

FRA CORRIDOR IDENTIFICATION
AND DEVELOPMENT PROGRAM
Application for

MIDWEST CONNECT

CHICAGO - FORT WAYNE - COLUMBUS - PITTSBURGH



Baker Street Station (Fort Wayne, IN)

MARCH 27, 2023



SUBMITTED BY

City of Fort Wayne, Indiana
in partnership with
Mid-Ohio Regional Planning
Commission (MORPC)



COVER PAGE INFORMATION

Applicant	City of Fort Wayne, IN – Political subdivision of a State; Mid-Ohio Regional Planning Commission (MORPC)
Was a Federal Grant Application Previously Submitted for this Corridor?	FY 2022 FRA CRISI Grant Program – Midwest Connect Columbus Maglev Planning Study; FY 2014 FRA Intercity Passenger Rail Corridor Investment Plan Grant Funding Program
Other Sources of Funding for the Corridor?	Private dollars that assisted in the development of Corridor studies and local match dollars.
Cities and States where the Corridor is Located	Illinois: Chicago; Indiana: Gary, Valparaiso, Plymouth, Warsaw, Fort Wayne Ohio: Lima, Kenton, Marysville, Columbus, Newark, Coshocton, Newcomerstown, Uhrichsville, Steubenville Pennsylvania: Pittsburgh
Congressional Districts where the Corridor is Located	IL: 1, 2, 7 IN: 1, 2, 3 OH: 5, 4, 15, 3, 12, 7, 6 WV: 2 PA: 17, 18
Is the Corridor currently programmed or identified in State rail plan, or regional or interregional intercity rail systems planning study?	Yes. It is identified in the 2021 Indiana State Rail Plan; 2018 Indiana State Long-Range Plan; 2019 Ohio State Rail Plan, 2020 Ohio State Long-Range Plan, and in the 2020 Mid-Ohio Regional Planning Commission (MORPC) Plan.
Is the applicant working with other entities in support of the Corridor?	Yes. Southwest Pennsylvania Commission (SPC) with support from Indiana Department of Transportation (IndOT), Ohio Department of Transportation (ODOT), , Northwestern Indiana Regional Planning Commission (NIRPC), Michiana Area Council of Governments (MACOG), Northeastern Indiana Regional Coordinating Council (NIRCC), and Northern Indiana Passenger Rail Association (NIPRA).

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1 CORRIDOR SUMMARY

The City of Fort Wayne, Mid-Ohio Regional Planning Commission (MORPC) and project partners are seeking acceptance into and funding through FRA's Corridor Identification and Development (Corridor ID) Program. With a total population of **14.7 million**,¹ the Chicago-Fort Wayne-Columbus-Pittsburgh Midwest Connect Corridor (Corridor) is distinguished for its growing population, large industries, access to jobs, its centrality as an economic hub in the Midwest, and its ability to connect America's Midwest and Eastern regions. Acceptance into the Corridor ID Program would reestablish passenger rail through the American Heartland to address the challenges experienced along the Corridor today, which includes the need for more equitable, safe, reliable, direct, and non-polluting transportation options that will make the Corridor more economically competitive while also investing in disadvantaged communities. To maintain cost-effectiveness, the service would operate primarily on existing freight railroad right-of-way that could be developed into one of America's premier high-speed rail trunk lines due to its superior location and geometry.² Studied for more than 10 years, the reestablishment of passenger rail in the Corridor would be a low-risk investment that will establish an equitable, healthy, and thriving central transportation system for millions of people.

Project partners are ready and prepared to work with other regional partners, agencies and DOTs to advance passenger rail in the corridor

2 CORRIDOR FUNDING

This application requests acceptance into and participation in the Corridor ID Program. In accordance with the NOFO, project partners request the initial award of \$500,000 for eligible Step 1 activities. The initial award would not include any cost sharing. Upon acceptance into the Program, project partners will work with FRA to determine if the completion of eligible Step 1 activities would require the use of the full \$500,000. Any remaining funds will be carried forward to the Step 2 award. Project partners are prepared to fund the necessary match as the Corridor advances beyond Step 1. Financial support for the match is expected from the Indiana and Ohio Departments of Transportation, MORPC, Northwestern Indiana Regional Planning Commission (NIRPC), and Amtrak. The Northern Indiana Passenger Rail Association (NIPRA) has also committed to fundraising for the match.

3 APPLICANT ELIGIBILITY

The applicants for the Midwest Connect Corridor ID Program are the City of Fort Wayne, IN and MORPC, a political subdivision of a State and a Regional Organization, respectively. Through previous studies, the applicants developed a partnership network that includes Southwestern Pennsylvania Commission (SPC), Indiana Department of Transportation (INDOT), Ohio Department of Transportation (ODOT), Northwestern Indiana Regional Planning Commission (NIRPC), Michiana Area Council of Governments (MACOG), Northeastern Indiana Regional Coordinating Council (NIRCC), Northern Indiana Passenger Rail Association (NIPRA), Amtrak, and others (see **Attachment 1: Letters of Support**).

¹ U.S. Census Data, American Community Survey (ACS) 2021 5-Year; <https://census.data.gov>, Accessed March 15, 2023.

² The Corridor includes the former Pennsylvania Railroad's mainline between Chicago and Pittsburgh. Primarily operating within existing freight railroad right-of-way will be cost effective by minimizing infrastructure investments and avoiding interface with freight traffic.

4 DETAILED CORRIDOR DESCRIPTION

4.1 Corridor Characteristics

4.1.1 KEY TRAVEL MARKETS

The 1990s ended the era of passenger rail in the Midwest Connect Corridor when Amtrak, the last remaining passenger rail provider, departed due to needed, but unfunded track improvements. Although the trains were full, the state departments of transportation were unable to fund the improvements due to competing priorities. Since then, railroad owners have made track improvements, such as a 2014 upgrade that improved the track to FRA Class 3 standards to allow speeds up to 40 mph for the entire Corridor. Implementation of Corridor ID Program activities will upgrade the railroads to Class 1 for passenger rail, which as expressed in the Letters of Support (**Attachment 1**), the states are supportive of.

