee	Dearborn Street Subway	$57.5 Million	$75.1 Million
Blue	Damen	O'Hare	$37.7 Million	$45.0 Million
Blue	Division	Dearborn Street Subway	$76.6 Million	$106.1 Million
Blue	Grand/Milwaukee	Dearborn Street Subway	$57.5 Million	$89.6 Million
Red	Harrison	State Street Subway	$61.1 Million	$95.2 Million
Blue	Irving Park	O'Hare	$32.0 Million	$39.4 Million
Blue	LaSalle	Dearborn Street Subway	$112.1 Million	$196.5 Million
Loop	LaSalle/Van Buren	Loop Elevated	$131.6 Million	$193.3 Million
Blue	Monroe/Dearborn	Dearborn Street Subway	$87.8 Million	$145.2 Million
Red	Monroe/State	State Street Subway	$114.1 Million	$153.3 Million
Red	North/Clybourn	State Street Subway	$101.9 Million	$129.1 Million
Green	Oak Park	Lake	$19.0 Million	$27.0 Million
Green	Ridgeland	Lake	$23.5 Million	$37.7 Million
Blue	Washington/Dearborn	Dearborn Street Subway	$86.4 Million	$123.2 Million
TOTAL Cost: Future ASAP Phases			**$1.2 Billion**	**$1.7 Billion**

ELEVATOR REPLACEMENT PROGRAM

To meet the 20-year Elevator Replacement Program timeframe (see Chapter 7), an average of eight elevators per year will need to be rehabilitated or replaced. The estimated cost to rehabilitate or replace an elevator is approximately $1.5 Million, though the individual scope of work for each elevator may vary depending on its condition.

Given the importance of ensuring reliability of CTA's existing elevators, the first five years of the Elevator Replacement Program are included in ASAP Phase One. The estimated cost for the first five years of the Program totals $65.6 Million, and the Future Elevator Replacement Program estimated cost is $253.0 Million. The total estimated cost for the entire 20-year Program is $318.5 Million, pending funding availability. Program costs are escalated to the estimated YOE within the 20-year horizon period. The escalation rate is based upon a historical average of 3 percent per year. A summary of the estimated total cost for the Elevator Replacement Program is shown in Table 17.

Table 17 Elevator Replacement Program Cost

Elevator Rehabilitation / Replacements per Year	Cost per Elevator	Cost per Year (2017$)	ASAP Phase One (YOE)	20-Year Program Cost (YOE)
8[a]	**$1.5 Million**	**$12.0 Million**	**$65.6 Million**	**$318.5 Million**

[a] Reflects an average number of elevators that would be rehabilitated/replaced per year.

TOTAL ASAP COSTS

CTA is set to begin delivering accessibility at over half of the ASAP Phase One stations in the next several years. Zeroing in on the near-term, the unfunded cost for the ASAP Phase One stations and the first five years of the Elevator Replacement Program is $140.3 Million (see Table 18).

Table 18 ASAP Phase One Cost (Unfunded Portion)

	Cost (YOE)
Austin Station	$24.0 Million
Montrose Station	$16.1 Million
California Station	$34.6 Million
Subtotal	**$74.7 Million**
Five-Year Elevator Replacement Program	$65.6 Million
TOTAL Unfunded Cost[a]	**$140.3 Million**

[a] The ASAP Phase One cost excludes the partially funded CDOT-led State/Lake station (Loop Elevated) and the four fully funded RPM Phase One stations on the Red Line at Lawrence, Argyle, Berwyn, and Bryn Mawr.

The total estimated cost to implement all inaccessible stations included in ASAP as well as the Elevator Replacement Program over the next twenty years is $2.1 Billion as shown in Table 19. The Future RPM Program and the FP Branch Reconstruction Program will help the CTA achieve its goal to make the legacy rail system 100 percent accessible. However, given the magnitude – in terms of scope and cost – of these major reconstruction initiatives, planning and design for these Programs is being conducted through separate processes that will address accessibility within the broader context of these Programs. Therefore, cost estimates for these Programs are not included in the total cost of ASAP.

Table 19 Twenty-Year ASAP and Elevator Replacement Program Cost

	Unfunded Cost (YOE)	Funded Cost (YOE)
ASAP Phase One Stations	$74.7 Million	
State/Lake	–	$119.4 Million[a]
RPM Phase One – Lawrence, Argyle, Berwyn, Bryn Mawr	–	$2.2 Billion[b]
ASAP Phase One Five-Year Elevator Replacement Program	$65.6 Million	–
Future ASAP Phases	$1.7 Billion	–
Future Elevator Replacement Program	$253.0 Million	–
TOTAL Twenty-Year Cost	**$2.1 Billion**	

[a] Reflects the projected cost for this CDOT-led project. To date, CDOT has secured CMAQ grant funds in the amount of $56.9 Million, which will not cover the full projected cost. However, CDOT plans to seek additional federal funding for construction, so this has not been identified as part of the funding needed for ASAP Phase One.

