



Project Name	Chicago Region Environmental and Transportation Efficiency (CREATE) Program Coordinated Grade Separations: <ul style="list-style-type: none"> • GS9 Belt Railway Company of Chicago and Archer Avenue • GS11 Belt Railway Company of Chicago and Columbus Avenue • GS21a Union Pacific Railroad and 95th Street
Previously Incurred Project Cost	\$7.5M
Future Eligible Project Cost	\$183.5M
Total Project Cost	\$191.0M
NSFHP Request	\$110.1M
Total Federal Funding including NSFHP	\$152.8M
Are matching funds restricted to a specific project component?	No
Is the project or a portion of the project currently located on the National Highway Freight Network?	No
Is the project located on the National Highway System?	No
Does the project add capacity to the NHS?	No
Is the project in a national scenic area?	No
Do the project components include a railway-highway grade crossing or grade separation project?	Yes
Do the project components include an intermodal or freight project within the boundaries of a public or private freight rail, water, or intermodal facility?	No
If answered yes to either of the above two component questions, how much of requested NSFHP funds will be spent on each of these project components?	100%
State in which project is located	IL
Small/large	Large
Also submitting an application to TIGER for this project?	No
Urbanized Area in which project is located	Chicago IL-IN
Population of Urbanized Area	8.6 Million
Is the project currently programmed in the:	
• TIP	Yes
• STIP	Yes
• MPO LRTP	Yes
• State LRTP	Yes
• State Freight Plan	Yes

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1. Executive Summary

Thank you for the opportunity to submit this application on behalf of the Chicago Region Environmental and Transportation Efficiency (CREATE) Program Partners for the Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) funding opportunity. This grant application will support a coordinated set of CREATE Projects in the City of Chicago: GS9 – a proposed grade separation of the Belt Railway of Chicago (BRC) and Archer Avenue; GS11 – a proposed grade crossing separation of the BRC and Columbus Avenue; and GS21a – a proposed grade separation of the Union Pacific Railroad (UPRR) and 95th Street.

Chicago is the third largest metropolitan area in the U.S. and the rail transportation hub of the nation – the Chicago region has the most extensive freight rail infrastructure of any metropolitan area in the United States, as shown by these statistics¹:

- 25 percent of all U.S. rail traffic touches Chicago
- 44 percent of all intermodal units in the U.S. touch Chicago
- 68 percent of intermodal units to/from the ports of Seattle/Tacoma touch Chicago
- 45 percent of intermodal units to/from Los Angeles/Long Beach touch Chicago
- Chicago's intermodal rail yards process 15 million TEU's worth of containers every year --a level of activity that would rank our region among the world's ten busiest containerized freight seaports²

The areas surrounding the grade crossing locations proposed for separation are densely populated and also economically distressed. Separation of the grade crossings would improve neighborhood and community access and connectivity while also eliminating the possibility of a collision between a train and a pedestrian, bicyclist, automobile, truck or transit vehicle.

This grant application requests \$110.1 million, or 60 percent of the cost, for final design (Phase II) and construction (Phase III) for three coordinated grade separation projects, all of which are part of the CREATE Program and benefit the highly trafficked freight routes leading into and out of Clearing Yard, the largest freight classification yard in Chicago. These three projects also bookend major freight rail corridors leading to and from the most congested stretch of freight rail tracks in the Chicago region – which will also be improved as part of the CREATE Program's planned 75th Street Corridor Improvement Project ([75th St. CIP](#)). Upon the future completion of the planned 75th St. CIP improvements, these corridors will have capacity to carry significantly more freight rail traffic, which would exacerbate the traffic, safety, and neighborhood access issues associated with the three grade crossings that are the subject of this application. Separating these three crossings in a coordinated manner will not only complement the 75th St CIP objectives but also facilitate its future construction. The Chicago Department of Transportation has already committed \$6.25 million to preliminary engineering (Phase I) for GS9, GS11 and GS21a. In addition, for GS21a, FRA recently awarded \$1.25M for Phase I engineering as part of the Railroad Safety Grants for the Safe Transportation of Energy Products by Rail Program. Matching funds for this FASTLANE application will come from a combination of local, state, and federal funding sources controlled or administered by the Illinois Department of Transportation (IDOT) and Chicago Department of Transportation (CDOT), as well as freight railroad funding in accordance with Federal statute.³ Total federal funding from all sources will not exceed 80% of project costs.

Section 2 of this application provides details regarding the primary applicant and co-applicants; Section 3 describes the CREATE program and the projects for which funding is being requested; Section 4 describes the location of the coordinated set of projects for which funding is being requested; Section 5 describes the project parties; Section 6 describes grant funds, sources and uses; Section 7 discusses the cost effectiveness of the projects, detailing the expected benefits of the CREATE Projects for which funding is being requested and alignment with the merit criteria; and Section 8 describes project readiness and environmental status.

¹ AAR analysis of Railinc data and 2014 STB carload waybill data

² Chicago Metropolitan Agency for Planning

³ 23 CFR §646.210 Classification of Projects and railroad share of the cost

The package of three coordinated grade crossing projects strongly contributes to each of the Merit Criteria outlined in the Final Notice dated March 14, 2016, including the following performance measures:

- **Merit Criteria:**⁴

- **Benefit Cost Ratio:** At an estimated cost of \$191 million, the benefit-cost ratio for the construction of the package of three coordinated projects is **1.06:1**. Individually, GS9 is 1.21:1; GS11 is 0.64:1; and GS21a is 1.31:1, all at a three percent discount rate. See Table 7.1 for a summary of benefits, costs and the benefit-cost ratios.
- **Economic Outcomes:** The economic outcomes from each of the projects include reduction in delay to passenger vehicles, public transit vehicles, and trucks on the primary crossing route and on the nearby roadway network, and reduction in vehicle operating costs. The total economic outcome benefit for the three projects combined is more than \$172 million.
- **Mobility Outcomes:** The grade separation projects improve the movement of people and goods by increasing the state of good repair for the road and railway infrastructure at the grade separation. The construction of the three grade separations will decrease the future maintenance requirements on the affected roadways, estimated at a \$9 million in savings. Benefits for reducing bottlenecks are included in Economic Outcomes.
- **Safety Outcomes:** Grade separation projects lead to a reduction in traffic fatalities and serious injuries by eliminating the potential for a collision between a roadway vehicle and a train. The safety benefits are estimated at \$6 million for the three projects over 30 years. Furthermore, each of the three crossings is designated as a "911 Critical Crossing" by the City of Chicago, and eliminating these crossings will significantly enhance the reliability of emergency vehicle response in the affected neighborhoods.
- **Community and Environmental Outcomes:**
 - **Community Benefits** - The projects will benefit the adjacent neighborhoods and communities by improving reliability of general traffic, public transit, and truck operations along several key urban corridors in Chicago. Every weekday: 21,100 motor vehicles (including 700 transit buses and 1,370 trucks) use 95th Street at the UPRR crossing (GS21a); 11,500 motor vehicles (including an estimated 2,000 trucks) use Columbus Ave at the BRC crossing (GS11); and 19,800 motor vehicles (including 200 transit buses and an estimated 3,500 trucks) use Archer Avenue at the BRC crossing (GS9). These improvements will also enhance the attractiveness of the three areas for economic development by removal of the barrier to access and connectivity that these at-grade rail lines currently represent. Removing barriers to mobility also removes disincentive to area investment, enhancing economic development opportunity in neighborhoods that are currently economically distressed.
 - **Environmental Benefits** - The environmental benefits of the grade separations include a reduction in emissions due to decreased passenger car, bus, and truck delay at the project site. The monetary benefits of Carbon Monoxide (CO), Hydrocarbon (HC), and Nitrous Oxide (NOx) lead to a savings of more than \$503,000 over 30 years.
- **Other Criteria**
 - **Partnerships** – CREATE is comprised of a **strong coalition of private and public railroads and state and local government agencies** that has planned and built more than two dozen projects since 2003, including five grade crossing separations.
 - **Innovation** – This package of projects **continues the innovative tradition of the CREATE Program**, which has developed processes and procedures unique to this type of multi-modal investment in the areas of engineering, design and project procurement.

