



U.S. Department of Transportation  
Federal Railroad Administration



# Methodology Report for the Performance and Service Quality of Intercity Passenger Train Operations

Fiscal Year 2024 v.3

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## Abbreviations, Acronyms, and Phrases in this Report

<b>Term</b>	<b>Meaning</b>
CFR	Code of Federal Regulations
FRA	Federal Railroad Administration
FY	Fiscal Year (October 1 to September 30)
NEC	Northeast Corridor, rail line between Boston, MA, and Washington, DC
OTP	On-Time Performance
PRIIA	<i>Passenger Rail Investment and Improvement Act of 2008</i> , P.L. 110-432
MSA	Metropolitan Statistical Area
U.S.C.	United States Code
U.S. DOT	United States Department of Transportation

## I. Introduction

This report explains the metrics and minimum standards reporting requirements outlined by Federal law, provides a description of Amtrak's route structure, and explains quarterly reporting data categories. Additional information and supporting data files are available at [railroads.dot.gov](https://railroads.dot.gov).

## II. Metrics and Standards Reporting

Section 207 of the *Passenger Rail Investment and Improvement Act of 2008*, Pub. L. 110-432, 122 Stat. 4907 (PRIIA) requires the Federal Railroad Administration (FRA) to collect the necessary data and publish a quarterly report on the performance and service quality of intercity passenger train operations.

The FRA published a final rule on November 16, 2020 that established metrics and minimum standards for measuring the performance and service quality of intercity passenger train operations in four categories: on-time performance (OTP) and train delays, customer service, financial, and public benefits. FRA publishes quarterly reports on the metrics and minimum standards according to the reporting structure established in the final rule. See **Table 1** for a summary of the metrics and reporting schedule.

**Table 1. Metrics Summary and Reporting Schedule**

Category	Metric	First Period Reported	Summary Description
OTP & Delays	Customer OTP	July 1 – September 30, 2021 (except disputed schedules) October 1 – December 31, 2021 (all schedules)	Standard: 80% for two consecutive quarters  Percentage of all customers on an intercity passenger rail train who arrive at their detraining point no later than 15 minutes after their published scheduled arrival time
	Ridership	Prior Month	Number of host railroads to whom Amtrak has provided host-specific ridership data
	Certified schedules	Prior Month	Number of certified schedules, uncertified schedules, and disputed schedules
	Train delays	April 1 – June 30, 2021	Minutes of delay for all Amtrak-responsible delays, host-responsible delays, and third-party delays, reported by delay code
	Train delays per 10K train miles	April 1 – June 30, 2021	Minutes of delay per 10,000 train miles for all Amtrak-responsible and host-responsible delays
	Station performance	July 1 – September 30, 2021	Number of detraining passengers, the number of late passengers, and the average minutes late that late customers arrive at their detraining stations
	Host running time	July 1 – September 30, 2021	Average actual running time and the median actual running time compared with the scheduled running time between the first and final reporting points for a host railroad set forth in the Amtrak schedule skeleton



**Table 1. Metrics Summary and Reporting Schedule**

<b>Category</b>	<b>Metric</b>	<b>First Period Reported</b>	<b>Summary Description</b>
Customer Service	Customer satisfaction	April 1 – June 30, 2021	Percent of respondents who provided a score of 70 percent or greater for their “overall satisfaction” on a 100-point scale for their most recent trip, shown both adjusted for performance and unadjusted
	Amtrak personnel	April 1 – June 30, 2021	Average score from respondents for their overall review of Amtrak personnel
	Information given	April 1 – June 30, 2021	Average score from respondents for their overall review of information provided by Amtrak
	On-board comfort	April 1 – June 30, 2021	Average score from respondents for their overall review of on-board comfort
	On-board cleanliness	April 1 – June 30, 2021	Average score from respondents for their overall review of on-board cleanliness
	On-board food service	April 1 – June 30, 2021	Average score from respondents for their overall review of on-board food service
Financial	Cost recovery	April 1 – June 30, 2021	Amtrak’s adjusted operating revenue divided by Amtrak’s adjusted operating expense
	Avoidable operating costs covered by passenger revenue	April 1 – June 30, 2021	Percent of avoidable operating costs divided by passenger revenue for each route, shown with and without State operating payments
	Fully allocated costs covered by passenger revenue	April 1 – June 30, 2021	Percent of fully allocated core operating costs divided by passenger revenue for each route, shown with and without State operating payments
	Average ridership	April 1 – June 30, 2021	Number of passenger-miles divided by train miles for each route
	Total ridership	April 1 – June 30, 2021	Total number of passengers
Public Benefits	Connectivity	October 1 – December 31, 2021 (covering all of FY 2021)	Percent of passengers connecting to and from other Amtrak routes
	Missed connections	October 1 – December 31, 2021 (covering all of FY 2021)	Percent of passengers connecting to/from other Amtrak routes who missed connections due to a late arrival from another Amtrak train
	Community access	October 1 – December 31, 2021 (covering all of FY 2021)	Percent of Amtrak passenger-trips to and from not well-served communities
	Service availability	October 1 – December 31, 2021 (covering all of FY 2021)	Total number of daily Amtrak trains per 100,000 residents in a metropolitan statistical area (MSA) for each of the top 100 MSAs in the United States, shown in total and adjusted for time of day

