

BUILD 2020 Project Information - Please complete all fields.
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Field Name	Response	Instructions
Project Name	Connecting Erie's Waterfront: Bayfront Parkway Mobility and Freight Improvement Program	Enter a concise descriptive title for the project. This should be the same title used in the Grants.gov SF-424 submission and the application narrative.
Project Description	The project builds new connections that maximize the use of existing infrastructure. Improvements include: Two multi-lane roundabouts at the Bayfront Parkway and Sassafras Street and Bayfront Parkway and Holland Street intersections; A grade-separated intersection at Bayfront Parkway and State Street; New segments of sidewalks and multi-use trails connecting to existing trails, Downtown Erie, and the waterfront; New pedestrian bridges connecting the Downtown Business Opportunity Zone to the waterfront Erie Intermodal Transportation Center; and A multimodal bridge connecting the Pennsylvania Soldiers' and Sailors' Home and the Veterans Memorial Cemetery, replacing a dangerous at-grade railroad crossing.	Describe the project in plain English terms generally understood by the public, using no more than 100 words . For example, "The project will replace the existing bridge over the W river on Interstate-X between the cities of Y and Z" or "the BUILD Grant will fund construction activities for streetcar service from location X to location Y." Please do not describe the project's benefits, background, or alignment with the selection criteria in this description field.
Urban/Rural	Rural	Identify whether the project is located in a rural or urban area , using the drop-down menu. For BUILD 2020, a project is designated as urban if it is located within (or on the boundary of) a Census-designated urbanized area that had a population greater than 200,000 in the 2010 Census. All other projects will be designated as rural.
Urbanized Area	Erie, PA	If you have identified the project as "urban," please select the associated 2010 Census-designated urbanized area (UA) from the drop-down. If you identified the project as "rural" but it is located in an UA with a population under 200,000, please select the UA from the drop-down. If you have identified the project as "rural" and it is not located in a non-urbanized area, please select "Not located in an urbanized area" from the drop-down.
Capital or Planning	Capital	Identify the project as capital or planning . The " capital " designation should be used for projects that are requesting funding primarily for the physical development, acquisition, or improvement of surface transportation capital infrastructure. The " planning " designation should be used for projects that are requesting funding primarily for aspects of planning, preparation, or design.

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Field Name	Response	Instructions
Project Type	Road - New Capacity	Identify the Primary and Secondary project type combination that most closely aligns with your project from the choices in the drop-down menu. See the "Project Types" tab in this file for further information and project type definitions.
Primary Project Location Zip Code	16507	Identify the 5-digit zip code of the project location . If the project is located in multiple zip codes, please identify the most centrally located zip code.
Project Previously Submitted?	Yes - BUILD/TIGER	Identify whether the project was submitted in a prior BUILD/TIGER or INFRA round , using the drop-down menu.
Prior BUILD/TIGER Funds Awarded to Project?	No	Identify whether the project has previously received BUILD/TIGER funding , and if so, whether that funding was through a planning or capital grant, using the drop-down menu.
FY20 INFRA or PIDP Applications?	Yes – INFRA	Identify whether this project is also being submitted to the Nationally Significant Freight and Highway Projects Program (also known as INFRA) or the Port Infrastructure Development Program (also known as PIDP) for Fiscal Year 2020.
Amount Requested	\$24,971,989	Enter the total amount of BUILD funds requested for this project in this application. [For capital projects , the minimum urban entry is \$5,000,000 and the minimum rural entry is \$1,000,000. For planning projects , the minimum entry is \$1. The maximum entry for both types is \$25,000,000].
Total Project Cost	\$63,871,989	Enter the total cost of the project . This should equal the sum of Total Federal Funding and Total Non-Federal Funding. <i>This value may not be less than the amount requested.</i>
Total Federal Funding	\$42,871,989	Enter the amount of funds committed to the project from ALL Federal sources including the proposed BUILD amount . For BUILD projects designated as urban , Federal funding cannot exceed 80% of total project cost.
Total Non-Federal Funding	\$20,000,000	Enter the amount of funds committed to the project from non-Federal sources . For BUILD projects designated as urban , the total non-Federal funding amount must be greater than or equal to 20% of the project cost.
Tribal Government?	No	Select "Yes" from the drop-down menu if the applicant is a Federally recognized tribal government .
Tribal Benefits?	N/A	If the applicant is not a Federally recognized tribal government , is the project located on tribal land? And if not, does it have direct tribal benefits? Answer using the drop-down menu.

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Field Name	Response	Instructions
Private Corporation Involvement	No	Does this project involve (a) private entity(ies) that will receive a direct and predictable financial benefit if the project is selected for award? This includes, but it not limited to, private owners of infrastructure facilities being improved and private freight shippers or carriers directly benefitting from completion of the proposed project.
Private Corporation Name(s)		If this project directly involves or benefits a specific private corporation , please list the corporation(s).
TIFIA/RRIF?	No	Is the project currently, or does this project anticipate applying for Transportation Infrastructure Finance and Innovation Act (TIFIA) or Railroad Rehabilitation & Improvement Financing (RRIF) loans ?
Department Financing Program?	No	If your application is unsuccessful, would you like to be contacted about the Department's financing program ?
Designated Opportunity Zone?	The project is fully located within an Opportunity Zone	Please indicate if this project is located within a designated Opportunity Zone . To make this determination, review the Department of Housing and Urban Development's interactive map of designated Opportunity Zones by clicking on this cell.

Connecting Erie's Waterfront

Bayfront Parkway Mobility and Freight Improvement Program

Better Utilizing Investments to Leverage Development (BUILD)
Transportation Discretionary Grant - FY2020
Funding Opportunity Number DTOS59-20-RA-BUILD
National Infrastructure Investments



Application Type: Capital Highway & Bridge
Location: City of Erie, Pennsylvania
BUILD Area Type: Rural
Amount Requested: \$25 million

Pennsylvania Department of Transportation District 1
225 Elm Street
Oil City, PA 16301

BUILD 2020 Discretionary Grant Application

Connecting Erie's Waterfront

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PROJECT DESCRIPTION

The *Connecting Erie's Waterfront* project is an excellent fit for the BUILD Transportation Discretionary Grant program, as it appropriately [fulfills the selection criteria](#). One of Pennsylvania's most unique assets—its Great Lakes waterfront—is choked off from the City of Erie's central business district and adjacent neighborhoods. The interference is caused by a busy roadway, an abrupt change in elevation, and an old railroad that once served the region's industrial past. These physical barriers regularly present obstacles for residents, workers, and visitors who drive, bus, bike, or walk to and from the area's many destinations. The conditions simultaneously stymie Erie's modern economic growth by reducing access to businesses and limiting aspiring developments on the waterfront's many idle properties.

The Pennsylvania Department of Transportation's (PennDOT's) local district office has worked with the City's leaders, hundreds of residents, and countless stakeholders to develop a cohesive plan to fix these problems. The resulting preferred alternative, known within this document as *Connecting Erie's Waterfront*, is ambitious yet systematic, multimodal while improving traffic flow, and enterprising while serving the city's economic anchors.



The improvements concentrate on Bayfront Parkway, the east-west thoroughfare nearest the waterfront. Three major intersections will be reconfigured, effectively opening the “valves” of north-south traffic flow for vehicles as well as pedestrians and bicyclists between downtown and waterfront business, health, education, and recreational destinations. Traffic flow on Bayfront Parkway will be improved, which is vital because the Bayfront Parkway is an important regional corridor that is part of the National Highway System and a connection to the National Highway Freight Network. Related project elements, such as removing two at-grade rail crossings and connecting a multi-use trail network, will enhance safety, mobility, and economic growth.

It has been a decades-long process, working from a vision to a shovel-ready project, but PennDOT (lead applicant) and the City of Erie are committed to moving forward. A significant portion of the funding is in place, the NEPA process is scheduled to be complete by early summer 2020, and construction is on schedule to start in late 2021.

Key Project Elements

The project improvements consist of:

- Reconstructing **three major highway intersections** (described below);
- **Removing existing railroad tracks (including two at-grade rail crossings)**;
- Closing the gaps in a **multi-use trail network**; and
- Constructing a **multimodal bridge**.

Detailed maps and renderings, showing each project component in context, are available on the “Detailed Project Map” [page](#) of the [project website](#) (Password: Er1Econnects).

The existing, signalized **Bayfront Parkway at Sassafras Street Extension [intersection](#)** will be upgraded to a dual-lane three-leg roundabout to improve safety, capacity, and efficiency. An at-grade pedestrian crossing will be provided [across](#) Sassafras Street Extension and will include a pedestrian refuge area within the concrete splitter island located between the opposing travel lanes. A sidewalk will be built [along](#) Sassafras Street—the one-way roadway from the Bayfront Parkway up to West Front Street—which will allow pedestrians from the bluff to cross the Bayfront Parkway at the existing signalized pedestrian crossing just west of the Erie Water Works driveway.

The existing, at-grade, signalized **Bayfront Parkway at State Street [intersection](#)** will be upgraded to a grade-separated roadway to improve safety and intersection operating efficiency. Bayfront Parkway’s through travel lanes will be lowered to pass beneath State Street at a [similar elevation](#) as the existing railroad tracks, which will be removed. Bayfront Parkway’s two inside lanes will ramp up to a traditional signalized intersection with State Street to maintain all directional access. New sidewalks and crosswalks are proposed on all quadrants of the intersection.