⁴ Primary outcome values are discounted at 3 percent, unless otherwise indicated

- **Cost Share** – The funding match from the Illinois DOT, Chicago DOT and railroads is committed, stable and dependable. The project cannot be easily and efficiently completed without additional Federal funding or financial assistance as requested in this application.
- **Region/Location** – Chicago is the rail transportation hub of the nation and also the third largest metropolitan area in the U.S. It is critical to not only ensure goods can traverse the area safely, efficiently and reliably but also to mitigate the impact of freight rail on the communities it serves and through which it passes. Because of Chicago's unique nature as the largest freight rail hub in North America, investment in Chicago freight rail infrastructure provides strategic benefits for the entire national rail network.
- **Project Delivery Performance** -- The CREATE Program Partners have a **track record of successfully delivering previous USDOT grants** for other projects on time, on budget and for full intended scope. The CREATE Program has demonstrated its ability to manage grant funding through its obligation of all Projects of National and Regional Significance (PNRS) funds and construction of Transportation Investment Generating Economic Recovery (TIGER) - funded projects (CREATE's TIGER I funds were released by USDOT on July 22, 2010 and construction initiated the week of August 2, 2010. For TIGER IV, CREATE funds were obligated October 2, 2012 and construction was initiated June 12, 2013. FRA American Recovery and Reinvestment Act funding of the Englewood flyover (P1) funds were obligated October 1, 2010 and the two main tracks supporting current operations were dedicated October 23, 2014.) This project directly complements previous Federal awards in that it will mitigate the community impacts of increased rail traffic volumes that are enabled by CREATE's overall rail capacity improvements.
- **Project Readiness and NEPA Status**
 - **Environmental Approvals** – Based on similar CREATE grade crossing projects conducted recently in the City of Chicago (i.e., [GS15a](#)), and the fact that no water bodies are located nearby, CDOT anticipates receiving categorical exclusions under NEPA for all three projects in this application. However this will not be determined conclusively until Phase I work, currently underway, is completed for each of the three projects.
 - **State and Local Planning** – CREATE is a central element of the strategic regional freight system in the Metropolitan Transportation Plan (MTP) which can be found at [Go To 2040 Plan](#). The CREATE Program is included as an important element of the [Illinois Rail Plan](#), in which the three grade crossing projects are specifically listed (Ch. 12 Appendix B, p. B 8-9).
 - **Project Schedule** – The schedules are estimated as follows:
 - GS9 - Phase I and Phase II engineering and final design is to be completed by September 2019; construction is to start by May 2020 and completed by December 2021;
 - GS11 - Phase I and Phase II engineering and final design is to be completed by July 2019; construction is to start by March 2020 and be completed by August 2021;
 - GS21a - Phase I and Phase II engineering is to be completed by July 2020 construction is to start by January 2021 and be completed December 2022.
 A detailed statement of work is provided at [Scope of Work](#).
 - **Financial Feasibility** – With funding from this FASTLANE grant and matching funds provided by the State of Illinois, CDOT and the affected railroads, there will be sufficient funding to complete Phase II engineering and final design and Phase III construction of this coordinated package of projects. Each project has 30 percent contingency reserves built into cost estimates.
 - **Technical Feasibility** – As part of the CREATE Program the Illinois DOT and Chicago DOT have since 2003 completed design and construction of five grade crossing separations throughout Chicago and its suburbs; two more CREATE grade separation projects are currently under construction and seven (including the three specified in this funding application) are currently in Phase I engineering and final design. Based on this experience, Illinois and Chicago DOT are confident that the construction of these three related grade crossing separations is technically feasible.
 - **Passenger Rail Impact**
 - Amtrak operates two trains per day on its Cardinal and Hoosier services through the location of the GS21a project. These trains carried approximately 75,000 passengers in fiscal year 2015. Separation of the

railroad tracks from the roadway crossing will eliminate the risk of potential vehicle crashes with a passenger train at this location.

2. Applicant

The primary applicant for this grant is the Illinois Department of Transportation, a CREATE Partner. These projects are eligible per section 3.i. of the Notice of Funding Opportunity (NOFO) as they are rail-highway grade separation projects.

The contact for this application is:

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This application is submitted with full support of the CREATE Partners by [Illinois DOT](#) and the following co-applicants:

- [Chicago Department of Transportation](#); (CREATE Partner and co-applicant);
- [Cook County](#) (co-applicant); and
- [Chicago Metropolitan Agency for Planning](#) (co-applicant).

3. Project Description

Background

The Chicago Region Environmental and Transportation Efficiency (CREATE) Program is a public-private partnership, including the U.S. DOT, Illinois Department of Transportation (IDOT), Chicago Department of Transportation (CDOT), Metra, Amtrak, and the Association of American Railroads (AAR) representing: BNSF Railway (BNSF), Canadian National (CN), Canadian Pacific (CP), CSX, Norfolk Southern (NS), Union Pacific (UP), and switching railroads Belt Railway Company of Chicago (BRC) and Indiana Harbor Belt Railroad (IHB). CREATE encompasses improvements along four rail corridors: 1) East-West Corridor (NS/BRC); 2) Western Avenue Corridor (BNSF/UP/CSX/NS); 3) Beltway Corridor (CSX/IHB); and 4) Passenger Express Corridors (Metra Southwest Service/Heritage Corridor Service). The CREATE Program is aimed at addressing existing and future congestion issues on the rail system, which bring adverse effects to the national economy and the transportation system, as well as to mitigate traffic congestion resulting from rail traffic by constructing key highway-rail grade crossing separations. CREATE's mission is to complete all the necessary improvements included in the 70 projects that comprise the CREATE Program to achieve national and regional benefits. A description of the evolution of the CREATE Program is available at [Program Evolution](#) and CREATE operational goals can be found at [Program Goals](#). CREATE goals are to:

- Improve safety and operations at proposed grade-separation locations;
- Eliminate or reduce many points of direct conflict between rail corridors and the roadway network;
- Eliminate points of conflict between rail corridors, especially points of passenger/freight train conflict;
- Reduce fuel consumption by and emissions from locomotives and waiting autos and trucks;
- Reduce traffic congestion on the region's highways;

- Modernize and increase the capacity of rail facilities to more efficiently handle today's rail traffic and meet future demands;
- Connect rail corridors more effectively to foster the efficient flow of goods and people within and through the region, as well as to and from other parts of the U.S., including international traffic through major American seaports;
- Reroute freight operations from the St. Charles Air Line rail route; and
- Improve the efficiency and reliability of the region's rail corridors to better serve national security.

The 70 Projects in the CREATE Program include:

- Grade separation of 25 highway-rail crossings;
- Grade separation of six railroad crossings (rail-rail flyovers);
- Extensive upgrades of tracks, switches, and signal systems via 36 rail projects;
- A Viaduct Improvement Program to improve city streets under existing railroad structures;
- Grade crossing safety enhancements; and
- Rail operations visibility improvements (Common Operational Picture) to better manage railroad operations.

The CREATE Program Final Feasibility Plan is available at [Final Feasibility Study](#).

Illinois is second only to Texas in having the highest number of public highway-rail at-grade crossings in the nation, but Illinois has a much smaller roadway network than Texas over which the crossings are distributed, with just 140,000 miles of public roadway compared to 300,000 miles in Texas.⁵ Therefore, there is a significant burden on Illinois in funding safety improvements at the large number of crossings. In Cook County, the county in which this project is located, there are 888 at-grade public highway-rail crossings.⁶

Description of Projects

Three coordinated grade separation projects, all of which are located on key freight routes through the heart of the Chicago region, have been identified as top priority crossings in the CREATE Program. These three projects are all located within the City of Chicago and are known as: GS9 – a proposed grade separation of the BRC and Archer Avenue; GS11 – a proposed grade crossing separation of the BRC and Columbus Avenue; and GS21a – a proposed grade separation of the UPRR and 95th Street. Each of these grade separation projects will improve the state of good repair of the crossing; eliminate long wait times for vehicles at the crossing; improve the efficiency of traffic operations in key industrial corridors of the city and along routes designated for trucks; stimulate economic development in the area; provide improved emergency response times; and eliminate the potential for crashes between trains and vehicles.

This grant application requests \$110.1 million, or 60 percent of the cost, for final design (Phase II) and construction (Phase III) for these three coordinated grade separation projects, all of which are part of the CREATE Program and benefit the highly trafficked freight routes leading into and out of Clearing Yard, the largest freight classification yard in Chicago. These three projects also bookend major freight rail corridors leading to and from the most congested stretch of freight rail tracks in the Chicago region – which will also be improved as part of the CREATE Program's planned 75th Street Corridor Improvement Project ([75th St. CIP](#)). Upon the future completion of the planned 75th St. CIP improvements, these corridors will have capacity to carry significantly more freight rail traffic, which would exacerbate the traffic, safety, and neighborhood access issues associated with the three grade crossings that are the subject of this application. Separating these three crossings in a coordinated manner will not only complement the 75th St CIP objectives but also facilitate its future

⁵ Illinois Rail Plan, available at: <http://www.idot.illinois.gov/Assets/uploads/files/Transportation-System/Reports/OP&P/Plans/Illinois%20State%20Rail%20Plan%202012.pdf#page=233>.

⁶ <http://www.icc.illinois.gov/railroad/crossingmap.aspx>.

construction. The Chicago Department of Transportation has already committed \$6.25 million to preliminary engineering (Phase I) for GS9, GS11 and GS21a. In addition, for GS21a, FRA recently awarded \$1.25M for Phase I engineering as part of the Railroad Safety Grants for the Safe Transportation of Energy Products by Rail Program. Matching funds for this FASTLANE application will come from a combination of local, state, and federal funding sources controlled or administered by IDOT and CDOT, as well as freight railroad funding in accordance with Federal statute.⁷ Total federal funding from all sources will not exceed 80% of project costs.

