



**CONVEYOR UPGRADE & REPLACEMENT PROJECT
FULTON COUNTY
LOWER MISSISSIPPI RIVER MM922**



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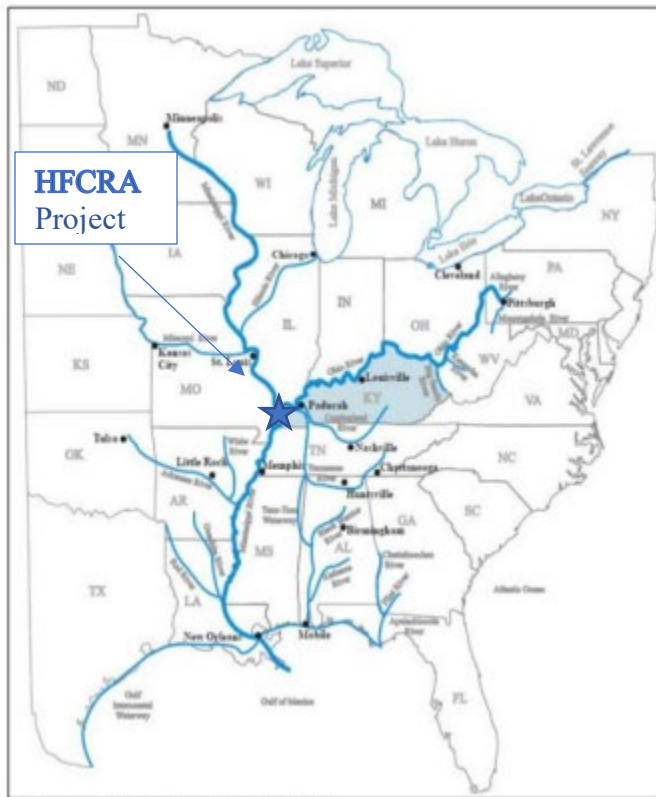
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INTRODUCTORY INFORMATION

Field Name	Guidance
Name of Lead Applicant	Hickman-Fulton County Riverport Authority, Inc.
Is the applicant applying as a lead applicant with any joint applicants?	No
Project Name	HFCRA Conveyor Upgrade and Replacement Project
Project Description	The Project involves replacing the port owned 30-year-old conveyor system with a new 48-inch conveyor system to meet increasing demand and improve safety and efficiency. The current system is operated at maximum capacity 24/7 from August to April to accommodate harvest requirements, with Cargill Corporation as the primary user. The Project also includes high-priority repairs to Mooring Cell 6, which has been necessitated by severe corrosion.
Is this a planning project?	No
Is this a project at a coastal, Great Lakes, or inland river port?	Inland Riverport
Is this project located in a noncontiguous State or U.S. territory?	No
GIS Coordinates (in Lat. / Long. format)	36.5689° -89.20556°
Is this project in an urban or rural area?	Rural
Project Zip Code	42050
Is the project located in a Historically Disadvantaged Community (HDC) or a Community Development Zone (CDZ)?	The Project is in an Area of Persistent Poverty and in a Historically Disadvantaged County and a Historically Disadvantaged Community (Census Tract 9602)

Field Name	Guidance
Has the same project been previously submitted for PIDP funding?	No
Is the applicant applying for other discretionary grant programs in 2023 for the same work or related scopes of work?	No additional funding requests were submitted at the time of this application.
Has the applicant previously received TIGER, BUILD, RAISE, FASTLANE, INFRA or PIDP funding?	No
PIDP Grant Amount Requested	\$3,295,878.87
Total Project Cost	\$4,119,848.58
Total Federal Funding	\$3,295,878.87
Total Non-Federal Funding	\$832,969.72
Will RRIF or TIFIA funds be used as part of the project financing?	No

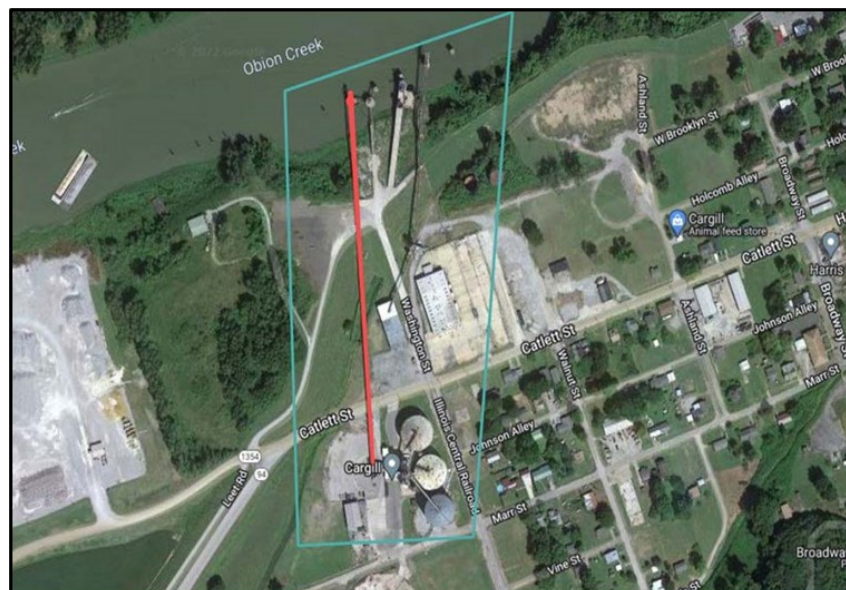
Project website: www.hickmanriverport.com/grant.html

SECTION I: PROJECT DESCRIPTION

The Hickman-Fulton County Riverport (the Riverport) is requesting a PIDP Grant for ~ \$3.3 million as a small project at a small port on an inland river. This Riverport is the only Kentucky riverport operating on the Mississippi River and supports one of the Midwest's major grain producing areas. Its grain handling conveyor system is used to load grain from the storage and handling facility directly to barge.

This prime geographic location enables the Riverport to offer distinct advantages to shippers for imports along the Mississippi River. The vision of the Hickman-Fulton County Riverport Authority is to be a leader in commercial and industrial development focusing on the retention and attraction of businesses and jobs and to be a catalyst for future development and regional growth related to the marine transportation industry.

Exhibit 1 : Hickman-Fulton Conveyor Upgrade and Replacement Project



The requested capital Project includes the following improvements:

- Replaces the more than 30-year-old port owned conveyor system that is operated at or near maximum capacity speeds 24 hours per day between August and April annually to accommodate harvest requirements. The conveyor system is a public asset owned by the Riverport. Cargill Corporation is the current primary user of this facility.
- Makes high priority repairs to Mooring Cell 6 that are required due to severe corrosion and settlement.
- Increases capacity while improving safety and efficiency by upgrading the conveyor system from a 30-inch to a 48-inch system to meet rising demand and ensure reliability.

The proposed grain conveyor upgrade Project will increase the amount of grain loaded on barge

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per hour by 160 percent.

The current conveyor system handles 12,000 bushels of grain per hour. The plan is to upgrade the conveyor system increasing the grain loading capacity to 20,000 bushels of grain per hour.

Current Status – Transportation Challenge

Since 1978, the Riverport has been Kentucky's only public port on the lower Mississippi River's east bank at mile 922 in the Elvis J. Stahr Harbor, with no locks south of St. Louis, Missouri. Located in the geographic center of a major grain-producing region, the Port provides a significant cost advantage for waterborne shipping with a full range of services. Its primary business includes grain, fertilizer, pet coke, steel wire rod, steel shapes, and general cargo.

The Riverport's warehousing facilities include an 18,000-square-foot building used by a Riverport tenant and a 10,000-square-foot building connected to the general cargo dock via a conveyor system. The diesel hydraulic PLM1220 duty cycle crane, located at the multi-purpose general cargo dock, in conjunction with a large staging area, enables the efficient and continuous discharge and movement of a wide range of products. The general cargo conveyor system is used for offloading products to storage or to a railcar.

In addition to the general cargo conveyor system, the Riverport also has a grain handling conveyor which is approximately 1,200 feet long and has a belt width of 30 inches. During harvest season, conveyor operations are typically 16 hours to 24 hours per day; it is also used for miscellaneous purposes during non-harvest seasons. As noted in the Preliminary Engineering Report's (PER), this conveyor and its components (with the exception of the existing elevator which can handle the upgrades without excessive costs and construction and has sufficient capacity to be able to accommodate a larger conveyor) need to be replaced. See PER Appendix A, Plan 15 which can be found on the [Project website](#).

The Solution

Given the location of the Riverport and its proximity to farmland yielding grain crops, replacing the grain handling conveyor system will result in higher productivity and economic gain. The Design will enable the new conveyor system to be built on a truss system similar to the existing system and will provide updated structural capacity. The Project also includes upgrading to an expanded belt width of 48-inch to access the existing structure since the existing 30-inch conveyor is currently operated at the high end of recommended belt speed for maximum capacity. This belt upgrade requires an expansion and immediate repair to the attached 20-foot mooring cell and tower. Electrical components will also be updated to increase automation of conveyor controls and improve coordination between the loading dock operation and the loading of grain from storage. This is a key improvement as it will create efficiencies in material savings and improve environmental conditions.

Detailed Statement of Work includes:

- New 1,200-ft Conveyor System with a 48-inch Belt 100HP Dodge Drive Package
- Conveyor Foundations
- Electrical Infrastructure

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- Remote Control Technology to include Wireless Multi-Switch Controller
- Supplementary Mooring Cell with Electrically Movable Discharge Head at Mooring Cell
- Design and install a full circumference cell band of 21'4" on Cell 6 from elevation 288 feet to 264 feet to address the open interlocks and protect the cell from further abrasion damage
- Environmental, Professional Engineering Design Services, Construction Administration and Testing and Inspection Services, and Procurement Services

History

Founded in 1964 as an operating riverport, HCFR sits on 10 acres with an additional 210 acres available for purchase and development. The Riverport handles agriculturally based commodities, wire rod, coke, steel, and general cargo. Its current infrastructure has exceeded its design life and needs substantial investment to modernize and expand, most specifically related to its grain-handling conveyor system which is utilized to load grain from the storage/handling facility to barges at the grain dock. The grain handling facility is leased to Cargill Corporation. The current approaches are located on the land side of the levee system, which is built to 500-year flood standards, and as a result, high water situations do not impede the flow of loading/unloading at the Riverport. It should be noted that this Project leverages the recent investments in the repairs to Mooring Cells 3 and 4, funded jointly by the Kentucky's Riverport Improvement (KRI) Program and the HFCRA.

