Update on the Methodology for Amtrak Performance Tracking (APT)

Volume 1: Main Report

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13. ABSTRACT (Maximum 200 words) This document updates previous FRA publications on the cost accounting methodology used by Amtrak to calculate and report route costs, Amtrak Performance Tracking (APT). The prior version of this report published in 2016, *Update on the Methodology for Amtrak Cost Accounting Amtrak Performance Tracking,* described Amtrak's APT cost allocation methodology and the report appendices displayed Fiscal Year 2014 summary data from Amtrak's accounting system. Updates to the data appendices using Fiscal Years 2017 - 2020 data were published in subsequent years. This document describes the cost allocation methodology as implemented by Amtrak at the conclusion of Fiscal Year 2021 including updates to the APT system since the 2016 report. All data within were captured in October 2021 and consist of unaudited figures from APT allocated data available at that time and do not reflect any subsequent adjustments or corrections. The figures are intended only to provide a general snapshot of the relative size of Amtrak's business and may not directly align with other published Amtrak reports, based on differences in reporting methodologies. The data described in the report and the appendices should be viewed holistically and do not necessarily account for changes within the APT structure over time.			
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SI* (MODERN METRIC) CONVERSION FACTORS

APPROXIMATE CONVERSIONS TO SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
		LENGTH		
in	inches	25.4	millimeters	mm
ft	feet	0.305	meters	m
yd	yards	0.914	meters	m
mi	miles	1.61	kilometers	km
		AREA		
in^2	square inches	645.2	square millimeters	mm^2
ft^2	square feet	0.093	square meters	m^2
yd^2	square yard	0.836	square meters	m^2
ac	acres	0.405	hectares	ha
mi^2	square miles	2.59	square kilometers	km^2
		VOLUME		
fl oz	fluid ounces	29.57	milliliters	mL
gal	gallons	3.785	liters	L
ft^3	cubic feet	0.028	cubic meters	m^3
yd^3	cubic yards	0.765	cubic meters	m^3
		NOTE: volumes greater than 1000 L shall be shown in m^3		
		MASS		
oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2000 lb)	0.907	megagrams (or "metric ton")	Mg (or "t")
oz	ounces	28.35	grams	g
		TEMPERATURE (exact degrees)		
°F	Fahrenheit	5 (F-32)/9 or (F-32)/1.8	Celsius	°C
		ILLUMINATION		
fc	foot-candles	10.76	lux	lx
fl	foot-Lamberts	3.426	candela/m^2	cd/m^2
		FORCE and PRESSURE or STRESS		
lbf	poundforce	4.45	newtons	N
lbf/in^2	poundforce per square inch	6.89	kilopascals	kPa

APPROXIMATE CONVERSIONS FROM SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
		LENGTH		
mm	millimeters	0.039	inches	in
m	meters	3.28	feet	ft
m	meters	1.09	yards	yd
km	kilometers	0.621	miles	mi
		AREA		
mm^2	square millimeters	0.0016	square inches	in^2
m^2	square meters	10.764	square feet	ft^2
m^2	square meters	1.195	square yards	yd^2
ha	hectares	2.47	acres	ac
km^2	square kilometers	0.386	square miles	mi^2
		VOLUME		
mL	milliliters	0.034	fluid ounces	fl oz
L	liters	0.264	gallons	gal
m^3	cubic meters	35.314	cubic feet	ft^3
m^3	cubic meters	1.307	cubic yards	yd^3
mL	milliliters	0.034	fluid ounces	fl oz
		MASS		
g	grams	0.035	ounces	oz
kg	kilograms	2.202	pounds	lb
Mg (or "t")	megagrams (or "metric ton")	1.103	short tons (2000 lb)	T
g	grams	0.035	ounces	oz
		TEMPERATURE (exact degrees)		
°C	Celsius	1.8C+32	Fahrenheit	°F
		ILLUMINATION		
lx	lux	0.0929	foot-candles	fc
cd/m^2	candela/m^2	0.2919	foot-Lamberts	fl
		FORCE and PRESSURE or STRESS		
N	newtons	0.225	poundforce	lbf
kPa	Kilopascals	0.145	poundforce per square inch	lbf/in^2

*SI is the symbol for the International System of Units. Appropriate rounding should be made to comply with Section 4 of ASTM E380. (Revised March 2003)

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List of Abbreviations

Abbreviation	Term
Amtrak	National Railroad Passenger Corporation
APT	Amtrak Performance Tracking
AUA	Asset Usage Allocation
CEP	Customer Electric Percentage
CETC	Centralized Electrification Traffic Control Center
CI	Commuter Infrastructure Access
CMR	Commuter Operations
CNOC	Consolidated National Operations Center
COM	Commercial
CUS	Chicago Union Station Company
DelDOT	Delaware Department of Transportation
DOT	Department of Transportation
FAST Act	Fixing America's Surface Transportation Act
FRA	Federal Railroad Administration
FY	Fiscal Year
G&A	General and Administrative
GAO	U.S. Government Accountability Office
IO	Internal Order
LD	Long Distance
MARC	Maryland Rail Commuter
MoE	Maintenance of Equipment
MoW	Maintenance of Way
NEC	Northeast Corridor
NJT	New Jersey Transit
Non-NTS	Direct Customer
NTS	National Train Service
OBIS	On-Board Information Systems
OBS	On Board Services
OIG	Office of Inspector General
OMS	Operations Management Systems
PAS/ALMS	Passenger Accounting System/Automated Lift Match System
PIDS	Public Information Display Systems
PRIIA	Passenger Rail Investment and Improvement Act of 2008
PRIL	Passenger Railroad Insurance Limited
PSL	Penn Station Leasing, LLC
REB	Reimbursable
RPA	Rail Passengers Association
RPS	Route Profitability System
RR	Railroad
RRDW	Ridership and Revenue Data Warehouse
RSCC	Reservation Sales Call Center

Abbreviation	Term
SAIPRC	State-Amtrak Intercity Passenger Rail Committee
SAP-BPC	SAP Business Planning and Consolidation
SEPTA	Southeastern Pennsylvania Transportation Authority
SQL	Structured Query Language
SS	State Supported
T&E	Trainmen and Enginemen
TSL	30th Street Limited, L.P.
TUS	Train Unit Statistics
Volpe Center	Volpe National Transportation Systems Center
VSIP	Voluntary Separation Incentive Program
WBS	Work Breakdown Structure
WBSE	Work Breakdown Structure Element

Executive Summary

This report updates previous documentation on the Amtrak Performance Tracking (APT) financial reporting system used by Amtrak to report its fully allocated route costs to Congress. APT was developed in close collaboration between the Federal Railroad Administration (FRA), the John A. Volpe National Transportation Systems Center (Volpe Center), and the National Railroad Passenger Corporation (Amtrak) and documented in a three-volume 2009 report to congress. The Volpe Center updated the documentation in 2016 and published annual updates to the data appendices for Fiscal Years 2017 to 2020. This three-volume report updates prior descriptions of the APT methodology for determining the fully allocated costs and revenues of each Amtrak route, and documents Amtrak's current application of that methodology and associated reporting results.

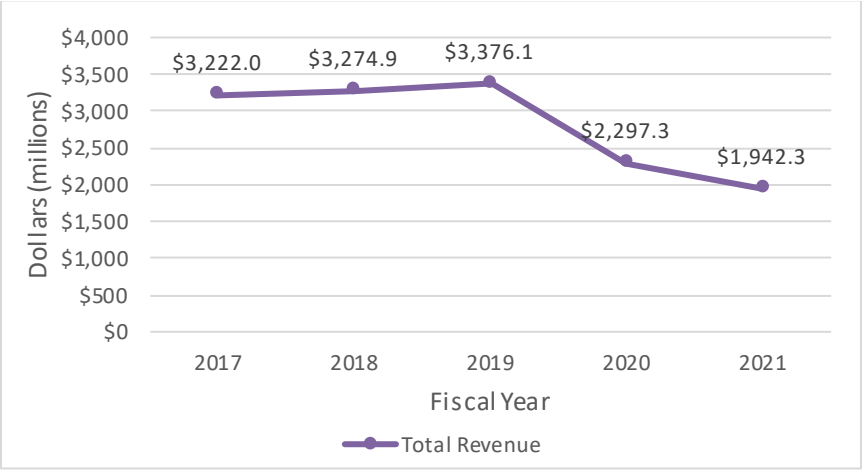

Figure ES-1. Total Revenue, Fiscal Years 2017-2021

Volume 1, this document, contains the current description of the allocation methodology for each segment of the Amtrak enterprise and includes new tables and figures depicting recent trends in Amtrak's revenues, shown in Figure ES-1, and costs, shown in Figure ES-2, along with the relevant service lines to which those dollars are allocated. This report also describes changes to APT implemented by Amtrak and planned future modifications, along with a description of public and stakeholder perceived strengths and weaknesses of the system.

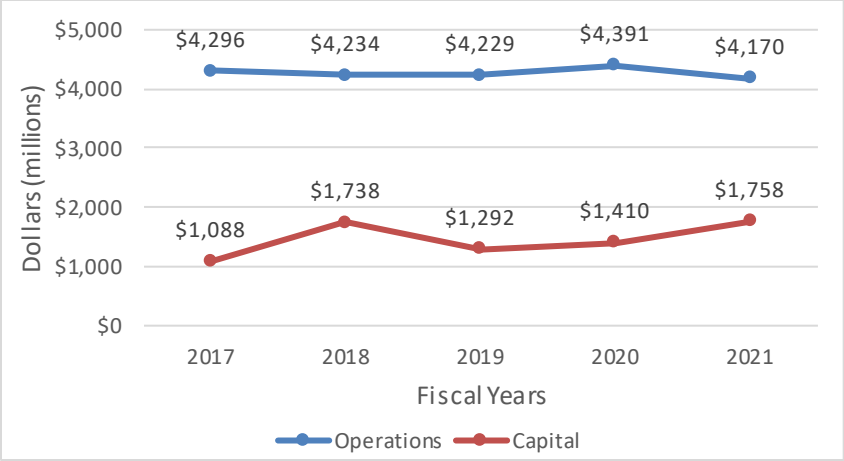

Figure ES-2. Operating and Capital Costs, Fiscal Years 2017-2021

Volume 2 updates the annual data appendices using Fiscal Year 2021 data. Appendix A contains the Cost Center List by Family and Appendix B the APT Data Tables. Volume 3 contains Appendix C, the Glossary, and Appendix D, Definitions of Allocation Statistics.

1. Introduction

This report provides updated documentation for the Amtrak Performance Tracking (APT) financial reporting system. This includes an introduction to APT, a summary of updates to APT systems following the *Update on the Methodology for Amtrak Cost Accounting Amtrak Performance Tracking,* 2016[1,2] a description of strengths and perceived weaknesses of APT, revenue and cost methodology summaries, and concluding remarks.

1.1 What Is APT?

The Consolidated Appropriations Act, 2005 (Act)[3] directed the Secretary of Transportation "to retain a consultant … to develop … a methodology for determining the avoidable and fully allocated costs of each Amtrak route." The Federal Railroad Administration (FRA) met this requirement through an agreement with the John A. Volpe National Transportation Systems Center (Volpe Center) to closely collaborate with the National Railroad Passenger Corporation (Amtrak) in developing the cost accounting methodology required by the Act.[4]

The Volpe Center and Amtrak jointly developed the methodology for estimating fully allocated costs and FRA published an extensive description of this cost accounting methodology in a three-volume 2009 report to Congress.[5] As explained in that report, fully allocated costs are the total costs associated with operating an Amtrak route, including direct operating expenses, a portion of shared expenses, and a portion of corporate overhead expenses. Importantly, fully allocated costs are a retrospective look at the actual expenses incurred during a previous reporting period. Amtrak implemented this methodology in its APT system and began using it for reporting route financial performance in 2009. Amtrak's Route Systems and Assessment department is responsible for operating and maintaining APT.

After the 2005 Act and the development of its mandated cost accounting methodology, Section 203 of the Passenger Rail Investment and Improvement Act of 2008 (PRIIA) required Amtrak to "…implement a

[1] John A. Volpe National Transportation Systems Center (U.S.). 2016. "Update on the Methodology for Amtrak Cost Accounting Amtrak Performance Tracking (APT): Volume 1." https://rosap.ntl.bts.gov/view/dot/39858. (hereafter referred to as the "APT Methodology Update Report" or 2016 Report).
[2] John A. Volpe National Transportation Systems Center (U.S.). 2016. "Update on the Methodology for Amtrak Cost Accounting Amtrak Performance Tracking (APT): Volume 2, Appendices A-F." https://rosap.ntl.bts.gov/view/dot/12420.
[3] *Consolidated Appropriations Act, 2005.* 2004. Public Law 108-447 https://www.govinfo.gov/app/details/PLAW-108publ447.
[4] As part of the initial system development and original report to Congress, the Volpe Center developed a methodology to estimate the "Avoidable Costs" of each Amtrak route, with assistance from Amtrak staff. However, this methodology was not implemented. See Section 3.3 for a discussion of the avoidable cost methodology.
[5] Federal Railroad Administration. 2009. "Methodology for Determining the Avoidable and Fully Allocated Costs of Amtrak Routes, Volume 1: Main Report." DOT-VNTSC-FRA-09-05. https://rosap.ntl.bts.gov/view/dot/6273. (hereafter referred to as "APT Methodology Report, Vol. I" or 2009 Report to Congress).

modern financial accounting and reporting system."[6] To satisfy this requirement, Amtrak implemented SAP's[7] Enterprise Resource Planning software as its primary financial data system in 2012. Implementing SAP affected the organization and operation of APT. These changes and other organizational and business changes at Amtrak altered how the allocation methodology documented in the 2009 Report to Congress is implemented and currently operates at Amtrak and prompted subsequent updates to the APT documentation.

1.2 Development and Documentation History

The APT system described in this report is the culmination of efforts that began in 2005 by Amtrak, FRA, and the Volpe Center to develop an improved methodology and a process for calculating and reporting fully allocated costs and revenues for Amtrak routes and other businesses. As the system evolved, the Volpe Center published additional materials on APT beyond the initial 2009 Report to Congress, each discussed in turn below.

1.2.1 2009 Report to Congress

FRA, Amtrak, and the Volpe Center worked together on many levels to initially develop APT. FRA provided general oversight and a policy perspective of multiple stakeholders including Amtrak's Federal and State partners. Amtrak provided detailed knowledge of its passenger rail and other businesses necessary in such an effort, and it was responsible for the system design, programming, and implementation. The Volpe Center provided the congressionally mandated outside technical expertise in financial analysis, resource costing, and accounting needed for developing the allocation methodology, and it was responsible for documentation. The three entities worked collaboratively to decide which features and functionalities APT would include and how the system's cost methodology would be structured and configured. Because APT integrates with existing financial and reporting systems, it was essential that Amtrak assume primary responsibility for information system development and implementation. The Volpe Center and Amtrak jointly developed and achieved consensus on the initial allocation rules used to calculate the fully allocated costs of Amtrak routes and the need for additional studies or updates where the preferred rules were not immediately feasible or implementable.

APT went into production in Amtrak's Fiscal Year 2009 and operated in parallel for a year with Amtrak's legacy reporting Route Profitability System (RPS). In Fiscal Year 2010, Amtrak shut down RPS and APT became Amtrak's financial route reporting system of record. The initial version of APT was documented

[6] *Passenger Rail Investment and Improvement Act of 2008*. 2008. Public Law 110-432 https://www.govinfo.gov/app/details/PLAW-110publ432.

[7] SAP (Systems, Applications and Products in Data Processing) is the general reference for SAP AG, a German-based software corporation best known for its enterprise management and reporting software products. SAP's primary product is SAP ERP (Enterprise Resource Planning) and is used worldwide. When using the term "SAP," it can mean the corporation or the SAP ERP product, depending on context.

in a 2009 three-volume methodology report.[8] This report to Congress described the methodology as developed, satisfying the initial statutory requirement. The report included a detailed description of the allocation method used for each major Amtrak department (engineering, mechanical, etc.) and relevant subsets of those departments. The report also introduced new categorizations of those Amtrak departments, presented within as APT Families and Subfamilies. These new groupings of Amtrak's organizational units share common activities and expenses, and the APT Family structure facilitated the approach to allocate similar activities in a common manner.

1.2.2 2016 Report

In 2016, the Volpe Center revised the 2009 Report to Congress,[9] providing an update to the APT methodology as originally conceived and documented. The 2016 report described adjustments to the APT system since its launch, updated the cost allocation methodology description for each subfamily, and included a series of appendices on APT's cost centers and summary allocated data results. Most critically, the update provided information on the change to the primary input to APT, Amtrak's general ledger, which was replaced with SAP. The 2016 report described the changes to APT required by the shift to SAP including the reprogramming of APT to use alternate data sources, the realignment of APT's codes into the new framework, and a description of the cost allocation methodology in place and used by Amtrak to allocate Fiscal Year 2014 costs.

1.2.3 2017 Summary Report

In 2017, the Volpe Center produced a summary report to provide a plain language summary of the logic and use of APT.[10] The report did not contain the detailed allocation rules as in the 2009 or 2016 comprehensive methodology reports, but instead it provided a general description of the APT system, its purpose, and the conceptual logic behind the allocation methods. This plain language summary remains the best description of the conceptual methodology and is considered current.

1.2.4 Standalone Data Appendices

Following the publication of the 2016 report, the Volpe Center and FRA have published annual updates of that report's data appendices. For fiscal years 2017 through 2020, these have provided a snapshot of the APT structure in use by Amtrak as well as updated annual summary values of allocation results. Appendix A includes the list of active Amtrak business units (cost centers) assigned to each family and subfamily, and Appendix B contains a series of allocated cost tables showing costs by business units along with additional data. This report updates these appendices with Fiscal Year 2021 data.

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[8] Federal Railroad Administration. "APT Methodology Report, Vol. 1."
[9] John A. Volpe National Transportation Systems Center (U.S.). "APT Methodology Update Report."
[10] John A. Volpe National Transportation Systems Center (U.S.). 2017. "Amtrak Performance Tracking (APT) System: Methodology Summary." DOT-VNTSC-FRA-17-06. https://rosap.ntl.bts.gov/view/dot/32542. (hereafter "APT Summary" or 2017 APT Summary Report).

1.3 Purpose of this Report

The objectives of this report are twofold. First, the report updates prior descriptions of the APT methodology for determining the fully allocated costs and revenues of each Amtrak route. Second, it documents Amtrak's current application of that methodology and associated reporting results. APT's financial estimation and reporting continues to fulfill the original congressional mandates and provides additional features and value to both FRA and Amtrak. This report updates the documentation presented in the 2009 Report to Congress and 2016 report, including a description of changes to the implementation of the APT methodology.

This report provides an update to prior APT reports and appendices with relevant new material. This report will not restate the underlying methodology process. Clear and concise description of the underlying methodology process may be found in the 2017 APT Summary Report.[11] This report discusses the family structure as it existed on October 1, 2021 (the conclusion of Fiscal Year 2021). This includes the types of activities occurring within each subfamily, with descriptive measures such as common accounts in the subfamily and the service lines it supports, along with common allocation statistics used. This report also presents new data by family and subfamily including a five-year trend of costs by family and subfamily, share of subfamily dollars by allocation round, and the distribution of costs by Amtrak service line.

Also new in this report update is a section describing public and stakeholder perceived strengths and weaknesses of the APT system. The intent of this section is to provide a description of improvements over the prior system and areas of commonly noted criticism, as well as to provide an opportunity for Amtrak response and clarification.

This report does not purport to present materials for PRIIA Section 209 Cost Methodology Policy, but information is presented with as much clarity as possible so that it may serve as a reference for PRIIA 209 purposes, with the understanding that this report provides methodology as of October 1, 2021.

1.4 Structure of this Report

Volume 1 of the overall report, this document, contains background information, updates, and a narrative description of the broader APT methodology, including a family-by-family description of the current allocation with five-year trends. Volume 2 contains the annual updates for Appendices A and B, the Cost Center List by Family and the APT Data Tables, using Fiscal Year 2021 data. Volume 3 contains Appendices C and D, the Glossary and the Definitions of Allocation Statistics.

[11] John A. Volpe National Transportation Systems Center (U.S.). "APT Summary."

2. APT System Updates

This section discusses broad changes to APT or its input systems newly in place since the 2016 Report was published. This is not a discussion of changes to the allocation methodology (subfamilies, allocation rules, etc.) but changes and updates to the system itself that affect Amtrak's operation of APT or the users of APT data.

2.1 SAP-BPC 10

APT is a series of Structured Query Language (SQL) procedures that combine financial transactional data from SAP and train statistics data from Amtrak's operational databases to allocate costs to Amtrak trains and other businesses. After the procedure to perform the allocation begins, the results are reviewed and validated by Amtrak finance staff. The monthly validation process includes reconciling with the general ledger, reviewing any new accounts in the data, adding new allocation rules, and then re-running the allocation process. Upon reconciliation, the data are saved in a series of tables that are accessed by users through SAP Business Planning and Consolidation (SAP-BPC), a Microsoft Excel add-in. It is through SAP-BPC that final APT results are queried and analyzed, and it is, practically speaking, the source for all APT financial reports for Amtrak.[12]

In October 2017, Amtrak updated SAP-BPC from version 7.5 to SAP-BPC version 10. Amtrak had used version 7.5 since the deployment of APT, but the software version was no longer supported by SAP. Although the change was driven by the version's obsolescence, updating to SAP-BPC version 10 came with other benefits. BPC version 7.5 was not initially created by SAP but was acquired. Version 10 was developed and deployed by SAP and enjoys better integration with other SAP products used by Amtrak. Additionally, version 10 offers Amtrak a more stable and robust platform for its analytical needs with increased flexibility for reporting. Reporting improvements include the ability to query multiple APT databases in one report, the ability to use add formulas to reports for user calculations, and more formatting options to facilitate analysis.

2.2 Allocation by Work Breakdown Structure (WBS)

Prior to May 2021, allocation rules were defined and sorted by the cost center dimension in APT. For each expense record processed by APT, the allocation engine would first identify the cost center and search for the appropriate allocation rule at the cost center level depending on the other accounting code elements for the expense. APT uses four accounting codes in addition to cost center that describe the transaction: account, internal order, profit center, and Work Breakdown Structure (WBS) to define an allocation rule. The WBS code is used to define and capture project transactions and an individual

[12] See Section 3.3 of the 2016 Report for a full discussion of SAP-BPC and the APT allocation process.

WBS within the hierarchy is called a WBS element (or WBSE). In cases where a WBS element for a project might be associated with multiple cost centers, multiple allocation rules were created, potentially with different allocation statistics, statistic qualifiers, or train groups. This increased the total number of allocation rules and increased the potential for a project's expenses to be allocated inconsistently across cost centers.

In May 2021, Amtrak added functionality to the APT allocation rules that allowed the definition of a single allocation methodology for a WBS project regardless of the associated cost center. The new WBS rule functionality adds a step in the allocation engine where records from SAP are first run against a table of WBS rules prior to querying the main APT cost center-based allocation rules table. If a project expense has a WBS rule, it is allocated in a single and consistent manner regardless of its cost center to the trains and service lines indicated in the rule. The remaining expenses, not allocated by WBS, then proceed with the standard APT allocation process driven by cost center precedence. Although this new functionality may be applied to either operating and capital WBS projects, Amtrak primarily uses the new WBS rules for capital projects.

The new functionality reduced the number of primary cost center-based APT allocation rules from approximately 93 thousand rules in April 2021 to thirty-seven thousand rules in May 2021. A reduction of approximately 56 thousand rules was partially offset by the addition of 15 thousand new WBS rules, with a net saving of over 40 thousand allocation rules eliminated.

The new functionality produced multiple benefits to Amtrak. First, a single allocation rule for a WBS project's expenses results in a consistent allocation of that WBS regardless of the cost center, increasing accuracy and stability of allocation. The cost center-based allocation rule might have introduced alternate allocations for a single WBS, and this improvement reduces inconsistent allocation of a project. Second, the large reduction in the absolute number of allocation rules results in simpler maintenance of the rule set for Amtrak staff. Candidate WBS rules are investigated and included as part of Amtrak's new periodic APT allocation reviews.

2.3 New Train Earnings System

In Fiscal Year 2021, Amtrak began testing a new revenue accounting system to replace the legacy train earnings system Passenger Accounting System/Automated Lift Match System (PAS/ALMS), referred to generally as the "train earnings" system. PAS/ALMS was the Amtrak system where ticket data is entered and stored and is the source of passenger count by train and station, passenger miles, and revenue data. The train earnings system was an upstream data source to APT, which used the information generated to help define methods to allocate costs, revenues, and in support of required route reporting. [13]

[13] PAS/ALMS passes data through an intermediate system, the Ridership and Revenue Data Warehouse (RRDW), to APT. See Appendix D for the allocation stats derived from ridership and revenue data through RRDW to APT.

The new train earnings system, Sales Data Repository (SDR), deployed at the start of Fiscal Year 2022, allows Amtrak to assign passengers and revenue more precisely. Most notably, the new system improves the tracking of passenger journey origin and destinations resulting in a more accurate assignment of revenues to different portions of a route. Some Amtrak routes are segmented by geography, with the same train subdivided in the accounting system into different segments. In many cases, these segments are financially supported by States. In these State-supported service arrangements, a state, under a contractual agreement with Amtrak, provides financial support for a portion of the overall route, paying some costs in excess of revenues for a given route. The exact amount is defined by the 209 Cost Methodology Policy. Amtrak uses the term "Base-Increment" (B-I) for these cases where "base" refers to the Amtrak-supported portion of the route, and "increment" refers to the State-supported portion(s) of the route(s).

When a passenger takes a journey across several legs of a train, the legacy train earnings system assigned the full passenger ridership and revenue to only a single leg of a train, regardless of the share of the journey spent on either leg. For B/I routes that are partially supported by States, this required a manual adjustment by Amtrak staff to apportion ridership and revenue data to the appropriate leg for State billing. SDR will automatically apportion a passenger's journey to the appropriate leg, better reflecting the passenger's utilization of the route. The apportioned data will allow for easier allocation of costs and revenues by removing the manual ridership and revenue adjustments, thus simplifying State billing.

With the new system, Amtrak also will implement changes to the way it manages data on connecting motor coaches. Limitations in the legacy train earnings system make it difficult to link ridership and revenue data for individual buses to the routes to which they connect. The new system will allow for a more comprehensive assignment of individual buses to the proper routes. This increases the visibility of the financial impact of bus service on routes and improves APT allocation to a route's trains and connecting buses.

Finally, the SDR will alter the process for allocating deferred revenue. Deferred revenue is revenue from tickets purchased but not used. After a period of time when the ticket can no longer be used, the revenue is realized. Prior to SDR, after deferred revenue was realized, it was allocated nationally based on passenger revenue. SDR, however, will retain the route information of the original purchase. When the deferred revenue is realized, it will be credited to the route for which the ticket was purchased.

2.4 Changes to APT Allocation Statistics

Amtrak consistently reviews its allocation statistics to improve their calculation and to identify when alternate statistics may be needed. Since 2016, the following APT statistics have been created or modified:

- Generation of commuter Locomotive and Car Unit Miles (ST_UMX) statistic at a Stat Qualifier level.
- The Mechanical Direct Costs (ST_MDC_DBX) statistic was brought in line with the Ops Trans Direct Cost (ST_TDC_DBX) and Maintenance of Way Direct Costs (ST_MWDC_DBX) statistic in how it handles capital transfers.
- A new Police Direct Cost (ST_PDC_DBX) statistic was created to handle police overheads, in a similar manner to how ST_MDC_DBX, ST_TDC_DBX, and ST_MWDC_DBX operate.
- Statistics related to labor hours[14] and the Gallons (ST_GALX) statistic are now created as part of the budgeting process.
- Recoding of Locomotive and Car Unit Trips (ST_UTX) statistic at a station pair level to reflect the actual whole trip as it relates to B/I trains.

See Appendix D for an updated statistics glossary with a full description of each.

2.5 COVID-19 Accounting Challenges

As the COVID-19 public health crisis deepened in March and April 2020, several Amtrak routes fully suspended service. The unprecedented reduction in service resulted in several routes having zero allocation statistics for the entire month of April 2020. With zero statistics available for the allocation engine's processing, the APT allocation process produced numerous errors when asked essentially to "divide by zero," requiring Amtrak to modify its typical monthly closing approach to allocate all April 2020 costs. This process delayed April 2020 reporting. Amtrak presented preliminary April 2020 results in May of 2020 and then produced revised April 2020 results in June of 2020.

The missing statistics affected routes differently depending on the degree to which each route was isolated from other routes on the network. In cases where a suspended route typically shared a cost with other routes, the cost was allocated relative to the statistical share of the remaining, active routes without having to adjust the allocation rules. In these cases, the APT rules worked as intended by allocating costs to the active services with valid statistics. In cases where there was no active route to assign costs to, Amtrak adjusted the allocation rules, and it directly assigned an identified cost to the appropriate route. To accomplish this, Amtrak used the Straight-Line Allocation (1) (ST_NONX) statistic, a statistic that allocates all costs to a single identified route rather than apportions costs among routes. This statistic is used when the cost is directly attributable to a route but not coded in SAP as directly assigned. Where fully isolated, a route's remaining costs were assigned exclusively to that route, resulting in no shift in the distribution of costs. Where suspended routes overlapped, Amtrak needed to determine the share to assign for each.

The pandemic was an unprecedented event and revealed that APT works best under stable conditions. APT is an allocation system dependent on actual costs and activity and the full suspension of service was

[14] For example, Total OBS Labor Hours (ST_OLHX).

unanticipated. The sudden change in service levels required Amtrak to intervene to ensure costs were appropriately assigned. If such a full suspension of service were to be repeated in a future month, Amtrak's experience from the COVID-19 pandemic would allow costs to be allocated after relevant rules are adjusted to process the exceptions.

2.6 Modified Presentation of Amtrak's Service Lines

Amtrak as an entity performs a variety of work types for different customers and the organization of the business has changed over time. Related business activities within a common sector of the passenger rail business are called "service lines." As defined by FRA, a service line, "represents a set of Amtrak business activities that typically share a common mission, core customers, and/or management structure."[15] Amtrak's current organization of service lines include the three train services (Northeast Corridor (NEC), State Supported (SS), & Long Distance (LD), together commonly referred to the as the National Train Service (NTS)), Infrastructure Access, and Ancillary Services (Commuter Operations, Reimbursable, and Commercial). Costs and revenues are allocated from different functional areas at Amtrak (the cost center family structure described in Section 5) to trains, routes, and other businesses grouped into these service lines.

Previous versions of APT documentation presented a prior, alternate view of the service lines. Those presentations used different terminology, referring to "business lines," or "business types," and aggregated different services together under alternate names. This report modifies the previous presentation slightly and reflects the separate business areas that make up the Amtrak enterprise as of Fiscal Year 2021:

- **National Train Service (NTS):** Amtrak's primary business of providing intercity passenger train service, consisting of the Northeast Corridor (NEC), State Supported (SS), and Long Distance (LD) service lines.
- **Infrastructure Access:** Provision of access to Amtrak-owned facilities, including track, other facilities, and infrastructure services such as yard moves to independently operated railroads. This includes access to both the NEC, owned and operated by Amtrak as well as other Amtrak-owned assets nationwide.
- **Commuter Operations (CMR):** An Ancillary Service, Commuter Operations reflects the provision of commuter rail service by Amtrak on behalf of outside commuter railroad agencies.
- **Reimbursable (REB):** An Ancillary Service, Reimbursable captures maintenance of non-Amtrak owned infrastructure and equipment performed by Amtrak for outside enterprises, mostly commuter railroads and States on a reimbursable cost basis.

[15] Federal Railroad Administration. 2016. "Account Structure Definition and Accounting Methodology Improvements to Address Section 11201 of the FAST Act of 2015." https://railroads.dot.gov/elibrary/account-structure-definition-and-accounting-methodology-improvements-address-section-11201.

- **Commercial (COM):** An Ancillary Service, Commercial reflects Amtrak's management of property and assets for purposes other than for the direct provision of intercity passenger train service (e.g., retail space, parking garages, air rights, etc.).
- **Other – Unallocated:** Not a service line as above, Amtrak groups certain transactions from SAP here that are not allocated to the NTS trains or other service lines. The expenses are mainly depreciation, interest, Amtrak's OIG, and expenses not associated with the current operation such as inactive assets maintained per lease requirements.

The tables, charts, and appendices in this report reflect total revenues and costs allocated to the above areas regardless of the source of funds. The account structure of Amtrak's national accounting required by the FAST Act Section 11201, Amtrak Account Structure,[16] presents a slightly different view of the service lines including the alignment of service lines, or portions thereof, with either a NEC or National Network accounts.

2.7 Periodic APT Review

In 2019, Amtrak formalized a process to review the APT allocation methodology quarterly and at the end of each fiscal year. As part of the process, Amtrak staff review the Amtrak cost center families to investigate allocations and expenses within each cost group, simplify and streamline the rules, identify areas of improvement, and increase outreach and feedback among key users. Amtrak also conducts monthly maintenance including a review of new expenses and adjustments to allocation rules as necessary.

At the end of each fiscal quarter, all cost center families undergo a review in response to any changes made during that quarter's monthly closings and adjustments. The quarterly reviews also include proactive adjustments made in response to changes in the business. The reviews attempt to reduce and streamline the allocation rules and group like cost centers and expenses. Where changes are proposed to either the allocation rule or an assignment of a cost center, the review process identifies the impact to the service lines (including an explicit look at impact on State-supported service lines jointly managed with States as part of the PRIIA 209 process). The review includes any cost center movements within or between families, statistic changes, miscoding adjustments, or other enhancements. Additionally, as part of year-end closing activities, an annual review takes a more exhaustive look at allocation data to ensure mid-year changes were appropriately handled and all corporate reorganizations are captured.

The results of the review are documented and shared with both internal and external stakeholders with supporting data and written justification. Changes resulting from a review are approved by a committee consisting of members from Amtrak Finance, Accounting, and the Service Line Leads.

[16] *Fixing America's Surface Transportation Act.* 2015. Public Law 114-94 https://www.govinfo.gov/app/details/PLAW-114publ94.

The review process ensures each cost center family and major Amtrak department is periodically reviewed to improve allocation quality and consistency. Changes typically include adjustments to a cost center's family assignment, identification of project costs that may benefit from WBS-driven allocation rules, and adjustment of allocation statistics. Where a WBS is identified for a general allocation, it is added to the WBS ruleset as discussed above and its cost center-based allocation rules are eliminated.

3. Perceived Strengths and Weaknesses of APT

This section will describe the strengths and perceived weaknesses of APT, covering known issues and criticism of APT. The section leads with the strengths, including improvements over the prior system, followed by subsections on perceived weaknesses.

3.1 Strengths of APT

Amtrak is a large, complex organization that provides passenger rail, host railroad, construction, and related services to a wide variety of business partners. APT provides a means for Amtrak to assess and evaluate the financial performance of its service lines and to report that performance to meet Congressional requirements. APT is a single collection point for route financial and operational statistics such as ridership, train frequencies, and train miles. Through this, APT allocates common overheads to all its service lines, an improvement over its predecessor, RPS, which allocated to Amtrak's trains only, overburdening them with indirect costs. The total fully allocated cost results for all APT routes reconcile back to the general ledger data as well as Amtrak's audited financial statements.

The allocation methodology in APT endeavors to match revenues and expenses with the service lines that derive benefit. The methodology has been documented by subfamily, describing the nature of expenses as well as the service lines that share in the cost. In recent years, the methodology description has been supplemented annually with published data. These updates show the allocated APT fiscal year results documenting shifts in the family structure and common allocation information such as allocation statistics. Currently, 50 percent of expenses and over 95 percent of revenues require no allocations as they are solely associated with a single service.

Another improvement of APT over RPS is the introduction of statistical qualifiers or "Stat Qualifiers," which allow for specific local allocations. These qualifiers establish criteria to determine whether a train should receive a share of the cost being allocated. This is particularly useful in the allocation of expenses that are not directly coded or assigned to trains. This allows for a dynamically defined list of trains on which the costs should be allocated, based on the qualifying statistics, and avoids the need to manually change allocation rules.[17]

The 2013 OIG Audit report noted several improvements in APT over RPS. These included "system transparency and reporting timeliness," including the development of "a formal process to evaluate and

[17] Federal Railroad Administration, "APT Methodology Report, Vol. 1," 38.

document system changes."[18] In addition, Amtrak is able to produce monthly performance reports much more quickly using APT.[19]

3.2 Allocating Capital Costs

One criticism of APT is the treatment of some capital expenses, namely depreciation and interest, and whether they should be allocated to the service lines as a component of fully allocated costs.

3.2.1 Allocation of Depreciation

In January 2016, the Government Accountability Office (GAO) published a report to congressional requesters,[20] finding that Amtrak's reporting was incomplete in part because it "does not allocate its depreciation costs by line of business."[21] The GAO reinforced its earlier view from a published 2005 report,[22] stating that by continuing to not allocate depreciation "Amtrak will continue to be at risk of misstating financial information used for decision making, which could result in misallocation of internal and Federal resources."[23] An article in *Trains* magazine criticizes Amtrak's treatment of depreciation[24] by restating the GAO's assertion that costs should be allocated to lines of business.[25] A 2018 document prepared by the Rail Passengers Association (RPA) provides further criticism of Amtrak's route reporting system.[26] With regard to depreciation specifically, the critique states that the lack of depreciation calculations on maintenance of way "significantly understates the cost of operating the NEC."[27] Since depreciation and interest are operating costs, the full allocation of costs would include these measures.

However, using this information to inform business practices is a business decision unrelated to APT itself. Amtrak follows "Generally Accepted Accounting Principles" (GAAP) in the computation of depreciation and includes it on its income statements. Amtrak's calculated depreciation expenses are

[18] U.S. Department of Transportation Office of Inspector General. 2013. "Amtrak's New Cost Accounting System Is a Significant Improvement but Concerns Over Precision and Long Term Viability Remain." https://www.oig.dot.gov/sites/default/files/Amtrak%27s%20New%20Cost%20Accounting%20System%20Report%5E3-27-13.pdf. 3.
[19] U.S. Department of Transportation Office of Inspector General. "Amtrak's New Cost Accounting System." 4.
[20] United States Government Accountability Office. 2016. "AMTRAK: Better Reporting, Planning, and Improved Financial Information Could Enhance Decision Making." Washington, D.C. https://www.gao.gov/assets/680/674520.pdf.
[21] United States Government Accountability Office. "AMTRAK: Better Reporting." 26.
[22] United States Government Accountability Office. 2005. "AMTRAK MANAGEMENT: Systemic Problems Require Actions to Improve Efficiency, Effectiveness, and Accountability." Washington, D.C. https://www.gao.gov/assets/160/157607.pdf. 66.
[23] United States Government Accountability Office. "AMTRAK: Better Reporting." 27.
[24] Johnson, Bob. 2019. Amtrak's Money Mystery. Accessed 2022. https://www.trains.com/trn/news-reviews/news-wire/amtraks-money-mystery/.
[25] Johnson. "Amtrak's Money Mystery."
[26] The Rail Passengers Association. 2018. "Amtrak's Route Accounting: Fatally Flawed, Misleading & Wrong." https://www.railpassengers.org/site/assets/files/7353/amtraks_route_accounting_-_fatally_flawed.pdf. 2.
[27] The Rail Passengers Association. "Amtrak's Route Accounting: Fatally Flawed." 10.

entered into the SAP general ledger as a single record for the entire company's depreciation. This one entry does not contain information about specific assets that would allow APT to identify which service lines utilize those assets and to which routes the operating expenses might be allocated. As the single entry has no identifiable characteristics, it is captured in the APT G&A Family but is not allocated to individual services. Amtrak's upstream systems for calculating depreciation would need to modify their output to SAP with additional information before APT might allocate the expense to routes.

3.2.2 Asset Usage Allocation (AUA) Transparency

There have been several criticisms regarding the transparency of the Asset Usage Allocation (AUA) charge. The GAO noted that "while Amtrak may be capturing depreciation or economic costs through its synthetic capital charge (which serves as a proxy for depreciation and which Amtrak does not publicly report)," the recommendation to allocate depreciation by lines of business is still of value. [28]

The RPA also criticizes transparency of reporting and interpretability of information regarding the synthetic capital charge (AUA), as "(t)he Asset Usage Allocation … does not appear in Amtrak's route accounting reports." [29] The critique also suggests that Amtrak should provide a document that reconciles the AUA charge with the depreciation reported on Amtrak's financial statements. The *Trains* article is also critical of Amtrak's synthetic capital charge, stating that it is not a "real" expense. [30]

The purpose of AUA was to develop a synthetic measure of interest and depreciation that could be allocated to trains using APT, but it is not intended to replace depreciation in audited financial reports. AUA offered a measure of capital usage by each route while avoiding some of the complications of allocating Amtrak's unique assets (conveyed assets, fully depreciated assets, State contributions, etc.). However, interest and depreciation charges captured on Amtrak's SAP general ledger and the AUA are not directly reconcilable with one another. AUA is a synthetic approximation of interest and depreciation to represent their economic value but does not tie back those underlying financial transactions. Finally, the AUA charge is not reported externally by Amtrak, and it is unclear to what extent, if any, Amtrak utilizes the measure for internal purposes.

