



# Illinois 2023 State Freight Plan

Executive Summary



Illinois Department  
of Transportation

Updated December 2023







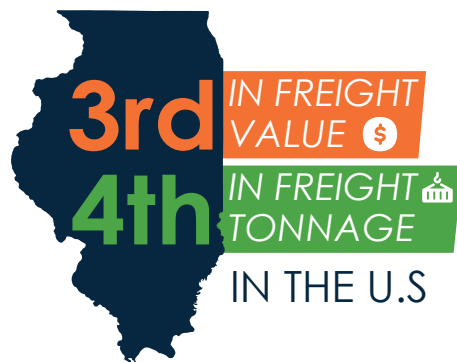
"To say Illinois is the freight hub of the nation would be a huge understatement. We are home to the third-largest interstate and bridge system, the world's busiest airport and almost 80 public airports. We are the only state where all Class I railroads operate. Illinois is bordered by rivers and the only connection between the Great Lakes and the Gulf of Mexico. The bottom line is freight is the lifeblood of the Illinois economy. At IDOT, it is our mission to build upon our past strategic planning efforts and enhance freight mobility for the future."

**OMER OSMAN**

Secretary of Transportation

# INTRODUCTION

Illinois is a vibrant and thriving hub for freight. The State's multimodal freight network connects businesses and consumers in all parts of Illinois and across the nation. Every year, about **1.5 BILLION TONS OF FREIGHT** valued at **\$2.4 TRILLION** FLOW INTO, OUT OF, and THROUGH ILLINOIS.



The Illinois Department of Transportation (IDOT), in partnership with Federal agencies, port authorities, municipalities, railroads, private businesses, and other state and local agencies, plays a critical role in supporting Illinois

freight. The Freight Plan is part of IDOT's "Suite of Plans" under the umbrella of the Long-Range Transportation Plan (LRTP), which sets long-range policy and strategic direction for development of asset and system-specific actions, including the Freight Plan. In addition to the Illinois 2023 Freight Plan, IDOT created nine individual District Freight Plans and 102 County Freight Profiles.

The Freight Plan serves as the roadmap for the State's freight program, identifying both policies and investments that will enhance freight in the State. It builds upon IDOT's extensive library of transportation plans and programs, incorporates national freight planning best practices for data analytics, and synthesizes input from key public- and private-sector freight stakeholders.



**147,000** miles of roadway

**11,000** truck parking spaces



**10,000+** miles of railroad tracks

**1 in every 4** freight trains in the U.S. traverse Illinois



**1,118** miles of navigable waterways

**19** public port districts

**341** miles public and private cargo-handling river terminals



**20** cargo-handling airports

**2** world-class cargo airports



**134,000+** miles of pipeline

**54** pipeline intermodal connections



**2.4** million freight-related jobs



# VISION AND GOALS



## ILLINOIS STATE FREIGHT PLAN GOALS



### PLAN

**Prioritize the development of plans and policies** and deployment of innovative technologies, that help achieve the vision of the State Freight Plan.



### PARTNER

**Drive collaboration and foster partnerships** with public agencies and private-sector freight stakeholders throughout Illinois.



### INVEST

**Make investments and implement policies** that improve the safety, resiliency, and reliability of access to the multimodal freight system.



### IMPLEMENT

**Implement a data informed approach** to freight asset management, preservation of the multimodal freight system, and stewardship of public funds.



### PROTECT

**Incorporate socioeconomic and environmental impacts** into freight related decision-making.

## ILLINOIS STATE FREIGHT PLAN VISION

The *Illinois State Freight Plan* will advance a **safe, efficient, reliable, resilient, and sustainable multimodal freight system** that supports **Illinois' competitive position as a global hub, grows the economy, and enhances equity and quality of life** for Illinois residents.

# OUTREACH AND ENGAGEMENT



## PARTNER

This Freight Plan, while led by IDOT, was a statewide effort. A robust stakeholder engagement effort was undertaken to ensure that a wide variety of input from a diverse group of stakeholders was incorporated into the planning process. Additionally, engagement was used to foster partnerships and collaboration between IDOT and stakeholders who will have a strong role in implementation.



**150** stakeholders

participated including shippers, haulers, and freight facilities



**2** rounds of freight forums

at IDOT's

**9** districts



**5** Illinois State Freight Advisory Council meetings

to validate results and foster meaningful input



# ILLINOIS' FREIGHT NETWORK

## IMPLEMENT



The movement of goods is the backbone of Illinois' economy. The multimodal freight network provides resilient and cost-effective shipping alternatives throughout the State, connecting residents and businesses to markets, domestically and internationally. As part of this plan, Illinois identified a Priority Freight Network (PFN) based on four factors. This network will help inform freight planning and investment.