### III. Amtrak Route Structure and Descriptions

Amtrak provides intercity passenger rail service across the United States, serving more than 500 destinations in 46 states, and several locations in Canada. Amtrak has three operating service lines: Northeast Corridor (NEC) service, which provides service between Boston, MA, and Washington, DC; State Supported service, which provides service on corridor routes of not more than 750 miles through cost-sharing agreements with State Partners; and Long Distance service, which includes all routes over 750 miles (**Figure 1**). See **Table 2** for a description of the service lines and routes and **Table 3** for a list of host railroads for each route.

**Table 2. Physical Route Descriptions**

Service Line	Service	Sub Service	Route Description
Northeast Corridor	Acela	Acela	Between Boston (South Station), New York (Penn Station), and Washington, DC
	Northeast Regional	On Spine Northeast Regional	Between Boston (South Station), Springfield, MA, New Haven, CT, New York (Penn Station), and Washington, DC
	Northeast Regional	Richmond / Newport News / Norfolk	Between Norfolk, Newport News, Richmond, VA, New York (Penn Station), and Boston (South Station)
	Northeast Regional	Roanoke	Between Lynchburg/Roanoke, VA, and Boston (South Station)
	Northeast Regional	Springfield Shuttles	Between New Haven, CT, and Springfield, MA



**Table 2. Physical Route Descriptions (continued)**

<b>Service Line</b>	<b>Service</b>	<b>Sub Service</b>	<b>Route Description</b>
State Supported	Borealis	Borealis	Between Chicago (Union Station), Milwaukee, WI, and St. Paul, MN
	Capitol Corridor	Capitol Corridor	Between Auburn, Oakland Coliseum, Oakland (Jack London Square Station), and San Jose, CA
	Carolinian	Carolinian	Between Charlotte, NC, and New York (Penn Station)
	Cascades	Cascades	Between Eugene, OR, Portland, OR, Seattle, WA, and Vancouver
	Downeaster	Downeaster	Between Boston (North Station), Portland, ME, and Brunswick, ME
	Empire	Adirondack	Between New York (Penn Station) and Montreal
	Empire	Berkshire Flyer	Between New York (Penn Station) and Pittsfield, MA <i>Seasonal service, July - September</i>
	Empire	Ethan Allen Express	Between New York (Penn Station) and Burlington, VT
	Empire	Maple Leaf	Between New York (Penn Station) and Toronto
	Empire	New York - Albany	Between New York (Penn Station) and Albany, NY
	Empire	New York - Niagara Falls	Between New York (Penn Station) and Niagara Falls
	Heartland Flyer	Heartland Flyer	Between Fort Worth, TX, and Oklahoma City, OK

**Table 2. Physical Route Descriptions (continued)**

<b>Service Line</b>	<b>Service</b>	<b>Sub Service</b>	<b>Route Description</b>
State Supported	Hiawatha	Hiawatha	Between Chicago, IL, and Milwaukee, WI
	Illinois	Carl Sandburg / Illinois Zephyr	Between Chicago and Quincy, IL
	Illinois	Illini / Saluki	Between Chicago and Carbondale, IL
	Illinois	Lincoln Service	Between Chicago, IL, and St. Louis, MO
	Keystone	Keystone	Between Harrisburg, PA, Philadelphia, PA, and New York (Penn Station)
	Lincoln / Missouri	Lincoln / Missouri	Between Kansas City, MO, St. Louis, MO, and Chicago, IL
	Michigan	Blue Water	Between Chicago, IL, and Port Huron, MI
	Michigan	Pere Marquette	Between Chicago, IL, and Grand Rapids, MI
	Michigan	Wolverine	Between Chicago, IL, and Pontiac, MI
	Missouri	Missouri	Between Kansas City and St. Louis, MO
	Pacific Surfliner	Pacific Surfliner	Between San Luis Obispo, Goleta, Los Angeles, and San Diego, CA
	Pennsylvanian	Pennsylvanian	Between New York (Penn Station) and Pittsburgh, PA
	Piedmont	Piedmont	Between Charlotte and Raleigh, NC
	San Joaquins	San Joaquins	Between Bakersfield, Oakland (Jack London Square Station), and Sacramento, CA
	Vermont	Vermont	Between St. Albans, VT, and Washington, DC

