

PROJECT OUTCOME CRITERIA

The CREATE Program’s Project EW2A (the Project) provides significant direct benefits to the [75th St Corridor Improvement Project](#) (75th St CIP) area, the broader region, and the country, as described in responses to these six project outcome criteria. Representing the next critical phase of the 75th St CIP, Project EW2A builds on Projects P3 and GS19, which are under construction and will separate one of America’s most congested rail junctions. Detailed in the [BCA](#) (p.12), EW2A will eliminate over 73,000 hours of combined delay for freight and passenger trains in the Chicago Terminal (the Terminal) between 2033–2052, by reducing conflict points at Belt Junction. The Project also reduces crashes and auto-related injuries at the Project area’s viaducts¹ by 30%, through implementation of community mobility improvements ([BCA](#), p.20). Lastly, the Project will restore 14 grade-separated structures (including numerous bridges and viaducts) along the corridor. These structures are over 100 years in age and the improvements will prevent the freight congestion and passenger service suspension that would result from a partial closure forecasted in the Project’s no-build scenario. EW2A’s improvements to travel time, safety, and state of good repair are prerequisite for implementing future enhancements to Norfolk Southern (NS) Landers Intermodal Yard, including a future Metra double track and NS main line. EW2A must also occur before the planned P2 Flyover can be constructed, which will allow for the rerouting of Metra’s SouthWest Service (SWS) trains to the Rock Island District (RID) line, and ultimately to LaSalle St commuter rail station. Once this is complete, the shifting of SWS service to LaSalle St Station will enable the expansion of Amtrak and Metra service at Chicago Union Station (CUS). As 90% of the population living in the corridor reside in census tracts designated as either Historically Disadvantaged Communities (HDC), Areas of Persistent Poverty (APP), or both (detailed in [Exhibit 1G](#)), the Project’s improvements will advance USDOT’s Justice40 Initiative.

Criterion 1: Safety

Improving safety is a primary goal in the Project’s [Purpose and Need statement](#), achieved by reducing rail-rail conflicts, highway-rail crossing problems, and community mobility problems. EW2A advances safety by upgrading the corridor’s infrastructure, reducing crashes and crime at the viaducts, and preventing health impacts from potential truck diversions on local streets and throughout the Terminal.

Increased Safety by Improving State of Good Repair

EW2A delivers significant safety benefits, by preventing forecasted out of service failures for any of the bridges or viaducts on the corridor, and by reconfiguring track segments and signals, to increase safety and efficiency of train movements at interlockings. As detailed in Criterion 2 (State of Good Repair, p. 4), the 14 structures to be improved within the corridor are over 100 years old and beyond their originally expected functional life. As presented in the [BCA](#), given the loads and age of the structures, the CREATE partners’ engineering teams forecast a 10% chance of at least one rail line carried by these structures to have to be taken out of service by 2032 (p.5). Given the

¹ “Viaducts” are a series of structures carrying one element of infrastructure over another to eliminate conflicts. With EW2A, viaducts carry the rail lines above city streets. A single viaduct may include multiple bridges and structures, enabling passage of the road and sidewalks below. The City of Chicago issued its first general ordinance requiring elimination of at-grade rail crossings in 1893, to maintain safety, mobility, and connectivity in the city as the rail network expanded. This forward-thinking policy necessitated construction of the viaducts that EW2A will improve.

probability that such an occurrence will eventually happen, and as 90 freight, 30 Metra, and 2 Amtrak trains travel the corridor daily,² suspensions in service on this route to address structural safety issues will become more frequent. This is also true for the roadways running under and through the viaducts, which handle a combined AADT of 139,000,³ as well as eight CTA bus routes (8,9, X9, 44,48,49, X49, 75) with an estimated combined weekday ridership of 52,217.⁴ Three City-designated bike routes also cross the corridor (along Damen Ave, Loomis St, Halsted St), and all roads that run through the viaducts have sidewalks. The Project will avoid the need for safety-related closures along these critical routes, by returning these bridges and viaducts to a state of good repair (with an expected service life of 50-100 years) and by improving their load-bearing capacity, to better accommodate the forecasted long-term characteristics and volumes of its rail traffic. By reconfiguring and adding track segments and by updating the positive train control (PTC) and centralized traffic control (CTC) signal technology along the corridor, EW2A reduces rail-rail conflict points and improves control systems at interlockings, thereby improving safety.

Increased Safety from Community Mobility Improvements

By improving community mobility along streets that cross under the corridor's viaducts, EW2A will increase safety for people walking, bicycling, taking transit, and driving within the Project Area. Specifically, the Project will remove the need for structural columns within the roadway and add crash protection beams at the viaducts, improving both navigability and structural protections for all travelers. Detailed in [Exhibit 4. Environmental Commitments](#), EW2A's improvements also include ADA ramps, LED lighting, sidewalk/pedway enhancements, pavement replacement, combined sewer upgrades and bridge deck waterproofing. These improvements will encourage safe passage for all modes and reduce the probability of accidents, injuries, or fatalities, by enhancing visibility, road surface quality, and protections for non-motorized travelers, and by reducing flooding at the viaducts. Detailed in the [BCA](#) (p.20), an average of 51 auto crashes and 8 auto-related injuries occur annually at the viaducts, and through implementation of EW2A's improvements future crashes and auto-related injuries will be reduced by 30% between 2033-2052. These improvements advance USDOT's [National Roadway Safety Strategy](#) (NRSS), by "design[ing] roadway environments to mitigate human mistakes and account for injury tolerances, to encourage safer behaviors, and to facilitate safe travel by the most vulnerable users" (p.11).

Identified as a critical need in the NRSS (p.8), EW2A also helps to reduce the rate of bicycle and pedestrian-related accidents and fatalities in majority African American communities (where these incidents occur more frequently than the national average). These improvements stand as especially important in Illinois, which in 2019 ranked in the top 25% for "Roadway Fatalities by State" (p.3). The NRSS also identifies that "75 percent of all fatal pedestrian crashes occur in darkness" (p.18), a risk at the corridor's viaducts, which is addressed through the Project's lighting scope. EW2A also advances the [City of Chicago's Vision Zero Plan \(2017\)](#), by "design[ing] streets so that speeds are safe for all users of the roadway," and by "commit[ing] to equitable investment" (p.7) With 2 hospitals, 10 fire stations, 4 police stations and 127 schools within 2 miles of the Project area,⁵ EW2A's improvements also preserve and enhance access for emergency vehicles and school buses through the corridor.