### ILLINOIS' PRIORITY FREIGHT NETWORK FACTORS:



Economic Competitiveness



Goods Movement



Strategic Supply Chain



Market Access & Connectivity

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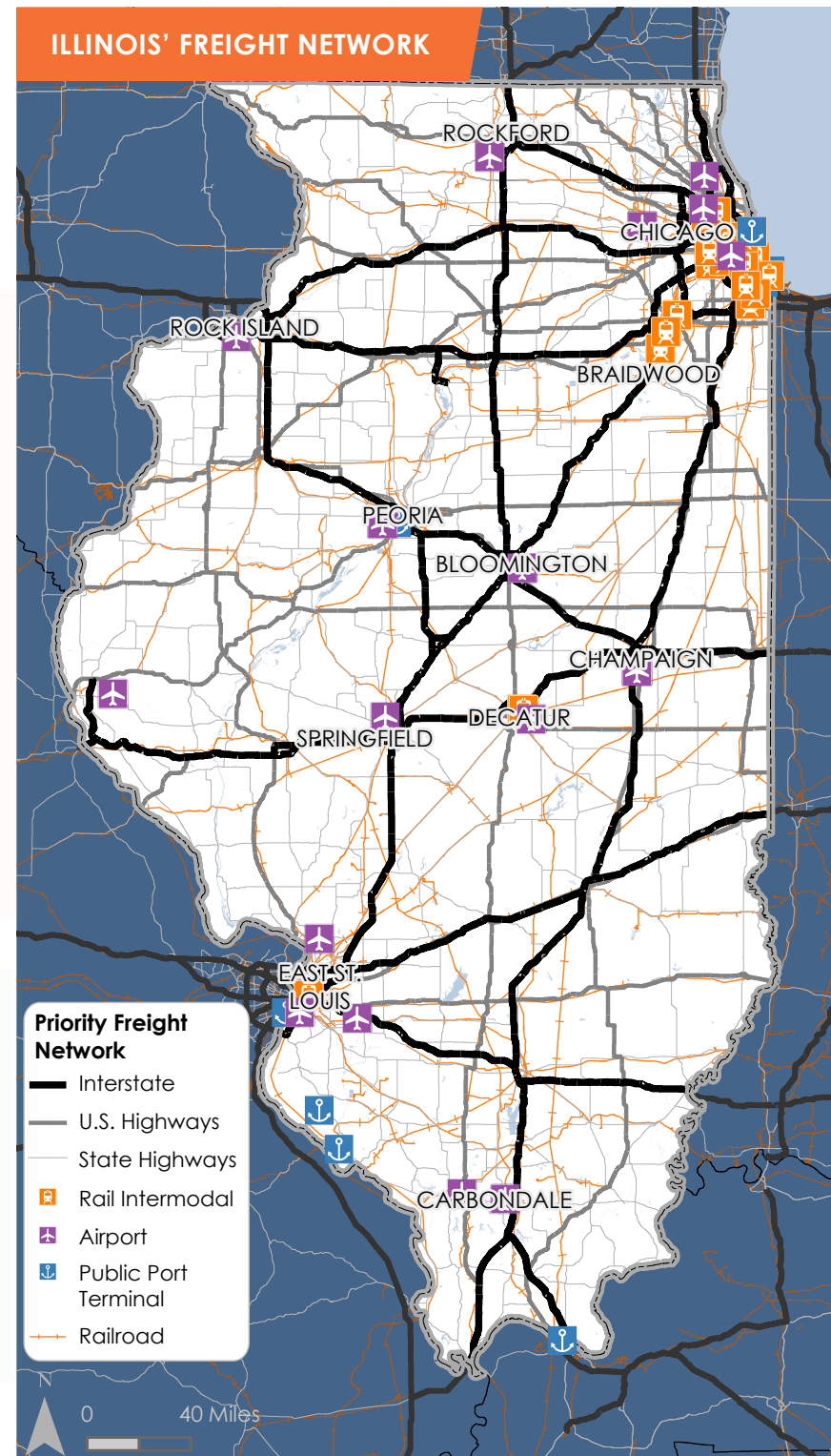
## PROTECT



To help Illinois achieve its environmental and community goals, IDOT needs to understand where freight movements pose the most risk to communities and the environment. The State Freight Plan examines the spatial relationship between the PFN and disadvantaged communities in Illinois.