In 2009, the Northern Indiana Passenger Rail Association (NIPRA) was created by community stakeholders to revive passenger rail service in northern Indiana. Throughout a variety of planning efforts in the Corridor, the partners have continually focused efforts on serving key travel markets where there is currently no passenger rail service to connect the Chicago-Fort Wayne-Columbus-Pittsburgh markets. Columbus is currently the largest metro area in the United States with no passenger rail service. While Chicago and Pittsburgh are served by Amtrak routes, including service from Chicago to Pittsburgh via Cleveland, all passenger rail service to cities in southern Indiana and Ohio has long since ended. As a result, residents are left with fewer options for convenient, safe, affordable, and reliable intercity travel.

In 2020, MOPRC undertook a study of the Corridor and analyzed these strong ridership markets. The study analyzed current (year 2015) and forecasted (year 2040) population and employment for the cities of Chicago, Fort Wayne, Lima, Columbus and Pittsburgh only. Fort Wayne and Pittsburgh are expected to grow in population by at least 10 percent between 2015 and 2040, with Chicago and Columbus seeing the highest increase of over 20 percent population growth. In 2020, Fort Wayne was the fastest growing metro area in the Great Lakes region (out of 59 metro areas) and its growth rate was more than five times the national rate in 2021.³ All key cities are expected to grow in employment, with over 15 percent employment growth in Chicago, Fort Wayne and Columbus and 12 percent in Lima and Pittsburgh.

4.1.2 CORRIDOR SERVICE CHARACTERISTICS

The Midwest Connect Corridor would combine the results of multiple studies into a singular analysis. In 2019, NIPRA undertook pre-NEPA (National Environmental Policy Act) planning activities, which included identifying the project's purpose and need, conducting a route and service level alternatives analysis, and completing conceptual engineering. That study focused efforts on the portion of the Corridor between Chicago-Fort Wayne-Lima and analyzed three service alternatives (See **Table 1**). More information on this study can be found at: <http://nipr rail.org/pre-nepa/>. Also in 2019, MORPC and its partners in Lima, Marysville, Dublin, and Union County also completed components of a Tier I Environmental Impact Statement (EIS) study to advance intercity, rapid-speed transportation service between Chicago, Columbus, and Pittsburgh. Upon entry into the Corridor ID Program, project partners would work together to develop potential service characteristics.

The main takeaway from these completed studies is that communities along this route have the population, market and need for more mass transportation options, including passenger rail service, connecting the corridor communities to the U.S. passenger rail network.

³ Greater Fort Wayne Inc., Fort Wayne growth rate paces Grate Lakes region, May 2021; <https://www.greaterfortwayneinc.com/allen-county-posts-another-year-of-positive-domestic-migration>, Accessed March 17, 2022.

TABLE 1: NIPRA PRE-NEPA SERVICE ALTERNATIVES SUMMARY

NIPRA identified three service alternatives as the most reasonable and cost-effective to further develop infrastructure needs and costs.

RANK Performance of alternatives against each other High - Mid - Low	2 DRT 79 MPH	4 DRT 79 MPH	6 DRT 79 MPH	4 DRT 110 MPH	6 DRT 110 MPH
RIDERSHIP ESTIMATE Annual Riders (2035)	387,000 5	571,000 4	677,000 3	765,000 2	917,000 1
TRAVEL TIME Chicago to Lima, OH (Hours:Minutes)	3:27 2	3:27 2	3:27 2	2:35 1	2:35 1
EQUIPMENT NEEDS					
TOTAL TRAIN CONSISTS	2	3	4	3	4
LOCOMOTIVES	2	3	4	6	8
SINGLE-LEVEL COACH CAR	8	9	12	12	16
BUSINESS/CAFE CAR	2	3	4	3	4
ANNUAL REVENUE Ticket Sales and Concessions	\$13,800,000 5	\$20,900,000 4	\$24,896,000 3	\$28,107,000 2	\$33,519,000 1
"ANNUAL" OPERATING and MAINTENANCE COSTS	\$17,384,000 1	\$28,943,000 2	\$41,073,000 4	\$35,437,000 3	\$50,263,000 5
OPERATING SURPLUS/DEFICIT					
FUNDING GAP	\$(3,584,000)	\$(8,043,000)	\$(16,177,000)	\$(7,330,000)	\$(16,744,000)
OPERATING RATIO	0.79	0.72	0.61	0.79	0.67
NIPRA will evaluate these service alternatives in further detail in future environmental and engineering studies.	2 DRT 79 MPH	4 DRT 79 MPH		4 DRT 110 MPH	

4.1.3 MIDWEST CONNECT ROUTE

A map of the Corridor routing is provided in **Section 5**. Working closely with FRA, the partners have identified the least complicated, most strategic, and high-speed ready Corridor that would create the greatest benefit to all users and to the communities along the route. The key geographic travel markets for the Corridor to fulfill its intended objectives are Chicago, IL, Fort Wayne, IN, Columbus, OH, and Pittsburgh, PA since those are the cities along the Corridor where the highest populations, potential ridership, and the greatest number of jobs reside (see **Section 0** for a population comparison). However, equally as important to connect within the Corridor are the smaller communities and the rural areas that offer jobs and tourism opportunities and would benefit from inclusion in the Corridor's intercity passenger rail service.

The proposed passenger rail Corridor would primarily follow existing freight rail lines and right-of-way that are recognized for their geometrically superior straight-line tracks. In fact, the Fort Wayne Line, the former Pennsylvania Railroad's mainline between Chicago and Pittsburgh, used solely for freight since 1990, is one of the straightest railroads in the U.S. with few curves outside urban areas. The curves that do exist are flatter and less restrictive on train speeds.