[b] Funding for RPM Phase One only has been programmed; the Future RPM Program remains unfunded. The RPM Program includes a larger infrastructure scope beyond accessibility.

CHAPTER 7: IMPLEMENTATION STRATEGY

ESTABLISHING PHASES

ASAP PHASE ONE

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>
> Implementing ASAP will take time, coordination, and commitment.

As previously noted, the CTA has been making progress to add accessibility throughout the system, most recently at two stations in 2017 at the Wilson station (Red Line) and Washington/Wabash station (Loop Elevated). CTA is on track to complete the Quincy station (Loop Elevated) in 2018, which is currently under construction to add elevators. The funded ASAP Phase One stations continue this momentum, and are on track to provide the disability community accessibility at five additional stations over the next several years.

ASAP also advances design for three stations – the Austin Green Line station and the Montrose and California Blue Line stations. These stations generally are less complex, requiring a shorter timeframe for planning, design, and construction, making it possible for them to also be constructed within ASAP's first phase alongside the CDOT-led State/Lake station and the four RPM Phase One Red Line stations that are actively moving forward to construction.

ASAP PHASE ONE APPROACH

Because the ASAP Phase One stations represent the first phase of ASAP they include a more detailed analysis of major project milestones. There are a number of key schedule milestones that must be met before construction can begin on any construction project that the CTA undertakes. To develop the ASAP Phase One implementation strategy, the CTA estimated the time needed to complete each of the following critical scheduling milestones for each station.

- **NEPA / Planning / Agency Consultation and Coordination** – Projects that receive federal funding must follow the National Environmental Policy Act (NEPA) to determine the effects of a proposed project prior to implementation. Moreover, because ASAP projects are still at the conceptual level, further planning and agency consultation and coordination with CTA partners (e.g., MOPD, CDOT, IDOT,) related to multimodal connectivity and other issues will be necessary throughout the project development process.
- **Land Survey and Geotechnical Survey** – A land survey provides precise measurements and markings to serve as reference points for the design and construction of a project. A geotechnical survey includes soil sampling and analysis (e.g., consistency, structure, groundwater level, etc.) to determine soil conditions relevant for the engineering and construction of a project.

- **Design** – The initial scope of work for each station developed for ASAP, including the 10 percent design concepts, design schematics, and engineering specifications would be advanced to a final design stage.
- **Surface and Subsurface Utilities** – Construction projects often require the relocation of existing utilities that are located in and/or adjacent to the public-way. Conflicts must be resolved prior to permitting any construction project.
- **Public-way Coordination** – Due to the size of some station footprints as they exist today, some of the proposed station designs extend beyond the CTA right-of-way and will require further coordination related to non-CTA owned property (e.g., land acquisition, easements, air rights).
- **Project Permitting** – Prior to construction, all stations will need to be reviewed, approved, and permitted by the DoB, which includes permit reviews by MOPD and the Fire Prevention Bureau. While permitting occurs at the end of the project development process, coordination with the DoB, MOPD, and the Fire Prevention Bureau typically occurs throughout at key points during the project development process to identify, avoid, and/or resolve issues.

FUTURE ASAP PHASES

ASAP is a capital intensive program with an ambitious 20-year timeframe. The potential for changes to the implementation strategy is high. CTA developed a preliminary phased implementation strategy to serve as a roadmap for sequencing stations to meet the 20-year timeframe. The construction sequencing exercise helped the CTA assess the viability of 20-year implementation. However, implementing the three stations via ASAP Phase One and Future ASAP Phases is contingent on identifying funding, which means that the phased implementation strategy is preliminary at this time.[9]