**Table 2. Physical Route Descriptions (continued)**

<b>Service Line</b>	<b>Service</b>	<b>Sub Service</b>	<b>Route Description</b>
Long Distance	Auto Train	Auto Train	Between Lorton, VA, and Sanford, FL
	California Zephyr	California Zephyr	Between Chicago, IL, and Emeryville, CA
	Capitol Ltd	Capitol Ltd	Between Chicago, IL, and Washington, DC
	Cardinal	Cardinal	Between Chicago, IL and New York (Penn Station) via Cincinnati, OH
	City Of New Orleans	City of New Orleans	Between Chicago, IL and New Orleans, LA
	Coast Starlight	Coast Starlight	Between Los Angeles, CA and Seattle, WA
	Crescent	Crescent	Between New York (Penn Station) and New Orleans, LA
	Empire Builder	Empire Builder	Between Chicago, IL, Portland, OR, and Seattle, WA
	Lake Shore Limited	Lake Shore Limited	Between Chicago, IL, New York (Penn Station), and Boston via Cleveland, OH, and Buffalo, NY
	Palmetto	Palmetto	Between New York (Penn Station) and Savannah, GA
	Silver Meteor	Silver Meteor	Between New York (Penn Station) and Miami, FL via Charleston, SC
	Silver Star	Silver Star	Between New York (Penn Station) and Miami, FL via Columbia, SC
	Southwest Chief	Southwest Chief	Between Chicago, IL, and Los Angeles, CA
	Sunset Limited	Sunset Limited	Between Los Angeles and New Orleans, LA
Texas Eagle	Texas Eagle	Between Chicago, IL and San Antonio, TX	

**Table 3. Routes, Hosts and Mileage**

Service Line	Route	Host	Route Miles
Long Distance	Auto Train	Central Florida Rail Corridor	16
		CSX	898
	California Zephyr	BNSF	1,027
		UP	1,381
	Capitol Ltd	CSX	307
		Norfolk Southern	481
	Cardinal	Amtrak	226
		Buckingham Branch Railroad	132
		CSX	703
		Norfolk Southern	79
	City Of New Orleans	CN	930
	Coast Starlight	BNSF	158
		SCRRA	48
		Sound Transit	20
		UP	1,162
	Crescent	Amtrak	226
		Norfolk Southern	1,141
	Empire Builder	BNSF	2,147
		CP	384
		Metra	29
	Lake Shore Ltd	Amtrak	111
		CSX	741
		Metro-North Railroad	64
		Norfolk Southern	339
	Palmetto	Amtrak	226
		CSX	659
	Silver Meteor	Central Florida Rail Corridor	61
		CSX	1152
		Florida DOT	68
	Silver Star	Amtrak	226
Central Florida Rail Corridor		61	
CSX		1,209	
Florida DOT		68	
Norfolk Southern		28	
Southwest Chief	BNSF	2,206	
	New Mexico DOT	80	

**Table 3. Routes, Hosts and Mileage (continued)**

Service Line	Route	Host	Route Miles
Long Distance	Sunset Ltd	BNSF	190
		UP	1,784
	Texas Eagle	BNSF	116
		CN	35
		Trinity Rail Express	33
	UP	1,073	
NEC	Acela Express	Amtrak	401
		Metro-North Railroad	56
	On Spine Northeast Regional	Amtrak	463
		Metro-North Railroad	56
	Richmond / Newport News / Norfolk	Amtrak	463
		CSX	189
		Metro-North Railroad	56
		Norfolk Southern	81
	Roanoke	Amtrak	463
		Norfolk Southern	216
		Metro-North Railroad	56
	Springfield Shuttles	Amtrak	62
		Massachusetts DOT	36
State Supported	Adirondack	CN	49
		CP	178
		Amtrak	100
	Berkshire Flyer	Amtrak	97
		CSX	46
		Metro-North Railroad	64
	Blue Water	Amtrak	99
		CN	159
		Michigan DOT	22
		Norfolk Southern	39
	Borealis	CP	376
		Metra	33
	Capitol Corridor	UP	171
	Carl Sandburg / Illinois Zephyr	BNSF	257
	Carolinian	CSX	295
Norfolk Southern		202	

**Table 3. Routes, Hosts and Mileage (continued)**

Service Line	Route	Host	Route Miles
State Supported	Cascades	BNSF	317
		Sound Transit	20
		UP	125
	Downeaster	MBTA	38
		PanAm	107
	Ethan Allen Express	Amtrak	100
		CP	60
		Metro-North Railroad	64
		Vermont Railway	24
	Heartland Flyer	BNSF	236
	Hiawatha	CP	53
		Metra	29
	Illini / Saluki	CN	304
	Keystone	Amtrak	195
	Lincoln Service	CN	35
		UP	231
	Maple Leaf	Amtrak	109
		CSX	298
		Metro-North Railroad	64
	Missouri	UP	271
	New York - Albany	Amtrak	81
		Metro-North Railroad	64
	New York - Niagara Falls	Amtrak	109
		CSX	296
		Metro-North Railroad	64
	Pacific Surfliner	BNSF	22
		San Diego Northern	60
		SCRRA	95
		UP	174
	Pennsylvanian	Amtrak	195
		Norfolk Southern	249
	Pere Marquette	CSX	135
		Norfolk Southern	39
Piedmont	Norfolk Southern	173	
San Joaquins	BNSF	284	
	UP	88	