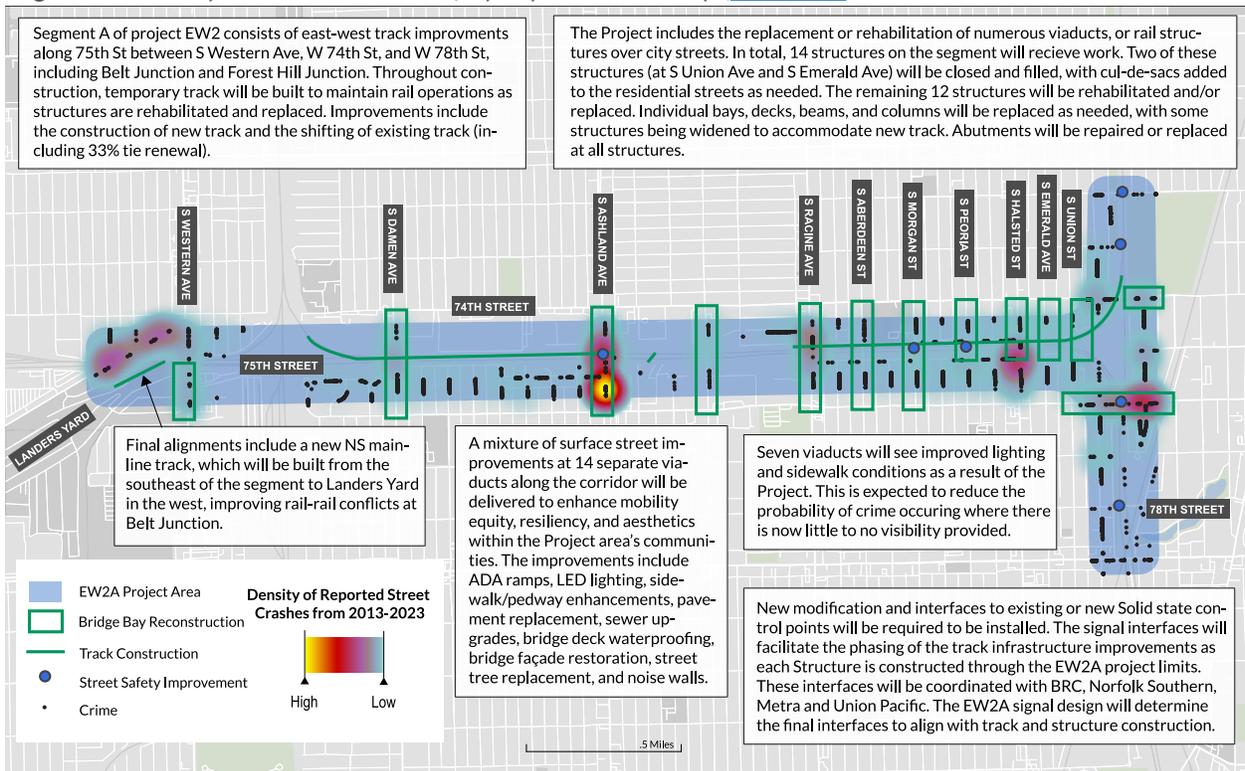
² [75th Street Corridor Improvement Project \(75th St CIP\)](#)

³ [Chicago Data Portal – Average Daily Traffic Counts](#)

⁴ [Regional Transportation Authority Mapping and Statistics – Ridership Data](#)

⁵ [Exhibit 3H – EW2A Community Institutions](#)

Figure 1. Roadway Crash Incidents & Safety Improvements Map (Exhibit 1C)



Source: [City of Chicago Data Portal -Traffic Crashes](#)

Increased Safety Through Crime Reduction

EW2A’s improvements will serve to reduce crime at the viaducts and along the elevated rail corridor. As detailed in the [BCA](#) (p.21), these improvements (namely lighting) are forecasted to reduce crime at the viaducts by nearly 4%. Additionally, by reducing delay on the elevated rail corridor (shown in Criteria 2 and 3), EW2A reduces the threat of theft and pilferage from idling freight trains by trespassers within the Project area, in addition to reducing associated operational risks and security costs.

Increased Safety by Preventing a Mode Shift to Trucks

By improving rail operations and throughput along the corridor, EW2A prevents increases in “last mile” truck trips on surrounding streets, and subsequent impacts to roadway safety, pavement conditions, congestion, and emergency vehicle response times. Detailed in the [BCA](#), from 2047-2051 (the period that forecasted shipment diversions would occur from rail to truck in a no-build scenario, due to a closure on the corridor), EW2A’s improvements will prevent an increase of 37 million truck vehicle miles traveled (VMT) in the Terminal (p.17). This increase in truck VMT would also yield harmful emissions in the Project area, including GHG’s like carbon dioxide (CO₂) and criteria pollutants like nitrogen oxides (NO_x), sulfur oxides (NO_x), and particulate matter (PM_{2.5}) by a combined 25,624 metric tons (p.17), impacting both Illinois EPA-recognized environmental justice communities and the Chicago region (a US EPA PM_{2.5} non-attainment area).

Criterion 2: State of Good Repair

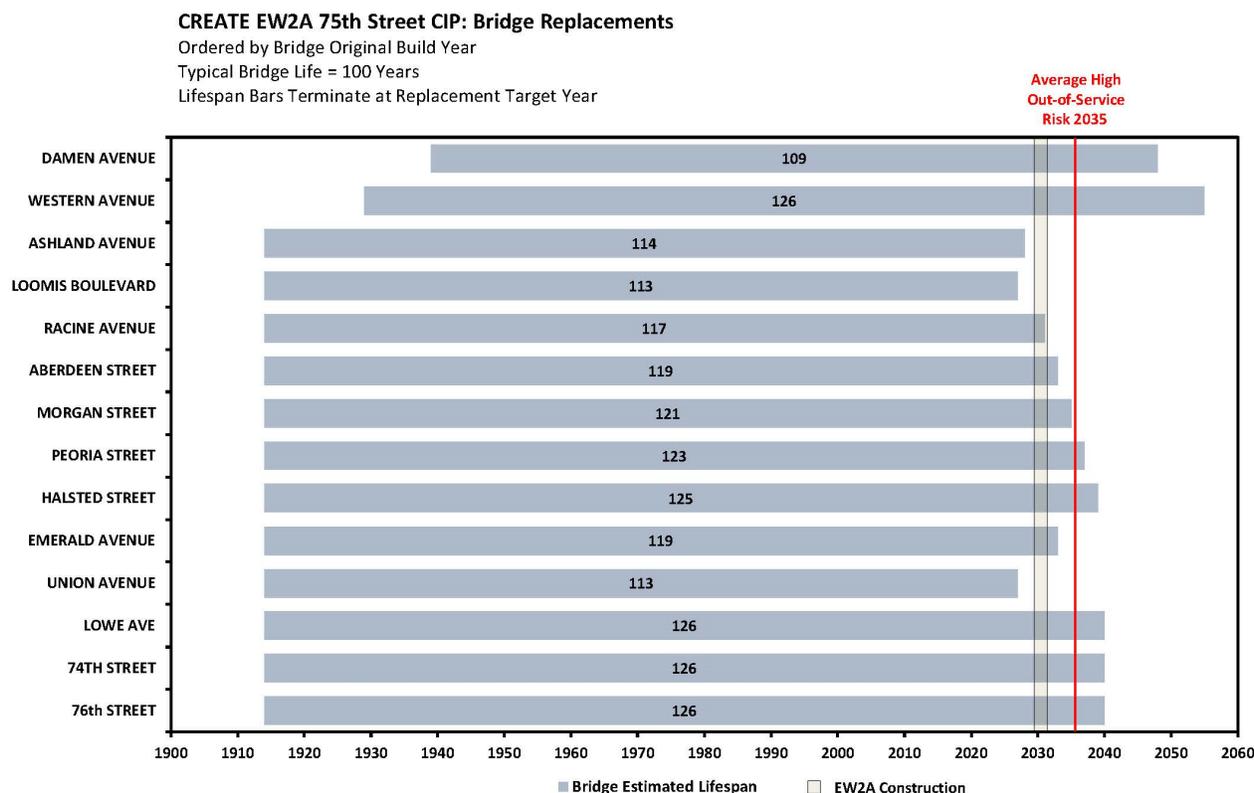
Advancing state of good repair is a primary goal of EW2A. By restoring structures, streamlining track segments, adding track capacity, modernizing signals, and upgrading intersecting surface