3.3 Avoidable Cost Methodology

In the RPA's evaluation of APT, it notes that Amtrak does not report avoidable costs as required by statute. [31] The original mandate for APT, Consolidated Appropriations Act, 2005, described a system for the "*avoidable* and fully allocated costs of each Amtrak route [emphasis added]." The initial

[28] United States Government Accountability Office. "AMTRAK: Better Reporting." 56.
[29] The Rail Passengers Association. "Amtrak's Route Accounting: Fatally Flawed." 19.
[30] Johnson. "Amtrak's Money Mystery."
[31] The Rail Passengers Association. "Amtrak's Route Accounting: Fatally Flawed." 4.

methodology developed in 2009 included an avoidable cost module.[32] However, Amtrak did not implement or publish the results. Subsequently, in a 2013 audit, the DOT Office of Inspector General (OIG) reviewed and found limitations to the proposed avoidable cost methodology,[33] which resulted in a concern about the reliability of avoidable cost estimates produced. As a result, the initial avoidable cost methodology is not implemented in APT. Additionally, RPA states that while the mandate to report avoidable cost has not been rescinded, there have not been follow-on efforts to estimate avoidable costs.[34]

PRIIA Section 207 ("Metrics and Standards") requires a metric of the percentage of avoidable and fully allocated operating costs covered by each route and a recent FRA rulemaking described the composition of this metric.[35] In the rule, avoidable operating costs are defined as "the sum of frequency and route variable costs," both Amtrak measures of route costs derived from APT data that attempt to categorize Amtrak route costs and their variability with changes in service. For a full description of the measures that comprise avoidable costs in the rule, see the rulemaking on Metrics and Standards from November 2020.

3.4 Data Quality

A common criticism of APT is the occurrence of data quality issues, either resulting from inconsistencies due to the use of allocation proxies or due to data entry errors.

3.4.1 Allocation Proxies

The RPA report offers criticism on how allocation rules in APT are applied using proxies when data is not available. For example, the RPA states that with respect to the allocation of station costs

> … at some of Amtrak's largest (and most expensive) stations, APT cannot use even this statistic because commuter agencies do not report it. Instead, APT uses passenger car unit trips (in plain language, number of coaches).[36]

The RPA report states that the proxy used in the allocation process would favor (commuter) trains with larger coach capacity.

It is true that APT uses proxies where allocation statistics are not available. For instance, while gross ton miles may be an ideal allocation statistic for track maintenance costs, it is not available for all service lines from the Train Unit Statistics (TUS) database including freight or commuter railroads. Not all

[32] Federal Railroad Administration. "APT Methodology Report, Vol. 1."
[33] U.S. Department of Transportation Office of Inspector General. "Amtrak's New Cost Accounting System." 4.
[34] The Rail Passengers Association. "Amtrak's Route Accounting: Fatally Flawed." 4.
[35] *Metrics and Minimum Standards for Intercity Passenger Rail Service*. 2020. 85 FR 72971, 49 CFR 273 (November 16).
[36] The Rail Passengers Association. "Amtrak's Route Accounting: Fatally Flawed." 5.

railroad operators provide statistics, so proxies are used when needed. An example of this is that commuter passenger boards and deboards information at each station is not available to Amtrak as a data feed for train statistics. In this case, the proxy of passenger coaches is used rather than Total Boards and Deboards (ST_TBDX). Amtrak endeavors to use allocation statistics most representative of the costs to be allocated and proxies are only used when the desired allocation statistic is not available.

3.4.2 Allocation and Data Quality

APT is reliant on the provision of accurate data from its input systems and its results must include allocations of all posted transactions. For example, SAIPRC investigations into route cost categories have shown what appear to be data quality issues, with many very small charges, with seemingly unrelated accounting codes. While these may be immaterial at the aggregate level (about 1.5 percent of route costs), the noise in the data may decrease the overall confidence in APT for outside stakeholders.[37] The SAIPRC Route Cost Summary Report notes that Amtrak cites two possible reasons for these charges "unique/unusual expenses, or data entry errors."[38] The RPA also criticizes the allocation of inaccurate financial transactions by APT.[39]

APT is reliant on input from multiple systems, including but not limited to SAP, TUS, and the Operations Management Systems (OMS), and any limitations of upstream systems affect APT results. Additionally, APT must allocate all expenses entered into the ledger, regardless of whether they are accurate. Critically, APT must allocate all financial transactions from SAP entered into the system and balance with each month's ledger. In some instances, expenses that seem out of place in a family, such as mechanical materials costs in an Operations subfamily, do occur. However, the statement by RPA that the charge is a result of a "flaw" of APT[40] is inaccurate. Any inaccurate coding of financial transactions into SAP must be allocated by APT, regardless of accuracy. APT itself does not create charges, and incorrect entry of data into an upstream system can generate an implausible allocation. It should be noted that this would be a potential issue in any allocation system, including the previous RPS system.

Improving the quality of data feeding APT from upstream systems, including both the procedures for entering valid data into those systems and the modernization of the systems themselves, would improve the quality of APT results. In practice, Amtrak has procedures to identify correct upstream issues before they reach APT through multiple channels. Amtrak's APT group works with Amtrak's general ledger accountants to identify and implement validation rules for data entry into SAP. Such validation steps identify and restrict the use of certain cost elements only to applicable departments, preventing the potential miscoding of data that enters APT, to preclude incorrect or counterintuitive allocations. In addition, Amtrak continues to develop process improvements to the assignment of WBS Qualifiers,

[37] State-Amtrak Intercity Passenger Rail Committee. 2019. "SAIPRC Task 1 Route Cost Category Descriptions Summary Report." 23.
[38] State-Amtrak Intercity Passenger Rail Committee. "SAIPRC Task 1." 23.
[39] The Rail Passengers Association. "Amtrak's Route Accounting: Fatally Flawed." 7
[40] The Rail Passengers Association. "Amtrak's Route Accounting: Fatally Flawed." 7.

aiming to establish consistency into the construction and organization of WBS projects and associated costs.

3.5 Allocation Transparency for State Partners

The lack of transparency of the APT allocation methods has concerned stakeholders, particularly in the context of APT as the source of Section 209 invoices. In some instances, the complexity of the system inhibits stakeholders from determining the source of higher-than-expected costs and other queries.[41] When the methodology is combined with a perceived resistance by Amtrak to "data sharing and collaboration,"[42, 43] some stakeholders experience a difficulty in interpreting allocation of costs. This may be attributable to a lack of "narrative/description that interprets the comprehensive cost information."[44] One example of transparency and complexity resulting in unexpected costs is allocated charges to States for police costs where no police are stationed, due to the calculation process for police support fees.[45,46] At times, some costs are allocated in a manner perceived by some stakeholders as counterintuitive (e.g., the reduction of the Long Distance services causing an *increase* in Section 209 route costs).[47] Lack of transparent communication on adjustments to the allocation methodology that impact the state-supported services has resulted in inquiries and adjustments to State bills. The Amtrak Office of Inspector General also found that in one case, reclassification of certain mechanical cost centers caused unintended downstream effects in the calculation of shared costs, resulting in overcharging of some State partners.[48] Issues related to transparency and accuracy of cost sharing may result in a lack of trust, as documented in the Amtrak Office of Inspector General report.[49]

It should be noted that the net costs from the Section 209 policy are a subset of costs as negotiated by the States and Amtrak, including route costs closely associated with the operation of a route, third-party costs charged to State routes, and support fees that cover regional or national shared costs in

[41] 2020. "Correspondence between San Joaquin Regional Rail Commission and U.S. House members." November 30.
[42] Mortenson, Stacey. 2020. "OP-ED: Transparent and Responsive Cost Sharing Is the Key Ingredient for Intercity Passenger Rail." Mass Transit, October 29. https://www.masstransitmag.com/rail/blog/21160449/oped-transparent-and-responsive-cost-sharing-is-the-key-ingredient-for-intercity-passenger-rail.
[43] San Joaquin Joint Powers Authority. 2019. "Testimony of Stacey Mortensen, Executive Director For San Joaquin Joint Powers Authority, U.S. House Transportation & Infrastructure Committee, Subcommittee on Railroads, Pipelines and Hazardous Materials: On Amtrak Now and Into The Future." November 13. https://transportation.house.gov/imo/media/doc/Mortensen%20Testimony.pdf.
[44] AECOM. 2018. "Memo: Existing PRIIA Section 209 Cost Documentation." May 3.
[45] United States Government Accountability Office. "AMTRAK: Better Reporting." 45.
[46] Amtrak Office of Inspector General. 2022. "Amtrak Has Begun to Address State Partners' Concerns About Shared Costs But Has More Work to Do to Improve Relationships." https://amtrakoig.gov/audit-documents/audit-reports/governance-amtrak-has-begun-address-state-partners-concerns-about. 22.
[47] 2020. "Correspondence between San Joaquin Regional Rail Commission and U.S. House members." November 30.
[48] Amtrak Office of Inspector General. "Amtrak Has Begun to Address State Partners' Concerns." 33.
[49] Amtrak Office of Inspector General. "Amtrak Has Begun to Address State Partners' Concerns." 38.

proportion to the service. However, APT allocation methods were designed for fully allocated costing to meet congressional requirements and some shared costs not closely related to a State route are excluded from the Section 209 costs paid by States. Criticisms in this section are stated with respect to transparency in the context of Section 209, and it should be noted that the use of APT to determine Section 209 costs is an extension of its core mandate.

Amtrak and the individual States coordinate on improved transparency in costing and allocation through their service managers and collectively through participation in SAIPRC and its working groups related to costing. Utilizing a data-sharing agreement between Amtrak and SAIPRC, State partners have access to detailed APT cost data to validate their bills and investigate discrepancies. Additionally, FRA publishes data appendices annually that summarize cost allocations for the fiscal year and this report will update prior documentation. The Amtrak Office of Inspector General recommended in a 2022 report that Amtrak should work with SAIPRC to ensure that, with respect to the cost-sharing methodology, "its independent third party periodically reviews and validates that the systems the company uses to implement it, do so accurately and in accordance with the methodology, particularly the APT allocations and the PnL tool."[50]

[50] Amtrak Office of Inspector General. "Amtrak Has Begun to Address State Partners' Concerns." 43.

4. Revenue Methodology Summary

To see the complete financial result of an Amtrak route or other service line, revenues are balanced with costs to determine the net surplus or loss. APT uses the Revenue Family to attribute revenues to routes, both through direct assignment and allocation. The APT Revenue family is an extension of the family structure used for costs and follows its patterns of terminology and usage. Specifically, the Revenue Family (FM_Revenue) has two subfamilies, each detailed below: National Train Service (FM_001) and Contract Revenue (FM_002). In Fiscal Year 2021, total reported revenue was $1,942.0 million with $934.0 million attributed to the National Train Service Family and $1,008.0 million attributed to the Contract Revenue Family. Revenue totals reported by each subfamily over the past five years are shown below.[51]

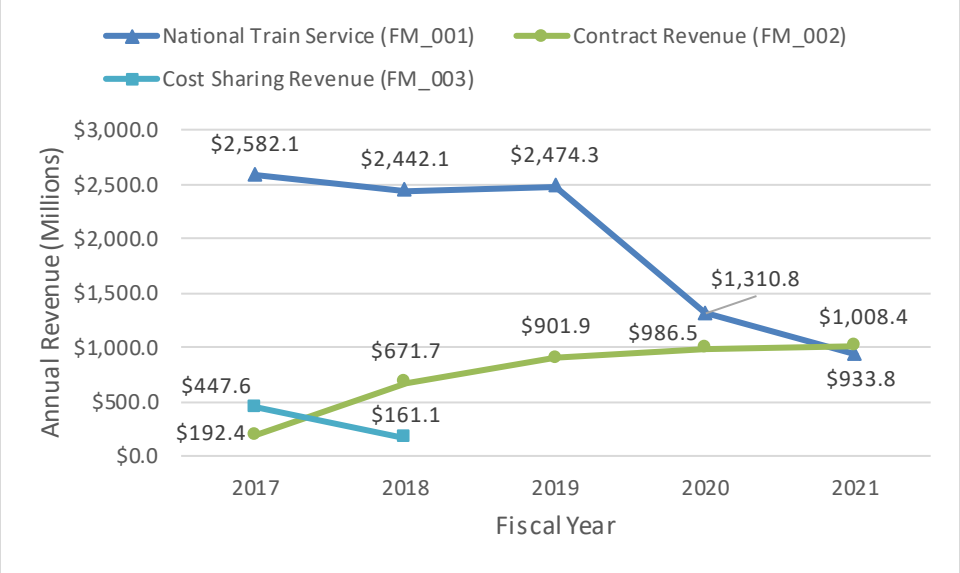

Figure 4-1. Revenue by Subfamily, Fiscal Years 2017-2021 (Millions)

As APT is cost center focused, the Revenue Family currently consists of seven virtual "cost" centers, even though no costs are incurred, and they are unstaffed. These Revenue Family cost centers serve as a "landing spot" for revenue data in a manner consistent with expense transactions assigned to relevant cost centers in the APT families discussed in Section 5.[52]

[51] Note: The Cost Sharing Revenue subfamily (FM_003) last reported revenues in Fiscal Year 2018. Since then, Amtrak has fully consolidated revenues into two subfamilies. As a result, the Cost Sharing Revenue subfamily is not discussed in this update.

[52] The virtual "cost" centers are used to track and store revenue data and are accounting concepts only. This differs from many activity-based cost centers that track expenses which are often associated with physical facilities with staff that perform activities. Activity-based cost centers make-up the vast majority of cost families described in Section 5 of this document, however the overhead cost centers for benefits and related transfer costs are similarly virtual.

While cost subfamilies are defined by the activities they perform, grouping similar cost centers with each other, the Revenue Family doesn't perform any work and is defined differently. The source of revenue and the accounts associated with each are the primary characteristics that differentiate revenues and links them to a specific subfamily. In APT, all revenue accounts are assigned exclusively to one subfamily and any revenue with that account is posted with its appropriate revenue cost center. Additionally, in some cases a credit or transfer is applied to an account resulting in a negative value. When summed, all accounts total 100 percent but individual positive account totals may sum to more than 100 percent before the negative totals are netted out. The most significant positive and negative accounts within each revenue cost center are presented within the subsections below. Revenue accounts within the SAP account dimension are differentiated from expense accounts by the first digit. Revenue account codes start with the digit "4."

While accounts determine what subfamily the revenue item is assigned to, other characteristics determine the method of attributing revenue to trains. While approximately 96 percent of all revenues are directly assigned to trains, some revenues are allocated. When attributing revenues to trains and other ancillary businesses, the WBSE and profit center codes on the revenue transaction record are the primary means of determining the applicable allocation rule. The account identifies the type of revenue, the profit center identifies the Amtrak route or service line, and the WBSE on the transaction identifies the specific group of trains or customers to which the revenue is attributed.

The following subsections describe the general purpose of the two revenue subfamilies, identify the respective size and share of Amtrak's total revenue, analyze the component revenue accounts, and describe the attribution approach. The resulting revenues are also presented by each Amtrak service line, showing the distribution of revenues. Section 2.6 describes each service line.

4.1 National Train Service Subfamily

Family: **FM_Revenue**
Subfamily: **National Train Service (FM_001)**

The National Train Service subfamily consists of three revenue cost centers:[53] National Train Service – Passenger Revenue (CC_REV_001_1), National Train Service – Other Revenue (CC_REV_001_3), and Food & Beverage Revenue (CC_REV_001_4).[54] This subfamily tracks the revenues related to Amtrak's

[53] The style of Revenue Family cost center codes is inconsistent with the cost side of APT. For costs, the lowest level member in the Cost Center Hierarchy has a two-digit prefix "CC" followed by an underscore and a four-digit numeric code, "1234." In the Revenue Family, the lowest level member in the Cost Center Hierarchy is equivalent to and used in the same manner as cost family subcategories. However, for discussion in the Revenue Family the base level member will be referred to as a "cost center" for simplicity.
[54] Note: The National Train Service – State Revenue cost center (CC_REV_001_2) last reported revenues in Fiscal Year 2018. Since then, Amtrak has consolidated revenue from States into the State Train Payments cost center

core business of operating the NTS.

Subfamily revenues for Fiscal Year 2021 were $934.0 million and account for 48.1 percent of Amtrak's total revenue. This figure is a decrease from Fiscal Year 2019 in the aftermath of the COVID-19 global pandemic, as shown in Figure 4-2 and Figure 4-3. NTS-Passenger Revenue makes up most revenues for the subfamily and that relative scale is shown in Figure 4-2.

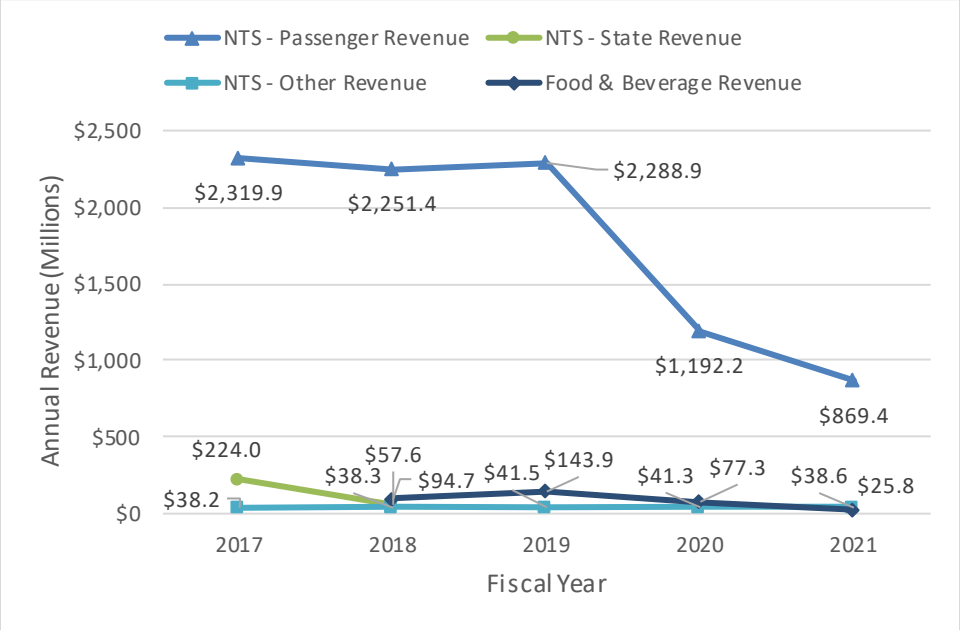

Figure 4-2. National Train Service Revenue, Fiscal Years 2017-2021 (Millions)

To better show the relative changes of NTS-State Revenue, NTS-Other Revenue, and Food & Beverage Revenue, they are shown again in Figure 4-3 without the NTS-Passenger Revenue.

(CC_REV_002_1), which is described below. As a result, the National Train Service – State Revenue cost center is not discussed in this update. The Food & Beverage Revenue cost center (CC_REV_001_4) was formed in Fiscal Year 2018 as part of the re-organization and first began reporting revenue in that year.

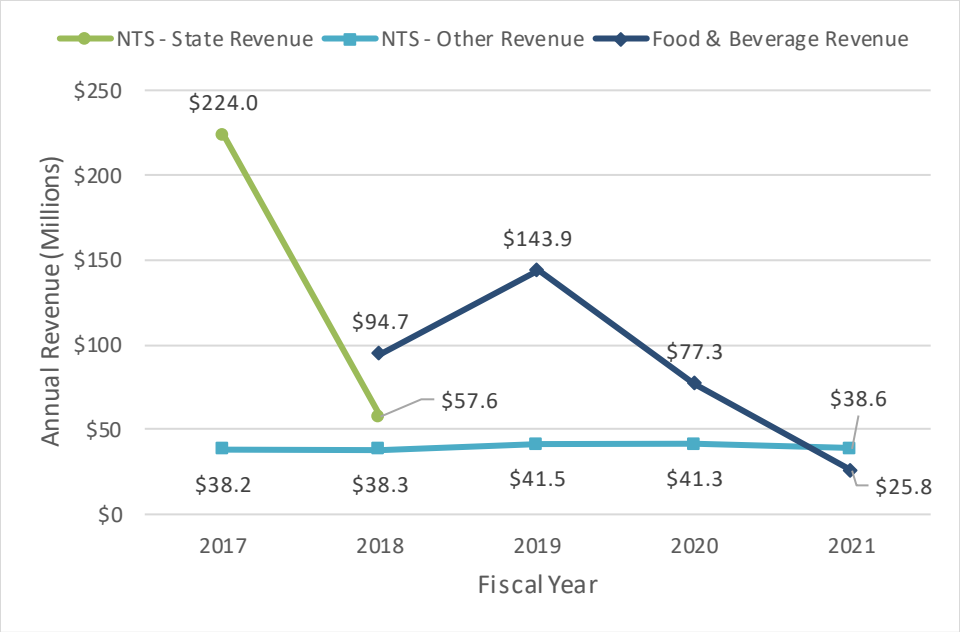

Figure 4-3. Subset of National Train Service Revenue, Fiscal Years 2017-2021 (Millions)

4.1.1 National Train Service – Passenger Revenue (CC_REV_001_1)

The Passenger Revenue cost center accounts for roughly 93.1 percent of the National Train Service subfamily. The revenues within this cost center comprise passenger ticket revenue and other revenues generated from passenger expenditures, such as for sleeper car spaces or for car and bicycle transport.

Table 4-1: Top Accounts Ranked by Allocations (Fiscal Year 2021) for National Train Service – Passenger Revenue (CC_REV_001_1)

Account	Code Number	Revenues (Millions)	Dominant Statistics	Percent of Cost Center Revenues
PASSENGER TICKET REVENUE	AC_400102	$471.8	ST_NO_STX, ST_PRVX	54.3%
BUSINESS CLASS TRANS.	AC_400113	$131.7	ST_NO_STX	15.1%
SLEEPING CAR	AC_400104	$112.2	ST_NO_STX	12.9%
SLEEPER CLASS TRANS.	AC_400114	$59.6	ST_NO_STX	6.9%
AUTOMOBILE AND BICYCLE REVENUES	AC_400106	$30.1	ST_NO_STX	3.5%
CLUB AND CUSTOM CLASS REVENUE	AC_400105	$19.9	ST_NO_STX	2.3%

The majority of the revenue within this cost center comes from AC_400102, which shows passenger ticket revenue as reported by the train earnings system. While passenger ticket revenue accounts for approximately half of all revenue within the NTS - Passenger Revenue cost center, most of the remaining revenue comes from five other accounts. These accounts primarily consist of specialized tickets such as

for business class seats, sleeper class seats, or club or custom class seats.

Table 4-2: Distribution of Operating Revenues by Allocation Round (Fiscal Year 2021) for National Train Service – Passenger Revenue (CC_REV_001_1)

Allocation Round	Percent of Revenues Allocated in Allocation Round
Direct Assignment	98.4%
First Round	1.5%
Second Round	0.0%

As shown above, revenues within this cost center are almost entirely directly assigned. Passenger ticket revenue is associated with specific trains within a route and the SAP revenue data includes the train number, which APT incorporates as directly assigned to a route.

Table 4-3: Statistics Used for Revenue Attribution (Fiscal Year 2021) for National Train Service – Passenger Revenue (CC_REV_001_1)

Statistic	Code	Revenues (Millions)	Percent of Cost Center Revenues
No Statistic (Direct Charges)	ST_NO_STX	$883.1	101.6%
Coach Class Revenue	ST_CRVX	$8.0	0.9%
Passenger Related Transportation Revenue	ST_PRVX	-$18.8	-2.2%

As most charges are direct, statistics play a relatively small role in the allocation of dollars within this cost center. Most revenue is directly assigned without a statistic, however, small transfers both in and out of the NTS – Passenger Revenue subfamily are captured using the Coach Class Revenue and Passenger Related Transportation Revenue statistics.

Table 4-4 shows the distribution of revenues by NTS service line, with the NEC the largest at 39.0 percent, followed by Long Distance at 37.1 percent and State Supported with 23.9 percent. While the vast majority occurs within the NTS, an immaterial amount of revenue is attributed to, and transferred from, several other service lines.

Table 4-4. Service Lines Used for Revenue Attribution (Fiscal Year 2021) for National Train Service – Passenger Revenue (CC_REV_001_1)

Service Line	Revenues (Millions)	Percent of Cost Center Revenues
NTS-NEC	$339.2	39.0%
NTS-LD	$322.4	37.1%
NTS-SS	$207.9	23.9%

Service Line	Revenues (Millions)	Percent of Cost Center Revenues
All Other Service Lines	-$0.002	0.0%

4.1.2 National Train Service – Other Revenue (CC_REV_001_3)

The Other Revenue cost center, accounting for 4.1 percent of the National Train Service subfamily, handles all other miscellaneous revenue associated with the NTS. The revenues within this cost center are comprised of assorted miscellaneous activities including insurance premiums, branding commissions and tips provided through the Amtrak website.

Table 4-5. Top Accounts Ranked by Allocations (Fiscal Year 2021) for National Train Service – Other Revenue (CC_REV_001_3)

Account	Code Number	Revenues (Millions)	Dominant Statistics	Percent of Cost Center Revenues
PRIL INSURANCE DIRECT PREMIUMS WRITTEN 3RD PARTY	AC_459038	$32.8	ST_TPMX	85.0%
CO-BRAND COMMISSIONS	AC_459032	$12.6	ST_PRVX	32.7%
AMTRAK.COM INTERNET TIPPING	AC_459005	$5.5	ST_TBDX	14.2%
PRIL FORCE ACCOUNT INSURANCE REVENUE	AC_459015	$4.2	ST_TPMX, ST_TAC_DBX	10.8%
PRIL CHANGE IN UNEARNED PREMIUMS 3RD PARTY	AC_459016	-$19.7	ST_TPMX, ST_TAC_DBX	-51.1%

Most of the revenue within this subfamily comes from third party insurance premiums, however, there is also a large negative transfer from unearned third party insurance premiums, which reduces the overall total somewhat. The largest accounts by value within this cost center relate to Passenger Railroad Insurance, Limited, or PRIL, a wholly owned subsidiary of Amtrak.

Table 4-6. Distribution of Operating Revenues by Allocation Round (Fiscal Year 2021) for National Train Service – Other Revenue (CC_REV_001_3)

Allocation Round	Percent of Revenues Allocated in Allocation Round
Direct Assignment	1.9%
First Round	83.0%

Allocation Round	Percent of Revenues Allocated in Allocation Round
Second Round	15.0%

As shown above, revenues within this cost center are largely allocated in the first round, with smaller amounts allocated by second-round statistics or directly assigned. The single largest statistic used is the Passenger Related Transportation Revenue (ST_PRVX) at 36.8 percent. Other first-round statistics over 10 percent of the subfamily include Total Operated Passenger Miles (ST_TPMX) and Total Boards and Deboards (ST_TBDX). ST_TPMX is used to allocate the third party insurance premiums and the value for these costs in and out of the subfamily net out positively, resulting in the positive statistic value. Second-round allocations almost exclusively use Total Allocated Costs (ST_TAC_DBX).

Table 4-7: Statistics Used for Revenue Attribution (Fiscal Year 2021) for National Train Service – Other Revenue (CC_REV_001_3)

Statistic	Code	Revenues (Millions)	Percent of Cost Center Revenues
Passenger Related Transportation Revenue	ST_PRVX	$14.2	36.8%
Total Operated Passenger Miles	ST_TPMX	$10.8	27.9%
Total Boards and Deboards	ST_TBDX	$5.5	14.2%
Total Allocated Costs	ST_TAC_DBX	$5.5	14.1%
Average Locos and Cars Used per Day	ST_UUX	$1.3	3.3%

The distribution of revenues across service lines is concentrated heavily within the NTS, the three service lines together totaling 96.3 percent of the subfamily total, indicating that this cost center focuses primarily on passenger service. The largest non-NTS service line is the Infrastructure Access service line, capturing 2.7 percent of revenues. The remaining service lines account for 1.3 percent of other revenue.

Table 4-8. Service Lines Used for Revenue Attribution (Fiscal Year 2021) for National Train Service – Other Revenue (CC_REV_001_3)

Service Line	Revenues (Millions)	Percent of Cost Center Revenues
NTS-LD	$14.2	36.7%
NTS-NEC	$12.3	31.8%
NTS-SS	$10.7	27.8%
Inf. - NEC	$1.0	2.7%
All Other Service Lines	$0.4	1.0%

4.1.3 Food & Beverage Revenue (CC_REV_001_4)

The Food & Beverage Revenue cost center accounts for 2.8 percent of the National Train Service subfamily. The revenues within this cost center are essentially consolidated into one account and are almost entirely directly assigned.

Table 4-9. Top Accounts Ranked by Allocations (Fiscal Year 2021) for Food & Beverage Revenue (CC_REV_001_4)

Account	Code Number	Revenues (Millions)	Dominant Statistics	Percent of Cost Center Revenues
FOOD AND BEVERAGE REVENUE	AC_400110	$58.9	ST_NO_STX, ST_DRVX	228.8%
FOOD AND BEVERAGE SALES DISCOUNTS	AC_400117	-$0.02	ST_NO_STX	-0.1%
FOOD AND BEVERAGE TRANSFER	AC_400103	-$33.2	ST_NO_STX	-128.7%

The revenue within this subfamily comes from food and beverage sales on the NTS and is consolidated into a single account. A small amount of revenue is deducted from discounts and a larger portion is transferred from first class ticket revenue because first class passenger meals are included in the price of the ticket.

Table 4-10. Distribution of Operating Revenues by Allocation Round (Fiscal Year 2021) for Food & Beverage Revenue (CC_REV_001_4)

Allocation Round	Percent of Revenues Allocated in Allocation Round
Direct Assignment	97.4%
First Round	2.6%
Second Round	0.0%

Revenues within this cost center are almost entirely assigned directly as food and beverage sales can be directly assigned to trains within each route. The remaining revenues were assigned in the first round with no second-round assignments necessary.

Table 4-11. Statistics Used for Revenue Attribution (Fiscal Year 2021) for Food & Beverage Revenue (CC_REV_001_4)

Statistic	Code	Revenues (Millions)	Percent of Cost Center Revenues
No Statistic (Direct Charges)	ST_NO_STX	$25.1	97.4%
Food Service Revenue	ST_DRVX	$0.7	2.6%

As most charges are directly assigned, most of the revenue within this cost center is reflected in the No Statistic (Direct Charges) (ST_NO_STX) statistic. The revenues allocated in the first round are allocated using the Food Service Revenue statistic, which is an aggregate of each routes Food Service Revenues. All revenues are assigned to the three NTS service lines. The service line with the most food and beverage sales is the Long Distance train service. Second are the State-supported routes followed by the NEC, as shown in Table 4-12.

Table 4-12. Service Lines Used for Revenue Attribution (Fiscal Year 2021) for Food & Beverage Revenue (CC_REV_001_4)

Service Line	Revenues (Millions)	Percent of Cost Center Revenues
NTS-LD	$12.6	48.9%
NTS-SS	$6.8	26.3%
NTS-NEC	$6.4	24.8%

4.2 Contract Revenue Subfamily

Family: FM_Revenue
Subfamily: Contract Revenue (FM_002)

The Contract Revenue subfamily captures the fees paid by States, freight, and commuter railroads for services provided by Amtrak and access to Amtrak-owned rights of way. In addition to the access fee, services may include electric propulsion revenue, third rail access revenue, or similar accounts. Revenues are recorded with WBSE that allow for identification of the appropriate commuter, freight, or private user. The Infrastructure Contract Revenue subfamily consists of four revenue cost centers: Infrastructure Revenue (CC_REV_002_0), State Train Payments (CC_REV_002_1), Ancillary (CMR, REB, COM) (CC_REV_002_2), and Capital Project Revenue (CC_REV_002_3).

Subfamily revenues for Fiscal Year 2021 were $1,008.4 million and account for 51.9 percent of Amtrak's total revenue, as shown in Figure 4-4. These revenues have remained steady through the COVID-19 global pandemic, in large part due to an influx of CARES Act funding. Over the full five-year period, these cost centers have grown steadily since Amtrak re-organized the revenue cost centers in Fiscal Year 2018.[55]

[55] The data view is retrospective, as a result, because three of these cost centers were created in Fiscal Year 2018, they show zero revenues in Fiscal Year 2017. This is a product of APT's snapshot data view limitations.

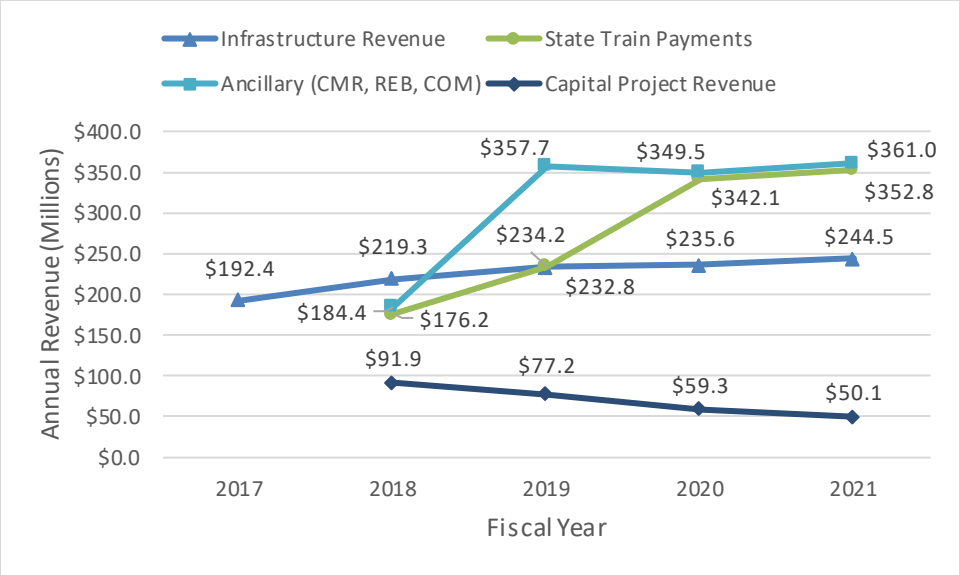

Figure 4-4. Contract Revenue, Fiscal Years 2017-2021 (Millions)

4.2.1 Infrastructure Revenue (CC_REV_002_0)

The Infrastructure Revenue cost center accounts for 24.2 percent of the Contract Revenue subfamily. The revenues within this cost center are concentrated within a small group of accounts and are consistent with revenue generated by allowing the use of Amtrak's infrastructure. See Table 4-13 for the top Infrastructure Revenue accounts.

Table 4-13. Top Accounts Ranked by Allocations (Fiscal Year 2021) for Infrastructure Revenue (CC_REV_002_0)

Account	Code Number	Revenues (Millions)	Dominant Statistics	Percent of Cost Center Revenues
PRIIA212 ACCESS REVENUE	AC_410000	$174.7	ST_NO_STX, ST_FTTX	71.5%
ELECTRIC PROPULSION FEE REVENUE	AC_410001	$31.7	ST_NO_STX	13.0%
FREIGHT TRAIN OPERATION REVENUE	AC_410016	$25.1	ST_NO_STX	10.3%
OTHER ACCESS & SERVICE REVENUE	AC_410006	$12.5	ST_NONX, ST_FTTX	5.1%

The most notable account within this cost center is the PRIIA212 Access Revenue account, which refers to revenue collected through access granted to the NEC, consistent with the terms negotiated by Amtrak and the NEC commuter railroads under PRIIA Section 212.[56] The three railroads/entities with the

[56] *Passenger Rail Investment and Improvement Act of 2008.* 75.

highest access revenues paid to Amtrak in Fiscal Year 2021 are Connecticut Department of Transportation, New Jersey Transit, and the Long Island Railroad.[57]

Table 4-14. Distribution of Operating Revenues by Allocation Round (Fiscal Year 2021) for Infrastructure Revenue (CC_REV_002_0)

Allocation Round	Percent of Revenues Allocated in Allocation Round
Direct Assignment	94.4%
First Round	5.6%
Second Round	0.0%

Revenues within this cost center are almost entirely assigned directly as most infrastructure revenues can be associated with specific locations and routes. A small amount of revenue was allocated in the first round and zero revenue was allocated in the second round.

Table 4-15. Statistics Used for Revenue Attribution (Fiscal Year 2021) for Infrastructure Revenue (CC_REV_002_0)

Statistic	Code	Revenues (Millions)	Percent of Cost Center Revenues
No Statistic (Direct Charges)	ST_NO_STX	$230.9	94.4%
Straight-Line Allocation (1)	ST_NONX	$12.8	5.2%
Frequency of Train Trips	ST_FTTX	$0.8	0.3%

The first-round allocation occurs primarily with only two statistics, as shown in Table 4-15. While Frequency of Train Trips (ST_FTTX) has a small contribution, most of this allocation is done using Straight-Line Allocation (1) (ST_NONX). This statistic is used to assign revenues directly to routes and is a substitute in cases where using no statistic is inappropriate, in essence a direct assignment of costs that were not categorized in SAP as "direct" and so they go through the allocation engine. In terms of the associated service lines, the revenues are almost entirely distributed across the Infrastructure Access service line, as shown in Table 4-16.

Table 4-16. Service Lines Used for Revenue Attribution (Fiscal Year 2021) for Infrastructure Revenue (CC_REV_002_0)

Service Line	Revenues (Millions)	Percent of Cost Center Revenues
Infrastructure	$244.7	100.1%

[57] Additional entities paying access revenue include Delaware Department of Transportation, Maryland Department of Transportation, the Massachusetts Bay Transportation Authority, Rhode Island Department of Transportation, the Southeastern Pennsylvania Transportation Authority, and the Virginia Railway Express.

Service Line	Revenues (Millions)	Percent of Cost Center Revenues
Access		
Reimbursable	-$0.2	-0.1%

4.2.2 State Train Payments (CC_REV_002_1)

The State Train Payments revenue cost center accounts for 35.0 percent of the Contract Revenue subfamily. The revenues within this cost center are spread across a wide range of accounts, seen in Table 4-17, which all roll-up into an overarching State Supported Contracted Revenue account and are consistent with State train operations.

Table 4-17. Top Accounts Ranked by Allocations (Fiscal Year 2021) for State Train Payments (CC_REV_002_1)

Account	Code Number	Revenues (Millions)	Dominant Statistics	Percent of Cost Center Revenues
Train & Engine Crew Labor	AC_410111	$120.0	ST_NO_STX	34.0%
Car & Locomotive Maintenance and Turnaround	AC_410112	$116.9	ST_NO_STX	33.1%
CARES Revenue for States	AC_410026	$78.0	ST_NO_STX	22.1%
Stations – Shared	AC_410119	$58.7	ST_NO_STX	16.6%
Train & Engine Additive	AC_410141	$38.6	ST_NO_STX	10.9%
CARES Revenue for States Offset	AC_410025	-$78.0	ST_NO_STX	-22.1%
Ticket Revenue Contra	AC_410101	-$177.6	ST_NO_STX	-50.3%

The most notable accounts within this cost center relate to train service operations such as for train labor and turnaround servicing as well as station operations. Notably, CARES Act Revenue funded to States is tracked by both including it using AC_410026 and offsetting it using AC_410025.

Table 4-18. Distribution of Operating Revenues by Allocation Round (Fiscal Year 2021) for State Train Payments (CC_REV_002_1)

Allocation Round	Percent of Revenues Allocated in Allocation Round
Direct Assignment	100.0%
First Round	0.0%
Second Round	0.0%

Revenues within this cost center are entirely assigned directly as all payments are for specific State route operations in accordance with the PRIIA Section 209 Cost Methodology Policy.

Table 4-19. Statistics Used for Revenue Attribution (Fiscal Year 2021) for State Train Payments (CC_REV_002_1)

Statistic	Code	Revenues (Millions)	Percent of Cost Center Revenues
No Statistic (Direct Charges)	ST_NO_STX	$352.8	100.0%

As all charges are directly assigned, no allocation statistics are used for its revenues. Similarly, all revenues are allocated to the NTS – State Supported service line.

Table 4-20. Service Lines Used for Revenue Attribution (Fiscal Year 2021) for State Train Payments (CC_REV_002_1)

Service Line	Revenues (Millions)	Percent of Cost Center Revenues
NTS-SS	$352.8	100.0%

4.2.3 Ancillary (CMR, REB, COM) (CC_REV_002_2)

The Ancillary revenue cost center accounts for 35.8 percent of the Contract Revenue subfamily. The revenues recorded within this cost center are generated from Amtrak's three ancillary business service lines: Commuter Operations (CMR), Commercial (COM), and Reimbursable (REB). The revenues are spread across a broad range of accounts that are used to track the three-ancillary business, shown in Table 4-21.