**Table 3. Routes, Hosts and Mileage (continued)**

Service Line	Route	Host	Route Miles
State Supported	Vermont	Amtrak	304
		Massachusetts DOT	50
		Metro-North Railroad	56
		New England Central	192
	Wolverine	Amtrak	99
		CN	27
		Michigan DOT	134
		Norfolk Southern	39



Figure 1. Amtrak System Map



All route/map data provided by Amtrak

**Figure 2. Amtrak Host Railroad Map**



All route/map data provided by Amtrak. The map depicts Amtrak host railroads as of the first quarter of FY 2024.

## Physical vs. Financial Route Classification

For some routes, Amtrak reports operational (train performance) data differently than it reports financial or ridership data. In some State Supported service arrangements, a State, under a contractual agreement with Amtrak, will provide financial support for a portion of a larger route.

Amtrak has two route hierarchies within its reporting systems to account for these arrangements. The first route hierarchy is used to track the physical versions of the routes on the network. This physical route hierarchy, which is reflected on the individual performance profiles in Section III of the Quarterly Report, includes the entire physical train that moves between its origin and ultimate destination. The second hierarchy, financial routes, are a financial construction in Amtrak's accounting that breaks the physical train up into the Amtrak supported portion of the route and State Supported portion of the route. These financial routes exist to allocate financials between the State Supported segment and the Amtrak supported segment for accounting purposes. This explains why the Richmond / Newport News / Norfolk, Roanoke, and Springfield Shuttle routes are classified as Northeast Corridor in Section III of the Quarterly Report, but include State Supported segments. See **Table 4** for a summary of where financial routes may be different from physical routes.

In quarterly reports, all Customer OTP and train delay metrics are reported using the physical route structure (**Table 2**), and financial, customer service, and public benefits metrics are reported using the financial route structure (**Table 4**).

**Table 4. Financial Routes Descriptions Different than Physical Routes**

Sub-Service	Physical Route	Financial Route
Adirondack	New York, NY – Montreal, Canada	New York, NY – Albany, NY (Empire Service)
		Albany, NY – Montreal, Canada (Adirondack Service)
Berkshire Flyer	New York, NY – Pittsfield, MA	New York, NY – Albany, NY (Empire Service)
		Albany, NY – Pittsfield, MA (Berkshire Flyer)
Carolinian	Charlotte, NC – New York, NY	Charlotte, NC – Washington, DC
Cascades	Eugene, OR – Vancouver, BC	Eugene – Portland, OR (Oregon Service)
		Portland, OR – Vancouver, BC (Washington Service)
Empire West / Maple Leaf	New York, NY – Niagara Falls, NY	New York – Albany, NY (Empire Service)
		Albany – Niagara Falls, NY (Empire West/Maple Leaf Service)
Ethan Allen Express	New York, NY – Rutland, VT	New York – Albany, NY (Empire Service)
		Albany, NY – Burlington, VT (Ethan Allen Service)
Keystone	Harrisburg, PA – New York, NY	Harrisburg – Philadelphia, PA
Lincoln / Missouri	Kansas City, MO – Chicago, IL	Kansas City, MO – St. Louis (Missouri River Runner)
		St. Louis – Chicago (Lincoln Service)

**Table 4. Financial Routes Descriptions Different than Physical Routes (continued)**

<b>Sub-Service</b>	<b>Physical Route</b>	<b>Financial Route</b>
Lynchburg/ Roanoke	Lynchburg/Roanoke – New Haven, CT/Boston, MA	Lynchburg, VA – Washington, DC
Newport News	Newport News, VA – New Haven, CT/Boston, MA	Newport News, VA – Washington, DC
Norfolk	Norfolk, VA – New Haven, CT/ Boston, MA	Norfolk, VA – Washington, DC
Springfield Shuttles	Washington, DC – New Haven, CT/Boston, MA	New Haven, CT – Greenfield, MA
Pennsylvanian	Pittsburgh, PA – New York, NY	Pittsburgh – Philadelphia, PA
Richmond	Richmond – New Haven, CT/ Boston, MA	Richmond, VA – Washington, DC
Vermont	Washington, DC – St. Albans, VT	New Haven, CT – Springfield, MA; Springfield, MA – St. Albans, VT

## IV. Quarterly Reporting Data Categories

### A. On-Time Performance and Train Delay Metrics

#### Certified Schedules

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The number of certified schedules, uncertified schedules, and disputed schedules, reported by train, by route, and by host railroad (excluding switching and terminal railroads), identified in a notice to the Federal Railroad Administrator by Amtrak.