The existing, signalized **Bayfront Parkway at Holland Street [intersection](#)** will be upgraded to a dual-lane four-leg roundabout. Sidewalks, crosswalks, and an elevated pedestrian bridge will be added to connect the [University of Pittsburgh Medical Center](#) (UPMC) Hamot Hospital’s [campus](#) and Downtown Erie to the Waterfront District. The [railroad tracks](#) will be removed, and an at-grade pedestrian crossing will be provided [across](#) Holland Street. It will include a pedestrian refuge area within the concrete splitter island located between the opposing travel lanes.

A **multi-use trail** connecting all three intersections on the north side of the Bayfront Parkway will be completed to enhance bicycle and pedestrian access throughout the project area.

Lowering the Bayfront Parkway below State Street requires the **removal of approximately 2,400 feet of [railroad tracks](#)** that are currently owned by CSX and used for [storing rolling stock](#). The removal will include the tracks [just east](#) of the Bayfront Parkway and Sassafras Street Extension intersection to [just east](#) of the Bayfront Parkway and Holland Street intersection. To mitigate the loss of that rail segment, improve operations for CSX, and enhance safety, a **multimodal bridge** will replace an [existing at-grade crossing](#) to the east, adjacent to the historic [Pennsylvania Soldiers’ and Sailors’ Home](#) (PSSH) property. In order to maintain its operations, CSX will reconfigure and

expand its [existing railyard](#) located east of Holland Street adjacent to PSSH and the Veterans Memorial Cemetery (Pennsylvania's only state-owned veterans' cemetery).

Transportation Challenges the Project will Address

The transportation challenges facing the project area (**Exhibit 1**) are organized by the following categories: **Mobility and Connectivity**, **Safety**, and **Operations and Efficiency**.

Exhibit 1. Challenges the Project Will Address and How It Will Address Them

Challenges	Solutions
Mobility and Connectivity Issues	
<p>Lack of Accessibility: The average elevation difference between Downtown Erie and the adjacent Bayfront District is 70 feet. Due to this abrupt elevation change and associated retaining walls and fencing, Bayfront Parkway and the adjacent train tracks act as a barrier limiting user access to the project area. Transit access is scarce. Improved access to Downtown Erie is needed to maximize prior investments in the Erie Intermodal Center.</p>	<p>The intersection improvements, at-grade rail crossing eliminations, and the multimodal trails will provide better linkages for all users traversing through the waterfront area. With the proposed bicycle and pedestrian access at each project intersection, the Downtown Business Opportunity Zone and Erie Intermodal Transportation Center will become more accessible for all transportation users. With improved access, the Erie Metropolitan Transit Authority (EMTA)—Erie's fixed-route and demand response provider—will be able to transport riders to downtown jobs and the medical center more efficiently.</p>
<p>Lack of North-South Connectivity: Businesses continue to urge the city to address the lack of connectivity between the waterfront and downtown.</p>	<p>With improved connectivity, travelers in both the north-south and east-west directions will experience a total travel time savings of 7.5 million hours and a monetized time savings of \$66 million.</p>
Safety Issues	
<p>Vehicular Crashes: The crash rate on Bayfront Parkway is much higher than the crash rate for the city as a whole. Red-light and speeding violations increase at peak hours.</p>	<p>Roundabouts will help reduce traffic speeds throughout the project area and will eliminate two signalized intersections. Lowering Bayfront Parkway will eliminate cross-traffic crashes at State Street.</p>
<p>Lack of Safe Bike and Pedestrian Facilities: There is a lack of consistent bike and pedestrian facilities in the project area, requiring bicyclists and pedestrians to share the road with motorized vehicles,</p>	<p>Expanding, improving, and connecting the sidewalk and crosswalk network will reduce vehicle crashes with bicyclists and pedestrians. A pedestrian bridge over the Bayfront Parkway</p>

<p>compromising the safety of all transportation users. The public increasingly perceives Bayfront Parkway as an unsafe corridor to walk or bike, due to high vehicle speeds.</p>	<p>and Holland Street intersection will separate motorized and non-motorized traffic.</p>
<p>Traffic Congestion: Traffic congestion has reportedly impacted emergency response times and employee commute times for UPMC Hamot Hospital and other employment centers along the Bayfront Parkway corridor.</p>	<p>With the project's new intersection configurations, the project area will see improvements to Levels of Service (LOS). Future LOS at each intersection will be as follows:¹</p> <ul style="list-style-type: none"> • Sassafra Street Extension <ul style="list-style-type: none"> ○ AM peak improves from LOS C to A ○ PM peak improves from LOS F to B • State Street <ul style="list-style-type: none"> ○ AM peak improves from LOS E to C ○ PM peak improves from LOS F to B • Holland Street <ul style="list-style-type: none"> ○ AM peak unchanged at LOS B ○ PM peak improves from LOS D to B

Operations and Efficiency

<p>Anticipated Increases in Travel Demand: Land use/zoning changes and current/future economic development initiatives will likely increase traffic volumes within the disjointed and congestion-prone project area.</p>	<p>Eliminating Bayfront Parkways traffic signals and installing roundabouts will allow higher volumes of traffic to move throughout the project area more efficiently.</p>
<p>Lack of Signal Synchronization: The traffic signals in Downtown Erie and along Bayfront Parkway are outdated and unsynchronized.</p>	<p>A traffic signal corridor improvement project on 12th Street (SR 0005) complements the Bayfront Parkway Central Corridor Improvement Project. This roadway is an east-west corridor that bisects Erie south of the Bayfront Parkway corridor. One purpose is to improve traffic flow through the corridor's 26 intersections so that 12th Street can be used as an effective east-west alternative route while the Bayfront Parkway is under construction. The project is currently in the preliminary engineering phase with plans to upgrade traffic signals, coordinate signal timings, and enhance both pedestrian and vehicular safety.</p>

¹ For more information about the traffic congestion and LOS, please see page 30 of the 2017 [Bayfront Parkway Feasibility Study](#).

	<p>Intelligent Transportation Systems (ITS) signs are also currently being evaluated/proposed on both sides of Erie to provide real-time traffic information between 12th Street and Bayfront Parkway. These signs will also help inform motorists of traffic delays during the construction of various improvements on the Bayfront Parkway.</p>
<p>Freight-Related Issues</p>	
<p>Anticipated Increases in Freight Demand: The Port of Erie and adjacent Donjon Ship Building and Repair draw large ships. Freight shipments at the Port of Erie increased 14.5 percent (2.7 percent/year) over the past five years. Much of this freight travels via truck on Bayfront Parkway to and from the Interstate Highway System, but Bayfront Parkway is unable to handle the projected increase in freight. See the Economic Competitiveness section for details.</p>	<p>The project will increase port access, roadway capacity, and mobility along Bayfront Parkway—an important regional corridor (as part of the National Highway System) and connection to the National Highway Freight Network.</p>

Source: Various plans and studies of the project area. Please see the [project website](#) for details.

Project History

Over the years, there have been a series of comprehensive studies in an effort to transform Erie's stalled economy, revitalize its aging infrastructure, and address its population migration to the suburbs. These plans aimed to bring renewed economic development interest and socioeconomic balance to the city. The City of Erie's [2014 Background Analysis Plan](#) provided a decision-making framework to guide investments to achieve two desired outcomes:

1. Stabilizing prices and rents by bringing supply and demand for private real estate and supportive infrastructure into equilibrium.
2. Transforming Erie into a community of choice in the region by improving its remaining real estate supply and by taking advantage of the city's outstanding assets—making the city's housing, streets, parks, and economic opportunities highly desirable.

From 2015-2017, PennDOT commissioned a study of the Bayfront Parkway that evaluated concepts and proposed improvements to:

- Encourage more efficient and safe access to motorized vehicles;
- Support pedestrian, bicycle and transit access to the Bayfront;
- Enhance connections to downtown Erie and the surrounding neighborhoods; and
- Support current and future development within the downtown and Bayfront areas.

The *Connecting Erie's Waterfront* project fulfills a vital part of this vision that has been building for some time. To learn more about the project's history and its planning efforts, please see the Bayfront Parkway Project study [webpage](#). To date, PennDOT has not completed any physical components of the project, but the vast majority of the planning has been completed and the engineering and design is underway.

Other Transportation Infrastructure Investments being Pursued

A **traffic signal corridor improvement project on SR 5/12th Street** complements the *Connecting Erie's Waterfront* project. This roadway is an east-west corridor that bisects Erie south of Bayfront Parkway. One purpose is to improve traffic flow through the corridor's 26 intersections so that 12th Street can function as an east-west alternative route while Bayfront Parkway is under construction. The project is currently in the preliminary engineering phase with plans to upgrade traffic signals, coordinate signal timings, and enhance both pedestrian and vehicular safety.

Project Benefits for Communities in Rural Areas

Erie's comprehensive plans² have produced a growing vision that proposes solutions to the area's rural growth-related issues. The *Connecting Erie's Waterfront* project is the fulfillment of a critical component of those visions, because it links the civic, economic, land use, and entertainment opportunities of the waterfront to Downtown Erie and to the rest of the region. The project's new connections and multimodal focus complement more than \$750 million in private, public, and philanthropic investment in Erie. Together, all components of the project:

- Enhance the connectivity of the Erie's eight Opportunity Zones, the Lake Erie waterfront (one of Erie's most significant assets), and surrounding neighborhoods;
- Smooth traffic flow;
- Improve safety for all travelers; and
- Reinforce Downtown Erie's ongoing economic revitalization.

