



Please write your Name,
Organization, and Role
in the Teams Chat Box

South Carolina Rail Plan

Rail Advisory Committee Meeting #2

presented to

South Carolina Department of Transportation

South Carolina Rail Advisory Committee

presented by

Cambridge Systematics, Inc.

CDM Smith

June 4, 2024

South Carolina Rail Plan

(in progress)

These slides reflect ongoing analysis for the state rail plan and are not final.

Project Management Team - SCDOT



- » David Gray, Project Manager, Multimodal Planner

- » SCDOT Steering Committee
 - Mike Barbee, Right of Way Office
 - Eric Wessinger, Railroad Research Engineer, Traffic Safety Department, Section 130
 - Michael Peterson, Director of the SCDOT Office of Planning
 - Ron Hinson, State Traffic Design Engineer, Traffic Engineering office

Rail Advisory Committee

- Aiken County Government
- Aiken Railway Company
- Amtrak
- Anderson Area Transportation Study
- Appalachian Council of Governments
- Augusta Regional Transportation Study
- Berkeley Charleston Dorchester Council of Governments
- Carolina Piedmont Railroad
- Catawba Regional Council of Governments
- Central Midlands Council of Governments
- City of Rock Hill
- CSX
- Federal Highway Administration
- Federal Railroad Administration
- Florence Area Transportation Study
- Georgia Department of Transportation
- Greenville Pickens Area Transportation Study
- Lancaster & Chester Lancaster
- Lowcountry Council of Governments
- Lower Savannah Council of Governments
- Norfolk Southern
- NCDOT
- Operation Lifesaver
- Palmetto Railways
- Pee Dee Regional Council of Governments
- Pee Dee River Railroad
- Pickens Railway Company
- R.J. Corman Railroad Group
- Rock Hill-Fort Mill Area Transportation Study
- Santee Lynches Council of Governments
- SC Commission for Minority Affairs
- SC Council on Competitiveness
- SC Department of Agriculture
- SC Department of Commerce
- SC Department of Employment and Workforce
- SC Economic Developers' Association
- SC Port Authority
- SCDOT
- South Carolina Operation Lifesaver
- SC Trucking Association
- South Carolina Association of Railroads
- South Carolina Central Railroad
- Southeast Rail Forum
- Spartanburg Area Transportation Study (SPATS)
- Sumter Area Transportation Study (SUATS)
- TDOT
- Upper Savannah Council of Governments
- Waccamaw Regional Council of Governments

Role of the Rail Advisory Committee



Support development and **implementation** of the plan



Providing **input** into and **vetting** materials and data



Validate vision and goals



Connect with key **stakeholders** that use the system and with decision makers and implementers

Agenda

- » RAC #1 Polling Summary
- » Schedule
- » Updates on State Rail Plan Activities
 - SC Vision and Goals
 - Overview of Rail Trends and Forecast
 - Grade Crossing Analysis/Crash Data
 - Public and Stakeholder Outreach and Engagement
- » Discussion and Input on Needs and Opportunities
 - Grant-Funded Projects
 - Rail Project Ideas
 - Online tool demo
- » Next Steps

RAC #1 Polling Summary

RAC #1 Polling Summary: What are you hoping to achieve through your participation in the RAC?

- » **Better information/understanding/awareness (x8)**
 - Long-term infrastructure
 - Rail advancements
 - Economic development opportunities
- » **Collaboration/connectivity (x7)**
- » **Funding (x2)**
- » Gather information to share statewide
- » Ensure NCDOT and SCDOT are well coordinated
- » Discuss how freight rail can help remove trucks from the highways
- » Provide input from the economic development organizations
- » Learn about rail integration in our transportation network
- » Provide input on future rail planning and activities in SC from the freight rail perspective
- » Guidance on establishing an opportunity for a passenger rail services that can serve our State
- » Have a cohesive rail program in SC related to economic development and infrastructure
- » Rail safety in the state related to highway and transit

RAC #1 Polling Summary: What are the unique perspectives on rail that your agency will bring to the plan?

- » **My team (x4)**
- » **Economic development (x3)**
- » **State perspective (x2)**
- » **Safety (x2)**
- » Amtrak would like to explore a partnership in SC to give residents an additional transportation option
- » Our experience and expertise in supporting manufacturing
- » Challenges faced by operators
- » How SC rail can connect to the rest of Southeast
- » Other successes from around the country
- » Rail focused industrial development
- » Connecting with our community
- » Input from local land use planning agency on the impact and value of rail
- » Removing trucks from the roads
- » State freight corridor planning
- » MPO study area includes many active rail lines
- » Railroad/highway Interface and conflicts with rail car parking impacting vehicular movement in small urban areas
- » Conversion of underutilized or abandoned lines to Rail Trails
- » Passenger service on rails as a reliable travel mode
- » Support Class III railroads rather than lose rail access to those communities

RAC #1 Polling Summary: Thinking about the next 20 years, what would you like to see in South Carolina related to rail?

- » **Improved passenger rail (x4)**
- » **Safe and efficient rail infrastructure (x4)**
- » **Local rail (x2)**
- » **Funding (x2)**
- » **Passenger rail (x2)**
- » Bullet Trains
- » A completed Tier 2 EIS for Southeast High-Speed Rail, ready to build
- » More dual served sites
- » Freight rail that does not block the roadways
- » A population that thinks about rail as a transportation option rather than just as a tool for freight movement
- » Extension of rail spurs to planned industrial sites designated by Economic Development Alliances
- » Parallel lines
- » Local hub centers
- » Align rail needs to local land use planning
- » Tax credit programs
- » Coordination between rail and other modes, safety, security, impacts to community

RAC #1 Polling Summary: What opportunities are there to improve issues related to grade crossings?

» **Safety at at-grade crossings (x5)**

- **Advanced warnings**
- **Grade separation**
- **Gates**
- **Signage**

» **Funding (x2)**

- » Better coordination/communication with rail companies and DOTs
- » Pavement/rail maintenance at crossings
- » Need to work with railroads to establish agreed-upon types of improvements for grade crossing. Specifically concerned with urban area crossings where sidewalks and bike/ped facilities are needed

RAC #1 Polling Summary: What are opportunities and next steps that could be taken to improve passenger rail in South Carolina?