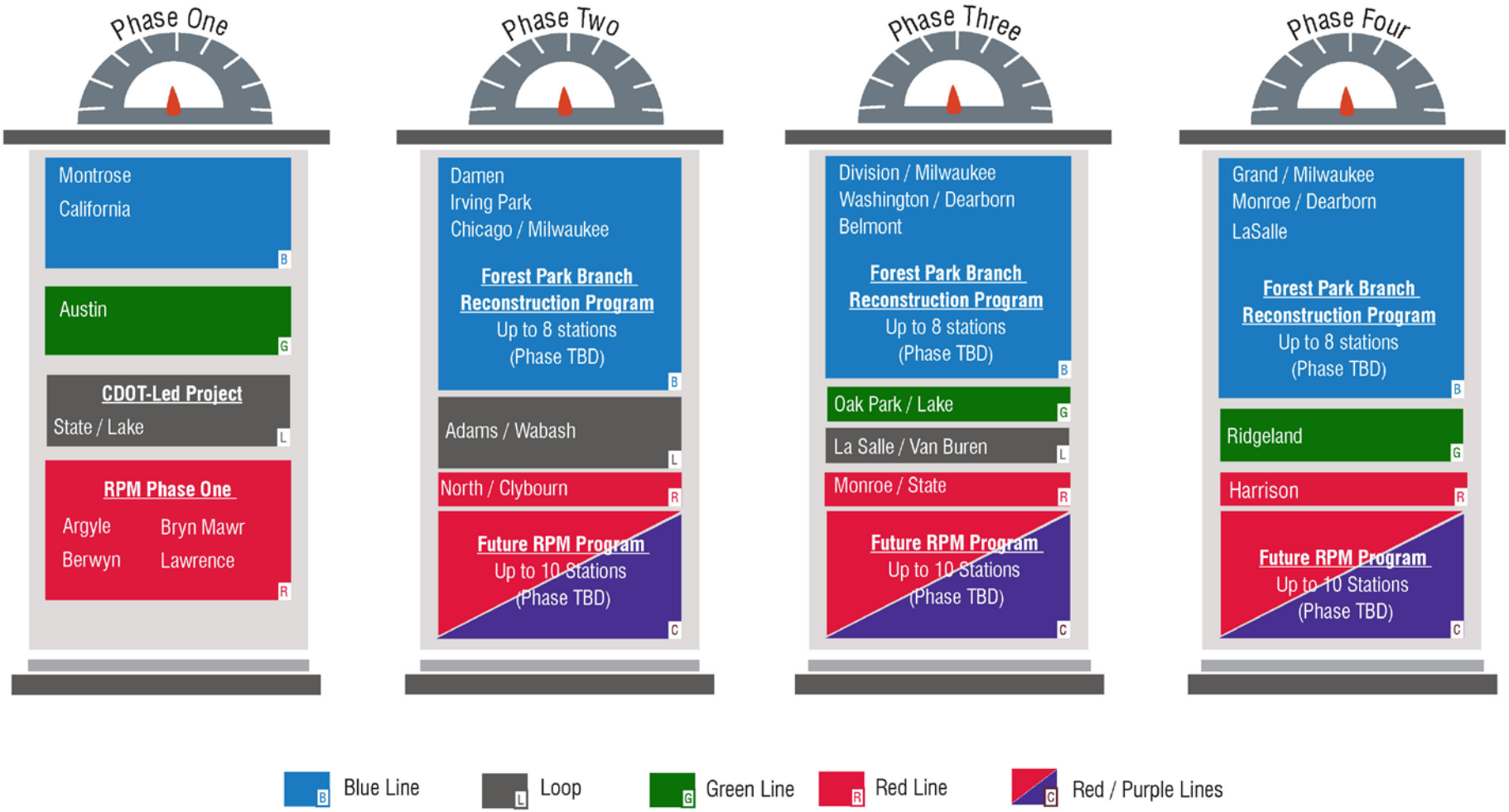
Since complex stations are more challenging to design, engineer, and construct, they are addressed in future phases, which allows more time to work through complexities.

The exact phasing of stations after the first phase is less certain as there are many variables that could impact the proposed phased implementation strategy. Similarly, the timeframes for the Future RPM Program and the FP Branch Reconstruction Program are still being defined and there are uncertainties that could impact the phasing of stations associated with those Programs. Implementation assumptions for the Future RPM Program and the FP Branch Reconstruction Program are based on available information at this point, and will be revised as more information becomes available.

Following the eight stations that comprise ASAP Phase One, the remaining 16 ASAP stations are proposed to be implemented in Phase Two through Four as shown in Figure 10.

[9] The midpoint year of construction is a key input to cost estimates; therefore, any changes to the assumptions underlying the phased implementation strategy would necessarily change project costs.

Figure 10 Twenty-Year Implementation Strategy by Phase, Pending Funding Availability



Note: Phases reflect the sequencing in which construction is estimated.

FUTURE ASAP PHASING APPROACH

The potential ordering of the 16 stations identified for Future ASAP Phases followed a similar approach as conducted for ASAP Phase One, albeit at a reduced level of detail given the higher level of uncertainty in future phases. Ordering of these stations considered the following critical scheduling milestones for each station:

- NEPA / Planning / Agency Consultation and Coordination;
- Design;
- Surface and Subsurface Utilities; and
- Public-way Coordination.

The implementation approach for the Future RPM Program and the FP Branch Reconstruction Program, and ultimately the implementation schedule of these stations, will be developed through their respective Programs and coordinated with ASAP.