Table 4-21. Top Accounts Ranked by Allocations (Fiscal Year 2021) for Ancillary (CMR, REB, COM) (CC_REV_002_2)

Account	Code Number	Revenues (Millions)	Dominant Statistics	Percent of Cost Center Revenues
COMMUTER LABOR ST	AC_439010	$36.3	ST_NO_STX, ST_NONX	10.1%
REIMBURSABLE LABOR ST	AC_419010	$27.5	ST_NO_STX, ST_PUTX	7.6%
COMM-RIGHT OF WAY	AC_462003	$19.4	ST_NO_STX	5.4%
REIMBURSABLE OTHER	AC_419026	$18.8	ST_NO_STX	5.2%
REIM LABOR BENEFIT ADDITIVE REVENUE SERVICE COST	AC_460002	$18.8	ST_NO_STX	5.2%
REIMBURSABLE CONTRACT SVCS	AC_419021	$18.4	ST_NO_STX	5.1%

Account	Code Number	Revenues (Millions)	Dominant Statistics	Percent of Cost Center Revenues
REIMBURSABLE LABOR OVERHEAD ADDITIVE REVENUE	AC_460005	$17.9	ST_NO_STX	4.9%
COMM LABOR BENEFIT ADDITIVE REVENUE SERVICE COST	AC_480002	$15.9	ST_NO_STX	4.4%
REIMBURSABLE MATERIALS	AC_419020	$15.8	ST_NO_STX	4.4%
RETAIL	AC_440003	$14.6	ST_NO_STX, ST_TAC_DBX	4.1%

Each account within this cost center can be traced back to one of the three ancillary business. The largest accounts relate to reimbursable businesses and commuter operations.

Table 4-22. Distribution of Operating Revenues by Allocation Round (Fiscal Year 2021) for Ancillary (CMR, REB, COM) (CC_REV_002_2)

Allocation Round	Percent of Revenues Allocated in Allocation Round
Direct Assignment	98.9%
First Round	0.4%
Second Round	0.7%

Revenues within this cost center are almost entirely directly assigned to specific routes. Most of these ancillary revenues, particularly commuter operations and commercial real estate, can be associated with a specific location or route.

Table 4-23. Statistics Used for Revenue Attribution (Fiscal Year 2021) for Ancillary (CMR, REB, COM) (CC_REV_002_2)

Statistic	Code	Revenues (Millions)	Percent of Cost Center Revenues
No Statistic (Direct Charges)	ST_NO_STX	$357.2	98.9%
Total Allocated Costs	ST_TAC_DBX	$2.6	0.7%
Frequency of Train Trips	ST_FTTX	$0.5	0.1%
Straight-Line Allocation (1)	ST_NONX	$0.4	0.1%
Average Locos and Cars Used per Day	ST_UUX	$0.2	0.1%

The small magnitude of revenues allocated in the first round use a range of statistics, as seen in Table 4-23. The second-round allocations exclusively use Total Allocated Costs (ST_TAC_DBX). As expected, the service line distribution is concentrated within the three service lines that are associated with the three ancillary businesses represented in this cost center, shown in Table 4-24. Notably, the

Reimbursable service line accounts for approximately half of the revenue, followed by Commuter Operations and Commercial service lines.

Table 4-24. Service Lines Used for Revenue Attribution (Fiscal Year 2021) for Ancillary (CMR, REB, COM) (CC_REV_002_2)

Service Line	Revenues (Millions)	Percent of Cost Center Revenues
Reimbursable	$170.7	47.3%
CM	$122.1	33.8%
Commercial	$63.9	17.7%
All Other Service Lines	$4.3	1.2%

4.2.4 Capital Project Revenue (CC_REV_002_3)

The Capital Project Revenue cost center accounts for 5.0 percent of the Contract Revenue subfamily. The revenues within this cost center all relate to capital in some capacity.

Table 4-25. Top Accounts Ranked by Allocations (Fiscal Year 2021) for Capital Project Revenue (CC_REV_002_3)

Account	Code Number	Revenues (Millions)	Dominant Statistics	Percent of Cost Center Revenues
CAPITAL OTHER	AC_429026	$720.0	ST_FTTX, ST_UUX	1437.1%
CAPITAL CONTRACT SERVICES	AC_429021	$541.1	ST_FTTX, ST_NO_STX	1080.1%
CAP MATERIALS	AC_429020	$194.1	ST_UUX, ST_FTTX	387.4%
CAP LABOR ST	AC_429010	$109.1	ST_FTTX, ST_UUX	217.7%
CAP LABOR BENEFIT ADDITIVE REVENUE SERVICE COST	AC_470002	$98.0	ST_FTTX, ST_UUX	195.6%
CAP LABOR OVERHEAD ADDITIVE REVENUE	AC_470005	$82.2	ST_FTTX, ST_UUX	164.1%
CAP LABOR EXEMPT	AC_429001	$66.4	ST_NO_STX, ST_FTTX	132.6%
CAP LABOR OT	AC_429014	$51.4	ST_FTTX, ST_PUTX	102.5%
DEFERRED REVENUE CONTRA	AC_499050	-$242.1	ST_FTTX, ST_UUX	-483.2%
GRANT REVENUE CONTRA	AC_499055	-$1,692.0	ST_FTTX, ST_UUX	-3377.3%

Revenues from numerous capital-related accounts appear within this cost center, as seen in Table 4-25. While several categories exist, notably the largest remains a catch-all account for other capital, Capital Other (AC_429026). The high level of revenue is offset by large grant and deferred revenue deductions. These deductions are used to negate the impact of deferred billings on the current year's profit and loss

statements.

Table 4-26. Distribution of Operating Revenues by Allocation Round (Fiscal Year 2021) for Capital Project Revenue (CC_REV_002_3)

Allocation Round	Percent of Revenues Allocated in Allocation Round
Direct Assignment	12.1%
First Round	87.8%
Second Round	0.1%

Revenues within this cost center are mainly allocated in the first round. As a result, several statistics are used to allocate these revenues depending on the nature of the capital project, displayed in Table 4-27.

Table 4-27. Statistics Used for Revenue Attribution (Fiscal Year 2021) for Capital Project Revenue (CC_REV_002_3)

Statistic	Code	Revenues (Millions)	Percent of Cost Center Revenues
Frequency of Train Trips	ST_FTTX	$27.2	54.4%
Average Locos and Cars Used per Day	ST_UUX	$9.4	18.7%
No Statistic (Direct Charges)	ST_NO_STX	$6.0	12.1%
Total Operated Train Miles	ST_TTMX	$2.2	4.5%
Passenger Car Unit Trips	ST_PUTX	$1.7	3.4%
Electric Loco and EMU Unit Miles	ST_EUMX	$1.5	3.0%

Most revenues within this cost center are allocated using Frequency of Train Trip (ST_FTTX) statistic, followed by Average Locos and Cars Used Per Day statistic (ST_UUX). For the resulting service lines, while most revenues are allocated to Infrastructure Access, a wide range of service lines are used, as seen in Table 4-28.

Table 4-28. Service Lines Used for Revenue Attribution (Fiscal Year 2021) for Capital Project Revenue (CC_REV_002_3)

Service Line	Revenues (Millions)	Percent of Cost Center Revenues
Infrastructure Access	$21.6	43.2%
NTS-NEC	$8.8	17.6%
NTS-SS	$8.1	16.2%
Other – Unallocated	$5.9	11.8%
NTS-LD	$5.6	11.2%
All Other Service Lines	$0.01	0.0%

5. Cost Methodology Summary

This section describes the detailed methodologies for estimating fully allocated costs and documents the current approach for the 42 individual subfamilies[58] within APT in Fiscal Year 2021. Amtrak cost centers and costs are divided into seven families representing the broad categories of activity, such as Maintenance of Way (also known or referred to as "engineering") and Maintenance of Equipment (mechanical), which are required to operate a passenger railroad such as Amtrak. Within each family are one or more subfamilies. The activities within each subfamily are of a similar nature and, in accordance with the methodology, the APT system distributes the costs associated with these activities in a logical and consistent manner.

Each section below covers an APT family, the highest member of the APT cost center hierarchy, describing in general terms what the family does. Table 5-1 below provides the fully allocated operating and capital cost by family costs for Fiscal Year 2021 along with a full Amtrak total.

Table 5-1. Fully Allocated Costs by Family, Pre-Audit Fiscal Year 2021 Dollars (Millions)

Family Name[59]	Operating Costs	Capital Costs	Total Costs
Maintenance of Way (MoW)	$482.4	$683.1	$1,165.5
Maintenance of Equipment (MoE)	$604.4	$171.5	$775.9
Transportation Operations	$1,297.7	$75.1	$1,372.8
Sales and Marketing	$170.2	$114.0	$284.2
General and Administrative (G&A)	$1,380.5	$233.0	$1,613.5
Capital	$0.0	$738.3	$738.3
Police, Environmental and Safety	$94.5	$19.9	$114.4
Grand Total	$4,029.8	$2,035.0	$6,064.8

After the overall family introduction, the subsections that follow contain separate descriptions of the methods for calculating fully allocated costs for each APT subfamily in Fiscal Year 2021. The descriptions

[58] The 42 included subfamilies allocated operating or capital costs in Fiscal Year 2021. Other subfamilies have been used in the past but are not shown in this report. Additionally, the Revenue Family adds another five revenue-related subfamilies.

[59] Family and subfamily names presented in this report may be adjusted from the specific family or subfamily names as shown in APT. They have been modified here for readability; for example, replacing the shorthand "Maint of Way" for "Maintenance of Way" and expanding "Claims Mgmt" to "Claims Management." See Appendix B for a listing of the modified family and subfamily descriptions.

provide information on the general scope of the subfamily including the type of work typically performed in the subfamily. A series of charts display the family's operating and capital costs over the past five years as well as the distribution of costs by subfamily within the family. Additionally, subfamily operating and capital costs for Fiscal Year 2021[60] are provided along with the subfamily's share of Amtrak total costs to illustrate magnitude. The sections each detail a subfamily's composition of costs including the types of accounts and internal orders used to categorize subfamily activities. Finally, each section provides an overview of the subfamily's allocation methods, including the level of direct or allocated costs, the primary allocation statistic(s) used, and the resulting Amtrak businesses (including the core passenger rail business) to which costs are allocated.

Each subfamily description includes a series of figures and tables containing the relevant subfamily information referenced in the text:

- A summary table of general subfamily facts including the number of cost centers, overall costs, and the subcategories used,
- A five-year trend of operating and capital costs,
- A distribution of Fiscal Year 2021 operating costs by account type,
- A distribution of Fiscal Year 2021 capital costs by account type,
- The top internal orders used to classify expenses,
- The distribution of operating costs by round of allocation,
- The top allocation statistics used in the subfamily,
- The resulting allocation results by Amtrak service line.

As in the 2016 report, the "Top Internal Orders" are those internal orders that recorded the highest Fiscal Year 2021 expenses at the cost centers in each subfamily and in total account for approximately 95 percent of total subfamily expenses.[61] For each internal order, the dominant statistic(s) that allocate those expenses are presented. The statistics displayed for each of the top internal orders make up at least 70 percent of the internal order's costs. These tables show the dominant internal orders by their magnitude (i.e., absolute value) of total costs within the subfamily, including negative values (transfers or credits) where applicable. The top internal order tables show approximately 95 percent of subfamily costs with a maximum of 10 internal orders. Therefore, in subfamilies that broadly distribute costs among numerous internal orders, it is possible that the sum of percentages for the top 10 internal orders displayed might not equal 95 percent.

The "Top Statistics" are the primary allocation statistics that are used at cost centers located in each subfamily, irrespective of internal order, and in total account for about 95 percent of the subfamily's expenditures, including directly assigned costs.[62] As with the internal order table, a maximum of 10

[60] Amtrak's Fiscal Year ran from October 1, 2020 to September 30, 2021.
[61] This includes internal order expenses either allocated or directly assigned.
[62] The expenditures listed in the summary tables are actual Fiscal Year 2021 expenditures recorded in SAP. The expenditures associated with each statistic are those that are allocated using that statistic. In some Subfamilies, large credits may be allocated by a statistic that exceed the expenses also allocated by that statistic, creating a negative

statistics are displayed and so the sum of percentages may be less than 95 percent. In many subfamilies, the ST_NO_STX (No Statistic, Direct Charge) is a primary statistic. This is not an allocation statistic itself, but the value that APT populates in the statistic field when an expense is directly assigned to a train or other cost object (such as ancillary business cost objects for commuter entities or reimbursable projects).

New to this report is the five-year trend of operating and capital costs, the distribution of costs by account type, the distribution of operating costs by round of allocation, and the resulting allocation results by service line. The five-year trends use the figures from the annual data appendix updates (discussed in Section 1.2.4). The distribution of dollars by accounts utilizes Amtrak's account hierarchy structure and present aggregate accounts by category that capture numerous base-level accounts. For instance, the "Wages & Overtime" aggregate account category contains the underlying base-level accounts for Wages (AC_500010), Overtime (AC_500014), and other related wage types while management salaries are coded to the general management base-level salary account, Salaries (AC_500001), which is captured under the "Salaries" account category with other related salary or non-agreement labor costs. The 14 overarching account categories, with examples of underlying accounts within each, are shown in Table 5-2 below.

Table 5-2. Example Base-Level Accounts by Account Category

Account Category	Example Base-Level Accounts in Category
Salaries	Salaries, Wages for non-agreement, non-exempt employees
Wages & Overtime	Wages, Vacation, Overtime Wages
Employee Benefits Expenses	State & Local Payroll Taxes, Life Insurance, Pension
Employee Related	Employee Uniforms, Travel
Train Operations	Locomotive Rent, Crew Layover, Crew Transportation
Fuel Power & Utilities	Train Fuel, Utilities – Electricity
Materials	Rolling Stock Material, Concrete Ties
Facility Communication & Office	Office Equipment, Building Maintenance Services
Advertising & Sales	Advertising, Sales Promotions
Casualty & Other Claims	Claims Services, Claims Insurance Passenger
Depreciation	Depreciation Expenses
Amort of Gain on Sale/Leaseback	Amort of Gain on Sale/Leaseback (single account)
Other Expenses	Professional Fees, Data Processing Services, Passenger Inconvenience

value. In many cases, these negative value statistics are minor, but where credits are a significant share of the overall activity in a Subfamily, they are included.

Account Category	Example Base-Level Accounts in Category
Indirect Costs Capitalized to P&E	Indirect Costs Capitalized to P&E (single account)

Operating dollars in each subfamily are distributed across three allocation rounds: directly assigned, first-round allocations, or second-round allocations. As capital expenses are disproportionately directly assigned to routes, they are excluded from the allocation round tables. To account for some statistics being used to allocate large credits or transfers, the absolute value of operating allocations is presented to capture the overall magnitude of the activity by statistic in the family. Directly assigned costs come from SAP to APT with a train number associated with the expense and are not processed by APT. First-round allocations are then allocated by APT followed by second-round allocations that incorporate the share of direct and first-round dollars into their allocations for indirect costs.

Finally, the distribution of allocated dollars by Amtrak service line (see Section 2.6 for description of the service lines) are presented for each subfamily. This table shows the service lines that most utilize the services of the subfamily.

Further details on Fiscal Year 2021 allocations for each subfamily are documented in Appendices A and B contained in Volume 2 of this report. These appendices contain the complete list of currently active cost centers in each subfamily, other supporting tables that list the allocation statistics and indicate their relative importance to the allocation process, and the dollars by each internal order.

Due to rounding or to limit the number of table rows displayed, resulting values may not sum to 100 percent.

5.1 Maintenance of Way (MoW) Family (FM_MOW)

The Maintenance of Way (MoW) Family, also referred to as the "engineering department" or more simply as "engineering," is responsible for constructing and maintaining railroad fixed assets owned by Amtrak and, on a reimbursable basis, assets owned by other entities. These fixed assets can include track, crossties, and ballast; signals and switches; electric catenary, power transmission and related systems; and tunnels, bridges, and buildings. The MoW Family is responsible for the performance of capital work and operating maintenance on Amtrak's shared assets with those costs allocated to Amtrak's NTS trains along with the freight and commuter railroads that utilize them.

MoW cost centers are organized into seven geographic subfamilies corresponding with Amtrak's engineering subdivisions and are consistent with SAP's tracking and reporting of overhead costs by geography. APT initially formed MoW subfamilies by their broad craft—track, communications & signals, electric traction, and buildings & bridges—but this was modified to a geographical framework with the introduction of SAP. Each of the seven geographic subfamilies therefore may perform the full range of

MoW activities within the subfamily, although the level may change depending on geography. For example, the divisions that include portions of the NEC or other electrified territory will have more electric traction MoW work than those divisions that do not operate electrified service. The eighth and ninth subfamilies are MoW Support (FM_105) and MoW System Gangs (FM_106), which support the other MoW subfamilies regardless of location or craft. Within each subfamily, Amtrak captures MoW activities by WBS and asset using its MAXIMO asset management system, allowing for labor and materials expenses to be appropriately allocated to services that utilize that asset.

For each of the past five years, the majority of costs in the MoW Family have been capital costs, which varied from over $900 million in Fiscal Year 2017 to below $700 million in Fiscal Year 2021 over the five-year analysis window, as shown in Figure 5-1. Operating costs represent a smaller share of total MoW Family costs, with annual values relatively steady around $450 million.

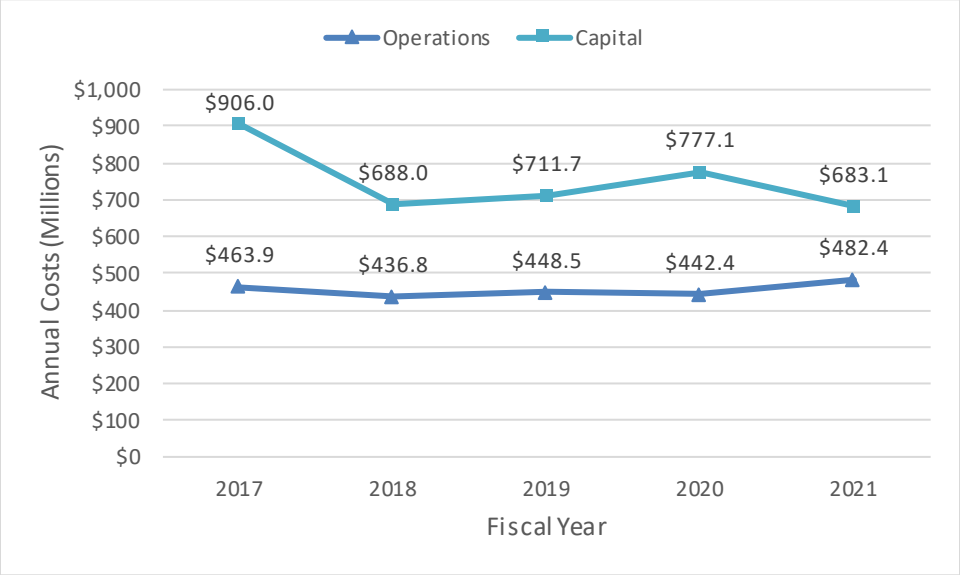

Figure 5-1. MoW Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

A single year's operating costs for Fiscal Year 2021 gives the relative sizes of each MoW subfamily, as shown in Figure 5-2. The largest MoW subfamilies by operating costs are New York Division (FM_104), Mid-Atlantic Division (FM_102), and New England Division (FM_103), followed by System Gangs (FM_106).

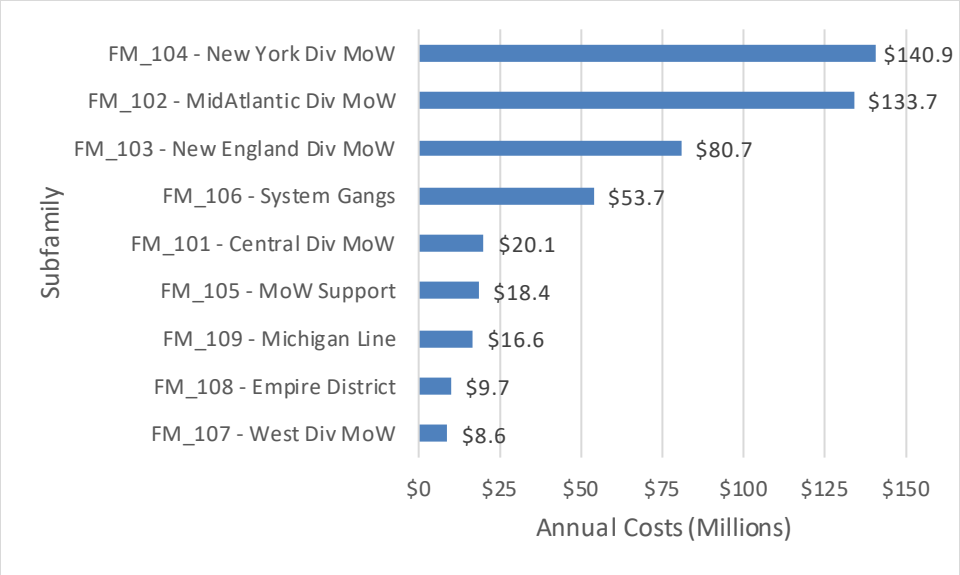

Figure 5-2. Subfamily Distribution of MoW Operating Costs, Fiscal Year 2021 (Millions)

A single year's capital costs for Fiscal Year 2021 gives the relative sizes of each MoW subfamily, as shown in Figure 5-3. The largest MoW subfamily, comprising 81 percent of MoW capital costs, is MoW Support (FM_105).

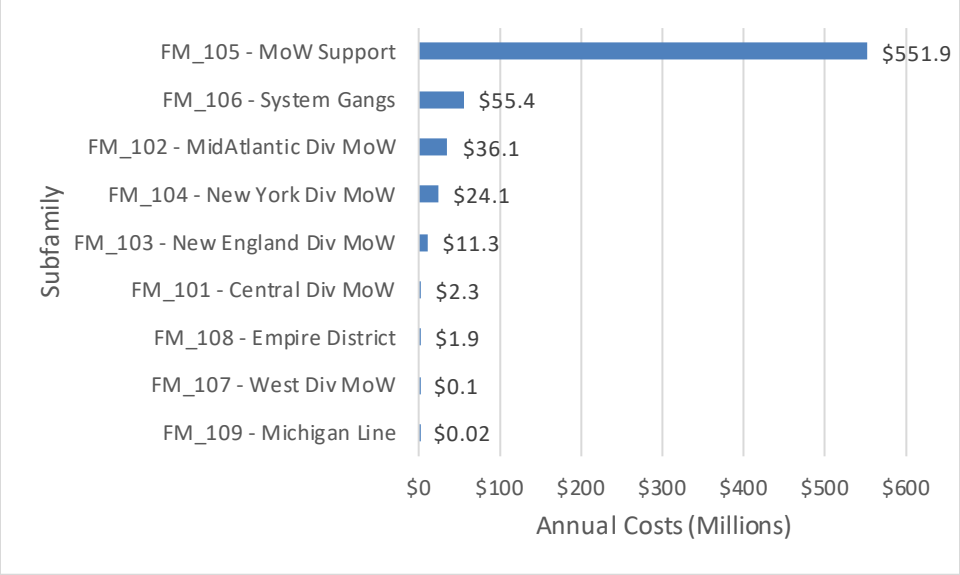

Figure 5-3. Subfamily Distribution of MoW Capital Costs, Fiscal Year 2021 (Millions)

The subsections below describe each MoW subfamily in detail, including the activities performed, a breakdown of account costs, the approach to cost allocation, and a summary of allocation data.

5.1.1 Central Division Subfamily

Family: Maintenance of Way (MoW) – FM_MoW
Subfamily: Central Division – FM_101

Scope

The Central Division Subfamily records and allocates maintenance of way costs from Amtrak's Central Division.

Total costs for the Central Division Subfamily in Fiscal Year 2021 were $22.4 million, accounting for approximately 0.4 percent of Amtrak's total costs. The subfamily consists of 11 cost centers in one subcategory. Table 5-3 is an overview of Fiscal Year 2021 for the Central Division Subfamily.

Table 5-3. Subfamily Overview for Central Division Subfamily – FM_101

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$22.4
Subcategories Used	General 101_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	11

Composition of Subfamily Costs

Subfamily costs in Fiscal Year 2021 were $22.4 million and were composed largely of operating costs. This represents a 37 percent decrease compared to Fiscal Year 2017. Central Division operating costs declined between Fiscal Year 2017 and Fiscal Year 2018, from $31.0 million to $19.9 million, and were relatively consistent through Fiscal Year 2021 ($20.1 million), with a decrease in Fiscal Year 2020 to $15.5 million. Operating cost changes were driven by changing costs within cost centers, with large decreases (greater than one million dollars in decreased costs from Fiscal Year 2017 to 2021) in C&S Michigan District (CC_3360), Track Michigan District (CC_3361), and Sr Dir MoW Intercity (CC_3302). Central Division capital costs were smaller than operating costs throughout the five-year period and were relatively consistent from Fiscal Year 2017 to Fiscal Year 2020, as shown in Figure 5-4, with a decline in Fiscal Year 2021 to $2.3 million.

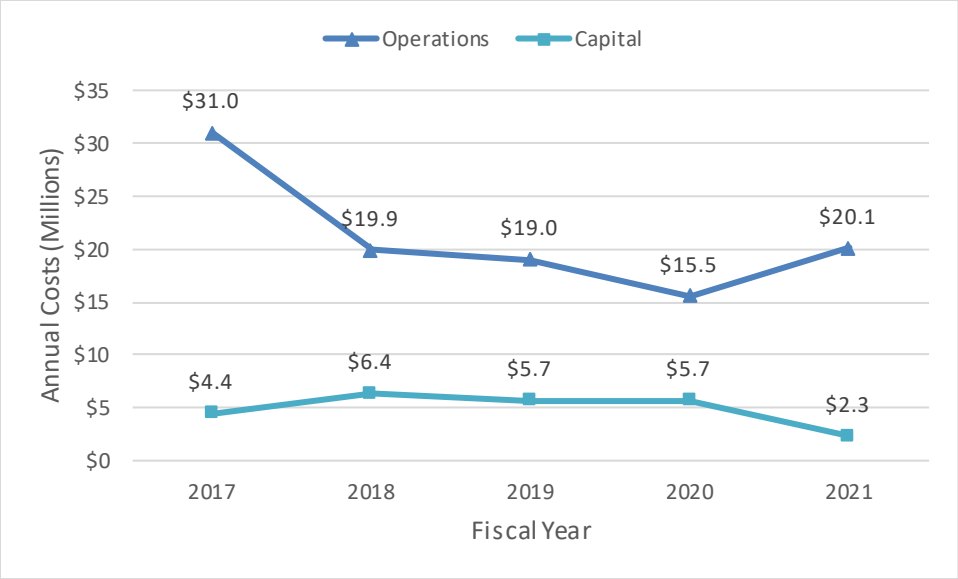

Figure 5-4. Central Division Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Central Division Subfamily operating costs are largely composed of the Wages & Overtime and Employee Benefits Expenses account categories, which reflect 43 percent and 30 percent of operating costs, respectively. Other account categories in this subfamily are Other Expenses (8 percent), Facility Communication & Office (6 percent), Salaries (5 percent), and Materials (5 percent) The Fuel Power & Utilities, Employee Related, and Train Operations account categories each account for 3 percent or less of operating costs, as shown in Figure 5-5.

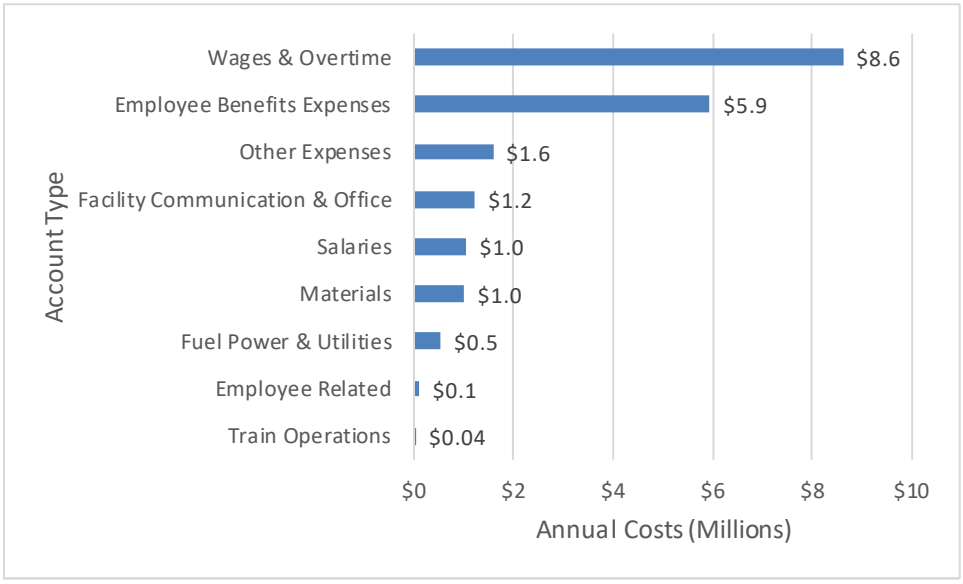

Figure 5-5. Central Division Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Almost all capital costs, 99 percent, in the Central Division Subfamily are in the Wages & Overtime account category, with smaller amounts in the Employee Related and Facility Communication and Office

Account categories. The Facility Communication & Office category shows a net credit, as can be seen in Figure 5-6.

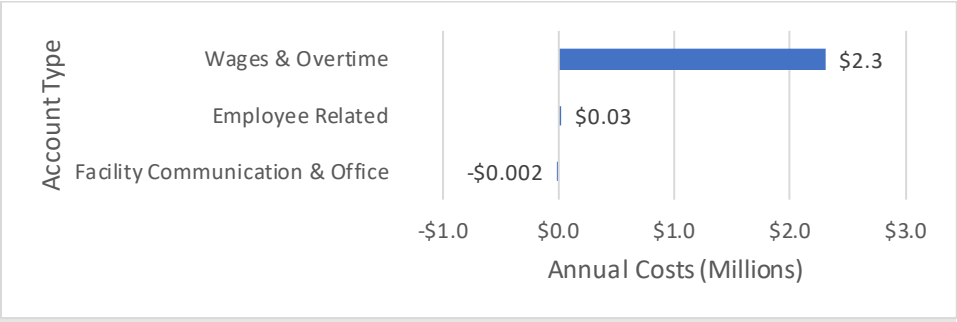

Figure 5-6. Central Division Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest internal order in the Central Division Subfamily is No Function (IO_NO_IO), which accounts for 16.7 percent of subfamily expenditures and is used for benefits transfers. Other internal orders include Capital (IO_4200), which accounts for 11.7 percent of subfamily expenditures and records "all capital related project costs…associated with Amtrak's capital program," and Signal & Interlocker Maint (IO_1713), which accounts for 11.5 percent of subfamily expenditures and records "labor, material, and other costs of routine repair and renewal of signal and interlocker systems and buildings." Track Maintenance (IO_1703), Reimbursable – General (IO_4100), and M of W Overhead (IO_1751), account for 11.2 percent, 10.2 percent, and 10.1 percent of expenditures respectively. All other internal orders account for less than 10 percent of subfamily expenditures, as shown in Table 5-4.

Table 5-4. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Central Division Subfamily – FM_101

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
No Function	IO_NO_IO	$3.7	ST_MWDC_DBX	16.7%
Capital	IO_4200	$2.6	ST_FTTX	11.7%
SIGNAL & INTERLOCKER MAINT	IO_1713	$2.6	ST_FTTX	11.5%
TRACK MAINTENANCE	IO_1703	$2.5	ST_FTTX	11.2%
Reimbursable – General	IO_4100	$2.3	ST_NO_STX	10.2%
M OF W OVERHEAD	IO_1751	$2.3	ST_MWDC_DBX	10.1%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
ROADWAY BLDG MAINT.	IO_1726	$2.0	ST_MDC_DBX	8.8%
M OF W MANAGERIAL	IO_1701	$1.1	ST_MWDC_DBX	5.1%
AUTOMOTIVE VEHICLE EXPENSES	IO_1844	$0.6	ST_MWDC_DBX	2.8%
STA SVCS-BLDG MAINT	IO_1281	$0.4	ST_TDC_DBX	1.8%

Cost Allocation Approach

About two-thirds, 66.3 percent, of Central Division Subfamily expenditures are allocated in the second round, with 21.1 percent allocated in the first round and 12.6 percent by direct assignment.

Table 5-5. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Central Division Subfamily – FM_101

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	12.6%
First Round	21.1%
Second Round	66.3%

The most used statistic in the Central Division Subfamily is Maintenance of Way Direct Costs (ST_MWDC_DBX), which accounts for 38.0 percent of subfamily expenditures, followed by Mechanical Direct Costs (ST_MDC_DBX), and Frequency of Train Trips (ST_FTTX), which account for 23.0 percent and 22.0 percent of subfamily expenditures, respectively. Other statistics include No Statistic (Direct Charges) (ST_NO_STX) and Ops Trans Direct Cost (ST_TDC_DBX), as shown in Table 5-6.

Table 5-6. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Central Division Subfamily – FM_101

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Maintenance of Way Direct Costs	ST_MWDC_DBX	$8.5	38.0%

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Mechanical Direct Costs	ST_MDC_DBX	$5.2	23.0%
Frequency of Train Trips	ST_FTTX	$4.9	22.0%
No Statistic (Direct Charges)	ST_NO_STX	$2.5	11.3%
Ops Trans Direct Cost	ST_TDC_DBX	$0.4	1.6%

Service Line Allocation Results

Central Division costs are primarily allocated to the NTS – State Supported, NTS – Long Distance, and Infrastructure Access service lines, which account for 38.3 percent, 23.6 percent, and 23.6 percent of subfamily expenditures, respectively. The Reimbursable service line accounts for 13.5 percent of subfamily expenditures, while the NTS – NEC, and all other service lines account for less than 2 percent each of subfamily expenditures, as shown in Table 5-7.

Table 5-7. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Central Division – FM_101

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-SS	$8.6	38.3%
Infrastructure Access	$5.3	23.6%
NTS-LD	$5.3	23.6%
Reimbursable	$3.0	13.5%
NTS-NEC	$0.2	1.0%
All Other Service Lines	$0.01	0.02%

5.1.2 Mid-Atlantic Division Subfamily

Family: Maintenance of Way (MoW) – FM_MoW
Subfamily: Mid-Atlantic Division – FM_102

Scope

The Mid-Atlantic Division Subfamily records and allocates maintenance of way costs from Amtrak's Mid-Atlantic Division.

Total costs for the Mid-Atlantic Division Subfamily in Fiscal Year 2021 were $169.8 million, accounting for approximately 2.8 percent of Amtrak's total costs. The subfamily consists of 52 cost centers in two subcategories. Table 5-8 is an overview of Fiscal Year 2021 for the Mid-Atlantic Division Subfamily.

Table 5-8. Subfamily Overview for Mid-Atlantic Division Subfamily – FM_102

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$169.8
Subcategories Used	General 102_0, Harrisburg Line 102_1
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	52

Composition of Subfamily Costs

Subfamily costs in Fiscal Year 2021 were $169.8 million and were composed largely of operating costs. This represents an 8.8 percent increase compared to Fiscal Year 2019. Mid-Atlantic Division operating costs were relatively steady between Fiscal Year 2017 ($87.8 million) and Fiscal Year 2019 ($92.1 million), before increasing in Fiscal Year 2020 ($101.5 million) and Fiscal Year 2021 ($133.7 million). Mid-Atlantic Division capital costs were smaller than operating costs throughout the five-year period, as can be seen in Figure 5-7, and were relatively consistent from Fiscal Year 2017 ($56.0 million) to Fiscal Year 2018 (57.1 million). Capital costs increased in Fiscal Year 2019 to $63.9 million, before decreasing in Fiscal Year 2020 to $54.5 million and decreasing further in Fiscal Year 2021 to $36.1 million.

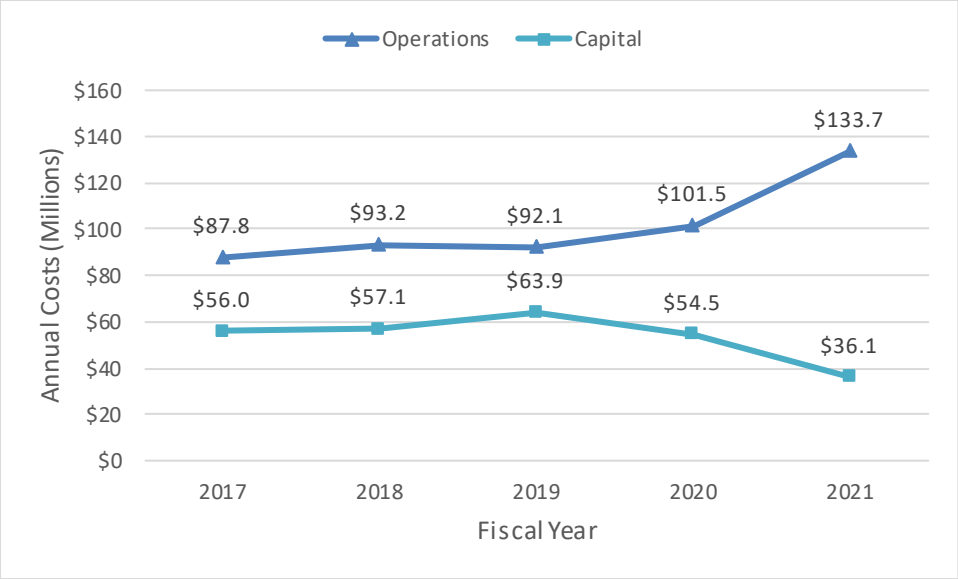

Figure 5-7. Mid-Atlantic Division Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at summary accounts, labor-related costs dominate the subfamily operating costs. Mid-Atlantic Division Subfamily operating costs are concentrated largely in Wages & Overtime (47.3 percent) and Employee Benefits Expenses (35.6 percent). Other noteworthy operating costs are Other Expenses (6.4 percent), Facility Communication & Office (3.4 percent), Materials (2.4 percent), Fuel Power & Utilities (2.3 percent) and Salaries (1.5 percent). Other subfamily operating costs are also shown in Figure 5-8.

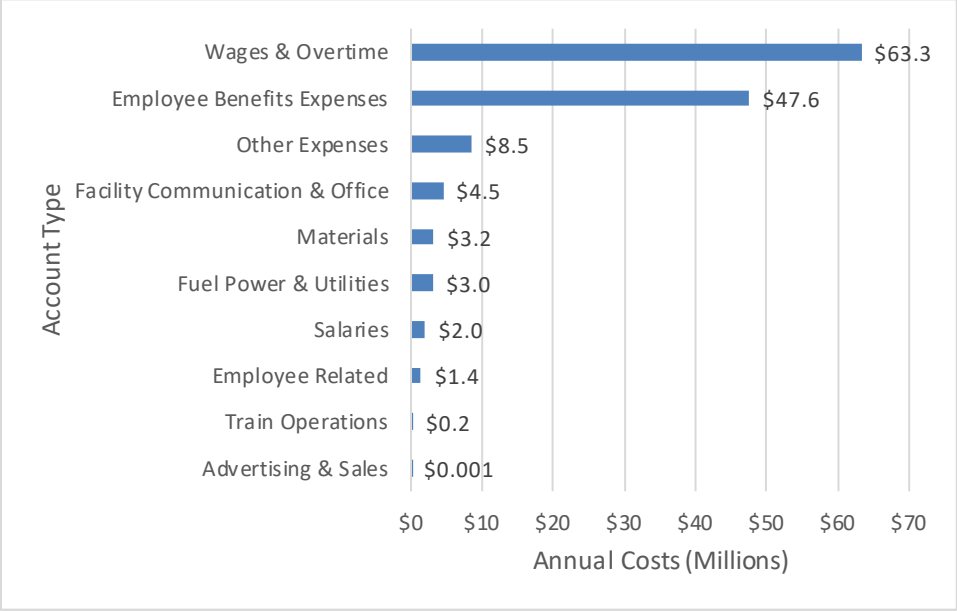

Figure 5-8. Mid-Atlantic Division Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Mid-Atlantic Division Subfamily capital costs are largely Wages & Overtime (96.5 percent), as shown in Figure 5-9.

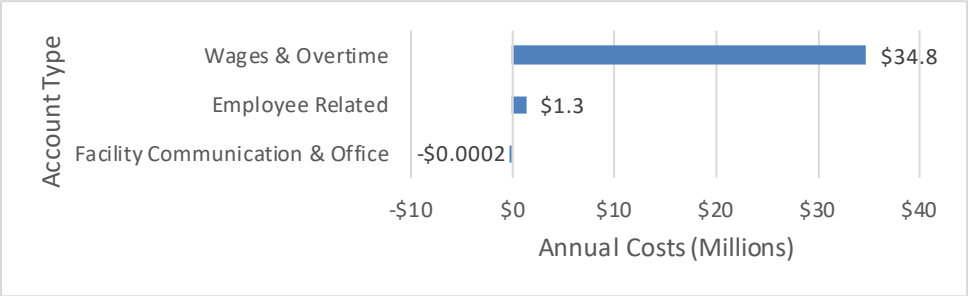

Figure 5-9. Mid-Atlantic Division Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest single internal order in the Mid-Atlantic Division Subfamily is Capital (IO_4200) at 27.3 percent, which records "all capital project related costs (capitalizable and non-capitalizable) associated with Amtrak's capital program." Also notable is No Function (IO_NO_IO) at 18.0 percent, and M OF W Overhead (IO_1751), which records "the cost of supervision, housekeeping, clerical work, travel expenses, camp car operation, small tools, and supplies vehicles, including leases, maintenance and supplies used in Maintenance of Way operations." See Table 5-9 for the remaining top internal orders in the Mid-Atlantic Division Subfamily and the dominant statistic used to allocate each.