- » Compact with NC and GA to start Tier 2 EIS
- » Understanding what routes Amtrak will support in providing passenger rail
- » New state supported service
- » Follow NC and VA examples of planning spot improvements along Class 1 lines to allow passenger rail to not impact freight or be slowed
- » Research the demand/market to improve or expand passenger rail in SC. *Is there enough demand to make it successful?*

Schedule

Rail Plan Advisory Committee Proposed Meetings



April 24, 2024

Plan Overview and Objectives
Strategies for Business/Industrial
Development Opportunities
Grade Crossing Coordination and Prioritization



June 4, 2024

Vision and Goals
Rail Project Ideas



September 2024 *(tentative)*

Draft Final Recommendations

Plan Activities



Updates on State Rail Plan Activities

South Carolina Vision and Goals

South Carolina Vision and Goals Outline

State Rail Plan Vision

- » **Multimodal Vision**
- » **Draft Rail Plan Vision**
- » **Discussion / Input**

State Rail Plan Goals

- » **Vision and Goals from the Previous Plan**
- » **Multimodal/LRTP Goals for Momentum 2050**
- » **Discussion / Input**

South Carolina Draft State Rail Plan Vision

Previous Rail Plan Vision

Safe, reliable surface transportation and infrastructure that effectively supports a healthy economy for South Carolina.

Multimodal Vision (2050):

The vision of Momentum 2050 aims to move South Carolina forward economically as it grows.

South Carolina's rail system and its multimodal connections will...

Draft Vision:

Address the changing transportation needs and deliver **safe** and **reliable** mobility fostering **economic growth**

Is there anything else you would like to see included or emphasized in the Vision statement?

Nobody has responded yet.

Hang tight! Responses are coming in.

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

Vision and Goals from the Previous Plan

Vision

Safe, reliable surface transportation and infrastructure that effectively supports a healthy economy for South Carolina.

Goals

Mobility and system reliability

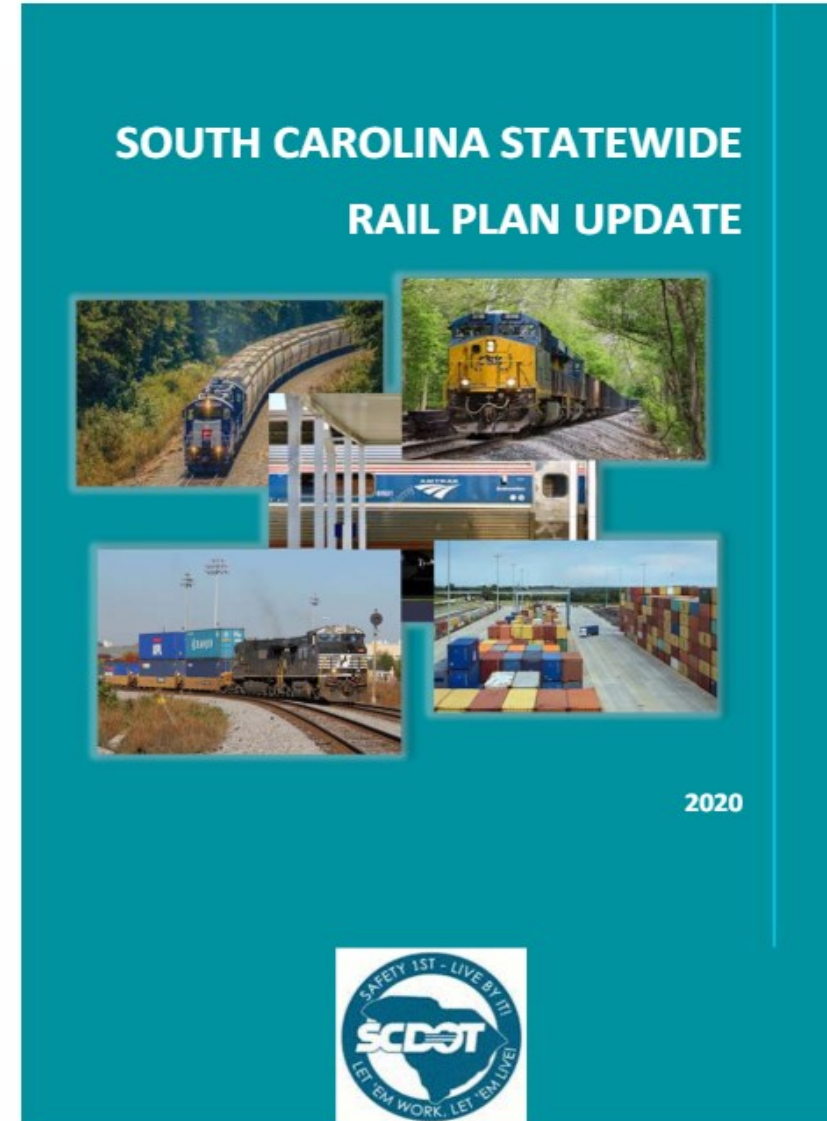
Safety

Infrastructure condition

Economic and community vitality

Environmental

Equity



Summary of Multimodal/LRTP Goals for Momentum 2050



- Goal #1: “**Systemically invest** in a resilient, world-class interstate system to support the movement of freight and people across South Carolina to keep South Carolina’s economy growing.”



- Goal # 2: “Promote the continued prosperity of south Carolina’s urban areas to ensure consistent **mobility across the economic hubs** through multiple modes.”



- Goal #3: “Better connect rural South Carolina to the global economy by improving **access to rural communities** for job opportunities and economic development.”



- Goal #4: “Leverage **other modes** to support south Carolina’s continued prosperity.”

Is there anything else you would like to see included or emphasized in the Goals?

Nobody has responded yet.
Hang tight! Responses are coming in.