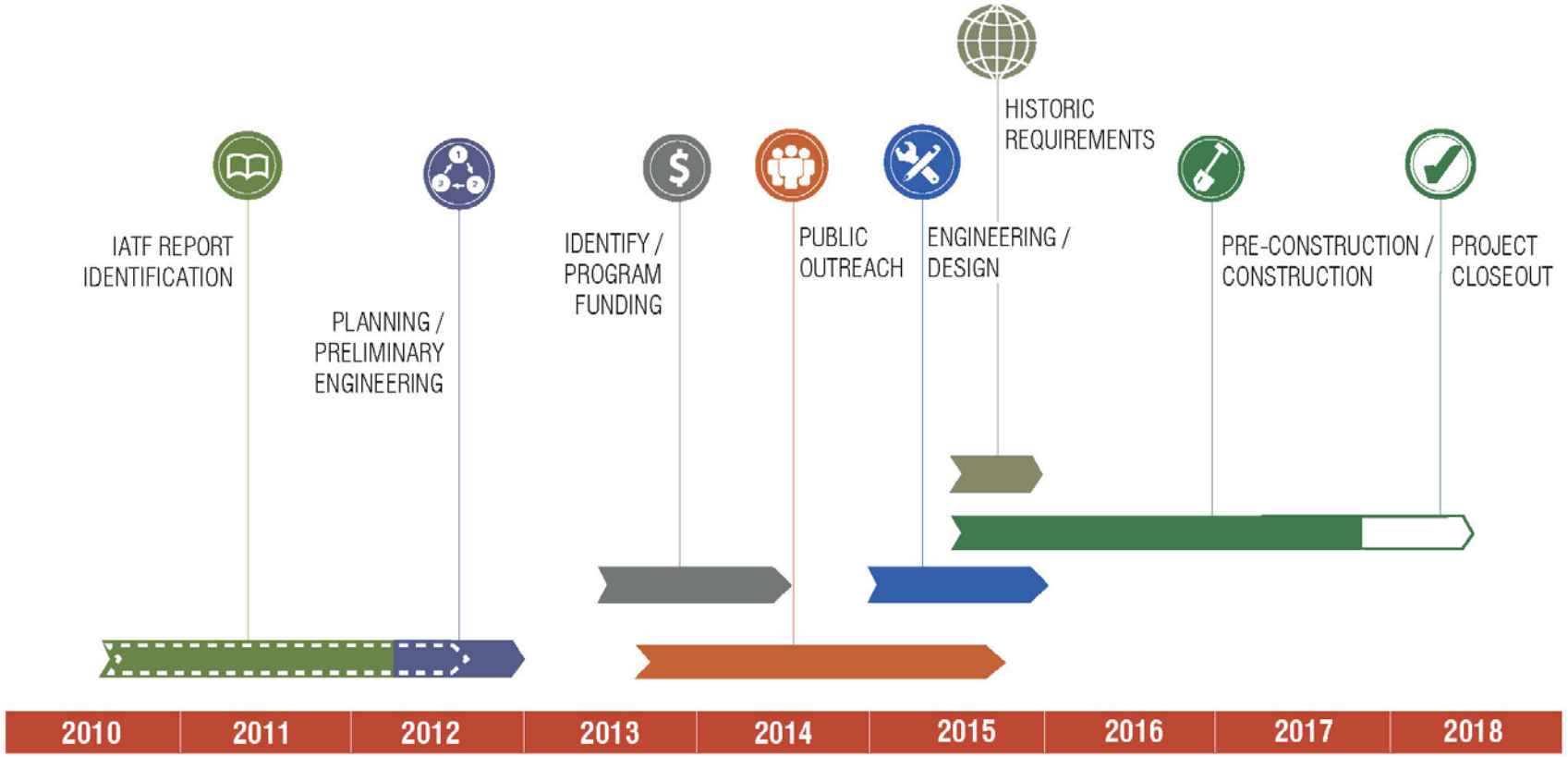
PROJECT DEVELOPMENT TIMELINE

Infrastructure projects are expensive and often take many years to plan, design, and construct. All transit projects – even straightforward ones that may only require limited planning and design – involve multiple steps to complete. If the project development process appears to be long and complex, that is because it is. The project development process is resource intensive and complex, and is designed to ensure that projects are thoughtfully implemented to best serve the diverse needs of customers. By comparison, a major roadway construction project, such as a new expressway, can take 20 years or more from concept development to completion.

Typically the size, complexity, and funding availability of transit projects and programs determine the amount of time it takes to move a project from concept development to groundbreaking. Along the way, the CTA consults and coordinates with various federal, state, and local governmental agencies and elected officials, and also engages with the public and stakeholders. Moreover, often extensive environmental and historic requirements must be met before projects can move forward. Individual project timelines vary from project to project and many of the steps in the project development process may overlap or occur simultaneously. It is important to understand that there are many steps that must occur to implement capital projects and that these activities take time.