These elements support continued economic growth and increased appeal to businesses and residents. For more information regarding the project's benefits for communities in rural areas, please refer to the Economic Competitiveness and Quality of Life sections.

PROJECT LOCATION

All project maps and renderings may be reviewed in detail on the "Detailed Project Map" [page](#) of the [project website](#) (Password: Er1Econnects). This webpage provides the following maps:

- [Overall Corridor](#) – Overall project boundaries
- [Sassafras Street Extension](#) – Bayfront Parkway at Sassafras Street Extension intersection
- [State Street](#) – Bayfront Parkway at State Street intersection
- [Holland Street](#) – Bayfront Parkway at Holland Street intersection
- [Soldiers' & Sailors' Access](#) – The multimodal bridge at the historic PSSH property

² To view Erie's previously completed studies, please visit the Bayfront Parkway Project study [webpage](#).

The overall project boundaries, which begin west of the Sassafras Street Extension intersection and continue through the State Street and Holland Street intersections. To the east of these three intersections, a multimodal bridge will connect the PSSH to Veterans Memorial Cemetery and accommodate the improvements at Bayfront Parkway and State Street.

The *Connecting Erie's Waterfront* project is located on the SR 4034 (Bayfront Parkway) corridor within the City of Erie, in Erie County, Pennsylvania. The City of Erie is situated on I-90 and I-79, due north of Pittsburgh, Pennsylvania, midway between Buffalo, New York, and Cleveland, Ohio. Bayfront Parkway is a regionally significant freight corridor providing access to the Erie-Western Pennsylvania Port Authority which is also [registered as Foreign-Trade Zone 247](#). The project is in the heart of [several of the city's Qualified Opportunity Zones](#). **Exhibit 2** shows the *Connecting Erie's Waterfront* project area in relation to Pennsylvania.

Exhibit 2. Context Map: The City of Erie in Relation to Pennsylvania



GRANT FUNDS, SOURCES, AND USES OF PROJECT FUNDING

A comprehensive public funding strategy is now in place to implement the *Connecting Erie's Waterfront* project. The funding program includes \$38.9 million in state and federal grant assistance. PennDOT is requesting \$25 million from this BUILD grant cycle for additional project funding.

Project Costs

The estimated total construction cost eligible for federal funding is \$58.4 million. This includes all project components and related costs, such as right-of-way acquisition. A detailed cost estimate is provided on the [project website](#). **Exhibit 3** presents a summary of the estimated project costs (approximately \$58.4 million) and total costs (approximately \$63.9 million, which includes a \$5.5 million contingency fund). All cost estimates are in 2020 dollars.

Exhibit 3. Estimated Project Costs

Elements	Item	Estimated Cost ³	Percentage of Project Costs ⁴
CSX Railroad Relocation	CSX Railroad Track Relocation and Crossing Upgrades	\$5,000,000	8.6%
	Soldiers & Sailors Access Improvements	\$1,676,519	2.9%
Sassafras Street Extension	Dual-lane Roundabout & Sidewalk Improvement	\$2,314,093	4.0%
State Street	Grade Separated with Signal	\$21,225,062	36.4%
Holland Street	Dual-lane Roundabout & Pedestrian Bridge	\$9,025,964	15.5%
Corridor Construction Costs	Corridor Improvements	\$2,342,700	4.0%
Miscellaneous Costs	Construction Management / Construction Inspection	\$4,000,000	6.9%
	Utility Relocation	\$1,000,000	1.7%
	Right-of-Way Acquisition	\$2,000,000	3.4%
	Engineering / Design	\$9,800,000	16.8%
Total w/o contingency		\$58,384,338	100%
Contingency		\$5,487,651	
Total w/ Contingency		\$63,871,989	

Source: MS Consultants, Inc.

³ High-level construction cost estimates based on past project experience and subject to change upon more detailed investigations and engineering. Additional construction costs may be incurred with phased construction.

⁴ Percentages based on total cost w/o contingency. May not sum to 100% due to rounding.

Funding Commitments

Bayfront Parkway is a state-owned roadway maintained by PennDOT. Based on PennDOT's maintenance work order records in the past five years, the average annual roadway maintenance cost along the Bayfront Parkway corridor is \$13,145 per lane-mile. The funding sources include PennDOT's County 582 Appropriation Funds for maintenance (e.g., roadway pavement and painting) and City of Erie funds for operating assistance (e.g., signals). Rebuilding the segment will reduce maintenance costs for several years after the project's completion.

For capital costs, PennDOT has allocated \$15 million from the State Appropriations 581 Fund, which provides funding for state highway and capital projects, and \$5 million from State Multimodal Funds, which will fund the CSX relocation. Additionally, the federal government has allocated \$18.9 million to the project using the Surface Transportation Program (STP) and Railroad Section 130 funding. The STP provides funding for projects to preserve and improve the conditions and performance of federally aided projects. The Section 130 program provides funds for eliminating hazards at railway-highway crossings. **Exhibit 4** shows the project's funding plan. **Exhibit 5** lists project expenditures and funding sources. Documentation of funding commitments for non-federal funds is provided in the Appendix.

Exhibit 4. Project Funding Plan by Phase

Entity	Project Phase	Eligible Costs	Percentage of Total ⁵
PennDOT Commitment			
2020-2022 State Multimodal Funds	Construction	\$5,000,000	7.5%
2022 A-581 Funds	Construction	\$10,000,000	15.0%
2023 A-581 Funds	Construction	\$5,000,000	7.5%
Federal Commitment			
2017 STP Funds ⁶	Preliminary Engineering (PE)	\$2,600,000	3.9%
2019 STP Funds ⁶	PE	\$4,000,000	6.0%
2020 STP Funds	Final Design	\$1,000,000	1.5%
2021 STP Funds	Final Design	\$1,000,000	1.5%
2021 STP Funds	Utilities	\$1,000,000	1.5%
2021 STP Funds	Right-of-Way	\$1,500,000	2.3%
2022 STP Funds	Construction	\$5,500,000	8.3%
2023 STP Funds	Construction	\$1,000,000	1.5%
2022-2024 RRX Section 130 Funds	Construction	\$1,300,000	2.0%
Subtotal Committed Funds		\$38,900,000	60.9%
BUILD Grant		\$24,971,989	39.1%
Total Project Funding		\$63,871,989	100%

⁵ May not sum to 100% due to rounding.

⁶ 2017 and 2019 STP funds have already been released.

Exhibit 5. Project Expenditures by Funding Source

Project Component	Cost	Eligible Funding Partners		
		Federal	State	BUILD
CSX Railroad Relocation	\$6,676,519	●	●	●
Sassafras Street Extension Intersection	\$2,314,093	●	●	●
State Street Intersection	\$21,225,062	●	●	●
Holland Street Intersection	\$9,025,964	●	●	●
Corridor Construction Costs	\$2,342,700	●	●	●
Miscellaneous Costs	\$16,800,000	●	●	●
Contingency	\$5,487,651	●	●	●
Total	\$63,871,989			

PRIMARY SELECTION CRITERIA

Connecting Erie's Waterfront is an excellent fit for the BUILD Transportation Discretionary Grant program, meeting each of the selection criteria as outlined below.

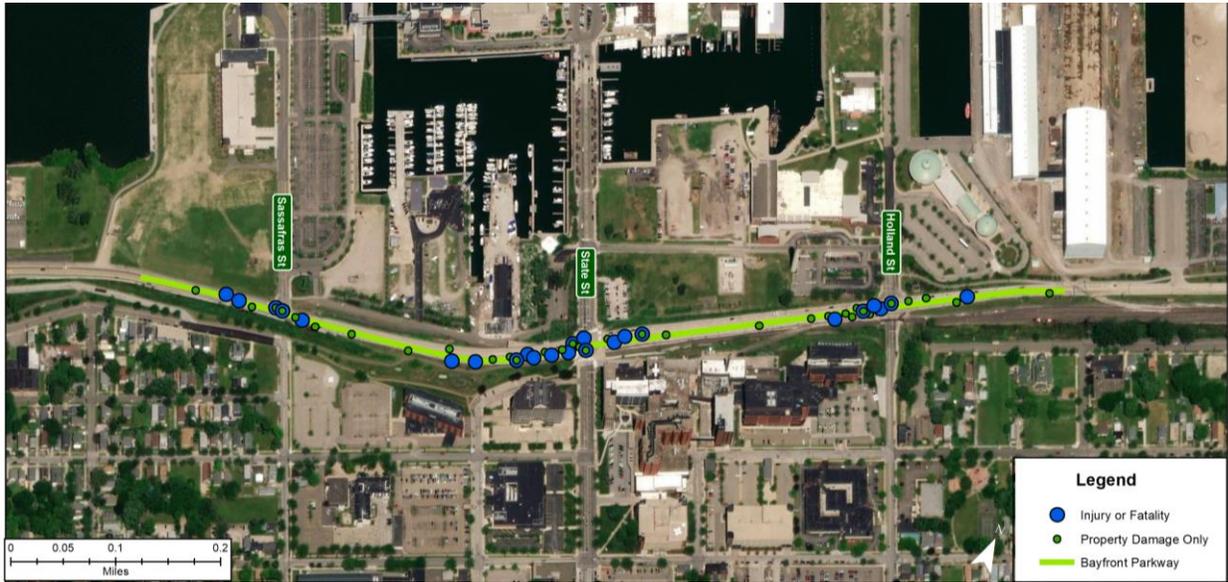
Safety

Connecting Erie's Waterfront will foster a safe transportation system for the movement of goods and people.