SECTION II: PROJECT LOCATION

The port is located at 625 Catlett Street, Hickman, Kentucky 42050 on the lower Mississippi at mile 922 in the Elvis J. Stahr Harbor. The terminal is on the southern bank of Obion Creek located approximately 1.2 miles east of Mississippi River Mile Marker 921. The terminal consists of six mooring cells, one monopile dolphin, and a floating dock. The structures are roughly arranged east to west. The port facilities are located on Kentucky Highway 94, with access via Kentucky Highways 125, 166, and 309. The Riverport is approximately 20 miles from US Highway 51 and the Kentucky Purchase Parkway.

GIS Coordinates are: 36.5689, -89.20556.

The port consists of three docks with the capacity to handle large volumes of products which include fertilizer, coke, grain, steel, and general cargo. KY 94 provides the nearest arterial access; a short

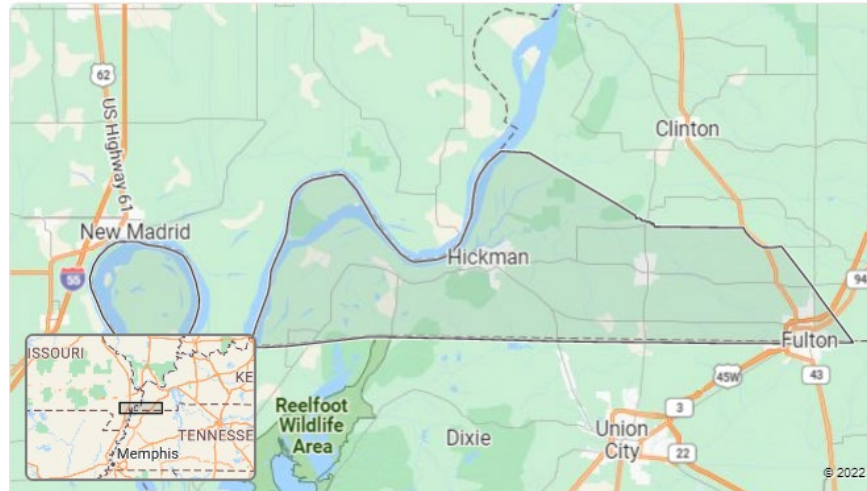
Exhibit 2: Project Location



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line railroad also serves the site.

Exhibit 2: Location Map of Hickman, KY



This Project is an inland river port located in a rural area. It is a small project at a small port seeking funding under 46 U.S.C. 54301(b). Hickman Fulton County Riverport’s 3-year annual average tonnage between 2018 and 2020 was just over 1.1 million tons. It is in Census Tract 9602, a Historically Disadvantaged Community (HDC) with a poverty level in 2020 of 26.6 percent.

Exhibit 3: Demographic Summary within One-Mile Buffer of the Project

Variable	Value	State Avg.	Percentile in State	USA Avg.	Percentile in USA
Minority Populations	36%	16%	87	40%	56
Low Income	58%	36%	82	30%	86
Limited English Proficient	0%	1%	0	5%	0

Based upon the EJScreen data, the demographics within a one-mile buffer of the Project is low-income in the 82nd percentile of the state of Kentucky and the 86th percentile in the USA.

WATERWAY:
Mississippi River mile 922;
Elvis J. Stahr Harbor

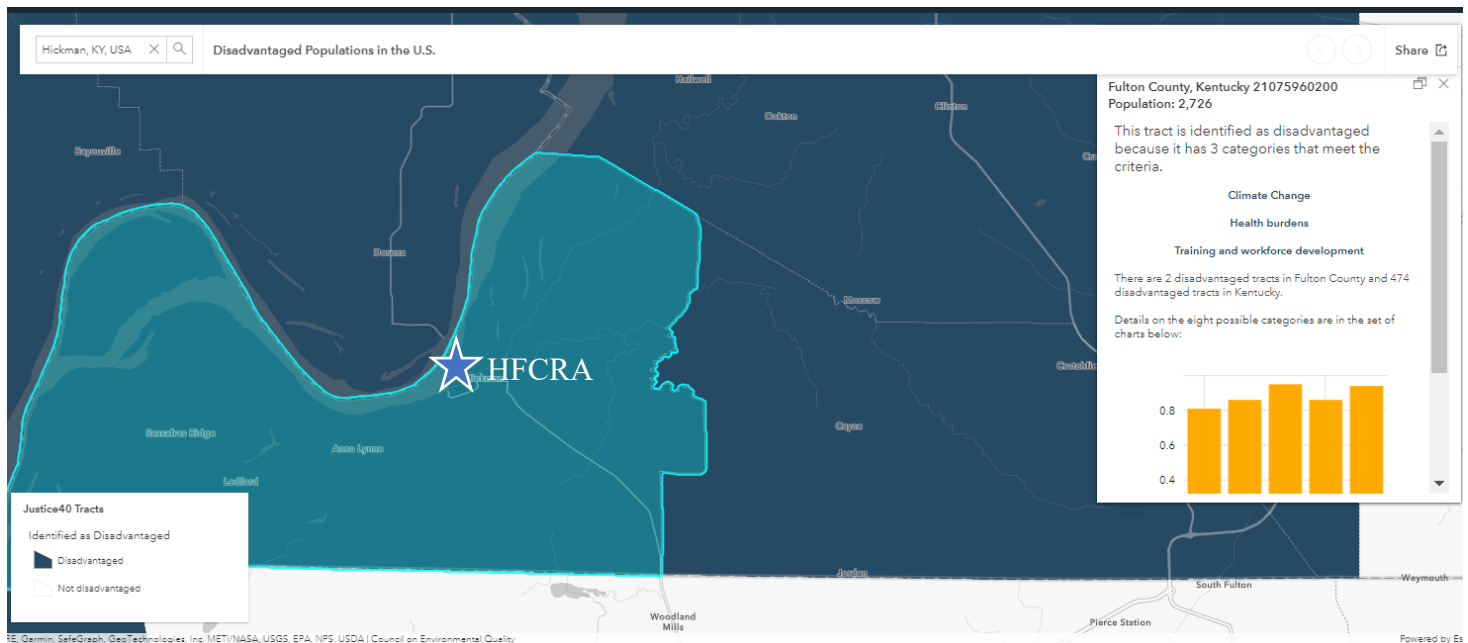
RAILROAD:
Class I and Class II rail with the
TennKenn Railroad Company
short line railroad connecting
to the CN Class I railroad

ROADWAY:
KY 94, with access routes
via KY 125, KY 166, and
KY 309 and ferry service

AVIATION:
Fulton Airport is located
approximately 19 miles SE
of the riverport

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Exhibit 4: Tract 210759602 is a Disadvantaged tract.



US DOT Equitable Transportation Community Explorer (ETCE) has identified this tract as one of two disadvantaged tracts in Fulton County, KY. This tract qualifies as disadvantaged based upon three categories: Climate Change, Health burdens, and Training and workforce development criteria.

SECTION III: GRANT FUNDS, SOURCES, AND USES OF FUNDS

The Project Budget has been developed based on the Preliminary Engineering Report (developed in 2022 which includes a 30 percent design for which the costs were estimated and represents the scope as described in Section I above. The Preliminary Engineering Report can be found on the [Project website](#).

Sources and Uses Chart

a) Project Costs

The HFCRA is requesting \$3,295,880 million under the Small Project at Small Ports PIDP FY23 Funding to implement the Project. The Project budget below depicts how the funds received from the PIDP grant award will be allocated toward Project costs (full budget in Appendix B).

Exhibit 5: Project Costs

Hickman-Fulton County Riverport Conveyor Upgrade & Replacement Project	
Cost Category	Amount
Construction	\$3,152,635
Professional Services	\$429,842
Contingency	\$537,373
Total Cost	\$4,119,850

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b) Eligible Costs, Sources, and Amount of Funds

Exhibit 6: Sources of Funds

Source	Status	Amount in Millions	Percent (%) Contribution
PIDP FY23 Discretionary Grant	Requested	\$3.296	80%
Federal - other		\$0	0%
Federal	-	\$3.296	80%
Local- HFCRA	Committed	\$0.824	20%
Non-Federal	-	\$0.824	20%
TOTAL		\$4.12	100%

a) Amount and Nature of Federal Funds and Use of Funds

Exhibit 7: Summary of Sources and Uses of Funds by Agency

Source PIDP FY23 Grant Request	Amount in Millions	Percent (%) Contribution	Use	
Federal				
PIDP FY23 Discretionary Grant	\$3.296	80%	Requested	Final Design / Env. / Construction / Equip.
Other Federal Funding	\$0.000	0%		
Total Federal Funding	\$3.296	80%		
Non-Federal /Local Funding				
Hickman-Fulton County Riverport Authority	\$0.824	20%	Committed	Final Design / Env. / Construction / Equip.
Total Non-Federal Funding	\$0.824	20%		-
Total Funding	\$4.12	100%		-

Funding by Component

Component 1	
PIDP Funds	\$3.296
Other Federal Funds	\$0
Non-Federal Funds	\$0.824
Total Federal Funding	\$4.12

All improvements are in Tract 9602.

Pre-obligation Costs

The Riverport is requesting pre-obligation authority of 30% of the Professional Services to complete the next step of design and the Environmental Review process equal to approximately \$130,000.

Funding Commitments for Non-Federal funds

b) Documentation of funding commitments

Documentation on funding commitments can be found in Appendix B and the Port's Balance Sheet can be found in Appendix L.

SECTION IV: MERIT CRITERIA

This Project aligns with the PIDP Merit criteria of Achieving Safety, Efficiency, or Reliability Improvements; Supporting Economic Vitality; Leveraging Federal Funding; and Port Resilience as described below.

Section A: Achieving Safety, Efficiency, or Reliability Improvements

Safety Improvements

Replacing the 30-year-old conveyor system with a modern system can significantly improve safety in several ways. As technology has advanced, newer conveyor systems have been designed with numerous safety features and improvements that address potential hazards and risks associated with older systems. Here are some of the key improvements:

- **Advanced Materials and Design:** The proposed modern conveyor system is built with high-quality, durable materials that reduce the risk of mechanical failure, wear, and tear. Additionally, newer designs minimize pinch points, entanglement hazards, and other potential danger zones, making the overall system safer for operators.
- **Enhanced Automation and Control:** The new conveyor system incorporates advanced automation technologies, which reduces the need for manual intervention and therefore decreases the chances of human error. This can include features such as remote monitoring, automatic shutoff in case of emergency, and predictive maintenance algorithms that help identify and resolve potential issues before they become serious problems.
- **Improved Dust Control:** Grain loading terminals can produce large amounts of dust, which poses a risk of explosion, respiratory issues, and reduced visibility. The upgraded conveyor system includes more effective dust control mechanisms, such as dust-tight enclosures, air filtration systems, and dust suppression techniques. It is anticipated that these enhancements will significantly reduce the risk of dust-related incidents.
- **Better Fall Protection:** Modern conveyor systems come with improved fall protection systems, such as guardrails, safety nets, and harnesses. These features help protect workers from falls while working on or near the conveyor, reducing the risk of injuries and fatalities.
- **Ergonomic Design:** Newer conveyor systems are designed with ergonomics in mind, minimizing the physical strain on workers. This can include adjustable heights for better access, reduced noise levels, and designs that minimize repetitive motions. By reducing the physical demands on workers, a modern conveyor system can help prevent injuries caused by repetitive strain, muscle fatigue, and other ergonomic risks.