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

Rail Trends and Forecast

Commodity Flow Forecast Outline

Demographic Growth

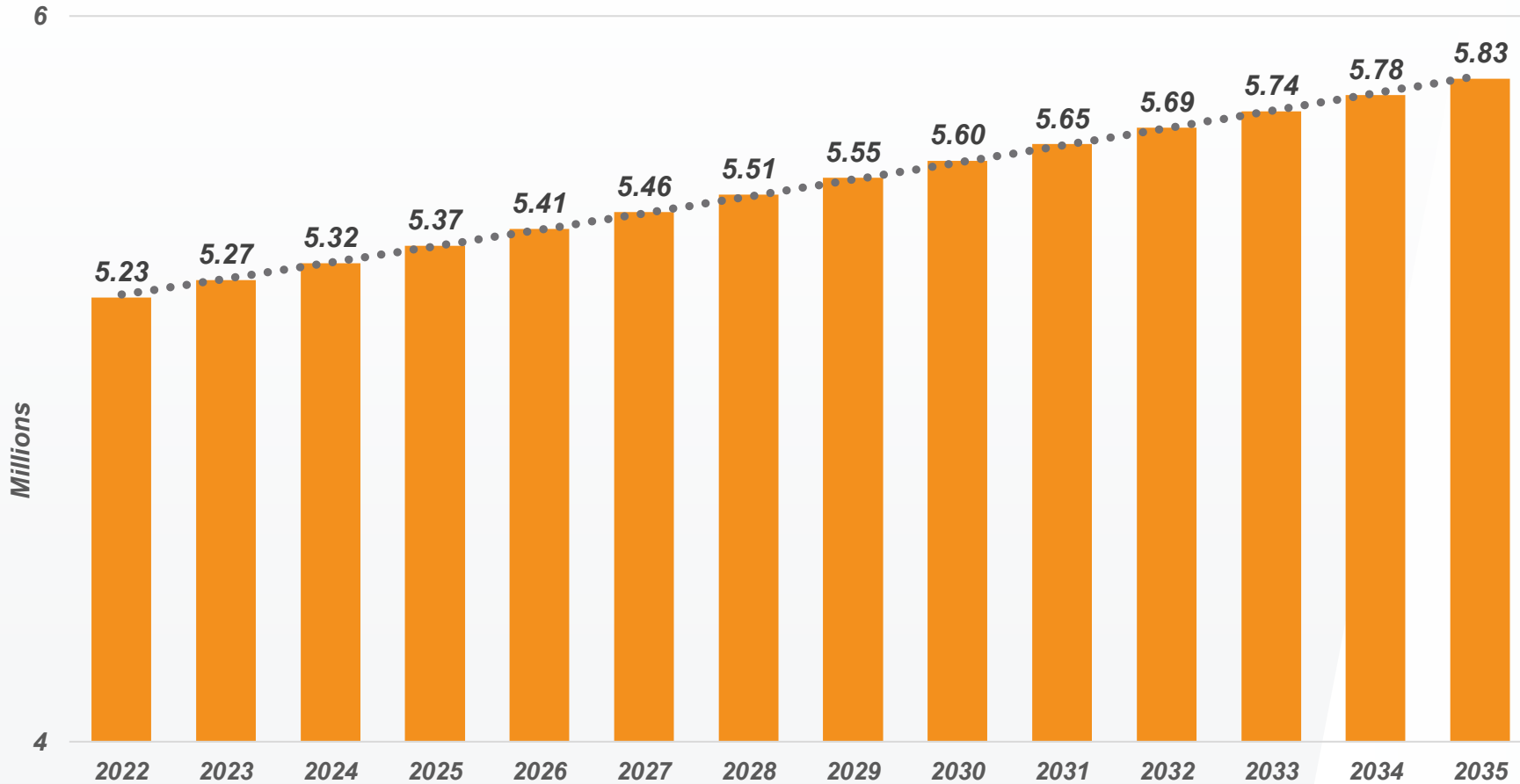
- » Population Trend
- » Employment Trend

Commodity Flow Forecast

- » Directional Trends
- » Commodity Trend - Coal
- » Commodity Trend - Chemicals
- » Commodity Trend - Transportation Equipment

Population Growth

South Carolina Population Trends 2022 - 2035



South Carolina is estimated to have a steadily growing population into 2035. From 2022 – 2035, the state will have an **11.5% population increase.**

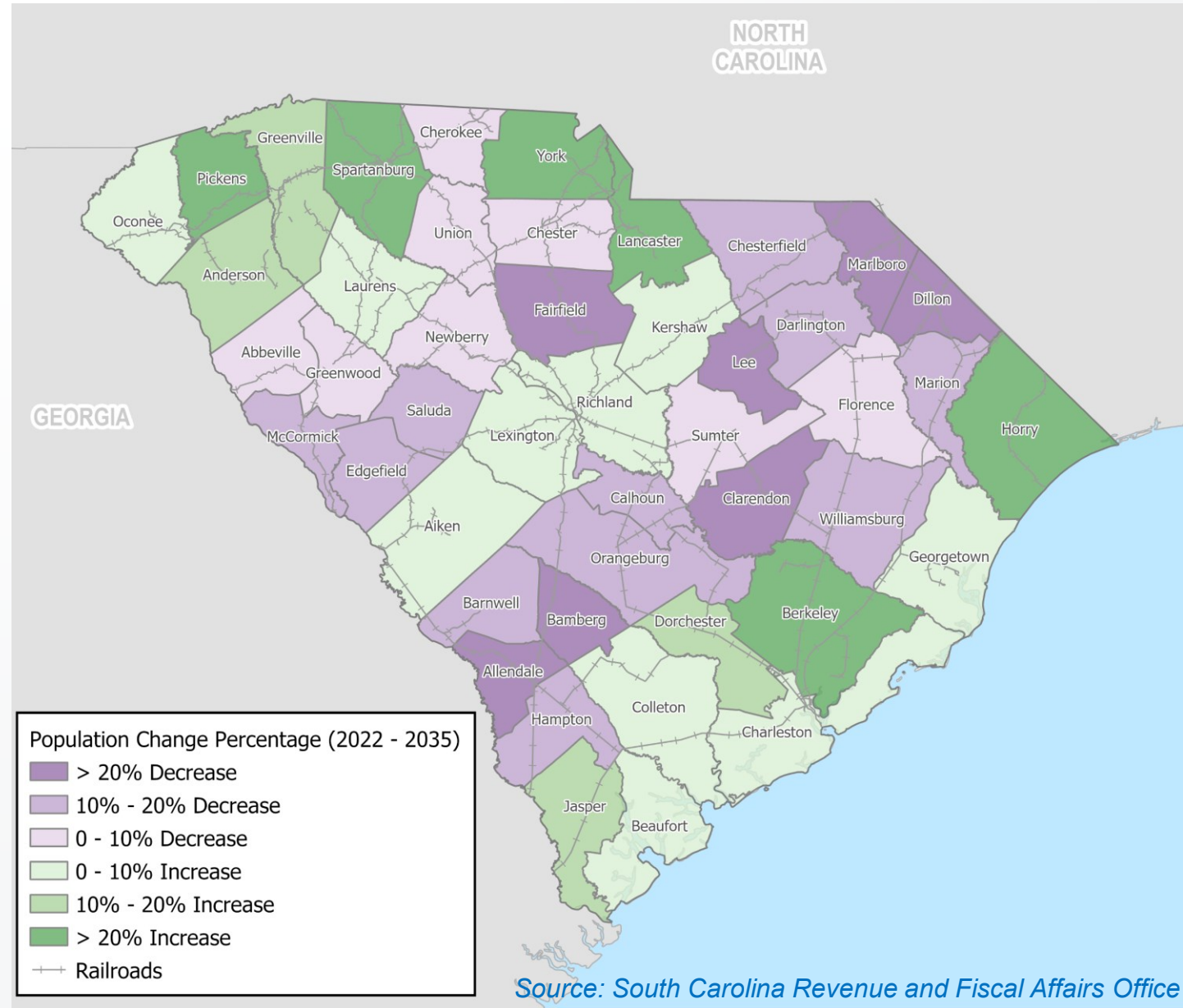
Source: South Carolina Revenue and Fiscal Affairs Office

Population Growth

Greenville, Horry, Charleston, Spartanburg, and Richland are the most populated counties in South Carolina in both 2022 and 2035.