Criterion	How Project Meets Criterion (narrative follows summary table)
Improves number and rates of crashes, fatalities, injuries, and other consequences	<ul style="list-style-type: none"> Replaces two intersections with roundabouts and builds a third grade-separated intersection, eliminating through traffic at the Bayfront Parkway and State Street intersection, thus reducing traffic speeds and conflicts. Eliminates an estimated 114 injuries/fatalities and 46 property-damage-only crashes over the 20-year analysis horizon (through 2043). Reduces average annual crashes from 15 to an estimated 11 and reduces the average annual number of injuries/fatalities from 10 to 4. Reduces the project area's crash rate from 2.6 to an estimated 1.4 (crashes/MEV). Separates motorized and non-motorized traffic, reducing bicycle- and pedestrian-involved crashes.
Eliminates highway/rail grade crossings	<ul style="list-style-type: none"> Eliminates two at-grade highway-rail crossings.

The project will improve safety by reducing the number of crashes and their resulting property damage, injuries, and fatalities. **Exhibit 6** maps the crashes that occurred in the project area between 2009 and 2018.

Exhibit 6. Map of Crash Sites within Project Area (2009-2018)



Due to the development of Downtown Erie and the waterfront in recent years, the project area has experienced increased vehicular and pedestrian traffic, which has contributed to increasingly severe safety issues. PennDOT’s crash data indicates that the average annual growth rate of the number of crashes along the central part of Bayfront Parkway was 7 percent between 2009 and 2018. During this time period, the project’s three intersections (Sassafraz, State, and Holland) were the site of a total of 147 crashes, resulting in 100 injuries or fatalities. **Exhibit 7** and **Exhibit 8** summarize the number of crashes and injuries/fatalities by year.

Exhibit 7. Number of Crashes, Erie Bayfront Parkway (Central), 2012-2018

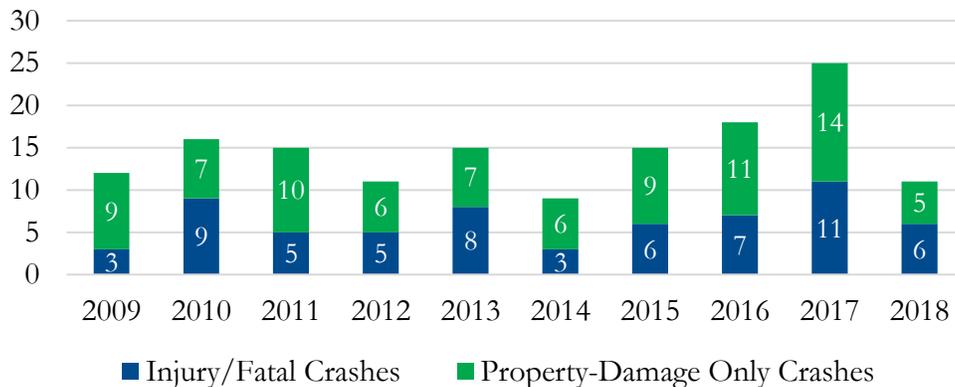
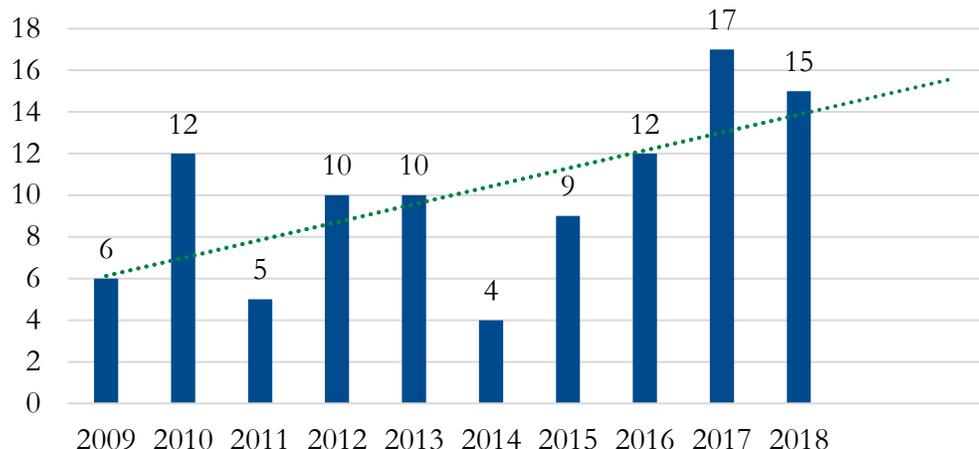


Exhibit 8. Number of Injuries and Fatalities, Erie Bayfront Parkway (Central), 2012-2018



Connecting Erie's Waterfront will address these safety concerns. The project features two roundabouts—at the Bayfront Parkway and Sassafras and Bayfront Parkway and Holland intersections—and eliminates two at-grade rail crossings. The FHWA Office of Safety recognizes roundabouts as a proven safety countermeasure because they organize the flow of traffic and reduce speeds. The State Street intersection will be grade-separated, improving traffic flow and safety for travelers on State Street and between the adjacent project intersections. The project's pedestrian overpasses will separate vulnerable roadway users from high-volume automobile traffic, thereby reducing the likelihood of crashes at these locations.

Analysis of safety impacts is included in the Benefit/Cost Analysis portion of this application located on the [project website](#). Crash reductions were determined based on PennDOT's Crash Facts & Statistics and Crash Modification Factors Clearinghouse, funded by FHWA. Previous studies by PennDOT estimated the total cost in dollars of crashes and injuries of various severities. These costs were applied to Bayfront Parkway data to quantify project benefits (while recognizing that health and life are priceless). The monetized benefits of these safety improvements over the same period amount to \$12.5 million, or \$5.4 million in present discounted value terms.

State of Good Repair

The project will ensure the good condition of rural transportation infrastructure that supports commerce and economic growth.

Criterion	How Project Meets Criterion (narrative follows summary table)
Consistent with plans to maintain transportation facilities in a SOGR	<ul style="list-style-type: none"> Bayfront Parkway is a PennDOT-maintained segment of the National Highway System (NHS). Therefore, it is a PennDOT priority to maintain the corridor in a state of good

	<p>repair in order to meet FHWA-required pavement condition thresholds.</p> <ul style="list-style-type: none"> • <i>Connecting Erie's Waterfront</i> is listed on the Erie MPO Long-Range Transportation Plan (LRTP) and the Statewide Transportation Improvement Program (STIP).
<p>If left unimproved, the poor condition of the asset will threaten future transportation network efficiency, mobility of goods, mobility and accessibility of people, and economic growth</p>	<ul style="list-style-type: none"> • Project-area roadway and intersection capacity and connectivity are inadequate for the current traffic volume and mix. • From 2014 to 2018, traffic volumes increased on average by 697 vehicles during the AM peak (9.2 percent average annual increase) and 532 vehicles during the PM peak (6.3 percent average annual increase). • The corridor is already congested, as reflected by 2018 LOS ratings by intersection and peak period: <ul style="list-style-type: none"> ○ Sassafras Street Extension: LOS C (AM), LOS F (PM) ○ State Street: LOS E (AM), LOS F (PM) ○ Holland Street: LOS B (AM), LOS D (PM) • The corridor traffic volume is projected to increase by 35% between 2018 to 2040, increasing average vehicle travel time by 126%. • The project is on the NHS and links the Port of Erie to the Primary Highway Freight System (PHFS), I-79, and I-90. • Since 2016, tonnage through the Port of Erie has increased 38.3%, to 695,619 tons in 2019. Bayfront Parkway cannot accommodate projected freight traffic increases.
<p>Appropriately capitalized and uses asset management approaches to optimize long-term cost structure</p>	<ul style="list-style-type: none"> • Committed state and federal funds are in place to cover 60.9% of the \$63.9 million project cost, which includes a 12.4% contingency budget. • As a state-owned facility on the NHS, ongoing maintenance of Bayfront Parkway will be managed through PennDOT's asset management system, in accordance with its Transportation Asset Management Plan, to achieve lowest life-cycle cost through timely maintenance.
<p>Sustainable source of revenue available for operations and maintenance; project will reduce overall life-cycle costs</p>	<ul style="list-style-type: none"> • Bayfront Parkway is a state-owned roadway already maintained by PennDOT. • Average annual roadway maintenance cost along the corridor is \$13,145 per lane-mile, funded through PennDOT's County 582 Appropriations Funds. • The City of Erie provides operating assistance for signals. • Constructing new roadway elements will reduce maintenance costs below current levels for several years. • As an NHS and PHFS roadway, the facility receives the highest priority for federal transportation funding.

Maintains or improves transportation infrastructure that supports border security functions	<ul style="list-style-type: none"> The corridor has a minimal role in border security, however it does handle freight and other traffic between the Port of Erie and Interstates 79 and 90.
Includes a plan to maintain the transportation infrastructure in a SOGR	<ul style="list-style-type: none"> As a state-owned roadway, Bayfront Parkway maintenance activities will continue to be funded in a state of good repair using primarily County 582 Appropriations Funds.