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- Enhanced Training and Safety Protocols:** The proposed conveyor system will be accompanied by a comprehensive training program and safety protocols, ensuring that operators and maintenance personnel are well-versed in the safe operation and maintenance of the equipment. These elements should lead to a more safety-conscious workforce and a reduction in accidents and injuries.
- Compliance with Current Safety Standards:** By upgrading to a modern conveyor system, the HFRCA can ensure the grain loading terminal follows the latest safety standards and regulations. This not only helps to protect workers and reduce liability, but it also demonstrates a commitment to safety, which can be beneficial for the terminal's reputation and worker morale.

Exhibit 8 : Safety Impacts by Mode

Safety Impact

Both rail and truck statistics include incidents involving only vehicular crashes or derailments. However, the waterborne database reports incidents resulting from a wide variety of causes.

Ratio of Fatalities by Mode of Transport	
Mode of Transport	Fatalities
Truck Freight	155
Railroads	22.7
Inland Towing	1

Ratio of Injuries by Mode of Transport	
Mode of Transport	Injuries
Truck Freight	2171.5
Railroads	125.2
Inland Towing	1

This investment will lead to a safer working environment, reduced liability, and increased productivity.

Efficiency Improvements

Upgrading the existing 30-inch conveyor to a 48-inch conveyor belt with a 100HP Dodge Drive Package will bring several improvements to the efficiency of the grain loading process at the terminal. These efficiency enhancements include:

- Increased Capacity:** The wider 48-inch conveyor belt will have a 60% larger surface area, allowing for a higher volume of grain to be transported in the same period compared to the 30-inch conveyor. This increased capacity is anticipated to significantly reduce loading times, speeding up the overall process and potentially increasing throughput at the terminal.
- Reduced Belt Speed:** By replacing the existing conveyor that operates at the high end of recommended belt speed, the new conveyor system can run at a lower belt speed while still maintaining or even exceeding current capacity. Operating at a lower speed reduces the wear and tear on the belt and other system components, prolonging the life of the system and reducing maintenance requirements. This will translate to lower operating costs and improved reliability.
- Enhanced Energy Efficiency:** The 100HP Dodge Drive Package is anticipated to be more energy-efficient than the current outdated drive system. Improved energy efficiency results in lower energy consumption and reduced operating costs, which will contribute to the overall efficiency of the grain loading process.

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- **Better Product Handling:** The new conveyor system, operating at lower belt speeds, will provide gentler handling of the grain, reducing the risk of product damage, breakage, or loss. This can lead to a higher quality product being delivered to the end customer, which can positively impact the reputation of the grain loading terminal and increase demand for its services.
- **Streamlined Maintenance:** The 100HP Dodge Drive Package is likely to require less maintenance than the older drive system, as it will incorporate more advanced technology and design. Additionally, the reduced wear and tear on the belt due to lower operating speeds can lead to less frequent maintenance, further increasing the overall efficiency of the system.
- **Improved Integration and Control:** A proposed modern conveyor system can be more easily integrated with other equipment and automation systems at the terminal. This can lead to better coordination and control of the overall process, increasing operational efficiency.

By investing in a 48-inch conveyor belt with a 100HP Dodge Drive Package, the increased capacity, reduced belt speed, enhanced energy efficiency, better product handling, streamlined maintenance, and improved integration and control will all contribute to a more efficient and cost-effective grain loading operation.

Improves reliability.

Investing in the Project will increase reliability at the grain terminal in several ways:

- **Modern Technology and Design:** The new conveyor system will feature up-to-date technology and design, which offers better performance, durability, and reliability compared to the older system. The advanced materials and engineering used in the new system can withstand heavy usage and harsh operating conditions, reducing the risk of unexpected breakdowns and failures.
- **Lower Operating Speeds:** By operating at lower belt speeds than the current system, the new conveyor will experience reduced wear and tear on its components, such as the belt, rollers, bearings, and power unit. This can extend the lifespan of the system and decrease the frequency of maintenance and repairs, ultimately improving its overall reliability.
- **Energy-Efficient Drive Package:** The 100HP Dodge Drive Package is designed to be energy-efficient and reliable. Upgrading to this modern drive system can lead to a more stable and dependable operation, reducing the likelihood of drive-related issues or failures.
- **Improved Maintenance Capabilities:** The new conveyor system will include features that facilitate easier maintenance and repairs, such as modular components, improved accessibility, and diagnostic tools. These features can help maintenance personnel identify and address potential issues more quickly, reducing downtime and enhancing overall reliability.

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- **Better Integration with Other Systems:** Modern conveyor systems can often be more easily integrated with other equipment and automation systems at the grain terminal. This improved integration can lead to more efficient coordination and control of the overall process, reducing the likelihood of operational issues that could impact the system's reliability.
- **Compliance with Current Standards:** Upgrading to a modern conveyor system ensures compliance with the latest industry standards and regulations. This can result in a system that is not only safer but also more reliable, as it is designed and built according to best practices and guidelines.
- **Reduced Human Error:** The new conveyor system may incorporate advanced automation and control features that minimize the need for manual intervention. By reducing the potential for human error, the overall reliability of the grain loading process will be improved.

By investing in a new conveyor system, the terminal will benefit from increased reliability which can lead to reduced downtime, lower operating costs, and a more efficient grain loading operation.

Benefits of the Proposed Project are anticipated to:

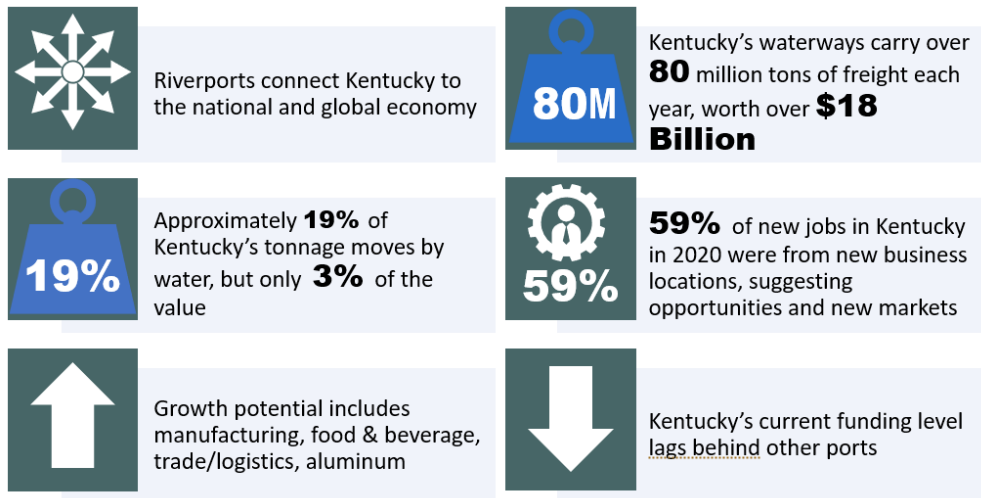
- Prevent loading delays and potential reroutes caused by old conveyor equipment's capacity and condition. The upgrades to the equipment will increase operational capacity and efficiency of bulk commodity movements from truck, storage, and rail to barge.
- Maintain ongoing support for a variety of agricultural related businesses and jobs in the community.
- Ensure a dependable supply chain for moving bulk commodities to market while removing trucks from the road and providing economic stability to rural areas.

Section B: Supporting Economic Vitality at the Regional or National Level

Agricultural production depends on a complete transportation system that includes all major modes of transportation (truck, rail, barge, aircraft, and ocean vessel), with their complementary and competitive roles in transporting farm goods. Kentucky's agricultural producers rely heavily on rural infrastructure to efficiently transport farm products, as crops are moved from production regions by truck, rail, or barge to elevators and processing facilities. As with most commodities, trucks are often the first and last mode in the transport of agricultural products. Due to its cyclical nature during annual periods of growth in volume, agriculture, in turn, puts pressure on the transportation system. Many agricultural commodities weigh more, are perishable, seasonal, and of relatively low value, making efficient and appropriate transportation challenging but critical.

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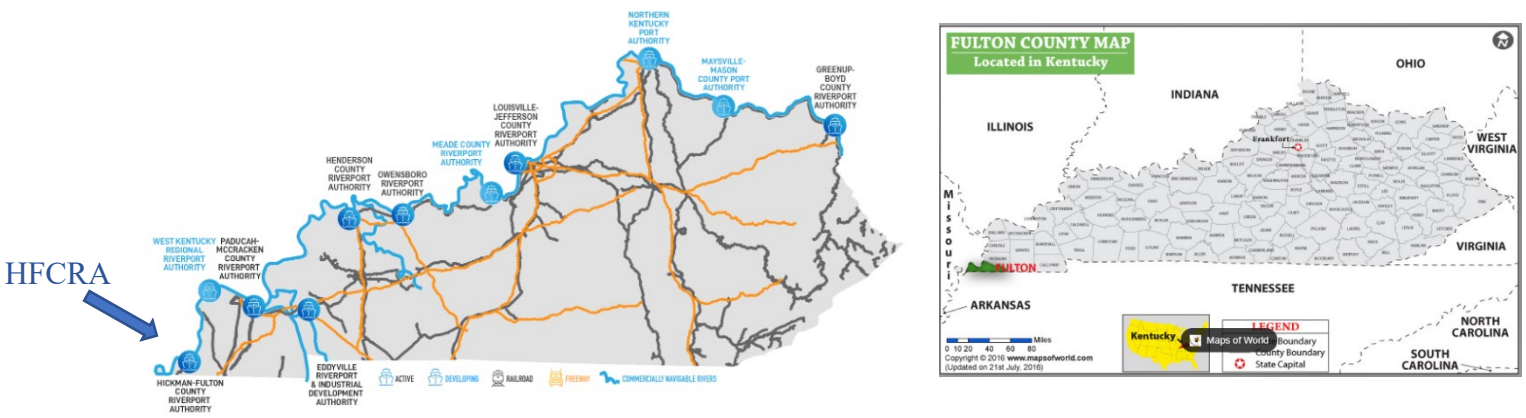
Exhibit 9: The Kentucky Riverport Market