Coastal counties and counties in the Upstate Region are forecasted to have a greater population growth:

- Horry County: 36%
- Berkeley County: 34%
- York County: 34%
- Spartanburg: 29%



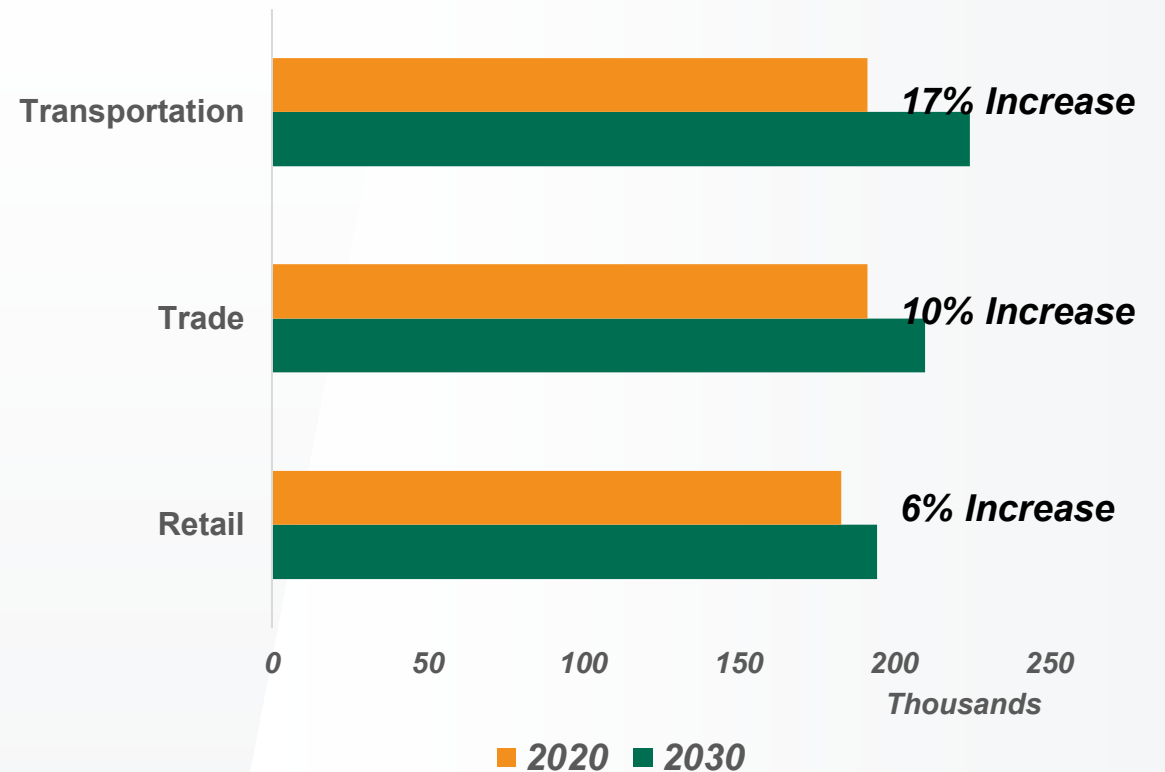
Employment Trends

The total employment in South Carolina will increase from **2.2M** in 2020 to **2.5M** in 2030.

Employment in the transportation, Trade, and Retail sectors accounts for **26%** of total employment.

These three railroad transportation-related sectors are projected to grow by 2030, with the transportation sector leading at **17% growth** from 2020 to 2030.

Employment Forecast by Sector



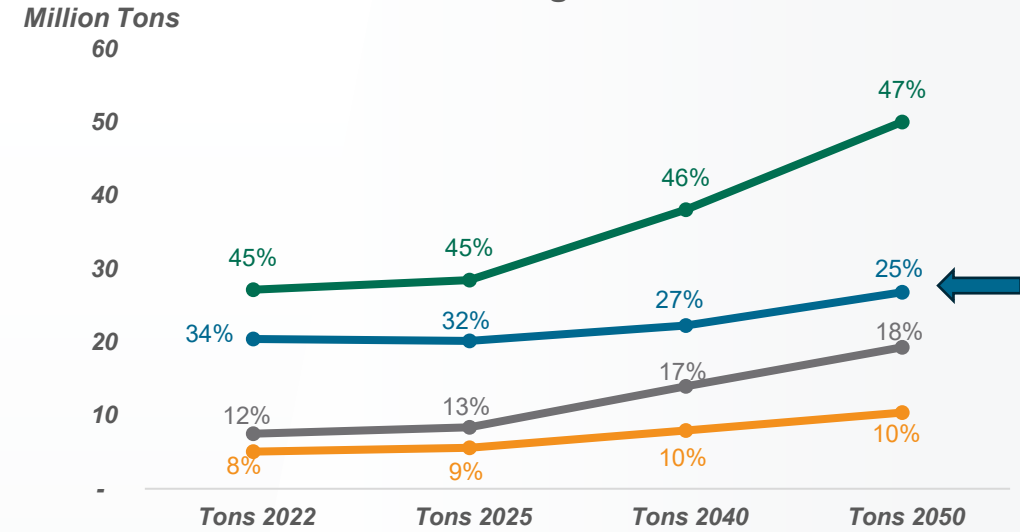
Source: State of Utah Division of Technology Services

Trend Overview

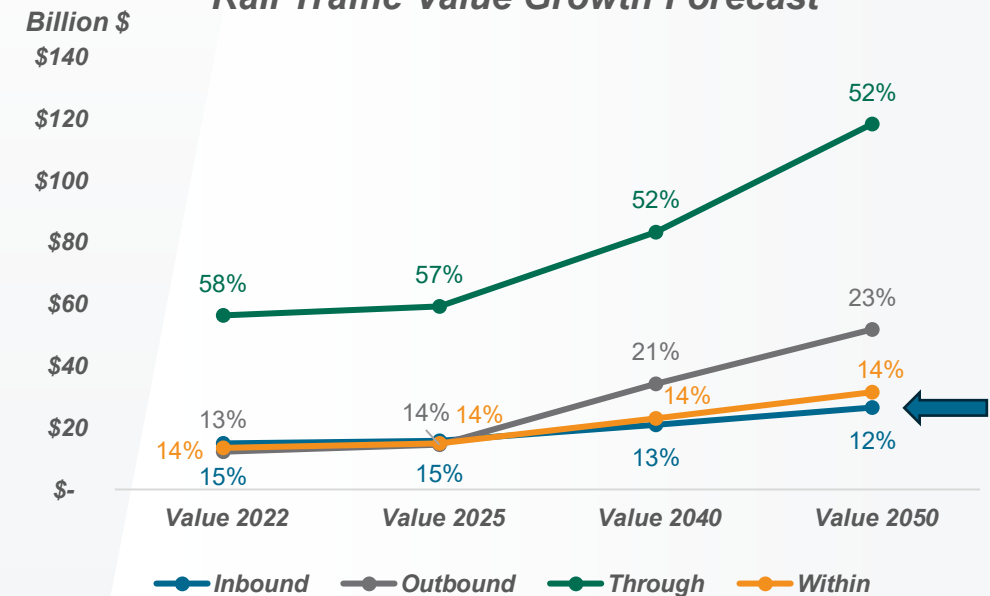
For each year, through Traffic accounted for more than 45% rail freight tonnage and half value.