In their present state, the conditions within the project area will continue to threaten future transportation network efficiency, mobility, and accessibility, as well as Erie's ability to encourage economic growth. The *Connecting Erie's Waterfront* project will improve the travel efficiency of Bayfront Parkway by redesigning the segment between east of Holland Street and west of Sassafra Street Extension. The life cycle costs (in the year of expenditure dollar values) are summarized below:

- Design and Right-of-Way – \$12.6 million (2020-2021)
- Construction – \$53.9 million (2021-2023)
- Operating and Maintenance – \$31,942 per year; \$0.64 million total (2024-2043)

Bayfront Parkway is a state-owned roadway maintained by PennDOT. Based on PennDOT's maintenance work order records in the past five years, the average annual roadway maintenance cost along the Bayfront Parkway corridor is \$13,145 per lane-mile. The funding sources include PennDOT's County 582 Appropriation Funds for maintenance (e.g., roadway pavement and painting) and City of Erie funds for operating (e.g., signals). Rebuilding the segment will reduce maintenance costs for several years after the project's completion. Additionally, maintaining the transportation infrastructure within a state of good repair is well within the normal scope of work that PennDOT performs daily across its 40,500 miles of state-owned roadways.

Economic Competitiveness

The project addresses gaps in service in a rural area and will attract private economic development, supporting local and regional economic competitiveness.

Criterion	How Project Meets Criterion (narrative follows summary table)
Decreases transportation costs and improves access, through reliable and timely access to employment centers and job opportunities	<ul style="list-style-type: none"> • Enhances access between two major activity centers—the waterfront area and Downtown Erie. • Improves Level of Service at each intersection: <ul style="list-style-type: none"> ○ Sassafra Street Extension <ul style="list-style-type: none"> ▪ AM peak improves from LOS C to LOS A ▪ PM peak improves from LOS F to LOS B ○ State Street

	<ul style="list-style-type: none"> ▪ AM peak improves from LOS E to LOS C ▪ PM peak improves from LOS F to LOS B ○ Holland Street <ul style="list-style-type: none"> ▪ AM peak unchanged from LOS B to LOS B ▪ PM peak improves from LOS D to LOS B • Serves major employers, including: <ul style="list-style-type: none"> ○ UPMC Hamot Hospital ○ Pennsylvania Solders' and Sailors' Home ○ Erie Metropolitan Transit Authority ○ Erie Insurance ○ Port of Erie • Decreases costs associated with crashes, which translates to monetized safety benefits through 2043 of \$12.5 million.
<p>Improves long-term efficiency, reliability, and costs in the movement of workers and goods</p>	<ul style="list-style-type: none"> • Saves an estimated 7.5 million hours in travel time through 2043 with a \$70.7 million monetized time savings benefit.
<p>Increases the economic productivity of land, capital, or labor</p>	<ul style="list-style-type: none"> • Fulfills Erie's comprehensive planning vision to link the civic, economic, land use, and entertainment opportunities of the waterfront to Downtown Erie and the rest of the region to support economic revitalization. • Supports property values in sync with revitalization efforts for the city's residential neighborhoods, led by The Bayfront Eastside Taskforce and Our West Bayfront. • Enhances access for Erie's eight Business Opportunity Zones and their 22,561 residents. • Encourages waterfront development and associated property tax revenue.
<p>Results in long-term job creation and other economic opportunities</p>	<ul style="list-style-type: none"> • Estimated short-term jobs created is 1,533 (24 jobs per \$1M) • Facilitates access to the waterfront area and its tourism, healthcare, and manufacturing sectors as well as areas primed for mixed-use redevelopment. • Complements more than \$750 million in private, public, and philanthropic investment in Erie and the associated increases in family-sustaining jobs.
<p>Helps the U.S. compete globally by facilitating efficient and reliable freight movement</p>	<ul style="list-style-type: none"> • The Port of Erie, adjacent to the project, has the largest stiff legged crane (300-ton capacity) and one of the two 1,000-foot-long dry docks on the Great Lakes. The project will facilitate freight traffic between the Port of Erie and Interstates 90 and 79 as part of the FHWA-designated PHFS.

Erie is one of the Great Lakes' best natural harbors, making it a key U.S. port. During its early development, it rapidly became an economic hub for northwestern Pennsylvania and neighboring

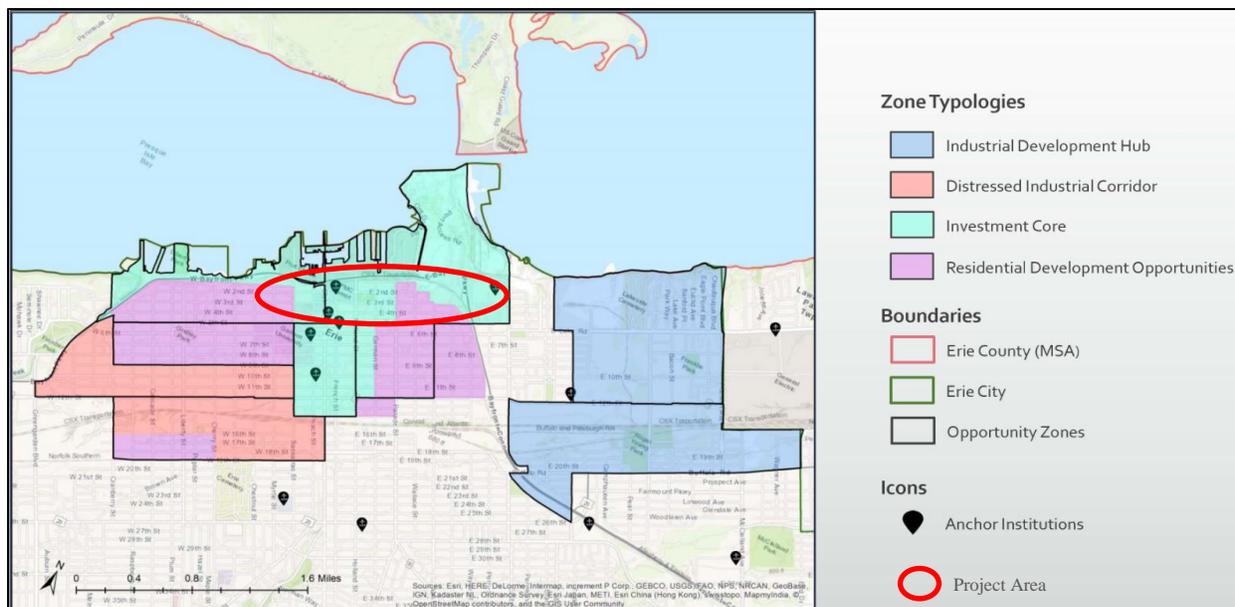
communities in Ohio and New York State. The city's rapid expansion peaked around 1960, after which growth stalled, vacant real estate increased, and development moved away from the downtown core.

In the 1980s, Erie began to develop a series of comprehensive plans that ushered in a new era of regional revitalization. The *Connecting Erie's Waterfront* project, which supports national and regional economic vitality by connecting the region's major Interstates to the waterfront, is a product of those plans. Erie saw new developments in its downtown and along the waterfront, as well as an increase in trips generated along Bayfront Parkway, and an increase in freight at the port.

The tourism, healthcare, and manufacturing sectors are represented in the businesses along the waterfront, where many of Erie's anchor destinations are located, such as the Port of Erie, UPMC, and Presque Isle Bay and State Park. These sites, in addition to many others, attract thousands of trips daily. A recent origin-destination (OD) study found that 50 percent of originating and destined State Street trips were to or from Interstate 79 or West 8th Street.

As of 2019, Erie County had eight Opportunity Zones (**Exhibit 9**), with a total of 22,561 residents in those zones. State Street bisects two of them, meaning the *Connecting Erie's Waterfront* project will strengthen connections between the two Opportunity Zones. Updating the Bayfront Parkway will increase the capacity of the three study-area intersections to better serve the local market, Opportunity Zones, and downtown assets. More information about the Opportunity Zones in Erie can be reviewed on the [project website](#) within the *City of Erie Investment Prospectus*.

Exhibit 9. Map of Erie Opportunity Zones in Relation to Project Area



Community Investments

Connecting Erie's Waterfront will complement more than \$750 million in private, public, and philanthropic investment in Erie by building new and improved multimodal access between the Downtown District and the Lake Erie waterfront. The Bayfront Parkway will be enhanced with newly designed connections that maximize the use of existing infrastructure and landscape.

To the north of the parkway lies the Bayfront Convention Center, the Sheraton and Marriot Hotels, and restaurants, marinas, charter services, and ship repair services. Additional attractions are either planned or already underway north of the parkway. Key developments include:

- Harbor Place, led by Scott Enterprises, which will consist of a mixed-use hotel, commercial, and residential use valued at approximately \$150 million.
- Bayfront Place, located on the former GAF Materials Corp. site and led by Erie Events (formerly the Erie Convention Center Authority), will also consist of mixed commercial and residential land use and will have an investment valued between \$200 and \$300 million.