Source: <https://transportation.ky.gov/MultimodalFreight/Pages/Kentucky-Riverports,-Highway-and-Rail-Freight-Study.aspx>

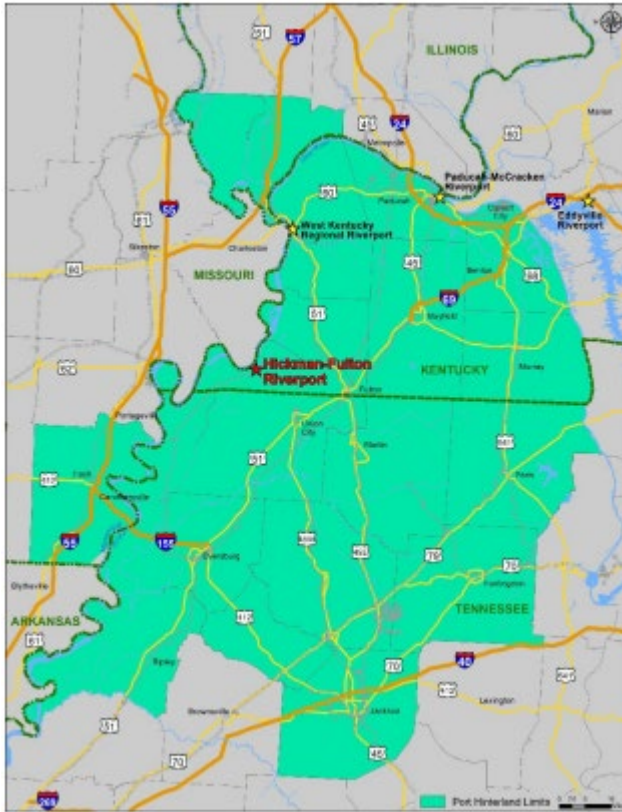
HFCRA is making significant investments to address its current disadvantage of aging assets. This investment will benefit the vitality of the regional economy. The Project will support the agriculture sector and enhance the movement of the grain to ensure a more prosperous community and regional economy. Improvements will address the current disadvantage that the Riverport has when dealing with port infrastructure that has exceeded its design life. The proposed substantial investment to upgrade the current conveyor system is for the Riverport to modernize and expand its capacity to meet current and future customer demand. The Riverport lies along the Mississippi River at the western edge of the Commonwealth. Fulton County, a rural county with a population of only 6,064, is on the southwest tip of Kentucky just across the state line from Tennessee to the south, and Missouri to the west across the Mississippi River. HFCRA is one of 11 riverports in Kentucky.

Exhibit 10: Hickman-Fulton County River Authority (HFCRA)



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Exhibit 11: Hinterland Catchment Area



HFCRA’s advantage is its location which includes year-round lock-free navigation to the Gulf of Mexico. Improvements to the port will allow for faster loading/unloading times and increased savings on waterborne shipping. The Riverport is strategically located in the heart of a major crop-producing region. Grain is the primary cargo handled by the Riverport including corn, soybeans, wheat, and milo.

According to the Kentucky Transportation Cabinet’s *Kentucky Riverports, Highway and Rail Freight Study*, the competitive market area for the HFCRA is estimated to be a 90-minute drive from the port. Forecast opportunities are mostly from north-south movements in western Kentucky extending across an agricultural and manufacturing riverport hinterland of 21 counties in Kentucky, Illinois, Tennessee, and Missouri. While the Dorena-Hickman ferry provides the nearest cross-river mobility to Missouri, the

nearest highway bridges are located near Wickliffe, KY (30 miles north) and along I-155 between Tennessee/Missouri (40 miles southwest). An ongoing bi-state project is in design to replace the aging US 51 bridge at Wickliffe.

Commodity Flows

As shown in Exhibit 13, 1.0 billion tons of freight moved through the hinterlands during 2018, totaling \$1.5 trillion by value. Top commodities of agriculture, construction materials, petroleum, and chemicals were broken down between highway, rail, and waterway modes.

Exhibit 12: Hickman-Fulton County Riverport 2018 Market Hinterland Total Tons and Values

Mode	Tons (millions)	Value (USD billions)
Truck	425.0	\$657.7
Water	10.5	\$5.3
Rail	633.5	\$896.8
Total	1,068.9	\$1,559.7

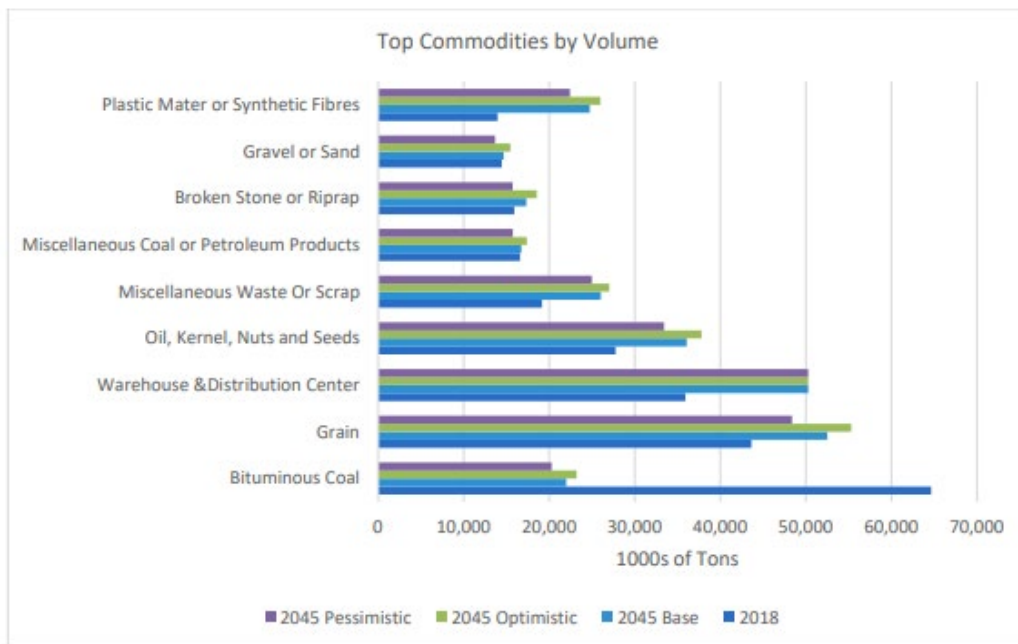
In 2018, the Catchment Area consisted of 8.8 million tons of Agricultural Products and Livestock. It is forecast that the Grain requiring transport out of this area will increase by 29 percent (1.2 million tons) by 2045. Grain is forecasted to be 19 percent of the 6.5 million tons of total tonnage

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growth of the catchment area. To offset this growth, Coal is forecast to drop 54 percent (6.0 million tons) equivalent to 47 percent of the forecasted products that will decline by 2045.

Exhibit 14 presents the top hinterland commodities by volume. As shown, grain replaces coal in the top volume in two of three future scenarios. Mixed consumer products in warehouses rank second although there are challenges to divert these to water transportation.

Exhibit 13: Top Commodities by Volume 2018 compared to 2045 Forecasts.



The increased dependability and efficiency of a grain conveyor system will attract more producers to the Riverport as a means of transporting their products, stimulating the local economy, and creating job opportunities.

Agriculture in Kentucky is one of the state’s leading and most vital industries, contributing about \$45.6 billion to Kentucky’s economy each year. Kentucky agriculture is also constantly changing to keep up with consumer demand and the ever-growing world population.

Kentucky is home to 75,966 farms ranging in size from large to small. The average farm size in Kentucky is 171 acres, compared to 444 acres nationally. Kentucky agriculture is dominated by small family farms. Approximately 66 percent of its farms (49,942) have annual sales of less than \$10,000 or less than 32 percent of the median household income in Fulton County.

Of Kentucky’s 25.4 million acres, just over 50% is considered farmland (12.8 million acres). Kentucky agricultural cash receipts (sale of crops and livestock) set a record \$6.86 billion in 2021.

To determine the value of agriculture in Kentucky, an Input-Output (IO) model is constructed using 2019 IMPLAN data. In 2019, total revenue for production agriculture was \$5.6 billion and total employment equaled 91,864. The agricultural processing sector generated output worth approximately \$25.1 billion and employed 45,024 workers. Total output for the entire agriculture

industry topped \$31.6 billion and employment totaled 138,612 workers. Agricultural output was about 6.7% of total revenue in Kentucky.

For oilseed and grain production of the agriculture industry in 2019, the employment multiplier is equal to 1.92. This number suggests that for every 100 new jobs in the oilseed and grain production industry, through direct, indirect, and induced effects, an additional 92 jobs are created throughout the rest of the local economy. The output multiplier is equal to 1.76. This means that for every dollar spent in the production of oilseed and grain, an additional 76 cents are generated as a result of interactions between business, suppliers, and household spending. The income multiplier is equal to 1.97. For every \$1 of income generated, an additional 97 cents of income are generated within the local economy. It is important to note that the indirect and induced effects are not constrained to the agricultural industry. Depending on the relationships between different industries and household spending, spillover effects can be felt in any industry within the local economy. The final estimate of the overall economic impact of oilseed and grain agriculture on the state of Kentucky, including the multiplier effect, production agriculture represents approximately \$3.3 billion of output, 24,422 jobs and just less than \$1 billion in labor income. Source: http://cedik.ca.uky.edu/files/importance_of_ag_ky_update_2022.pdf

Section C: Leveraging Federal Funding to Attract Non-Federal Sources of Infrastructure Investment

A. The Port's efforts to maximize the non-federal share of the Project

The Project is being supported locally by the HFCRA. This investment builds on the previously awarded investment from the State of Kentucky Riverport Initiative (KRI) and the HFCRA to replace the system that moves products from the river to the port to truck/rail for final delivery. This illustrates commitments at all levels of government in the Project area to ensure the HFCRA is a viable and reliable supply chain partner for key traded sectors of the area economy. The federal investment is necessary to complete the funding package for modernizing port operations and expanding the available capacity to accommodate future demand. At the time of application, the Riverport was maximizing its efforts to attract additional private and public resources to assist with the Project.