Previous Corridor studies concluded that the use of active freight railroad lines would optimize the cost effectiveness of the project by maximizing the use of existing rail infrastructure and railroad-owned right-of-ways. The railroads that could optimally serve the passenger rail Corridor are those owned by Norfolk Southern (NS), Chicago, Fort Wayne and Eastern (CFE), CSX Transportation (CSX), and Columbus & Ohio River (CUOH). The reestablished passenger rail along the Fort Wayne Line would enable historic rail stations to be retrofitted for use, such as Fort Wayne's Baker Street Station (see **cover page photo**).⁴

⁴ Passenger rail station history: The Fort Wayne, IN Baker Street Train Station is currently used for offices and events. The Lima, OH station is on the National Register of Historic Places. It currently houses its Utility Department in the station building and has indicated the municipal desire to reopen the station to passenger rail services. The station in Coshocton, OH is also historic.

Implementation of the Midwest Connect Corridor would bring infrastructure enhancements including potential flattening of tighter curves and grade separation of crossings, benefiting passenger and freight services alike.

4.2 Corridor Readiness

This Corridor ID Program application is the culmination of 12 passenger rail studies conducted along the Midwest Connect Corridor within the last 11 years. These studies have laid the groundwork for future analyses, the Service Development Plan, NEPA activities and documentation, and preliminary engineering. Interregional rail expert partnerships have been developed throughout this research and the Midwest Connect Corridor has been well-vetted to determine risk levels and complexity as well as the level of effort associated with Corridor planning and implementation. Collectively, these studies provide a foundation to build the future of the Midwest Connect Corridor through FRA's Corridor ID Program. **Table 2** provides information about these recent studies, many of which can be viewed at:

<https://www.morpc.org/program-service/rapid-speed-transportation-initiative/> and <http://niprarail.org/progress-press/>.

TABLE 2: PREVIOUS CORRIDOR STUDIES

#	Study Name and Entity	Year Published
1	Northern Indiana/Ohio Passenger Rail Corridor Feasibility Study and Business Plan - NIPRA	Dec. 2012
2	Northern Indiana Passenger Rail Corridor Existing Conditions Report – Fort Wayne, IN	Jun. 2016
3	Chicago-Fort Wayne-Lima Passenger Rail Study: Preliminary Forecasts	Apr. 2017
4	Northern Indiana Passenger Rail Corridor Purpose and Need Statement – Fort Wayne, IN	Nov. 2017
5	Chicago-Fort-Wayne-Lima Passenger Rail Corridor Study: Sensitivity Analysis (revised) - NIPRA	Jun. 2018
6	Pre-NEPA Studies: Summary for Chicago-Lima Corridor - NIPRA	Jan. 2019
7	Rapid Speed Transportation Initiative (RSTI): Existing Conditions Report, Chicago to Pittsburgh Corridor - MORPC	Jun. 2019
8	RSTI: Purpose and Need Statement, Chicago to Pittsburgh - MORPC	Sep. 2019
9	RSTI: Route Alternatives Report - MORPC	Nov. 2019
10	Hyperloop Feasibility Study - MORPC	May 2020
11	Benefit Cost Analysis of Northern Indiana Passenger Rail Project - NIPRA	Mar. 2020
12	Midwest Regional Rail Planning Study, FRA	Oct. 2020

Fort Wayne, MORPC, and project partners exhibit a strong commitment to the planning, implementation, and operations of the Corridor. The Midwest Connect Corridor is also supported by U.S. Senators, State Senators and Representatives, State Departments of Transportation, regional organizations, municipalities, counties, Amtrak, and other advocates, as evidenced by the **80+ letters of support** obtained (see **Attachment 1**). This commitment and support contributes to the readiness of the Corridor to partner with FRA and propel the planning efforts forward.

4.3 Completed and Ongoing Eligible Activities

Beginning in 1996 with the initiation of the Midwest Regional Rail Initiative (MWRRI) and in 2020 with the Midwest Connect Hyperloop Feasibility Study and Benefit Cost Analysis, the Midwest Connect Corridor partners have together completed a multitude of analyses that will feed into and support eligible Corridor ID Program activities. These pre-NEPA studies followed FRA's approach in pre-NEPA planning where service planning, environmental analysis, alternatives analysis, and public involvement are undertaken prior to beginning the formal NEPA process to initiate NEPA with a solid preliminary purpose and need and a well-defined range of reasonable alternatives. Equipped with this foundation, Midwest Connect partners will be able to quickly complete eligible activities.

4.4 Railroad Operator

Amtrak would be the operator for the Midwest Connect Corridor as their support of the Corridor has been steadfast. Amtrak's letter of support states, "This corridor would create better connectivity between urban & rural communities & large businesses that are not currently served by rail...The service would also provide essential connections to existing passenger rail services...and to other Corridor ID applications...[it] will help strengthen economic growth and mobility throughout the region and the country and will boost the local economy of the cities and towns along the route." (See **Attachment 1**).

4.5 Applicant and Partner Capability and Capacity

The City of Fort Wayne and MORPC are partnered with NIRPC, SPC, the Departments of Transportation and the municipalities along the Midwest Connect Corridor. This partnership network has been strengthened while working on the many previous Corridor studies as has the partners' relationships with industry expert consultants that have and will continue to provide technical assistance.

The Midwest Connect Corridor partners would begin Step 1 activities on a solid technical foundation with the technical capabilities needed to oversee Corridor planning, development, final design, and construction. Along with regional agencies and DOTs, project partners would likely engage consultant support to coordinate and deliver the multi-step Corridor ID Program deliverables. Cooperative agreements and contracts will be developed stating the roles and responsibilities of each entity and future financial commitments necessary in Steps 2 and 3.

4.6 Challenges Corridor Aims to Address

Previous Corridor studies identified the following challenges that Midwest Connect aims to address. Details on how the Corridor will address these challenges are provided in **Sections 6 and 7**.