Table 5-9. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Mid-Atlantic Division Subfamily – FM_102

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Capital	IO_4200	$46.3	ST_FTTX	27.3%
No Function	IO_NO_IO	$30.6	ST_MWDC_DBX	18.0%
M OF W OVERHEAD	IO_1751	$22.3	ST_MWDC_DBX	13.1%
TRACK MAINTENANCE	IO_1703	$12.0	ST_MWDC_DBX	7.1%
SIGNAL & INTERLOCKER MAINT	IO_1713	$10.4	ST_FTTX	6.1%
Reimbursable – General	IO_4100	$8.1	ST_NO_STX	4.8%
STA SVCS-BLDG MAINT	IO_1281	$6.9	ST_PUTX, ST_TAC_DBX	4.1%
POWER TRANSMISSION SYS MAINT	IO_1718	$4.3	ST_EUMX	2.5%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
AUTOMOTIVE VEHICLE EXPENSES	IO_1844	$4.1	ST_MWDC_DBX	2.4%
M OF W MANAGERIAL	IO_1701	$3.6	ST_MWDC_DBX	2.1%

Cost Allocation Approach

Operating costs on the Mid-Atlantic Division Subfamily are largely allocated in the first and second rounds, with only 6.3 percent of costs directly assigned. As seen in Table 5-10, most (63.4 percent) costs are allocated by second-round statistics.

Table 5-10. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Mid-Atlantic Division Subfamily – FM_102

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	6.3%
First Round	30.2%
Second Round	63.4%

The most used statistic in the Mid-Atlantic Division Subfamily is Maintenance of Way Direct Costs (ST_MWDC_DBX), which accounts for 48.4 percent of subfamily expenditures, followed by Frequency of Train Trips (ST_FTTX), which accounts for 29.8 percent of subfamily expenditures. Other statistics include No Statistic (Direct Charges) (ST_NO_STX), Electric Loco and EMU Unit Mile (ST_EUMX), Passenger Car Unit Trips (ST_PUTX), and Total Allocated Costs (ST_TAC_DBX) as shown in Table 5-11.

Table 5-11. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Mid-Atlantic Division Subfamily – FM_102

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Maintenance of Way Direct Costs	ST_MWDC_DBX	$82.1	48.4%
Frequency of Train Trips	ST_FTTX	$50.6	29.8%

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
No Statistic (Direct Charges)	ST_NO_STX	$11.5	6.8%
Electric Loco and EMU Unit Miles	ST_EUMX	$9.7	5.7%
Passenger Car Unit Trips	ST_PUTX	$6.3	3.7%
Total Allocated Costs	ST_TAC_DBX	$2.6	1.5%

Service Line Allocation Results

Mid-Atlantic Division Subfamily costs are primarily allocated to the NTS (combined 56.5 percent of total subfamily expenditures), with NTS – NEC comprising the largest expenditure service line at 37.2 percent of total. Infrastructure Access also comprises a significant share of expenditures at 37.7 percent, as seen in Table 5-12.

Table 5-12. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Mid-Atlantic Division – FM_102

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
Infrastructure Access	$64.1	37.7%
NTS-NEC	$63.2	37.2%
NTS-SS	$21.7	12.8%
NTS-LD	$11.1	6.5%
Reimbursable	$8.4	4.9%
All Other Service Lines	$1.4	0.8%

5.1.3 New England Division Subfamily

Family: Maintenance of Way (MoW) – FM_MoW
Subfamily: New England Division – FM_103

Scope

The New England Division Subfamily records and allocates maintenance of way costs from Amtrak's New England Division.

Total costs for the New England Division Subfamily in Fiscal Year 2021 were $91.9 million, accounting for approximately 1.5 percent of Amtrak's total costs. The subfamily consists of 37 cost centers across two subcategories. Table 5-13 is an overview of Fiscal Year 2021 for the New England Division Subfamily.

Table 5-13. Subfamily Overview for New England Division Subfamily – FM_103

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$91.9
Subcategories Used	General 103_0, Springfield Line 103_1
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	37

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $91.9 million. Total costs show an upward trend, rising 15.3 percent from Fiscal Year 2017. Operating costs are an increasingly dominant share of subfamily costs, increasing 55.3 percent from Fiscal Year 2017 to 2021. Subfamily capital costs have declined annually, falling 47.3 percent over the same period.

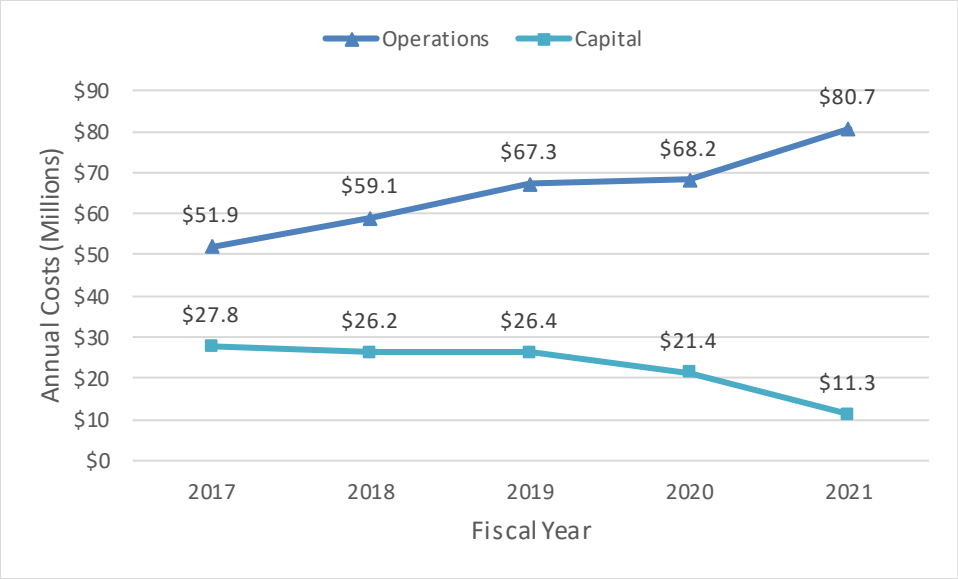

Figure 5-10. New England Division Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

New England Division Subfamily costs, as viewed through operating cost summary accounts, are largely labor-related. The largest share of operating costs are Wages & Overtime (48.1 percent) and Employee Benefits Expenses (31.0 percent). Other notable operating costs are Other Expenses (6.8 percent), Materials (4.9 percent), while the Salaries, Fuel Power & Utilities, and Facility Communication & Office account categories represent less than 3 percent each of operating costs as shown in Figure 5-11.

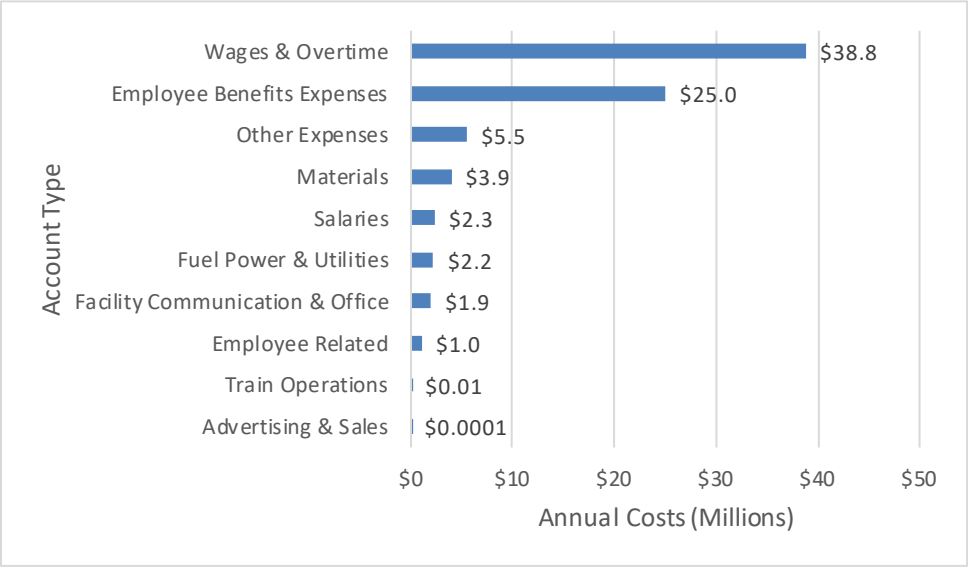

Figure 5-11. New England Division Distribution of Operating Costs, Fiscal Year 2021 (Millions)

New England Division capital costs are composed of the Wages & Overtime (91.8 percent) and Employee

Related (8.2 percent) account categories, as shown in Figure 5-12.

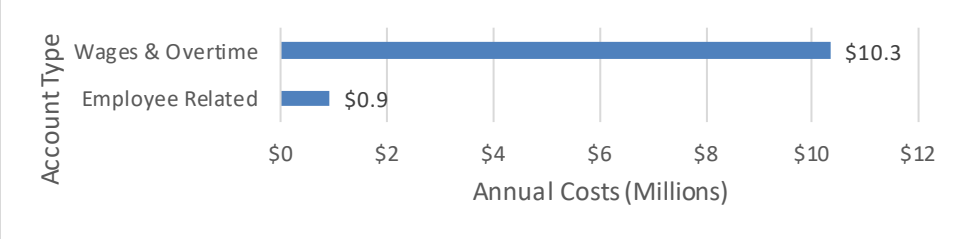

Figure 5-12. New England Division Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest internal order in the New England Division Subfamily is No Function (IO_NO_IO) at 17.7 percent. This is followed by M of W Overhead (IO_1751) at 15.3 percent, Capital (IO_4200) at 14.3 percent, and Signal & Interlocker Maint. (IO_1713) at 11.7 percent. These three internal orders record various costs used in maintenance of way operations; costs associated with Amtrak's capital program; and "all labor, material, and other costs of routine repair and renewal of signal and interlocker systems and buildings. Includes routine repair and renewal of rail bonds and connections, repairs resulting from FRA inspection reports, and the maintenance of signal and interlocker towers and other buildings, including fixtures, ground surroundings, and buildings." The remaining costs by top internal orders are shown in Table 5-14.

Table 5-14. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for New England Division Subfamily – FM_103

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
No Function	IO_NO_IO	$16.3	ST_MWDC_DBX	17.7%
M OF W OVERHEAD	IO_1751	$14.1	ST_MWDC_DBX	15.3%
Capital	IO_4200	$13.2	ST_FTTX	14.3%
SIGNAL & INTERLOCKER MAINT	IO_1713	$10.7	ST_FTTX	11.7%
Reimbursable – General	IO_4100	$8.0	ST_NO_STX	8.7%
POWER TRANSMISSION SYS MAINT	IO_1718	$4.0	ST_EUMX	4.4%
TRACK MAINTENANCE	IO_1703	$4.0	ST_FTTX	4.3%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
AUTOMOTIVE VEHICLE EXPENSES	IO_1844	$3.2	ST_MWDC_DBX	3.5%
M OF W MANAGERIAL	IO_1701	$2.7	ST_MWDC_DBX	2.9%
TRAINING AMTRAK	IO_1131	$2.1	ST_MWDC_DBX	2.2%

Cost Allocation Approach

Operating costs in the New England Division Subfamily are largely allocated, with only 10.1 percent directly assigned. Most operating costs are allocated using second-round statistics, representing 63.7 percent of subfamily operating costs, as seen in Table 5-15.

Table 5-15. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for New England Division Subfamily – FM_103

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	10.1%
First Round	26.1%
Second Round	63.7%

The most used statistic in the New England Division Subfamily is Maintenance of Way Direct Costs (ST_MWDC_DBX), which accounts for 53.3 percent of subfamily expenditures, followed by Frequency of Train Trips (ST_FTTX), which accounts for 23.2 percent of subfamily expenditures. Other statistics include No Statistic (Direct Charges) (ST_NO_STX) and Electric Loco and EMU Unit Miles (ST_EUMX), as shown in Table 5-16.

Table 5-16. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for New England Division Subfamily – FM_103

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Maintenance of Way Direct Costs	ST_MWDC_DBX	$49.0	53.3%

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Frequency of Train Trips	ST_FTTX	$21.3	23.2%
No Statistic (Direct Charges)	ST_NO_STX	$8.6	9.4%
Electric Loco and EMU Unit Miles	ST_EUMX	$4.7	5.1%
Total Operated Train Miles	ST_TTMX	$2.1	2.3%
Mechanical Direct Costs	ST_MDC_DBX	$1.7	1.9%

Service Line Allocation Results

New England Division Subfamily costs are primarily allocated to the NTS (combined 56.3 percent), with the largest expenditure in the NTS – NEC service line (44.6 percent). Also notable is Infrastructure Access at 33.5 percent of subfamily expenditures. A complete list of subfamily expenditures by service line can be found in Table 5-17.

Table 5-17. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for New England Division – FM_103

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-NEC	$41.0	44.6%
Infrastructure Access	$30.8	33.5%
Reimbursable	$9.0	9.8%
NTS-SS	$8.3	9.0%
NTS-LD	$2.5	2.7%
All Other Service Lines	$0.4	0.4%

5.1.4 New York Division Subfamily

Family: Maintenance of Way (MoW) -FM_MoW

Subfamily: New York Division – FM_109

Scope

The New York Division Subfamily records and allocates maintenance of way costs from Amtrak's New York Division.

Total costs for the New York Division Subfamily in Fiscal Year 2021 were $165.0 million, accounting for approximately 2.7 percent of Amtrak's total costs. The subfamily consists of 49 cost centers within a single subcategory, General (104_0). Table 5-18 is an overview of Fiscal Year 2021 for the New York Division Subfamily.

Table 5-18. Subfamily Overview for New York Division Subfamily – FM_104

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$165.0
Subcategories Used	General 104_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	49

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $165.0 million, representing a 20.6 percent increase from Fiscal Year 2017. Operating costs are the majority of subfamily costs, with Fiscal Year 2021 seeing a large increase in operating costs from 2020 (a 30.4 percent increase) while capital costs decreased over the same year (a decrease of 49.7 percent), as shown in Figure 5-13.

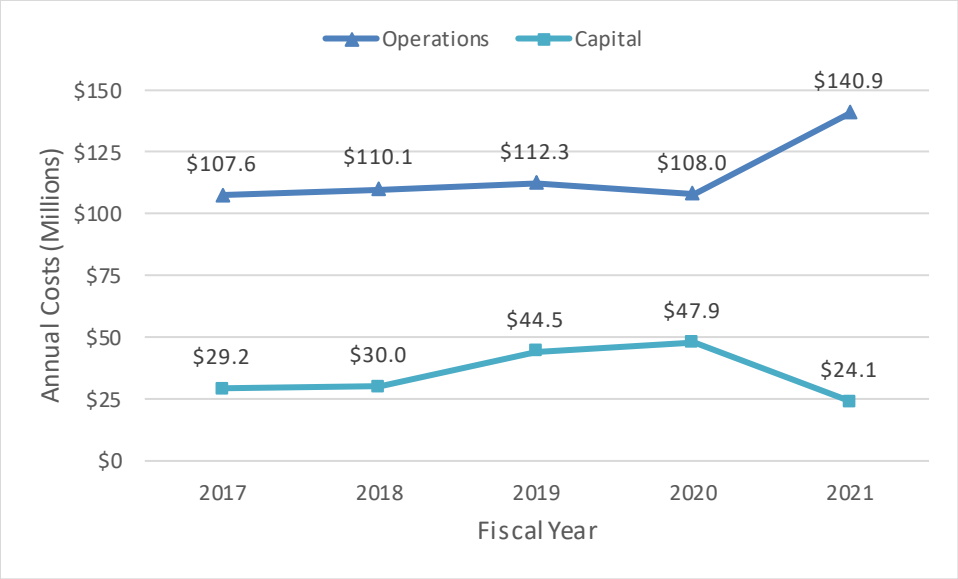

Figure 5-13. New York Division Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at New York Division Subfamily operating cost summary accounts, the majority are labor-related costs, including Wages & Overtime (50.0 percent) and Employee Benefits Expenses (30.5 percent). Other operating costs include Other Expenses (7.9 percent), and Facility Communication & Office (4.0 percent). As shown in Figure 5-14, Salaries, Materials, Employee Related, Fuel Power & Utilities, Train Operations, Casualty & Other Claims, and Advertising & Sales comprise less than 3 percent each of subfamily operating costs.

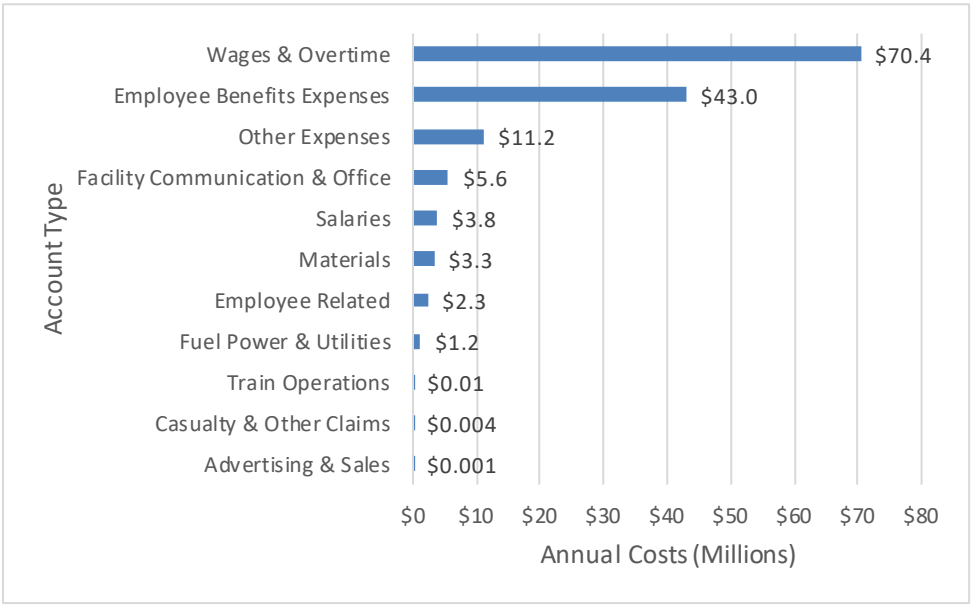

Figure 5-14. New York Division Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Most New York Division Subfamily capital costs, shown in Figure 5-15, are Wages & Overtime (96.9

percent), with the rest being Employee Related (3.2 percent).

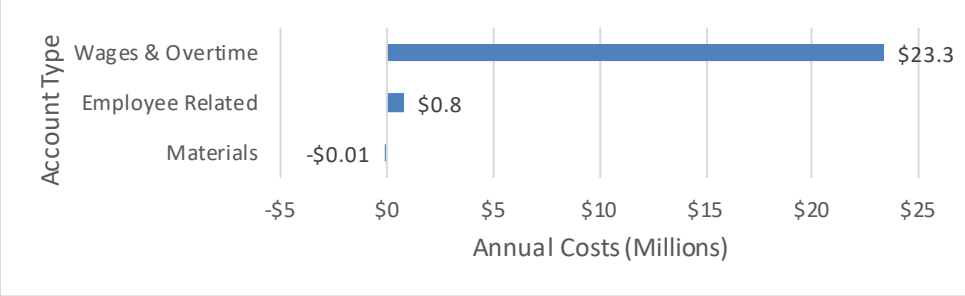

Figure 5-15. New York Division Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The three largest internal orders in the New York Division Subfamily are Capital (IO_4200), No Function (IO_NO_IO), and Reimbursable-General (IO_4100) representing 18.2 percent, 16.2 percent, and 15.6 percent of costs, respectively. Capital (IO_4200) records capital related costs, while Reimbursable-General (IO_4100) records "the labor, material, and other costs performed for and billable to outside parties." Also notable is M of W Overhead (IO_1751), which records various costs in maintenance of way operations and comprises 10.9 percent of costs. The remaining costs by internal order are shown in Table 5-19.

Table 5-19. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for New York Division Subfamily – FM_104

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Capital	IO_4200	$30.0	ST_FTTX	18.2%
No Function	IO_NO_IO	$26.7	ST_MWDC_DBX	16.2%
Reimbursable – General	IO_4100	$25.8	ST_NO_STX	15.6%
M OF W OVERHEAD	IO_1751	$18.0	ST_MWDC_DBX	10.9%
TRACK MAINTENANCE	IO_1703	$10.2	ST_FTTX	6.2%
SIGNAL & INTERLOCKER MAINT	IO_1713	$9.5	ST_FTTX	5.8%
TUNNEL MAINTENANCE	IO_1722	$7.6	ST_FTTX	4.6%
POWER TRANSMISSION SYS MAINT	IO_1718	$5.4	ST_FTTX	3.3%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
STA SVCS-BLDG MAINT	IO_1281	$5.3	ST_PUTX	3.2%
M OF W MANAGERIAL	IO_1701	$4.8	ST_MWDC_DBX	2.9%

Cost Allocation Approach

Costs in the New York Division Subfamily are largely allocated, with only 11.8 percent directly assigned. The largest share of costs are allocated using second-round statistics (49.7 percent).

Table 5-20. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for New York Division Subfamily – FM_104

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	11.8%
First Round	38.5%
Second Round	49.7%

The most used statistic in the New York Division Subfamily is Maintenance of Way Direct Costs (ST_MWDC_DBX), which accounts for 41.2 percent of subfamily expenditures, followed by Frequency of Train Trips (ST_FTTX), which accounts for 28.7 percent of subfamily expenditures. Other statistics include No Statistic (Direct Charges) (ST_NO_STX) and Passenger Car Unit Trips (ST_PUTX), as shown in Table 5-21.

Table 5-21. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for New York Division Subfamily – FM_104

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Maintenance of Way Direct Costs	ST_MWDC_DBX	$68.0	41.2%
Frequency of Train Trips	ST_FTTX	$47.4	28.7%
No Statistic (Direct Charges)	ST_NO_STX	$17.2	10.4%

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Passenger Car Unit Trips	ST_PUTX	$13.1	8.0%
Straight-Line Allocation (1)	ST_NONX	$7.4	4.5%
Electric Loco and EMU Unit Miles	ST_EUMX	$7.4	4.5%

Service Line Allocation Results

New York Division Subfamily costs are largely allocated to Infrastructure Access, comprising 61.7 percent of the subfamily total. Most of the remaining costs are allocated to the NTS (combined 27.5 percent of expenditures), with the largest area being NTS – NEC (19.8 percent of expenditures). The remainder of expenditures are Reimbursable at 10.5 percent, with all other service lines accounting for 0.4 percent.

Table 5-22. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for New York Division – FM_104

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
Infrastructure Access	$101.7	61.7%
NTS-NEC	$32.7	19.8%
Reimbursable	$17.4	10.5%
NTS-SS	$6.4	3.9%
NTS-LD	$6.1	3.7%
All Other Service Lines	$0.6	0.3%

5.1.5 MoW Support Subfamily

Family: Maintenance of Way (MoW) – FM_MoW
Subfamily: MoW Support – FM_105

Scope

The MoW Support Subfamily performs general support activities that support all or some of the other MoW subfamilies. These activities include management and supervision; training; dedicated material control shops and procurement; work, wire, and wreck trains; support work for specific capital projects; and related activities.

Total costs for the MoW Support Subfamily in Fiscal Year 2021 were $570.3 million, accounting for approximately 9.4 percent of Amtrak's total costs. The subfamily consists of 61 cost centers across two subcategories. Table 5-23 is an overview of Fiscal Year 2021 for the MoW Support Subfamily.

Table 5-23. Subfamily Overview for MoW Support Subfamily – FM_105

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$570.3
Subcategories Used	General 105_0, Engineering Training 105_1
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	61

Composition of Subfamily Costs

Subfamily costs for MoW Support in Fiscal Year 2021 were $570.3 million, a decrease of 29.5 percent from Fiscal Year 2017. The majority of MoW Support costs are capital costs ($18.4 million operating, $551.9 million capital). Subfamily operating costs were relatively stable until Fiscal Year 2021, when operating costs decreased 83.6 percent from the previous year. In Fiscal Year 2021, Amtrak consolidated the transfer credits for benefits and capital projects from the various division subfamilies into MoW Support. As these transfers are negative, the net operating costs for the MoW Support Subfamily fell significantly while the net operating costs of the other MoW subfamilies saw a proportionate increase in their operating costs.

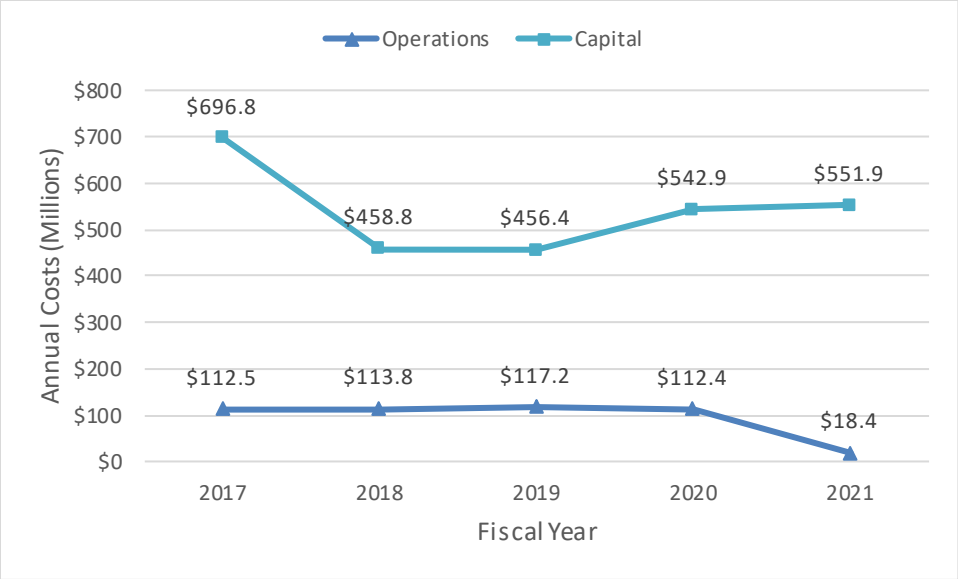

Figure 5-16. MoW Support Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at MoW Support Subfamily operating cost summary accounts, Other Expenses comprise the largest positive cost at 23.0 percent of total absolute costs. A negative transfer within Indirect Costs Capitalized to P&E comprise the largest share of costs at 33.1 percent of total absolute costs. Labor-related costs comprise most remaining subfamily operating costs, with Salaries, Wages & Overtime, and Employee Benefits Expenses making up 13.1 percent, 12.5 percent, and 12.5 percent of total absolute costs, respectively. These and additional operating account categories are shown in Figure 5-17.

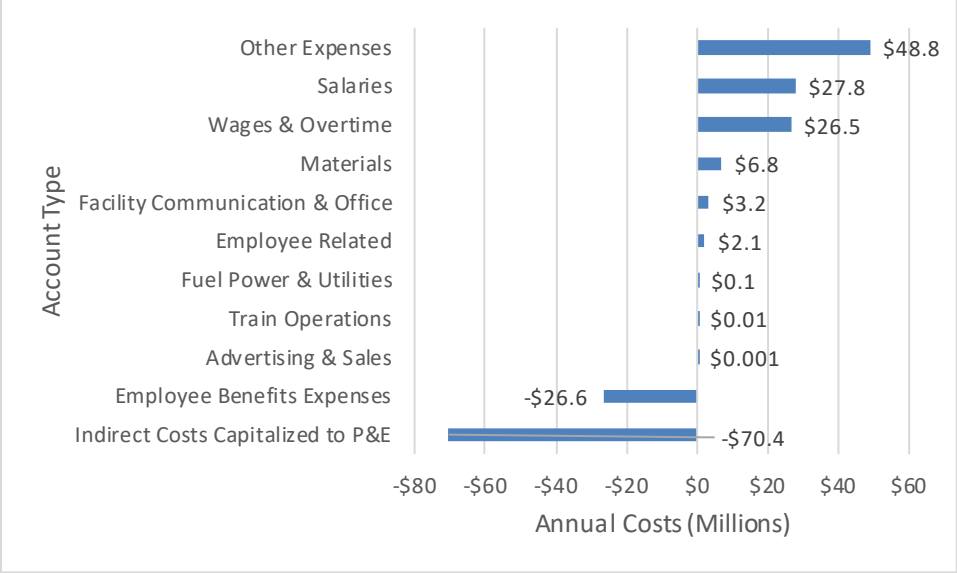

Figure 5-17. MoW Support Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The largest MoW Support Subfamily capital costs are in Materials (27.3 percent) and Other Expenses (24.9 percent). Other major cost areas are Facility Communication & Office (16.8 percent), Indirect Costs

Capitalized to P&E (15.1 percent), and Employee Benefits Expenses (9.5 percent). The remaining cost areas make up less than 7 percent of MoW Support Subfamily capital costs and are shown in Figure 5-18.

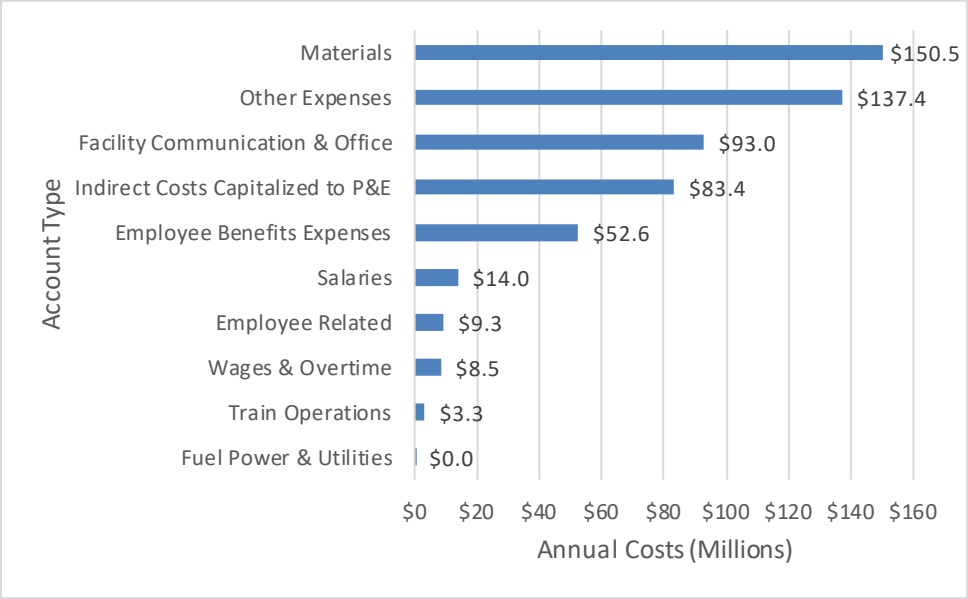

Figure 5-18. MoW Support Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest internal order in the MoW Support Subfamily is Capital (IO_4200), recording 80.1 percent of costs. This internal order records capital project related costs. Other notable internal orders include M of W Managerial (IO_1701) and Reimbursable-General (IO_4100) at 4.8 percent and 4.2 percent respectively. These internal orders record "payroll and other expenses associated with Maintenance of Way engineering/communication and signal management and administration," and "the labor, material, and other costs performed for and billable to outside parties." Additional internal orders recording MoW Support costs are shown in Table 5-24.

Table 5-24. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for MoW Support Subfamily – FM_105

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Capital	IO_4200	$456.6	ST_FTTX, ST_TBDX	80.1%
M OF W MANAGERIAL	IO_1701	$27.3	ST_MWDC_DBX	4.8%
Reimbursable – General	IO_4100	$23.8	ST_NO_STX	4.2%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
No Function	IO_NO_IO	$17.2	ST_FTTX	3.0%
M OF W OVERHEAD	IO_1751	$8.3	ST_MWDC_DBX	1.5%
M OF W MATERIAL CONTROL	IO_1796	$6.9	ST_MWDC_DBX	1.2%
TRACK MAINTENANCE	IO_1703	$4.8	ST_TTMX	0.8%

Cost Allocation Approach

Operating costs in the MoW subfamily are largely allocated with second round (47.9 percent) or first-round (39.0 percent) statistics. Additionally, 13.1 percent of costs are directly assigned, as shown in Table 5-25.

Table 5-25. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for MoW Support Subfamily – FM_105

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	13.1%
First Round	39.0%
Second Round	47.9%

When considering both operating and capital costs; however, the majority of costs are allocated in the first round. Total allocations in MoW Support use a wide array of statistics depending on the nature of the asset as well as the benefiting customer. The most used statistic in the MoW Support Subfamily is Frequency of Train Trips (ST_FTTX), which accounts for 70.2 percent of subfamily expenditures. This statistic is used in conjunction with station pair Stat Qualifiers that isolate the allocation only to trains that traverse the territory specified. By absolute magnitude of allocated costs, the second largest statistic is Maintenance of Way Direct Costs (ST_MWDC_DBX), used for second-round allocations including the transfer credits for benefits and capitalized project costs. Other statistics include No Statistic (Direct Charges) (ST_NO_STX), Electric Loco and EMU Unit Miles (ST_EUMX), and Passenger Car Unit Trips (ST_PUTX) as shown in Table 5-26.

Table 5-26. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for MoW Support Subfamily – FM_105

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Frequency of Train Trips	ST_FTTX	$400.3	70.2%
Total Boards and Deboards	ST_TBDX	$90.2	15.8%
No Statistic (Direct Charges)	ST_NO_STX	$63.9	11.2%
Electric Loco and EMU Unit Miles	ST_EUMX	$47.8	8.4%
Passenger Car Unit Trips	ST_PUTX	$40.5	7.1%
Mechanical Direct Costs	ST_MDC_DBX	$28.5	5.0%
Straight-Line Allocation (1)	ST_NONX	$15.4	2.7%
Maintenance of Way Direct Costs	ST_MWDC_DBX	-$158.0	-27.7%

Service Line Allocation Results

When viewed collectively, the largest share of MoW Support Subfamily costs are allocated to the three NTS service lines at 49.4 percent of subfamily costs. However, the largest single service line expenditure is Infrastructure Access at 38.9 percent of subfamily costs. The other service line allocations are shown in Table 5-27.

Table 5-27. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for MoW Support – FM_105

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
Infrastructure Access	$222.0	38.9%
NTS-NEC	$125.6	22.0%
NTS-SS	$85.3	14.9%
NTS-LD	$70.7	12.4%
Reimbursable	$62.5	11.0%
All Other Service Lines	$4.2	0.7%

5.1.6 System Gangs Subfamily

Family: Maintenance of Way (MoW) – FM_MoW
Subfamily: System Gangs – FM_106

Scope

The System Gangs Subfamily records and allocates MoW costs from Amtrak's MoW System Gangs. System Gangs are roving crews such as the Amtrak track laying machine that travel among regions.

Total costs for the System Gangs Subfamily in Fiscal Year 2021 were $109.1 million, accounting for approximately 1.8 percent of Amtrak's total costs. The subfamily includes 18 cost centers across a single subcategory. Table 5-28 is an overview of Fiscal Year 2021 for the System Gangs Subfamily.

Table 5-28. Subfamily Overview for System Gangs Subfamily – FM_106

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$109.1
Subcategories Used	General 106_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	18

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $109.1 million. While this is a relatively small (2.9 percent) increase from Fiscal Year 2017, there have been substantial shifts in subfamily capital and operating costs over the five-year period. The largest share of subfamily costs are capital, though this has fallen by 44.6 percent from Fiscal Year 2020 to Fiscal Year 2021, from $100.0 million to $55.4 million. Conversely, subfamily operating costs have risen from $5.1 million in Fiscal Year 2020 to $53.7 million in Fiscal Year 2021. The convergence of System Gangs Subfamily capital and operating costs can be seen in Figure 5-19.

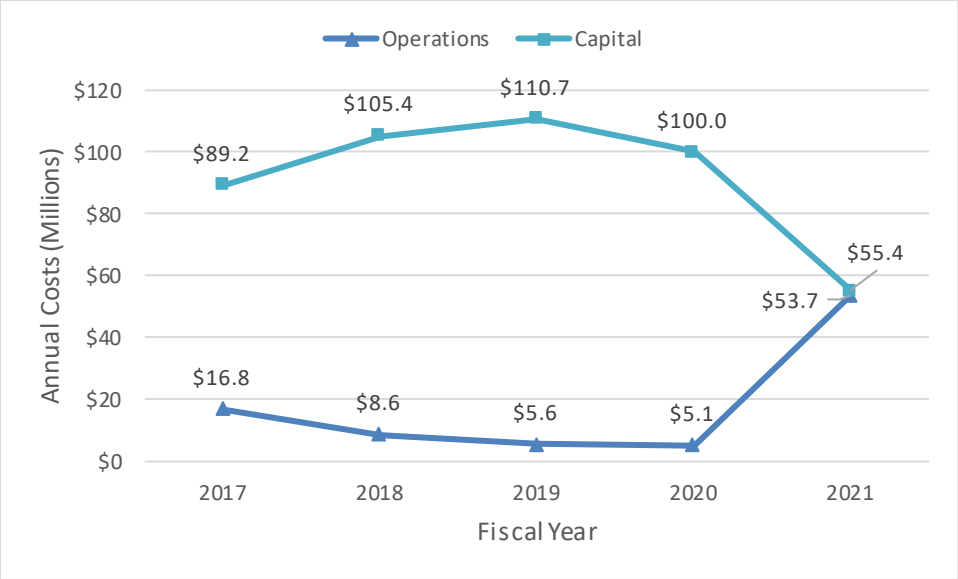

Figure 5-19. System Gangs Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at the System Gangs Subfamily operating cost summary accounts, Employee Benefits Expenses comprise the largest share at 55.2 percent of subfamily operating costs. The next largest operating cost area, Wages & Overtime, is 25.3 percent of costs. Other Expenses, Employee Related, and Materials make up the next largest cost areas at 6.8 percent, 4.8 percent, and 3.6 percent, respectively. The remaining cost areas total less than 5 percent of subfamily operating costs and are shown in Figure 5-20.

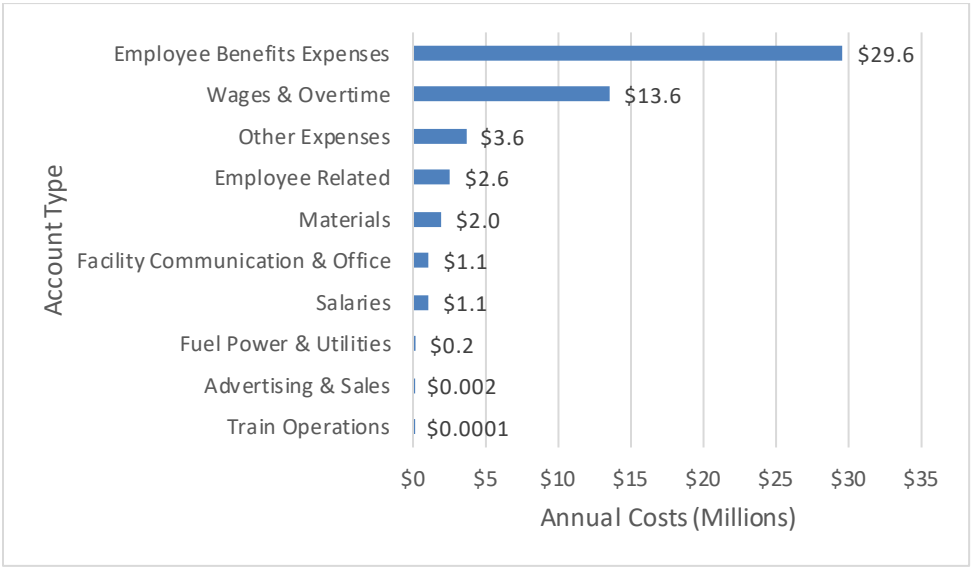

Figure 5-20. System Gangs Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Capital costs are almost entirely Wages & Overtime at 88.2 percent of subfamily capital costs. Employee

Related costs make up 11.8 percent, with a nominal capital cost in Materials, as shown in Figure 5-21.

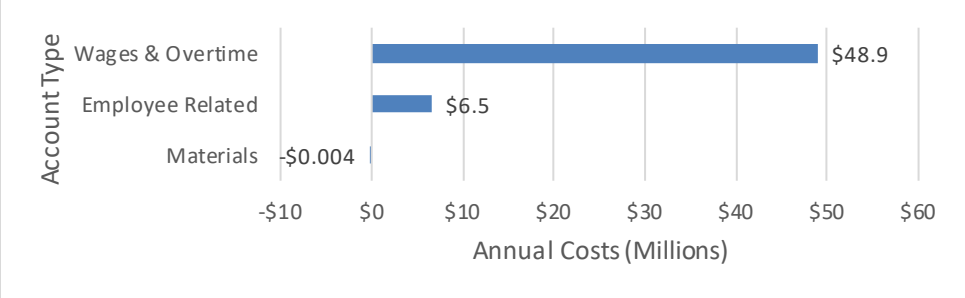

Figure 5-21. System Gangs Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest internal order in the System Gangs Subfamily is Capital (IO_4200), recording 52.7 percent of costs. This internal order records all capital project-related costs. The next two largest internal orders, No Function (IO_NO_IO) and M of W Overhead (IO_1751) record 17.5 percent and 17.1 percent of subfamily costs, respectively. M of W Overhead (IO_1751) records "the cost of supervision, housekeeping, clerical work, travel expenses, camp car operation, small tools, and supplies vehicles, including leases, maintenance and supplies used in Maintenance of Way operations." The remaining costs for top internal orders in the System Gangs Subfamily are shown in Table 5-29.