streets along the corridor, EW2A supports numerous other outcomes, including improved safety, travel times, throughput, mobility, equity, and resiliency. These improvements also serve to reduce future maintenance costs. EW2A’s scope also fortifies USDOT’s investment in P3 and GS19 and enables future upgrades to the Metra SWS (through Project P2) and to NS Landers Yard. Project partners pledge that the ongoing state of good repair of EW2A’s improvements will be maintained, in accordance with [Metra’s Transit Asset Management Plan](#) and with FRA standards like [49 CFR 213 \(Track Safety Standards\)](#), [49 CFR 236 \(Signals & Train Control Devices\)](#), [49 CFR 237 \(Bridge Safety Standards\)](#). Ownership and asset management responsibilities on the corridor are detailed in [Exhibit 2K. 75th St CIP Structure Index](#) and [Exhibit 2L. 75th St CIP Bridge Number Schematic](#).

Restoring & Modernizing Existing Infrastructure

EW2A’s 14 structures are all over 100 years old and beyond their recommended functional life. Displayed in *Figure 2*, CREATE partners have identified 2035 as the year that a “high out of service risk” emerges for one or more tracks on the corridor. The [BCA](#) assumes a 10% chance of at least a partial out of failure of one of these structures by 2032 (p.6). As 204 million gross tons (per 1,000 service train-miles) crossed these structures in 2022, a value that is expected to increase by 52% by 2047 under the no-build scenario,⁶ improving the state of good repair and load bearing capacity of these structures is a chief concern of the project.

Figure 2. EW2A Bridge Age Diagram ([Exhibit 1H](#))



Source: Belt Railroad of Chicago

⁶ [Exhibit 3D. RTC Model Outputs – Tonnage](#)

Illustrated in [Exhibit 2A. Detailed Project Scope](#), EW2A restores the corridor's structures (including bridges and viaducts) to a state of good repair, and delivers numerous track, signal, and community mobility improvements, summarized below. As shown in the [BCA](#) (p.12), between 2033-2052, the track configuration improvements will yield 3,258 hours of avoided delay for passenger trains and 69,969 hours for freight trains in the Terminal, by separating passenger and freight movements at Belt Junction, thereby reducing instances where one operator curtails the movement of another. By reducing rail congestion on the corridor, which cascades throughout the lines in the Terminal, these improvements will prevent subsequent roadway user delay due to gate-down time at at-grade crossings in the Terminal by 42,620 vehicle hours annually ([BCA](#), p.19). By avoiding a potential closure on the corridor, EW2A prevents 36,096 hours of resulting freight train delay in the Terminal between 2033-2052 ([BCA](#), p.14). Such a closure would also suspend Metra SWS operations due to safety concerns and delay impacts.⁷ In turn, implementing EW2A prevents a resulting increase of 2.2 million VMT annually, due to trip diversions from commuter rail to automobiles ([BCA](#), p.15).

Structure Work

EW2A includes rehabilitation or new construction of 14 grade separated structures (containing 86 bridges and viaducts) over city streets. As most of these structures are beyond their functional life (reflected in *Figure 2*) and over 100 years old, their restoration is critical to the ongoing viability of the corridor. Detailed in [Exhibit 2A. Detailed Project Scope](#), two structures will be closed and filled, with cul-de-sacs added to the residential streets. The remaining 12 structures will be rehabilitated or replaced. All new bridges will be designed with a loading capacity meeting the AREMA Cooper E-80 standard. The upgrades will increase the average load rating of these bridges and extend their useful life by 50-100 years. Individual bays, decks, beams, and columns will be replaced as needed, with some structures widened to accommodate new and reconfigured track. Abutments will be repaired or replaced at all structures. Retaining walls will be installed at two locations, as well as one noise barrier at the S Union Ave wall. W 76th St will be lowered to improve vertical clearance.

Track Work

EW2A will deliver east-west track improvements along a 3-mile corridor, parallel to 75th Street, between S Western Ave, W 74th St, and W 78th St, including Belt Junction and Forest Hill Junction. This involves realigning 8.5 miles of existing track and constructing 3.4 miles of new track, including a new NS mainline from S Racine Street to Landers Yard, which will reduce rail-on-rail conflicts at Belt Junction. EW2A will improve throughput and prevent delays (by creating non-conflicting train paths), enabling parallel movements on the corridor and future increases in train volumes in the Terminal, which are expected to grow by over 1.3 million train miles annually from 2022-2047 ([Exhibit 3B. RTC Model Outputs – Train Miles](#)).

Signal Work

Signals will be repositioned, retrofitted, or added in the vicinity of S Damen Ave, Belt Junction, and W 74th St. New signals will be added at four locations along the corridor and existing and modified signals will be shifted to nine new locations. This will better align the signal network with the reconfigured track segments and will serve to update PTC and CTC technology on the corridor, improving control of train movements through the interlockings.

⁷ [Exhibit 3A. RTC Modeling of CREATE EW2 and P2 Projects](#)

Community Mobility Improvements

As detailed in [Exhibit 4. Environmental Commitments](#), various street improvements at 14 separate viaducts along the corridor will be delivered within Project area. This includes ADA ramps, LED lighting fixtures, sidewalk/pedestrian enhancements, pavement replacement, sewer upgrades, bridge deck waterproofing, bridge façade restoration, street tree replacement, and noise walls. Once implemented, the corridor’s viaducts will demonstrate improved safety and accessibility for disabled persons, enhanced road surface quality (benefitting all modes), improved visibility and energy efficiency, and reduced street flooding.