- Existing transportation options do not meet Corridor travel needs: Current air service along the Corridor can be expensive compared to other modes and while the travel times from airport-to-airport are shorter than drive times, air travel involves wait times for security procedures, parking, and reaching downtown centers. Additionally, the distances between many of the Corridor cities are too short to develop an air market, yet too long to efficiently drive on a regular basis – an ideal market gap for passenger rail to fill. Bus service is low cost, but is also infrequent, indirect, and slower than auto travel times. Auto travel is not available to non-drivers and can be expensive for individuals who do not own a vehicle. Further, there is no direct interstate service between Columbus and Chicago.
- Existing transportation options are not reliable: Auto, bus, and air travel are subject to traffic congestion and weather-related delays.
- Safety is a concern for existing vehicle travel: Autos, and to a lesser extent buses, are subject to the typical safety concerns of vehicle travel, including accidents from speeding, distracted driving, and weather-related issues. Snow and ice conditions are common along the Corridor, which impact vehicle trip safety more than rail trips.
- Existing transportation options have relatively high environmental impacts: Compared to rail, air and vehicle travel have higher emissions per passenger and utilize more energy, which could be reduced with a shift to high-occupancy rail transportation.
- Economic competitiveness: Safe, reliable, and convenient linkages to metropolitan areas are critical for economic development. This is true both for large cities, with numerous businesses and higher demand for intercity travel, as well as for smaller municipalities with smaller economic bases that are often dependent on the economies of nearby metropolitan areas.

4.7 Corridor Users and Beneficiaries

The Midwest Connect Corridor has remained in multi-state planning studies and continues to be supported by numerous partners due to its strong projected population and economic growth. The 2019 MORPC Passenger Rail Study projected that by 2040, the Corridor will see nearly **3 million more residents and over 1 million new jobs** (see **Figure 1**). While population and economic growth in the Corridor may somewhat increase freight volumes, shipping companies will likely continue using the well-established freight routes they use today. The Corridor's ideal track geometry, separation of train services, and presence of low freight traffic further supports how this Corridor would be less complicated than many other corridors nationwide and could potentially provide high-speed capabilities.

Since the highest east-west daily freight train volumes are located in the northern portion of Indiana and Ohio, most of the rail lines on the Corridor have fewer than 20 freight trains daily, which would increase Amtrak's passenger rail reliability throughout this Corridor. Efforts would also be made to primarily route the passenger rail alongside freight rail in railroad right-of-way. The Midwest Connect Corridor will therefore be well-positioned to promote efficiency and resiliency of supply chains by having few conflicts with freight and by investing in the rail infrastructure, like sidings, to alleviate bottlenecks.

FIGURE 1: POPULATION AND EMPLOYMENT GROWTH PROJECTIONS



4.8 Scaling and Phasing of Implementation Approach

The Corridor runs parallel to other east-west passenger rail corridors that may advance through the Corridor ID Program, including Chicago-Cleveland-Buffalo (Lake Shore Limited), Cleveland-Toledo-Detroit, and Philadelphia-Pittsburgh-Cleveland (Keystone). The Midwest Connect Corridor, possibly in combination with segments of other corridors, may offer the best opportunity for a high-speed connection between the Midwest and the East Coast, as it did a century ago.

Partners welcome the opportunity to work with the FRA and other corridor sponsors to identify the appropriate level of investment in each corridor as a connected system. The partners are ready and prepared to work with other regional partners, agencies and DOTs to advance passenger rail in the Corridor, whether through combining corridors, involving new partners, scaling the approach to match available funding, and phasing to ensure the route is developed in the best manner.

The Midwest Connect Corridor is located between Chicago, IL; Fort Wayne, IN; Columbus, OH; and Pittsburgh, PA. The Corridor is approximately 545 miles in length, stretching across five states.⁵ **Figure 2** illustrates the conceptual route with the inset map detailing congressional districts. The station stops on the map reflect prior studies of that route.

FIGURE 2: LOCATION MAP

The map displays the proposed rail corridor from Chicago to Lima, Ohio, and then to Pittsburgh. The main map highlights the Chicago-Lima Rail Corridor in black, with stations marked by circles. The Lima-Pittsburgh segment is shown in purple. An inset map shows the broader regional context, including Illinois (IL), Indiana (IN), Michigan (MI), Ohio (OH), Pennsylvania (PA), and West Virginia (WV). The inset map also shows the Ohio River and the Pittsburgh area. A scale bar indicates distances in miles (0, 10, 20, 40).

Chicago - Lima Rail Corridor and stations

- Chicago - Gary Airport
- Chicago - Valparaiso
- Plymouth
- Warsaw
- Fort Wayne
- Lima
- Kenton
- Marysville
- Columbus
- Newark
- Coshocton
- Uhrrichsville
- Stuebenville
- Pittsburgh

Lima - Pittsburgh Alternative Rail Segments & Stations

- Potential station locations
- Lima to Dunkirk to Kenton
- Kenton to Marysville to Columbus
- Columbus - North
- Columbus - South
- Columbus to Mingo Junction
- Mingo Junction - North
- Mingo Junction - South
- Mingo Junction to Pittsburgh - North A
- Mingo Junction to Pittsburgh - South
- Kirwan Heights to Ohio Connecting Bridge
- Pittsburgh - Ohio River West Upper
- Pittsburgh - Ohio River West Lower
- Pittsburgh - Downtown
- Mingo Junction to Pittsburgh - South

Other Map Features

- Other rail lines
- Amtrak routes & stations
- Interstate highway
- US highway
- State road

Legend

- Parks
- Rivers, streams, and waterbodies
- Census designated urban areas (CUA)
- Census places (incorporated areas)

7

6 EVALUATION AND SELECTION CRITERIA

6.1 Corridor Benefits

The need for the Midwest Connect passenger rail corridor arises from current travel challenges within the Corridor and the need to provide an alternative mode of transportation that would provide equitable intercity and interregional transportation connectivity, meet nationwide climate resiliency and sustainability goals, and maintain and grow the economic competitiveness of the small, mid-sized, and large communities along the Corridor. The Corridor's superior location and geometry also provides the foundation for a transformative high-speed rail investment between the Midwest and East Coast.