Key developments are also in progress south of the Bayfront Parkway:

- Erie Insurance is undertaking a \$135 million expansion, which will add more than 1,000 new jobs.
- UPMC Hamot hospital is investing approximately \$111 million in a new medical building on its existing campus.
- Mercyhurst University plans to initiate an innovation district in Downtown Erie (location yet to be determined). The university received a \$4 million grant to help with the project.
- The Erie Downtown Development Corporation plans a mixed-use development in the downtown area (location yet to be determined).
- Velocity Net is moving its corporate headquarters to the vicinity of 10th and Sassafras streets—an investment valued between \$7 and \$8 million.

Revitalization efforts are also underway in the city's residential neighborhoods. The Bayfront Eastside Taskforce (BEST) and Our West Bayfront (OWB) groups are leading neighborhood improvement efforts.

The Erie Metropolitan Transit Authority (EMTA) has completed Phase 1 of its expansion project and is working toward Phase II. Ultimately EMTA will have a centralized downtown facility for maintenance and operations, complete with compressed natural gas (CNG) refueling stations that will also be available to the public.

Development along the waterfront increases Erie's economic vitality by adding opportunities for employment, tourism, and residential property tax revenue. Updates to the surrounding road infrastructure thus become increasingly critical to keep pace with current and future user demand along the waterfront. The *Connecting Erie's Waterfront* project will improve the flow of traffic throughout Erie and accommodate the increase in trips generated by new development.

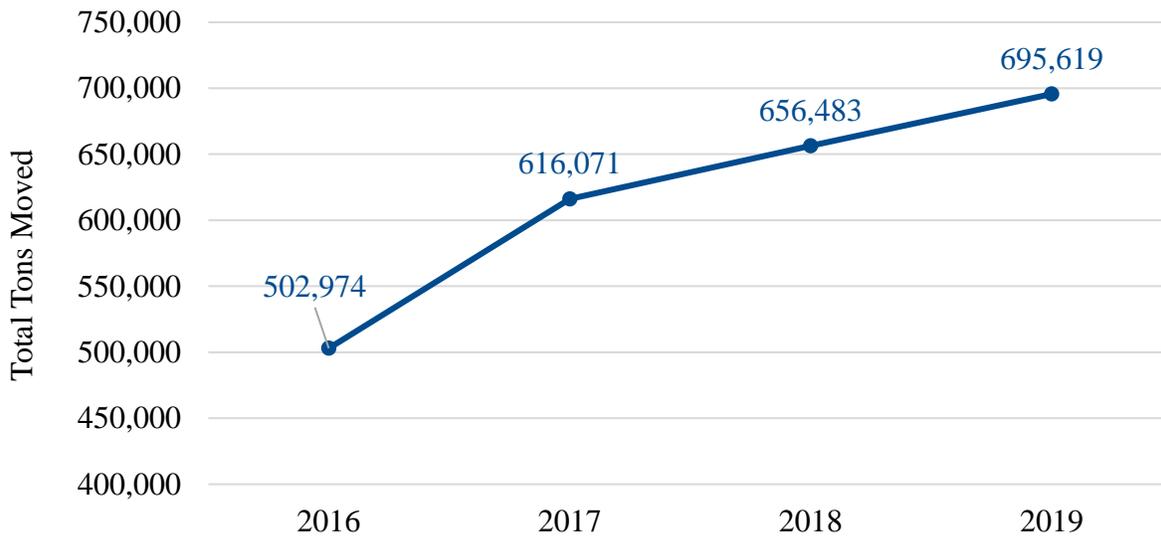
Port of Erie Investments and Freight Traffic

In 2018, Pennsylvania Governor Tom Wolf's administration announced \$2.7 million in new state investments in the Erie Western PA Port Authority, designed to spur economic development through the Port of Erie. This award increases PennDOT's three-year commitment to the Port of Erie to \$11,589,000, including a \$6,737,750 grant award to Donjon Shipbuilding and Repair to upgrade its facilities and expand employment opportunities.

Erie plays an important role in the state's commerce and goods movement. The economic impacts generated by marine cargo activity in Erie, including U.S. domestic commerce, Canadian domestic commerce, and international traffic, support 757 jobs. Additionally, the direct business revenue associated with marine activity in Erie exceeds \$63.6 million—including \$49.6 million in direct and indirect wages and generation of state taxes in the amount of \$5.1 million annually, as calculated in the July 2018 Economic Impact Study commissioned by the Erie Western PA Port Authority.

Since 2016, the Port of Erie has experienced a 38.3 percent increase in tonnage moved, detailed in **Exhibit 10**.

Exhibit 10. Total Tons Moved at the Port of Erie, 2016–2019



The improvement projects funded by the City of Erie and the Commonwealth of Pennsylvania are projected to further increase port shipments and land freight traffic; Bayfront Parkway will not be able to accommodate increased freight traffic along with passenger vehicles. The *Connecting Erie's Waterfront* project will increase port access, roadway capacity, and mobility along Bayfront Parkway—an important regional corridor (as part of the National Highway System) and connection to the National Highway Freight Network.

More information about the Port of Erie, including its Master Plan and recent economic data supporting the Master Plan, can be reviewed on the [Port Downloads website](#).

Environmental Sustainability

The project will improve energy efficiency, reduce dependence on oil, reduce congestion-related emissions, and avoid environmental impacts for streamlined environmental reviews.

Criterion	How Project Meets Criterion (narrative follows summary table)
Reduces energy use and air or water pollution through congestion mitigation strategies	<ul style="list-style-type: none"> • Reduces idling time and thus reduces vehicular emissions and fuel consumption. • Reduces CO2 emissions by an estimated 38%. • Eliminates an estimated 15,530 metric tons of carbon dioxide over the 20-year life of the project.
Avoids adverse environmental impacts to air or water quality, wetlands, and endangered species	<ul style="list-style-type: none"> • Improves a developed urban area and does not adversely impact air or water quality or endangered species. • Causes <i>de minimis</i> impacts to two small wetlands (0.015 acres). • Categorical Exclusion due to its negligible environmental impacts.
Provides environmental benefits, such as brownfield redevelopment and stormwater mitigation	<ul style="list-style-type: none"> • Provides indirect environmental benefits by improving access to brownfield sites along Erie's formerly industrial waterfront that are being considered for redevelopment. • Green stormwater infrastructure (e.g., plant/soil systems, permeable pavements, stormwater harvesting/reuse, and landscaping) and Best Management Practices (e.g., grassed swales, filter strips, and bioretention) will be evaluated as part of the overall stormwater management strategy.

These criterion focus on mitigating environmental impacts and reducing congestion-related emissions. The project encourages environmentally sustainable transportation through the construction of roundabouts and a grade-separated intersection. Recent research has demonstrated that replacing road and street intersections with roundabouts reduces vehicular emissions and fuel consumption by reducing idling time at intersections, thereby reducing overall carbon emissions. *Connecting Erie's Waterfront* improvements are estimated to remove 15,530 metric tons of carbon dioxide through 2043, with a monetized environmental burden of \$1.04 million, or \$422,734 in present-day dollars.

FHWA has approved it to be **reclassified to a Level 2 Categorical Exclusion Evaluation (CEE) on April 14, 2020**. It was determined that the project will not have any significant or adverse environmental impacts. Copies of the correspondence confirming this are available for review on the [project website](#).

Quality of Life

The project will enhance quality-of-life factors for Erie residents and visitors.

Criterion	How Project Meets Criterion (narrative follows summary table)
Increases transportation choices for individuals	<ul style="list-style-type: none"> • Makes walking and bicycling feasible and comfortable between downtown and waterfront destinations by: <ul style="list-style-type: none"> ○ Providing grade-separated pedestrian and bicycle accommodation in key locations. ○ Adding and improving sidewalks, crosswalks, and pedestrian refuge islands. ○ Designing bicycle and pedestrian connections with a manageable grade, vs. the existing 70-foot drop from the downtown district to the waterfront side of Bayfront Parkway. ○ Completing gaps in the multi-use trail on the north side of Bayfront Parkway. ○ Reducing vehicular speeds and red-light-running by replacing two intersections with roundabouts. • Improves reliability of fixed-route and demand-response public transit through congestion reduction. • Improves access to the downtown Erie Intermodal Center from the waterfront. • Meets ADA requirements for sidewalk, crosswalk, and signal facilities, including ADA-compliant curb ramps, detectable warning surfaces, and accessible pedestrian signals.
Expands access to essential services for rural communities	<ul style="list-style-type: none"> • Improves traffic flow on the corridor carrying regional traffic, including ambulances, to downtown medical centers.
Improves connectivity for citizens to jobs, health care, and other critical destinations, particularly for rural communities	<ul style="list-style-type: none"> • Improves north-south connectivity—the central purpose of this project—through three redesigned intersections, a pedestrian bridge at UPMC Hamot Hospital, and a multimodal bridge at the Pennsylvania Soldiers' and Sailors' Home. • Provides connectivity for residents of the city and surrounding region to Erie's major employment, medical, and educational destinations.

Erie is currently focused on entering into a new era of placemaking, with focus on downtown, the waterfront, and neighborhoods. Informing this vision is the understanding that supporting and

building the middle class while also aiding underserved populations is essential for a strong community and a better quality of life for Erie's residents and visitors.

Revitalization and reinvestment are already underway with new businesses, urban design, and transportation infrastructure (as described in the Economic Competitiveness section). Redevelopment efforts have attracted more visitors with diverse transportation needs. However, pedestrian accessibility between downtown and the waterfront remains insufficient and disjointed, with the Bayfront Parkway and railroad tracks creating a barrier that feels vast and intimidating for non-motorized modes. Further improvements are required to unify the downtown and bayfront.