Detailed information on the projects can be found at the links below:

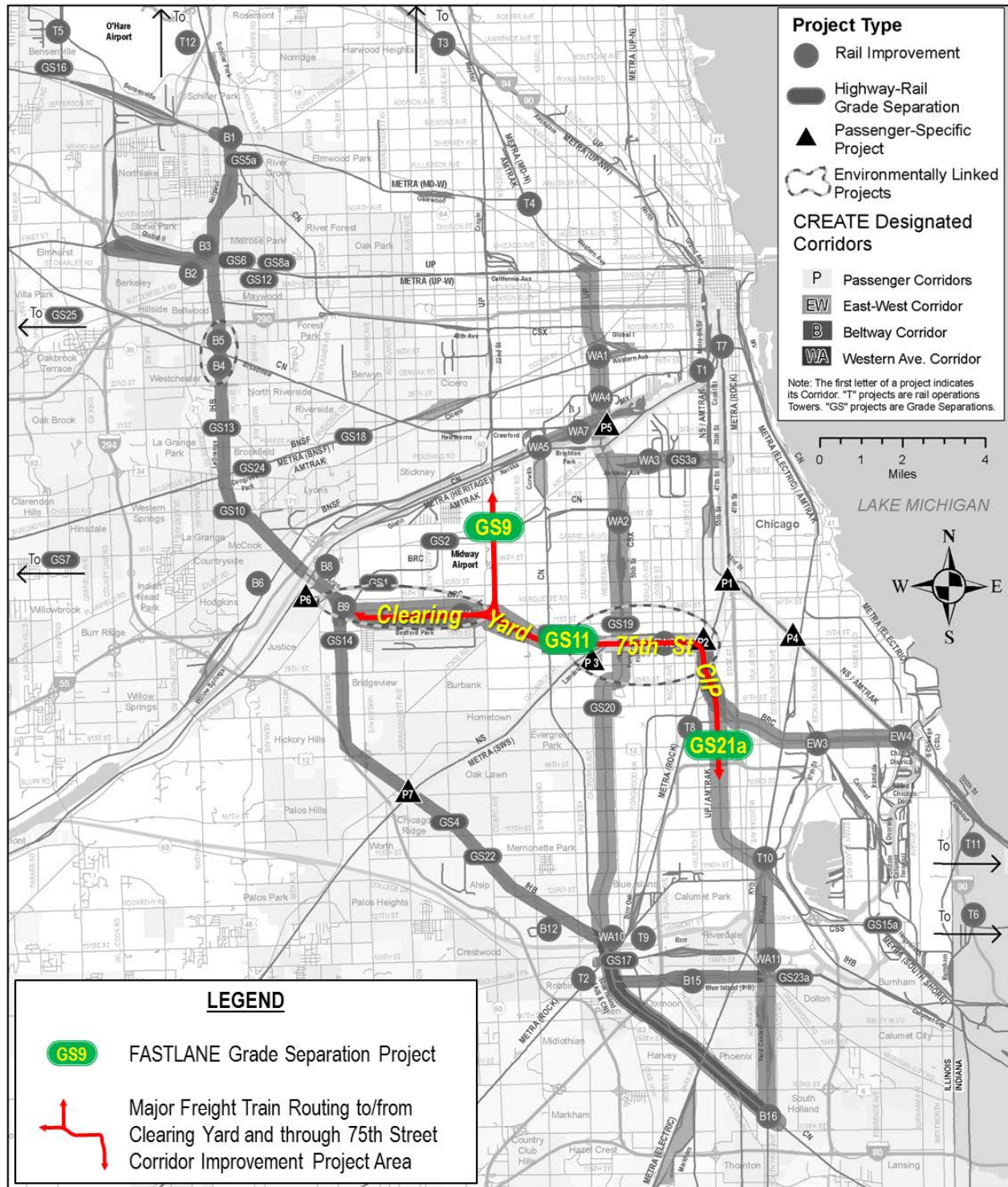
- [Scope of Work](#);
- [Schedule](#);
- [Budget](#); and
- [Project Information](#).

4. Project Location

Chicago is the **rail transportation hub of the nation and also the third largest metropolitan area** in the U.S. It is critical to not only ensure that goods and products can traverse the region safely, efficiently and reliably but also to mitigate any negative impacts of freight rail on the communities through which it passes. The proposed projects are all located in the City of Chicago, within the Chicago IL-IN Urbanized Area. Figure 4.1 shows the location of the proposed coordinated group of three grade separation projects at a regional level and in the context of the entire program of CREATE projects. Figures 4.2 to 4.4 show the local context of each specific project location. Each grade crossing is in an economically distressed area, where residents earn less than 80 percent of the national average for household income.

⁷ 23 CFR §646.210 Classification of Projects and railroad share of the cost

Figure 4.1 CREATE Coordinated Grade Separation Projects for FASTLANE Funding



GS9

As shown in Figure 4.2, GS9 is located on Chicago's Southwest side in the Stevenson Industrial Corridor, which is one of the city's largest industrial areas, home to almost 200 businesses and over 7,000 jobs. The GS9 crossing is on Archer Avenue, one of few major diagonal arterial streets in Chicago, an important bus transit corridor, and a gateway to Midway

International Airport which is located less than one mile southwest of this site. Cicero Avenue, just west of the crossing location, is also a major cross-town arterial street and bus transit corridor. Both of these streets have been identified by the City of Chicago as important truck routes. Archer Avenue is the closest arterial for numerous freight-generating businesses, including Trendler Components, Rex Carton Company, and the Midway Distribution Center, as well as potential sites for new and expanded freight-oriented businesses. An Intermodal Trucking business is also currently located adjacent to the crossing. This location is the only at-grade railroad crossing on Archer Avenue in the City of Chicago.

Figure 4.2 GS9 Grade Crossing Location



GS11

As Shown in Figure 4.3, GS11 is located on Columbus Avenue, also known as "Southwest Highway" at the point where it diverges from Western Avenue, the longest North-South arterial street in Chicago and a major cross-town bus transit corridor. Both of these routes have been identified by the City of Chicago as important truck routes. Columbus Avenue bisects the Greater Southwest Industrial Corridor, an area in the Ashburn neighborhood of Chicago with over 80 businesses and 3,000 jobs. Landers Yard, a Norfolk Southern intermodal terminal that provides approximately 300,000 container lifts per year, is located just south of Columbus Avenue; its truck entrance is on Western Avenue south of the intersection with Columbus. The current travel pattern for trucks to access Landers Yard from points west involves approaching via 79th Street and making a left turn at Western, and then another left turn from Western into the intermodal yard. This truck movement pattern often backs up traffic on Western Ave., impeding access for more than 600 students to nearby St. Rita High School. Columbus Avenue could serve as an uncongested alternative to 79th Street and Western Avenue, but the BRC grade crossing and inadequate roadway geometry at the Columbus/Western intersection currently preclude using this route for truck access to Landers Yard. In addition, traffic delays on Columbus due to the grade crossing may back up on to Western Avenue, further congesting traffic on that vital urban arterial. The GS11 project will help alleviate this congestion, as well as provide an alternate route for accessing or avoiding the entrance to Landers Yard. Norfolk Southern has pursued projects to expand Landers Yard, which along with nearby trucking and rail related businesses provide hundreds of jobs in Ashburn, an economically distressed part of the City of Chicago. Several freight generating businesses are also located directly near the crossing site, including International Transload Logistics, and Assemblers Manufacturing. There are also numerous vacant parcels nearby that may be suitable for industrial

development. The GS11 grade separation will provide needed connectivity and congestion relief to this region. GS11 is also within the [Greater Southwest Industrial \(East\)](#) tax increment financing district (TIF), which is intended to encourage land uses that strengthen the function and appeal of the area for industrial, commercial, institutional and residential uses.