Inbound flow is 2nd major flow direction by tonnage but makes up the least percentage of value.

Rail Traffic Tonnage Growth Forecast



Rail Traffic Value Growth Forecast



Source: Waybill.

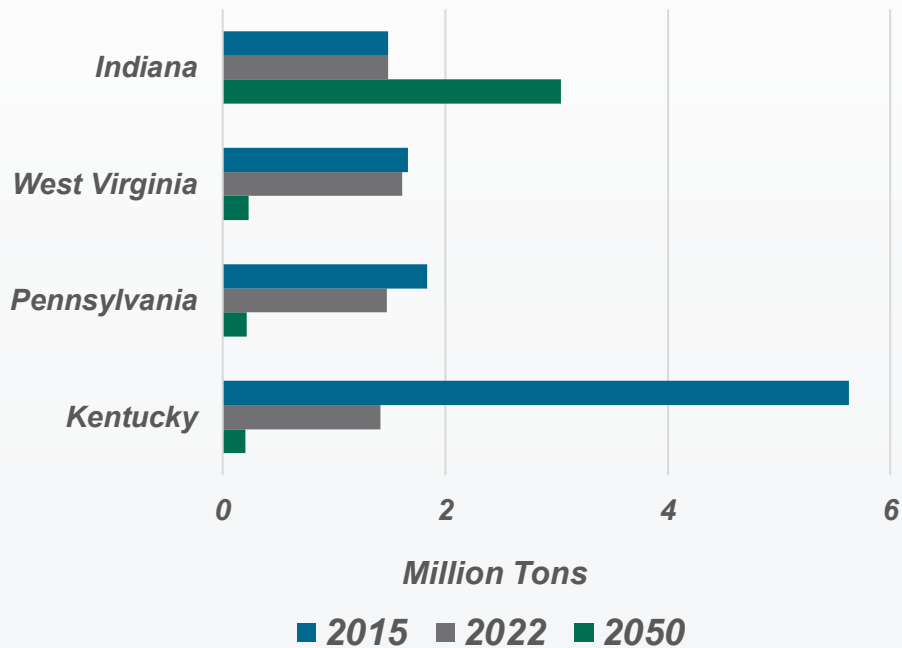


Declining Coal Demands

12% Volume
0.2% Value
In 2022



4% Volume
0.06% Value
In 2050



Source: Waybill.

99.9% of inbound Coal products is Bituminous Coal, moved to SC by carload.

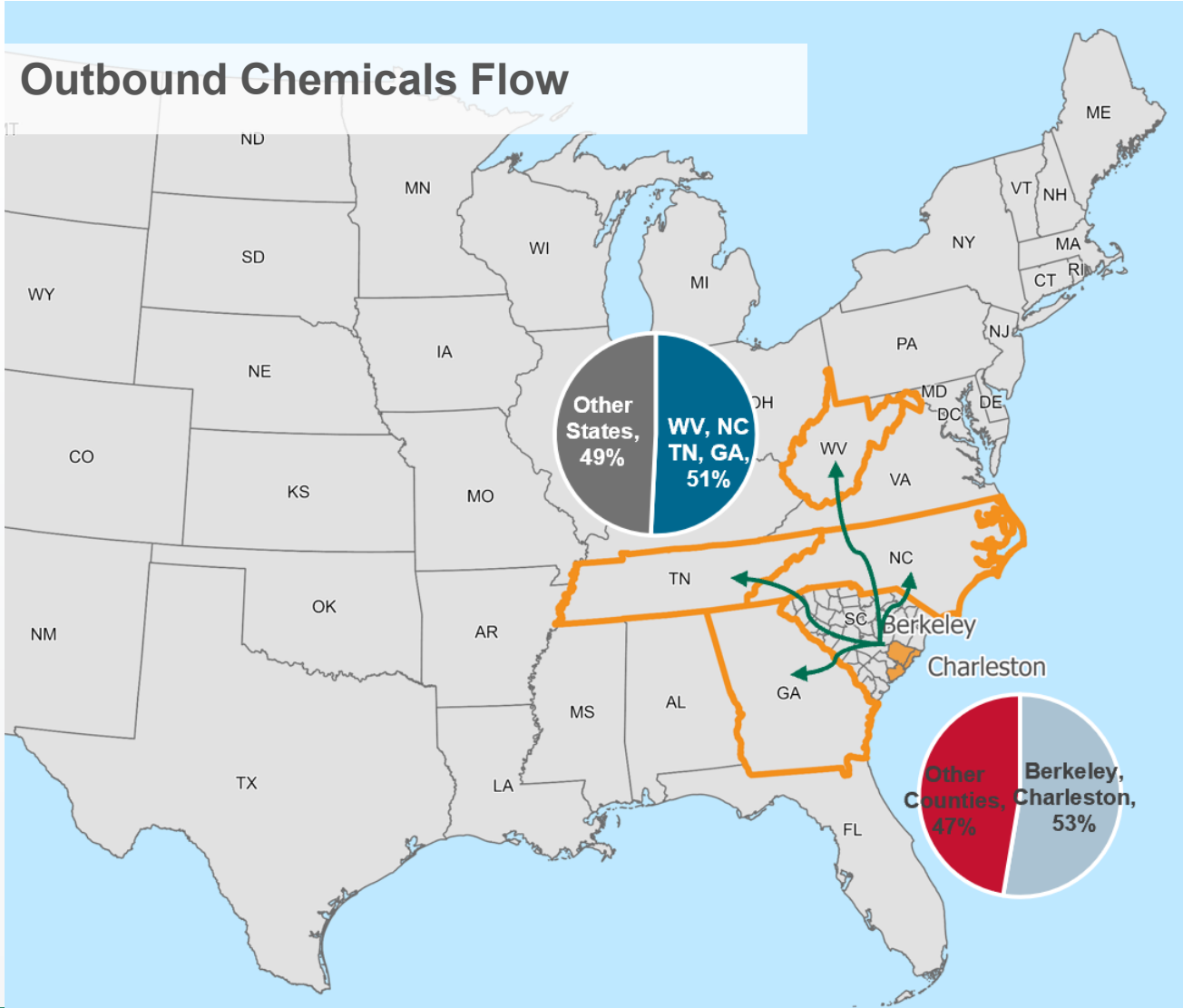
Kentucky, Pennsylvania, West Virginia, and Indiana contributed to more than 90 % coal used in South Carolina.