Figure 1. Example Viaduct Improvements: Project WA1 - Before & After



Source: Union Pacific Railroad

Reduced Maintenance Costs

To preserve operations on the corridor, CREATE’s partner railroads spend over \$33,000 on maintenance per structure annually ([BCA](#), p.22). By reinvesting in their state of good repair, these annual costs will be reduced, as the maintenance costs of a rail structure’s first 50 years of life mainly include inspection costs, versus routine repair costs. EW2A’s improvements will yield \$2.5 million in annual maintenance cost savings on the corridor’s structures from 2033-2052 ([BCA](#), p.22). Improving state of good repair also enables the corridor to handle increased traffic, by reducing the amount of time when track segments are out-of-service due to maintenance (which serves to increase trail miles elsewhere in the Terminal). As train miles in the Terminal are projected to grow by over 1.3 million annually in the no build scenario, from 2022 to 2047,⁸ increasing the capacity of this corridor is critical for handling growth and reducing trip diversions to trucks or to rail terminals outside of Chicago, in the event of a closure (shown in Criterion 3).

Criterion 3: Economic Impacts, Freight Movement, and Job Creation

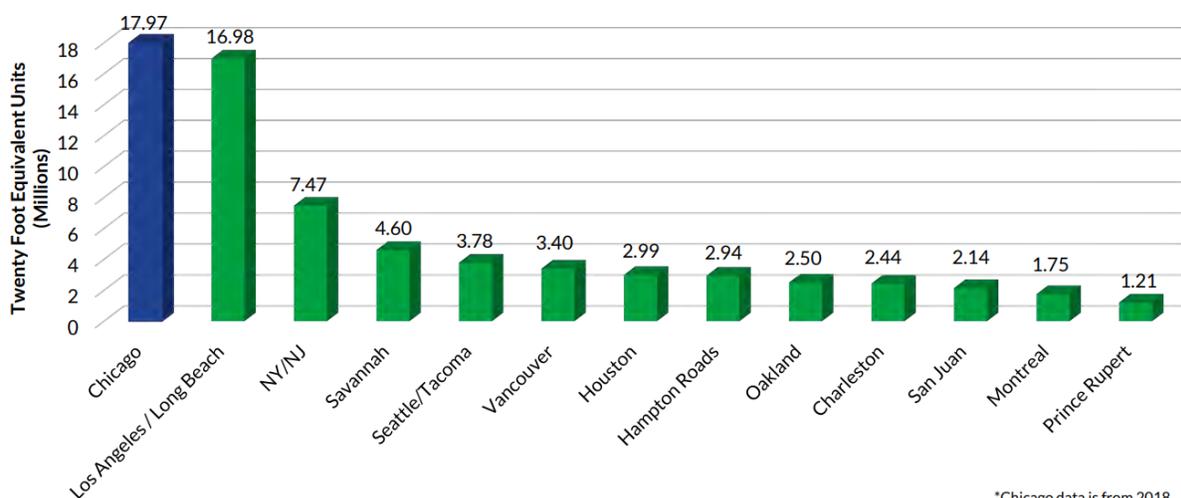
Creating positive economic impacts, enhancing freight movement, and supporting job creation are the primary goals of EW2A and the CREATE Program. By removing and preventing supply chain bottlenecks, the Project benefits the regional and national economy. EW2A also enhances access to the Terminal’s intermodal yard network, and reinvests in local and regional transit routes, as well as Amtrak’s Cardinal service, thereby strengthening opportunities for transit-oriented development (TOD), recreation, and tourism in the region. As with all CREATE projects, the Project advances equitable workforce development programming and supports the creation of union jobs, prioritizing local trade skill development and income growth.

⁸ [Exhibit 3B - Railroad Train Controller Model Outputs – Train Miles \(2022-2052\)](#)

Removing and Preventing Supply Chain Bottlenecks

Freight and Metra trains currently use the same tracks at Belt Junction. By agreement between the passenger and freight railroads in the Chicago Terminal, the guidelines of the Chicago Protocol⁹ prioritize passenger train movements at the interlockings and other joint operating locations. This significantly curtails freight train operations during the peak morning and afternoon commuting periods (totaling six hours daily) and to a lesser degree during non-peak periods. This increases freight travel times and delay through the corridor, but also narrows the window of time where freight movements can even occur, negatively impacting the supply chain travelling through Belt Junction, particularly to and from the adjacent NS Landers Intermodal Yard. Specifically at Landers Yard, increased dwell times slow the process of stripping and reloading containers on trains, delaying inbound and outbound travel, and reducing productivity. The Project alleviates these bottlenecks, by realigning track, introducing new track segments, and adding a wye, serving to reduce dwell times on the freight main lines through the corridor and support future growth. Between 2033-2052, EW2A’s improvements will result in 69,969 hours of avoided delay for freight trains in the Terminal (BCA, p.12), valued at a cost savings of over \$42.6 million (BCA, Appendix IV). This will benefit the national distribution of manufactured goods and natural resources, as Chicago continues to handle 67% of all east-west gateway traffic in the US, and 85% of all east-west intermodal traffic, and remains the top North American container port (handling 17.9 million twenty foot equivalent units annually).¹⁰ EW2A enhances the efficiency of these container movements through the Terminal, and maintains the cost-effectiveness of rail car shipments for critical sectors like agriculture, energy, and manufacturing.

Figure 2. Top North American Container Ports (2019)



*Chicago data is from 2018
 Source: CMAP Intermodal Facility Lift Counts Regional TEU Estimate (2019), American Association of

Under the no-build scenario, as congestion in the Terminal increases, and where the chance of partial closure along the corridor reaches 10% by 2032, the BCA projects that 13 billion ton-miles of freight rail shipments would divert away from Chicago during the outage period (2047-2051), to less congested Midwestern markets like St. Louis or Kansas City, costing the region around \$170 million in economic value annually (p.18). A portion of these diversions would stay in the

⁹ Chicago Train Operations Protocol Guidelines (May 21, 2023)