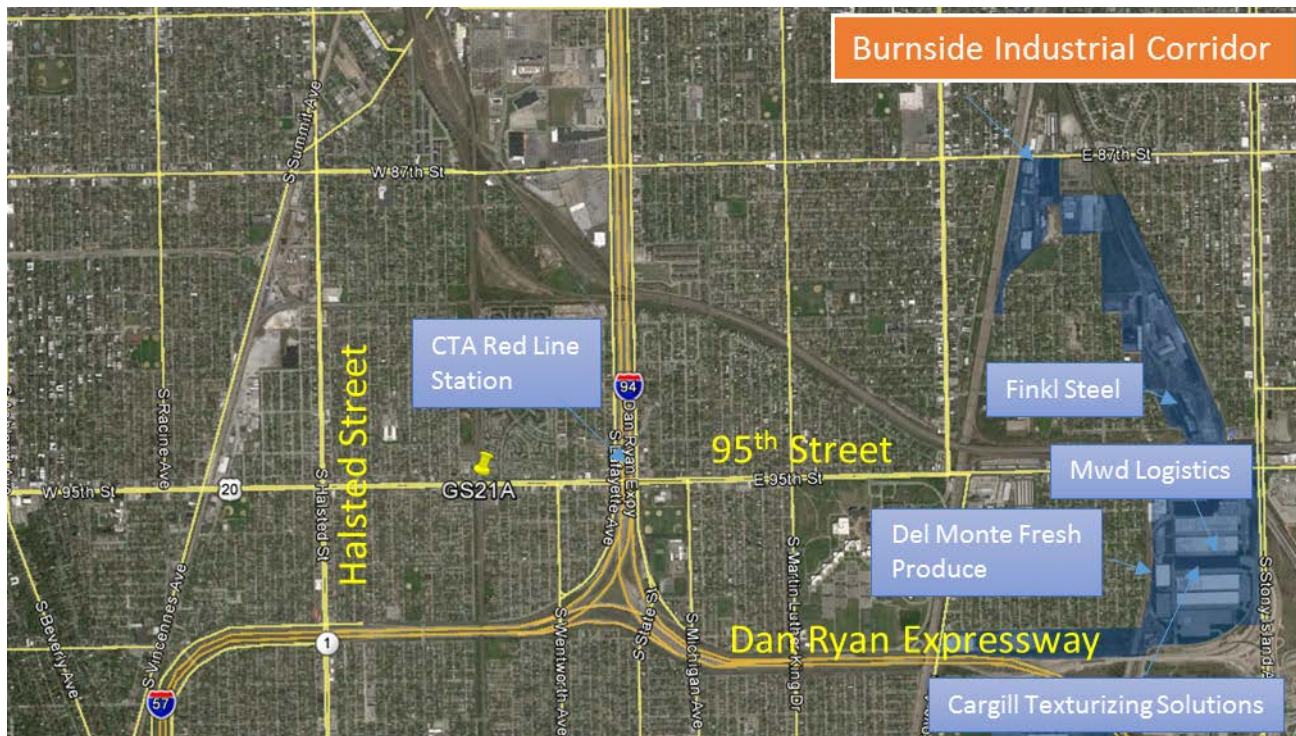
Figure 4.3 GS11 Grade Crossing Location



GS21a

As shown in Figure 4.4, the location of the proposed GS21a grade crossing separation is in a very densely populated area adjacent to many major transportation facilities. Specifically, the crossing location is one-half mile from the southern terminus of the Chicago Transit Authority (CTA) Red Line, which operates in the center of the Dan Ryan Expressway, a major multimodal transfer point to CTA and Pace buses. 95th Street has also been identified by the City of Chicago as an important truck route and is the only nearby arterial with east-west connectivity that does not have limitations to truck travel such as low clearances. The GS21a Crossing is also located about two miles from the Burnside Industrial Corridor, which has over 30 businesses and 1,200 jobs and is home to businesses such as Finkl Steel, a major worldwide producer of steel products which processes over 100,000 tons of steel each year in the Chicago area, as well as Del Monte Fresh Produce and MWD Logistics. At this location 95th Street is also a vital bus transit link for the surrounding communities. CTA and Pace buses along this corridor provide access to CTA's Red Line 95th Street station (currently being upgraded with a TIFIA loan), Lowden Homes, Chicago State University, Metra Rock Island District stations at 95th/Longwood and at 95th/Beverly Hills, and a Metra Electric station at 95th/CSU.

Figure 4.4 GS21a Grade Crossing Location



5. Project Parties

As noted in Section 2, the CREATE Program is a public-private partnership of IDOT, CDOT and public and private railroads serving the Chicago region. All of these partners will be involved in this coordinated package of three grade crossing separation projects.

Each CREATE project is managed by an individual project sponsor, which leads procurement, and manages engineering and construction activities. Chicago DOT is the sponsor of CREATE Projects GS9, GS11 and GS21a and will work closely with Illinois DOT. At the locations of the proposed grade separations, 95th Street, Archer Avenue, and Columbus Avenue are all routes under Illinois DOT jurisdiction. In addition, 95th Street is also an Illinois State Class II designated truck route⁸. All three routes have also been identified by Chicago DOT in a recent planning study as important local truck routes. Because the three roadways involved are all truck routes, CDOT will coordinate with Illinois DOT as needed on aspects of the design relating to truck movements. The City and State have collaborated on an ongoing basis with the freight railroads as part of CREATE for more than a dozen years. Through CREATE, participating public agencies and the railroad partners have established effective mechanisms for successful collaboration among the parties on the many projects that have been delivered thus far. These time-tested mechanisms will be utilized throughout the design and construction of this project.

A number of specific management practices and policies have been instituted governing the roles and responsibilities of IDOT, CDOT, FHWA, and the railroad partners. These policies ensure the Program makes steady progress forward and that proper quality controls are in place. For example, major Federal funding for CREATE so far has come from the Projects of National and Regional Significance Program and TIGER grants, managed by the Federal Highway Administration, as well as FRA's Railroad Safety Grants for the Safe Transportation of Energy Products by Rail Program and American Recovery and Reinvestment Act (ARRA) High Speed Rail funding. When the CREATE Program was initiated

⁸ Illinois Truck Route map - <http://www.gettingaroundillinois.com/gai.htm?mt=dtr>.

in 2003, with the extensive number of projects involving rail infrastructure, policies to govern the types of projects contemplated by CREATE were not in place given the historic highway focus of FHWA. Therefore, in the early years of the program, a number of policies were developed specific to the CREATE Program. Now that this work has been done, the Program is organized to advance projects quickly and efficiently. A significant policy developed for CREATE is the Systematic, Project Expediting, Environmental Decision-Making (SPEED) Strategy. The SPEED Strategy:

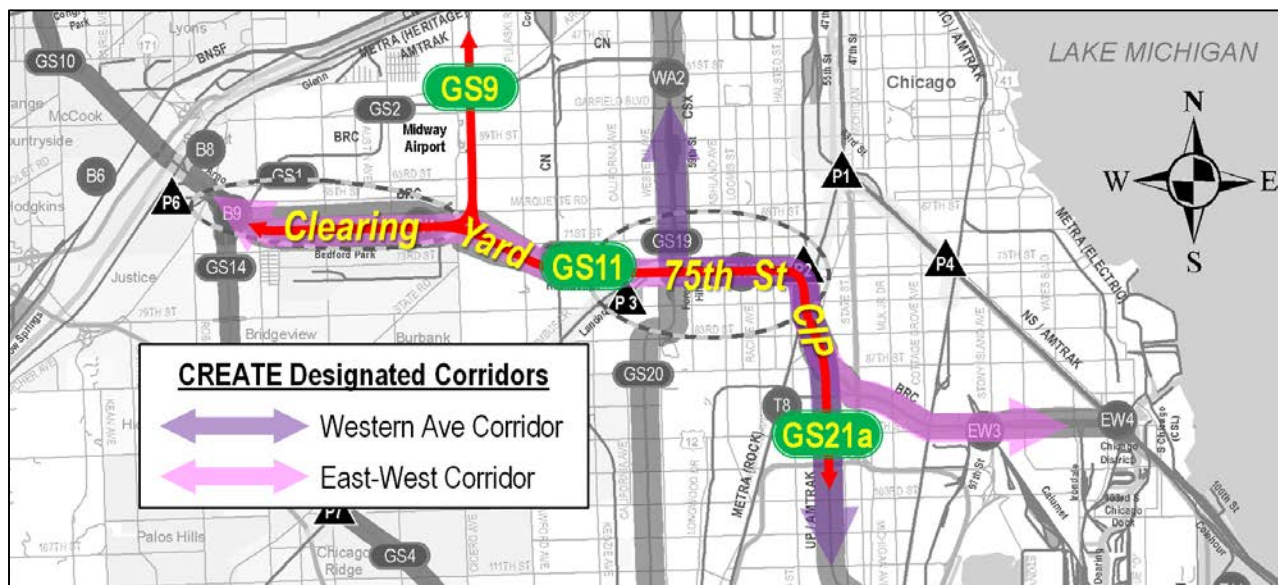
- Addresses the CREATE Program in total;
- Supports systematic decision-making through an expeditious method of moving low-risk component projects forward; and
- Assesses potential environmental impacts in a proportional, graduated way.

A detailed description of the SPEED strategy is available at [SPEED Strategy](#). A detailed process has been developed to guide all partners in adhering to policies and procedures for design and construction of CREATE projects. The purpose of preparing Phase I reports for the CREATE projects is to fully document the coordinated efforts of the Illinois Department of Transportation and other involved parties in developing the environmental documents and preliminary (30 percent) design. The Phase I Manual also helps ensure financial feasibility of projects by defining contingency reserves for projects depending on their stage of development. This document is accessible at [Phase I Manual](#). The Phase II Manual provides guidance on topics, including contracting for professional services and DBE utilization plan development. The Phase II and Phase III manuals are available at [Phase II Manual](#) and [Phase III Manual](#). A flow chart detailing CREATE processes for Phase I is available at [Phase I Flowchart](#) and for Phase II and Phase III is available at [Phase II/III Flowchart](#).

Projects' Relationship to CREATE Program

A FASTLANE award will allow CREATE to advance three coordinated grade separation projects included in the full Program. As shown in Figure 5.1, GS21a and GS11 in particular are located on the CREATE Program's Western Avenue and East-West Corridors that are undergoing a number of improvements to increase capacity and improve performance. Project GS9 is located on a major rail traffic corridor that feeds directly into CREATE's East-West Corridor and Clearing Yard. All three projects serve rail traffic that traverses the most congested bottleneck in Chicago's freight rail network – the 75th Street Corridor.

Figure 5.1 Locations of GS11 and GS21a in Relation to CREATE Corridors



Western Avenue Corridor

- GS21a is located on CREATE's Western Avenue Corridor (shown in purple in Figure 5.1).
- The Western Avenue Corridor is undergoing numerous rail infrastructure improvements to increase capacity and speed the movement of freight trains and Amtrak intercity trains. To date on the northern segment of the Western Avenue corridor three WA projects are under construction (WA2, WA3, and WA4), and one is in Phase II final design (WA1). South of GS21a, one project, WA11, is in Phase I preliminary engineering. These improvements to rail traffic flow will enable increased volumes of trains to operate along the corridor in the future, which would result in more frequent delays at this grade crossing.