#### Notes

- The metric was reported monthly through May 2021, after which it is reported annually.
- *Certified schedule* means a published train schedule that Amtrak and the host railroad jointly certify is aligned with the customer on-time performance metric and standard.
- *Uncertified schedule* means a published train schedule that has not been reported as a certified schedule or a disputed schedule.
- *Disputed schedule* means a published train schedule for which a specific change is sought: (i) that is the only subject of a non-binding dispute resolution process led by a neutral third-party and involving Amtrak and one or more host railroads; (ii) that is the only subject of a non-binding dispute resolution process led by a neutral third-party that has been initiated by one or more host railroads and Amtrak has not consented to participate in the process within 30 calendar days; or (iii) that is the only subject of a non-binding dispute resolution process led by a neutral third-party that has been initiated by Amtrak and the host railroad has not consented to participate in the process within 30 calendar days.
- Certified Schedules data is available for download at [railroads.dot.gov](https://railroads.dot.gov). See Schedule Certification Tables.

#### Customer On-Time Performance

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The Metrics and Minimum Standards for Intercity Passenger Rail Service rule defines OTP as the percentage of all customers on an intercity passenger rail train who arrive at their detraining point no later than 15 minutes after their published scheduled arrival time, reported by train and by route. Amtrak uses the 15-minute maximum when calculating OTP for all routes and trains except the Acela. Amtrak uses a 10-minute maximum when calculating OTP for the Acela.

The customer on-time performance minimum standard is 80 percent for any two consecutive quarters.

#### Notes

- Customer on-time performance for all schedules, at the route-level and by train, are available for download at [railroads.dot.gov](https://railroads.dot.gov). See Customer OTP Metrics.

## Disputed Train Delays

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### Notes

- *Delay minutes disputed by host railroad and not resolved by Amtrak* means delay minutes for which a host railroad disputed the code used by Amtrak to classify the delay, or the number of delay minutes assigned to the host railroad, but were not changed by Amtrak after the host's initial request. Ultimately, Amtrak and the host railroads may agree that a different delay code or number of delay minutes is appropriate following further discussion; this data only reports delay minutes that were not adjusted after the host railroad's initial request for reclassification.
- *Delays* are reported by operating business line, which is similar to the service line structure (see Amtrak Route Structure and Descriptions). The NEC business line includes the following routes: Acela, Northeast Regional, Northeast Regional – Richmond / Newport News / Norfolk, Northeast Regional – Roanoke, and Northeast Regional – Springfield Shuttles. See **Table 5** for a list of host railroad codes used in the delay reports.
- Disputed Train Delays data is available for download at [railroads.dot.gov](https://railroads.dot.gov). See Disputed Delay Minutes Metric.

## Host Running Time

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The average actual running time and the median actual running time compared with the scheduled running time between the first and final reporting points for a host railroad set forth in the Amtrak schedule skeleton, reported by route, by train, and by host railroad (excluding switching and terminal railroads).

### Notes

- *Actual running time* means the actual elapsed travel time of a train's travel on a host railroad, between the departure time at the first reporting point for a host railroad segment and the arrival time at the reporting point at the end of the host railroad segment.
- *Scheduled running time* means the scheduled duration of a train's travel on a host railroad, as set forth in the Amtrak schedule skeleton.
- *Schedule skeleton* means a schedule grid used by Amtrak and host railroads to communicate the public schedule of an Amtrak train and the schedule of operations of an Amtrak train on host railroads.
- Data is available for download at [railroads.dot.gov](https://railroads.dot.gov).

## Ridership

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The number of host railroads to whom Amtrak has provided ridership data reported by host railroad and by month.

### Notes

- Ridership data means, in a machine-readable format: the total number of passengers, by train and by day; the station-specific number of detraining passengers, reported by host railroad whose railroad right-of-way serves the station, by train and by day; and the station-specific number of on-time passengers reported by host railroad whose railroad right-of-way serves the station, by train and by day.
- Amtrak provided ridership data to Portland Terminal Railroad Company via BNSF Railway.
- Ridership data is available for download at [railroads.dot.gov](https://railroads.dot.gov).

## Station Performance

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The number of detraining passengers, the number of late passengers, and the average minutes late that late customers arrive at their detraining stations, reported by route, by train, and by station. The average minutes late per late customer calculation excludes on-time customers that arrive no later than 15 minutes after their scheduled time. Amtrak considers Acela passengers who arrive at their detraining station more than 10 minutes behind schedule to be late.

### Notes

- Station Performance data is available for download at [railroads.dot.gov](https://railroads.dot.gov). See Station Performance Metric.