**28% OF ALL CENSUS TRACTS IN ILLINOIS ARE CONSIDERED TRANSPORTATION DISADVANTAGED** using the USDOT Justice40 definition.<sup>1</sup> Over half of these intersect with the PFN.

<sup>1</sup> Justice40, <https://www.whitehouse.gov/environmentaljustice/justice40/>.





# FREIGHT, EQUITY, AND THE ENVIRONMENT



## PROTECT

While the movement of goods is critical to Illinois' economy, it also can impact the State's communities, natural and cultural resources, and has global implications, such as contributing to rising levels of greenhouse gas emissions.

The Illinois Competitive Freight Program (CFP) (see page 15) included environmental justice and equity metrics in the scoring matrix to ensure resources were directed, in part, to address negative impacts and ensure equitable distribution of benefits.

**IMPROVING EQUITY**  
and **REDUCING THE ENVIRONMENTAL IMPACTS** of freight are a priority for both IDOT and USDOT.



The Illinois PFN intersects

**312** miles of 100-year flood zones,

**310** miles of impaired lakes, and

**547** miles of the Mahomet Sole Source Aquifer, which provides drinking water in central Illinois.



# FREIGHT DEMAND IN ILLINOIS

## FREIGHT FLOWS BY MODE



**TRUCK** carries the bulk of freight in Illinois, from raw materials to consumer goods.



**RAIL CARLOAD** carries primarily bulk goods and automobiles.



**RAIL INTERMODAL** carries higher-value, lower weight goods supporting a growing e-commerce sector.



**MARINE TRANSPORTATION** moves high weight, less time sensitive bulk goods, including agriculture products, scrap, and mined materials.



**AIR** moves the highest value, most time sensitive goods such as pharmaceuticals.



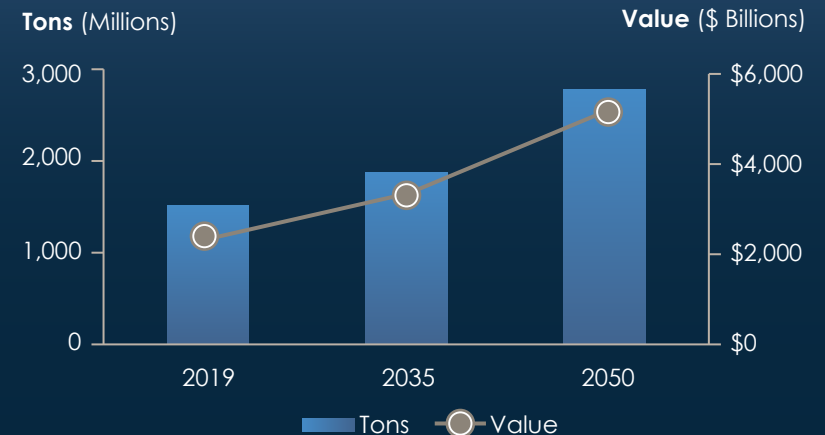
**PIPELINE** carries high volume liquid materials.

Source: 2019–2050 S&P Transearch and 2019 STB Carload Waybill Data.

A well performing and connected multimodal freight network is critical to support both the businesses and residents of Illinois—now and in the future.