East-West Corridor

- GS11 is located on CREATE's East-West Corridor (shown in pink in Figure 5.1).
- The East-West Corridor is also undergoing numerous rail infrastructure improvements to increase capacity and speed the movement of freight trains. Project EW4 is complete, while Phase I design is complete for projects EW1 and EW2 and nearly complete for EW3. Funding is currently being sought to complete construction on the EW1 project segment. Once funding is received for EW1, freight trains will have the ability to traverse a new east-west mainline route through the Chicago Rail Terminal. The East-West Corridor also passes through the Belt Railway of Chicago's Clearing Yard, the largest classification yard in Chicago handling more than 3,000 railcars per day out of the 8,000 that traverse the BRC daily. GS11 is located immediately east of the yard. The GS21a at-grade crossing is located just south of the East-West rail corridor, and GS9 just north.

75th Street Corridor Improvement Project

- At the point where CREATE's Western Avenue and East-West Corridors intersect lies the most congested stretch of freight rail tracks in the Chicago region – a bottleneck known as the 75th Street Corridor. A major upcoming CREATE Project, the 75th Street Corridor Improvement Project ([75th St. CIP](#)), is being planned and designed to untangle the crisscrossing series of tracks in this corridor and significantly increase capacity and reduce delays.
- Upon the future completion of the planned 75th St. CIP improvements, these corridors will have capacity to carry significantly more freight rail traffic, which would exacerbate the traffic, safety, and neighborhood access issues associated with the three grade crossings that are the subject of this application. Separating these three crossings in a coordinated manner will not only complement the 75th St CIP objectives but also facilitate its future construction.

The grantee, IDOT, shall perform all tasks required for the project through a coordinated process, which will involve affected railroad owners, operators, and funding partners including:

- CDOT – lead agency for project engineering and construction;
- UPRR (see [Letter of Support](#)); and
- BRC (see [Letter of Support](#)).

6. Grant Funds, Sources and Uses

IDOT and co-applicants seek funding for Phase II engineering and final design and Phase III construction for this coordinated group of projects as set out in Table 6.1 below.

Table 6.1 CREATE Funding Request (millions)

	GS9	GS11	GS21a	TOTAL
Estimated Total Project Cost (millions)	\$63.0	\$65.0	\$63.0	\$191.0
Prior CDOT funding commitment (Phase I design)	\$2.5	\$2.5	\$1.25	\$6.25
Prior FRA grant (Phase I)			\$1.25	\$1.25
Total Phase II and III estimated funding needed	\$60.5	\$62.5	\$60.5	\$183.5
FASTLANE grant request	\$36.3	\$37.5	\$36.3	\$110.1
Matching Funding (public* + railroad**)	\$24.2	\$25.0	\$24.2	\$73.4
Percentage FASTLANE request	60%	60%	60%	60%

* The public share of the matching funding will come from a combination of IDOT and CDOT controlled Federal, State, and/or Local sources, within the requirements that the total Federal share (FASTLANE + all other Federal sources) does not exceed 80% of project costs.

** The railroad industry share of the matching funding will be determined in accordance with 23 CFR Section 646.210 based upon actual project costs.

Note: a detailed budget for all three projects is available at [Budget](#).

7. Cost Effectiveness

These three coordinated grade separation projects are closely in keeping with the spirit of USDOT's *Next Frontier of Opportunity* initiative as they address social and economic equity at the same time as making needed transportation improvements. In the past, large freight rail projects have at times generated adverse impacts on vulnerable communities. The specific projects proposed in this application, in coordination with the overall CREATE Program, would take a major step towards reversing that trend by making improvements to our freight rail system that result in significant safety and quality of life benefits to the local communities most impacted by their presence. These grade separations will improve freight rail operations in the Chicago area as well as commuter and intercity passenger rail service, ease congestion for motorists and bus transit riders, enhance safety, and improve air quality for many years to come. These projects will also provide economic opportunity for local businesses including Disadvantaged Business Enterprises.

The beneficiaries of the three grade crossing separation projects are wide ranging, including local community residents who will experience reduced risk from potential vehicle and freight train crashes, as well as intercity rail passengers and businesses that ship goods via rail. Beneficiaries include:

- Residents of the established Chicago neighborhoods bordering the proposed grade crossing separations: Archer Heights and Elsdon (GS9); Ashburn and Chicago Lawn (GS11); and Washington Heights and Roseland (GS21a);
- Truck operators along Archer Avenue, Columbus Avenue and 95th Street, who will avoid the potential for delays or the possibility of a crash when trains cross the roadway;
- More than 50,000 transit users on over 1,300 buses traversing Archer Avenue, Western Avenue, and 95th Street each day who will experience greater service reliability;
- Passengers on two daily Amtrak trains (Cardinal and Hoosier) who will avoid the potential of crashes with vehicles at the GS21a location;
- Pedestrians, bicyclists, and motorists and their passengers along 95th Street, Columbus Avenue and Archer Avenue, who will avoid delays from a combined 87 daily trains that cross these roadways;
- Transit users at the 95th Street CTA Red Line rail station who will benefit from improved reliability of bus connections to and from neighborhoods to the west; and

- Freight rail operators and shippers who will avoid the potential interruption to service from a rail-highway crash and also benefit from more efficient use of existing rail infrastructure without the need to stage trains in ways that avoid blocking these major urban street crossings.

Merit Criteria

Economic Outcomes

Benefit Cost Analysis

A comprehensive Benefit-Cost Analysis (BCA), compliant with all requirements in the March 14, 2016 announcement, was performed for the three grade crossing projects included in this application using FRA's GradeDec tool for highway-rail grade crossing investment analysis. The benefits are the public benefits that accrue from grade crossing improvements. This BCA includes monetized benefits for the following:

- \$172 million in economic outcome benefits from reduction in delay to passenger vehicles and trucks on the primary crossing route and on the nearby roadway network, and reduction in vehicle operating costs;
- \$9 million in mobility outcome benefits from maintaining the roadway infrastructure in a state of good repair;
- \$6 million in safety benefits due to avoidance of vehicle-train crashes;
- \$500 thousand in emissions reductions resulting from decreased vehicle idling and delay; and
- \$16 million in additional benefits accrued beyond 30 years, which are monetized as a single value.

Table 7.1 summarizes the costs, benefits, and benefit-cost ratio in present dollars for the year of project construction.⁹ The grade crossing separation projects were compared against a no-build scenario. No other level of improvements was considered. Currently, the grade crossings have conventional gated crossings on either side of the roadway.

A narrative description of the benefit-cost analysis and additional information on the FRA's GradeDec tool, analysis parameters and results is available at [Benefit Cost Narrative](#).

Table 7.1 Benefit-Cost Summary

Benefits / Costs (\$000s)	All 3 Projects	GS 9 Only	GS 11 Only	GS 21a Only
Economic Outcomes	\$171,623	\$64,802	\$30,274	\$76,547
Mobility Outcomes	\$9,000	\$3,000	\$3,000	\$3,000
Safety	\$6,044	\$2,544	\$2,888	\$612
Environmental	\$503	\$236	\$118	\$149
Benefits beyond 30 years	\$16,045	\$5,292	\$5,460	\$5,292
Total Benefits	\$203,215	\$75,875	\$41,740	\$82,635
Capital Costs (Phase I, II, III)	\$191,000	\$63,000	\$65,000	\$63,000
Benefit Cost Ratio	1.06	1.21	0.64	1.31

⁹ Details of GS9 GS11 and GS21a construction schedules are found in the [Project Schedule](#); all costs and benefits are discounted to 2021 present dollars using a 3 percent discount rate. 2021 was chosen as a baseline common year of construction for the benefit cost analysis for summary purposes and comparison across projects.

Economic Outcomes

The grade separation projects each contribute to improving the efficiency and reliability of the surface transportation system. GS9 is located on a busy arterial street within one mile of a major metropolitan airport (Midway Airport¹⁰). GS11 is near an intersection connecting Columbus Avenue with Western Avenue. Both GS 9 and GS 11 are located in Industrial Corridors designated by the City of Chicago. GS21a is located on 95th Street, the only East-West arterial route within several miles without vertical clearance obstructions or other barriers to truck traffic. All three of these roadways have been identified as important truck routes by the City of Chicago in a recent planning study. Connectivity on these roadways is vital for both freight and passenger transportation. The grade separation projects will reduce delay and overall vehicle operating costs for passenger vehicles, transit buses, and trucks both on the primary roadways and the surrounding street network. They will also improve neighborhood connectivity for pedestrians and bicyclists. The total economic outcome benefit for the three projects combined is nearly \$172 million, as shown in Table 7.2.