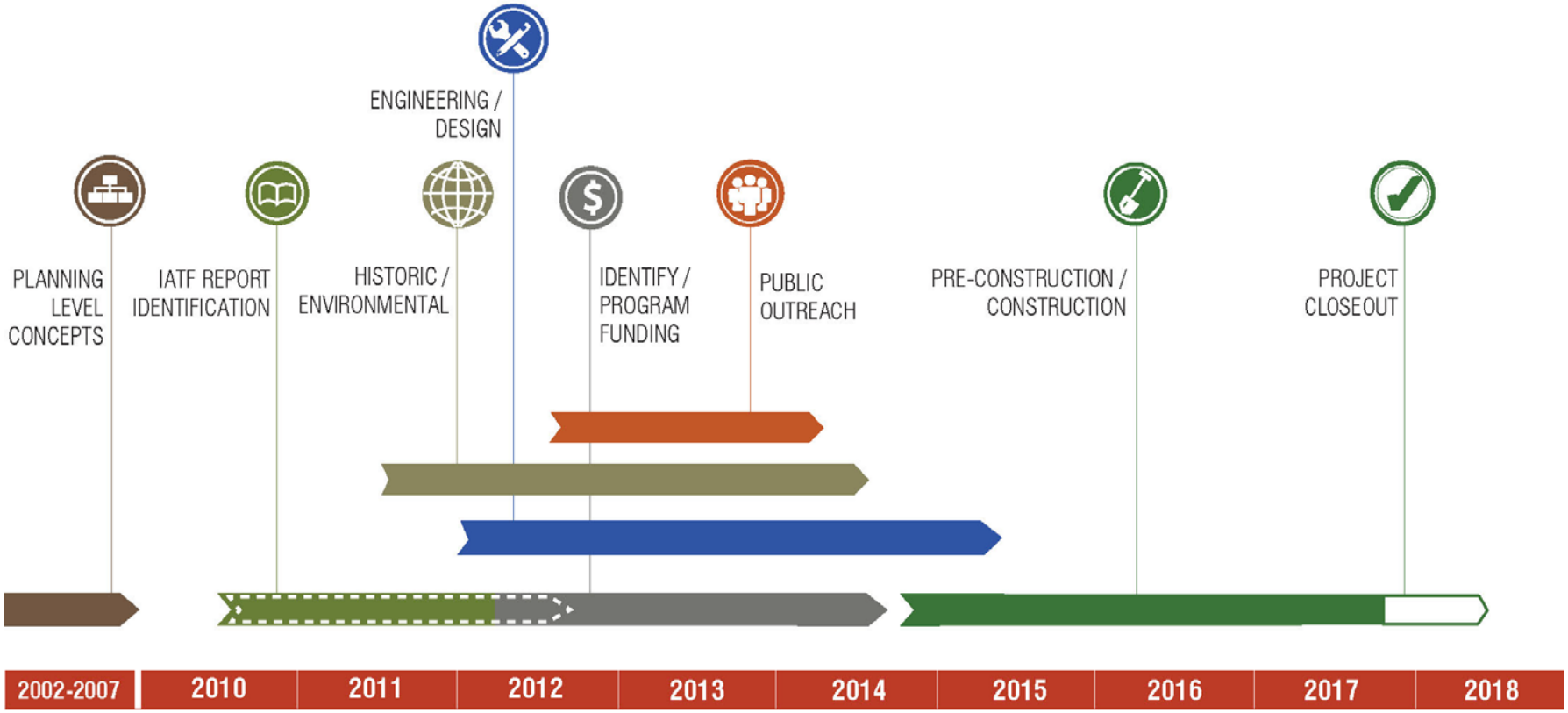
Figure 11 provides an example of the Quincy station (Loop Elevated), which is currently being retrofitted. This alteration project will add accessibility at this station. Figure 12 provides an example of the recently completed Wilson station (Red Line). The Wilson station (Red Line) was completely rebuilt from the ground up and added accessibility at this station. These figures are based on actual duration times for the major components of the project development process.

Figure 11 Quincy (Loop Elevated) Station Retrofit Timeline



Note: There are many steps involved in the project development process. This figure represents a simplified process.

Figure 12 Wilson – Red Line (North Side Main Line Branch) Station Reconstruction Timeline



Note: There are many steps involved in the project development process. This figure represents a simplified process.

SERVICE IMPACTS AND MITIGATIONS

ASAP projects will require construction activities that use heavy equipment (e.g., excavators, bulldozers) that must be stored and complicated movements (e.g., cranes) that must be carefully orchestrated to avoid electrified tracks and others trains that are in service. However, there is a finite amount of available time to perform track-level construction work. Because track-level construction work causes service disruptions, the CTA prefers to perform this type of work when the least number of customers would be impacted (i.e., weekends). However, the amount of available track time for construction during weekends is constrained because special events take precedence (e.g., marathons, parades, festivals). Moreover, the timeframe to conduct track work is further reduced during the winter months when construction activities are limited or cannot take place at all. Viewed in its entirety, the amount of available weekend time to perform track-level construction work each year is heavily restricted and track time must be spread across the many projects within CTA's Capital Program that require track access.