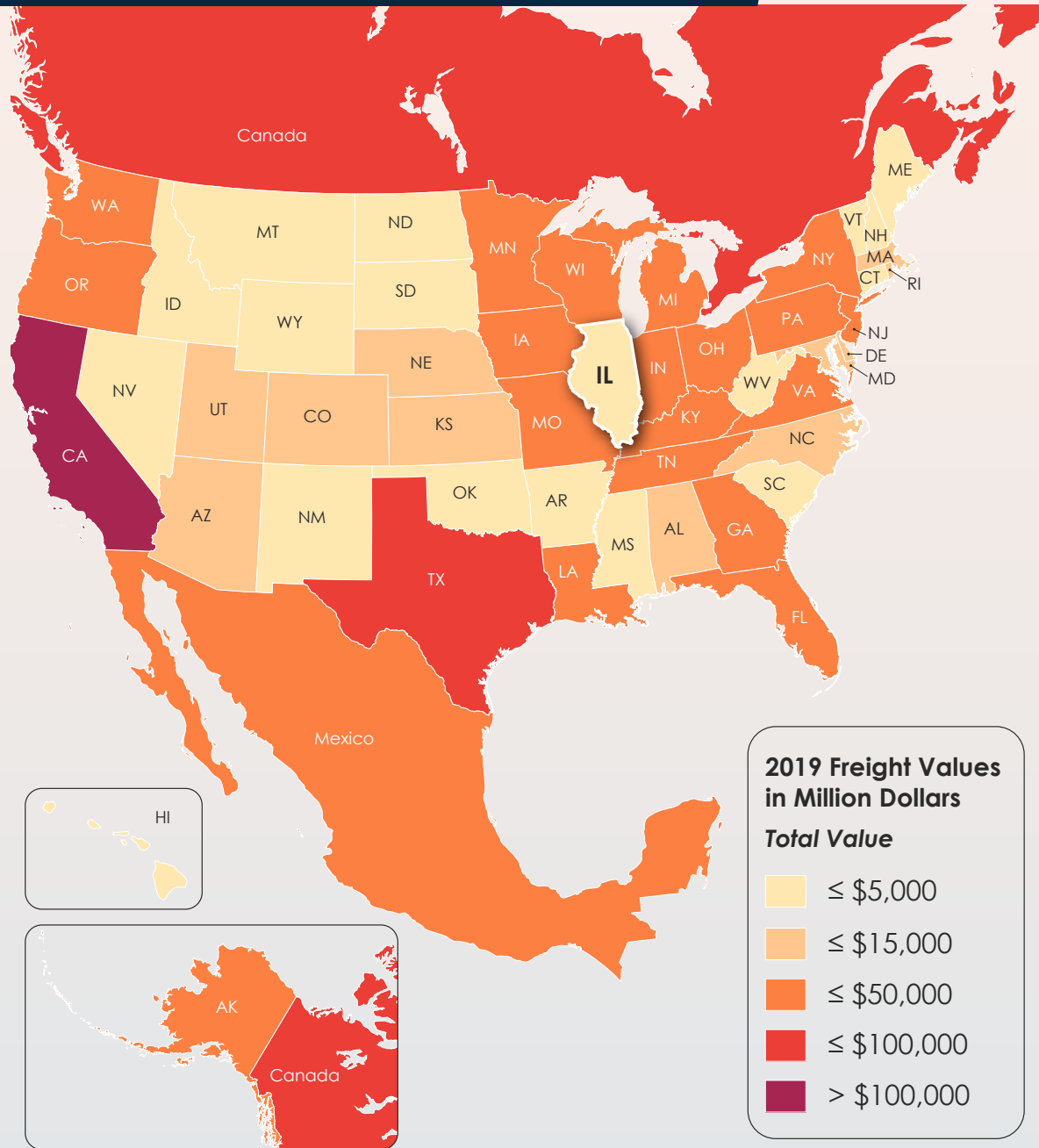
By 2050, **Illinois is projected to move 2.8 BILLION TONS OF FREIGHT ACROSS ALL MODES VALUED AT \$5.1 TRILLION, an increase of 87% BY TONNAGE and 116% BY VALUE.**

## ILLINOIS TOTAL FREIGHT FLOWS, ALL MODES (2019–2050)





ILLINOIS TOP TRADING PARTNERS BY VALUE (2019)



Source: 2019–2020 S&P Transearch and 2019 STB Carload Waybill Data.

TRADING PARTNERS

When measured by weight, Illinois' top trading partners are its nearest neighbors—Wisconsin, Iowa, Missouri, and Indiana. Illinois exports are also shipped to Canada and other markets via the Mississippi River to the Gulf of Mexico. This trade is heavily driven by the agricultural sector.

When measured by value, Illinois' top trading partners also include states with major coastal ports (California, Texas, and Washington), as well as major consumer markets (California, Texas, Ohio, and Pennsylvania).

ILLINOIS' TOP FREIGHT COMMODITIES

**Top Commodities by Weight:**



- Farm Products
- Nonmetallic Minerals
- Food or Kindred Products
- Secondary Traffic\*
- Chemicals or Allied Products

**Top Commodities by Value:**



- Secondary Traffic\*
- Transportation Equipment
- Misc. Mixed Shipments\*
- Food or Kindred Products
- Chemicals or Allied Product

\*Goods that are moving to/from warehouses, distribution centers, and retail or wholesale stores.

# ILLINOIS FREIGHT ECONOMY

Illinois has a large and diverse freight-related economy. The five largest freight-related clusters by Gross Regional Product (GRP) in Illinois are:



IDOT divides Illinois into 9 Transportation Districts. Each district has a distinct freight-based economy that contributes to the State's economic diversity.