6.1.1 PROJECTED RIDERSHIP, REVENUES, CAPITAL INVESTMENT, OPERATION FUNDS

As detailed in **Section 4.2** Corridor Readiness, both the NIPRA and MORPC Corridor studies have demonstrated strong markets for ridership and revenue which warrant additional study and investment to advance the Corridor. The Pre-NEPA study examined ridership and revenue factors between Chicago, Fort Wayne and Lima and found the potential for up to **917,000 annual riders** (2035) and over **\$33 million in annual revenue**.⁶ MORPC's 2019 Passenger Rail Study did not forecast exact ridership and revenue, however, Corridor population and employment were studied and justify ridership markets for the proposed service. The 2020 MORPC Hyperloop Feasibility Study found a potential demand of over **2,000,000 annual riders**, highlighting the high demand ridership markets present.

6.1.2 ENVIRONMENTAL, CONGESTION, AND INDIRECT TRAVEL MITIGATION

The proposed passenger rail service parallels some of the most congested interstate corridors in the U.S. including I-80, I-94 and I-90 in the Chicago, Northwest Indiana (Gary) area, where all the east-west connections for the northern part of the country are forced together by Lake Michigan, creating a major bottleneck. Additionally, the Columbus beltway, I-270, is heavily congested at peak hours, especially where it is intersected by other routes such as I-70, US-33, US-23, and I-71. West of Columbus, there is no direct interstate route, forcing drivers to choose between an indirect interstate route through Indianapolis or a direct route using lower-quality, lower-speed, less safe highways with multiple intersections, stop lights, and driveway cuts. Passenger rail would eliminate the need for a new interstate system to be built.

For instance, the most direct highway route between Lima, OH and Chicago, IL is US-30/IN-49/I-90, which is prone to unreliable travel times. However, US-30 is a critical link along the Corridor for many of the small and mid-sized communities that are not directly served by the interstate system. As such, plans have moved forward to improve US-30 with a major rehabilitation project.⁷ Now is the right time for passenger rail plans to move forward for the Midwest Connect Corridor that runs parallel to it.

The Corridor's projected population and employment growth will continue to increase pressure on existing highways, creating more congestion and unpredictable travel times, and will increase the need for more transportation alternatives. Tolls along Corridor highways add to the inequitable costs associated with existing transportation options.

The Chicago to Columbus origin-destination pair has the highest existing travel demand of the Corridor pairs followed by Columbus to Pittsburgh and Chicago to Pittsburgh. Developing rail as a competitive travel mode in the region can also reduce the environmental impacts of transportation. Reduced emissions means rail is typically more energy-efficient than other modes of transportation. **Table 3** provides national estimates of per-passenger

⁶ \$33 million in 2019 dollars.

⁷ Ohio Department of Transportation (ODOT), Projects, U.S. 30 Major Rehabilitation webpage, <https://www.transportation.ohio.gov/projects/projects/93455>, Accessed March 10, 2023.

energy usage for different modes of travel and indicates that rail generally has lower emissions per passenger than other modes.

TABLE 3: PASSENGER TRAVEL AND ENERGY USE⁸

Mode	Passenger Miles (millions)	Btu per vehicle mile	Btu per passenger mile
Automobile	2,238,169	4,526	2,939
Air	661,991	266,640	2,320
Passenger Rail (Amtrak)	6,520	31,958	1,551

6.1.3 PROJECTED TRIP TIMES AND COMPETITIVENESS WITH OTHER MODES

Air travel is the largest mode share between Chicago and Columbus and Chicago and Pittsburgh since air travel trips typically take the least time of any mode. However, this is not always the case, particularly for Fort Wayne's airport, which does not have direct flights to Columbus or Pittsburgh. Also, there is no direct air service available between Columbus and Pittsburgh and intermediate corridor communities need to travel to hubs to make corridor trips by air. Even on direct, non-stop flights, air travel times are affected by wait times for security procedures, car rental pickup, and parking, as well as "last-mile" travel to city centers, the final destination of many intercity trips.

Bus transit services are lacking between the small and intermediate communities along the Corridor, leaving people without equitable and adequate transportation access, especially if they do not have access to a vehicle. Intercity bus service is currently available on two Greyhound routes between Chicago and Pittsburgh. One goes through Cleveland, similar to Amtrak's Capital Limited service, and the other goes through Columbus but requires a transfer in Indianapolis. Due to the indirect bus routing, travel times for some Corridor trips are much longer than auto travel. Bus and air travel also do not provide direct access to city centers where the Midwest Connect Corridor route would.

The nearest access point to existing Amtrak services from Fort Wayne is in Waterloo, IN, about 30 miles north. From Lima, the nearest Amtrak station is about 60 miles north in Bryan, OH. The existing services also do not typically meet Corridor travel needs since the routes have long-distance trains with schedules that are not convenient for most Corridor-based business and personal trips.⁹

A detailed travel time analysis has not yet been completed for the entire Corridor and will be dependent upon ultimate speeds. However, the 2019 NIPRA study, focusing on Chicago to Lima, found that the travel time of the screened service alternatives range from 3 hours, 27 minutes for 79 mph service to 2 hours, 35 minutes for the 110-mph service. Both 79 mph and 110 mph travel times are competitive with auto travel times in this congested corridor, which can range from 3 hours, 30 minutes to 5 hours, 20 minutes depending on time of day.

⁸ Transportation Energy Data Book, Edition 37-2018; https://tedb.ornl.gov/wp-content/uploads/2020/02/Edition37_Full_Doc.pdf

⁹ A vehicle trip from Lima, O.H. to Chicago with a 9 a.m. departure time can range anywhere from 3 hours and 50 minutes to 5 hours and 20 minutes. Depending on the service alternative ultimately selected, the run times estimated for the proposed Northern Indiana Passenger Rail service could be less than 4 hours for a 79-mph service and under three hours for a 110-mph service.

6.1.4 POSITIVE ECONOMIC AND EMPLOYMENT IMPACTS

The Midwest Connect Corridor will foster economic development, particularly in rural and smaller communities, increase mobility for all, provide more convenient travel options for travelers, and better connect the key cities. The service would make the communities along the Corridor more economically competitive by providing increased accessibility. It will attract workers to the Corridor's established companies and will enable small to large business development due to the improved economic opportunity the rail service would provide.