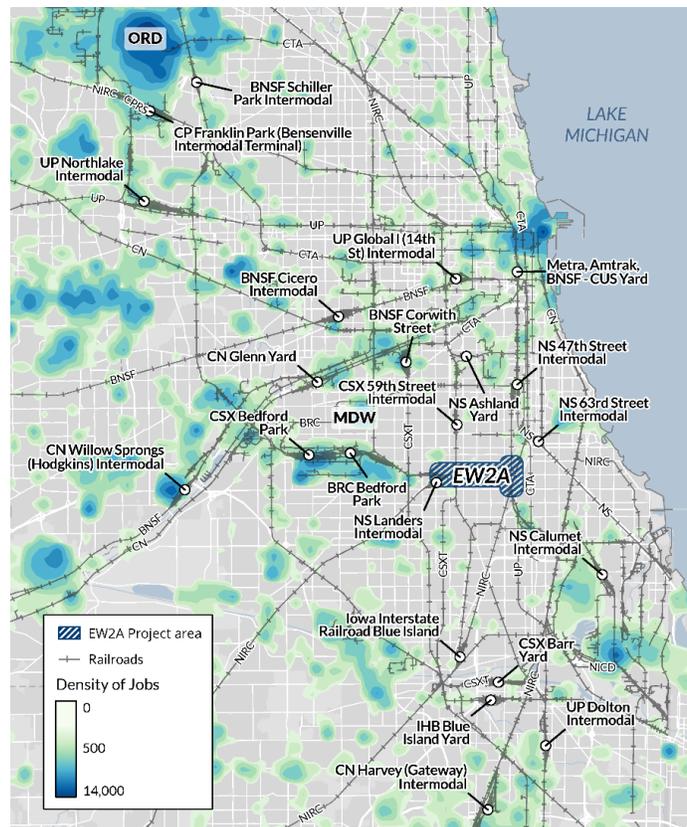
¹⁰ [CREATE Program Overview Presentation \(p. 4 & 6\)](#)

region but shift to commercial trucks travelling within 255 highway-mile trips, increasing truck traffic in the Terminal by over 37 million VMT between 2047-2051. This increase in truck traffic would be borne on local roads and Interstate 90/94, which sits only 1 mile east of EW2A's limits, and is ranked the second most congested freight highway in the U.S. in [FHWA's Freight Mobility Trends Report](#) (2019). In turn, EW2A's focus on reducing delay and improving state of good repair is critical for preserving and enhancing supply chain movements on Chicago's rail system and preventing freight congestion on its roadways.

Growing the Local and Regional Freight Economy

Implementing EW2A, the 75th St CIP, and the overall CREATE Program is critical for sustaining and growing Chicago's freight economy, as increased travel times in the Terminal would reduce the competitiveness of the regional market. Chicago's rail system handles 47% of the nation's intermodal rail containers, 28% of all rail cars, and \$641 billion of goods transported on rail annually, as it continues to be one of the most efficient pathways for freight movement nationally.¹¹ As identified by the Chicago Metropolitan Agency for Planning (CMAP), the region's freight cluster accounts for 190,000 jobs (2016) and over \$14 billion in personal income for the residents of northeastern Illinois, with freight railroads directly employing nearly 12,000 people and indirectly supporting an additional 26,000 jobs regionally (2014).¹² The CREATE program has strengthened regional freight activity and employment, yielding \$31.5 million in generated economic benefits and creating an estimated 44,000 job years from its projects to date.¹³ Implementing EW2A will enable the region to continue to capture these economic benefits. With the total annual train miles in the Terminal expected to increase by 1.3 million from 2022-2047,¹⁴ there is a pressing need to upgrade the region's infrastructure to meet the projected demand, and as detailed in the [BCA](#), threats like a partial closure along the corridor could result in a loss of \$373 million in economic value annually (p.23), resulting from a diversion of east-west freight rail traffic to other Midwestern markets.

Figure 3. Employment Map ([Exhibit 1F](#))



Source: CMAP 2012

¹¹ Annual Carloads and Value, 2017 STB Confidential Waybill Sample

¹² [Regional Freight Strategic Direction](#) (Chicago Metropolitan Agency for Planning, 2018): p. 31

¹³ CREATE Economic Benefits Study (Cambridge Systematics, 2015)

¹⁴ [Exhibit 3B - Railroad Train Controller Model Outputs – Train Miles \(2022-2052\)](#)

EW2A also benefits nearby freight facilities like NS – Landers Intermodal Yard (reporting 382,329 annual lifts in 2021)¹⁵, by allowing Metra’s 30 daily trains to run separate, parallel movements from NS trains that exit and enter Landers, reducing delay for all operators on the corridor, particularly in instances where one breaks down. By reducing delay in the Terminal, the Project benefits freight movement for other intermodal yards and logistics centers across the Chicago region, near O’Hare Airport (ORD), Lake Calumet and Will County (see *Figure 5*).

Advancing Local Workforce Development

The implementation of EW2A will include high quality job creation and will focus on local workforce development. EW2A will incorporate CREATE’s Community Partnership program, which emphasizes inclusion of disadvantaged business enterprises (DBE) in design and construction work. The contracted work element of the Project will include outreach to support local hiring in the surrounding communities, conducted in partnership with City Colleges, community organizations, and elected officials. IDOT data from 2022 showed that of CREATE’s ten most recent general rail construction projects, the Program achieved a DBE participation goal of 23%, exceeding its 21% target, representing \$39 million in completed awards. An additional \$30 million in DBE contract awards is planned through 2028. Specifically for Projects P3 and GS19, the DBE goal has been even higher, at 30%. To date, 19 of the 26 subconsultants and contractors hired for P3 and GS19 have been DBEs. CREATE partners are also performing a procurement analysis for EW2A that will enable setting of project-specific construction DBE and local hiring goals, considering the technical capacity required to complete the work and the capabilities of local firms. CREATE also maintains a mentor-protégé program that advances participation and experience development for under-represented vendors.