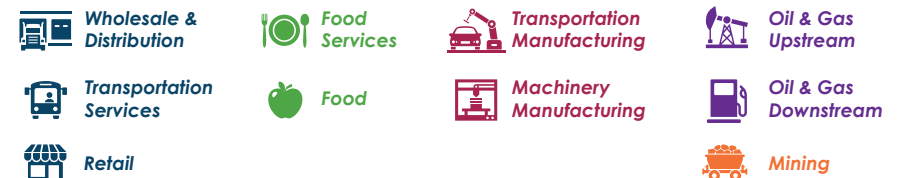
Illinois has a large and diverse freight-related economy. **2.5 MILLION (39%) OF ILLINOIS JOBS ARE IN FREIGHT RELATED SECTORS.** The five largest freight-related sectors, as measured by Gross Regional Product (GRP) in Illinois are agriculture, manufacturing, retail, transportation, and warehousing and distribution. Illinois had 6.1 million total jobs in 2019. 2.5 million million of these were freight-related jobs.

Source: ESMI.



## TOP THREE FREIGHT-RELATED ECONOMIC SECTORS IN EACH ILLINOIS IDOT DISTRICT (2019)

DISTRICT	RANK		
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
1			
2			
3			
4			
5			
6			
7			
8			
9			



Source: ESMI.

# INDUSTRY SECTOR SPOTLIGHT



## AGRICULTURE

ILLINOIS AGRICULTURE IS A \$16.1 BILLION DOLLAR INDUSTRY in 2020, RANKING 7<sup>TH</sup> IN THE NATION.

- » **Corn, soybeans, and animal products represent 95%** of the State's agriculture industry.
- » Illinois is a **leader in ethanol component exports** and other containerized agricultural products.
- » Illinois is **3<sup>rd</sup> in national ethanol production** capacity with 10% of the U.S. capacity in the State.
- » **4<sup>th</sup> in biodiesel production** capacity with 5 plants (production capacity of 168 million gallons per year).

ILLINOIS IS A LEADER IN THE U.S. IN AGRICULTURE PRODUCTS, and is:

**1<sup>st</sup>** in PUMPKIN production

**1<sup>st</sup>** in SOYBEAN production

**1<sup>st</sup>** in PROCESSED FOOD sales

**2<sup>nd</sup>** in CORN production

**3<sup>rd</sup>** in AGRICULTURE exports



# INDUSTRY SECTOR SPOTLIGHT (continued)




## WIND ENERGY


Wind energy is **CLEAN, RENEWABLE, AND COST EFFECTIVE**. The Climate and Equitable Jobs Act (CEJA) of 2021 commits Illinois to fully renewable energy sources by 2050.


Illinois is **#5 IN ELECTRICITY GENERATED BY WIND**, generating 5% of the total U.S., and **#6 IN TOTAL WIND TURBINES**, with more than 3,600 throughout the State.

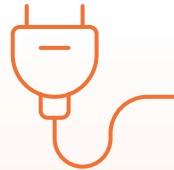
10 IDOT issues over **900 PERMITS TO MOVE WINDFARM EQUIPMENT EACH YEAR.**

A **single 150 MW wind farm** requires:

**8** ocean shipments, 

**140** trips by rail, 

and **650** truckloads 

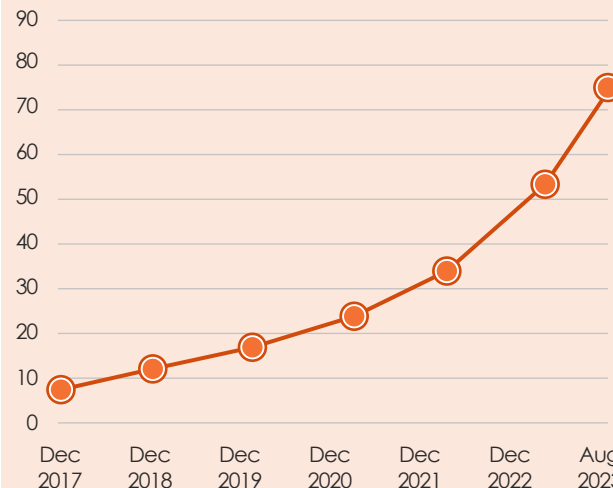


## ELECTRIC VEHICLES

Electric vehicle sales are increasing exponentially in the U.S. **MANY OF THE VEHICLES AND COMPONENTS ARE MADE BY THE 1,800 EV-RELATED COMPANIES IN ILLINOIS** including manufacturing facilities in:

- » **Rivian, Normal**—pick-up trucks
- » **Lion Electric, Joliet**—school buses
- » **Jeep, Belvidere**—light duty vehicles
- » **T/CCI, Decatur**—EV compressors
- » **Goion, Manteno**—battery packs (planned)

Illinois EV registrations (in thousands):