Table 5-29. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for System Gangs Subfamily – FM_106

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Capital	IO_4200	$57.5	ST_FTTX	52.7%
No Function	IO_NO_IO	$19.0	ST_MWDC_DBX	17.5%
M OF W OVERHEAD	IO_1751	$18.7	ST_MWDC_DBX	17.1%
AUTOMOTIVE VEHICLE EXPENSES	IO_1844	$3.1	ST_MWDC_DBX	2.8%
TRAINING AMTRAK	IO_1131	$2.2	ST_MWDC_DBX	2.0%
Reimbursable – General	IO_4100	$1.9	ST_NO_STX	1.8%
M OF W MANAGERIAL	IO_1701	$1.7	ST_MWDC_DBX	1.6%

Cost Allocation Approach

Most System Gangs operating costs are allocated using second-round statistics (86.8 percent). However,

a relatively small share are directly allocated (4.2 percent) and allocated in the first round (9.0 percent), as shown in Table 5-30.

Table 5-30. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for System Gangs Subfamily – FM_106

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	4.2%
First Round	9.0%
Second Round	86.8%

The most used statistic in the System Gangs MoW subfamily is Maintenance of Way Direct Costs (ST_MWDC_DBX), which accounts for 43.5 percent of subfamily expenditures, followed by Frequency of Train Trips (ST_FTTX), which accounts for 42.1 percent of subfamily expenditures. Other statistics include Passenger Car Unit Trips (ST_PUTX) and No Statistic (Direct Charges) (ST_NO_STX), which account for 9.3 percent and 3.1 percent of subfamily expenditures, respectively, as shown in Table 5-31.

Table 5-31. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for System Gangs Subfamily – FM_106

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Maintenance of Way Direct Costs	ST_MWDC_DBX	$47.5	43.5%
Frequency of Train Trips	ST_FTTX	$46.0	42.1%
Passenger Car Unit Trips	ST_PUTX	$10.1	9.3%
No Statistic (Direct Charges)	ST_NO_STX	$3.4	3.1%

Service Line Allocation Results

The largest share of System Gangs Subfamily expenditures is allocated to the Infrastructure Access service line (52.7 percent). This is closely followed by expenditures to the NTS (combined total of 45.1 percent), the largest of which is NTS – NEC at 29.3 percent of total subfamily expenditures. Other expenditures are attributed to Reimbursable (2.1 percent) and all other service lines (0.01 percent), as shown in Table 5-32.

Table 5-32. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for System Gangs – FM_106

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
Infrastructure Access	$57.5	52.7%
NTS-NEC	$31.9	29.3%
NTS-SS	$11.4	10.4%
NTS-LD	$5.9	5.4%
Reimbursable	$2.3	2.1%
All Other Service Lines	$0.02	0.01%

5.1.7 Western Division Subfamily

Family: Maintenance of Way (MoW) – FM_MoW
Subfamily: Western Division – FM_107

Scope

The Western Division Subfamily records and allocates maintenance of way costs from Amtrak's West Division.

Total costs for the West Division Subfamily in Fiscal Year 2021 were $8.8 million, accounting for approximately 0.1 percent of Amtrak's total costs. The subfamily consists of six cost centers within a single subcategory. Table 5-33 is an overview of Fiscal Year 2021 for the Western Division Subfamily.

Table 5-33. Subfamily Overview for Western Division Subfamily – FM_107

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$8.8
Subcategories Used	General 107_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	6

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $8.8 million, 6.0 percent lower than in Fiscal Year 2017, and 21.7 percent lower than the peak in Fiscal Year 2018. West Division Subfamily costs are largely operating costs, with Fiscal Year 2021 operating costs of $8.6 million and capital costs of $0.1 million. Both operating and capital costs are shown in Figure 5-22.

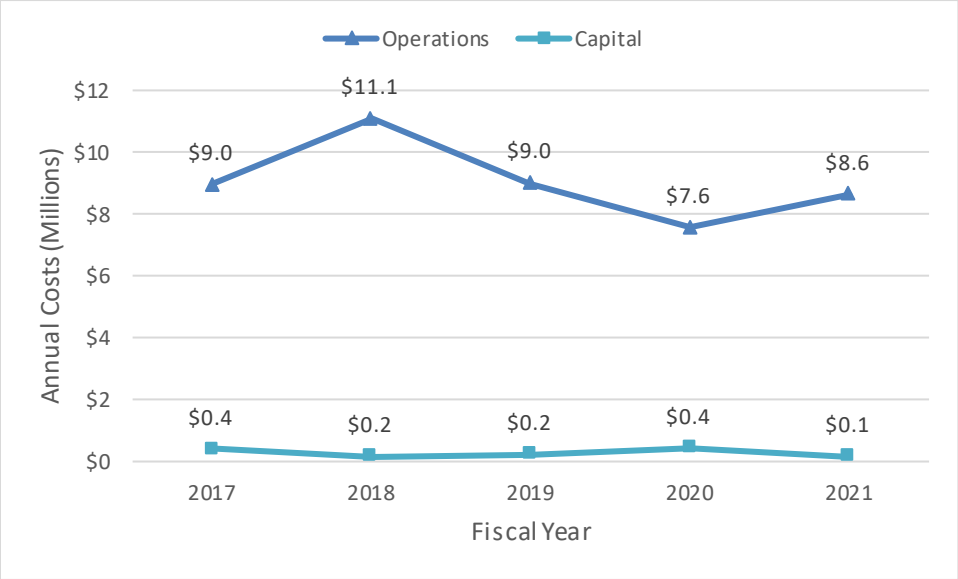

Figure 5-22. Western Division Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at West Division Subfamily operating cost summary accounts, Facility Communication & Office comprises the largest share of operating costs at 38.4 percent. Labor-related costs composed of Wages & Overtime, Employee Benefits Expenses, and Salaries make up the next largest cost areas with 21.1 percent, 17.4 percent, and 12.8 percent, respectively. Other Expenses accounts for 6.0 percent. The remaining cost areas comprise less than 5 percent of the West Division Subfamily operating costs, as shown in Figure 5-23.

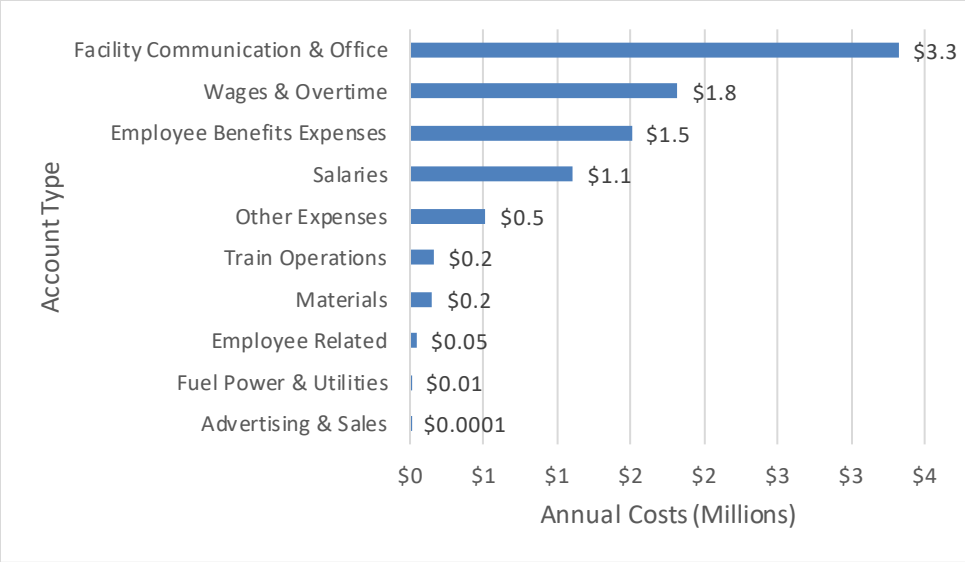

Figure 5-23. Western Division Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Most subfamily capital costs are Wages & Overtime, with a net credit in Facility Communication & Office, as shown in Figure 5-24.

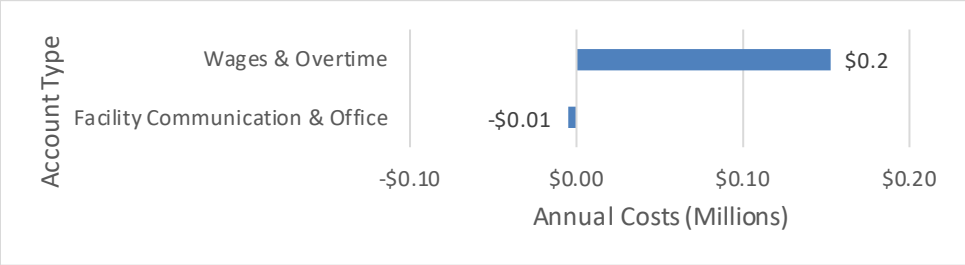

Figure 5-24. Western Division Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest internal order in the West Division Subfamily is Roadway Building Maintenance (IO_1726) at 42.3 percent. This internal order records "all labor, material, and other costs of maintenance of roadway shops and other buildings, including fixtures and grounds surrounding the building." The next largest internal orders are M of W Managerial (IO_1701) and Reimbursable-General (IO_4100) at 16.3 percent and 12.2 percent, respectively. These record "payroll and other expenses associated with Maintenance of Way engineering/communication and signal management and administration," and "the labor, material, and other costs performed for and billable to outside parties." Other top West Division internal orders are listed in Table 5-34.

Table 5-34. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Western Division Subfamily – FM_107

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
ROADWAY BLDG MAINT.	IO_1726	$3.7	ST_MDC_DBX	42.3%
M OF W MANAGERIAL	IO_1701	$1.4	ST_MDC_DBX	16.3%
Reimbursable – General	IO_4100	$1.1	ST_NO_STX	12.2%
No Function	IO_NO_IO	$0.9	ST_MDC_DBX	9.9%
TRACK MAINTENANCE	IO_1703	$0.6	ST_MDC_DBX	7.3%
M OF W OVERHEAD	IO_1751	$0.5	ST_MDC_DBX	5.6%
Capital	IO_4200	$0.2	ST_MDC_DBX	1.8%
COMMUNICATIONS SYS MAINT	IO_1712	$0.1	ST_MDC_DBX	1.4%
AUTOMOTIVE VEHICLE EXPENSES	IO_1844	$0.1	ST_MDC_DBX	1.0%

Cost Allocation Approach

Operating costs in the West Division Subfamily are largely allocated using second-round statistics, accounting for 86.8 percent of operating cost allocations. The next largest share are directly assigned (12.4 percent), as shown in Table 5-35.

Table 5-35. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Western Division Subfamily – FM_107

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	12.4%
First Round	0.8%
Second Round	86.8%

The most used statistic in the West Division Subfamily is Mechanical Direct Costs (ST_MDC_DBX), which accounts for 75.4 percent of subfamily expenditures. Other statistics include No Statistic (Direct Charges) (ST_NO_STX) and Maintenance of Way Direct Costs (ST_MWDC_DBX), which account for 12.4 percent and 11.0 percent of subfamily expenditures, respectively, as shown in Table 5-36.

Table 5-36. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Western Division Subfamily – FM_107

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Mechanical Direct Costs	ST_MDC_DBX	$6.6	75.4%
No Statistic (Direct Charges)	ST_NO_STX	$1.1	12.4%
Maintenance of Way Direct Costs	ST_MWDC_DBX	$1.0	11.0%

Service Line Allocation Results

The largest share of West Division Subfamily expenditures are in NTS – State Supported at 40.7 percent of the total, with another large share of expenditures in NTS – Long Distance (28.3 percent). Reimbursable is the next largest service line for subfamily expenditures at 23.9 percent of the total. Relatively smaller expenditures were made in Commuter Operations (6.5 percent) and all other service lines (0.6 percent), as shown in Table 5-37.

Table 5-37. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Western Division – FM_107

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-SS	$3.6	40.7%
NTS-LD	$2.5	28.3%
Reimbursable	$2.1	23.9%
Commuter Operations	$0.6	6.5%
All Other Service Lines	$0.1	0.6%

5.1.8 Empire District Subfamily

Family: Maintenance of Way (MoW) – FM_MoW
Subfamily: Empire District – FM_108

Scope

The Empire District Subfamily records and allocates maintenance of way costs from Amtrak's Empire District Division.

Total costs for the Empire District Subfamily in Fiscal Year 2021 were $11.6 million, accounting for approximately 0.2 percent of Amtrak's total costs. The subfamily consists of four cost centers within a single subcategory. Table 5-38 is an overview of Fiscal Year 2021 cost allocations for the Empire District Subfamily.

Table 5-38. Subfamily Overview for Empire District Subfamily – FM_108

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$11.6
Subcategories Used	General 108_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Reimbursable, Commercial, Infrastructure Access
Number of Cost Centers	4

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $11.6 million. The majority of Empire District costs are operating costs, with $9.7 million operating costs and $1.9 million capital costs in Fiscal Year 2021. Subfamily operating costs have been relatively stable since Fiscal Year 2018, when they saw a large decrease (68.7 percent) in operating costs compared to Fiscal Year 2017, as shown in Figure 5-25. This decrease is largely attributable to a decrease in costs in SR Director Empire Corridor (CC_3713), rather than movement of cost categories outside the subfamily. Capital costs increased from $2.0 million to $4.0 million in Fiscal Year 2018, and remained relatively stable through Fiscal Year 2020, before decreasing in Fiscal Year 2021.

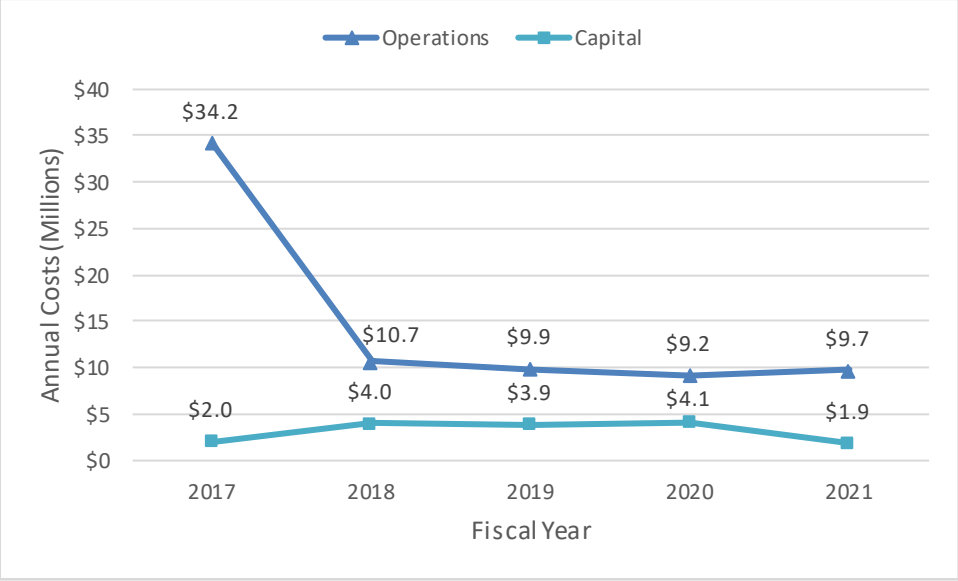

Figure 5-25. Empire District Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at Empire District Subfamily operating cost summary accounts, most costs are labor-related. These include Wages & Overtime (38.5 percent) and Employee Benefits Expenses (29.5 percent), with smaller costs in Salaries (3.5 percent). Materials, Other Expenses, and Facility Communication & Office comprise the next largest shares of subfamily operating costs at 8.7 percent, 8.6 percent, and 7.5 percent, respectively. Empire District Subfamily operating costs are shown in Figure 5-26.

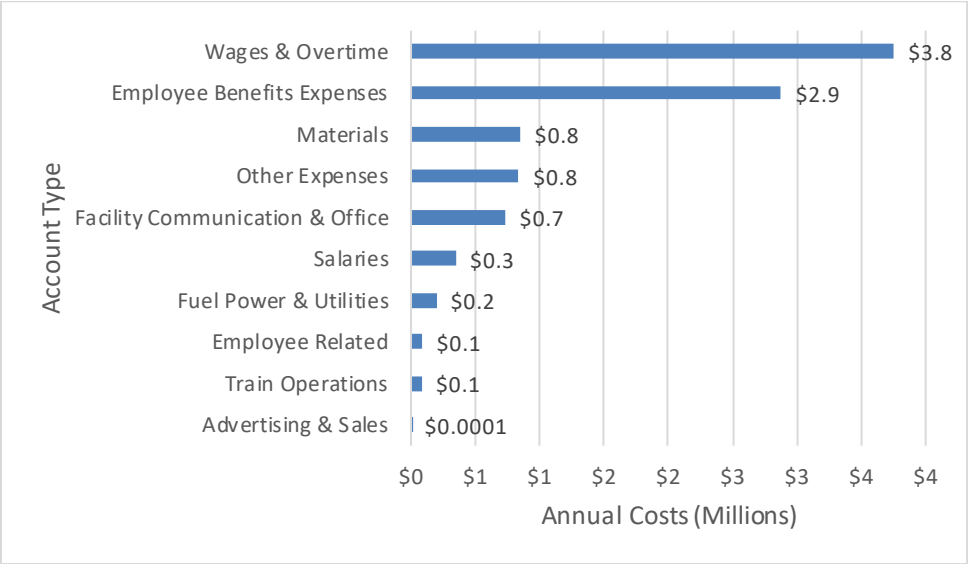

Figure 5-26. Empire District Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Empire District Subfamily capital costs are nearly all (97.4 percent) in the Wages & Overtime account category. As shown in Figure 5-27, the remaining subfamily capital costs are Employee Related.

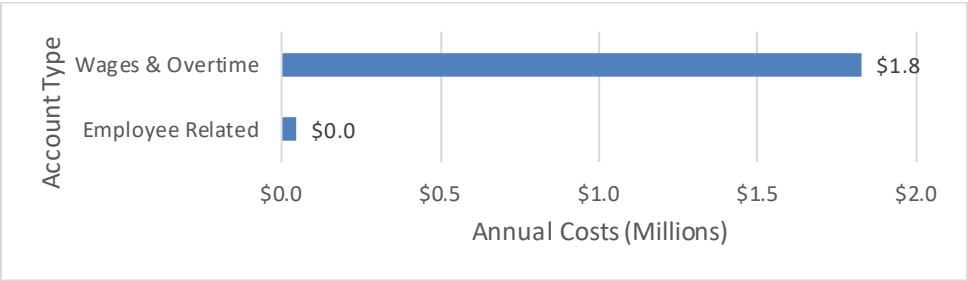

Figure 5-27. Empire District Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest internal order in the Empire District Subfamily is Capital (IO_4200), accounting for 16.1 percent of subfamily expenditures. This internal order "records all capital projects related costs (capitalizable and non-capitalizable) associated with Amtrak's capital program." Similar in scale are the next two largest internal orders, M of W Overhead (IO_1751) and Track Maintenance (IO_1703) at 15.9 percent and 15.5 percent respectively. The first records "the cost of supervision, housekeeping, clerical work, travel expenses, camp car operation, small tools, and supplies vehicles, including leases, maintenance and supplies used in Maintenance of Way operations" while the second records "all labor,

material, and other costs of routine track maintenance. Includes changing of rail, ties, ballast, switches and turnout material, and other track material. Also includes surfacing track, gauging track, patrolling and inspecting track, routine grinding and welding of rail, frogs and switches, and repairing insulated joints." The next largest is No Function (NO_IO_NO) at 15.3 percent. Other internal orders comprising the Empire District Subfamily are shown in Table 5-39.

Table 5-39. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Empire District Subfamily – FM_108

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Capital	IO_4200	$1.9	ST_FTTX	16.1%
M OF W OVERHEAD	IO_1751	$1.8	ST_NO_STX	15.9%
TRACK MAINTENANCE	IO_1703	$1.8	ST_NO_STX	15.5%
No Function	IO_NO_IO	$1.8	ST_MWDC_DBX	15.3%
Reimbursable – General	IO_4100	$1.1	ST_NO_STX	9.3%
SIGNAL & INTERLOCKER MAINT	IO_1713	$0.7	ST_NO_STX	5.6%
AUTOMOTIVE VEHICLE EXPENSES	IO_1844	$0.6	ST_MWDC_DBX	5.2%
M OF W MANAGERIAL	IO_1701	$0.4	ST_MWDC_DBX	3.8%
STA SVCS-BLDG MAINT	IO_1281	$0.4	ST_MWDC_DBX	3.4%
M OF W SPEC PROJ	IO_1798	$0.3	ST_MWDC_DBX	2.4%

Cost Allocation Approach

A majority (54.9 percent) of Empire District Subfamily operating costs are allocated via direct assignment, with nearly all additional operating costs (44.1 percent of total) allocated in the second round, as shown in Table 5-40.

Table 5-40. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Empire District Subfamily – FM_108

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	54.9%
First Round	1.1%
Second Round	44.1%

The most used statistic in the Empire District Subfamily is No Statistic (Direct Charges) (ST_NO_STX), which accounts for 46.0 percent of subfamily expenditures, largely for reimbursable work directly tied to reimbursable projects. Other statistics include Maintenance of Way Direct Costs (ST_MWDC_DBX) and Frequency of Train Trips (ST_FTTX), which account for 37.0 percent and 12.0 percent of subfamily expenditures, respectively, as shown in Table 5-41.

Table 5-41. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Empire District Subfamily – FM_108

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
No Statistic (Direct Charges)	ST_NO_STX	$5.4	46.0%
Maintenance of Way Direct Costs	ST_MWDC_DBX	$4.3	37.0%
Frequency of Train Trips	ST_FTTX	$1.4	12.0%

Service Line Allocation Results

The largest share of Empire District Subfamily costs is allocated to the Reimbursable service line, comprising 49.8 percent of the subfamily total. The remaining allocations include both NTS – State Supported (36.7 percent), and NTS – Long Distance (9.0 percent). The remaining subfamily expenditures are Infrastructure Access (3.7 percent), and all other service lines (0.9 percent), as shown in Table 5-42.

Table 5-42. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Empire District – FM_108

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
Reimbursable	$5.8	49.8%
NTS-SS	$4.3	36.7%
NTS-LD	$1.0	9.0%

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
Infrastructure Access	$0.4	3.7%
All Other Service Lines	$0.1	0.9%

5.1.9 Michigan Line Subfamily

Family: Maintenance of Way (MoW) – FM_MoW
Subfamily: Michigan Line – FM_109

Scope

The Michigan Line Subfamily records and allocates maintenance of way costs from Amtrak's Michigan Line Division.

Total costs for the Michigan Line Subfamily in Fiscal Year 2021 were $16.6 million, accounting for approximately 0.3 percent of Amtrak's total costs. The subfamily consists of two cost centers in a single subcategory, Michigan Corr Track & Struct Jackson (CC_3112) and Michigan Corr C&S Jackson (CC_3116). Table 5-43 is an overview of Fiscal Year 2021 for the Michigan Line Subfamily.

Table 5-43. Subfamily Overview for Michigan Line Subfamily – FM_109

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$16.6
Subcategories Used	General 109_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	2

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $16.3 million, an increase of 59.8 percent from their lowest value, seen in Fiscal Year 2018. Michigan Line costs are largely operating costs, with $16.6 million in operating and $0.02 million in capital costs in Fiscal Year 2021. Capital costs were consistently below $0.1 million over the five-year period, while operating costs varied, as shown in Figure 5-28.

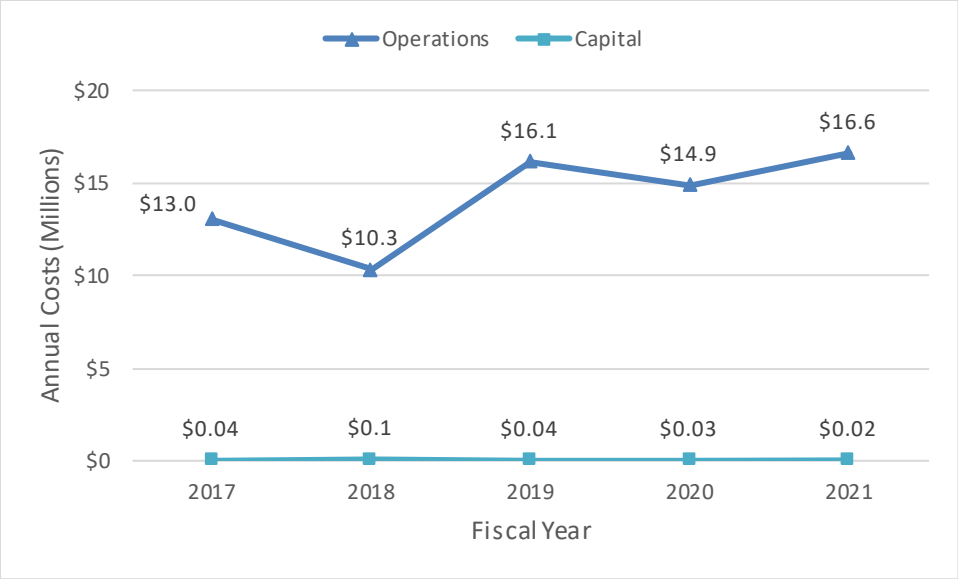

Figure 5-28. Michigan Line Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

The Materials account category comprises the largest share of Michigan Line operating costs at 49.3 percent. Labor-related costs, including Wage & Overtime (25.4 percent) and Employee Benefits Expenses (13.0 percent), are the next largest shares of operating costs. Other operating costs include Other Expenses (8.1 percent) and Facility Communication & Office (3.6 percent). As shown in Figure 5-29, Employee Related, Train Operations, and Fuel Power & Utilities comprise less than 1 percent of operating costs.

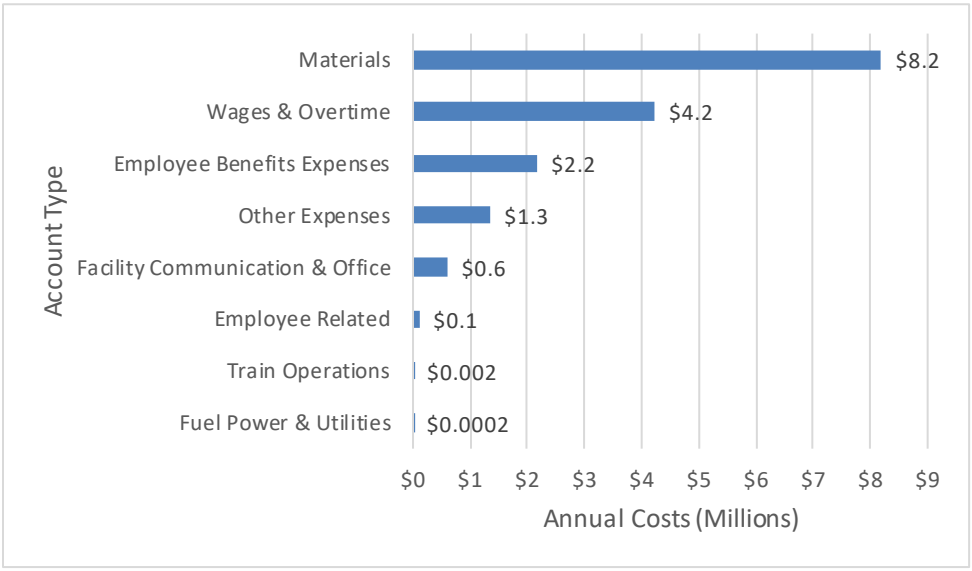

Figure 5-29. Michigan Line Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Michigan Line capital costs are almost entirely Wages & Overtime (97.8 percent), as shown in Figure

5-30.

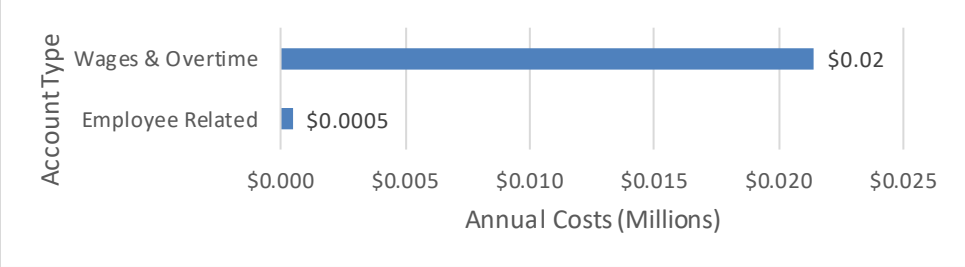

Figure 5-30. Michigan Line Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest internal order in the Michigan Line Subfamily is Reimbursable – General (IO_4100), recording 83.8 percent of costs. This internal order "records the labor, material, and other costs performed for and billable to outside parties." The other Michigan Line Subfamily internal order is M of W Overhead (IO_1751) at 3.4 percent, which "records the cost of supervision, housekeeping, clerical work, travel expenses, camp car operation, small tools, and supplies vehicles, including leases, maintenance and supplies used in Maintenance of Way operations." The remaining costs are recorded under No Function (IO_NO_IO) at 8.9 percent, as shown in Table 5-44.

Table 5-44. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Michigan Line Subfamily – FM_109

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Reimbursable – General	IO_4100	$13.9	ST_NO_STX	83.8%
No Function	IO_NO_IO	$1.5	ST_FTTX	8.9%
M OF W OVERHEAD	IO_1751	$0.6	ST_NO_STX	3.4%

Cost Allocation Approach

Operating costs in the Michigan Line Subfamily are largely directly assigned (82.8 percent). Smaller shares are allocated in the first and second rounds at 11.1 and 6.2 percent, respectively, as shown in Table 5-45.

Table 5-45. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Michigan Line Subfamily – FM_109

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	82.8%

Allocation Round	Percent of Costs Allocated in Allocation Round
First Round	11.1%
Second Round	6.2%

The most used statistic in the Michigan Line Subfamily is No Statistic (Direct Charges) (ST_NO_STX), which accounts for 82.7 percent of subfamily expenditures, largely for reimbursable work. Other statistics include Frequency of Train Trips (ST_FTTX) and Maintenance of Way Direct Costs (ST_MWDC_DBX), which account for 11.1 percent and 6.2 percent of subfamily expenditures, respectively, as shown in Table 5-46.

Table 5-46. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Michigan Line Subfamily – FM_109

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
No Statistic (Direct Charges)	ST_NO_STX	$13.8	82.7%
Frequency of Train Trips	ST_FTTX	$1.8	11.1%
Maintenance of Way Direct Costs	ST_MWDC_DBX	$1.0	6.2%

Service Line Allocation Results

Michigan Line Subfamily costs are primarily allocated to the Reimbursable service line, comprising 82.6 percent of the subfamily total. The remaining allocations are to Infrastructure Access (8.7 percent), NTS – State Supported (8.6 percent), and all other service lines (0.1 percent), as shown in Table 5-47.

Table 5-47. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Michigan Line – FM_109

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
Reimbursable	$13.7	82.6%
Infrastructure Access	$1.4	8.7%
NTS-SS	$1.4	8.6%
All Other Service Lines	$0.01	0.1%

5.2 Maintenance of Equipment (MoE) Family (FM_MOE)

The activities and associated costs for keeping Amtrak's rolling stock in working order are tracked and managed at cost centers in the Maintenance of Equipment (MoE) Family. In addition to Amtrak's rolling stock, this includes rolling stock owned by other entities on a reimbursable basis, including locomotives, passenger coaches, and other equipment. The family performs several levels of operating maintenance, including turnaround servicing between each departure, preventative and scheduled maintenance, bad order and wreck repairs, as well as capital programs including overhauls and component renewals that extend the service life of assets. Amtrak captures MoE activities by WBS and equipment type using its SPEAR asset management system, allowing for labor and materials expenses to be appropriately allocated to services that utilize that equipment. The family consists of eight subfamilies described below, including a new subfamily not included in the 2016 report, MoE Material Control (FM_208).

Most costs in the MoE Family are operating costs, which held steady around $600 million over the five-year analysis window, as shown in Figure 5-31. Capital costs represented a smaller share of total MoE Family costs, with a wider variance from year to year, from $208.9 million in Fiscal Year 2017 up to $287.6 million in Fiscal Year 2019, before dropping $116 million over two years to $171.5 million in Fiscal Year 2021.

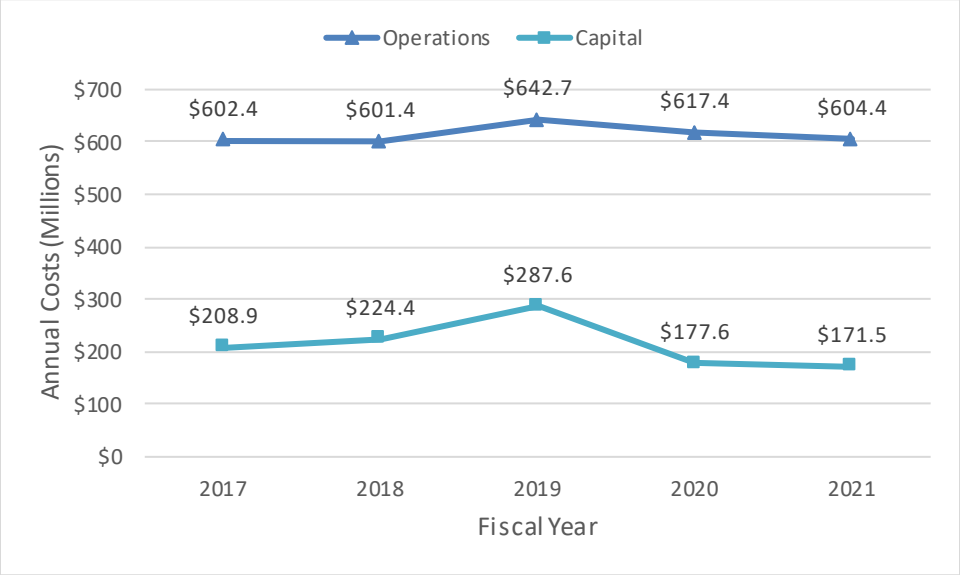

Figure 5-31. MoE Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

A single year's operating costs for Fiscal Year 2021 gives the relative sizes of each MoE subfamily in Fiscal Year 2021. The largest MoE subfamily by operating costs is Turnaround at $231.6 million, followed by MoE Locomotive Maintenance at $93.9 million, and MoE Multiple at $83.1 million (Figure 5-32).

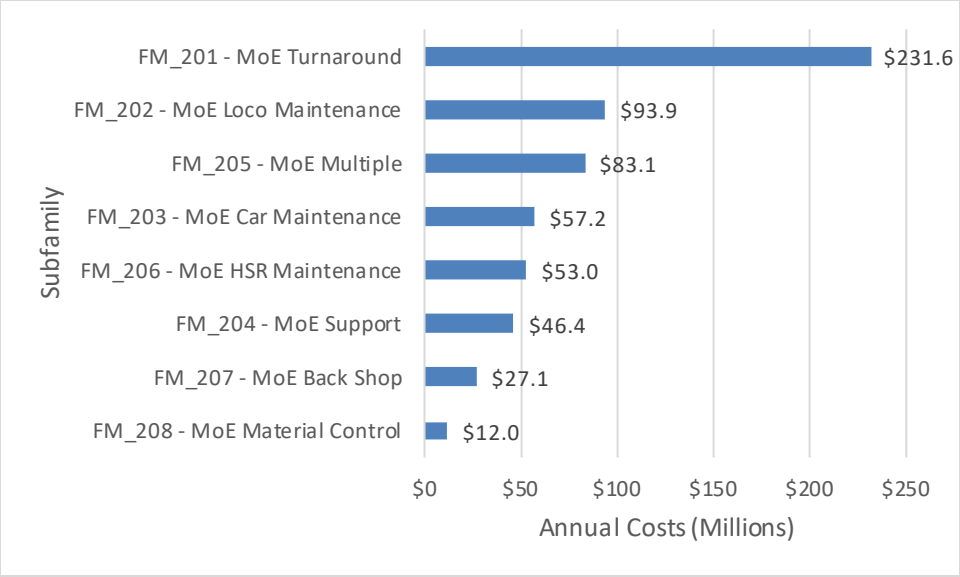

Figure 5-32. Subfamily Distribution of MoE Operating Costs, Fiscal Year 2021 (Millions)

Fiscal Year 2021 MoE Family capital costs, shown in Figure 5-33, are concentrated primarily in the Back Shop and MoE Multiple subfamilies, together representing 97.4 percent of MoE capital costs. Minor capital costs are found in all other subfamilies except Material Control, which had no capital costs in Fiscal Year 2021.

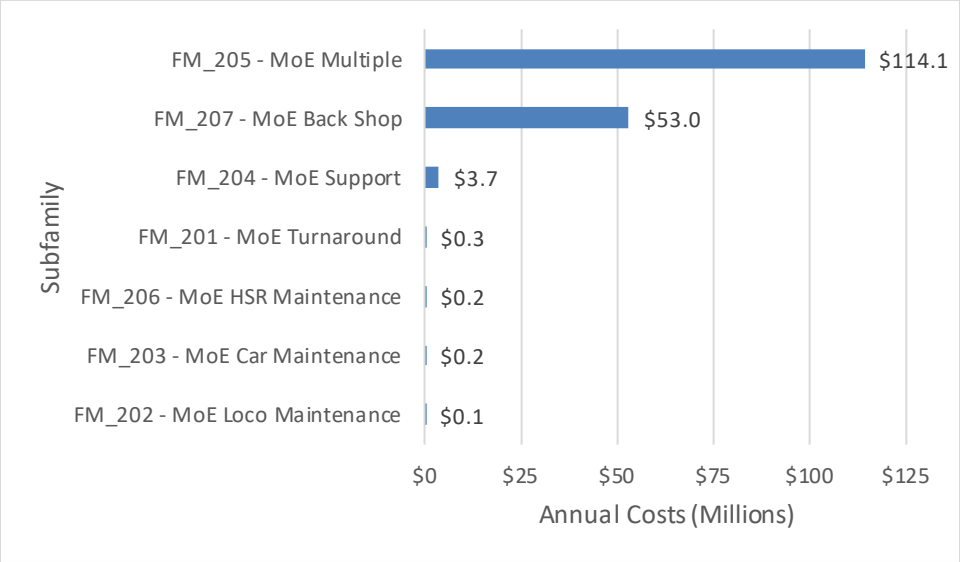

Figure 5-33. Subfamily Distribution of MoE Capital Costs, Fiscal Year 2021 (Millions)

The subsections below describe each MoE subfamily in detail, including the activities performed, a breakdown of account costs, the approach to cost allocation, and a summary of allocation data.

5.2.1 Turnaround Subfamily

Family: Maintenance of Equipment (MoE) – FM_MOE
Subfamily: Turnaround – FM_201

Scope

The Turnaround Subfamily performs cleaning, inspections, and minor repairs on Amtrak trains and Amtrak-operated commuter trains before each departure and en route. Turnaround facilities can work on cars or locomotives. At some locations, turnaround services are performed by outside contractors rather than Amtrak employees. Additionally, Amtrak employees known as "train riders" accompany trains and perform minor en route repairs as required.

Total costs for the Turnaround Subfamily in Fiscal Year 2021 were $231.8 million, accounting for approximately 3.8 percent of Amtrak's total costs. The subfamily consists of 56 cost centers within a single subcategory. Table 5-48 is an overview of Fiscal Year 2021 for the Turnaround Subfamily.

Table 5-48. Subfamily Overview for Turnaround Subfamily – FM_201

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$231.8
Subcategories Used	General 201_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	56

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $231.8 million, a 2.1 percent decrease from Fiscal Year 2020 and a 41.5 percent increase from Fiscal Year 2017. Turnaround costs are almost exclusively operating costs ($231.6 million operating, $0.3 million capital) with minimal capital costs recorded for the five-year analysis period. Year over year, Turnaround costs are flat but for a 40.4 percent increase in Fiscal Year 2019. Much of the total gain in costs that year occurred when Amtrak reclassified several cost centers

from the MoE Multiple Subfamily into Turnaround.