The number of operational coal mines in these four states decreased from 580 in 2015 to 384 in 2022.

Indiana is estimated to send more coal to South Carolina in 2050.

Growing Chemicals

Outbound Chemicals Flow



Rail is estimated to carry 28 million tons of chemicals by 2050 and is the top commodity by tonnage.

By tonnage, 33% will be inbound and 13% outbound.

Charleston County stands out as both the top origin and destination for chemical movement.

Transportation Equipment

In 2050, the rail is estimated to carry 1.6 million tons of transportation equipment, with a value of \$14 billion.

South Carolina is home to 139 automotive related companies.

South Carolina is home to 12 tire manufacturing plants and is at the capacity of producing 144,000 tires daily.



Source: <https://www.upstatescalliance.com/top-industries/automotive/>

Main Takeaways

South Carolina shows an overall population growth; most increase happens in coastal counties or the Upstate Region.

Inbound rail movement is the second largest flow, and coal movement accounted for a large proportion; but the proportion of inbound flow gradually decreases.

Rail is the primary mode of transporting coal, and the movement of coal is important to the SC rail industry, particularly the Class I railroads. Coal movement is forecasted to fall due to tighter environmental regulations and cheaper alternatives.

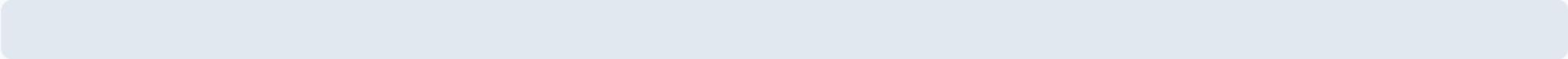
Chemicals are becoming an increasingly important commodity for railroads, with demand closely tied to the state's leading industries.

Rail is a primary freight mode for the automobile industry, serving as a vital component at every stage of vehicle manufacturing.

Do these trends in the rail industry align with what you've observed over the past few years and your future outlook?

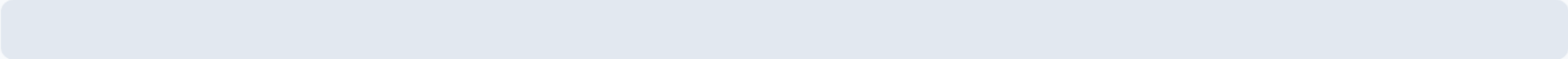


Yes



0%

No



0%

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

Discussion

- » How do these rail trends compare with your experiences and expectations for the rail industry over the past several years and into the future?

Grade Crossing Analysis/Crash Data

Grade Crossing Analysis/Crash Data

At-Grade Crossing Inventory:

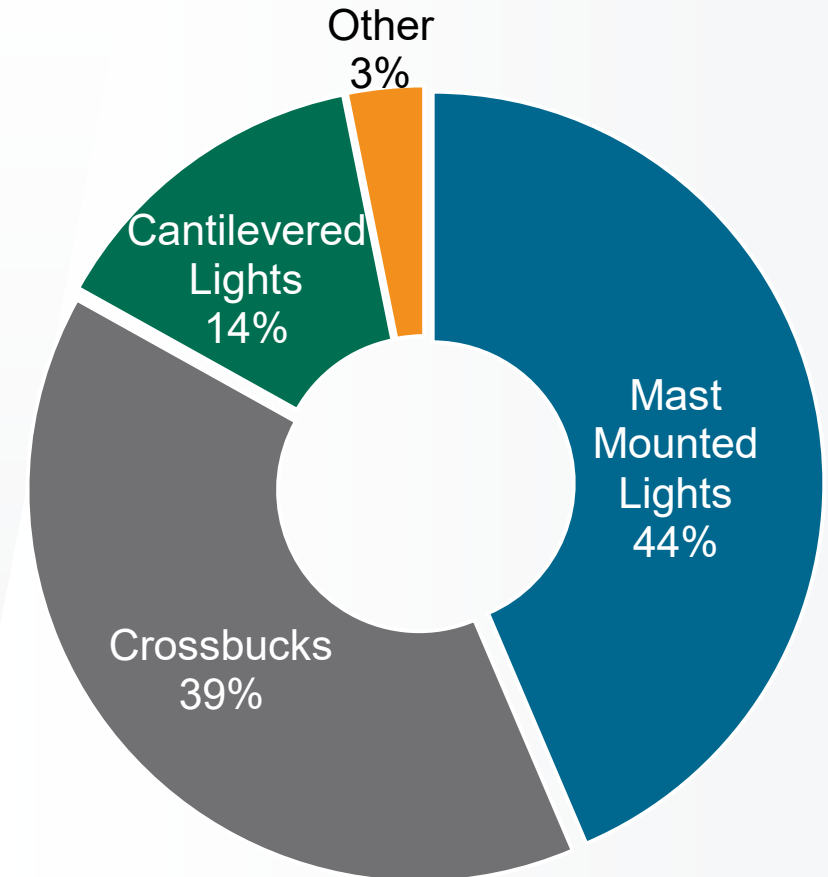
» Public At-Grade Crossings: 3,033

- Rural: 48%
- Urban: 52%

» Crossings by Roadway Type (percent)