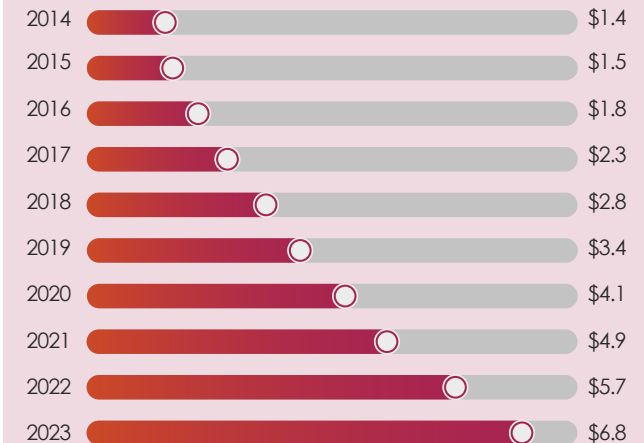


## RETAIL AND E-COMMERCE

E-commerce is **AN EVER-GROWING PART OF THE RETAIL MARKET**, and is shaping the freight landscape, with **OVER \$800 BILLION IN U.S. SALES ANNUALLY.**

- » Online retailers are mixing retail spaces with distribution.
- » Increasingly, traditional brick and mortar retail stores are repurposed to warehouses, referred to as dark stores or dark distribution centers.
- » Being close to consumers allows e-retailers to deliver goods in less time.

Global retail e-commerce sales (in \$ trillions):



Data Source: eMarketer

© 2020 www.ecommerceceo.com

# MULTIMODAL FREIGHT NEEDS

## HIGHWAY FREIGHT NEEDS



### IMPLEMENT

Highway needs were identified using a data-driven, stakeholder-informed approach. This Freight Plan identified five categories of highway needs:

1. Safety
2. Reliability
3. System enhancement (pavement and bridge condition)
4. Operational needs (lane width and weight limitations)
5. Truck parking

Many of Illinois' highway needs are concentrated within the greater Chicagoland area with its oversized industrial and consumer base. However, other areas of the State also show significant highway freight needs, including other smaller urban areas such as the Quad Cities and Quincy, as well as rural counties throughout the State, which see high volumes of agricultural and energy sector traffic. Unsurprisingly, needs are heavily concentrated along Interstate corridors, which carry the highest volumes of freight traffic.

## TRUCK PARKING NEEDS

Truck parking is a critical safety and mobility need across the nation and in Illinois. IDOT maintains 54 Illinois Interstate truck parking safety rest areas that provide truck parking across 30 facilities in the State. 24 of the 30 facilities are dual facilities, in which there is one facility on either directional side of the highway. There are also 91 privately operated truck stops statewide.

Currently, the **HIGHEST DEMAND** for **TRUCK PARKING** in Illinois is on

**I-80** south of **Chicago**,  
**I-57** south of **Champaign**,  
 and  
**I-57** and **I-24**  
 south of **Carbondale**.

## ILLINOIS' INTERSTATE TRUCK PARKING



## RAIL FREIGHT NEEDS

- Improve state of good repair including track improvements, bridges, grade separations, and rail yard projects.
- Address vertical clearances that limit rail capacity.
- Maintain and expand rail capacity, especially in the Chicago terminal.
- Invest in technology such as anti-idling units, zero or low-emissions yard equipment, and alternative fuel technologies.

## MARINE FREIGHT NEEDS

- Repair or rehabilitate dock walls, dock surfaces, or other port district infrastructure.
- Upgrade port facility roads and railroad infrastructure.
- Repair, rehabilitate, and maintain locks and dams and expanded capacity on Illinois waterways.

12

## AIR FREIGHT NEEDS

- Complete repair or reconstruction projects at 85 airports to support passenger and goods movement.
- Improve surface transportation connectivity and access to air freight facilities.

## PIPELINE FREIGHT NEEDS

- Maintain and ensure state of good repair of pipeline infrastructure.
- Improve surface transportation connectivity and access to pipeline terminals.



# STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS ANALYSIS



## PLAN

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was conducted to identify the most critical needs, issues, and opportunities related to freight in Illinois.

- » **Over 20 freight-related reports** were reviewed.
- » **Over 130 industry representatives** provided input to the SWOT analysis process.
- » **Over 100 elements were identified** in the statewide SWOT analysis.