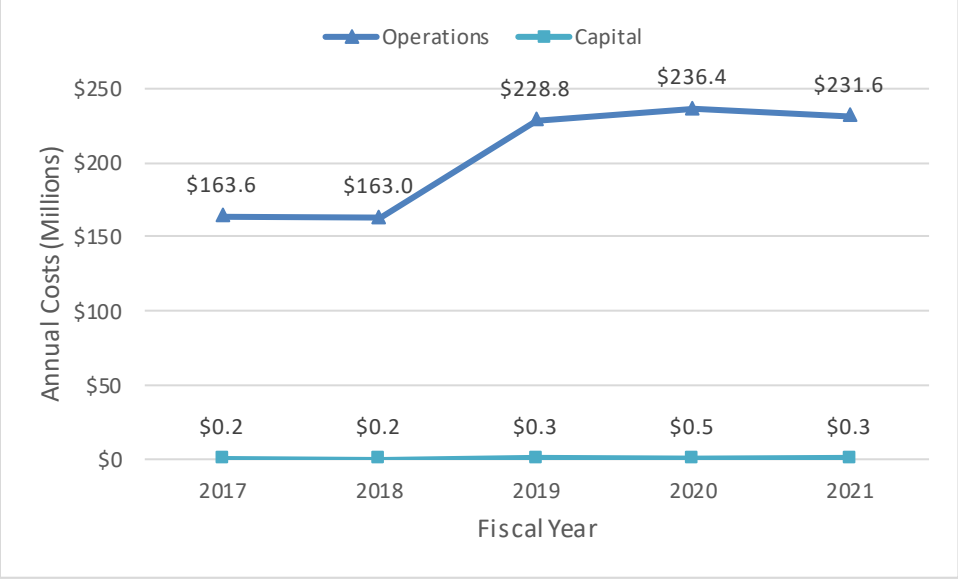

Figure 5-34. Turnaround Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at the summary accounts, labor-related costs dominate the subfamily. Turnaround costs are concentrated largely in Wages & Overtime and the Employee Benefits Expenses account categories at 49.6 percent and 26.5 percent, respectively (Figure 5-35). Other noteworthy cost types include Materials used during turnaround servicing (9.6 percent), utilities expenses at turnaround facilities (3.8 percent), management salary (3.0 percent), and other facility expenses.

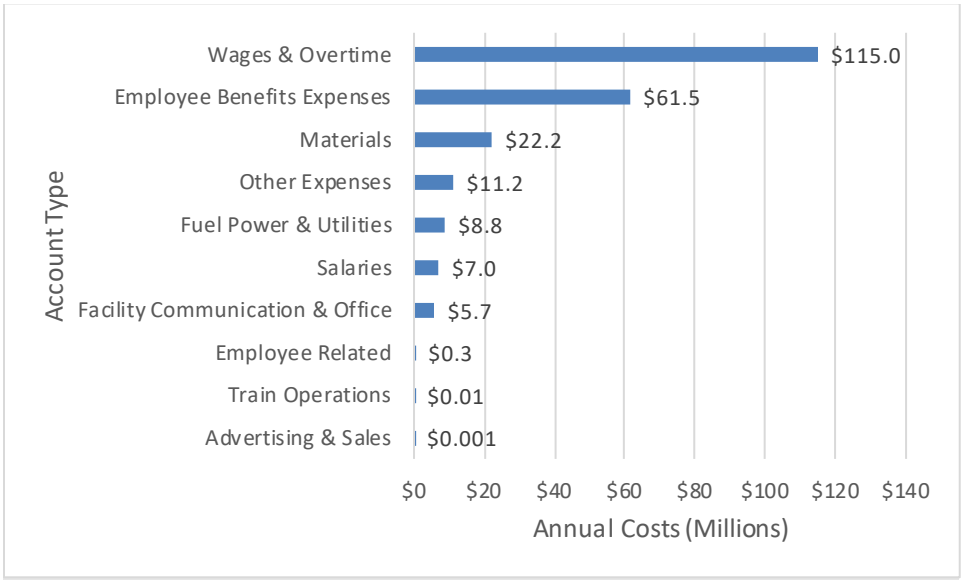

Figure 5-35. Turnaround Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The minor Turnaround capital expenses are all in the Wages & Overtime and Employee Related account

categories, concentrated almost exclusively in the former.

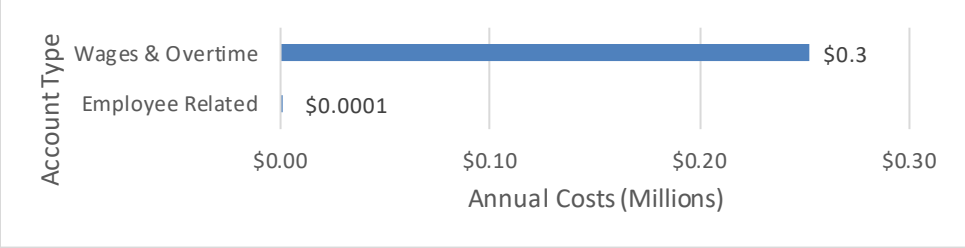

Figure 5-36. Turnaround Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest single internal order in the Turnaround Subfamily is Train and Consist Turnaround Service (IO_1828), recording 27.2 percent of costs. This internal order records "all costs of (1) mechanical and electrical inspections and incidental maintenance of cars before dispatch to service from a yard or station (turnaround); (2) servicing and preparing cars for service." After the internal order No Function (IO_NO_IO), which is largely used for benefits charges, M of E Shop Facility (IO_1806), M of E Vac/Holiday/Non-prod Labor (IO_1815), and M of E Supv Cler & Office (IO_1808) round out the top five. These internal orders capture labor, material, and costs of maintaining the turnaround facilities, non-productive labor time for turnaround employees, and the payroll and office expenses of Turnaround shop managers, foremen, and supervisors. See Table 5-49 for the top internal orders related to Turnaround costs and the primary statistic used to allocate each.

Table 5-49. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Turnaround Subfamily – FM_201

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
TRAIN & CONSIST TURNAROUND SERVICE	IO_1828	$63.0	ST_NO_STX	27.2%
No Function	IO_NO_IO	$59.6	ST_MDC_DBX	25.7%
M OF E SHOP FACILITY	IO_1806	$15.8	ST_MDC_DBX	6.8%
M OF E-VAC/HOLIDAY/NON-PROD LABOR	IO_1815	$10.6	ST_MDC_DBX	4.6%
M OF E SUPV CLER & OFFICE	IO_1808	$10.0	ST_MDC_DBX	4.3%
CAR BAD ORDERS	IO_1830	$10.0	ST_UMX	4.3%
M OF E OVERHEAD	IO_1814	$8.9	ST_MDC_DBX	3.8%
M OF E	IO_1801	$8.4	ST_MDC_DBX	3.6%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
MANAGERIAL				
CONTRACT ROLL STK MGT/MAINT	IO_1851	$8.0	ST_NO_STX	3.5%
Reimbursable – General	IO_4100	$7.9	ST_NO_STX	3.4%

Cost Allocation Approach

Costs in the Turnaround Subfamily can be either directly assigned to trains or are shared costs allocated in the first or second round. Directly assigned operating costs account for 36.7 percent of the subfamily total with "Train Rider" costs for en route cleaning, outside contracts for turnaround servicing, and reimbursable work directly assigned to trains, largely captured by is Train and Consist Turnaround Service (IO_1828). These costs require a train number to assign costs directly to the appropriate train and no statistic is used. First-round allocated costs make up 16.2 percent of the subfamily total with the remaining 47.2 percent allocated by second-round statistics.

Table 5-50. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Turnaround Subfamily – FM_201

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	36.7%
First Round	16.2%
Second Round	47.2%

Shared turnaround costs are allocated to those Amtrak trains or Amtrak-operated commuter trains that receive turnaround servicing services prior to or during passenger operations. Because turnaround servicing is typically allocated to arriving trains (or en route), a train group is sometimes necessary for each turnaround cost center to identify the specific trains to which costs at a cost center are allocated. Departing trains allocate turnaround servicing costs at their destination cost center. Shared costs closely associated with the service, inspection, and light maintenance during turnaround are allocated in the first round. These costs primarily use the Average Locos and Cars Used per Day (ST_UUX) or Locomotive and Car Unit Miles (ST_UMX) statistics with the appropriate equipment-type Stat Qualifier. As equipment may be cycled through the network, some equipment maintenance at Turnaround facilities is allocated nationally to all routes that use that equipment type. See Table 5-51 for a list of the most prominent allocation statistics used in the Turnaround Subfamily.

Table 5-51. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Turnaround Subfamily – FM_201

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Mechanical Direct Costs	ST_MDC_DBX	$109.2	47.1%
No Statistic (Direct Charges)	ST_NO_STX	$84.9	36.6%
Average Locos and Cars Used per Day	ST_UUX	$14.9	6.4%
Locomotive and Car Unit Miles	ST_UMX	$13.2	5.7%

The single largest statistic by allocated costs in the Turnaround Subfamily is Mechanical Direct Costs (ST_MDC_DBX), allocating 47.1 percent of the subfamily total. This statistic is used to allocate overhead or support costs such as senior management, facilities expenses, or other costs that cannot be tied to a particular type of equipment and are allocated in the second round using a Cost Center Stat Qualifier. The Mechanical Direct Costs statistic is calculated as the sum of prior round turnaround expenses attributed to a train or other customer at a cost center. After the directly assigned and first-round expenses are allocated, Mechanical Direct Costs are calculated, and indirect support costs are allocated to each train or customer in proportion to its share of total Mechanical Direct Costs for all trains or customers using turnaround services at that specific Cost Center. With directly assigned costs making up 36.6 percent of the subfamily, those two statistics jointly comprise 83.7 percent of the total. Average Locos and Cars Used per Day (ST_UUX) and Locomotive and Car Unit Miles (ST_UMX) account for the majority of remaining costs.

Service Line Allocation Results

Turnaround costs are primarily allocated to the three NTS service lines, together comprising 87.5 percent of the subfamily total, the largest of which is the State Supported service line at 35.5 percent. Additionally, Turnaround costs are allocated to the Commuter Operations and Reimbursable service line, with minor allocations to the other service lines. All service line shares of Turnaround costs are shown in Table 5-52.

Table 5-52. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Turnaround – FM_201

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-SS	$82.2	35.5%

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$72.8	31.4%
NTS-NEC	$47.8	20.6%
Commuter Operations	$18.5	8.0%
Reimbursable	$9.7	4.2%
All Other Service Lines	$0.8	0.4%

5.2.2 Locomotive Maintenance Subfamily

Family: Maintenance of Equipment (MoE) – FM_MOE
Subfamily: Locomotive Maintenance – FM_202

Scope

The Locomotive Maintenance Subfamily performs maintenance on Amtrak's diesel and electric locomotives. The work performed in this subfamily includes both preventive maintenance and as-needed maintenance due to locomotive failures, bad orders, freeze damage, and wrecks. No significant capital work is undertaken in this subfamily; instead, the Back Shop Subfamily performs locomotive capital work. Amtrak's SPEAR asset management system tracks labor and materials costs, the type of work performed, and the specific unit number and equipment type on which maintenance work is performed.

Subfamily expenditures for Fiscal Year 2021 were $94.0 million and account for approximately 1.5 percent of Amtrak's total costs. The subfamily consists of eight cost centers within one subcategory. Table 5-53 is an overview of Fiscal Year 2021 cost allocation for the Locomotive Maintenance Subfamily.

Table 5-53. Subfamily Overview for Locomotive Maintenance Subfamily – FM_202

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$94.0
Subcategories Used	General 202_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	8

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $94.0 million, a 3.0 percent gain from Fiscal Year 2020 and a 19.1 percent gain from Fiscal Year 2017. Locomotive Maintenance costs are almost exclusively operating costs ($93.9 million operating, $0.1 million capital) with minimal capital costs recorded for the five-year analysis period. Year over year, Locomotive Maintenance costs are relatively flat with the largest increase, 12.0 percent, occurring in Fiscal Year 2018.

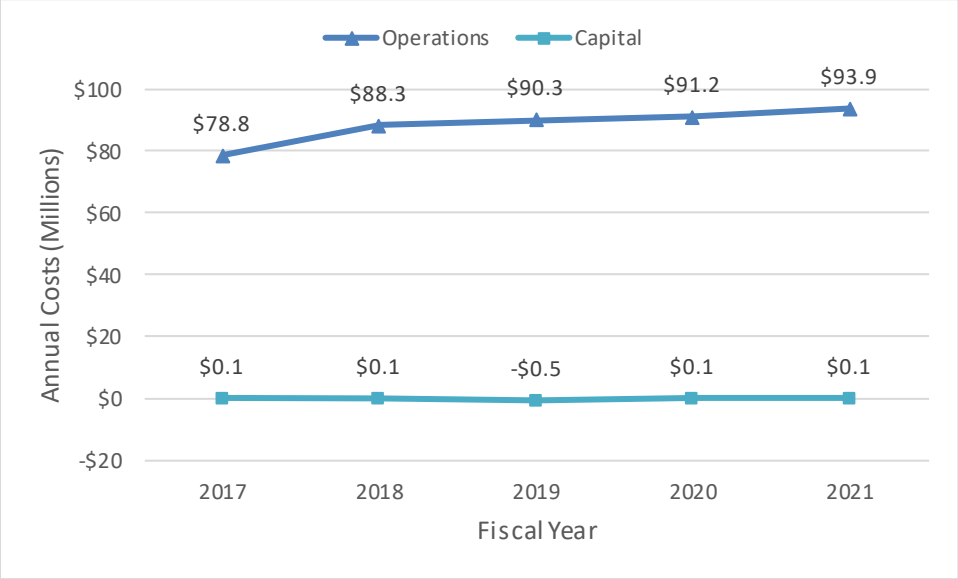

Figure 5-37. Locomotive Maintenance Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at the summary accounts, materials and labor-related costs dominate the subfamily. Locomotive Maintenance costs are concentrated largely in Materials at 45.4 percent. The labor-related accounts Wages & Overtime, Employee Benefits Expenses, and Salaries account for 35.0 percent (Figure 5-38). Other noteworthy cost types include other maintenance expenses (18.8 percent). Capital costs (not shown) play a minor role within the subfamily, accounting for just $0.1 million, or less than one percent of subfamily costs, and are entirely in the Wages & Overtime account category.

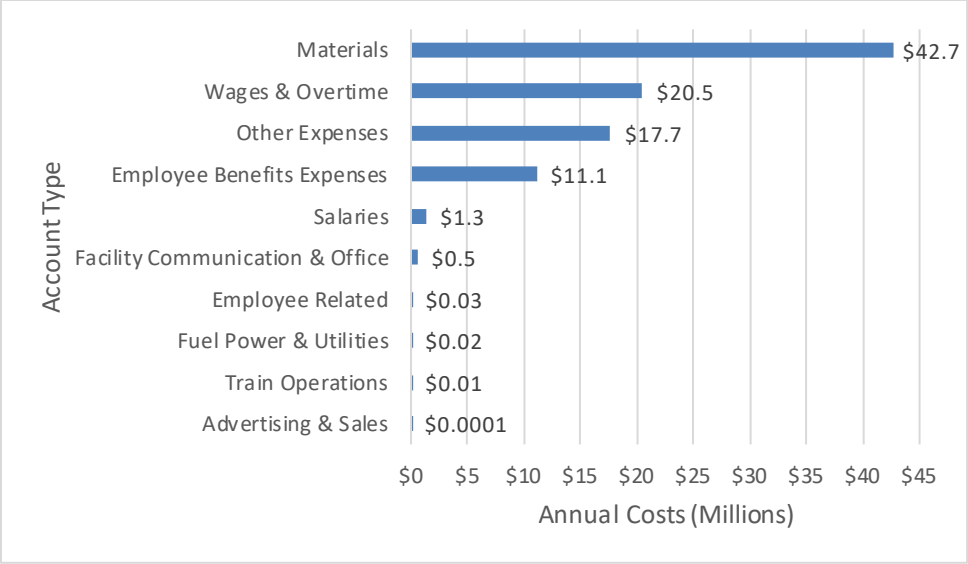

Figure 5-38. Locomotive Maintenance Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The largest single internal order in the Locomotive Maintenance is Maintenance of Equipment Special Projects (IO_1889), recording 20.3 percent of costs. This internal order records "all labor, material, and miscellaneous costs associated with special projects; consists of: (1) repairing all types of passenger cars, (2) inspection (maintenance and electrical) and incidental maintenance to cars before dispatch, and (3) servicing and preparation of cars for service (including changing and reconditioning batteries, lighting, water services, etc." Other significant internal orders within the subfamily are Locomotive-Diesel Bad Orders (IO_1864), which focuses on unscheduled repairs, and Contract Rolling Stock Management and Maintenance (IO_1851), which "records the cost related to payments made to contractors managing or performing maintenance on Amtrak rolling stock." See Table 5-54 for the top internal orders related to Locomotive Maintenance costs and the primary statistic used to allocate each.

Table 5-54. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Locomotive Maintenance Subfamily – FM_202

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
M OF E SPEC PROJ	IO_1889	$19.0	ST_UUX	20.3%
LOCO-DIESEL BAD ORDERS	IO_1864	$16.5	ST_UMX	17.6%
CONTRACT ROLL STK MGT/MAINT	IO_1851	$12.9	ST_UUX	13.7%
No Function	IO_NO_IO	$11.1	ST_MDC_DBX	11.8%
LOCO-DIESEL PROGRAM SVC	IO_1863	$10.9	ST_UUX	11.5%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
LOCO-DIESEL TURNAROUND SVC	IO_1862	$4.1	ST_UUX	4.4%
M OF E SUPV CLER & OFFICE	IO_1808	$3.9	ST_MDC_DBX	4.2%
M OF E SHOP FACILITY	IO_1806	$2.0	ST_MDC_DBX	2.1%
M OF E-VAC/HOLIDAY/NON-PROD LABOR	IO_1815	$1.9	ST_MDC_DBX	2.0%
M OF E INVENTORY ADJUST	IO_1992	$1.9	ST_UUX	2.0%

Cost Allocation Approach

Locomotive Maintenance allocates costs nationally to all trains that utilize the types of equipment being repaired. Amtrak locomotives are maintained at numerous facilities and as a particular locomotive could be maintained at several different facilities and used on multiple routes, national level allocation approach ensures that the actual location where such equipment is maintained does not affect how maintenance costs for that equipment are allocated to trains. A total of 75.0 percent of operating costs within the Locomotive Maintenance Subfamily are allocated in the first round. The majority of remaining costs are allocated in the second round as seen in Table 5-55.

Table 5-55. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Locomotive Maintenance Subfamily – FM_202

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	1.7%
First Round	75.0%
Second Round	23.3%

Train activity statistics are used in conjunction with equipment type Stat Qualifiers to ensure that the costs for maintaining a particular equipment type, regardless of where it is maintained, are allocated only to trains using that equipment type. The statistics primarily responsible for allocating Locomotive Maintenance Subfamily costs correspond with usage and include Average Locos and Cars Used per Day (ST_UUX) or Locomotive and Car Unit Miles (ST_UMX). The second-round allocations occur through Mechanical Direct Costs (ST_MDC_DBX). See Table 5-56 for the expenditures associated with these three statistics, which represent the most prominent allocation statistics used in the Locomotive Maintenance Subfamily.

Table 5-56. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Locomotive Maintenance Subfamily – FM_202

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Average Locos and Cars Used per Day	ST_UUX	$52.6	55.9%
Mechanical Direct Costs	ST_MDC_DBX	$21.9	23.3%
Locomotive and Car Unit Miles	ST_UMX	$17.7	18.8%

The largest statistic, Average Locos and Cars Used per Day (ST_UUX), is used to allocate costs associated with preventive maintenance because preventative maintenance is largely based on time and ST_UUX is a time-based statistic. ST_UMX is used to allocate non-preventative maintenance costs because such maintenance is based on usage. These costs are allocated nationally to all trains that use the corresponding equipment type. Overhead or support costs in this subfamily are those for which a particular equipment type cannot be identified. These costs are allocated in a second round by Mechanical Direct Cost (ST_MDC_DBX. ST_MDC_DBX is the sum of first-round costs allocated to a train or to another customer at a Cost Center. After first-round expenses are allocated, ST_MDC_DBX is calculated, and indirect costs are allocated to each train or customer that use the type of equipment maintained at a cost center in proportion to its share of total ST_MDC_DBX costs for all trains or customers that use the type of equipment maintained at that specific cost center.

Service Line Allocation Results

Locomotive Maintenance costs are primarily allocated to the three NTS service lines, together comprising 97.9 percent of the subfamily total, the largest of which is the Long Distance service line at 44.3 percent. Additionally, minor allocations are made to other service lines, including Reimbursable and Commuter Operations, as shown in Table 5-57.

Table 5-57. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Locomotive Maintenance - FM_202

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$41.6	44.3%
NTS-SS	$34.9	37.2%

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-NEC	$15.4	16.4%
Reimbursable	$1.3	1.4%
All Other Service Lines	$0.7	0.8%

5.2.3 Car Maintenance Subfamily

Family: Maintenance of Equipment (MoE) – FM_MOE
Subfamily: Car Maintenance – FM_203

Scope

The Car Maintenance Subfamily performs maintenance on Amtrak's cars, including passenger coaches, dining cars, sleeping cars, and baggage cars. The work performed in this subfamily includes both preventive maintenance and as-needed maintenance due to car failures, bad orders, freeze damage, and wrecks. No significant capital work is undertaken in this subfamily; instead, the Backshop Subfamily performs car capital work. Amtrak's SPEAR asset management system tracks labor and materials costs, the type of work performed, and the specific unit number and equipment type on which maintenance work is performed.

Total costs for the Car Maintenance Subfamily in Fiscal Year 2021 were $57.4 million, accounting for approximately 0.9 percent of Amtrak's total costs. The subfamily consists of five cost centers in a single subcategory. Table 5-58 is an overview of Fiscal Year 2021 cost allocation for the Car Maintenance Subfamily.

Table 5-58. Subfamily Overview for Car Maintenance Subfamily - FM_203

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$57.4
Subcategories Used	General 203_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	5

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $57.4 million, a 6.2 percent drop from Fiscal Year 2020 but a

60.3 percent gain from Fiscal Year 2017. Car Maintenance costs are almost exclusively operating costs ($57.2 million operating, $0.2 million capital) with minimal capital costs recorded for the five-year analysis period. The sharp rise in Car Maintenance costs began in Fiscal Year 2019. However, high costs were sustained because service suspension from the COVID-19 pandemic allowed Amtrak to address deferred maintenance on its cars.

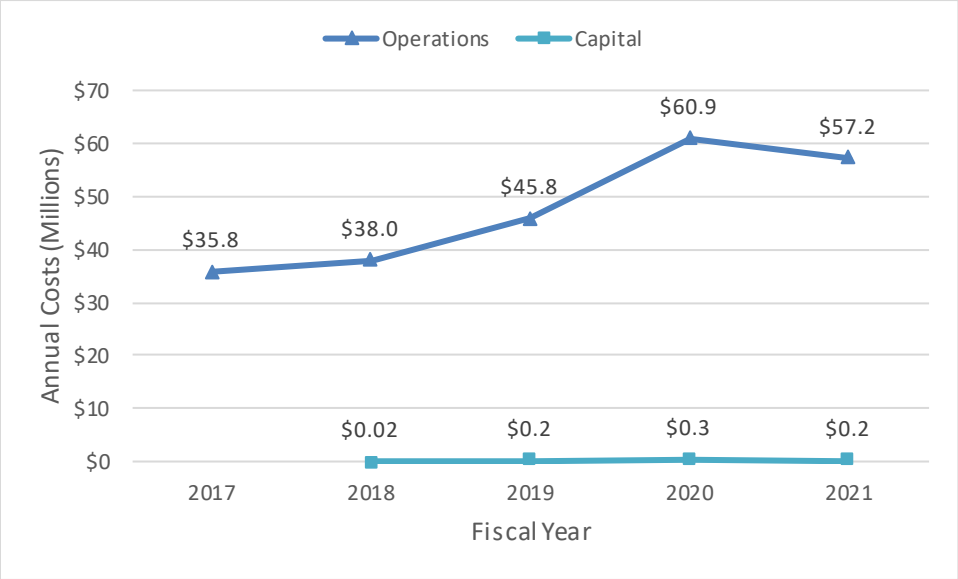

Figure 5-39. Car Maintenance Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at the summary accounts, labor-related costs dominate the subfamily. Car Maintenance costs are concentrated largely in Wages & Overtime and the Employee Benefits Expenses account categories at 45.5 percent and 25.1 percent, respectively (Figure 5-40). Other noteworthy costs include Materials used during maintenance activities (25.3 percent).

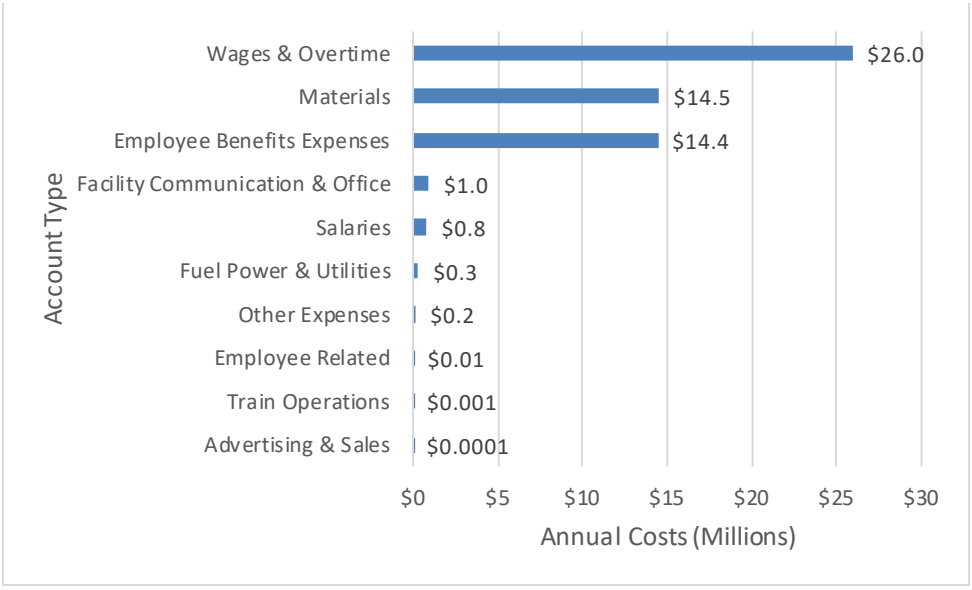

Figure 5-40. Car Maintenance Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The minor Car Maintenance capital expenses are all in the Wages & Overtime and Employee Related account categories, concentrated almost exclusively in the former.

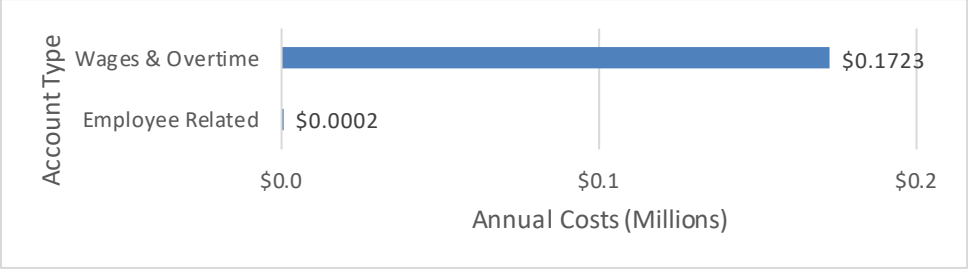

Figure 5-41. Car Maintenance Distribution of Capital Costs, Fiscal Year 2021 (Millions)

Three internal orders comprise 74.6 percent of the Car Maintenance costs. The largest, Car Program Maintenance (IO_1829), records all labor and material costs for Amtrak's regularly scheduled car maintenance programs. After the internal order No Function (IO_NO_IO), which is used for benefits charges, Car Bad Orders (IO_1830), is this third most prominent. Car Bad Orders records all labor and materials costs for unscheduled repairs to cars. See Table 5-59 for the top internal related to Car Maintenance costs and the primary statistic used to allocate each.

Table 5-59. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Car Maintenance Subfamily - FM_203

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
CAR PROGRAM MAINT.	IO_1829	$15.7	ST_UUX	27.3%
No Function	IO_NO_IO	$14.3	ST_MDC_DBX	25.0%
CAR BAD ORDERS	IO_1830	$12.8	ST_UMX	22.3%
M OF E SUPV CLER & OFFICE	IO_1808	$3.0	ST_MDC_DBX	5.3%
M OF E-VAC/HOLIDAY/NON-PROD LABOR	IO_1815	$2.7	ST_MDC_DBX	4.6%
TRAIN & CONSIST TURNAROUND SERVICE	IO_1828	$2.2	ST_NO_STX	3.8%
M OF E SHOP FACILITY	IO_1806	$2.1	ST_MDC_DBX	3.6%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
M OF E OVERHEAD	IO_1814	$1.2	ST_MDC_DBX	2.0%
M OF E SHOP EQUIPMENT	IO_1807	$1.1	ST_MDC_DBX	1.9%

Cost Allocation Approach

A majority of Car Maintenance costs (50.9 percent) are allocated in the first round by train activity statistics using equipment type, followed by 45.2 percent of costs allocated in the second round. Only 3.8 percent of Car Maintenance costs are directly assigned. Car Maintenance costs are allocated nationally to all trains that utilize the type of equipment being repaired. Amtrak cars are maintained at numerous facilities. Since a particular car could be maintained at several different facilities, a national allocation ensures that the actual location where such equipment is maintained does not affect how maintenance costs for that equipment type are allocated to trains.

Table 5-60. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Car Maintenance Subfamily - FM_203

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	3.8%
First Round	50.9%
Second Round	45.2%

Three statistics dominate the subfamily, Mechanical Direct Costs (ST_MDC_DBX), Average Locos and Cars Used per Day (ST_UUX), and Locomotive and Car Unit Miles. Average Locos and Cars Used per Day (ST_UUX) and Locomotive and Car Unit Miles (ST_UMX) account for the bulk of the first-round allocations. These train activity statistics are used in conjunction with equipment type Stat Qualifiers to ensure that the costs for maintaining a particular equipment type, regardless of the place where it is maintained, are allocated only to trains using that equipment type.

Table 5-61. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Car Maintenance Subfamily - FM_203

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Mechanical Direct Costs	ST_MDC_DBX	$25.9	45.1%

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Average Locos and Cars Used per Day	ST_UUX	$16.5	28.7%
Locomotive and Car Unit Miles	ST_UMX	$12.7	22.1%

Car Maintenance first-round costs are allocated using Average Locos and Cars Used per Day (ST_UUX) and Locomotive and Car Unit Miles (ST_UMX) statistics in conjunction with an equipment type Stat Qualifier for specific types of equipment. Average Locos and Cars Used per Day (ST_UUX) is used to allocate preventive maintenance costs as such maintenance is largely based on time as units used is a time-based statistic. Locomotive and Car Unit Miles (ST_UMX) is used to allocate non-preventive maintenance costs and is based on usage. These first-round costs are both allocated nationally to all trains that use the corresponding equipment type.

Mechanical Direct Costs (ST_MDC_DBX) is the single largest statistic, used to allocated second-round indirect costs not closely tied to the maintenance of an equipment type such as management salaries, facilities costs, or other overheads. Mechanical Direct Costs (ST_MDC_DBX) is the sum of first-round costs allocated to a train or customer at a cost center. After first-round expenses are allocated, ST_MDC_DBX is calculated, and indirect costs are allocated to each train or customer that use the type of equipment maintained at a cost center in proportion to its share of total ST_MDC_DBX for all trains or customers that use the type of equipment maintained at that specific cost center.

Service Line Allocation Results

Car Maintenance costs are allocated almost exclusively solely to the three NTS service lines, the largest of which is the Long Distance service line at 58.7 percent. This is followed by the State Supported and NEC service lines, at 26.8 percent and 14.4 percent, respectively, as shown in Table 5-62.

Table 5-62. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Car Maintenance - FM_203

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$33.7	58.7%
NTS-SS	$15.4	26.8%
NTS-NEC	$8.3	14.4%
All Other Service Lines	$0.05	0.1%

5.2.4 MoE Support Subfamily

Family: Maintenance of Equipment (MoE) – FM_MOE
Subfamily: MoE Support – FM_204

Scope

The MoE Support Subfamily performs managerial, administrative, and other activities in support of turnaround servicing, rolling stock maintenance and repair, and component work performed in the various Amtrak mechanical shops. The MoE Support Subfamily also contains the overhead cost centers for the entire MoE family. These overhead cost centers contain large debit and credit transactions accounting for all of the benefits transfer charges within the family including transfers to capitalized projects. Total costs for the MoE Support Subfamily in Fiscal Year 2021 were $50.1 million, accounting for approximately 0.8 percent of Amtrak's total costs. The subfamily consists of 37 cost centers within two subcategories. Table 5-63 is an overview of Fiscal Year 2021 cost allocation for the MoE Support Subfamily.

Table 5-63. Subfamily Overview for MoE Support Subfamily - FM_204

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$50.1
Subcategories Used	General 204_0, Mechanical Training 204_1
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	37

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $50.1 million, a 11.6 percent increase from Fiscal Year 2020 and a 10.4 percent increase from Fiscal Year 2017. MoE Support costs are almost entirely operating costs ($46.4 million operating, $3.7 million capital) with a low level of capital costs recorded for the five-year analysis period compared to operating costs. While up slightly in Fiscal Year 2021, MoE Support costs have been relatively flat over the last five years with the shifting of cost centers in and out of the subfamily contributing to the fluctuations.

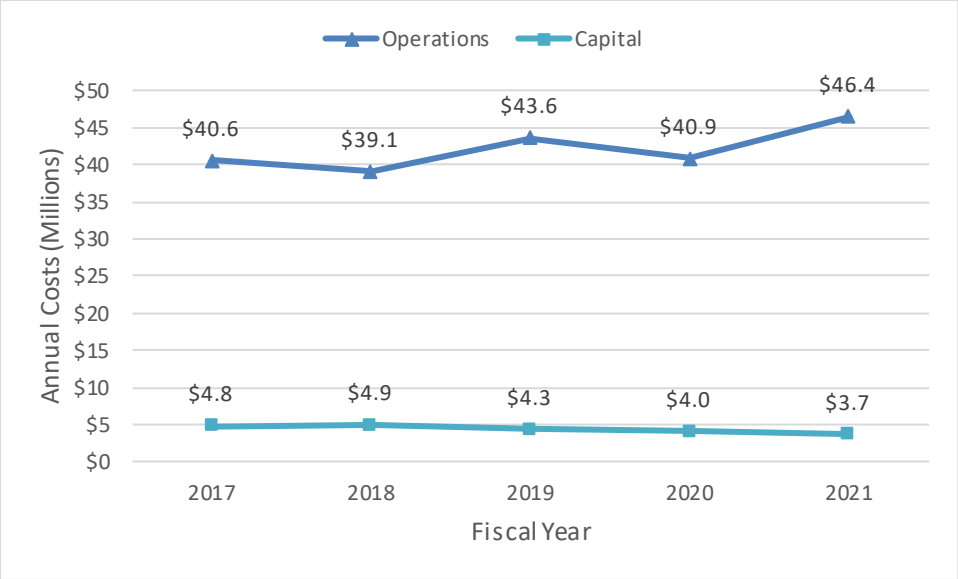

Figure 5-42. MoE Support Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at the summary accounts, labor-related costs dominate the subfamily. Three of the top four MoE Support costs are labor-related, consisting of Salaries, Employee Benefits Expenses, and Wages & Overtime. These accounts represent 62.1 percent of subfamily costs (Figure 5-43). Other noteworthy costs include Fuel Power & Utilities used during maintenance activities (13.4 percent). MoE Support recorded -$3.3 million in the Indirect Costs Capitalized to P&E account category, representing the net transfer of indirect shop costs out of operating to capital as part of a capitalized project.

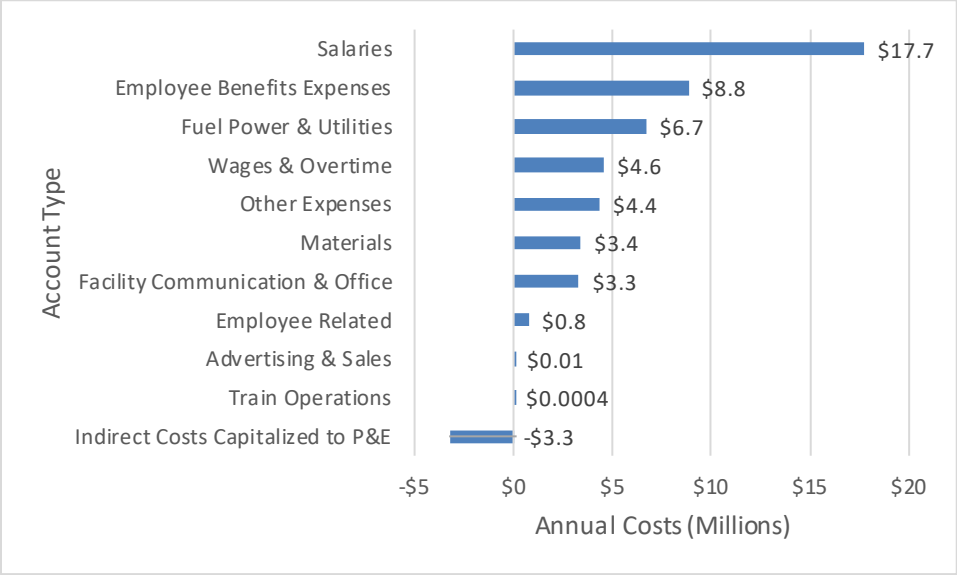

Figure 5-43. MoE Support Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The majority of capital costs (89.2 percent) are within the Indirect Costs Capitalized to P&E account category, representing indirect MoE shop overhead operating costs capitalized as part of a completed

capital project.

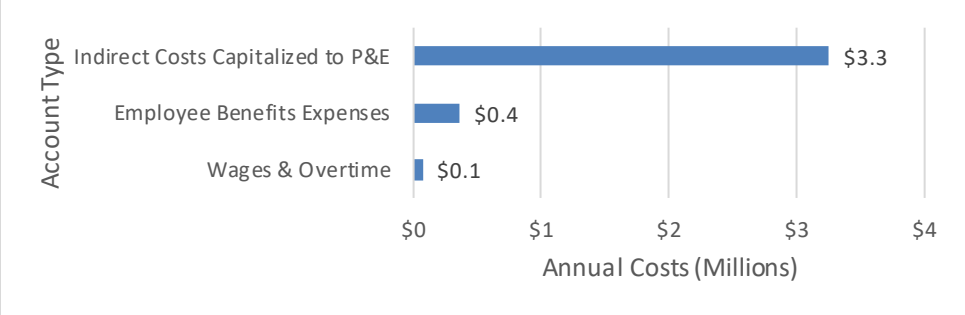

Figure 5-44. MoE Support Distribution of Capital Costs, Fiscal Year 2021 (Millions)

Two internal orders comprise over half of the MoE Support costs. The largest, Maintenance of Equipment Managerial (IO_1801), is an overhead account that records all payroll and other expenses incurred in the management and administration of MoE operations. The second largest, Maintenance of Equipment Shop Facility (IO_1806), records all labor, material, and other maintenance costs of shop buildings and facilities. See Table 5-64 for the top internal orders related to MoE Support costs and the primary statistic used to allocate each.

Table 5-64. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for MoE Support Subfamily - FM_204

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
M OF E MANAGERIAL	IO_1801	$16.6	ST_MDC_DBX	33.1%
M OF E SHOP FACILITY	IO_1806	$9.1	ST_MDC_DBX	18.2%
Reimbursable – General	IO_4100	$4.3	ST_NO_STX	8.6%
No Function	IO_NO_IO	$4.3	ST_NO_STX	8.6%
SAFETY OPERATIONS	IO_1675	$3.3	ST_MDC_DBX	6.6%
M OF E SUPV CLER & OFFICE	IO_1808	$2.1	ST_MDC_DBX	4.3%
M OF E SPEC PROJ	IO_1889	$2.0	ST_NO_STX	4.0%
M OF E OVERHEAD	IO_1814	$2.0	ST_MDC_DBX	4.0%
CORPORATE ADMINISTRATION	IO_1001	$1.5	ST_MDC_DBX	3.1%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
ENVIRONMENTAL ACTIVTIES	IO_1875	$1.3	ST_MDC_DBX	2.6%

Cost Allocation Approach

MoE Support operating costs are allocated broadly in all rounds, including 31.2 percent by direct assignment, 24.5 percent in the first round, and with a plurality of costs allocated in the second round at 44.3 percent.

Table 5-65. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for MoE Support Subfamily - FM_204

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	31.2%
First Round	24.5%
Second Round	44.3%

The costs assigned directly to projects are assigned without a statistic (ST_NO_STX). Other project costs are allocated primarily by using the usage statistic Average Locos and Cars Used per Day (ST_UUX). The balancing and crediting of overhead transactions are allocated by Mechanical Direct Cost (ST_MDC_DBX). While ST_MDC_DBX allocates the majority of total transactions including typical overhead and management expenses, the benefits credits from the overhead cost centers are larger, resulting in ST_MDC_DBX showing a net credit for the subfamily. The train or customer at issue receives a portion of the MoE Support costs in proportion to its share of total ST_MDC_DBX costs for all trains and customers in each cost center group.

Table 5-66. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for MoE Support Subfamily - FM_204

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
No Statistic (Direct Charges)	ST_NO_STX	$127.8	255.1%
Average Locos and Cars Used per Day	ST_UUX	$97.8	195.2%

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Mechanical Direct Costs	ST_MDC_DBX	-$176.9	-353.0%

In addition to the allocation of operating costs described above, capital expenses are occasionally coded to cost centers in this subfamily including overheads charged to capital projects and later capitalized. These expenses may be allocated to or directly assigned to specific projects. When the capital work is completed, eligible capital expenses coded to this subfamily are capitalized and transferred to Amtrak's asset ledgers.