Secondary road	61%
Local road	26%
SC Route	9%
US Route	4%
Ramp	0%

Crossings by Safety Features



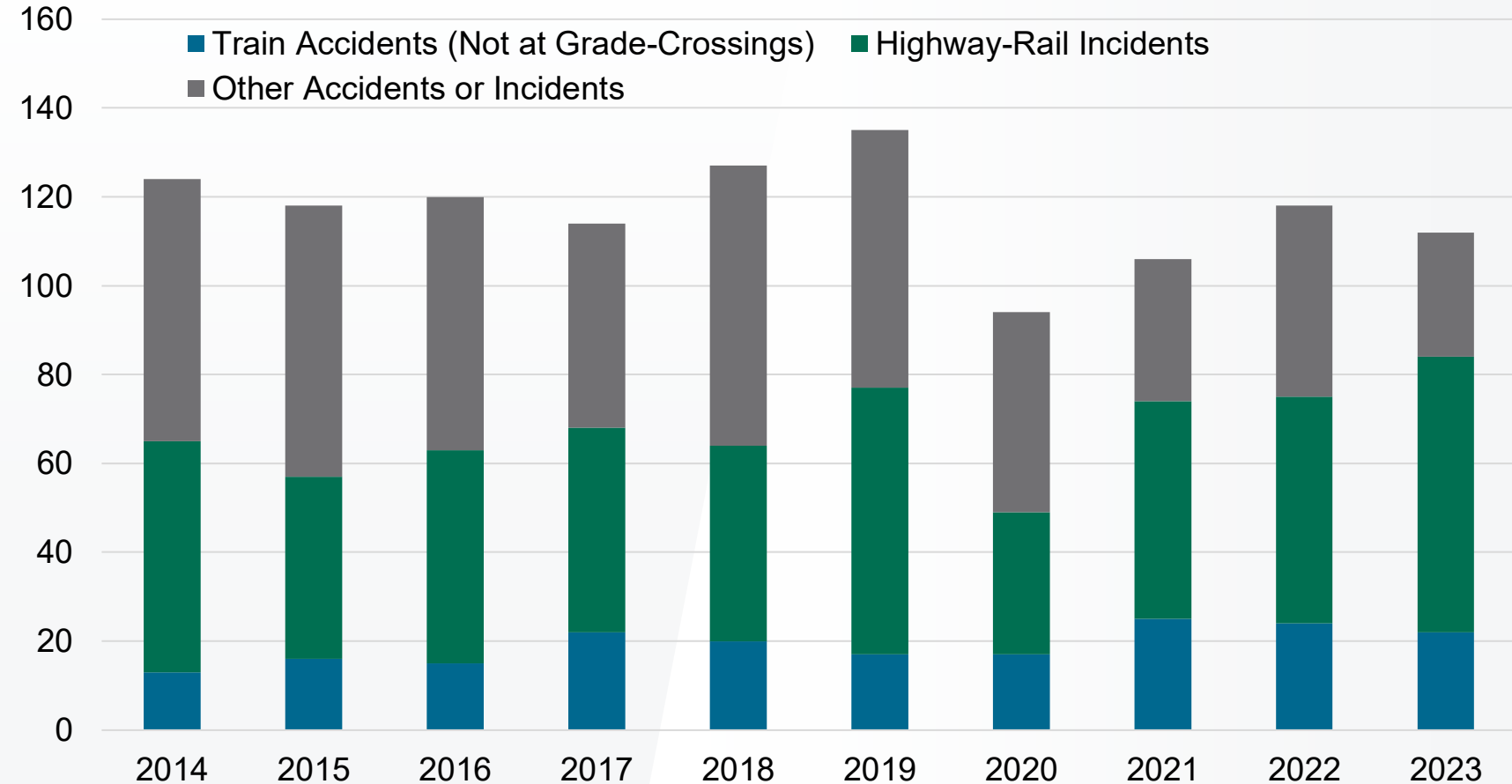
Source: SCDOT Section 130 Data

Grade Crossing Analysis/Crash Data

All Rail Incidents, 2014 to 2023

All Rail Incidents:

- » Fewer total rail incidents
 - Large decrease in “other”
- » At-grade crossings incidents:
 - Pre-2020: less than 40% of total (on average)
 - Post-2020: nearly 50% of total (on average)



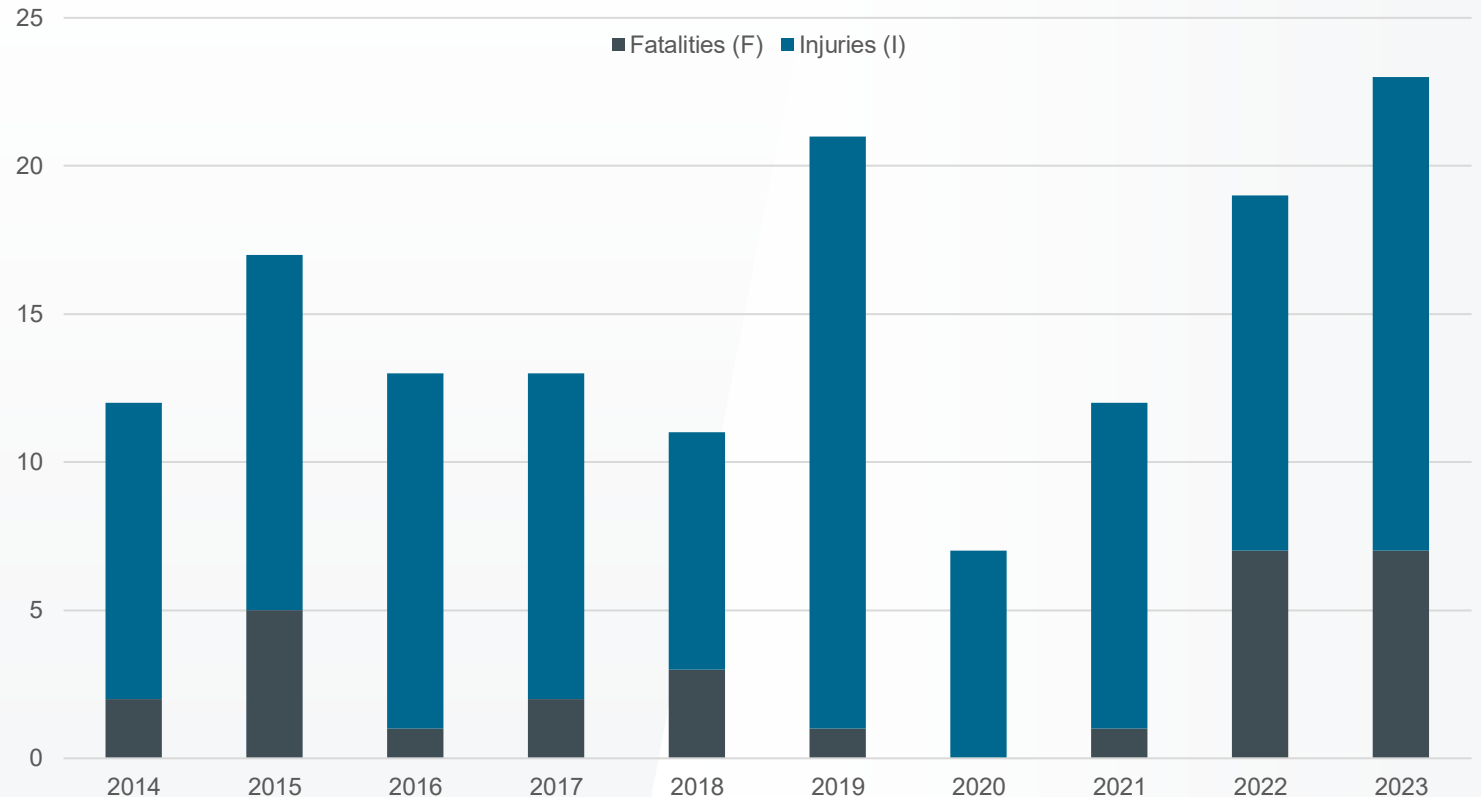
Source: FRA Office of Safety Analysis

Grade Crossing Analysis/Crash Data

At-Grade Crossing Incidents:

- » At-grade crossing incidents generally up (after 2020 dip)
- » Severity Trends:
 - Large spike in injury crashes in 2019
 - Post-2020 Death share higher than Pre-2020 share

Grade Crossing Crashes by Severity, 2014 to 2023



Source: SCDOT Section 130 Data

Public & Stakeholder Outreach and Engagement

Virtual Public Meeting

Virtual Public Meeting

- » Wednesday, June 26, 2024
- » 5:30 to 6:30 p.m. EST
- » Zoom Webinar (registration required)

https://us06web.zoom.us/webinar/register/WN_7zFdX-BWRlaeVM4mgMpdqQ



Virtual Public Meeting – We need your help!