Table 7.2 Economic Outcomes Benefits

Economic Outcomes Benefits (in \$000s)	All 3 Projects	GS 9 Only	GS 11 Only	GS 21a Only
Reduction in delay to passenger vehicles and trucks on the primary crossing route	\$163,066	\$61,622	\$27,413	\$74,032
Reduction in delay on the nearby roadway network	\$2,150	\$473	\$1,454	\$223
Reduction in vehicle operating costs	\$6,406	\$2,707	\$1,407	\$2,292
Total Economic Outcomes Benefits	\$171,622	\$64,802	\$30,274	\$76,547

Economic Competitiveness of the National Freight Rail System

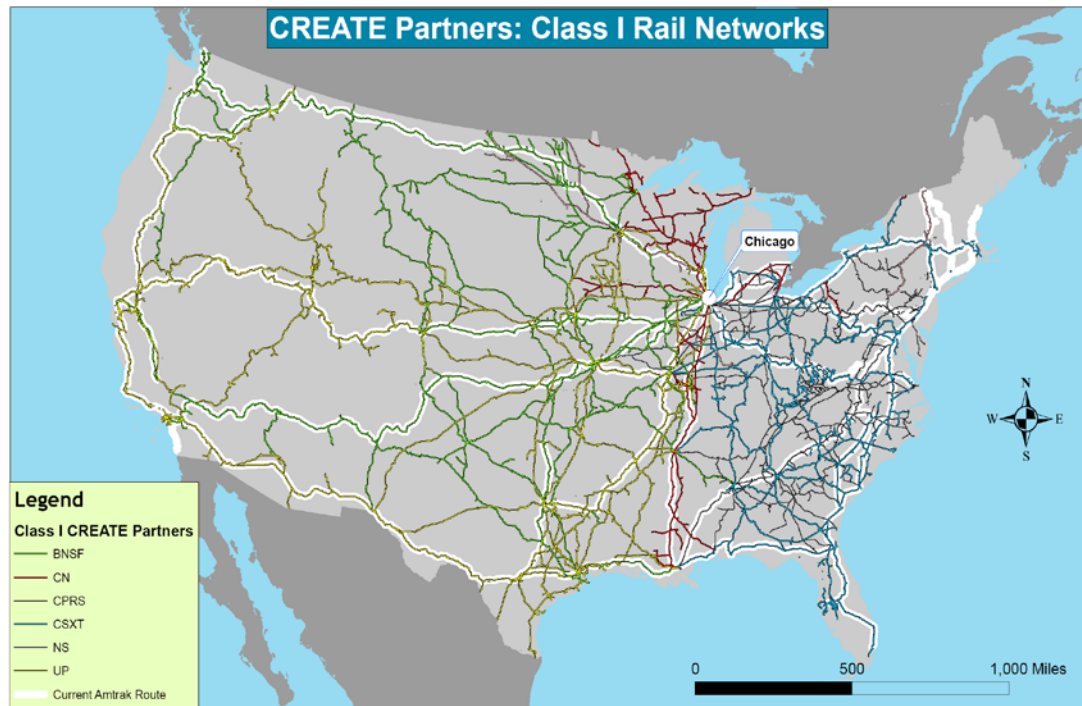
Each day, nearly 1,300 trains (800 passenger and 500 freight) with a staggering 40,000 railcars are handled in the Chicago region. One quarter of the nation's freight rail traffic travels through the Chicago region.¹¹ Nowhere else in North America does such a quantity of rail traffic converge in a single region, creating a level of passenger and freight rail activity that impacts the movement of people and goods nationally. In recognition of these broad impacts, the CREATE Program has been designated by Congress as a Project of National and Regional Significance.

Figure 7.1 demonstrates Chicago's critical location at the nexus of the North American railroad network. Six of the seven largest rail carriers serve the region: the eastern railroads, NS and CSX; the western railroads, BNSF and UP; and the two Canadian railroads, CPR and CN. Chicago is a key interchange point between the eastern, western, and Canadian railroads, who have been building infrastructure in the region for more than a century and a half. Rail congestion and delays in the Chicago region ripple throughout the U.S. As rail demand increases, new and improved infrastructure and connections are needed to accommodate the efficient rail service upon which our nation's economic growth depends. This growth may create impacts on the communities through which trains pass, and these impacts must also be addressed as part of the necessary infrastructure improvements. The CREATE Program, including the three coordinated grade crossing separation projects in this application, plays a critical role in addressing these issues and maintaining the efficiency and reliability of the national freight rail network as well as mitigating any negative impacts of goods movement on local communities.

¹⁰ Midway is the 26th busiest airport in the U.S. based on 2014 departures and arrivals.

¹¹ Association of American Railroads analysis of Railinc data and the 2014 Rail Waybill Sample.

Figure 7.1 CREATE Partners Rail Network



Intercity Passenger Rail Operations

Chicago is the primary intercity rail hub of the National Railroad Passenger Corporation (Amtrak) outside the Northeast Corridor (see Figure 7.2). All of Amtrak's long-distance and regional trains serving the Midwest terminate at downtown Chicago's Union Station – 56 trains per day. The Cardinal and Hoosier services serving New York, Washington, D.C., Cincinnati and Indianapolis operate twice daily through the GS21a project location. Increasing demand for passenger service places additional burdens on Chicago's rail network. The CREATE Program overall, including the GS21a project, is key to efficient regional and national passenger rail service.

Economically Distressed Areas

The three grade crossings to be separated as part of this initiative are all located in economically distressed areas, where residents earn less than 80 percent of the national

Figure 7.2 Midwest Amtrak Rail Hub



Source: Amtrak

average for household income. These projects will provide benefits to underinvested communities. According to US Census Bureau data from the American Community Survey (2010-2014) at the census tract-level, overall incomes within one half mile of each of the grade crossings are 71

percent of the U.S. average income¹², as illustrated in Figure 7.3 and Table 7.3. By removing barriers to mobility and disincentives to area investment, these three related projects will enhance the economic competitiveness of the neighborhoods in which they are located while accommodating growth in the flow of goods through the region.

Figure 7.3 Household Median Income Levels

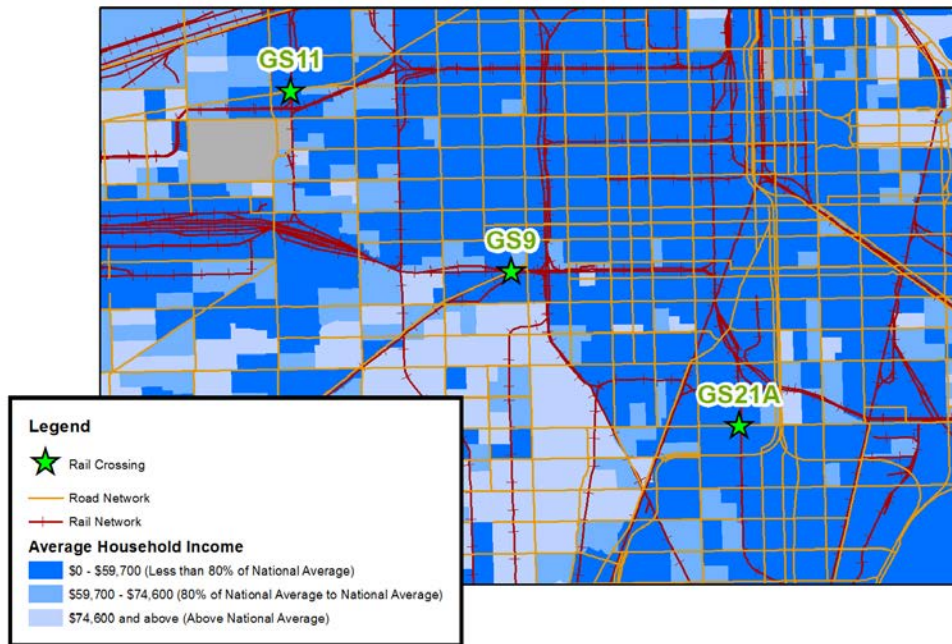


Table 7.3 Household Income in Project Areas

Description	Rail Crossing			Total
	GS9	GS11	GS21a	
Total Population	13,979	18,092	11,141	43,212
Average Household Income	\$47,876	\$58,564	\$52,952	\$53,283
Percent of National Average	64%	79%	71%	71%

Mobility Outcomes

State of Good Repair

All three coordinated grade separation projects included in this application are located on streets that are under the jurisdiction of the Illinois Department of Transportation and maintained by the Chicago Department of Transportation. At each location, railroad tracks currently cross the roadways at grade, and the combination of discontinuous pavement surfaces, varying load cycles, and difficult drainage associated with grade crossings greatly shortens roadway maintenance cycles. Grade crossing maintenance is far more complex and costly than for ordinary paved roadway surfaces, whether asphalt or concrete, and these crossings must be rebuilt with greater frequency, typically at least every ten years on high-volume roadways. As part of building a structure to separate these grade crossings, concrete would be used for the roadway surface and the maintenance life would increase to 20 years or more at each location. This would lead to an estimated maintenance cost savings over the 30 year project horizon of \$9 million dollars for the three projects (Table 7.4).

¹² Average household income was \$74,596 in 2014 according to the American Community Survey 2010-2014 estimates

Table 7.4 Mobility Outcomes Benefits

Mobility Outcomes Benefits (in \$000s)	All 3 Projects	GS 9 Only	GS 11 Only	GS 21a Only
State of Good Repair (Maintenance Savings)	\$9,000	\$3,000	\$3,000	\$3,000
Total Mobility Outcomes Benefits	\$9,000	\$3,000	\$3,000	\$3,000

Safety Outcomes

These three coordinated grade separation projects will result in a reduction in traffic fatalities and serious injuries by eliminating the potential for a collision between passenger and freight trains and the 55,000 roadway vehicles that travel through these crossings each day. The safety benefits of avoiding these crashes is \$6 million for the three projects (Table 7.5).