Service Line Allocation Results

MoE Support costs are unusual within the MoE family because costs are distributed not just to the NTS service lines, but a large portion of costs are also allocated to the Reimbursable service line (23.4 percent). A smaller portion is distributed to Commuter Operations (6.6 percent) and the remaining service lines, as shown in Table 5-67.

Table 5-67. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for MoE Support - FM_204

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-NEC	$17.4	34.7%
Reimbursable	$11.7	23.4%
NTS-SS	$8.9	17.7%
NTS-LD	$8.1	16.3%
Commuter Operations	$3.3	6.6%
All Other Service Lines	$0.7	1.4%

5.2.5 MoE Multiple Subfamily

Family: Maintenance of Equipment (MoE) – FM_MOE
Subfamily: MoE Multiple – FM_205

Scope

Costs within MoE Multiple are not for one primary activity, but rather the costs for performing multiple mechanical-related activities using internal orders that are typically used in other subfamilies within the MoE Family. The cost centers in this subfamily perform two or more main activities to a degree that precludes their inclusion in a specific subfamily. The types of activities performed at these cost centers

include but are not limited to turnaround servicing, locomotive maintenance, and car maintenance.

Total costs for the MoE Multiple Subfamily in Fiscal Year 2021 were $197.2 million, accounting for approximately 3.2 percent of Amtrak's total costs. The subfamily consists of six cost centers within a single subcategory. Table 5-68 is an overview of Fiscal Year 2021 cost allocation for the MoE Multiple Subfamily.

Table 5-68. Subfamily Overview for MoE Multiple Subfamily – FM_205

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$197.2
Subcategories Used	General 205_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	6

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $197.2 million, a 4.6 percent decrease from Fiscal Year 2020 and a 46.3 percent decrease from the high in Fiscal Year 2019. MoE Support costs are split between operating and capital costs ($83.1 million operating, $114.1 million capital) with capital costs exceeding operating costs in Fiscal Year 2019 and continuing to do so in Fiscal Years 2020 and 2021. This is in part because some cost centers were moved from this subfamily to the Turnaround and Car Maintenance subfamilies during this time period.

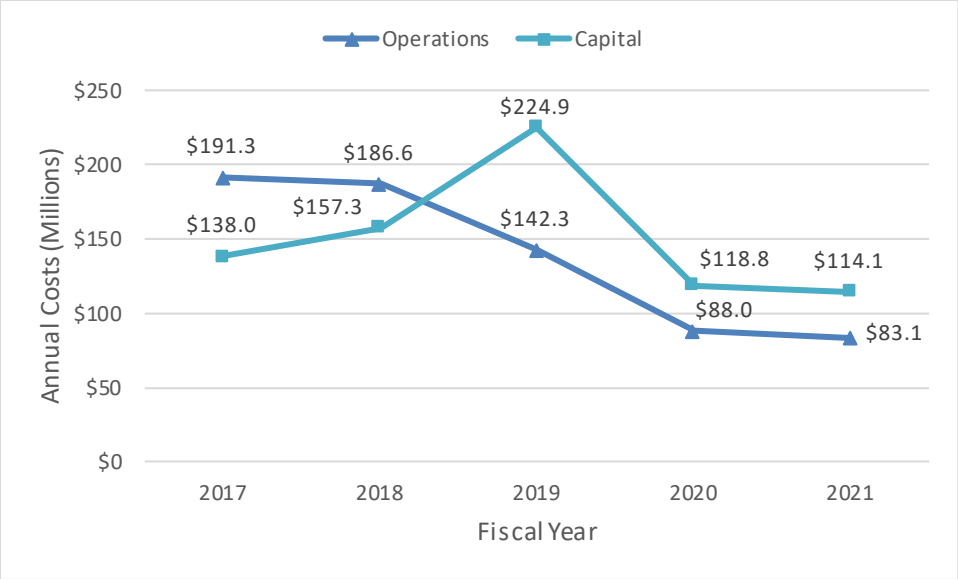

Figure 5-45. MoE Multiple Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at the summary accounts, Materials dominate the subfamily both for operating and capital costs. The Materials account contributes 56.7 percent of operating costs and 76.6 percent of capital costs. Labor-related costs comprise the majority of the remaining operating costs, as depicted in Figure 5-46. Assorted miscellaneous and other expenses comprise the majority of the remaining capital costs, as depicted in Figure 5-47.

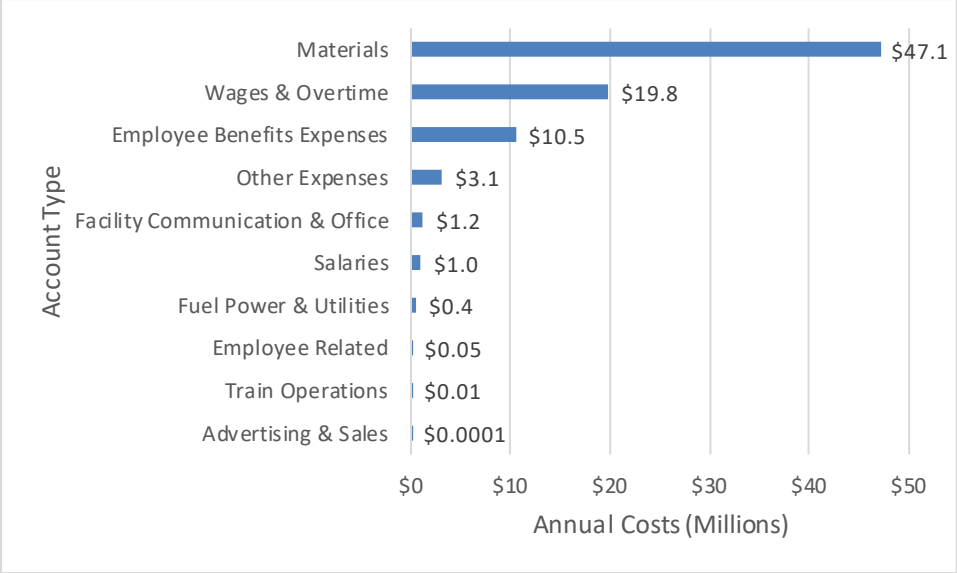

Figure 5-46. MoE Multiple Distribution of Operating Costs, Fiscal Year 2021 (Millions)

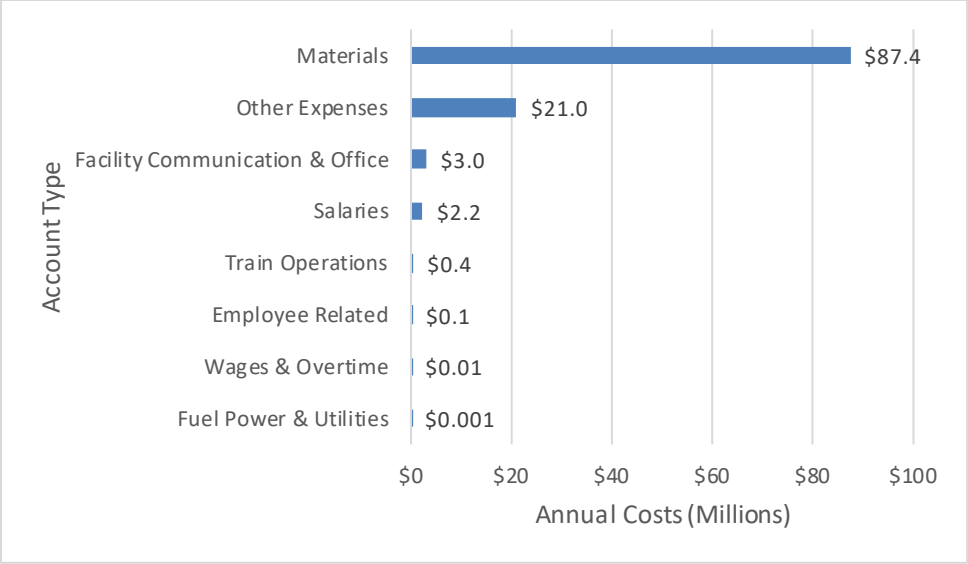

Figure 5-47. MoE Multiple Distribution of Capital Costs, Fiscal Year 2021 (Millions)

One internal order, Capital (IO_4200), dominates the MoE Multiple Subfamily, accounting for 74.6 percent. This internal order is used with capital work including with operating expenses that are later capitalized as the asset work is completed and transferred to the asset ledger. The remaining costs are distributed across a wide range of costs and are project specific. As described below, the capital costs are allocated using the Average Locos and Cars Used Per Day (ST_UUX) statistic.

Table 5-69. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for MoE Multiple Subfamily – FM_205

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Capital	IO_4200	$147.2	ST_UUX	74.6%
No Function	IO_NO_IO	$9.7	ST_MDC_DBX	4.9%
Reimbursable – General	IO_4100	$7.3	ST_NO_STX	3.7%
CAR BAD ORDERS	IO_1830	$6.3	ST_UMX	3.2%
TRAIN & CONSIST TURNAROUND SERVICE	IO_1828	$5.1	ST_NO_STX	2.6%
CAR PROGRAM MAINT.	IO_1829	$5.0	ST_UUX	2.5%
LOCO-DIESEL PROGRAM SVC	IO_1863	$3.9	ST_UUX	2.0%
LOCO-DIESEL BAD	IO_1864	$2.7	ST_UMX	1.4%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
ORDERS				
M OF E-VAC/HOLIDAY/NON-PROD LABOR	IO_1815	$1.9	ST_MDC_DBX	1.0%

Cost Allocation Approach

The MoE-Multiple Subfamily relies upon the various allocation methods used in the Turnaround, MoE Locomotive Maintenance, and Car Maintenance subfamilies. Expenditures at these subfamilies have internal orders that identify the type of activity. In the case of locomotive and car maintenance activities, cost allocations reflect allocation methods in those subfamilies while turnaround servicing activities are allocated costs are allocated at the cost center level.

The majority of operating costs in the MoE Multiple Subfamily are allocated in the first round, accounting for 57.9 percent of costs, as shown in Table 5-70. First-round costs are primarily allocated using Average Locos and Cars Used per Day (ST_UUX). Direct assignment accounts for 28.1 percent of the subfamily costs, consisting largely of reimbursable work directly assigned to the reimbursable party and turnaround costs directly assigned to the appropriate route. Second-round statistics account for 14.0 percent of the subfamily, including indirect support or overhead costs for which a particular equipment type cannot be identified.

Table 5-70. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for MoE Multiple Subfamily – FM_205

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	28.1%
First Round	57.9%
Second Round	14.0%

As noted above, the primary statistic used for allocation within the subfamily is Average Locos and Cars Used per Day (ST_UUX). This statistic is used to allocate capital costs as well as car and locomotive program maintenance costs. The second most prominent statistic, Mechanical Direct Cost (ST_MDC_DBX), is used for second-round allocation of indirect expenses not closely tied to a specific equipment type. Locomotive and Car Unit Miles (ST_UMX) is used to allocate car and locomotive bad order expenses.

Table 5-71. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for MoE Multiple Subfamily – FM_205

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Average Locos and Cars Used per Day	ST_UUX	$135.8	68.9%
Mechanical Direct Costs	ST_MDC_DBX	$24.5	12.4%
No Statistic (Direct Charges)	ST_NO_STX	$23.8	12.1%
Locomotive and Car Unit Miles	ST_UMX	$7.0	3.5%

Service Line Allocation Results

MoE Multiple costs are dominated by the NTS service lines, which comprise 90.7 percent of the subfamily. Of these, Long Distance service makes up the largest portion (41.3 percent). The majority of remaining costs are attributed to Commuter Operations, as Amtrak maintains trains for several outside commuter agencies, as shown in Table 5-72.

Table 5-72. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for MoE Multiple – FM_205

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$81.5	41.3%
NTS-SS	$60.4	30.6%
NTS-NEC	$37.1	18.8%
Commuter Operations	$13.4	6.8%
Reimbursable	$3.6	1.8%
All Other Service Lines	$1.2	0.6%

5.2.6 High Speed Rail (HSR) Maintenance Subfamily

Family: Maintenance of Equipment (MoE) – FM_MOE
Subfamily: High Speed Rail (HSR) Maintenance – FM_206

Scope

The High Speed Rail (HSR) Maintenance Subfamily performs all activities related to maintaining Amtrak's high-speed rail (Acela) equipment, including rolling stock maintenance, turnaround servicing, management, and support activities. Additionally, Amtrak contracts with Alstom to manage material control for Acela trains, including the supply of overhaul packages, scheduled maintenance kits, other maintenance materials, and technical assistance.

Total costs for the HSR Maintenance Subfamily in Fiscal Year 2021 were $53.3 million, accounting for approximately 0.9 percent of Amtrak's total costs. The subfamily consists of seven cost centers within a single subcategory. Table 5-73 is an overview of Fiscal Year 2021 cost allocation for the HSR Maintenance Subfamily.

Table 5-73. Subfamily Overview for HSR Maintenance Subfamily – FM_206

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$53.3
Subcategories Used	General 206_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Infrastructure Access
Number of Cost Centers	7

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $53.3 million, a 13.5 percent decrease from Fiscal Year 2020 and a 11.5 percent decrease from Fiscal Year 2017. HSR Maintenance costs are dominated by operating costs ($53.0 million operating, $0.2 million capital). Capital costs over the previous five years are relatively low, as shown in Figure 5-48.

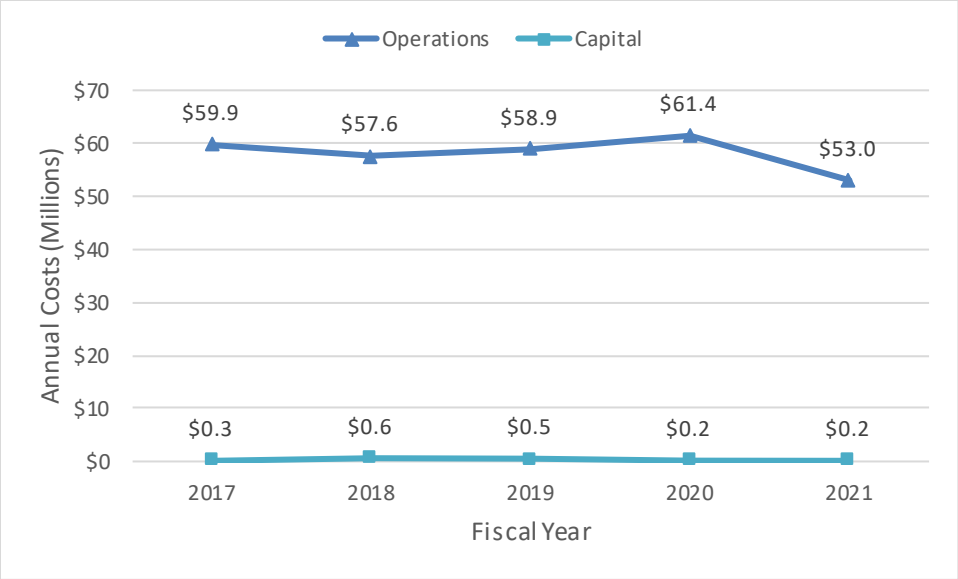

Figure 5-48. HSR Maintenance Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at the summary accounts, labor-related costs dominate the subfamily. HSR Maintenance costs are concentrated largely in Wages & Overtime and the Employee Benefits Expenses account categories at 33.6 percent and 23.1 percent, respectively (Figure 5-49). Other noteworthy costs include Materials used during maintenance activities (20.6 percent).

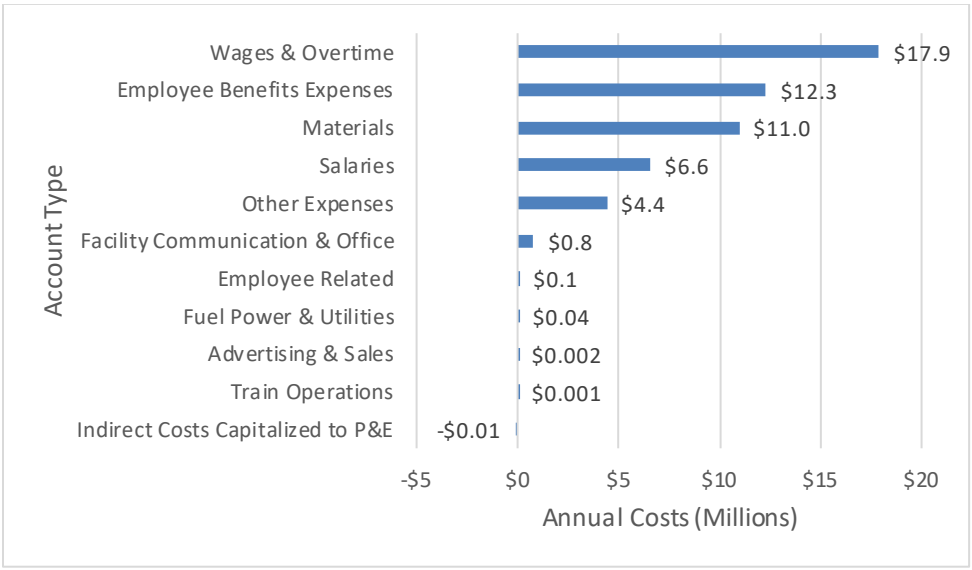

Figure 5-49. HSR Maintenance Distribution of Operating Costs, Fiscal Year 2021 (Millions)

For capital costs, Wages & Overtime dominate the subfamily costs. However, the overall total is minor relative to the full subfamily cost (Figure 5-50).

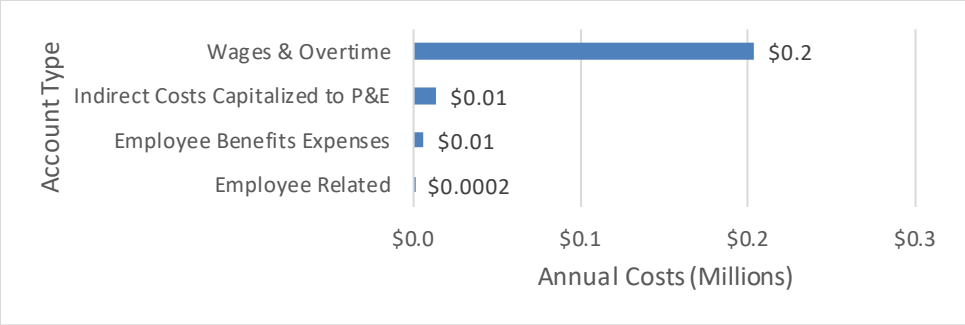

Figure 5-50. HSR Maintenance Distribution of Capital Costs, Fiscal Year 2021 (Millions)

Two internal orders dedicated specifically to HSR Maintenance make up 52.3 percent of the subfamily. HST Turnaround Servicing (IO_1852), which records all labor and material costs for high-speed trainset turnaround maintenance and inspections, and HST Bad Orders (IO_1854), which records all labor and material costs for unscheduled high speed trainset maintenance. The next remaining internal orders are used elsewhere in the MoE Family and not specific to high-speed service including No Function (IO_NO_IO) for benefits transfers and other MoE support and managerial activities, as seen in Table 5-74.

Table 5-74. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for HSR Maintenance Subfamily – FM_206

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
HST TURNAROUND SERVICING	IO_1852	$14.9	ST_UUX	27.9%
HST BAD ORDERS	IO_1854	$13.0	ST_UUX	24.4%
No Function	IO_NO_IO	$7.6	ST_NONX	14.2%
M OF E MANAGERIAL	IO_1801	$6.4	ST_NONX	12.0%
M OF E SUPV CLER & OFFICE	IO_1808	$1.9	ST_NONX	3.5%
M OF E-VAC/HOLIDAY/NON-PROD LABOR	IO_1815	$1.9	ST_NONX	3.5%
M OF E SHOP FACILITY	IO_1806	$1.4	ST_NONX	2.6%
M OF E INVENTORY ADJUST	IO_1992	$1.1	ST_NONX	2.1%
GEN SUPT SPECIAL PROJ.	IO_1198	$1.1	ST_NONX	2.1%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
M OF E OVERHEAD	IO_1814	$1.1	ST_NONX	2.0%

Cost Allocation Approach

HSR Maintenance costs are allocated directly (26. 0 percent) and through first-round allocations (74.0 percent), as shown in Table 5-75. No second-round allocations occur.

Table 5-75. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for HSR Maintenance Subfamily – FM_206

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	26.0%
First Round	74.0%
Second Round	0.0%

Cost allocations are exclusively to Amtrak's high speed Acela trains. Most maintenance costs are allocated using straight-line allocation (ST_NONX) or directly without a statistic (ST_NO_STX). ST_NONX is used to assign revenues directly to routes and is a substitute in cases where using no statistic is inappropriate, in essence a direct assignment of costs that were not categorized in SAP as "direct" and so they go through the allocation engine. This is possible in this case as high-speed trainsets can be associated with specific routes. Remaining costs are allocated within the Acela route to specific trains using the Average Locos and Cars Used per Day (ST_UUX) statistic. As all expenses are allocated exclusively to the Acela, indirect and miscellaneous costs also can be allocated using ST_UUX, and no second-round allocation statistic is required.

Table 5-76. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for HSR Maintenance Subfamily – FM_206

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Straight-Line Allocation (1)	ST_NONX	$27.1	50.9%
No Statistic (Direct Charges)	ST_NO_STX	$14.0	26.2%

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Average Locos and Cars Used per Day	ST_UUX	$12.1	22.8%

Service Line Allocation Results

HSR Maintenance activity occurs within the NTS service lines, specifically the NEC where the high-speed trainsets operate. Costs are incurred exclusively on the NEC. In some cases, costs are transferred out of the other service lines and assigned to NEC routes, which is why the NEC registers above 100 percent of costs and the other service lines have negative allocations, as shown in Table 5-77.

Table 5-77. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for HSR Maintenance – FM_206

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-NEC	$72.8	136.6%
Infrastructure Access	$0.004	0.01%
NTS-SS	-$8.4	-15.7%
NTS-LD	-$11.2	-20.9%

5.2.7 Back Shop Subfamily

Family: Maintenance of Equipment (MoE) – FM_MOE
Subfamily: Back Shop – FM_207

Scope

The Back Shop Subfamily performs major repairs and capital overhauls and produce and repair components. They also perform some minor car and locomotive maintenance and servicing. Amtrak has three Back Shop facilities, located in Beech Grove, Indiana; Bear, Delaware; and Wilmington, Delaware. These facilities are functionally and geographically separate from the car and locomotive maintenance subfamily facilities, which focus on preventative maintenance and non-capital repairs. Amtrak's SPEAR asset management system tracks labor and materials costs, the type of work performed, and specific unit numbers and equipment types on which work is performed.

Total costs for the Back Shop Subfamily in Fiscal Year 2021 were $80.1 million, accounting for approximately 1.3 percent of Amtrak's total costs. The subfamily consists of 22 cost centers within a single subcategory. Table 5-78 is an overview of Fiscal Year 2021 cost allocation for the Back Shop

Subfamily.

Table 5-78. Subfamily Overview for Back Shop Subfamily – FM_207

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$80.1
Subcategories Used	General 207_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	22

Composition of Subfamily Costs

Several major categories of expenditures are recorded in the Back Shop Subfamily corresponding to the varied activities performed in this subfamily. These expense categories include capital expenditures, component expenses, maintenance and servicing costs, indirect support and overhead costs, and expenses assigned directly to customers or other businesses.

Subfamily costs for Fiscal Year 2021 were $80.1 million, a 1.1 percent decrease from Fiscal Year 2020 and an 8.6 percent decrease from Fiscal Year 2017. Back Shop costs are primarily capital costs, though operating costs comprise a large portion of subfamily costs ($53.0 million capital, $27.1 million operating in Fiscal Year 2021).

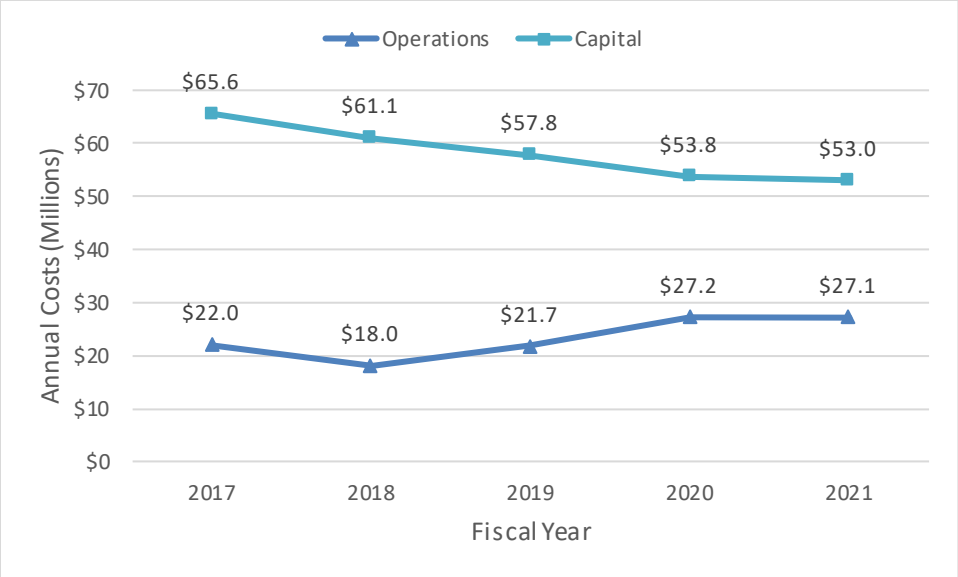

Figure 5-51. Back Shop Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at the summary accounts, labor-related costs dominate the operating costs within the subfamily. Back Shop operating costs are concentrated largely in Wages & Overtime and the Employee Benefits Expenses account categories (Figure 5-52). Of note are the large negative transfers out of the subfamily operating costs for Materials, which are transferred out of the subfamily entirely, and for Indirect Costs Capitalized to P&E, which are transferred into the capital cost side of the subfamily (Figure 5-53). The remaining capital costs are dominated by labor-related costs.

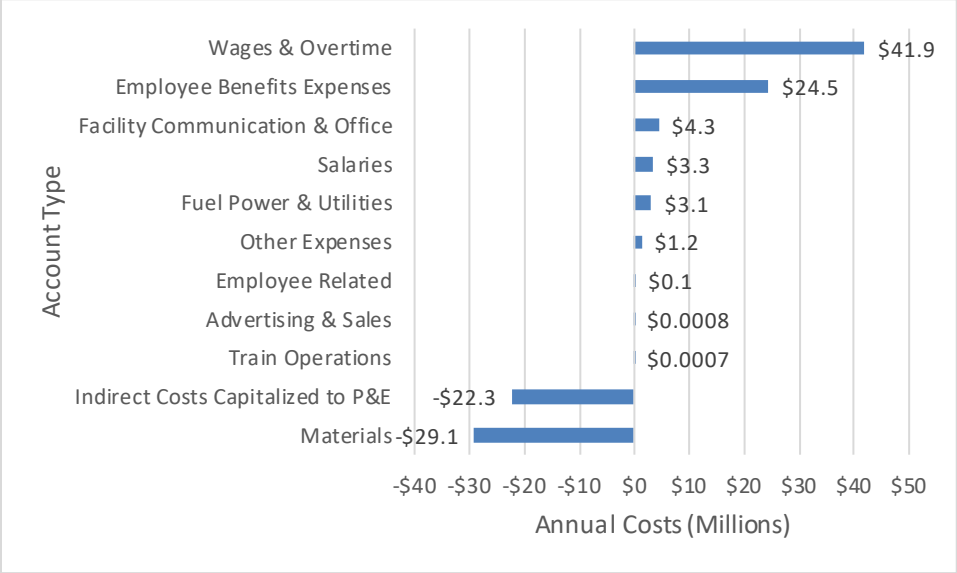

Figure 5-52. Back Shop Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Regarding the capital transfer, because the majority of costs in the Back Shop Subfamily are for capital projects, as the work is completed and capitalized, a portion of indirect operating costs related to that capital work is also capitalized. Once capitalized, the costs are transferred out of the operating business and applied to the capital side, resulting in net negative costs in the operating business roughly proportional to the capital costs.

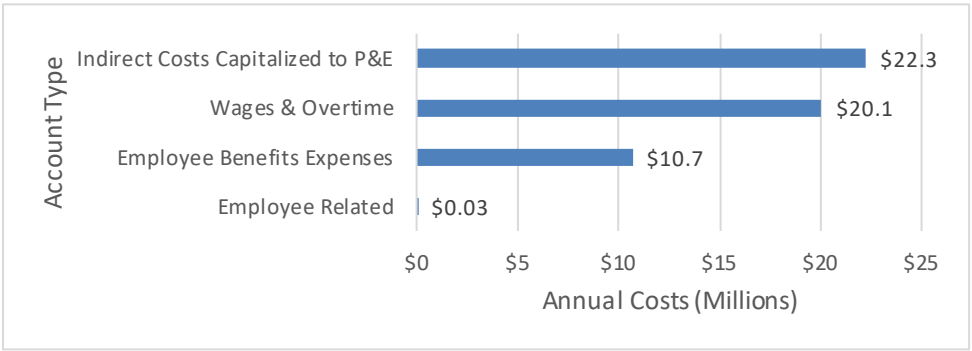

Figure 5-53. Back Shop Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The internal orders for the Back Shop Subfamily are dominated by Capital (IO_4200), which records all

capital project costs, and No Function (IO_NO_IO), which is used for benefits charges. The majority of the remaining internal orders are for specific MoE activities. The subfamily records a large negative cost or credit transfer in MofE Component Rebuild and Mfg. (IO_1810), which records, "all labor, material, and other costs to refurbish components which when completed will be returned to parts inventory."

Table 5-79. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Back Shop Subfamily – FM_207

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Capital	IO_4200	$27.5	ST_UUX	34.3%
No Function	IO_NO_IO	$26.5	ST_UUX	33.0%
M OF E SHOP FACILITY	IO_1806	$12.5	ST_MDC_DBX	15.6%
M OF E OVERHEAD	IO_1814	$8.2	ST_MDC_DBX	10.3%
Reimbursable – General	IO_4100	$7.0	ST_NO_STX	8.7%
M OF E-VAC/HOLIDAY/NON-PROD LABOR	IO_1815	$6.5	ST_MDC_DBX	8.1%
M OF E MATERIAL CONTROL	IO_1816	$6.4	ST_MDC_DBX	8.0%
M OF E MANAGERIAL	IO_1801	$3.1	ST_MDC_DBX	3.8%
M OF E SUPV CLER & OFFICE	IO_1808	$2.8	ST_MDC_DBX	3.5%
MofE Component Rebuild and Mfg.	IO_1810	-$27.5	ST_MDC_DBX	-34.3%

Cost Allocation Approach

Operating costs within the Back Shop Subfamily are allocated directly and in the first and second rounds. A majority of operating costs in the subfamily are allocated using second-round statistics. After second-round allocations, the direct assignment accounts for the bulk of remaining costs at 37.7 percent, with only 7.3 percent of costs allocated using first-round statistics.

Table 5-80. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Back Shop Subfamily – FM_207

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	37.7%

Allocation Round	Percent of Costs Allocated in Allocation Round
First Round	7.3%
Second Round	55.0%

When incorporating capital business expenses in addition to operating business, the picture of the subfamily shifts. The largest single statistic is Average Locos and Cars Used per Day (ST_UUX), a first-round statistic, accounting for 67.8 percent of the subfamily total. This statistic is used to allocate capital internal order expenses as well as the benefits transfer costs. Indirect support or overhead costs in the Back Shop Subfamily are allocated in a second-round allocation based on total Mechanical Direct Cost (ST_MDC_DBX), accounting for 20.7 percent of the subfamily total. ST_MDC_DBX is the sum of first-round mechanical costs allocated to a train or other customer and is calculated after all direct mechanical costs are allocated. The bulk of remaining costs are directly assigned using No Statistic (Direct Charges) (ST_NO_STX).

Table 5-81. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Back Shop Subfamily – FM_207

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Average Locos and Cars Used per Day	ST_UUX	$54.4	67.8%
Mechanical Direct Costs	ST_MDC_DBX	$16.6	20.7%
No Statistic (Direct Charges)	ST_NO_STX	$10.3	12.8%

Service Line Allocation Results

Back Shop activity occurs primarily within the NTS service lines, comprising 88.5 percent of total costs. This is led by equipment used for Long Distance service (40.0 percent). A small amount of costs are allocated to several other services lines, led by Reimbursable as shown in Table 5-82.

Table 5-82. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Back Shop – FM_207

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$32.0	40.0%
NTS-NEC	$23.3	29.1%

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-SS	$15.6	19.4%
Reimbursable	$8.1	10.1%
All Other Service Lines	$1.2	1.5%

5.2.8 MoE Material Control Subfamily

Family: Maintenance of Equipment (MoE) – FM_MOE
Subfamily: MoE Material Control – FM_208

Scope

The MoE Material Control Subfamily is a grouping of costs for the system which ensures that materials are available for maintenance as needed. The MoE Material Control Subfamily was established in Fiscal Year 2017. Prior to that, these costs were previously concentrated within MoE Support but have since been moved into their own dedicated subfamily.

Total costs for the MoE Material Control Subfamily in Fiscal Year 2021 were $12.0 million, accounting for approximately 0.2 percent of Amtrak's total costs. The subfamily consists of 14 cost centers within a single subcategory. Table 5-83 is an overview of Fiscal Year 2021 cost allocation for the MoE Material Control Subfamily.

Table 5-83. Subfamily Overview for MoE Material Control Subfamily – FM_208

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$12.0
Subcategories Used	MoE Material Control 208_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	14

Composition of Subfamily Costs

MoE Material Control Subfamily costs are specific, narrowly focused, and concentrated on controlling for future maintenance needs. Subfamily costs for Fiscal Year 2021 were $12.0 million, a 4.3 percent increase from Fiscal Year 2020 and a 15.4 percent increase from Fiscal Year 2017. Despite the steady increase, costs remain relatively low compared to other MoE subfamilies. MoE Material Control Costs

are entirely operating, with nominal capital costs occurring once in the past five years.

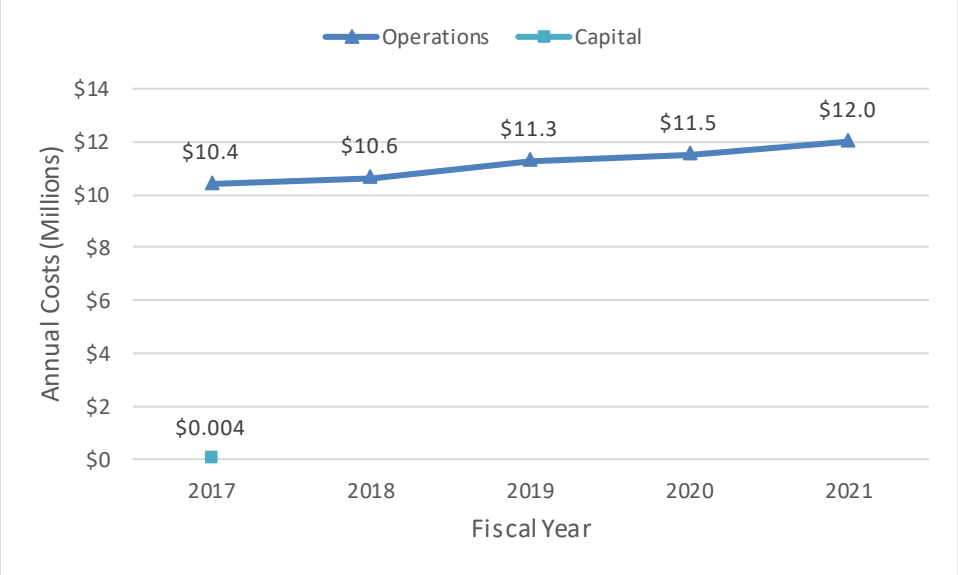

Figure 5-54. MoE Material Control Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at the account categories, labor-related operating costs dominate the subfamily, comprising nearly all of operating costs. The largest are the Wages & Overtime (53.3 percent), Employee Benefits Expenses (33.3 percent), and Salaries (11.7 percent) account categories as shown in Figure 5-55. There were no capital costs in Fiscal Year 2021.

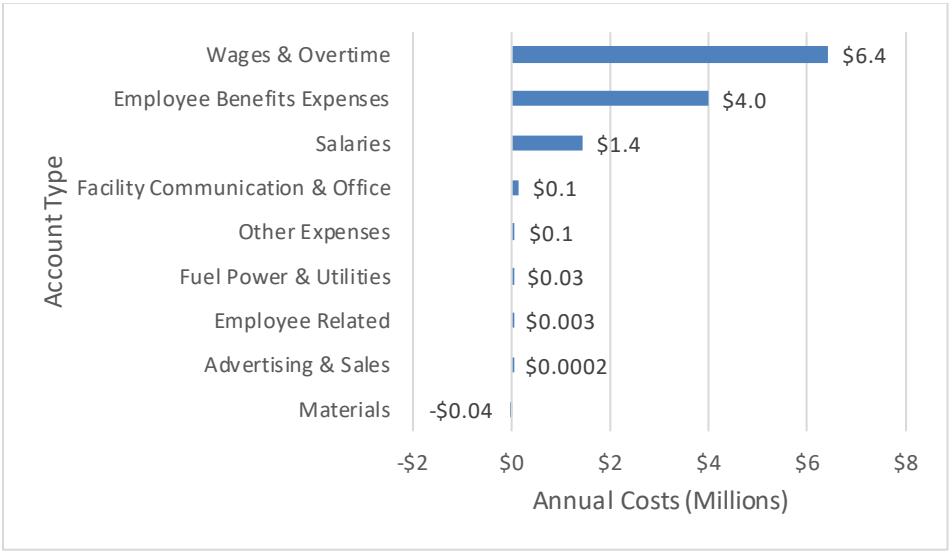

Figure 5-55. MoE Material Control Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The primary internal order used for material control costs is Maintenance of Equipment Material Control (IO_1816), which records all payroll and other expenses incurred by those Material Control Resource Centers that support exclusively equipment maintenance operations (as opposed to Maintenance of

Way Material Control). The remaining costs for benefits utilize No Function (IO_NO_IO).

Table 5-84. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for MoE Material Control Subfamily – FM_208

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
M OF E MATERIAL CONTROL	IO_1816	$9.0	ST_MDC_DBX	74.7%
No Function	IO_NO_IO	$2.7	ST_MDC_DBX	22.2%

Cost Allocation Approach

As MoE Material Control costs are support to the other MoE Family activities, they cannot be directly assigned or closely associated with a particular route. Therefore, Material Control operating costs are indirect and almost entirely allocated in the second round, with minor costs directly assigned or allocated in the first round, as shown in Table 5-85.

Table 5-85. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for MoE Material Control Subfamily – FM_208

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	1.9%
First Round	1.0%
Second Round	97.1%

As MoE Material Control is indirect support, the costs cannot be directly tied to a particular train or equipment type. These costs are allocated almost entirely in the second-round allocation based on total Mechanical Direct Cost (ST_MDC_DBX), accounting for 97.1 percent.

Table 5-86. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for MoE Material Control Subfamily – FM_208

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Mechanical Direct Costs	ST_MDC_DBX	$11.7	97.1%

Service Line Allocation Results

MoE Material Control activity occurs primarily within the NTS service lines, comprising 91.7 percent of

total costs. This is led by equipment used for Long Distance service (40.3 percent). A small amount of costs are allocated to Commuter Operations, as Amtrak maintains trains for several outside commuter agencies, and to Reimbursable, as shown in Table 5-87.

Table 5-87. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for MoE Material Control – FM_208

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$4.8	40.3%
NTS-SS	$4.2	34.9%
NTS-NEC	$2.0	16.5%
Commuter Operations	$0.6	5.2%
Reimbursable	$0.4	3.0%
All Other Service Lines	$0.01	0.1%

5.3 Transportation Operations Family (FM_OPS_TRANS)

The Transportation Operations Family is charged with the operation of moving passenger trains. This includes the staffing and support of onboard train personnel (engineers, conductors, dining car attendants, etc.), makeup and breakup of train consists in the yard, station operations and management, train dispatching, host railroad activities, and train fuel and power. Station management and operations was its own distinct family (Stations FM_500) when APT was first implemented, but in November of 2012 it was moved into the Transportation Operations Family.

Most costs in the Transportation Operations are operating costs, which in Fiscal Year 2021 were $1,297.7 million. This is a decrease from the $1,490.6 million in 2017, and from the highest annual family operating cost over the five-year period of $1,579.6 in 2019, as shown in Figure 5-56. Decreased service levels due to the COVID-19 pandemic contributed to the decrease in operating costs in Fiscal Year 2020 and Fiscal Year 2021. Capital costs are a smaller share of total Transportation Operations costs, with $75.1 million in Fiscal Year 2021. Transportation Operations capital costs, as shown in Figure 5-56, varied annually from $82.3 million (Fiscal Year 2019) to $38.3 million (Fiscal Year 2020).