Share with your networks starting June 11:

Register and attend our
**South Carolina Department of Transportation
State Rail Plan
Virtual Public Meeting**
June 26, 2024 | 5:30 - 6:30 PM EST
Learn about the South Carolina State Rail Plan Update and
share your feedback on rail in South Carolina!

 Register in advance to
attend this Zoom Webinar
by clicking the link or
scanning the QR Code 

https://us06web.zoom.us/join/register/WN_7zFdX-BWRlaeVM4mgMpdQ

After registering, you will receive a confirmation email with
information about how to join the Zoom Webinar

Contact: David Gray, Multimodal Planning Manager
South Carolina Department of Transportation

 graydl@scdot.org
 803-737-0738
 www.scdot.org



**Virtual Flyer/
Meeting Notice**



**State Rail Plan
Virtual Public Meeting**
June 26, 2024 | 5:30 - 6:30 PM EST

 Do you have an interest
in trains and rail in SC?
Share your feedback!



**Social Media
(graphic + post)**



Stakeholder Interviews – happening through July!

- » Class I railroads
- » Shortline railroads
- » Passenger rail
- » Ports and Intermodal facilities rail

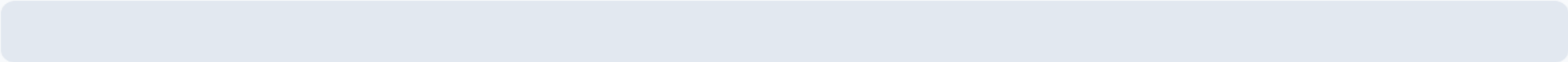


Discussion and Input on Needs and Opportunities

Have you used grant money for rail-related projects/concerns?

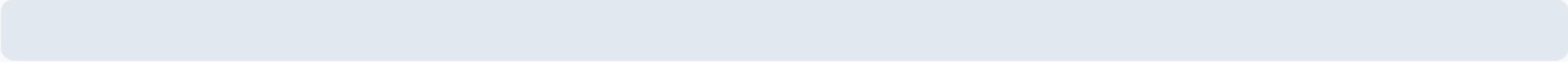
0

Yes



0%

No



0%

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

What rail-related projects have you applied for grant money?

Nobody has responded yet.
Hang tight! Responses are coming in.

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

What grants were used?

0

Nobody has responded yet.
Hang tight! Responses are coming in.

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

Discussion:

- » What was your experience using the grant funds? (working with Federal government, reporting requirements, etc.)
- » How difficult was it to apply for the grants?
- » How can SCDOT help with grants?
- » Do you have any unfunded grant applications related to rail projects? If so, can you provide details about these applications and the projects they were intended to fund?

Projects from last plan

- » CSX improvements
- » Norfolk Southern improvements
- » Palmetto Railway Industrial Rail Line (Camp Hall Commerce Park)
- » Charlotte Atlanta high speed rail or passenger rail
- » Short line needs

Table 4-1: Short Line Railroad Needs by Improvement Category

Type of Needs	Needs (Millions)
Rehabilitation	\$41.62
Capacity / Service	\$3.50
Safety	\$2.50
Short Line Total	\$47.62

Source: 2020 South Carolina Rail Plan

Short Line Improvement Project	Estimated Cost (\$ millions)
Rehabilitation	
Aiken Railway Company, LLC	
Rehabilitation: Drain improvement, bridge improvements, tie and surface 11.45 miles and 8.45 miles & Relay 8.45 miles to accommodate heavy loads	\$21.2
Pee Dee River Railway	
Rehabilitation: Relay 7.5 miles of rail between McColl & Bennettsville	\$5.0
Rehabilitation: Relay 2.1 miles of rail on the Breeden Spur	\$2.7
Pickens Railway	
Rehabilitation: Relay 10 miles of track from Belton to Anderson	\$5.8
Carolina Piedmont Railroad	
Rehabilitation: Relay 1 track mile, and upgrade track structure with 10,000 cross ties	\$1.88
South Carolina Central Railroad Company, LLC	
Rehabilitation: Relay 4 track miles, upgrade track structure with 10,000 cross ties	\$3.84
Greenville & Western Railway Company, LLC	
Rehabilitation: Tie and Surface 7.39 miles between Cheddar and Honea Path	\$1.2
Subtotal for Rehabilitation	\$41.62
Capacity / Service	
Pee Dee River Railway	
Capacity: Construct additional interchange yard track , and construct yard capacity in various locations	\$3.5
Subtotal for Capacity/Service	\$3.5
Safety	
Pee Dee River Railway	
Safety: Upgrade 3.80 miles of Mohawk Branch	\$0.90
Greenville & Western Railway	
Safety: Raise and widen J.P. Gossett Drive overpass near Williamston	\$1.6
Subtotal for Safety	\$2.50
Total for Short Line Projects	\$47.62

Rail Projects – Online Tool

Rail Projects – Online Tool

<https://survey123.arcgis.com/share/f76c812441a845a29b2c9041e2852d9e>

Purpose: Inform existing conditions for both freight and passenger rail, and provide recommendations for a well connected and competitive statewide rail system.

How to Use the Tool:

- » Fill out the survey using the link above (red asterisk indicate required fields)
- » Each submission should address one need/opportunity
- » Multiple submissions can be made by revisiting the above link
- » The map allows for one pin to be dropped, so use the description field at the end of the survey to provide detail on the location.
- » Please fill out your recommendations by June 21st.

Next Steps (Next 3 Months)

Next Steps (Next 3 Months)

» Virtual public meeting (June 26, 2024, 5:30-6:30 p.m. EST)

- *Register today and share the word!*

https://us06web.zoom.us/webinar/register/WN_7zFdX-BWRlaeVM4mgMpdqQ

» Finish one-on-one interviews

» Develop plan content:

- Future rail projects
- Plan goals, objectives, and strategies
- Strategies for industrial and business development
- Strategies for coordination and prioritization of grade crossings

Thank You! Comments/ Questions

Rail Plan website (coming soon!):

www.scdot.org/travel/freight-rail.aspx

David Gray
Multimodal Planning Manager,
SCDOT
803-737-0738
graydl@scdot.org