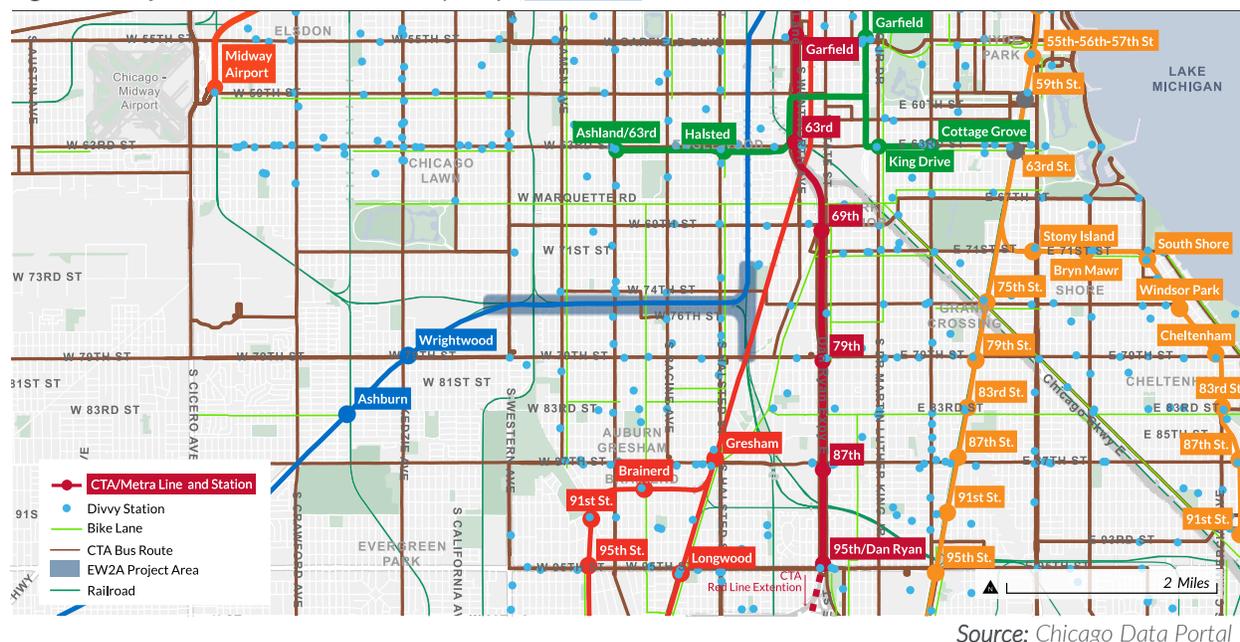
CREATE also provides funding for construction industry qualifications trainings, and for on-the-job training in 75th St CIP projects, involving entry-level individuals who have graduated from IDOT’s Highway Construction Careers Training Program (HCCTP). The HCCTP is offered at numerous Chicago area schools, including Dawson Technical Institute of Kennedy King College, South Suburban College, and Richard J. Daley College. To date, the HCCTP has advanced 600 graduates, 300 of which have been placed in highway careers. The CSX Railway Career Pathways Program is also held at Dawson Technical Institute, which prepares students for rail industry careers. In 2022, thirty-one students attended the program, and it continues to grow. NS has also contributed \$200,000 to [HIRE360](#)’s workforce development center, helping to cultivate Chicago’s next generation of construction workers and DBE entrepreneurs. CREATE Partners have also funded STEAM programs in 75th St CIP communities since 2019, including over \$200,000 from NS to Chicago Public Schools and the Chicago Public Library Foundation. These programs encourage student interest in transportation, engineering, and technical fields throughout a CREATE project’s design and construction phases. Partners also lead bridge building competitions at elementary schools and RFP Competitions with local high schools, having engaged over 130 elementary and 30 high school students to date. As with all CREATE projects, the contractor work will be carried out by 100% union labor, including skilled and semi-skilled laborers, equipment operators and specialty craftspeople, represented by the Laborers, Steel Workers, Electrical Workers, and Heavy Equipment Operators unions, to name a few. All contractor employees will be covered by Davis-Bacon Act (23 USC 113) requiring payment of prevailing wage rates.

¹⁵ [Exhibit 3I. CMAP - Chicago Intermodal Facility Lift Counts & Regional TEU Estimate, through 2021](#)

Reinvestment in Multimodal Transportation Systems

EW2A’s state of good repair focus will improve passenger rail service on the Metra SWS line (benefitting 9,600 weekday riders),¹⁶ and laying the groundwork for future project phases that shift SWS service to the Rock Island District (RID), and SWS trains from Chicago Union Station (CUS) to LaSalle Street Station. This will open track capacity at CUS, enabling adjustments to Metra’s other service lines that terminate there, as well as Amtrak’s 13 intercity lines. The Project’s reductions in travel time, delay, and safety upgrades also advance the priorities of [AmtrakConnectsUs](#), which calls for significant Midwest service growth, and improved speeds of 110-125 mph (p.46). EW2A’s mobility improvements also benefit the eight CTA bus lines that cross under its viaducts daily, handling a combined weekday ridership of 52,217. This includes express, 24-hour, high frequency service on Western and Ashland Avenues (see *Figure 6*).

Figure 4. Project Area Transit & Mobility Map ([Exhibit 1D](#))



Integrating Land Use, Economic Development, Transportation, Recreation & Tourism

Implementing EW2A and the greater 75th St CIP supports transit-oriented development (TOD) and active transportation along the Metra SWS. This includes initiatives like the [Orland Park TOD Master Plan](#), the [Palos Park Bikeways and Trails Plan](#), and [Oak Lawn’s 95th Street Corridor Plan](#). Through these planning efforts, many of the suburban communities located along Metra’s SWS line are prioritizing increased development density, mixed use, and non-motorized transportation infrastructure around their commuter rail stations, to advance local economic development, quality of life, and sustainability. As the [BCA](#) forecasts a 10% chance of a safety-driven out of service closure of at least one track on the corridor by 2032 (p.5), which would suspend Metra SWS service, reinvestment in this corridor’s infrastructure is critical for helping these communities realize their TOD and active transportation goals. In the City of Chicago, similar efforts are being advanced in numerous underserved neighborhoods. In the Auburn Gresham neighborhood, public

¹⁶ [Metra Commuter Rail – 2022 SouthWest Service Ridership Data](#)

incentives and resources are planned for investment along the 79th Street corridor (from Paulina St to Fielding Ave) near the southeast end of EW2A. Streetscaping and mobility improvements along 79th Street will leverage EW2A's similar improvements that are planned for the viaducts starting at 78th Street and running north to 75th Street. EW2A will also enhance rail access to regional and national recreation and tourism areas. This includes the Cal Sag Trail, a 13-mile off-street bike trail running along the Cal-Sag Channel, from the Illinois-Michigan Canal National Heritage Corridor to Calumet City. Through its improvements to Amtrak's Cardinal line (which carried 80,322 riders in 2022),¹⁷ EW2A also strengthens access to major cities (like Washington, DC, Cincinnati, Indianapolis), national parks (Shenandoah), historic sites (Monticello, Manassas National Battlefield Park, Washington's numerous monuments), and university towns (Charlottesville, VA, Lafayette, IN).

Criterion 4: Climate Change, Resiliency, and the Environment

EW2A will produce numerous, significant environmental benefits, including emissions reductions, air quality improvements, and enhancements that support climate resilience and active transportation. These positive outcomes align with local and regional plans by supporting their environmental and public health goals and by reducing transportation-related burdens placed on local environmental justice communities. The Project also supports future brownfield remediation efforts throughout Chicago's South Side and south Cook County.