The *Connecting Erie's Waterfront* project addresses these issues and supports Erie's ongoing economic revitalization. The planned improvements will provide a high-quality, safe, transitional experience for pedestrians and bicyclists between downtown and the waterfront by separating non-motorized and motorized traffic. New proposed segments of sidewalk will connect the Downtown Opportunity Zone to the waterfront Erie Intermodal Transportation Center. This broadening of transportation options and increasing connectivity will improve access to jobs, healthcare, and schools. The waterfront's mixed-use urban experience will finally be well integrated with downtown and adjacent neighborhoods. Continued revitalization of the area will, in turn, attract even more investment and continue to strengthen Erie's industries and community by making it a safer, more pleasant, and more interesting place to live and work.

Simultaneously, the project will produce travel time savings for vehicles in both the east-west and north-south connections, estimated at 7.5 million hours for a monetized time savings of \$70.7 million. Together, the improvements will provide interconnectivity between downtown and the waterfront, produce travel time savings for commuters, and create a safer environment for pedestrians and bicyclists.

Quality-of-life improvements will be generated by the enhanced traffic flow throughout the intersections. From 2014 to 2018, traffic volumes increased on average by 697 vehicles during the AM peak (9.2 percent average annual increase) and 532 vehicles during the PM peak (6.3 percent average annual increase). By intersection, traffic volumes increased as follows:

- Sassafras Street Extension: 541 AM Peak; 358 PM Peak
- State Street: 873 AM Peak; 644 PM Peak
- Holland Street: 676 AM Peak; 593 PM Peak

As traffic volumes continue to increase, the Level of Service of Bayfront Parkway will inevitably decrease. The additional congestion will lead to a worsening bottleneck for visitors, residents, and commuters to access the waterfront area, the medical center, and other major destinations in downtown. *Connecting Erie's Waterfront* relieves such issues and promotes the existing roadway routes by providing a smarter intersection solution with roundabouts and underpass lanes. This effort not only improves the flow of Bayfront Parkway traffic, but also encourages people to better take advantage of the new waterfront development and nearby assets.

SECONDARY SELECTION CRITERIA

Innovation

Criterion	How Project Meets Criterion (narrative follows summary table)
Innovative Technologies	<ul style="list-style-type: none"> • Indirect – Intelligent Transportation Systems (ITS) sensors and signage are proposed on connecting routes to provide travel-time data to inform motorists' route selection, which will be a particular benefit during the construction phase.
Innovative Project Delivery	<ul style="list-style-type: none"> • TBD – PennDOT is exploring design-build as a project delivery mode; it has used P3s successfully on past projects.
Innovative Funding	<ul style="list-style-type: none"> • None – PennDOT is using traditional funding sources.

Innovative Technologies

Proposed Intelligent Transportation Systems (ITS) signs on I-79 and the East Bayfront Connector are being evaluated for both sides of downtown Erie to provide real-time traffic information (i.e., travel time to destination points) between 12th Street and the Bayfront Parkway to help motorists make informed route decisions. These signs will also help inform motorists of traffic delays during the construction of various improvements on the Bayfront Parkway.

Innovative Project Delivery

PennDOT is exploring the use of design-build as an alternative delivery mode and has extensive experience using it in other projects, such as the [Rapid Bridge Replacement public-private-partnership \(PPP\)](#). It will enable the Department to reduce its risks and overall costs.

Innovative Financing

No innovative financing techniques will be used for the *Connecting Erie's Waterfront* project.

Partnership

The project demonstrates strong collaboration among a broad range of stakeholders.

Criterion	How Project Meets Criterion (narrative follows summary table)
Multiple partners in project development and funding	<ul style="list-style-type: none"> • Project development and funding partners span the federal, state, regional, and local levels of government as well as the private sector, as listed in Exhibit 11, Project Partners, and Exhibit 4, Project Funding Plan by Phase. • The project development process was also characterized by extensive outreach to the general public and other

	<p>stakeholders (see the Public Engagement section under Project Readiness).</p> <ul style="list-style-type: none"> • The project is broadly supported and long-anticipated.
Collaboration among jurisdictions to achieve local or regional benefits	<ul style="list-style-type: none"> • The project is a collaborative effort among jurisdictions: PennDOT Central Office (statewide), PennDOT Engineering District 1 (regional), the Erie County Metropolitan Planning Organization (regional), and the City of Erie (local).
Coordination of transportation project with economic development efforts	<ul style="list-style-type: none"> • The project is foundational to economic development efforts and has been scoped with extensive stakeholder involvement. • The need for the project has been underscored in plans by local economic development entities for more than two decades, including: <ul style="list-style-type: none"> ○ Erie Downtown Partnership's 2016 <i>Erie Downtown Master Plan</i> ○ Erie County Convention Center Authority's 2012 <i>Completing the Bayfront</i> ○ Erie Redevelopment Authority and City of Erie's 2005 <i>Erie Downtown Master Plan</i> ○ Economic Development Corporation of Erie County's 2001 <i>Toward an Economic Development Strategy for Erie</i>

Exhibit 11. Project Partners

Project Partners	Role
Grant Recipient	
Pennsylvania Department of Transportation (PennDOT)	PennDOT is the applicant for the FY 2020 BUILD Discretionary Grant Program, and will administer and maintain the project.
Key Partners	
City of Erie Erie Convention Center Authority Erie County Erie Insurance Erie-Western PA Port Authority Scott Enterprises UPMC Hamot Hospital Erie Downtown Development Corporation	Investors and project partners who have participated throughout all or most of the planning process since the project's inception.
Other Regional and Local Partners of the Planning Process	
Bayfront Eastside Taskforce (BEST) Bayfront Project Advisory Committee (PAC)	Engaged members who either participated during public outreach phases, current project

<p>CSX Destination Erie Erie County MPO Erie Downtown Partnership Erie Metropolitan Transit Authority Erie Regional Chamber & Growth Partnership Erie Water Works Our West Bayfront PennDOT Central Office PA Dept of Community and Economic Dev. PSSH S.O.N.S. of Lake Erie</p>	<p>design, and coordination phases or advocated to shape the future of the project.</p>
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ENVIRONMENTAL RISK REVIEW & PROJECT READINESS

Connecting Erie's Waterfront is a long-planned initiative that PennDOT is committed to moving forward with. The preliminary phases are well underway and construction expected to begin in late 2021.

Technical and Financial Capacity

The overall project is technically feasible and is within the normal scope of work that PennDOT performs daily across its 40,500 miles of state-owned roadways. As such, PennDOT possesses the required technical and financial capacity (with PennDOT supplying 30% total match and a contingency fund of 12%) to administer and deliver the project on-schedule and within budget. PennDOT has a long-standing history of working on and regularly providing technical assistance for large or complex projects.

Environmental Risk/Required Approvals

NEPA Status

PennDOT submitted a Purpose and Need Statement to FHWA in November 2018. The statement, which focused on increasing mobility, reducing crashes, and improving operations and efficiency, was approved by FHWA that month. Although the project was originally scoped as an Environmental Assessment (EA) based on the environmental studies and public outreach, FHWA has approved it to be **reclassified to a Level 2 Categorical Exclusion Evaluation (CEE) on April 14, 2020**. The environmental document has been submitted to FHWA and **environmental clearance is anticipated to be received in early summer 2020**. Copies of the correspondence confirming this are available for review on the [project website](#).

The following is the status of other environmental-related design elements:

- Right-of-Way – No property displacements and relatively minor right-of-way acquisition anticipated
- Streams – No streams within project limits

- Wetlands – *de minimis* impacts to two small wetlands (0.015 acres total)
- T&E Species – No impacts, with concurrence by PAFBC, DCNR, PAGC, and US Fish & Wildlife
- Historic – No effect to above-ground resources, with concurrence by the State Historic and Preservation Office (SHPO)
- Cultural – Limited project area has potential for archaeological deposits; Deferral of Archaeological Testing executed to perform additional investigation after environmental clearance obtained
- Environmental Justice Population – No adverse impacts anticipated; project will benefit EJ communities by improving connectivity
- Noise – Projected noise levels and increases are below FHWA Noise Abatement Criteria and Preliminary Noise Analysis approved by PennDOT and FHWA
- Coastal Zone – PADEP has provided concurrence of federal consistency
- Section 4(f) – *de minimis* / no adverse use to resources
- Hazardous Materials – Environmental covenant between Port Authority and PADEP to be modified for portion of right-of-way to be acquired. Specifications to be included in construction contract for testing, handling, and disposal of potentially contaminated soils at former GAF site.

Review, Approvals, and Permits by Other Agencies

No other agency approvals are needed; however, PennDOT has concurrence from, and is in the process of finalizing agreements with, CSX to complete the multimodal bridge connecting the Pennsylvania Soldiers' & Sailors' Home with the cemetery. This includes all coordination with CSX to complete the proposed improvements at State Street because there is an existing structure at the intersection that carries Bayfront Parkway over CSX railroad tracks.