## Train Delays

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The train delays metric is the minutes of delay for all Amtrak-responsible delays, host-responsible delays, and third-party delays for the host railroad territory within each route. The train delays metric is reported by delay code; total minutes of delay; Amtrak-responsible delays; Amtrak's host-responsible delays; Amtrak's host-responsible delays and Amtrak-responsible delays combined; non-Amtrak host-responsible delays; and third-party delays. The train delays metric is also reported by the number of non-Amtrak host-responsible delay minutes disputed by host railroad and not resolved by Amtrak.

### Notes

- *Amtrak-responsible* delays means delays recorded by Amtrak, in accordance with Amtrak procedures, as Amtrak-responsible delays, including passenger-related delays at stations, Amtrak equipment failures, holding for connections, injuries, initial terminal delays, servicing delays, crew and system delays, and other miscellaneous Amtrak-responsible delays.
- *Host-responsible* delays means delays recorded by Amtrak, in accordance with Amtrak procedures, as host-responsible delays, including freight train interference, slow orders, signals, routing, maintenance of way, commuter train interference, passenger train interference, catenary or wayside power system failure, and detours.
- *Third-party* delays means delays recorded by Amtrak, in accordance with Amtrak procedures, as third-party delays, including bridge strikes, debris strikes, customs, drawbridge openings, police-related delays, trespassers, vehicle strikes, utility company delays, weather-related delays (including heat or cold orders, storms, floods/washouts, earthquake-related delays, slippery rail due to leaves, flash-flood warnings, wayside defect detector actuations caused by ice, and high-wind restrictions), acts of God, or waiting for scheduled departure time. In this quarterly dataset, available for download at [railroads.dot.gov](https://railroads.dot.gov), the third-party delays are coded as "Neither."
- Train Delays data is available for download at [railroads.dot.gov](https://railroads.dot.gov). See Delay Metrics.



## Train Delays per 10,000 Train Miles

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The minutes of delay per 10,000 train miles for all Amtrak-responsible and host-responsible delays, for the host railroad territory within each route.

### Notes

- *Delays per 10,000 train miles* is the number of minutes of delay normalized by train miles so that routes of different lengths, and hosts with different amounts of Amtrak service, can be compared to each other. Specifically, it is the number of minutes of host-responsible and Amtrak-responsible delay, divided by the number of Amtrak train miles operated over that host, multiplied by 10,000.
- Train Delays data is available for download at [railroads.dot.gov](https://railroads.dot.gov). See Delays per 10K TM Metric.

## B. Customer Service Metrics

Amtrak's customer satisfaction survey means a market-research survey that measures Amtrak's satisfaction score as measured by specific service attributes that cover the entire customer journey.

FRA publishes information about Amtrak's customer satisfaction survey (including the survey questions and methodology) annually as an appendix to the quarterly report. The most recent customer satisfaction survey report can be accessed at [railroads.dot.gov](https://www.railroads.dot.gov).

Amtrak adjusts overall satisfaction score performance by removing passengers who arrive at their destinations on State Supported and Long Distance routes excessively late (30 minutes late for State Supported routes and 120 minutes for Long Distance routes) from the system-wide calculation. Scores are not adjusted for Northeast Corridor routes.

Amtrak provides the percent of respondents to the Amtrak customer satisfaction survey who provided a score of 70 percent or greater for their overall satisfaction (Top 4) and the percent of respondents who provided a score of 80 percent or greater (Top 3).

### Customer Satisfaction

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The percent of respondents to the Amtrak customer satisfaction survey who provided a score of 70 percent or greater for their "overall satisfaction" on a 100-point scale for their most recent trip, by route, shown both adjusted for performance and unadjusted.

### Amtrak Personnel

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The average score from respondents to the Amtrak customer satisfaction survey for their overall review of Amtrak personnel on their most recent trip, by route.

### Information Given

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The average score from respondents to the Amtrak customer satisfaction survey for their overall review of information provided by Amtrak on their most recent trip, by route.

### On-board Comfort

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The average score from respondents to the Amtrak customer satisfaction survey for their overall review of on-board comfort on their most recent trip, by route.

### On-board Cleanliness

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The average score from respondents to the Amtrak customer satisfaction survey for their overall review of on-board cleanliness on their most recent trip, by route.

### On-board Food Service

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The average score from respondents to the Amtrak customer satisfaction survey for their overall review of on-board food service on their most recent trip, by route.

## C. Financial Metrics

### Average Ridership

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The number of passenger-miles divided by train miles for each route.

#### Notes

- Financial Metrics data is available for download at [railroads.dot.gov](https://railroads.dot.gov).

### Avoidable Operating Costs Covered by Passenger Revenue

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The percent of avoidable operating costs divided by passenger revenue for each route, shown with and without State operating payments.