As a consequence of implementing CTA's Capital Program, disruptions to rail operations can occur that create unavoidable inconveniences to customers. However, the CTA makes every effort to minimize these short-term inconveniences to deliver long-term benefits to customers. For example, the CTA operates shuttles, increases services on parallel routes, or opens auxiliary entrances to minimize customer inconveniences. Because weekend track time is limited, one common way that the CTA mitigates customer impacts is to limit construction hours to weeknights. This tradeoff creates construction inefficiencies such that performing work on weeknights reduces productivity and increases costs. Other ways to accommodate track work on a line includes one or more of the following strategies:

- Re-route – A temporary modification to normal train routing to remove rail traffic from a track section to facilitate access to perform work on or near the CTA right-of-way.
- Single-track – A temporary rail operation of trains bi-directionally on one track while the adjacent track is taken out-of-service to facilitate access to perform work on or near the CTA right-of-way. Traditionally, the CTA only allows one single-track at a time on a line and only for very limited time periods. Employing single track operations along the same line concurrently is uncommon as it would compound negative impacts to CTA customers (i.e., numerous slow zones to accommodate multiple crews performing work concurrently).
- Line Cut – A temporary termination of all service on a line. A line cut reflects total stoppage of service on all tracks and at all stations within the area of closure to facilitate access to perform work on or near the CTA right-of-way. The CTA typically adds a bus shuttle to maintain service in this instance.

PHASING CONSIDERATIONS

The phased implementation strategy over the next 20 years shown in Figure 10 lays out a path for planning, designing, and constructing the proposed accessibility improvements at each station. The next step is to identify funding that will allow the CTA to stay on track to deliver accessibility at vertically inaccessible stations within the 20-year timeframe.

From an implementation perspective, there are a number of factors that may influence the phased implementation strategy. Some of these are unknown at this time and could have cascading effects on CTA's ability to adhere to the proposed phased implementation strategy. Following are

key factors that could influence adherence to the proposed phased implementation over the next 20 years.

- **Coordinating with Ongoing Infrastructure Projects** – As funding for ASAP and other projects becomes available, the CTA will need to continue to evaluate ASAP's construction sequencing in light of track maintenance needs, ongoing construction projects, and new projects within the CTA Capital Program.
- **Competing Track Work** – A significant number of the inaccessible stations are located on the Blue Line on both the O'Hare and Forest Park branches. While not all ASAP projects will require track access, some will. CTA is currently in the midst of implementing its *Your New Blue Program*, which includes extensive infrastructure work to tracks, signals, and power systems, all of which require track access. While the CTA strives to minimize disruptions to customers, the fact that so much construction is proposed to take place on the Blue Line will put unavoidable stress on the system. Some of these conflicts can be mitigated through contracting strategies and construction sequencing to capture cost and time efficiencies. However, the sheer magnitude of ASAP in relation to other infrastructure projects requiring track-level work underscores the importance of coordinating with those other projects to identify windows of opportunity to perform the necessary ASAP-related work within the 20-year time horizon.
- **Emerging Opportunities** – Opportunities may arise that enable the CTA to advance one project over another because funding, partnerships, or other scenarios make a project ripe for implementation. While these opportunities are unknown today, should they arise, the proposed station phasing will likely change.

There will likely be cost and other resource impacts should any of the above factors occur that would push the implementation of a project(s) to a future phase. For example, because inflation is a key input to a project cost estimate, the same project will become more expensive to implement in a future phase due to inflation should the implementation phase change. CTA will track the proposed phasing plan alongside other projects in the Capital Program to manage and minimize these potential impacts.