B. Fiscal Constraints that affect the Ports ability to increase the amount of non-federal revenue dedicated for transportation infrastructure

Kentucky Revised Statutes prohibit the use of fuel-tax revenues for non-highway projects. HFCRA is not an authorized taxing authority; therefore, it does not have access to revenues generated from any taxes and cannot fund large scale capital improvement projects. To become an authorized taxing authority, the HFCRA must receive approval from the City of Hickman and Fulton County governments, as well as receive public approval by a county wide vote. Public-Private Partnership funding opportunities are limited by the Kentucky Constitution; Section 164, to a 20-year period, thus negatively impacting opportunities for private partnership funding on the maritime Project.

The only state funding available for maritime projects in Kentucky is the designated \$500,000 set aside for riverports in the general budget that requires passage by the state legislature during its

biennial budget session. These funds are available to all seven operating public port complexes in Kentucky – the Hickman-Fulton Riverport, the Paducah-McCracken County Riverport, the Eddyville Riverport, the Henderson County Riverport, the Owensboro Riverport, the Meade County Riverport, the Louisville-Jefferson County Riverport, and the Greenup-Boyd County Riverport – thus requiring capital improvement projects to be self-funded or supported by grant opportunities like the PIDP grant.

HFCRA has received previous grants and has demonstrated the ability to effectively manage federal funds. See Appendix E for a list of previous grants. This PIDP application clearly demonstrates a business case for leveraging local funds to improve the nation's transportation network. A federal investment will produce a lasting return on investment for the entire four state region.

HFCRA has a track record in generating additional revenues by focusing resources on developing infrastructure to better utilize marine highway capacity. Federal investment in the Conveyor Upgrade & Replacement Project will likewise leverage additional investment for further developing the nation's Marine Highway system to move freight safely and efficiently and reduce demands on highway and rail systems.

This Project leverages recent investments to repair Mooring Cells 3 and 4, which was jointly funded by the KRI Program and the HFCRA.

Section D: Port Resilience

As mentioned above, the general cargo dock approaches are located on the land side of the levee system. As a result, high water situations do not impede the flow of loading/unloading at the Riverport, as long as the river is navigable.

The Project team has aligned these Projects with KY Conservation Committee Initiatives and KY Climate Resiliency Action Plan which both give guidance on lowering greenhouse gas emissions. The planning and selection of the components align directly with these Climate Action Plans. The Project also aligns with DOT Climate Action Plan by utilizing the following mitigation initiatives.

Investing in this Project will contribute to port resilience in several ways:

- **Enhanced Reliability:** As previously discussed, the new conveyor system is expected to be more reliable than the existing system, which can reduce downtime and improve overall port operations. A more reliable conveyor system can better withstand operational challenges, ensuring the grain terminal continues to function efficiently even under difficult circumstances. The expanded capacity it provides will provide operational certainty during flooding events, making the agriculture and bulk commodity supply chain more resilient.
- **Increased Capacity and Efficiency:** The new conveyor system's increased capacity and efficiency can help the port handle higher volumes of grain, potentially allowing it to better accommodate fluctuations in grain supply and demand. By being able to manage a larger

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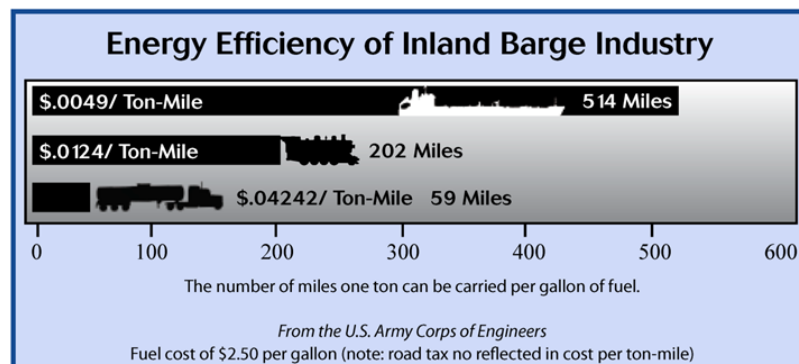
throughput, the port can maintain its operations in the face of disruptions, such as seasonal variations or changes in global trade patterns.

- **Adaptability and Scalability:** Modern conveyor systems are typically designed with modularity and scalability in mind, which allows for easier expansion, modification, or integration with other systems in the future. This adaptability can help the port quickly respond to changing requirements or emerging opportunities, making it more resilient to evolving market conditions and technological advancements.
- **Compliance with Safety Standards:** Upgrading to a modern conveyor system ensures compliance with the latest safety standards and regulations. By adhering to these guidelines, the port can reduce the risk of accidents, injuries, and damage to infrastructure, contributing to a safer and more resilient working environment.
- **Environmental Sustainability:** The energy-efficient drive package and improved dust control mechanisms in the new conveyor system can help reduce the port's environmental impact, making it more sustainable and resilient in the face of increasing environmental regulations and public scrutiny.
- **Enhanced Risk Management:** Investing in a modern conveyor system demonstrates a proactive approach to risk management. By addressing potential vulnerabilities in the existing system, the port can better anticipate and mitigate risks, such as equipment failure, operational disruptions, or safety hazards.
- **Improved Reputation and Stakeholder Confidence:** By investing in a state-of-the-art conveyor system, the port can demonstrate its commitment to safety, efficiency, and environmental responsibility, which can boost its reputation among stakeholders, including customers, regulatory agencies, and the local community. A strong reputation can help the port maintain its competitiveness and attract investment, both of which contribute to long-term resilience.

Promotes Energy Efficiency.

There currently is not a State of Kentucky Climate Action Plan, Equitable Development Plan, or an Energy Baseline Study. There also are not any at a regional or local level.

Exhibit 14: Efficiency of Barge Transportation



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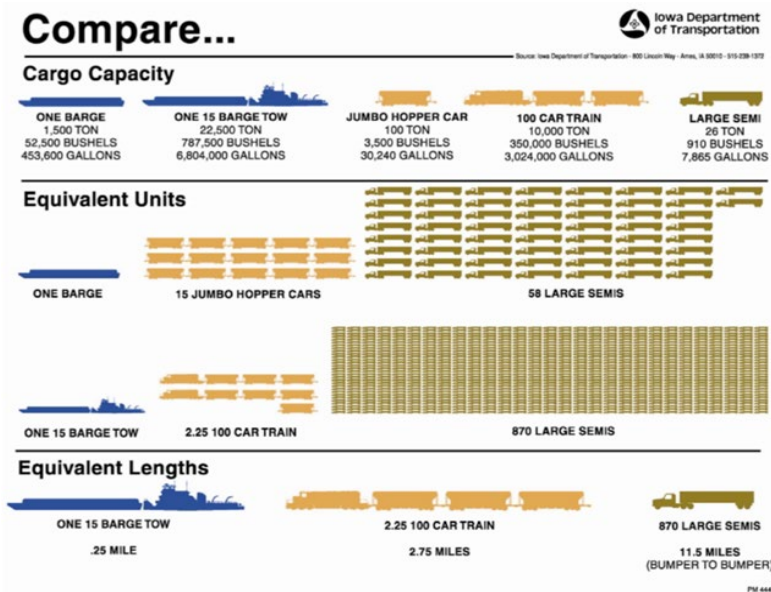
However, there are Project measures to reduce Greenhouse Gas (GHG) which include:

Transportation - Supporting alternative-fueled technology and implementing systems that increase the efficiency of transportation and reduce energy consumption.

The goal of the Project is to expand capacity and enhance the reliability of goods moving via the inland waterways. Exhibit 15 illustrates the energy efficiency of the inland waterway barge industry.

The Project will improve the throughput of goods being transported to final destinations, reducing inside the gate congestion, decreasing truck fuel usage. In addition, rail on port access further

Exhibit 15: The Efficiency of Barges versus Truck and Rail



reduces environmental impacts with the increased throughput capacity. This Project intends to remove heavy loads off the local roads by moving bulk materials by barge on the waterways.

Water transportation provides tremendous carrying capacity while consuming far less energy compared to other modes of transport such as truck, rail, or air. Shippers select barge transportation because these energy efficiencies lead to substantial cost savings. One gallon of

fuel can move one ton of cargo 514 miles by barge compared to 202 miles by train and only 59 miles by truck. The Riverport provides open river, efficient connections to Gulf Coast deep water ports, providing direct access to global markets through the expanded Panama Canal and destinations across the Atlantic.

Energy Conservation and Efficiency – The Riverport continues to employ energy strategies in their facilities that save money on utility costs, reduce GHG emissions and provide other community benefits.

Overall, investing in this Project can significantly enhance the resilience of the port by improving its reliability, capacity, adaptability, safety, environmental sustainability, risk management, and reputation. By addressing potential vulnerabilities and adapting to changing conditions, the port can maintain its operations and competitiveness in an ever-changing global market.

SECTION V: SELECTION CONSIDERATIONS

After discussing the merit criteria identified above, this section of the application discusses how the Project addresses the following selection considerations.

Section E: Climate Change and Sustainability

Fortunately, the general cargo dock approaches are located on the land side of the levee system. Thus, the facility does not experience flooding during highwater events on the river.

Increase Climate Resilience of Port Infrastructure

The Project increases climate resiliency of the inland waterway freight system by increasing capacity at the Riverport, where the facility has experienced greater fluctuations in water levels due to an increase in extreme weather events.

The wide variation of precipitation has led to sustained flooding and drought conditions. For example, in 2019 areas along the Mississippi remained above flood stage for at least three months. In fall 2022, the Mississippi experienced low water levels, reaching its shallowest level in 10 years in October. The river elevations have risen for many months after drought conditions ended in mid-December as precipitation has been favorable.

The Mississippi River is significant to trade within the U.S., as it serves as an avenue funneling 500 million tons of shipped goods into the economy. The river extends more than 2,300 miles in the center of the country from Minnesota to the Gulf of Mexico. The U.S. Army Corps of Engineers maintains a minimum 9-foot shipping channel from Louisiana to Minnesota to transport shipped goods up and down the Mississippi River. The improved precipitation and river water levels have benefitted the supply chain, as barges are no longer at a standstill or need to be light loaded, although routine dredging continues.

According to the U.S. Department of Transportation's modal-share analysis of grain transportation, between 2015 and 2019 – the latest-available data points – barges consistently moved about 13 percent of all U.S. bulk grain and 47 percent of all grain destined to export markets. From 2015 to 2019, 95 percent of corn, 94 percent of soybeans and 45 percent of wheat moved by barge traveled through the Mississippi River system to Louisiana. That corresponds to an average annual volume of 32 million tons of corn, 33 million tons of soybeans and 9 million tons of wheat traveling to Louisiana. The only other destination states with a significant portion of barge-grain movements are Oregon and Washington, which receive between 15 percent and 40 percent, respectively, of wheat deliveries via inland waterways such as the Columbia River¹.