#### Notes

- *Avoidable operating costs* means costs incurred by Amtrak to operate train service along a route that would no longer be incurred if the route were no longer operated. For this quarterly report, *avoidable operating expense* is calculated by adding frequency variable & route variable costs.
- *Passenger revenue* means intercity passenger rail revenue generated from passenger train operations, including ticket revenue, food and beverage sales, operating payments collected from States or other sponsoring entities, special trains, and private car operations.
- Financial Metrics data is available for download at [railroads.dot.gov](https://railroads.dot.gov).

### Cost Recovery

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Amtrak's adjusted operating revenue divided by Amtrak's adjusted operating expense. This metric is reported at the corporate level/system-wide and for each route and is reported in constant dollars of the reporting year based on the Office of Management and Budget's gross domestic product chain deflator.

#### Notes

- *Adjusted operating expenses* means Amtrak's operating expenses adjusted to exclude certain Amtrak expenses that are not considered core to operating the business. The major exclusions are depreciation, capital project-related expenditures not eligible for capitalization, the non-cash portion of pension and post-retirement benefits, and Amtrak's Office of Inspector General expenses. Adjusted operating expenses do not include any operating expenses for State Supported routes that are paid for separately by States.
- *System-wide* (Total Amtrak) includes ancillary and infrastructure expenses not related to train operations. National train service includes expenses from all train operations and routes. Special trains includes expenses related to contracting of Amtrak's equipment crews for private excursion.
- Financial Metrics data is available for download at [railroads.dot.gov](https://railroads.dot.gov).

## Fully Allocated Core Operating Costs Covered by Passenger Revenue

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The percent of fully allocated core operating costs divided by passenger revenue for each route, shown with and without State operating payments.

### Notes

- *Fully allocated core operating costs* means Amtrak's total costs associated with operating an Amtrak route, including direct operating expenses, a portion of shared expenses, and a portion of corporate overhead expenses. Fully allocated core operating costs exclude ancillary and other expenses that are not directly reimbursed by passenger revenue to match revenues with expenses.
- *Passenger revenue* means intercity passenger rail revenue generated from passenger train operations, including ticket revenue, food and beverage sales, operating payments collected from States or other sponsoring entities, special trains, and private car operations.
- Financial Metrics data is available for download at [railroads.dot.gov](https://railroads.dot.gov).

## Total Ridership

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The total number of passengers on Amtrak trains, reported by route.

### Notes

- Financial Metrics data is available for download at [railroads.dot.gov](https://railroads.dot.gov).

## D. Public Benefits

Public benefits metrics are reported annually, and they were included for the first time in the FY 2022 first quarter report, covering all of FY 2021.

### Connectivity

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The percent of passengers connecting to and from other Amtrak routes, updated on an annual basis.

#### Notes

- *Connection* means a passenger arriving on one train and connecting to a departing train within 23 hours.
- Public Benefits data is available for download at [railroads.dot.gov](https://railroads.dot.gov).

### Missed Connections

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The percent of passengers connecting to/from other Amtrak routes who missed connections due to a late arrival from another Amtrak train, reported by route and updated on an annual basis.

#### Notes

- Public Benefits data is available for download at [railroads.dot.gov](https://railroads.dot.gov).

### Community Access

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The percent of Amtrak passenger trips to and from not well-served communities, updated on an annual basis.

#### Notes

- Not well-served communities means those rural communities: within 25 miles of an intercity passenger rail station; more than 75 miles from a large airport; and more than 25 miles from any other airport with scheduled commercial service or an intercity bus stop.
- Public Benefits data is available for download at [railroads.dot.gov](https://railroads.dot.gov).

### Service Availability

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The total number of daily Amtrak trains per 100,000 residents in a metropolitan statistical area (MSA) for each of the top 100 MSAs in the United States, shown in total and adjusted for time of day, updated on an annual basis.

#### Notes

- The metric, as adjusted for time of day, shows only those trains that arrive or depart between 5:00 a.m. and 11:00 p.m.
- Public Benefits data is available for download at [railroads.dot.gov](https://railroads.dot.gov).