The current challenges along the Corridor, as noted in **Section 4.6** Challenges Corridor Aims to Address, impact the economic competitiveness of the small and mid-sized communities, businesses and educational facilities and make it more difficult for the region to achieve its long-term economic development goals. The introduction of passenger rail service will also help to catalyze development near rail stations which will bring opportunities for local revitalization and will further encourage business and service growth to the area by enabling multimodal connections.

The Midwest Connect Corridor runs through the center of the eastern Great Lakes Mega Region, linking the largest employment center in the region (metro Chicago) with two growing employment and residential centers (Columbus and Pittsburgh). The multiple metropolitan areas and the smaller cities are economically inter-dependent. The Corridor will also make vital connections to the larger passenger rail network, which will aid in providing economic growth and mobility across the United States.

The Fort Wayne metro area is a center of commerce along the Corridor with a strong manufacturing base and a long-standing insurance sector. Fort Wayne has a vibrant downtown with offices and residential living options and it provides many cultural, recreational, and entertainment destinations. Approximately 20 miles northeast of Fort Wayne is Columbia City, IN, the home to Steel Dynamics, Inc. (SDI) which is one of the largest domestic steel producers and metal recyclers in the U.S. with \$8.8 billion of annual revenues and over 7,500 employees. SDI is Amtrak's main U.S. rail provider. Warsaw, IN, 20 miles northwest of Columbia City, is the epicenter of the orthopedic industry with over 30 orthopedic device manufacturing, supply, and technical service companies.¹⁰ Medical device businesses in Warsaw generate over \$17 billion of annual revenue and employ nearly 7,000 workers. Passenger rail service would make Warsaw, Columbia City and other small-medium sized cities more attractive to retain and attract talent.

There are over 15 higher education institutions in the Corridor, including The University of Chicago, Purdue University, Indiana University, Ohio Northern University, and University of Pittsburgh. Passenger rail would provide a convenient and affordable travel option to attract students to these institutions since students often do not have personal vehicles. The cities along the Corridor, especially those with passenger rail station stops, would also benefit from the Midwest Connect service by attracting companies to open in or move to the cities. This would be followed by investment and would lead to the ability for the cities and companies to retain and gain world-class talent. It would also lead to needed downtown revitalization and would strengthen general city funds.

6.1.5 BENEFITS TO RURAL COMMUNITIES

The Midwest Connect service would make it easier to attract more people and workers to the region and to the rural communities by connecting them to the key cities and by opening up their economic, cultural, recreational, and agricultural tourism assets. The improved access and mobility will greatly improve the economic competitiveness and quality of life in these rural areas along the Corridor. Examples of rural communities include:

¹⁰ Parsons Brinckerhoff, Economic Impacts of Midwest High Speed Rail on the Orthopedics Industry of Warsaw, Indiana, 2011; <https://archive.org/details/ortho-worx-study>, Accessed March 10, 2023.

- The City of Kenton (pop. ~8,000), approximately 30 miles southeast of Lima, is the county seat of Hardin, which is the third most rural county in Ohio with a rural area of 98.8%.¹¹
- Marshall County, the location of Plymouth, IN (pop. 10,214) has a rural land area of 97.4%.¹²

6.1.6 BENEFITS TO UNSERVED AND LOW-INCOME COMMUNITIES AND AREAS OF PERSISTENT POVERTY

Socio-economic conditions vary along the Corridor, with the major markets of Chicago, Columbus, Fort Wayne, and Pittsburgh featuring both the highest median household incomes and the largest number of areas of persistent poverty and historically disadvantaged census tracts. These are also the same station areas expected to see the largest population growth. **Table 4** provides this data for potential station stops.¹³

TABLE 4: INCOME AND POVERTY LEVELS

Potential Station Locations	Population	Below Poverty Level	Median Household Income	Area of Persistent Poverty	Historically Disadvantaged Community
Chicago, IL (MSA)	9,510,390	10.60%	75,379	X	X
Gary, IN	69,739	30%	31,341	X	X
Valparaiso, IN	33,820	15.4%	80,151	X	-
Plymouth, IN	10,209	18.6%	59,276	X	X
Warsaw, IN	15,905	14.2%	55,295	X	-
Fort Wayne, IN (MSA)	423,038	10.2%	57,287	X	X
Lima, OH	36,352	12%	60,429	X	X
Kenton, OH	8,032	22.5%	31,239	X	-
Marysville, OH	24,922	6.9%	55,671	-	-
Columbus, OH (MSA)	2,151,017	11.5%	67,207	X	X
Newark, OH	49,703	16.8%	38,132	X	X
Coshocton, OH	11,051	21%	31,509	X	-
Newcomerstown, OH	3,809	28.9%	26,536	-	-
Uhrichsville, OH	5,275	20.1%	27,011	X	-

¹¹ Cleveland.Com Covering Northeast Ohio, The 20 most rural counties in Ohio, April 2022; <https://www.cleveland.com/data/2022/04/the-20-most-rural-counties-in-ohio.html>, Accessed March 10, 2023.

¹² Caledonian Record, Most rural counties in Indiana, 2021; https://www.caledonianrecord.com/most-rural-counties-in-indiana/collection_071e0bc9-f5b2-5579-980b-7932586b8c05.html#4, Accessed March 10, 2023.

¹³ Population, Poverty, and Income: U.S. Census Data, American Community Survey (ACS), 2021 5-Year; <https://data.census.gov>, Areas of Persistent Poverty & Historically Disadvantaged Communities: US DOT; <https://maps.dot.gov/BTS/GrantProjectLocationVerification>, Accessed March 10, 2023.