The Riverport dredges in front of their docks annually to ensure that decreased water levels do not affect the loading/unloading of barges. This allows for continued movement of goods in and out of the Riverport as long as the Mississippi river is navigable.

The four characteristics and filters included under "Climate Exposure" in Neighborhoods at Risk are indicators of land areas that may experience more significant impacts from climate change. These variables (hurricane flood zones, floodplains, impervious surface, and lack of tree canopy) represent characteristics of the physical environment that make a population vulnerable to climate change by affecting the likelihood of extreme heat and flood events.

¹ [Mississippi River levels slow transport \(agupdate.com\)](https://www.agupdate.com/mississippi-river-levels-slow-transport/)

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The following are the Climate exposure characteristics for the Project Area

Exhibit 16: Climate Exposure Tract 9602 compared to Fulton County, KY

Climate Exposure	Tract 9602	Fulton County, KY
Area lacking tree canopy	86.3%	86.9%
Area of impervious surface	0.9	1.4%
Area in 500-yr floodplain	65.4%	18.4%

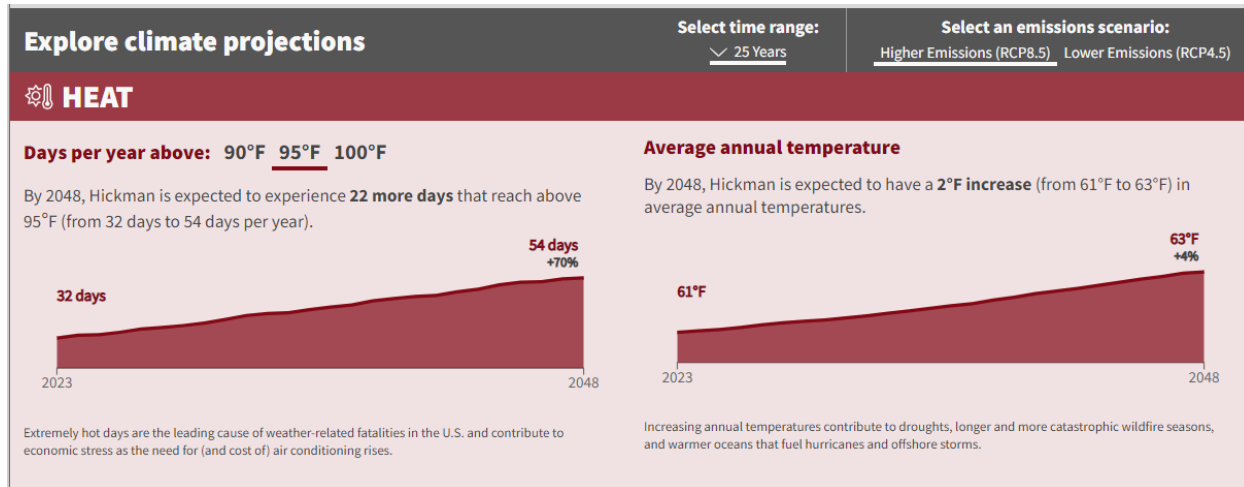
Note that since this is an inland location, the Climate Exposure characteristics only displays three of the four variables as hurricane flood zones, the fourth variable, is not applicable for this area.

Based upon these three characteristics as well as land use, etc., the Neighbors at Risk Model predicts that by 2048 Hickman is expected to experience a 70% increase on extremely hot days and a 7% increase in days with heavy precipitation.

It is forecasted that the City of Hickman will experience 22 more days that reach above 95°F than is expected in 2023. Average Annual Temperature by 2048 is anticipated to increase 2°F from 61°F in 2023 to 63°F in 2048.

If Emissions continue to grow, it is anticipated that there will be 0.7 more days with precipitation above 1". Average annual precipitation is expected to increase by 1" from 53.3" to 54.3" by 2048.

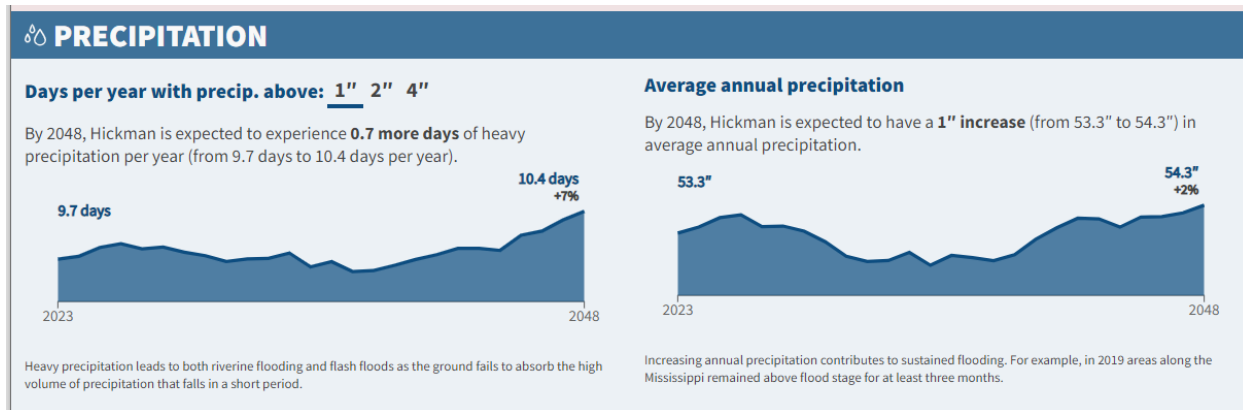
Exhibit 17: Average Annual Temperature Projection



If Hickman can lower their emissions over the next 25 years, hot days will increase by only 48% but annual heavy precipitation is projected to increase by 0.8 days, increasing the annual precipitation by 1.7" in average annual precipitation.

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Exhibit 18: Precipitation Projections



Greenhouse Gas Reduction

Providing additional capacity to offer shippers water transportation encourages movement by the mode with the least emissions per ton mile. According to a Texas Transportation Institute study completed in 2017, an inland waterway tow produces 15.6 tons of GHG emissions per one-million-ton miles compared to rail which produces 21.2 tons and diesel trucks which produce 154.1 tons of GHG emissions per one-million-ton miles. Exhibit 20 illustrates the modal comparison of emissions included in the TTI study.²

Exhibit 19: Summary of Emissions - Grams per Ton Mile 2019

Mode	Emissions (grams/ton mile)				
	HC (VOC for Truck)	CO	NOx	PM ₁₀	CO ₂
Inland Barge Tow	0.0058	0.0394	0.1526	0.0056	15.0815
Railroad	0.0083	0.0564	0.2182	0.0053	21.2
Truck	0.0221	0.1898	0.4487	0.0191	140.7023

An inland barge tow produces 26% less GHG emissions than rail and 90% less GHG emissions than trucks per one-million-ton-miles. Additionally, by increasing loading capacity at the Riverport, truck movement distances are reduced, and as a result the Project lower's regional emission.

Planning Tools Used

HFCRA commissioned a *Racial Equity and Environmental Justice Impact Analysis* specifically for this Project. The full report can be found in Appendix G. As can be seen from the results of the various EJ mapping tools and data collected, it is important to understand the Project and the potential impacts it may have on disadvantaged populations. Using multiple lenses through different Environmental Justice data tools helps refine the characteristics of the surrounding area. Fine tuning the scope of the analysis from a 1-mile radius around the Project area to the city level to the Census Tract to the County level, helps to inform planners and designers in developing their public outreach efforts. Using the characteristics of the populations near the Project and evaluating

² <http://nationalwaterwaysfoundation.org/documents/Final%20TTI%20Report%202001-2014%20Approved.pdf>

Project elements that could impact the underserved populations will help planners ensure negative impacts are identified and accounted for through mitigation efforts.

Since Hickman and the surrounding Fulton County area is sparsely populated, the Census Tract 9602 is one of two Tracts that Fulton County encompasses. US EPA's EJ Screen indicates that the area surrounding the project is considered an EJ area. It also shows that within a one-mile buffer, the population with less than a high school degree is in the 62nd percentile for the Commonwealth of Kentucky and 71st percentile for the nation. Additionally, the population over the age of 64 are in the 54th percentile for Kentucky and 59th for the U.S.

Once potential impacts are identified, then specific outreach can be designed to inform the affected populations and develop mitigation options as appropriate. Any activities and projects that reduce vehicle miles traveled and reduce vehicle idling will improve the air quality of the surrounding area as well as help reduce the effects of GHG on climate change. Since the Project is wholly contained on Riverport property, it is unlikely to have any direct impact on the disproportionately elderly population. The Project will reduce noise and the need for 24-hour operations, which should have a positive impact on the surrounding area.

Public Engagement and Outreach is a continuous process that will continue throughout the planning, design, and implementation of this project. The Public Engagement Plan, found in Appendix F, will inform the design, and will continue during implementation, procurement and/or construction and will enable the Project to address any past inequities identified relating to access and barriers to opportunity, and climate change.

Current analysis indicates that the proposed Project will improve multi-modal access to the Riverport. At this point of the team's analysis, it is believed that the EJ populations noted above will not be disproportionately negatively impacted by the Project. Analysis and monitoring will continue as HFCRA, and its partners move through the final phases of the Project. All mitigation measures identified in the design and environmental review process will be implemented and monitored post-construction for compliance and community enhancement.

The Port has used the DOT's Transportation Disadvantaged Census Tract tool, EPA's Environmental Justice Screening Tool (EJSCREEN), and the Council on Environmental Quality (CEQ) Climate and Economic Justice Screening Tool (CEJST) planning tools to inform the planning and design of the Project.

From these planning tools, we know that Hickman, Ky (Tract number 21075960200) has a population of 2,618. This tract is considered disadvantaged because it meets more than one burden threshold AND the associated socioeconomic threshold.