Table 7.5 Safety Benefits

Safety Benefits (in \$000s)	All 3 Projects	GS9 Only	GS11 Only	GS 21a Only
Savings due to crash reduction	\$6,044	\$2,544	\$2,888	\$612
Total Safety Benefits	\$6,044	\$2,544	\$2,888	\$612

Additionally, GS9, GS11, and GS21a are all located along routes through which significant numbers of emergency response vehicles pass. As such, they are designated as **911 Critical Crossings**, and the railroads must inform Chicago's Office of Emergency Management and Communication any time a train is expected to block the crossing for more than 10 minutes so that emergency vehicles may be routed to avoid the crossing (Figure 7.4). Separation of the roadway and rail at these locations will eliminate the possibility of emergency response vehicles being delayed due to a train crossing and impacting the safety outcome of the incident to which they are responding.

Figure 7.4 911 Emergency Route Crossing Designation at BRC and Columbus (GS11)

Community and Environmental Outcomes

Environmental Benefits - The environmental benefits of CREATE investments make a strong contribution to the sustainability of the region. Rail is a highly energy efficient mode of freight transport, offering significant environmental benefits from the standpoint of fuel consumption and greenhouse gas emissions, as well as other impacts including land use. On average, a freight train moves a ton of freight almost 480 miles on a single gallon of fuel. According to a recent independent study produced for the Federal Railroad Administration, railroads on average are four times more fuel-efficient than trucks. Greenhouse gas emissions are directly related to fuel consumption. That means moving freight by rail instead of truck reduces greenhouse gas emissions by 75 percent, on average. Improvements made to the nation's rail infrastructure – such as those proposed by CREATE – have the potential to further improve the efficiency of rail operations in the U.S. and to reduce the environmental impact of freight transport.

The environmental benefits of the three grade separations include a reduction in emissions due to decreased passenger car, bus, and truck delay at the project site (Table 7.6). The monetary benefits of Carbon Monoxide (CO), Hydrocarbon (HC) and Nitrous Oxide (NOx) are quantified as part of the benefit-cost analysis. The result is a savings of \$500,000 through emissions reductions over 30 years. Additionally, there will be savings of CO₂, SO_x, PM, and other harmful emissions which are not quantified here.

Table 7.6 Environmental Outcomes Benefits

Environmental Benefits (in \$000s)	All 3 Projects	GS 9 Only	GS 11 Only	GS 21a Only
Emissions Reduction	\$503	\$236	\$118	\$149
Total Environmental Benefits	\$503	\$236	\$118	\$149

Community Benefits

These projects will improve the neighborhoods in which they are located by increasing the reliability of bus transit operations along the affected streets. More than 700 transit buses per day serve 95th Street at GS21a, approximately 200 transit buses serve Archer Avenue at GS9. In addition, nearly 350 transit buses serve Western Avenue at Columbus Avenue, immediately east of and affected by the GS11 crossing when traffic backs up on Columbus due to rail traffic on the BRC. Archer Avenue and Western Avenue are key bus routes for the City of Chicago, connecting many neighborhoods and other bus and rail transit lines across the city. GS9 is about one mile northeast of Chicago Midway Airport, which serves over 20 million passengers annually on almost 200,000 flights. GS21a is located less than half a mile from the 95th Street Station of CTA's rapid transit Red Line, the line's southern terminus (see transit ridership detail in Table 7.7). Daily, 18,000 riders use routes that cross this location. Eliminating the potential for delay to transit vehicles will be a very significant benefit to daily bus riders, particularly those making connections with Red Line trains.

At present, the CTA is undertaking a complete reconstruction of the 95th Street Red Line Terminal (see rendering to right), an effort that is expected to attract additional customers to an already busy station. At a cost of \$240 million, this project will expand and greatly improve the terminal, bringing major benefits to the thousands of customers that travel through this vital South Side facility every day. The project, one of the largest station reconstructions in CTA's history and the latest large-scale project to improve the CTA's busiest rapid transit line, will create a signature station featuring a modern design and myriad amenities to improve the overall transit experience. By removing the at-grade crossing just one half mile away from the station this multimodal station's performance will be strengthened.



Table 7.7 Bus Transit Service Operating Through GS9 and GS21a Crossings

Crossing Location	Number of Bus Routes	Buses Per Day	May 2015		
			Average Weekday Ridership	Saturday	Sunday
GS9 (Archer Avenue)	1	193	12,000	7,000	5,500
GS21a (95th Street)	5	726	17,930	10,489	6,324

Source: Regional Transportation Authority Mapping and Statistics www.rtams.org.

GS9 and GS11 are located within areas targeted for investment and development through programs such as the Chicago Sustainable Strategies Initiative, a comprehensive planning effort to coordinate the economic, social and environmental aspects of Chicago's manufacturing sector.¹³ The grade crossing projects will also improve the attractiveness of the three areas for economic development by removal of the barrier of the rail line across the roadway at grade.

Other Criteria

Innovation

Two primary aspects of project development will result in exploration of innovative engineering techniques: alternatives analysis and stormwater management. The engineering efforts for these three projects will explore at least four alternatives, which may include tunneling (to minimize excavation and disturbance to traffic) as was done for another CREATE grade crossing project.

Partnerships

These coordinated projects will continue the innovative tradition of CREATE. Four of the CREATE partners -- CDOT, IDOT, BRC, and the UPRR -- will collaborate closely to bring the projects to fruition. CREATE is a groundbreaking public-private partnership involving 14 public and private agencies that have been working together for more than a dozen years to advance a complex set of multimodal infrastructure projects in the Chicago region. This application is submitted by IDOT and co-sponsored by CDOT, CMAP, and Cook County on behalf of all of the CREATE Partners listed below. More information is available on each partner by clicking on the links.

[USDOT*](#)

[Canadian Pacific](#)

[Cook County*](#)

[CSX Transportation](#)

[Illinois DOT](#)

[Indiana Harbor Belt](#)

[Chicago DOT](#)

[Metra](#)

[Amtrak](#)

[Norfolk Southern](#)

[Belt Railway of Chicago](#)

[Union Pacific](#)

[BNSF Railway](#)

[Canadian National](#)

Note: *nonvoting members

The management processes for CREATE are detailed in CREATE [Partnerships and Management Practices](#). Each of the partners has played a significant role in the advancement of CREATE, with most investing funds in CREATE projects

¹³ http://www.cityofchicago.org/city/en/depts/dcd/supp_info/chicago_sustainableindustries.html

within and outside of the formal CREATE process. As part of this application, Illinois DOT, Chicago DOT, and the affected railroads will commit to providing matching funds to complement the FASTLANE grant request.

Since its announcement in 2003, the CREATE partners have made considerable progress in securing funding and implementing the Program. The CREATE partners are experienced at procurement, project management and collaboration to ensure successful project delivery. The CREATE Program has demonstrated its ability to manage grant funding through its obligation of all PNRS funds and construction of TIGER-funded projects (TIGER I funds were released by USDOT on July 22, 2010 and construction initiated the week of August 2, 2010. For TIGER IV, funds were obligated October 2, 2012 and construction was initiated June 12, 2013. FRA funds for P1 were obligated October 10, 2010 and construction of the two main tracks completed on October 23, 2014)

To date, CREATE has received the following funds totaling \$1.306 billion:

Federal \$453.4 million	TIGER I and TIGER IV Grants, SAFETEA-LU PNRS Grant, ARRA High Speed Rail Grant, Railroad Relocation Grant, FRA Railroad safety grant for the Safe Transportation of Energy Products by Rail Program
State \$497.5 million	Illinois Jobs Now!, PNRS/TIGER match, grade separations
Local Governments \$67.8 million	Viaduct improvements, grade separations, land acquisition
Railroads \$289 million	Railroad infrastructure, grade separations

The CREATE Partners are well prepared and experienced at delivering projects. At the present time, 25 of CREATE's 70 projects have been completed, nine are under construction, two are in the final design phase, and 15 are undergoing preliminary engineering and environmental review. A key CREATE strategy has been to establish a pipeline of projects that have completed preliminary engineering and environmental review so they are ready to advance to the final design and construction phases as soon as funding is secured. Projects GS9, GS11, and GS21a are all currently in the preliminary engineering and environmental review stage, and a FASTLANE grant award at this time would allow them to continue seamlessly into final design and construction. A FASTLANE grant award would also complement previous USDOT investments in CREATE by continuing improvements to the Chicago Rail Terminal and mitigating community impacts.

CREATE Contribution to Economically Disadvantaged Populations/ Ladders of Opportunity

The three projects are located on the South Side of Chicago where incomes are below average and communities are economically distressed. Residents in each of the three grade crossing areas are more than 70 percent African American and Hispanic in the half mile area around the projects (Table 7.8). These areas are in need of investment that can spur businesses to locate in the area. Removal of the barriers resulting from the rail crossings of Archer Avenue, Columbus Avenue, and 95th Street would have substantial benefits to the community.