Reducing Rail Emissions & Fuel Consumption

EW2A will reduce Metra and Amtrak's emissions along the corridor, by cutting idling and delay time by 3,258 hours between 2033-2052 ([BCA](#), p.12), through its planned track and signal upgrades. As illustrated in the [BCA](#) (p.13), this will cut Metra's and Amtrak's carbon dioxide (CO₂) emissions by 2.5 metric tons annually and will reduce their fuel consumption by 248 gallons annually. Also, by avoiding an increase in car VMT, due to the suspension of the SWS line from a potential track closure, EW2A prevents an increase of 9,085 metric tons of combined emissions (CO₂, NO_x, SO_x, PM_{2.5}) from 2033-2052 ([BCA](#), p.15). By avoiding diversions to truck (that stem from a corridor closure), EW2A also prevents a combined 25,624 metric tons in emissions (between 2047-2052). Detailed in [Chicago's 2022 Climate Action Plan \(CAP\)](#), the City's carbon reduction goal of 62% by 2040 is heavily driven by reducing on-street transportation and railway emissions, which accounts for 1/6th of that total reduction goal (p.16-17). In turn, preventing emissions increases due to truck diversions (detailed above) will play a significant role towards helping the City achieve its climate action goals. These emissions reductions also directly benefit surrounding environmental justice communities. As revealed by the [Climate and Economic Justice Screening Tool](#) (CEJST), most census tracts in the Project area rank around the 90th percentile for PM_{2.5}, diesel particulate matter risk, and correlating health problems like asthma, reflecting the dire need to improve air quality in these communities (see [Exhibit 3G: CEJST Outputs](#)).

Climate Benefits of the Viaduct Improvements

As EW2A's viaduct improvements support bus transit, bicycle, and pedestrian movements through the Project area, EW2A in turn encourages use of active transportation modes, which produce fewer GHG emissions than passenger vehicles. In addition to the eight CTA bus lines that cross through the Project area daily, 3 designated City bike routes (on Damen, Loomis, and Halsted)

¹⁷ [Amtrak Route Ridership \(FY 22 v. FY21\)](#)

cross EW2A, and 26 Divvy bike share stations exist within a one mile of the corridor, which will greatly benefit from the planned pavement, drainage, and lighting improvements at the viaducts. As these improvements will facilitate equitable access to low or no-emission bus and rail transit options in the community, the Project advances Pillar 3 of the [Chicago CAP](#) (p. 77).

These improvements also include updating the viaduct lighting with new LED fixtures that reduce energy expense to the City, while providing brighter illumination. These LEDs are expected to have a lifespan of over ten years, as compared to about six years for HPSV fixtures, reducing operation and maintenance costs. This serves to implement Pillar 1 of the Chicago CAP (Increase Access to Utility Savings and Renewable Energy), through the “complete replacement of all streetlights with LED technology” (p.52). The drainage improvements implemented at many viaducts (including new sewer tie-ins and runoff control measures) will also improve infrastructure resiliency against flash flooding events. As cited in the [CAP](#), these events occur more frequently in environmental justice areas, where deferred upgrades lead to poor drainage and increased combined sewer overflow events (p.14). This is supported by the CEJST, which finds many of the Project’s census tracts rank in the 90th percentile for “Projected Flood Risk” ([Exhibit 3G: CEJST Outputs](#)). In turn, the Project advances the goals of the White House’s [National Climate Resilience Framework](#), by “increas[ing] resilience of the built environment to both acute climate shocks and chronic stressors” (Objective 2, p.11), and “ensur[ing] public funding requires climate-resilient infrastructure investments” (p.13). As the Project’s area’s viaducts also are bisected by numerous transit, emergency vehicle, and school bus routes, the Project supports Objective 6, by “ensur[ing] access to lifeline services remains stable through both acute and chronic climatic events” (p.28).

Additional Environmental Improvements & Benefits

In compliance with the environmental commitments of the [Project’s ROD](#), EW2A includes tree planting, tree replacement and landscaping work near the intersection of S Hamilton Ave and W 75th Pl, and the 76th St viaduct of the NS line. This scope element ensures that construction work does not negatively impact canopy coverage. According to the [Chicago Region Trees Initiative](#), most of the 75th St CIP’s census tracts possess a canopy coverage rate below the regional and national average (23% and 39.6%, respectively).¹⁸ In turn, the Project’s tree planting work not only supports community aesthetics, but also prevents increases in urban heat island effect, helps with capturing stormwater runoff, and promotes carbon sequestration and biodiversity. The Project also includes the installation of a noise barrier wall at S Union Ave, to mitigate noise and vibration impacts from rail operations. The railroads will also reduce noise and vibration through routine rail lubrication, rail grinding practices, and through continued deployment of Wheel Impact Load Detector (WILD) technology, to identify defective wheels and flat spots that contribute to wheel/rail interaction noise. Lastly, the Project will utilize recycled pavement for construction.

Supporting Sustainable Brownfield Redevelopment

EW2A enhances freight and passenger rail service along the corridor and lays the groundwork for capacity expansion projects like P2. This encourages redevelopment at rail-served sites along the Metra SWS line and on the various Class I freight lines that move through the corridor. This transit-oriented development (TOD) and cargo-oriented development (COD) supports a mode shift towards rail, reducing transportation emissions, but also strengthening the potential to remediate

¹⁸ [The disparity in tree cover and ecosystem service values among redlining classes in the United States](#)
David J. Nowak *, Alexis Ellis, Eric J. Greenfield

and revitalize brownfields along the corridor. One federally recognized brownfield exists within one half-mile of the Project area ([Exhibit 1K](#)), but a larger number of sites in the area likely possess some level of environmental contamination. Their presence harms economic growth, aesthetics, and health outcomes for local environmental justice communities. Implementing EW2A increases redevelopment potential of these sites by improving rail access.

Criterion 5: Equity, Multimodal Options, and Quality of Life

Aligning with the Justice40 Initiative, EW2A serves to advance equity, multimodal options, and quality of life within recognized Areas of Persistent Poverty (APP) and Historically Disadvantaged Communities (HDC). The Project achieves this by improving transit performance and mobility within transportation cost-burdened communities, providing supportive investments toward community redevelopment projects, improving access to park space, supporting freight access and employment, and through equity-focused workforce development and job creation.

Improved Transit Service and Mobility in Cost-Burdened Communities

EW2A improves the Metra SWS line, by reducing passenger train delay by 3,258 hours from 2033-2052 ([BCA](#), p.12), and by avoiding \$1.1 million in annual automobile operating costs that result from a suspension of the SWS line, due to a track closure ([BCA](#), p.15). Detailed in the Center for Neighborhood Technology (CNT) [Housing + Transportation Affordability Index](#), transportation costs for the Cook County municipalities along the Metra SWS line typically comprise 18-21% of monthly household income, higher than the Cook County average (16%). Monthly average transportation costs for the two Will County communities along the Metra SWS line (23-24% of the total) also exceed the County-wide average (22%) (see [Exhibit 3F: CNT H+T Reports](#)). While similar neighborhood-scale data does not exist for the Chicago communities in the corridor, 29% of the population lives below the poverty line and according to CEJST data, numerous census tracts in the area rank above the 80th percentile nationally for “Transportation Barriers,” defined as the “average relative cost and time spent on transportation” ([Exhibit 3G: CEJST Outputs](#)). Car expenses (ownership and mileage) are a large portion of those costs, ranging from \$647-\$1,154 per month for households on the SWS line, including EW2A’s Chicago communities ([Exhibit 3F](#)). These monthly costs are far higher than [monthly fares](#) for Metra (\$100) and CTA service (\$75), and the [Divvy bike share annual pass](#) (\$130 annually, \$11 monthly). EW2A’s improvements also leverage transit policy initiatives on Chicago’s South Side, including [Fare Transit South Cook](#) (a three-year pilot, offering up to 50% reduced fares on Metra’s Electric and RID lines) and CTA’s “[Bus Priority Zones](#)” on 79th St and Halsted St (which improve boarding space, bus speed and mobility at documented bottlenecks along major routes). As EW2A protects and strengthens the corridor’s transit service and bike routes, and leverages existing transit equity efforts, it thereby preserves transportation affordability, by sustaining and supporting lower cost modes.