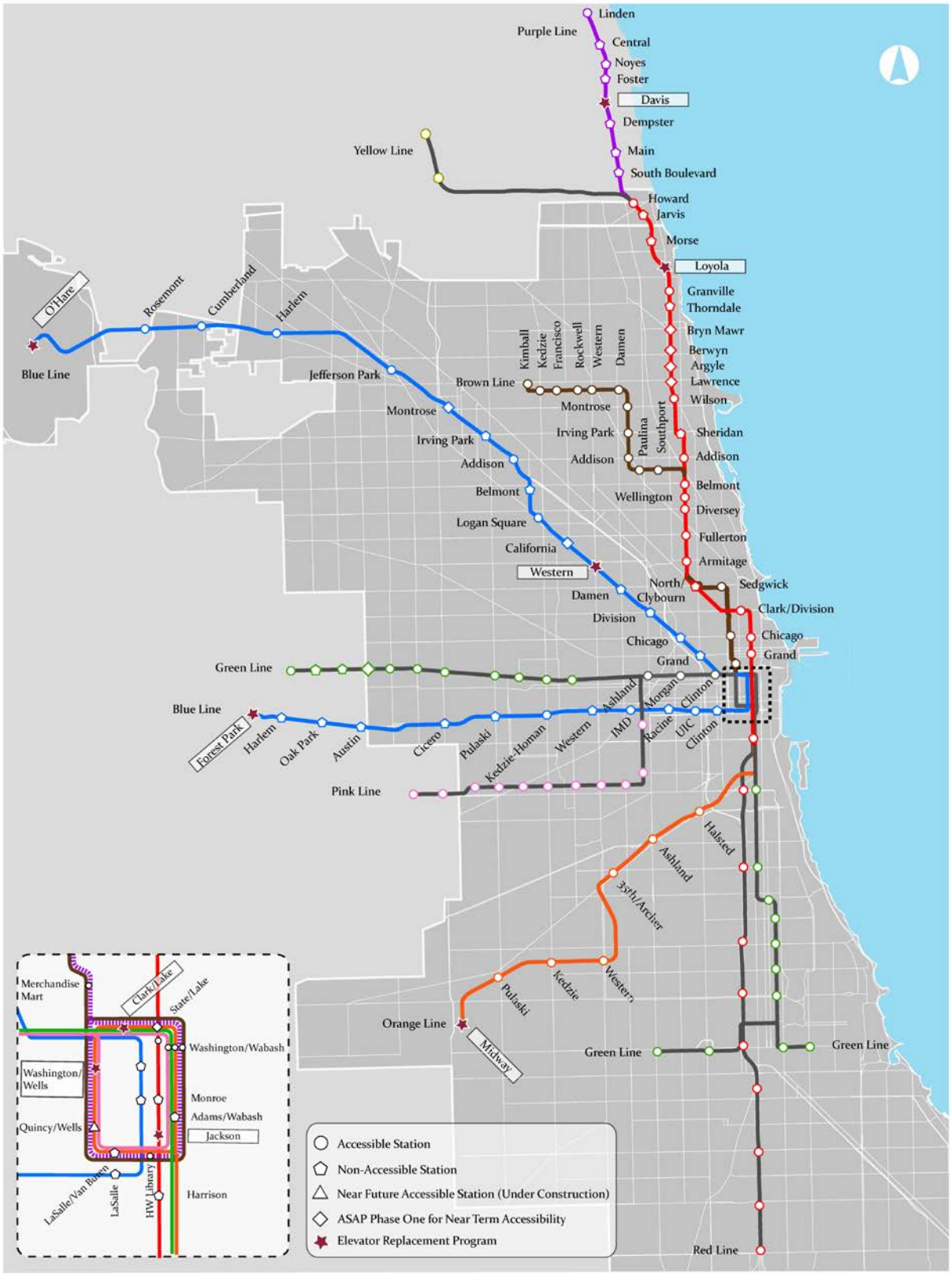
ELEVATOR REPLACEMENT PROGRAM

As previously noted, an average of eight elevators per year will need to be rehabilitated or replaced to meet the initial 20-year replacement timeframe (see Chapter 2). There are some stations where not all of the elevators at the station are recommended to be replaced during the first two years of the Elevator Replacement Program because not all elevators at a single station may be in the same condition as described in Chapter 2. Therefore, only those elevators that require rehabilitation or replacement at a station are recommended. The initial list of 16 elevators to be addressed during the first two years only of the Elevator Replacement Program is shown in Table 20 and Figure 13. These recommendations are preliminary and will be updated once funding is identified, and also will be reassessed every two years.

Table 20 Elevator Replacement Program Two-Year Strategy

Line	Station	Number of Station Elevators to be Rehabilitated or Replaced
Loop / Transfer Stations	Clark/Lake Blue, Brown, Green, Orange, Pink, & Purple Line Transfer Station	Rehabilitate or replace all 4 elevators
	Washington/Wells Brown, Orange, Pink, & Purple Line Transfer Station	Rehabilitate or replace 1 of 2 elevators
Red	Jackson	Rehabilitate or replace all 4 elevators
	Loyola	Rehabilitate or replace the only elevator
Blue	Forest Park	Rehabilitate or replace the only elevator
	O'Hare	Rehabilitate or replace the only elevator
	Western (O'Hare branch)	Rehabilitate or replace 1 of 2 elevators
Orange	Midway	Rehabilitate or replace both elevators
Purple	Davis	Rehabilitate or replace 1 of 2 elevators

Figure 13 Two-Year Elevator Replacement Program Locations



CHAPTER 8: NEXT STEPS

PREPARING FOR IMPLEMENTATION

CALL TO ACTION: ADVOCATING FOR ASAP

Building on the progress and momentum created over the last 30 years, and in partnership with the disability community, the ASAP Strategic Plan lays out the roadmap to deliver complete vertical accessibility to the CTA rail system within 20 years. The CTA recognizes that accessibility provides greater inclusiveness, benefitting everyone by creating environments that are usable by all people. ASAP goes beyond federal requirements to add accessibility across the entire CTA rail system.

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> Together the CTA and the disability community are allies that share a common objective to expand transit accessibility across the region.