## STRENGTHS

include a **focus on funding** (Rebuild Illinois), **planning, and the multimodal freight system** that provides cost effective options to shippers

## WEAKNESSES

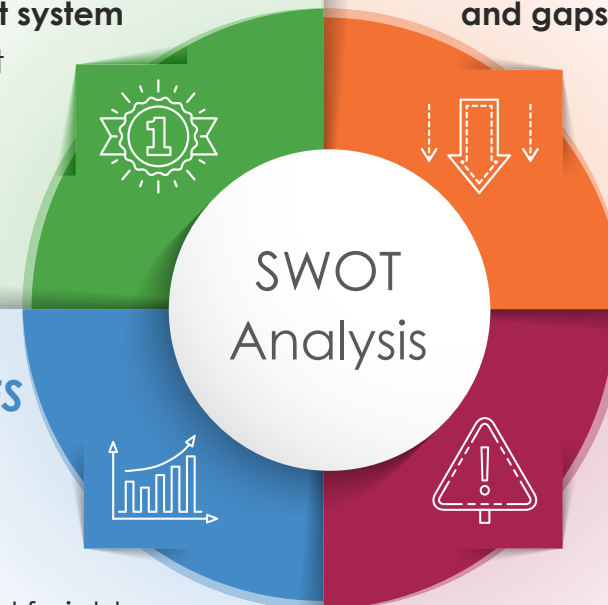
include a **lack of coordination, resources, data and guidance, and gaps** in the freight system (e.g., truck parking)

## OPPORTUNITIES

include **newly available Federal resources**, Illinois' existing multimodal freight network, and the emerging 21<sup>st</sup> century economic and technological advances

## THREATS

include a **lack of system resiliency, aging infrastructure, workforce shortages,** and localized concerns with the freight system and global events



# 2023 ILLINOIS COMPETITIVE FREIGHT PROGRAM



## INVEST

Illinois' Competitive Freight Program (CFP) identified and prioritized projects for the FY2023–FY2026 Freight Investment Plan.

- » A total of **35 applications were submitted** to the 2023 Illinois Competitive Freight Program.
- » IDOT scored each application based on a set of criteria in line with Freight Plan goals.
- » IDOT **awarded \$198 million** in Federal funding **to 22 projects** across the State.

## 2023 CFP AWARDS BY TYPE OF PROJECT

### Highway Awards

- Highway Projects | 7
- New Highway Connections | 1
- Bridge Replacements | 1
- Interchange Projects | 3
- Highway-Rail Grade Separations | 1