The three characteristics are:

Climate Change, Health, and Workforce

Exhibit 20 : Disadvantaged Census Tract Criteria

Characteristic	Element	Percentile	Description
Climate Change	Expected Population Loss Rate	95 th percentile	Fatalities and injuries resulting from natural hazards each year – (above 90 th percentile)
	& Low Income	88 th percentile	People with less than or equal to twice the federal poverty level (above 65 th percentile)
Health	Heart Disease	92 nd percentile	Share of people ages 18 years and older who have been told they have heart disease (above 90 th percentile)
	Diabetes	90 th percentile	Share of people ages 18 years and older who have diabetes other than diabetes during pregnancy (above 90 th percentile)
	& Low Income	88 th percentile	People with less than or equal to twice the federal poverty level (above 65 th percentile)
Workforce	Unemployment	95 th percentile	Number of unemployed people as a part of the labor force (above 90 th percentile)
	& High School Education	22 nd percentile	Percent of people ages 25 years or older whose high school education is less than a high school diploma (above 10 th percentile)

Climate change has been shown to disproportionately affect vulnerable populations, including elderly people, children, low-income communities, and communities of color. As a low-income community with health and workforce challenges as seen in Exhibit 21, climate change / natural weather events have been seen to affect this community disproportionately over the last few years. With fewer resources, the Hickman-Fulton community is not positioned to either prepare for or cope with extreme weather / climate-related events. This includes having fewer options for evacuating or accessing emergency relief services compared to other communities. Adding capacity to the Riverport increases capacity to move goods which in turn will generate more tax revenue for the community.

This Project aligns with USDOT policies and actions to incorporate climate change resilience, climate equity, and meaningful public involvement to educate the community on the potential impacts of the Project and together create climate solutions that ensure that all people can benefit equally. This Project will help diminish the disproportionate burden that this Justice40 community has endured.

SECTION F: EQUITY AND JUSTICE40

Utilizing USDOT’s Disadvantaged Census Tools and other tools such as EJScreen, it has been determined that this Project will not create any disproportionate impacts on the EJ community. If implemented, the Project is intended to provide opportunities for additional regional jobs for all populations near the Project area. As this is an investment in safety, efficiency, and resiliency of Port infrastructure, the Project is not positioned to remove transportation-related disparities, other than the increased capacity should reduce vehicle miles traveled (VMT) of grains trucks that

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currently are diverted from the Riverport due to limited capacity. The reduction of truck VMT will in turn increase the safety of the regional roads.

The Kentucky Riverport, Highway & Rail Study projects that HFCRA could divert over 600,000 truck VMT annually to barge at the Riverport with this improvement.

Equity Assessment

As described above HFCRA has completed an Equity Assessment of the Project and has engaged in meaningful public engagement that will continue through the Project's lifecycle. This Project is a case study of a Justice40 Community that experiences low-income, underserved and an overburdened community as demonstrated by its classification as a Historically Disadvantaged Community that has experienced Persistent Poverty over the years.

Public Outreach Planning

Public Engagement and Outreach is an on-going process that will continue throughout the planning, design, and implementation of this Project (Public Engagement Plan Appendix F). The Plan will continue to inform the design, implementation, procurement, construction, and on-going life-cycle investment which will enable the Riverport to address any past inequities identified relating to the Project in relation to equity, job opportunities, and climate change. The Riverport's intent to design their outreach activities to utilize best practices as identified in *USDOT's Promising Practices for Meaningful Public Involvement in Transportation Decision-Making Guide* to ensure that HFCRA adequately informs the public about how the Project will potentially impact affected communities and that diverse views are being heard and considered.

Current analysis indicates that the Project will improve multi-modal access to the River. At this point of the team's analysis, it is believed that the EJ populations noted above will not be disproportionately negatively impacted by the Project. Analysis and monitoring will continue as HFCRA, and its partners move through the final phases of the Project. All mitigation measures identified in the design and environmental review process will be implemented and monitored post-construction for compliance and community enhancement.

Census Tract 9602, encompassing the HFCRA, meets the definition of an Area of Persistent Poverty and the definition of a Historically Disadvantaged Community. Improving a Historically Disadvantaged Community fosters equality among all members of the surrounding area.

SECTION G: WORKFORCE DEVELOPMENT, JOB QUALITY, AND WEALTH CREATION

Workforce Training, Inclusionary Contracting Policies

Regional Workforce:

In 2020, Hickman-Fulton County had a population of 6,064 with 2,090 jobs and a median

household income of \$31,587³.

In 2021, the Riverport's biggest issue was workforce limitations due to COVID and competition for workers with nearby employers.

Wages continue to increase from an average of \$10.50 per hour in 2020, to \$13-\$15 per hour in 2021.

To address these workforce issues, the Riverport is engaging in the following initiatives:

Local Workforce Training Programs: By partnering with local educational institutions, such as Hickman County Extension Office, Western Kentucky Community and Technical College (WKCTC) in Paducah, and workforce development centers, to develop tailored training programs focused on skills required for jobs at the grain terminal, including logistics, operations, maintenance, and safety procedures.

Fulton County, with only a population of 6,064 as of 2020, is currently in the process of becoming a Kentucky Certified Work Readiness County. This process includes increasing High School graduation rate to 90% (Fulton County is currently at 80%), developing a plan to meet 25 Mbps internet service to 60 % (currently 80% of the County has access to the internet but the speed is low at only 10Mbps), and developing a plan to provide employment and engagement opportunities to underserved populations.

The Fulton County School District is home to the Four Rivers Career Academy, formerly the Fulton County Area Technical Center. The Academy offers dual credit courses, industry certifications, and career pathways in business entrepreneurship/marketing, advanced integrated technology, automotive technology, welding, and health sciences. The 4RCA partners with five districts, two technical centers and two college partners as well as several businesses and industries to provide a highly skilled pool of workers for the Riverport and other area industries.

The West Kentucky Alliance for a Vibrant Economy, or WAVE, leads economic development efforts in West Kentucky heavily focused on its location along both the Ohio and Mississippi Rivers. According to WAVE, the region's key asset is strong and deep support from the community, both in terms of parent participation, and the generosity of private philanthropists, most prominently, Robbie and Lisa Rudolph's Four Rivers Foundation which since 2009 has helped ensure that all local high school students have free access to college dual-credit programs and has better prepared students for post-secondary training and assisted them in the transition to a career. Vocational schools have been developed in the area; there is a strong presence of certified welders.

Directly related to HCFRA, Murray State University and WKCTC have initiated higher education curricula that will be valuable for river-related industries, including agriculture technology and logistics and supply chain management. Establishment of the new Emerging Technology Center on WKCTC's Paducah campus and the Skilled Craft Training Center in Graves County have

³ Source: datausa.io

helped ensure that the region boasts state-of-the-art workforce training facilities. WKCTC is a conduit for jobs in the maritime sector. The College offers Unlimited Radar Observer, Inland Radar Observer, Rivers Radar Observer certifications as well as Unlimited/Inland Radar and River Radar re-certification. The Marine Technology program gives professional mariners the opportunity to rise above the crowd and establish themselves as a leader in the industry as well as improve their opportunities to advance professionally. The curriculum for the Marine Technology program is taught online with flexible schedules to accommodate the ever-changing schedules of the mariner.

WKCTC also offers an Electronic Charting Software Training Course using Rose Point Navigation Systems Software and an U.S. Coast Guard Approved 16-Hour Marine Basic Firefighting Course. Participants in the Marine Technology Program can earn an associate degree in applied technology in Marine Technology with the following tracks:

- Marine Culinary Management Track
- Marine Engineering Track
- Marine Logistics Operations Track
- Wheelhouse Management Track

Certificates in the following can be earned through the program:

- Marine Culinary
- Marine Engineering
- Marine Industry
- Marine Technology Business

WKCTC was designated a 2021 Center of Excellence for Domestic Maritime Workforce Training and Education (CoE) by U.S. Department of Transportation's Maritime Administration (MARAD). Authorized under the National Defense Authorization Act of 2018, the CoE program is designed to assist the maritime industry in gaining and sustaining a well-trained labor force while enhancing diversity and inclusion in the industry. The College's Office of Cultural Diversity and Inclusion takes a holistic approach to identifying, recruiting, and supporting minority and low-income students as well as ensuring a diverse workforce.

The Project will expand capacity and enhance the use of the inland waterways, which will provide students successfully completing any of the Marine programs a path to good paying, living wage jobs in the maritime industry.

Apprenticeship Programs: Registered apprenticeship training is a vital part of the well-being of Kentucky and the US. Within Kentucky's Education and Workforce Development Cabinet, apprenticeship coordinators specialize in assisting employers in establishing registered apprenticeship training programs. HFCRA participates in these programs and encourages their customers to also avail themselves of these important job enhancement services. These apprenticeship programs are developed in collaboration with local unions, trade associations, and educational institutions. These programs provide hands-on training and mentorship opportunities for individuals interested in working at the Riverport. Registered apprenticeships in Kentucky are very flexible and are tailored to the individual employer's needs for on-the job training of apprentices. In addition to the on-the-job training, a minimum of 144 hours of related instructional

classwork is required for each year of apprenticeship. The related instruction is designed to teach the apprentices the theoretical and technical subjects related to the specific trade.

HFCRA supports **Minority and Women-Owned Business Enterprises (MWBE) Contracting and Supplier Diversity Program**: The Riverport has established procurement policies that prioritize contracting with certified M/WBEs for goods and services required at the grain terminal. The Riverport also offers assistance and resources to help these businesses navigate the contracting process. The Riverport plans to include procurement goals and providing resources to help these suppliers compete for contracts.

The Riverport has **Inclusive Recruitment Practices**: to help recruit a diverse pool of job candidates for open positions. This is achieved through outreach and the development of partnerships with local organizations, such as workforce development centers, minority-focused chambers of commerce, and community-based organizations. Other efforts include Targeted Outreach and Marketing to attract underrepresented groups including minorities, women, and other disadvantaged people.

Regular Reporting and Evaluation to track and report on the effectiveness of workforce training and inclusionary contracting policies. Using these reporting methods to evaluate these initiatives, the Riverport can adjust their initiatives as necessary to improve their success in promoting a diverse and skilled workforce at the grain terminal.

SECTION VI: PROJECT READINESS

HFCRA is well positioned to successfully deliver the Project due to the technical capacity it has available, and the Project's limited environmental risk as delineated below.

A: Technical Capacity

To minimize project delivery risks when upgrading the conveyor system, it is essential to have the necessary technical capacity in place. HFCRA has assembled a team to address the key elements required of a successful project team for the construction of a grain terminal upgrade. These elements include **a skilled project team, effective project management, detailed planning and scheduling, thorough risk assessment, strong communication and collaboration, quality assurance and control, and technical support and resources**. The Project team includes experienced professionals in relevant fields, and a dedicated project manager will oversee the Project's progress, budget, and timeline. A comprehensive Project plan with contingency measures has been developed, and a risk assessment is periodically updated to identify and address potential risks.