Public Engagement

Extensive public outreach has been conducted as part of *Connecting Erie's Waterfront* and during the alternatives analysis for the project. This project has buy-in of local and state officials, and the need for these improvements along the bayfront are widely recognized. Outreach efforts consisted of:

- More than 60 stakeholder meetings
- Online survey (nearly 500 respondents)
- 10 Project Advisory Committee (PAC) meetings
- 11 Coordinating Committee (CC) meetings
- 3 Technical Advisory Committee (TAC) meetings
- 3 public meetings (including two 8-hour open house displays)
- [Project website](http://www.BayfrontParkwayProject.com) (www.BayfrontParkwayProject.com)
- Facebook group page (<https://www.facebook.com/groups/BayfrontParkwayProject/>)

The PAC consists of more than 80 participants including project stakeholders, community advocacy groups, public organizations, and local officials who are intended to represent a variety of interests, their constituents, and the general public. The CC and TAC are subsets of the PAC and were formed to allow smaller-group discussions of specific project details and design elements.

State and Local Approvals

The *Connecting Erie's Waterfront* project is included in both the Erie Long-Range Transportation Plan (LRTP) and the Statewide Transportation Improvement Plan (STIP) and has broad public support. Copies of these plans are available for review on the [project website](#).

Federal Transportation Requirements Affecting State and Local Planning

The *Connecting Erie's Waterfront* project does not impact any state or local planning and is therefore not included in any plans other than the Erie LRTP and STIP.

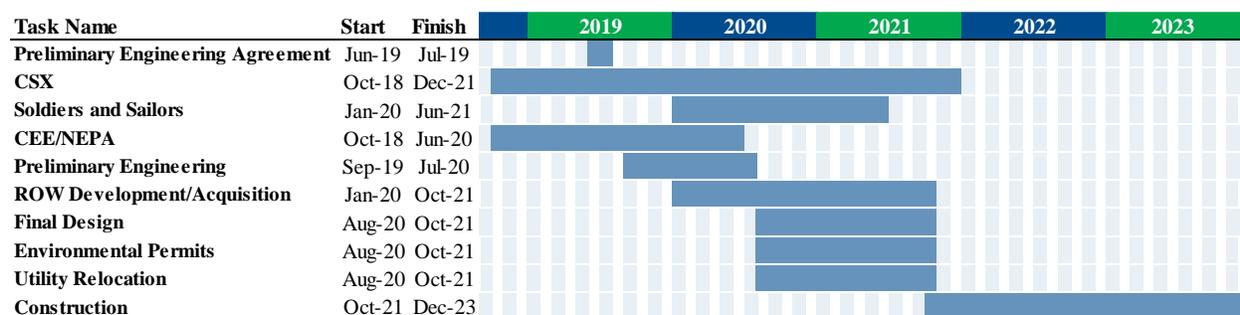
Assessment of Project Risks and Mitigation Strategies

PennDOT generally assesses and mitigates risk as part of a thorough project development process. Additionally, PennDOT has the financial and technical capacity to successfully deliver projects in compliance with applicable federal requirements. *Connecting Erie's Waterfront* is locally well-received and is a high priority for the State, and with the project set to receive environmental clearance early this summer, the *Connecting Erie's Waterfront* project is **relatively low risk** in terms of successful project start and completion.

Project Schedule

The *Connecting Erie's Waterfront* project will be delivered in a total of 1,345 days (from October 21, 2018, when the NEPA process began, to December 29, 2023). **Exhibit 12** shows a simplified project schedule. A more detailed schedule is provided on the [project website](#). All necessary activities will be complete to allow BUILD grant funds to be obligated in advance of September 30, 2022.

Exhibit 12. Simplified Project Schedule



BENEFIT / COST ANALYSIS (QUANTITATIVE BENEFITS)

The period of analysis used to estimate benefits and costs related to the differences between the Build and No-Build scenarios is 2019 to 2043, including the project development and construction years through 2023, and 20 years of infrastructure service life. All monetary values are expressed in 2020 dollars. A real discount rate of 7 percent is applied to this period to calculate present values while other potential discount rates (3 percent and 5 percent) are applied as comparisons.

Findings

As shown in **Exhibit 13**, the total monetized benefits of the proposed improvements are projected to be \$76.5 million (in present discounted value terms), reflecting travel time savings and safety benefits. The total costs of the project are at \$61.0 million (in present discounted value terms) including capital expenses, travel time increase during construction, and operating and maintenance costs. The project produces a net benefit in present value terms of \$15.6 million (discounted) and a benefit-cost ratio of 1.26. The corresponding internal rate of return (IRR) of the project is projected at 9.4 percent. For more details, the benefit/cost analysis spreadsheet is fully documented on the [project website](#).

Exhibit 13. Benefit/Cost Analysis Summary

Benefit and Cost Metrics	2019-2043 Totals (in Thousands of 2020 Dollars)			
	Before Discounting	Discounted at 3%	Discounted at 5%	Discounted at 7%
<i>Project Benefit</i>				
Travel Time Saving	\$180,090.3	\$117,507.9	\$90,375.4	\$70,678.9
GHG Emission	\$1,044.9	\$690.7	\$535.9	\$422.7
Safety	\$12,547.4	\$8,541.6	\$6,753.8	\$5,425.4
Total Benefit	\$193,682.6	\$126,740.3	\$97,665.1	\$76,527.1
<i>Project Costs</i>				
Capital	\$66,501.2	\$62,589.1	\$60,200.1	\$57,968.8
Construction Delay	\$3,546.6	\$3,293.0	\$3,138.2	\$2,993.6
O&M	\$0.0	\$0.0	\$0.0	\$0.0
Total Costs	\$70,047.8	\$65,882.1	\$63,338.2	\$60,962.4
Total Net Benefits	\$123,634.8	\$60,858.1	\$34,326.9	\$15,564.7
Benefit-Cost Ratio	2.77	1.92	1.54	1.26
Internal Rate of Return	9.4%	N/A	N/A	N/A

Key Parameters

According to the 2018 Traffic Impact Analysis for the Bayfront Parkway Central Corridor improvements, the corridor traffic volume is projected to increase by 35 percent from 2018 to 2040, inducing the average vehicle travel time to increase by 126 percent. With the *Connecting Erie's Waterfront* project being built, however, vehicles are expected to spend 29 percent less time traveling through the corridor compared to that of No-Build scenario. These rates are used as key

assumptions for calculating travel time benefits. In addition, the project is expected to improve safety performance with roundabouts. The crash reduction rate is suggested by the Crash Modification Factors Clearinghouse to be 19–71 percent for such designs.

Exhibit 14 summarizes the key parameters and assumptions which are used for benefit/cost analysis.

Exhibit 14. Key Parameters and Assumptions Used for Benefit/Cost Analysis

Parameter Name	Value	Unit
Project Life	20	Years
Real Discount Rate	7.0%	% per annum
Values Expressed in	2020	\$
Value of Time (inflation-adjusted from 2017 value)	\$24.25	per hour (median household income \$48,007/2080 hours)*(1+0.025)^(2020-2017-1)
Annualization Factor	300	days/year that benefits accrue
Maintenance Cost	\$13,145	per lane mile per year
Corridor Travel Time Reduction	29.00%	of No-Build Scenario Travel Time (Operation)
Corridor Travel Time Increase	10.00%	of “Before” Total Travel Time (Construction)
Fatality/Injury Reduction - Holland St.	71.20%	of “Before” Number of Crashes
Other Crash Reduction - Holland St.	19.10%	of “Before” Number of Crashes
Fatality/Injury Reduction - State St.	57.00%	of “Before” Number of Crashes
Other Crash Reduction - State St.	36.00%	of “Before” Number of Crashes
Fatality/Injury Reduction - Sassafras St.	71.20%	of “Before” Number of Crashes
Other Crash Reduction - Sassafras St.	19.10%	of “Before” Number of Crashes
Value of Fatalities	\$7,193,072	per person (inflation-adjusted from 2008 dollars)
Value of Major Injuries	\$1,576,080	per person (inflation-adjusted from 2008 dollars)
Value of Moderate Injuries	\$105,317	per person (inflation-adjusted from 2008 dollars)
Value of Minor Injuries	\$8,344	per person (inflation-adjusted from 2008 dollars)
Value of Unknown Injuries	\$3,338	per person (inflation-adjusted from 2008 dollars)
Value of Property Damage Only	\$8,344	per crash (inflation-adjusted from 2008 dollars)
Greenhouse Emission (CO ₂) Reduction	38%	of “Before” CO ₂ emissions
CO ₂ Emissions	353	gram/vehicle mile traveled
Social Value of CO ₂ Emissions (2019)	\$51	per metric ton (inflation-adjusted from 2007 dollars)
Social Value of CO ₂ Emissions (2043)	\$77	per metric ton (inflation-adjusted from 2007 dollars)

APPENDIX A: APPLICATION PACKAGE WEBSITE

For reference, the table below displays the elements of the *Connecting Erie's Waterfront* application that can be found on the website.

Connecting Erie's Waterfront Website	
https://bayfrontparkwayproject.com/BUILD2020/	
Website Password	
Er1Econnects	
Website Contents	Application Narrative Sections and Pages Referenced
Benefit/Cost Analysis	B/C Findings , pg. 29
Detailed Project Map	Project Location , pg. 8
Detailed Cost Estimate	Grant funds, sources, and uses of project funding , pg. 10
Detailed Project Schedule	Project Readiness , pg. 26
Map Files	Project Location , pg. 8
STIP Documentation	Required Approvals , pg. 26
Letter of Commitment for Non-Federal funds	Project Website
Letters of Support	Project Website
Other Supporting Documents	Project Website