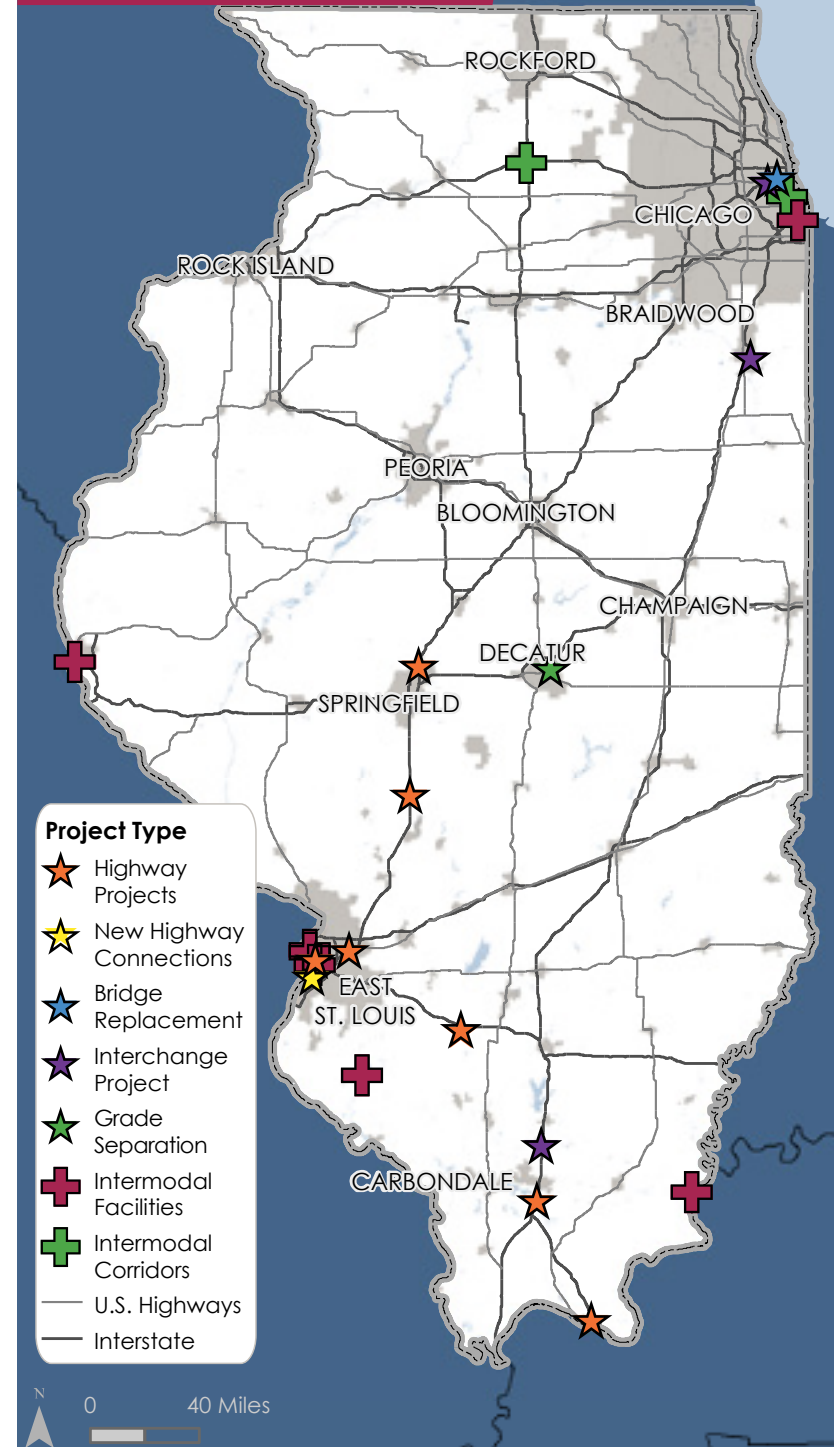


### Intermodal Awards

- Intermodal Facility Improvements | 7
- Intermodal Corridor Projects | 2



## ILLINOIS' PROJECT TYPES



## FREIGHT SYSTEM INFRASTRUCTURE

### RELIABILITY

- Prioritize addressing multimodal freight infrastructure needs.
- Identify freight-friendly design policies, encourage innovation and flexibility to incorporate needed freight elements.
- Design, build and operate infrastructure to safely accommodate emerging technologies.
- Address bottlenecks across modes and at freight nodes.
- Expand regulation harmonization and streamlining to facilitate reliable and efficient freight movements.

### ACCESSIBILITY

- Prioritize improving access to port and airport freight facilities and pipeline terminals.

### EFFICIENCY

- Address issues related to multimodal freight capacity, equipment availability, and workforce needs.
- Cultivate public and private partnerships to more efficiently invest in infrastructure.
- Mitigate conflicting demands on the shared system.

### SYSTEM CONDITION

- Ensure marine system availability for Illinois' shippers and customers.
- Ensure road and bridge adequacy for trucks, including oversized (OSOW) freight movements where needed.

## FREIGHT SYSTEM IMPACTS

### SUSTAINABILITY

- Support deployment of zero or near-zero emission vehicles/equipment and expanded use of renewable energy at terminals and parking facilities.
- Develop strategies to consider and decrease environmental impacts of freight (e.g., local air pollutants, impacts to wildlife, flooding).
- Encourage mode shift to lower emission modes for applicable cargoes.

### COMMUNITY

- Consider the distribution of benefits and burdens on communities when making freight investments.
- Improve communications between freight stakeholders and community representatives.

### RESILIENCY

- Take action to mitigate, minimize, or avoid the impacts of extreme weather and natural disasters on freight mobility.

### SAFETY

- Prioritize safety investments on areas of the PFN which have high levels of truck-related fatalities, injuries, and crashes.
- Increase public awareness and institute best practices for operating on corridors shared with trucks and other heavy vehicles.
- Eliminate or upgrade at-grade highway-railroad crossings to reduce blocked crossings and work to mitigate railroad trespassing.
- Continue to identify and address truck parking needs.

## FREIGHT AGENCY RESOURCES

### FUNDING

- Continue to provide state and local investment in freight programs.
- Continue to promote the Illinois Competitive Freight Program for future freight projects.
- Develop strategies to maximize and leverage Federal and private investment.

### WORKFORCE

- Engage with partner state agencies to understand and address workforce needs related to freight.
- Reduce barriers to entry and sustainability of the workforce in freight-adjacent industries, such as warehouses and manufacturing.

### PARTNERSHIPS

- Understand and communicate the importance and impacts of the freight system.
- Continue engaging with the Illinois State Freight Advisory Council (ISFAC).

### TECHNOLOGY

- Monitor emerging freight technologies and plans for Illinois' deployment.
- Address data availability and standards to measure, manage and plan performance of the freight system.





# Illinois 2023

## State Freight Plan

### Executive Summary

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For more information please visit:

<https://idot.illinois.gov/transportation-system/transportation-management/planning/freight/2017-state-freight-plan.html>

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