## IV. Additional Reference Material

**Table 5. Amtrak Delay Code Definitions**

<b>Responsibility</b>	<b>Code</b>	<b>Code Description</b>	<b>Explanation</b>
Amtrak-responsible delays	ADA	Passenger-related	All delays related to disabled passengers, wheelchair lifts, guide dogs, etc.
	CAR	Car failure	Mechanical failure on all types of cars
	CCR	Cab car failure	Mechanical failure on Cab Cars
	CON	Hold for guaranteed connection	Holding for connections from other trains or buses
	CTC	CETC system failure	Failure of the Centralized Electrification and Traffic Control (CETC) train control system
	ENG	Locomotive failure	Mechanical failure on engines
	HLD	Passenger-related	All delays related to passengers, checked baggage, large groups, etc.
	INJ	Injured/ill guest/ Employee	Delay due to injured passengers or employees
	ITI	Initial terminal delay	Delay at initial terminal due to late arriving inbound trains causing late release of equipment
	MTI	Disabled train ahead	Disabled train ahead due to mechanical failure
	OTH	Miscellaneous delays	Lost-on-run, heavy trains, unable to make normal speed, etc.
	SVS	Servicing	All switching and servicing delays
	SYS	Crew & system	Delays related to crews including lateness, lone-engineer delays
	UND	Undefined	Delays that are auto-entry 2 minute delay
Host-responsible delays	CTI	Commuter train interference	Delays for meeting or following commuter trains
	CTP	Commuter train problems	Delays directly caused by abnormal occurrences to commuter trains
	DBB	B&B work due to defect	Delays caused by bridge or building maintenance
	DCS	C&S work due to defect	Signal failure or other signal delays, wayside defect-detector false alarms, defective road crossing protection, efficiency tests, drawbridge stuck open
	DCT	Defective concrete ties	Delays caused by the replacement of concrete ties
	DDA	Defect detector actuation	Delays caused by train inspection following a defect detector actuation
	DET	ET work due to defect	Catenary or other electrical maintenance
	DMW	M/W work due to defect	Maintenance of Way delays including holds for track repairs or MW foreman to clear
	DSR	Slow order delays	Temporary slow orders, except heat or cold orders

**Table 5. Amtrak Delay Code Definitions (Continued)**

<b>Responsibility</b>	<b>Code</b>	<b>Code Description</b>	<b>Explanation</b>
Host-responsible delays	DTR	Detour	Delays from detours
	FTI	Freight train interference	Delays from freight trains
	PBB	Planned B&B work	Scheduled bridge and building maintenance
	PET	Planned ET work	Scheduled catenary or other electrical work
	PSC	Planned C&S work	Scheduled communications and signal work
	PSR	Planned speed restrictions	Scheduled speed restrictions
	PTI	Passenger train interference	Delays for meeting or following other passenger trains (not commuter trains)
	RTE	Routing delays, including late bulletins	Routing-dispatching delays including diversions, late track bulletins, etc.
	SMW	Scheduled M/W work	Scheduled maintenance of way work
TCD	Third party contractor delays	Unplanned Contractor delays that affect service	
Third-party delays	BSP	Bridge strike	Delay due to train striking an overhead bridge
	CUI	Customs and immigration	U.S. and Canadian customs delays; immigration-related delays
	DBS	Debris strike, damage, set outs	Debris strikes
	MBO	Movable bridge opening	Movable bridge openings for marine traffic where no bridge failure is involved
	NOD	Unused recovery time	Waiting for scheduled departure time at a station
	POL	Police-related delay	Police/fire department holds on right-of-way or on board trains
	TRS	Trespasser incident	Trespasser incidents including road crossing accidents, trespasser/animal strikes, vehicle stuck on track ahead, bridge strikes
	UTL	Utility company failure	Failure due to utility company issue
	WTR	Weather-related	All severe-weather delays, landslides or washouts, earthquake-related delays, heat or cold orders



**Table 6. Host Railroads**

Host Railroad Name	Code	Class I Host Railroad Name
Amtrak	AM	
Belt Railway of Chicago	BR	
BNSF Railway Company	BN	BNSF
Buckingham Branch Railroad	BB	
Canadian National	CN	
Canadian National - Other	XC	
Caisse de dépôt et placement du Québec (CDPQ)	CQ	
Central Florida Rail Corridor	FR	
Chicago Terminal <sup>1</sup>	CT	
CN – IC (Former GTW and IC)	CC	CN – IC
Conrail Shared Assets	CR	
CP Rail (Soo Line)	CP	CPKC
CSX Corporation	CS	CSX
Delaware & Hudson (CP Rail)(StL&H)	DH	CPKC
Florida DOT	FL	
Kansas City Terminal	KC	
Long Island Railroad	LG	
Massachusetts DOT	MA	
MBTA	MT	
Metra	ME	
Metro-North Railroad	MN	
Michigan DOT	MI	
Minnesota Commercial	MC	
New England Central	NE	
New Mexico DOT	NM	
Norfolk Southern	NS	Norfolk Southern
Pan Am Railways (formerly Guilford)	GT	CSX
Regional Transportation District (Denver)	RT	
S.C.R.R.A (Moorpark to LAX)	SC	
San Diego Northern	SN	
Sound Transit (XNI-XTW =Tacoma, WA vicinity)	ST	
Terminal Railroad Assn. Of St. Louis (TRRA)	TR	
Trinity Rail Express	TE	
Union Pacific UP	UP	Union Pacific
Vermont Railway	VR	

1 Amtrak records delays between 16th St. and Control Point-Roosevelt in Chicago to Chicago Terminal (CT)