Table 7.8 Socioeconomic Characteristics of Areas around Grade Crossings

Description	Rail Crossing			Total
	GS9	GS11	GS21a	
Total Population	13,979	18,092	11,141	43,212
Hispanic Population	1,354	12,490	108	13,952
Percent Hispanic	10%	69%	1%	32%
Black Population (Non-Hispanic)	11,662	431	10,794	22,887
Percent Black (Non-Hispanic)	83%	2%	97%	53%
Total Households	4,793	5,144	3,772	13,709

Source: US Census Bureau data from the American Community Survey (2010-2014) at the census block group-level

Ensuring safe and efficient operation of railroads is a critical element of economic activity in Illinois. The railroad industry is a major employer with freight railroads employing 13,152 people in Illinois alone. Railroad wages are highly competitive, averaging \$112,680 annually including benefits. For most railroad jobs only a high-school diploma is required to apply, and the railroads provide extensive on-the-job training. In the greater Chicago area, 47 percent of the CREATE freight railroad partners' employees are persons of color. It is important to ensure rail operations are unimpeded as much as possible to maintain Chicago's vital contribution to the U.S. economy as the rail transportation hub of the nation.

CREATE has conducted extensive outreach on employment and procurement opportunities to provide Ladders of Opportunity, including participating in multiple job fairs and several procurement fairs in the region and reaching out to disadvantaged business enterprises (DBEs), as described at [Employment and Procurement Outreach](#). In addition, the CREATE Partner agencies regularly conduct workshops and outreach on how to become certified as a DBE. Links to these programs is available via the CREATE website at [DBE/MBE/WBE Information](#). Bid solicitations are posted on the CREATE web site and automatically sent via email to contractors who have expressed an interest and registered to receive email notification. Freight supports jobs not only in transportation and logistics but also in freight-dependent industries such as manufacturing and wholesale trade. As noted by the Chicago Metropolitan Agency for Planning¹⁴, one-quarter of all jobs in the regional economy are in industries directly tied to freight. These freight-dependent industries add over \$115 billion to the regional economy each year. The project bid solicitations will include DBE requirements to ensure diverse participation.

In 2015, the FHWA enacted Special Experimental Project No. 14 – Local Labor Hiring Pilot Program to permit recipients of federal grants to utilize social and economic preferences in hiring, giving preference to local, low-income, and veteran workers. The Chicago Department of Transportation is intending to utilize this preference if the pilot program is still in effect or permanent procedures for local hiring preference are established at the time of the bidding process for the three grade separation projects. Specifics for how this pilot program may be incorporated can be found in [Draft Work Plan to Evaluate the Use of Local Labor Hiring](#).

8. Project Readiness and NEPA Status

Technical Feasibility

Phase 1 engineering is fully funded for all three projects. Projects GS9 and GS11, Phase I engineering is currently underway, while for GS21a a contractor is currently being selected and Phase I work is expected to begin this summer. Information on the rail infrastructure at the project locations is located at Project Information.

Description of Work

The Illinois DOT seeks funding for final engineering and design services and construction for three projects that would be managed by the Chicago Department of Transportation:

- GS9 - The grade separation of two Belt Railway of Chicago tracks from Archer Avenue, a major four-lane urban arterial street. Every day this crossing handles approximately 27 freight trains and 19,800 vehicles. Of the vehicles, 200 are transit buses on a route that carries approximately 12,000 passengers per day. The roadway also carries an estimated 3,500 trucks per day (18 percent of the vehicular traffic).
- GS11 – The grade separation of three Belt Railway of Chicago tracks from Columbus Avenue, a major four-lane urban arterial street. Every day this grade crossing handles 36 trains and 11,500 vehicles. A designated Class II truck route, the roadway also carries an estimated 2,000 trucks per day (18 percent of the vehicular traffic). The grade crossing is located immediately west of the intersection of Columbus Avenue and Western Avenue, a major cross-town urban arterial street and important truck and bus transit route. Every day, the stretch of Western Avenue

¹⁴ <http://www.cmap.illinois.gov/mobility/freight>.

that can be affected by traffic backing up from the Columbus Avenue grade crossing carries approximately 29,300 vehicles, including 350 transit buses on routes that carry approximately 25,000 passengers per day.

- GS21a - The grade separation of two existing and one future Union Pacific rail tracks from 95th Street, a major four-lane urban arterial street. Every day, this crossing handles approximately 24 freight trains, two Amtrak trains (carrying more than 200 people), and 21,100 vehicles. Of the vehicles, more than 700 are transit buses on routes that carry approximately 18,000 passengers per day. A designated Class II truck route, the roadway also carries an estimated 2,500 trucks per day (12 percent of the vehicular traffic). Due to the large volume of car, transit, and truck traffic along 95th Street, trains crossing at this location cause frequent and significant delays. In fact, this grade crossing location experiences the 15th highest level of delay out of 7,696 highway-rail grade crossings in the state, according to data from the Illinois Commerce Commission.

A detailed description of work is provided at [Scope of Work](#).

Environmental Approvals

Based on similar CREATE grade crossing projects conducted recently in the City, and the fact that no water bodies are located near the project locations, the project sponsor does not expect any unusual issues such as environmental or historic preservation impacts beyond potentially contaminated soil (e.g., special waste, given that the affected rail lines have been operational for many years). Therefore it is anticipated that the three projects will receive categorical exclusion under NEPA, as was the case for CREATE project GS15a, another recently completed nearby grade crossing separation in the City of Chicago. However this will be formally determined as part of the Phase I work now underway.

Project Schedules

As required by the NOFO, construction of all three projects can be initiated within 18 months of grant obligation. The estimated construction start dates for each of the coordinated projects are as follows:

GS9 – May 2020;

GS11 – March 2020; and

GS21 – January 2021.

A full construction schedule is available at [Schedule](#). Chicago DOT has developed the project schedules such that all necessary activities will be complete to allow grant fund obligation sufficiently in advance of the statutory deadline and that any unexpected delays will not put the funds at risk of expiring before they are obligated.

One risk for this type of project is property acquisition. Chicago DOT has conducted preliminary analysis of the land uses at all three project sites. On Archer Avenue adjacent to the GS9 grade crossing location land uses include: car wash, intermodal shipping facility, car rental agency, shopping center, car wash. CDOT expects to reach agreement with these businesses should land need to be acquired. The businesses on Columbus in the vicinity of the GS11 grade crossing are: car dealership, car rental, car dealership storage, church, NS railroad yard. To improve the intersection of Western/Columbus/74th, right-of-way (ROW) acquisition may be necessary. The ongoing alternatives analysis will determine the extent of ROW acquisition required, but CDOT expects to be able reach agreement with any affected businesses. The land uses on 95th Street adjacent to the GS21a project location are: housing, a church, and retail. To improve the intersection of 95th Street and Harvard Avenue, a full or partial take of vacant property may be necessary.

For all three projects, minimizing impact to alternatives that minimize impacts to private property will be favored in the evaluation process. The right-of-way acquisition process will start at the end of Phase I and property will be acquired in Phase II. All property or right-of-way acquisition will be completed in a timely manner in accordance with 49 CFR Part 24 and other pertinent legal requirements.

Because all three projects are currently in the preliminary engineering and environmental review stage, a FASTLANE grant award at this time will allow them to continue seamlessly into final design and construction. FASTLANE funds will continue be spent expeditiously once construction starts – CDOT and IDOT are highly experienced at design and construction of federally funded infrastructure projects, whether as part of the CREATE Program or for other purposes. While formal public

engagement has only just begun as part of Phase I efforts for these projects, initial conversations with the City of Chicago Aldermen in whose Wards the projects are located have suggested support for these improvements. See [letters of support](#).

State and Local Planning

CREATE is a central element of the strategic regional freight and highway system in the Metropolitan Transportation Plan (MTP), described in the [GO TO 2040 Plan](#). The [Illinois Rail Plan](#) published in 2012 also lists all these grade crossing projects as a priorities and reinforces the importance of the CREATE Program overall.

State and Local Approvals

The three coordinated projects included in this application are incorporated in the regional Transportation Improvement Program (TIP). The TIP is available at [CMAP TIP](#).

National and Regional Support

This grant application is supported by a broad range of transportation agencies and units of government. Copies of letters of support for this FASTLANE application are available at the links below. Letters have been received from:

- [Alderman Brookins, Ward 21](#)
- [Alderman Burke, Ward 14](#)
- [Alderman Curtis, Ward 18](#)
- [Amtrak](#)
- [Association of American Railroads](#)
- [Belt Railway of Chicago](#)
- [Chicagoland Chamber of Commerce](#)
- [Chicago Metropolitan Agency for Planning](#)
- [Chicago Transit Authority](#)
- [City of Chicago](#)
- [Coalition for America's Gateways and Trade Corridors](#)
- [Cook County Board of Commissioners](#)
- [HACIA](#)
- [Illinois Chamber of Commerce](#)
- [Illinois Department of Transportation](#)
- [Illinois Congressional Delegation](#)
- [Illinois Road and Transportation Builders Association](#)
- [Metra](#)
- [Midwest Truckers](#)
- [Metropolitan Planning Council](#)
- [Pace Bus](#)
- [SMART Transportation](#)
- [Supply Chain Innovation Network of Chicago](#)
- [St. Rita's High School](#)
- [Union Pacific Railroad](#)
- [World Business Chicago](#)