Steubenville, OH	18,122	25.4%	31,982	X	X
Pittsburgh, PA (MSA)	2,353,538	10.9%	62,638	X	X

The presence of lower income communities on the Corridor compounds the need for intercity rail to connect these markets, and the people who live there, to stronger economic areas. This is especially needed in these communities since people struggling with poverty, often also do not have reliable access to a vehicle, leaving them underserved by alternative transportation modes. Passenger rail will bridge the gaps, benefiting residents along and nearby the Corridor and the communities in which they live, work, and study. Passenger rail along the Midwest Connect Corridor would also address environmental justice, especially for the lower income communities that experience climate change impacts the most. The federal investments made in these communities will not only provide needed transportation options but will also provide other Justice40 benefits that will significantly aid the communities who need assistance the most.

6.1.7 IMPROVE CONNECTIVITY TO EXISTING AND PLANNED MODES

The Midwest Connect will connect to a variety of existing and planned transportation services and will:

- Complement air travel by making connections to the five airports along the Corridor
- Connect communities to the national rail network in Chicago and Pittsburgh and further east
- Link travelers to local transit and intercity bus services to reach smaller communities

6.1.8 PROVIDE CONNECTIONS TO MOST POPULATED METROPOLITAN AREAS

The Midwest Connect passenger rail link is critical to connecting the growing 14.7 million Corridor population. The Corridor already sees a high level of business, personal leisure, and tourism travel, evidenced by the high level of highway congestion in the region, which will increase as populations increase. The Corridor connects three of the top 32 populated metropolitan areas in the U.S. with Chicago being the 3rd most populated, Pittsburgh, the 27th, and Columbus, the 32nd. Fort Wayne is within the top 100 populous U.S. cities, at 84th.¹⁴

6.1.9 REGIONAL EQUITY, GEOGRAPHIC DIVERSITY AND INTEGRATION INTO NATIONAL PASSENGER RAIL SYSTEM

The Midwest Connect Corridor will play an important role as part of the national network of regional rail services because it will invest in the urban and rural communities in America's Heartland and make critical connections between Chicago, Mid-Indiana, Mid-Ohio, Pittsburgh and the well-developed rail network of the eastern seaboard. Imperative to the Midwest Connect partners is the ability for this Corridor to connect to other active, planned, and proposed Amtrak passenger rail corridors and that Midwest Connect does not preclude the development of other passenger rail projects. The connection of the Midwest Connect Corridor to the network would greatly increase ridership, enhance economic development, and reduce vehicle and airplane emissions throughout the system.

A Sensitivity Analysis was conducted in 2018 to analyze the feasibility of sharing a segment of the route with other proposed intercity passenger rail services across the Midwest since sharing the costs with other corridors would significantly increase the benefit-cost ratio for all alternatives. Stakeholder conversations have already started to determine how the Midwest Connect service would complement and support (and vice versa) the Corridor ID applications for the Cleveland-Columbus-Dayton-Cincinnati, Cleveland-Toledo-Detroit, Chicago-Indianapolis-Louisville, Chicago-Michigan, and Chicago-Toledo-Cleveland-New York corridors.

¹⁴ U.S. Census Data, 2020 Population and Housing State Data, August 2021; <https://www.census.gov/library/visualizations/interactive/2020-population-and-housing-state-data.html>, Accessed March 8, 2023.

6.2 Technical Merit

The partners are ready to advance the Midwest Connect Corridor through FRA's Corridor ID Program pipeline. The Corridor has already undergone significant study, providing a conceptual understanding of the risks, barriers to implementation, and next steps. The partners are prepared to work with other regional partners, agencies and DOTs to advance passenger rail in the Corridor. Together, they have the technical qualifications to lead and perform the necessary activities. The Corridor has significant support from the relevant legislative and executive government bodies along with an established history of support for intercity passenger rail operations and capital investments (see **Attachment 1**). The Corridor is supported by Amtrak and these planning efforts:

- FRA 2021 Midwest Regional Plan Study (MWRRP) pointed to the financial and economic value of the Corridor as freestanding and its enhanced value as part of a national network. The Chicago-Fort Wayne segment, potentially extending to Columbus, was identified as one of four corridors in the Midwest that could justify Core Express/Regional service levels.
- Indiana Department of Transportation's 2021 State Rail Plan documents the history of the Midwest Connect project and the involvement of the partners in expanding rail services.
- Ohio's 2019 State Rail Plan and its Long-Range Plan, Access Ohio 2045, acknowledges the necessity for Ohio to advance transportation investments that expand the state's economy and workforce and it identifies railroad investment as necessary to meet that goal.
- MORPC stated, "Central Ohio is the country's best case for new [passenger rail] service when you consider the current pace of growth... new service for the region would mean both new jobs and better access for Central Ohio residents and would support the region's communities... as we address transportation access, sustainability, and economic development issues."¹⁵
- Southwestern Pennsylvania Commission (SPC) supports Midwest Connect "to connect key Midwest hubs by passenger rail and believes that it represents a necessary investment in safety, accessibility, and regional equity in our nation's transportation system."

¹⁵ MORPC, Local Leaders Put The Region On Track for Passenger Rail Service, December 2022; <https://www.morpc.org/news/morpc-local-leaders-put-region-on-track-for-passenger-rail-service-2/>, Accessed March 8, 2023.

7 DOT STRATEGIC GOALS

7.1 Improve Safety

Traveling by auto is the least safe of the modes of intercity passenger transportation, however, it is used the most in the Corridor. Measured in terms of fatalities per passenger-miles carried, the U.S. highway fatality rate between 2007 and 2020 was 17 times higher than the rail fatality rate.¹⁶ In many cases this mode is used due to limited or no other choices. Passenger rail in the Corridor will therefore reduce auto-related fatalities and serious injuries across the transportation system. Riding the train allows people to engage in activities that in a vehicle are distracting and to not be subject to weather-related issues, which are common in the Midwest Connect Corridor. Safety will also be improved with potential updates for at-grade crossings, especially at highways; upgrading infrastructure, including wyes, sidings, and signals; and by utilizing an appropriately trained workforce.