ASAP benefits everyone, but funding is a key piece of the puzzle to make ASAP a reality. Funding has already been partially or fully secured for over half of the ASAP Phase One stations (Lawrence, Argyle, Berwyn, Bryn Mawr, and State/Lake). To help secure funding for RPM Phase One, the CTA relied on the support of many individuals and organizations, including those in the disability community, to advocate for funding for this much-needed project. These efforts were ultimately successful, resulting in the creation of the RPM Transit TIF District. Funding for transit is in short supply and securing funding for ASAP is no small task. The CTA will look to these strong partnerships again to obtain funding for the remainder of ASAP and move this critical program forward.

Long-term funding solutions are needed at both the federal and state level to allow the CTA to meet the accessibility needs of all riders. The CTA is currently facing extraordinary fiscal pressure, as the State of Illinois has reduced operating funds to support regional transit. CTA, which carries more than 80 percent of the region's transit rides, has shouldered the largest portion of these cuts: more than $33 Million in reduced funding. Meanwhile, limited state and federal capital funding is not sufficient to address the growing backlog of upgrades and repairs required to keep the CTA system in a state of good repair. The CTA continues investing in upgrading or replacing system assets, yet the unfunded capital need continues to grow with each year.

A new federal funding program is needed to incentivize accessibility improvements beyond the ADA requirements. There are currently no major federal funding programs that directly support accessibility-focused transit projects or programs like ASAP. The CTA – like many other legacy transit agencies throughout the country – has complied with the core requirements of the ADA and continues to meet ADA requirements on new projects. But CTA's ASAP initiative is different. ASAP goes beyond ADA requirements to achieve vertical accessibility across the entire CTA rail system. A good public transportation system is a major asset for all U.S. cities; transit supports economic development by providing access to jobs and businesses, reducing road congestion, and lowering transportation costs for individuals and households by providing an

alternative to driving. When a transit system is not fully accessible, the benefits it provides are not available to everyone. A long-term federal funding solution is needed to incentivize legacy transit systems to improve accessibility beyond what is required by law and to create a system that is fully inclusive and accessible, embracing the true spirit of the ADA.

A new state capital bill is needed to support the $140.3 Million projected cost of ASAP Phase One. At their current levels, CTA's existing funding sources are not adequate to support ASAP improvements. In the near-term, ASAP Phase One will need to be funded by the State. If a new federal funding program is created, the CTA will require a revenue stream to match federal funds. This revenue stream does not currently exist because the State has not passed a capital bill since 2009. Therefore, new transportation revenues will be needed from state and local sources to support a state capital bill that would allow ASAP Phase One to move forward.

In addition to the initial $140.3 Million needed for ASAP Phase One, the CTA estimates that an additional $1.95 Billion will be needed over the next 20 years to support ASAP ($1.7 Billion for the 16 station identified for Future ASAP Phases and $253.0 Million for the Future Elevator Replacement Program). The CTA will continue to work with individuals and organizations, including those in the disability community, to advocate for these projects to be included in a future state capital bill, and will continue to seek innovative ways to fund these projects with local and federal funding sources.

Ten (10) of the remaining stations to be addressed as part of ASAP will be included in the Future RPM Program. The RPM Program is a multistage program to be completed in phases over time, with RPM Phase One expected to begin in 2019. While CTA is advancing RPM Phase One through design and construction, work will continue on the preliminary planning efforts for the Future RPM Program. This work will include phasing and staging plans, preliminary engineering, and an evaluation of funding strategies for the future phases. These efforts will queue up the next phase of RPM for the federal Core Capacity grant program.

Eight (8) of the remaining stations to be addressed as part of ASAP will be included in the FP Branch Reconstruction Program. The FP Branch Reconstruction Program is not yet funded and does not qualify for any federal grant programs. The CTA is currently planning that this work will largely happen in coordination with IDOT's I-290 and bridge projects, for which construction is currently unfunded. The CTA currently anticipates that both of these projects could be at least partially funded by a future State capital bill.

Successful implementation of ASAP Phase One and Future ASAP Phases will heavily rely on a stable and reliable source of state capital funding as well as a new federal funding program. Accessibility will remain a central priority for CTA, even as it seeks to maintain, upgrade, and replace the existing system. Accessibility benefits everyone, and to make ASAP a reality, the CTA looks forward to ongoing collaboration with the disability community, the State of Illinois, and the federal government.

FUTURE ASAP STRATEGIC PLAN UPDATES

The ASAP Strategic Plan will be updated over time to remain consistent with ongoing planning, modernization, and construction work as part of CTA's Capital Program. The following regular updates are currently planned:

- CTA staff will provide annual updates on ASAP to the ADA Advisory Committee;
- The ADA Advisory Committee will include an update on ASAP as part of its annual update to the Chicago Transit Authority Board; and
- CTA staff will update the ASAP Strategic Plan every five years, which will be available on CTA's website: www.transitchicago.com/accessibility/asap.