Clear communication and stakeholder collaboration can help ensure everyone is aligned on Project goals and expectations. Quality assurance and control processes will be implemented to maintain high-quality standards, and adequate resources will be provided to overcome challenges and mitigate risks. Minimizing Project delivery risks for the conveyor system upgrade requires a combination of skilled personnel, effective project management, detailed planning, thorough risk assessment, strong communication, robust quality assurance, and appropriate technical support

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and resources. The Project team will be prepared to anticipate and manage potential risks, resulting in successful and efficient project delivery.

Project Schedule

Exhibit 21: Project Schedule

HFCRA Conveyor Update & Replacement	2022				2023				2024				2025				2026		
	1 Q	2 Q	3 Q	4 Q	1 Q	2 Q	3 Q	4 Q	1 Q	2 Q	3 Q	4 Q	1 Q	2 Q	3 Q	4 Q	1 Q	2 Q	3 Q
Site Plan PE 30%	■	■																	
Award announcement							■												
Engineering & Permitting								■	■	■	■	■	■						
Environmental Review									■	■	■	■							
Obligation											■								
Construction / Equip. Procurement													■	■	■	■	■		
Close Out Contract																	■		

Risk Mitigation Strategies

Exhibit 22: Risk Matrix

Potential Risk Area	Risk Type	Current Status/ Proposed Mitigation	Risk Level
Technical Feasibility	Feasibility	Preliminary Engineering Report completed in 2022.	Low
Design Standards Conformance	Feasibility	HFCRA uses professional consulting engineers for infrastructure improvement projects. Once selected through a quality-based selection process, the selected firm(s) will be required to conform to industry design standards.	Low
Partner Approvals	Schedule	None anticipated.	Low
Local Jurisdiction Approvals	Schedule	None anticipated.	Low
Environmental Approvals	Cost, Schedule	Based on the MARAD CE checklist and consultation with MARAD environmental staff, the project is anticipated to require an EA. Initial consultation has begun for the project.	Medium
Funding	Cost, Schedule	All non-Federal commitments have been made in writing. A contingency of 15% has been included in the Project Cost to cover unforeseen costs and inflationary pressures currently seen in the bidding environment.	Low
Public and Stakeholder Support	Cost, Schedule	The broad range of support is demonstrated by the letters in support of the project.	Low
ROW	Cost, Schedule	No ROW is required.	NA
Construction	Cost, Schedule	The project is a small project in a region with multiple contractors available.	Low

Potential Risk Area	Risk Type	Current Status/ Proposed Mitigation	Risk Level
Procurement	Cost, Schedule	Flexibility has been added into the Project schedule to provide adequate buffer to respond to these delays and meet the contractual timelines of the Grant.	Low
Grant Management	Compliance	HFCRA has legal services and will retain professional engineering services for preliminary engineering and design. HFCRA also has access to a seasoned USDOT grants manager.	Low

B: Environmental Risk

To move this Project forward, the Port has prepared a Preliminary Engineering Report (PER) to inform the Port Authority, and its stakeholders on the details of implementing the Project. This report can be found on the [Project website](#).

Information about the NEPA Status of the Project

Roughly 30 acres of land was reviewed for environmental compliance for the HFCRA. This portion of land encompasses the 1,200-ft conveyor system which is slated for replacement as well as surrounding land and riverfront improvement areas. The property was reviewed for flood plains, soils, wetlands and streams, and T&E. The work performed in the preparation of the PER is not a full environmental assessment of the site, but it is intended as an overview of the environmental considerations needed for the Project. The scope of this Project indicates that an environmental assessment is anticipated to meet local and federal laws and regulations as well as meet the federal grant requirements. A NEPA Categorical Exclusion (CE) checklist for MARAD was completed for the Project and has been included with the full Environmental Report in PER Appendix H which is on the [Project website](#) and includes a draft CE Worksheet for MARAD’s review. If MARAD deems an environmental assessment (EA) is required, the EA will identify possible environmental effects and establish all the impacts either positive or negative with regards to the Project and will consist of technical evaluation, economic impact, and social results that the Project will bring. It will include individual reviews of such topics which include but are not limited to:

- City Zoning
- Public Services/Utilities
- Noise Ordinance
- Public Health and Safety
- Clean Air Act
- Environmental Justice Section 4(f)
- Climate Change and Greenhouse gases
- National Historic Preservation Act (NHPA) Section 106
- Rivers and Harbors Act Section 10
- Endangered Species Act (ESA) Section 9
- Tribal Consultation

Environmental Permits and Reviews

Project site development will dictate if permits are required at the Riverport. Based on the replacement of the conveyor and the mooring cell maintenance and supplementary mooring cell addition, several permits will be required:

- Clean Water Act (CWA) Section 404-Memphis USACE Permit
- USACE 408 Permit

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- FEMA Permit for Floodplain Development
- Kentucky Division of Water (KDOW) Permit
- Notice of Intent (NOI) – Construction Stormwater Permit

State and Local Approvals

Only construction permits will be required locally.

Information on environmental reviews, approvals and permits by other agencies.

No additional reviews, approvals or permits are required.

SECTION VII: DOMESTIC PREFERENCE

The HFCRA will bid the material purchases consistent with the requisite domestic preferences requirements of the Build America, Buy America Act. All pass-through requirements will be included in the Bid documents including Domestic Preference requirements. Materials used for the construction components will be sourced locally when possible. The Project will support the continued supply of domestic materials for regional construction projects and support American construction and agriculture jobs.

SECTION VIII: STATUTORY DETERMINATIONS

Exhibit 23: Statutory Determination

Statutory Determination	Response
1. The project improves the safety, efficiency, or reliability of the movement of goods through a port or intermodal connection to the port.	The Project will improve safety by having a system that is in a good state of repair, limiting night shifts which can be more dangerous than day shifts. Efficiency is improved by over 100% due to the replacement of the system with modern equipment which also improved the equipment reliability. Port performance indicators for the Project include improved barge dwell times and Total tonnage as barges can be loaded 166% faster due to the capacity of the conveyor, capacity will increase as barges are loaded faster, throughput will increase due to the ability to load the barges faster, risk of accidents will drop as less night shifts are required to load the barges.
2. The project is cost effective.	N/A this is a small project at a small port
3. The eligible applicant has the authority to carry out the project.	Hickman-Fulton Co. Riverport Authority was established in 1964 by ordinance of the City of Hickman and Fiscal Court of Fulton County. The Port property is in the City of Hickman and in Fulton County. The Hickman-Fulton County Riverport Authority Inc. was established by an ordinance of the

Statutory Determination	Response
	City of Hickman, Kentucky, and an order of the Fiscal Court of Fulton County, Kentucky, as a non-profit, non-stock corporation. The Riverport is governed by an eight-member board of directors with four members being appointed by the mayor and four members being appointed by the County Judge Executive. The Hickman-Fulton County Riverport Authority was organized and exists under Kentucky Revised Statutes 65.510 to 65.650 and Kentucky Revised Statutes 273.161 to 273.390 for the purpose of establishing, maintaining, operating, and expanding necessary and proper Riverport and river navigation facilities, and to acquire and develop property, or rights therein, within the economic environs of the Riverport and to attract directly or indirectly river-oriented industry.
4. The eligible applicant has sufficient funding available to meet the matching requirements.	The funding is stable, dependable, and dedicated to this specific project as demonstrated by the letter of commitment and the HFCRA Balance Sheet. See Appendices B and L.
5. The project will be completed without unreasonable delay.	Anticipated expected obligation date by 1/1/2025 and construction to start 4/1/2025, See Appendix C for the Project budget and Appendix A for the Project Schedule
6. The project cannot be easily and efficiently completed without Federal funding or financial assistance available to the project sponsor.	The project will either be delayed substantially if the PIDP funds are not received. It is likely that the Riverport will need to seek traditional loan financing to complete the project. The schedule is anticipated to be delayed by 3-5 years and the partnership with Cargill will be in jeopardy. The cost of the project would likely increase due to delay of start date and interest charged by loan program.

LIST OF APPENDICES

The following Appendices are attached to the Application in Grants.gov.

- A. Schedule
- B. Letter of Commitment
- C. Project Cost Estimate
- D. Letters of Support
- E. Grant History
- F. Community Outreach Plan
- G. EJ Analysis
- H. Preliminary Engineering Report and Appendices – too big as an attachment in Grants.gov.
Please find this report on the [Project website](#).
- I. Detailed Technical Capacity – also attached below
- J. KY Clearing House Response
- K. HFCRA Incorporation Documents
- L. HFCRA Balance Sheet.



Appendix I: Detailed Technical Capacity

Skilled Project Team: HFCRA has assembled a project team that includes experienced and knowledgeable professionals in the relevant fields, such as engineering, procurement, and construction. Although the details are not all in place, this may involve hiring or training personnel or engaging the services of external consultants or contractors. The Port understands that a skilled project team is critical for identifying and mitigating potential risks and ensuring a successful project outcome.

Effective Project Management: The Port will have a dedicated project manager with experience in managing similar projects. This individual will be responsible for overseeing the project's progress, budget, and timeline, as well as coordinating communication among all stakeholders. As an experienced project manager, he or she will proactively identify potential risks and implement strategies to minimize their impact.

Detailed Planning and Scheduling: A comprehensive project plan has been developed that includes a clear scope of work, well-defined milestones, and a realistic timeline as demonstrated in the Project Schedule included in Section VI: PROJECT READINESS, page 27. The plan incorporates contingency measures for potential risks, such as equipment delays, labor shortages, or unforeseen site conditions. Regularly review and update the plan to reflect any changes or adjustments that may be necessary.

Thorough Risk Assessment: A comprehensive risk assessment has been prepared as seen in Exhibit 23 on page 27 and will be periodically updated as the project progresses. This assessment identifies potential risks, assessing their likelihood and impact, and identifies mitigation strategies. By proactively addressing potential risks, the project team can reduce the likelihood of unexpected issues arising during the project.

Strong Communication and Collaboration: Establish clear lines of communication among all stakeholders, including the project team, contractors, suppliers, and the grain terminal's management and users. Regular communication and collaboration can help ensure that everyone is aligned on project goals and expectations, which can contribute to more effective decision-making and risk management.

Quality Assurance and Control: The Team plans to implement robust quality assurance and control processes to ensure that all project deliverables meet the required standards and specifications. This will include regular inspections, testing, and audits, as well as a thorough commissioning process for the new conveyor system. By maintaining high-quality standards, the project team can reduce the risk of defects, rework, or delays.

Technical Support and Resources: This will be accomplished by ensuring that the project team has access to the necessary tools, equipment, and technical resources to complete the project successfully. This may involve procuring specialized equipment, investing in software or technology, or engaging external technical experts. Adequate resources can help the project team overcome challenges and mitigate risks throughout the project lifecycle.