Improving Community Connectivity in the Corridor

In addition to supporting local transit routes, EW2A’s mobility improvements increase connectivity between neighborhoods, particularly for pedestrians, disabled persons, and bicyclists. These improvements will also strengthen access for emergency vehicles, school buses, and other critical roadway users, and improve access to key institutions, facilities, and amenities (detailed in [Table 1](#) and [Exhibit 3H](#)), serving a population of 40,110 residents and 14,529 households within the EW2A’s census tracts ([Exhibit 3E. Census Tract Tables](#)). This includes implementing pedway and lighting improvements at Hamilton Park in the Englewood neighborhood (located at 73rd Street, west of the NS line), which will enable residents to safely access a popular local park that

features a baseball field, outdoor pool, and tennis courts. As discussed in Criterion 3, the Project also improves connectivity with regional job centers and intermodal facilities like NS Landers.

Table 1. Community Resources within the EW2A Project Corridor (2-mile buffer)

Institution	Total	Source(s)
Place of Worship	381	HIFLD
Schools (K-12, Public & Private)	127	HIFLD (Public), CDP (Private)
Post Office	7	ESRI
Emergency Responders (Police, Fire)	14	HIFLD
Libraries	9	CDP
Medical Facilities (<i>Hospitals</i>)	10 (2)	HIFLD
Housing Shelters	23	HIFLD
Community Centers	1	CDP
Grocery Stores	20	CDP

Source: Homeland Infrastructure Foundation-Level Data (HIFLD); Chicago Data Portal (CDP); ESRI US Federal Data (ESRI)

Improving Quality of Life in Urbanized Areas

EW2A supports quality of life improvements that are underway within the Project area’s six communities. The Project achieves this not only through mobility improvements, but also aesthetic improvements, such as the art deco façade restoration at the S Damen Avenue viaduct and the planned tree planting and replacement work. Detailed below and in [Exhibit 1E. Quality of Life Improvements](#), there are numerous planned and recent investments that EW2A leverages:

- **[79th St Corridor](#)**: In Auburn Gresham, the City is planning streetscaping and bicycle/pedestrian upgrades on 79th St, near the southeast corner of EW2A.
- **[Always Growing, Auburn Gresham](#)**: Led by Greater Auburn Gresham Development Corporation, Urban Growers Collective, Green Era Partners, this fully funded initiative includes (1) The “Healthy Lifestyle Hub,” a renovated 100-year old vacant building featuring a University of Illinois health center, bank, pharmacy, community space, restaurant and coffee shop, creating over 200 construction and 300 permanent jobs; and (2) An Urban Farm Campus, with greenhouse space growing up to 26,000 pounds of food annually.
- **[Evergreen Imagine](#)**: Two mixed-use projects on vacant City-owned lots in Auburn Gresham that include: (1) 28 affordable units and AYO West African Foods; and (2) 30 affordable, the KLEO Community Center, and The Park Supper Club.
- **[Englewood Connect](#)**: Englewood Connect is a \$10.3 million “eco-food hub,” involving adaptive reuse of the Green Street fire station as a commercial kitchen, business incubator, and community space. Later phases include flexible market space and an event center. This initiative will create around 80 construction jobs and 45 permanent jobs.

As these projects will deliver amenities and jobs to nearby APP’s/HDC’s, EW2A’s improvements serve as key for strengthening access and connectivity between residents and resources in the area.

Advancing Local Vendor Participation & Workforce Development

EW2A’s approach to ensuring participation from local and historically under-represented vendors and contractors and utilizing CREATE program funds to advance technical education and skills development is summarized in Criterion 4. This is also supported by recurring [Get on Board](#) (GOB) events, which acquaint minority contractors with upcoming project work.

Approach to Public Engagement

CREATE seeks input by engaging the environmental justice communities most directly served and impacted by the 75th St CIP. The 75th St CIP [Stakeholder Involvement Plan \(SIP\)](#) was completed in August 2020 to guide the collection and organization of input from all stakeholders. This ensures meaningful engagement with communities affected by the Project. The SIP is regularly updated and is informed by USDOT’s “[Promising Practices for Meaningful Public Involvement in Transportation Decision-Making Guide](#),” to ensure the Project’s engagement and partnerships center on equity and inclusivity. The 75th St. CIP also includes a dedicated Community Advisory Group (CAG), which supports decision making from public representatives. The CAG will be actively involved in EW2A, participating in charettes, and receiving key project updates. The CREATE Program also has strong relationships with local aldermen that represent Project area communities and will leverage that relationship to keep their constituents informed.

Criterion 6: Innovation

The Project will incorporate innovative and effective technology solutions, approaches to project delivery, and funding and financing strategies. These are detailed below:

Innovative Technology

The technologies applied in the Project, including modern bridge design, centralized traffic control and friction management, and updated PTC-capable traffic signals, are established solutions, but represent significant technological upgrades on the corridor. The Project also advances and supports the protection of the corridor’s assets and operations through its cybersecurity and innovative framework, overseen by AAR and the participating freight railroads, who comprise the CREATE Rail Information Security Committee (RISC). RISC procedures will be followed in the procurement of information technology for the Project and subsequent operations.

Innovative Project Delivery

EW2A represents CREATE’s project segmentation method, which separates larger projects into successive distinct phases that strategically maximize public and private partner priorities at each stage. To that end, EW2A will meaningfully deliver public-oriented improvements to safety and mobility as well as critical upgrades to the track and signal infrastructure, benefitting all operators. These improvements are designed to be minimally disruptive to train operations and lay the groundwork for additional major future improvements (like Project P2). The procurement process for the contracted portion of the Project will request that bidders propose methods for maximizing the efficiency of the construction work, to minimize interruptions to rail traffic and motorized and non-motorized traffic through the viaducts. This may include detailing use of advanced bridge construction methodologies and traffic management plans, and value engineering recommendations made by the contractor to reduce costs.

Innovative Financing

For nearly two decades, CREATE has stood as national example of an effective public-private partnership. As detailed in the Budget section, EW2A continues this approach as its funding plan offers significant private match (\$78 million) and total non-federal match (over \$184 million).