7.2 Economic Strength and Global Competitiveness

Providing fast, reliable, accessible, and equitable transportation connections between varied economies of scale will make business, personal, and tourist travel more efficient and will enhance economic competitiveness along the Corridor. For instance, small, rural cities will be seamlessly connected to metropolitan areas, such as Chicago with a Gross Domestic Product (GDP) of \$630 million+ and Fort Wayne (GDP: \$20 million+). Lima (GDP: ~7.5 million) will connect to Columbus with a GDP of \$125 million+ and to Pittsburgh's \$140 million GDP.¹⁷

Illinois, Indiana, Ohio, and Pennsylvania all support the U.S. agricultural and manufacturing economies. These industries supply jobs to residents and helped build the rail infrastructure in many Midwestern states where goods are shipped via rail. Understanding the Midwestern economy and its relationship to rail and the transportation system has been and continues to be an important context for this planning effort as has continuing to track the economies of the cities along the Corridor (see **Sections 0 and 0**).

7.3 Infrastructure Investment and Job Creation

The Midwest Connect Corridor would provide permanent and temporary employment opportunities that will enable families to achieve economic security through rail industry employment with strong labor standards and free and fair choices to join a union. A 2013 Business Case Study for the Chicago to Columbus rail corridor estimated that construction and ongoing operations and maintenance of the rail service were estimated to spur the creation of 12,000 construction jobs and 26,000 permanent jobs over 30 years.¹⁸ Committed to implementing strong labor standards, the Midwest Connect partners will ensure that these are good-paying jobs that provide families with financial security.

Midwest Connect will benefit railroad operators by investing in improvements of the existing rail infrastructure, which have been minimal in the last 20 years. The Fort Wayne Line, for instance, has not been a priority track since it was owned by Penn Central, though NS invested in portions of the railroad in the mid-1990s. Capital maintenance work on the line was minimal from the 1970s until 2004 when some improvements were made.

¹⁶ National Safety Council, Injury Facts, Deaths by Transportation Mode 2007-2020; <https://injuryfacts.nsc.org/home-and-community/safety-topics/deaths-by-transportation-mode/#:~:text=Passenger%20vehicles%20are%20by%20far,higher%20than%20for%20scheduled%20airlines>. Accessed March 10, 2023.

¹⁷ Bureau of Economic Analysis, Gross Domestic Product; <https://www.bea.gov/data/gdp/gross-domestic-product>. Accessed March 8, 2023.

¹⁸ Transportation Economics & Management Systems, Inc., Northern Indiana Ohio Passenger Rail Corridor Feasibility Study and Business Plan, December 2012, footnote 'The estimation of temporary construction jobs were developed by using RIMS II Input Output multipliers for the corridor.' <http://noprail.org/wp-content/uploads/2018/03/Northern-Indiana-Ohio-Passenger-Rail-Corridor-Feasibility-Study-and-Business-Plan.pdf>. Accessed March 7, 2023.

Selection into the Corridor ID Program will enable the Midwest Connect partners to ensure that the existing railroad assets will be improved to a state of good repair. Previous studies began outlining how this would be balanced between adding new infrastructure and properly maintaining existing aging assets.

7.4 Support Resilient Supply Chains and Economic Opportunity

Additional beneficiaries of Midwest Connect are active and planned passenger rail services and railroad operators. This is because ridership will increase on Amtrak's other corridors by enabling Corridor residents and visitors to connect to Cleveland, Toledo, St. Louis and Detroit. It will benefit the railroad operators and freight shippers on other established corridors as well, such as *Capitol Limited*, *Lake Shore Limited*, *Cardinal*, and *Wolverine*, by offsetting some of their passenger rail traffic. These benefits will support resilient supply chains.

7.5 Equity

In addition to the equitable and safer transportation connectivity, economic development, and quality of life enhancement that the Midwest Connect service would bring, the partners would also ensure equitable involvement throughout the Corridor's planning, construction, and implementation. An example of this, is that the partners are committed to working with businesses and organizations, such as Disadvantaged Business Enterprises (DBEs), and small and minority-owned businesses. They will also ensure that strong labor standards are maintained, high-quality workforce trainings are provided, and will support workforce development programs, such as those offering apprenticeships and pre-apprenticeships. Proactive plans will be developed and enforced to prevent any type of harassment, unions will be encouraged, and local good-paying jobs will be provided.

Long committed to equity, the partners have and will continue to develop and hold inclusive public engagement and outreach opportunities that ensure communities are meaningfully included in the planning and decision-making process. Public meetings will be held at accessible venues, hearing impaired and translation services will be available, and materials will be presented in a variety of mediums.

7.6 Climate and Sustainability

The Midwest Connect Corridor would directly serve four counties that are designated 8-hour ozone non-attainment zones per the National Ambient Air Quality Standards (NAAQS).¹⁹ These are areas where ground-level ozone, caused when pollutants from cars, power plants, refineries, etc., chemically react with sunlight, exceeds the maximum allowed measurement for ozone, posing harmful health and environmental effects. The high levels of roadway congestion in the Corridor exacerbate this serious problem.

Passenger rail would provide the Midwest Connect Corridor a more energy-efficient and less emission producing option. Additionally, the Midwest Connect service will reduce the need to use more land for auto-centric and air facilities and will mitigate future wetland and water resource impacts since the service would utilize existing rail and rail right-of-way.

7.7 Transformation

Entrance of Midwest Connect into the Corridor ID Program pipeline will set the stage for a tremendous transformation of this critical Midwest corridor since it will:

- Expand the Midwest passenger rail network by providing new service to previously served communities.
- Improve supply chain resilience.

¹⁹ EPA, Cook County, IL, Lake County, IN, Franklin County, OH, and Licking County, OH Ground-level Ozone Pollution; <https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics#effect>, Accessed March 10, 2023.

- Benefit railroad operators and freight rail owners and shippers on other established corridors by offsetting existing passenger rail traffic and improving rail assets.
- Leverage an existing railroad mainline and right-of-way, built for high-speed travel.
- Establish the backbone of a 21st Century high-speed rail connection between the Midwest and the East Coast.