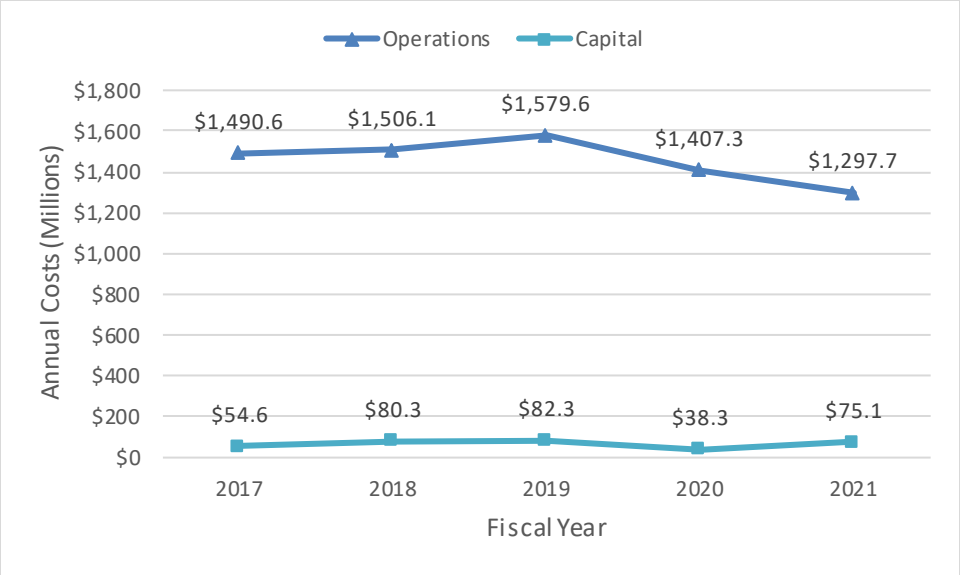

Figure 5-56. Ops Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

A single year's operating costs, shown in Figure 5-57, for Fiscal Year 2021 provides the relative size of each Ops subfamily. The largest Ops subfamily by operating cost is T&E (Trainmen and Enginemen) at $401.8 million, followed by Stations at $235.0 million and On Board Services at $184.1 million.

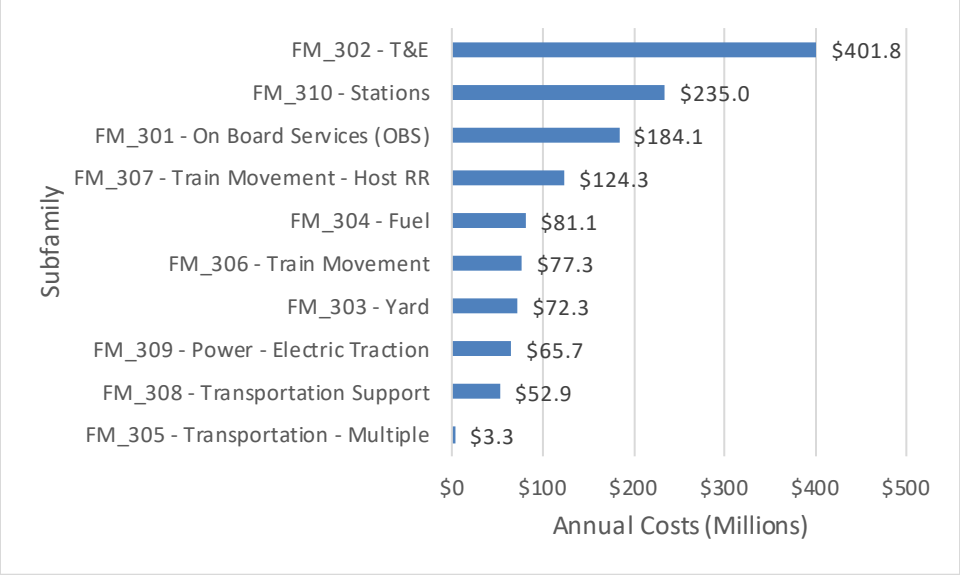

Figure 5-57. Subfamily Distribution of Ops Operating Costs, Fiscal Year 2021 (Millions)

Fiscal Year 2021 Transportation Operations capital costs, shown in Figure 5-58, are primarily in Transportation Support at $63.8 million and Train Movement – Host Railroad at $10.6 million. Relatively minor capital costs are seen in Train Movement, Yard, Stations, T&E, and Transportation – Multiple.

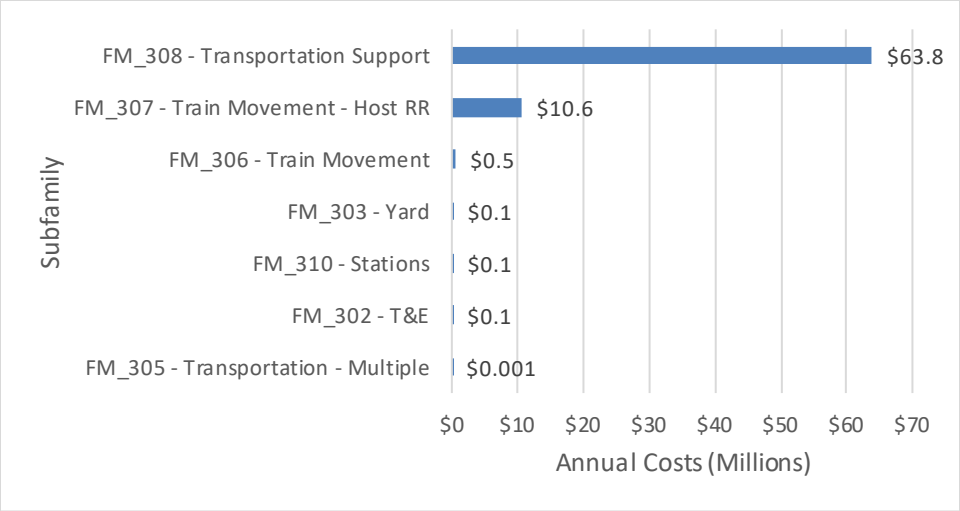

Figure 5-58. Subfamily Distribution of Ops Capital Costs, Fiscal Year 2021 (Millions)

The subsections below describe each Ops subfamily in detail, including the activities performed, a breakdown of account costs, the approach to cost allocation, and a summary of allocation data.

5.3.1 On-Board Services (OBS) Subfamily

Family: Transportation Operations – FM_OPS_TRANS
Subfamily: On-Board Services (OBS) – FM_301

Scope

The On-Board Services (OBS) Subfamily provides customer services onboard passenger trains including ticket validation, passenger interface, food and beverage (F&B) services, entertainment, and sleeping car services. This subfamily includes the direct and indirect labor costs of the employees providing such services, the costs of materials and supplies, commissary operation costs, costs for contractors to operate the commissaries, and related managerial and overhead costs.

Total costs for the OBS Subfamily in Fiscal Year 2021 were $184.1 million, accounting for approximately 3.0 percent of Amtrak's total costs. The subfamily consists of 119 cost centers in four subcategories. Table 5-88 is an overview of Fiscal Year 2021 for the OBS Subfamily.

Table 5-88. Subfamily Overview for On-Board Services (OBS) Subfamily – FM_301

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$184.1
Subcategories Used	Crew 301_1, Supplies – F&B 301_2, Commissary/Mgmt. – F&B

Summary Item	Value or Measure
	301_3, Support 301_4
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	119

Composition of Subfamily Costs

Subfamily costs in Fiscal Year 2021 were $184.1 million and were composed entirely of operating costs. This represents a 33.7 percent decrease since Fiscal Year 2019. OBS operating costs were relatively consistent from Fiscal Year 2017 ($266.2 million) through Fiscal Year 2019 ($277.7 million). However, costs declined in Fiscal Year 2020 to $217.4 million and further to $184.1 million in Fiscal Year 2021. The decline in service provision due to COVID-19 contributed to this decline in operating costs.

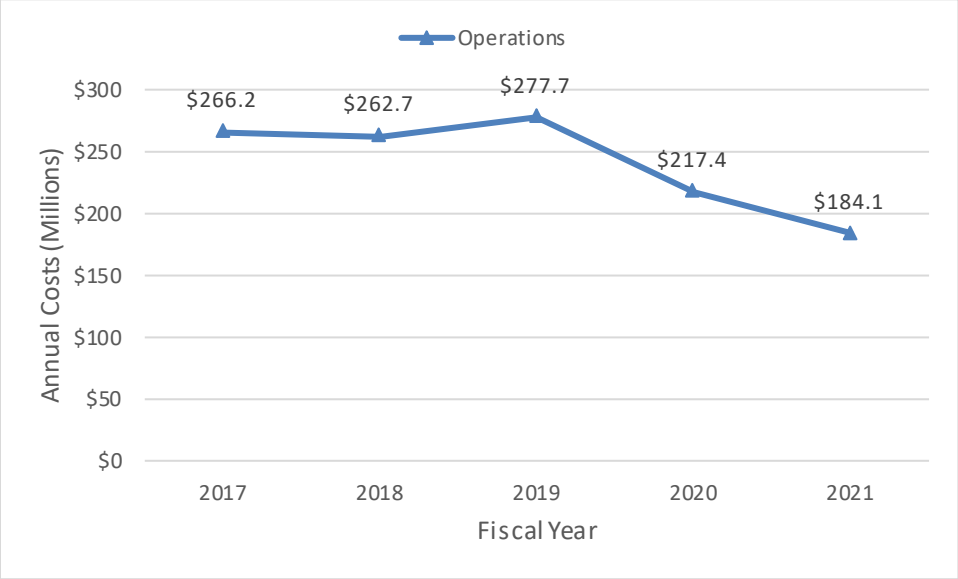

Figure 5-59. On-Board Services (OBS) Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

OBS operating costs are largely composed of the Wages & Overtime (39.5 percent), Train Operations (29.2 percent), which captures food supplies and other materials consumed onboard, and Employee Benefits Expenses (23.5 percent) account categories. A smaller proportion of operating costs are in the Salaries account category (6.2 percent). All other account categories represent less than 1 percent each of subfamily operating costs, as shown in Figure 5-60.

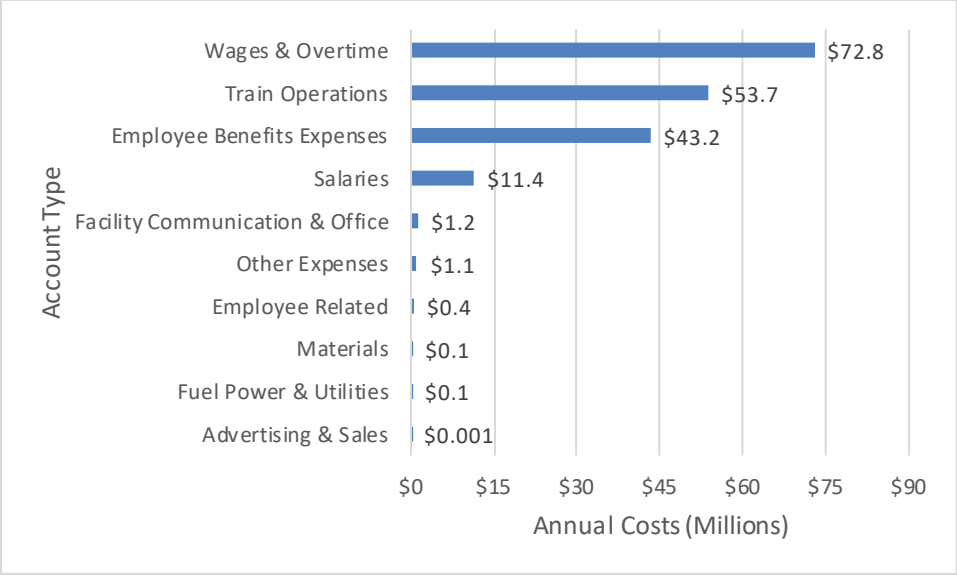

Figure 5-60. On-Board Services (OBS) Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The largest internal order in the OBS Subfamily is OBS Dining & Snack (IO_1321), which accounts for 33.6 percent of subfamily expenditures. This internal order records "payroll cost of on-board crews and other expenses (food, etc.) directly related to operating dining and snack cars." Other internal orders include No Function (IO_NO_IO), which accounts for 19.4 percent of subfamily expenditures, and Commissary (IO_1311), which accounts for 11.9 percent of subfamily expenditures. The Commissary internal order is responsible for payroll and other costs related to the operations of commissaries. Other internal orders used in this subfamily are related to operations of different types of train cars (i.e., sleeping cars, coach cars), and other costs related to overhead and management in OBS, as shown in Table 5-89. The internal orders for onboard labor are typically directly coded to the train and not allocated.

Table 5-89. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for On-Board Services (OBS) Subfamily – FM_301

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
OBS DINING & SNACK	IO_1321	$61.9	ST_NO_STX	33.6%
No Function	IO_NO_IO	$35.7	ST_OLHX	19.4%
COMMISSARY	IO_1311	$21.9	ST_CMSRYX	11.9%
OBS SLEEPING CAR	IO_1331	$14.8	ST_NO_STX	8.1%
OBS COACH SERVICE	IO_1341	$14.3	ST_NO_STX	7.8%
OBS SERVICES–	IO_1315	$11.8	ST_OLHX	6.4%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
OVERHEAD				
OBS MGMT & SUPV. STAFF	IO_1301	$11.7	ST_OLHX	6.4%
OBS SERVICES– EXTRA BOARD	IO_1313	$4.6	ST_OLHX	2.5%
DIVISION ADMINISTRATIVE	IO_1002	$4.4	ST_CMSRYX	2.4%

Cost Allocation Approach

While operating costs in OBS are primarily allocated in the first round, accounting for 53.4 percent of cost allocation, the remaining costs are almost entirely directly assigned, at 45.2 percent of the costs. These directly assigned costs include onboard crew labor as well as commissary food and beverage supplies, both of which are coded directly to specific train numbers. Second-round costs account for 1.4 percent of total operating costs, as shown in Table 5-90.

Table 5-90. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for On-Board Services (OBS) Subfamily - #301

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	45.2%
First Round	53.4%
Second Round	1.4%

Many of the costs for this subfamily are direct onboard labor costs for the OBS crewmembers and are assigned directly to Amtrak trains through the OBS crew Labor Management System (known as LMS). Expenditures for food supplies, beverages, crew meals, condemned food, and non-consumables such as linens are all assigned directly to trains with no need to allocate. The most used statistic in the OBS Subfamily is No Statistic (Direct Charges) (ST_NO_STX), which accounts for 45.2 percent of subfamily expenditures.

Allocations for indirect labor-related costs utilize different allocation statistics depending on the internal order used. Where possible, craft-specific labor hours, such as Dining Labor Hours (ST_DLHX), are used to allocate indirect labor costs with a corresponding craft-specific IO, in this case OBS Dining & Snack (IO_1321). OBS management and crew-related costs that are not directly assigned to trains, such as extraboard guarantee, benefits, crew meals, crew lodging, crew transportation, overhead, vacation, and holidays, are allocated to trains served by that Cost Center using Total OBS Labor Hours (ST_OLHX) for those trains. ST_OLHX accounts for 30.8 percent of OBS Subfamily cost allocations.

Commissary costs, including outsourced contract costs paid to outside contractors as well as Amtrak management and support costs, are allocated to the Amtrak trains served by that commissary. Commissary costs not directly assigned are related to the level of food service offered onboard individual trains and are allocated to reflect the levels of items consumed or used on each train. Statistics have been created to aggregate specific directly assigned commissary accounts for the purpose of allocating other commissary support account costs not directly assigned to trains, including Commissary Direct Expense (ST_CMSRYX). ST_CMSRYX accounts for 13.3 percent of OBS Subfamily expenditures. Other top statistics used for subfamily cost attribution are shown in Table 5-91.

Table 5-91. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for On-Board Services (OBS) Subfamily – FM_301

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
No Statistic (Direct Charges)	ST_NO_STX	$83.3	45.2%
Total OBS Labor Hours	ST_OLHX	$56.8	30.8%
Commissary Direct Expense	ST_CMSRYX	$24.4	13.3%
Food Service OBS Labor Hours	ST_DLHX	$5.8	3.1%
Straight-Line Allocation (1)	ST_NONX	$3.4	1.8%
Coach OBS Labor Hours	ST_CLHX	$2.6	1.4%

Service Line Allocation Results

OBS Subfamily costs are primarily allocated to the three NTS service lines, together accounting for 99.9 percent of subfamily expenditures. Over two-thirds of costs are allocated to the Long Distance service line (69.0 percent), while fewer are allocated to the State Supported (15.7 percent) and NEC (15.3 percent) service lines, as shown in Table 5-92.

Table 5-92. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for On-Board Services (OBS) – FM_301

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$127.0	69.0%
NTS-SS	$28.9	15.7%
NTS-NEC	$28.2	15.3%
All Other Service Lines	$0.01	0.01%

5.3.2 Trainmen & Enginemen (T&E) Subfamily

Family: Transportation Operations – FM_OPS_TRANS
Subfamily: Trainmen & Enginemen (T&E) – FM_302

Scope

The Trainmen & Enginemen (T&E) Subfamily covers the direct labor and indirect labor-related costs of operating trains including trainmen and enginemen. Enginemen are the engineers who operate locomotives, while trainmen are the conductors who are in overall control of trains.[63] Together, they are referred to as the train crew or road crew. T&E crew are attached to one of about 60 crew bases, and each physical crew base may consist of multiple cost centers broken down by labor craft or routes' geographic territory. Crew bases are where T&E sign in, obtain their manifests, receive briefings, and perform administrative tasks. Amtrak T&E crews work on both Amtrak trains and commuter trains operated by Amtrak and their costs are assigned or allocated to both Amtrak core intercity passenger rail business and its ancillary commuter operations business.

T&E Subfamily costs for Fiscal Year 2021 were $401.8 million and accounted for 6.6 percent of Amtrak's total expenses. The subfamily consists of 156 cost centers in two Subcategories: Crew (302_1) and Support (302_2). The Crew Subcategory consists of road crews and their immediate supervisors,[64] whereas the Support Subcategory consists of higher-level management and supervisory activities and costs. Table 5-93 is an overview of Fiscal Year 2021 for the T&E Subfamily.

Table 5-93. Subfamily Overview for T&E Subfamily – FM_302

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$401.8
Subcategories Used	Crew 302_1, Support 302_2
Service Lines to Which Costs Are	NTS-NEC, NTS-SS, NTS-LD,

[63] The terms "trainman" and "engineman" are used in a gender-neutral manner.
[64] The immediate supervisors of train engineers are referred to as road foremen and the immediate supervisors of conductors are "trainmasters." Road foremen are distinct from "railroad foreman" discussed in FM_308.

Summary Item	Value or Measure
Allocated	Commuter Operations, Reimbursable, Commercial, Infrastructure Access
Number of Cost Centers	156

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $401.8 million, a 13.3 percent decline from their peak over the five-year analysis period in Fiscal Year 2019, at $463.2 million. This decline was steady from Fiscal Year 2019 to Fiscal Year 2020 and Fiscal Year 2021 and can be partially explained by the decline in service provision related to COVID-19. Throughout the five-year period, costs were almost entirely operating costs, with minimal capital costs reported. Operating costs were relatively steady prior to Fiscal Year 2019, and were the highest in Fiscal Year 2019, at $463.0 million. Capital costs have been relatively steady, as shown in Figure 5-61.

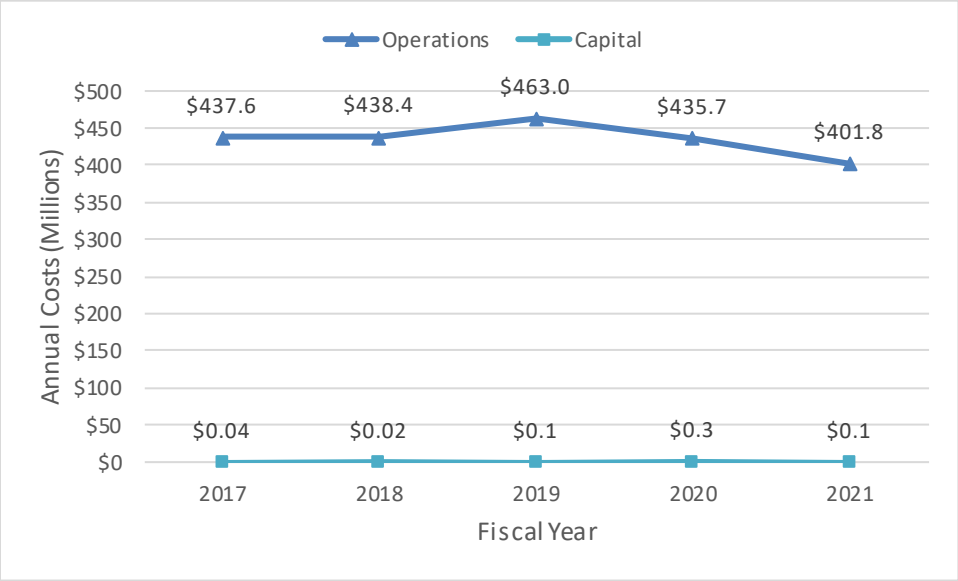

Figure 5-61. T&E Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

T&E operating costs are largely composed of the Wages & Overtime account category, which represents 59.3 percent of costs, capturing the train crew labor. The next most common account category, Employee Benefits Expenses, represents 31.9 percent of operating costs. The Train Operations and Salaries account categories account for 4.2 percent and 4.0 percent of operating costs, respectively, while all other account categories represent less than 1 percent each of operating costs, as shown in Figure 5-62. T&E Subfamily capital costs (not shown) are entirely composed of the Wages & Overtime account category and totaled $0.1 million in Fiscal Year 2021.

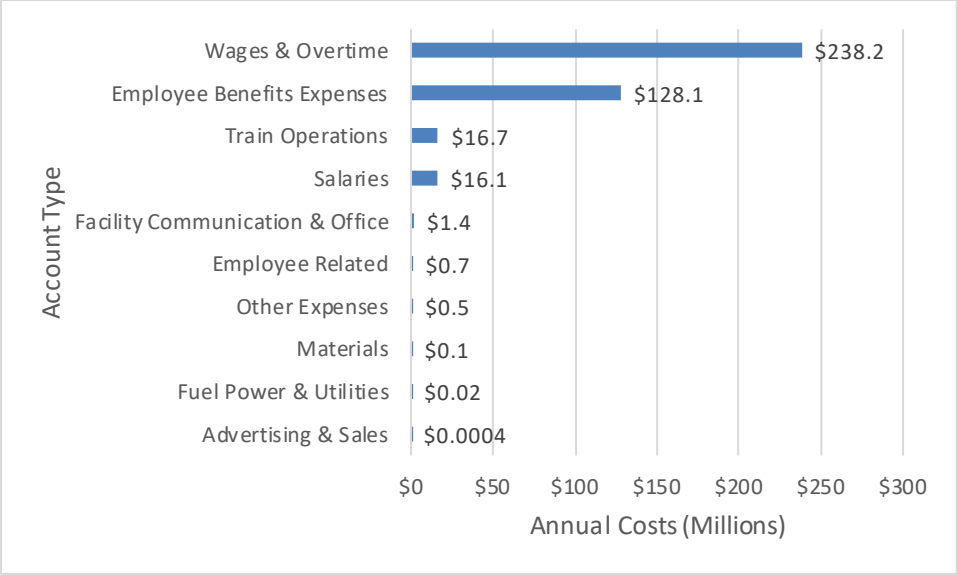

Figure 5-62. T&E Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The largest internal order in the T&E Subfamily is Psg. Trn Trainmen (IO_1635), with 26.7 percent of expenditures. This internal order records "expenses related to Passenger or Assistant Passenger Conductors in intercity service, to include turnaround movements or other movements or function previously performed by yard crews that are now considered part of positions regular assignment." The Psg. Train Enginemen (IO_1633) internal order, captures "expenses related to Passenger Engineers operating road locomotives in intercity passenger service, to include turnaround movements, or other movement previously handled by yard crews, which are now considered part of positions regular assignment," and accounts for 20.3 percent of subfamily expenditures. Other internal orders include No Function (IO_NO_IO) (24.3 percent) and others as shown in Table 5-94.

Table 5-94. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for T&E Subfamily – FM_302

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
PSG. TRN TRAINMEN	IO_1635	$107.3	ST_NO_STX	26.7%
No Function	IO_NO_IO	$97.7	ST_TEHX	24.3%
PSG. TRAIN ENGINMEN	IO_1633	$81.5	ST_NO_STX	20.3%
T&E OVERHEAD	IO_1617	$36.9	ST_TEHX	9.2%
TRANS. MGMT & SUPV	IO_1601	$18.1	ST_TEHX	4.5%
EXT.BRD GUAR ENG CREW OPER	IO_1615	$13.9	ST_ELHX	3.5%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
EXT.BRD GUAR TRAINMEN	IO_1616	$9.6	ST_TLHX	2.4%
Reimbursable – General	IO_4100	$6.3	ST_NO_STX	1.6%
TRAIN OPS – SPEC PROJ	IO_1689	$5.9	ST_TEHX	1.5%
TRAIN OPERATIONS	IO_1631	$5.7	ST_TEHX	1.4%

Cost Allocation Approach

Just over half of costs the T&E Subfamily are allocated via direct assignment (53.4 percent), with the remainder in the first round (45.2 percent), and fewer in the second round (1.4 percent).

Table 5-95. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for T&E Subfamily – FM_302

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	53.4%
First Round	45.2%
Second Round	1.4%

Most of the costs for this subfamily are direct labor costs for the T&E road crews and are assigned directly to Amtrak trains through Amtrak's Labor Management System (known as LMS). Each T&E crew member has a unique identifier relating the trains, scheduled hours, and pay rate associated with that employee and his position. When crew member signs into the crew base LMS system for their shift, his or her time is automatically assigned to one or more trains that day (Amtrak, commuter, or Reimbursable business-related trains) based on the schedule. This direct assignment is reflected in the No Statistic (Direct Charges) (ST_NO_STX) statistic, which accounts for 53.4 percent of subfamily expenditures.

Indirect costs in this subfamily are also labor-related. Indirect costs include items such as extra board guarantee, benefits, crew meals, crew lodging, crew transportation, vacation, holidays, other wages, and overhead management and support. These indirect costs are allocated by the level of crew activity for each train using allocation statistics dependent on the internal order used. All T&E costs that are not directly assigned to trains, are allocated based on Conductor and Engineer Labor Hours (ST_TEHX), Engineer Labor Hours (ST_ELHX), and Conductor Labor Hours (ST_TLHX), which account for 31.1 percent, 7.1 percent, and 4.3 percent of subfamily expenditures, respectively (Table 5-96). If available, the craft-

specific labor hours statistic is used, otherwise the joint crew statistic (ST_TEHX) is used for these allocations. Indirect cost allocations at a cost center utilize a Cost Center Stat Qualifier to allocate those indirect costs exclusively to trains serviced by that cost center.

Table 5-96. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for T&E Subfamily – FM_302

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
No Statistic (Direct Charges)	ST_NO_STX	$214.5	53.4%
Conductor and Engineer Labor Hours	ST_TEHX	$124.9	31.1%
Engineer Labor Hours	ST_ELHX	$28.4	7.1%
Conductor Labor Hours	ST_TLHX	$17.3	4.3%

Service Line Allocation Results

T&E Subfamily expenditures are primarily allocated to the three NTS service lines, with Long Distance as the largest, with 38.9 percent of subfamily expenditures, followed by the State Supported (32.7 percent), and NEC (14.7 percent) service lines. Additionally, 13.6 percent of subfamily expenditures are allocated to the Commuter Operations service line (Table 5-97).

Table 5-97. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for T&E – FM_302

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$156.3	38.9%
NTS-SS	$131.4	32.7%
NTS-NEC	$59.2	14.7%
Commuter Operations	$54.6	13.6%
All Other Service Lines	$0.2	0.1%

5.3.3 Yard Subfamily

Family: Transportation Operations – FM_OPS_TRANS

Subfamily: Yard – FM_303

Scope

The Yard Subfamily performs activities that support the movement of train equipment in preparation for revenue service. This includes the movement of trains between the yard and station, the makeup and breakup of trains, the movement of equipment to and from mechanical facilities, and the managerial costs related to scheduling the equipment moves and overseeing yard operations. The Yard Subfamily consists of four subcategories to identify and track distinct portions of yard activity, each composed of groups of cost centers with similar missions and activities:

- Yard Direct (Commuter) (301_1): yard cost centers that exclusively support Commuter operations,
- Train & Equipment Moves (303_2): the general case of yard cost centers that perform train makeup and breakup in support of transportation operations,
- Equipment Moves (NY&CHI) (303_3): yards in New York and Chicago that focus primarily on equipment moves in support of mechanical operations in addition to general yard operations, and
- Terminal Rent/Yard Services (Contract) (303_4): cost centers incur costs paid by Amtrak for yard services performed by outside agencies or railroads.

Total costs for the Yard Subfamily in Fiscal Year 2021 were $72.4 million, 1.2 percent of Amtrak's total costs. The subfamily is composed of 26 cost centers in the four subcategories above. Table 5-98 is an overview for the Yard Subfamily in Fiscal Year 2021.

Table 5-98. Subfamily Overview for Yard Subfamily – FM_303

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$72.4
Subcategories Used	Yard Direct (Commuter) 303_1, Train & Equipment Moves 303_2, Equipment Moves (NY & CHI) 303_3, Terminal Rent/Yard Services (Contract) 303_4
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	26

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $72.4 million and are almost entirely composed of operating

costs. This represents a 3.4 percent decrease compared to Fiscal Year 2019, when costs were at their highest in the five-year analysis period. Operating costs have been largely flat for the five-year period, from a low of $68.3 million in Fiscal Year 2017 to the five-year high of $74.9 million in Fiscal Year 2019. Capital costs over the five-year period were relatively lower, and trends were flat, as shown in Figure 5-63.

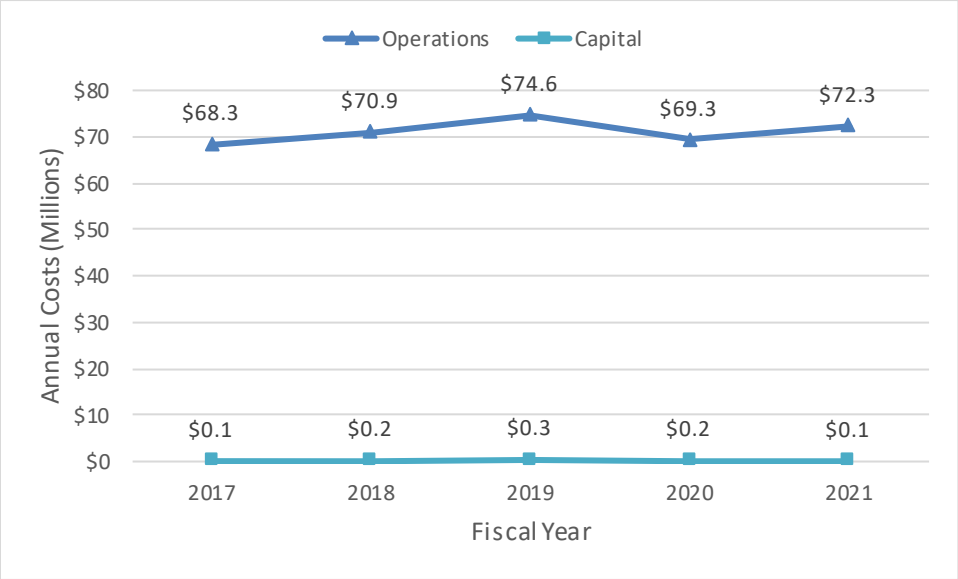

Figure 5-63. Yard Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Almost all operating costs in the Yard Subfamily are in the Wages & Overtime account category (61.4 percent) or the Employee Benefits Expenses account category (32.3 percent). All other account categories represent less than 5 percent each of subfamily operating costs (Figure 5-64). Capital costs in the Yard Subfamily (not shown) are entirely in the Wages & Overtime account category and totaled $0.1 million in Fiscal Year 2021.

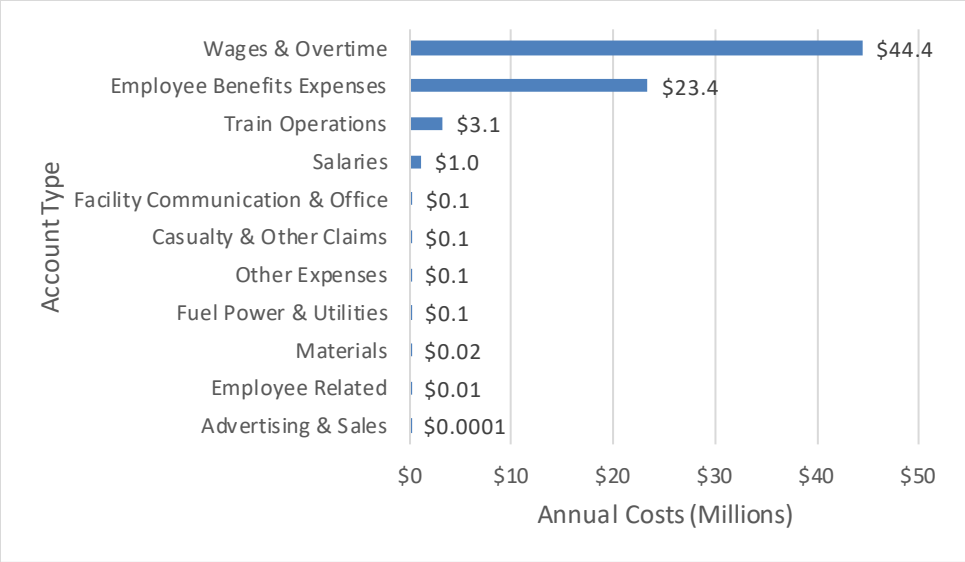

Figure 5-64. Yard Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The largest internal order in the Yard Subfamily is Yard Trainmen Operations (IO_1623), which accounts for 30.7 percent of subfamily expenditures. This internal order records "expenses related to train movements by Passenger Conductors and Assistant Passenger Conductors when position is specifically assigned to yard operations." Other internal orders include No Function (IO_NO_IO) and Yard Eng. Crew Ops. (IO_1622). IO_1662 functions similarly to IO_1623 except with respect to Passenger Engineers instead of Passenger Conductors. Other top internal orders in the Yard Subfamily can be found in Table 5-99.

Table 5-99. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Yard Subfamily – FM_303

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
YARD TRAINMEN OPERATIONS	IO_1623	$22.3	ST_UTX	30.7%
No Function	IO_NO_IO	$17.6	ST_UTX	24.3%
YARD ENG. CREW OPS.	IO_1622	$16.1	ST_FTTX	22.3%
T&E OVERHEAD	IO_1617	$4.6	ST_FTTX, ST_UTX	6.4%
YARDMASTERS AND CLERKS	IO_1621	$3.3	ST_UTX, ST_FTTX	4.6%
TRANSPORTATION OPS RAILROAD	IO_1641	$2.3	ST_NO_STX	3.1%
TRANS. MGMT &	IO_1601	$1.5	ST_MDC_DBX,	2.1%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
SUPV			ST_FTTX	
TRAIN OPERATIONS	IO_1631	$1.2	ST_NO_STX, ST_UTX	1.7%
EXT.BRD GUAR TRAINMEN	IO_1616	$0.7	ST_MDC_DBX	0.9%

Cost Allocation Approach

Most operating costs in the Yard Subfamily are allocated in the first round (72.2 percent), with fewer in the second round (23.0 percent), and the least via direct assignment (4.9 percent), as shown in Table 5-100.

Table 5-100. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Yard Subfamily – FM_303

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	4.9%
First Round	72.2%
Second Round	23.0%

All costs in this subfamily are labor-related, but unlike T&E road crews, yard crew labor charges are not directly assigned to specific Amtrak trains. Equipment movements vary daily depending on service changes, mechanical failures, and scheduled maintenance. While most of the costs are allocated to Amtrak trains, several Yard Subfamily cost centers are dedicated to an individual commuter operation and their costs are assigned directly to the appropriate customer. This is reflected in the No Statistic (Direct Charges) (ST_NO_STX) statistic, which accounts for 4.9 percent of subfamily costs, as shown in Table 5-101. Some yard cost centers service equipment for both commuter and Amtrak trains, in which case the train group for such cost centers includes both types of customers. Costs are allocated to trains that utilize the individual location.

The Yard Subfamily is unique in that the allocation methodology differs depending on the type of activity at a cost center. Subcategories are used not only to break out different types of costs and their allocation statistics (as in some other Subfamilies), but, in this case, to define a distinct allocation method that makes use of the Allocation Ratio and statistics. The primary allocation statistics in the overall subfamily are Locomotive and Car Unit Trips (ST_UTX) (35.5 percent) and Frequency of Train Trips (ST_FTTX) (34.5 percent), followed by Mechanical Direct Cost (ST_MDC_DBX) (22.9 percent). Costs allocated by ST_UTX in all subcategories in this subfamily reflect that trains with more cars, more locomotives, and more varied types of equipment require more crew time for train makeup and

breakup and are more likely to have mechanical failures. ST_MDC_DBX is employed at yard cost centers that support mechanical shops as it is consistent with the method for allocating support in the mechanical Family; the ST_MDC_DBX statistic is a measure of the share of first-round mechanical expenses incurred by a particular train at a mechanical cost center relative to total direct mechanical costs at that cost center.

The statistics used for allocation vary on the subcategory, depending on the mission of the cost centers, the customers they serve, and the data available for allocation at described below.

- Yard Direct (Commuter) (301_1): The majority of costs, accounting for 57.6 percent of the subcategory total, are directly assigned, while 42.3 percent of costs are allocated by ST_FTTX.
- Yard – Train & Equipment Moves (303_2): Most costs are allocated using ST_UTX or ST_FTTX, which account 38.5 percent and 35.2 percent of costs in the subcategory respectively. ST_MDC_DBX accounts for 17.5 percent of subcategory costs, and 5.6 percent of costs are directly assigned. The remaining statistics each account for less than 3 percent of costs.
- Yard – Equipment Moves (NY & CHI) (303_3): Costs are evenly spread between ST_FTTX, ST_UTX, ST_MDC_DBX, which account for 33.9 percent, 32.6 percent, and 31.9 percent of subcategory costs, while 1.1 percent of subcategory costs are directly assigned.
- Yard – Terminal Rent/Yard Services (Contract) (303_4): Costs in this subcategory are almost entirely directly assigned (99.2 percent), with the remainder in Total Boards and Deboards (ST_TBDX).

In some yard cost centers, an ACK Ratio is used to allocate a fixed percentage of an expense by a specified share.

Table 5-101. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Yard Subfamily – FM_303

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Locomotive and Car Unit Trips	ST_UTX	$25.7	35.5%
Frequency of Train Trips	ST_FTTX	$25.0	34.5%
Mechanical Direct Costs	ST_MDC_DBX	$16.6	22.9%
No Statistic (Direct Charges)	ST_NO_STX	$3.5	4.9%

Service Line Allocation Results

Yard Subfamily costs are primarily allocated to the three NTS service lines, accounting for 78.2 percent of subfamily expenditures. The most are allocated to the Long Distance service line (27.5 percent), while fewer are allocated to the NEC (26.3 percent) and State Supported (24.4 percent) service lines. The Infrastructure Access service line accounts for 17.9 percent of subfamily expenditures, and the Commuter Operations, Reimbursable, and all other service lines account for less than 3 percent each of subfamily expenditures (Table 5-102).

Table 5-102. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Yard – FM_303

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$19.9	27.5%
NTS-NEC	$19.0	26.3%
NTS-SS	$17.7	24.4%
Infrastructure Access	$13.0	17.9%
Commuter Operations	$1.6	2.2%
Reimbursable	$1.2	1.6%
All Other Service Lines	$0.02	0.03%

5.3.4 Fuel Subfamily

Family: Transportation Operations – FM_OPS_TRANS
Subfamily: Fuel – FM_304

Scope

The Fuel Subfamily records diesel fuel costs for Amtrak trains used in passenger service and for certain commuters. Costs incurred at cost centers in this subfamily almost entirely the costs of fuel only; no labor or other costs are to be recorded in the subfamily. However, this subfamily is not the exclusive home for all Amtrak diesel fuel-related costs. For example, fuel costs purchased as part of mechanical operations may be in the MoE Family and costs of diesel fuel purchased from other railroads used to fuel Amtrak trains are recorded in the Train Movement – Host Railroad Subfamily (FM_307). Additionally, related costs associated with fuel hedging activities are incurred in Treasury Mandatory (CC_0802)—located in the Centralized Expense Subfamily (FM_801).

Costs for the Fuel Subfamily in Fiscal Year 2021 were $81.1 million and account for 1.3 percent of Amtrak's total costs. This subfamily is made up of 41 cost centers in a single subcategory. Table 5-103 is an overview of the Fuel Subfamily in Fiscal Year 2021.

Table 5-103. Subfamily Overview for Fuel Subfamily - FM_304

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$81.1
Subcategories Used	General 304_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access
Number of Cost Centers	41

Composition of Subfamily Costs

Fuel Subfamily costs were comprised entirely of operating costs over the five-year analysis period (Figure 5-65), with no capital costs reported. Operating costs have varied, with a large increase from $99.0 million in Fiscal Year 2017 to $128.1 million in Fiscal Year 2018. Fiscal Year 2021 costs are 32.6 percent lower than those reported in Fiscal Year 2019 and show little change since Fiscal Year 2020. This decrease between Fiscal Year 2019 and Fiscal Year 2020 can be partially explained by reduced service provision due to the COVID-19 pandemic.

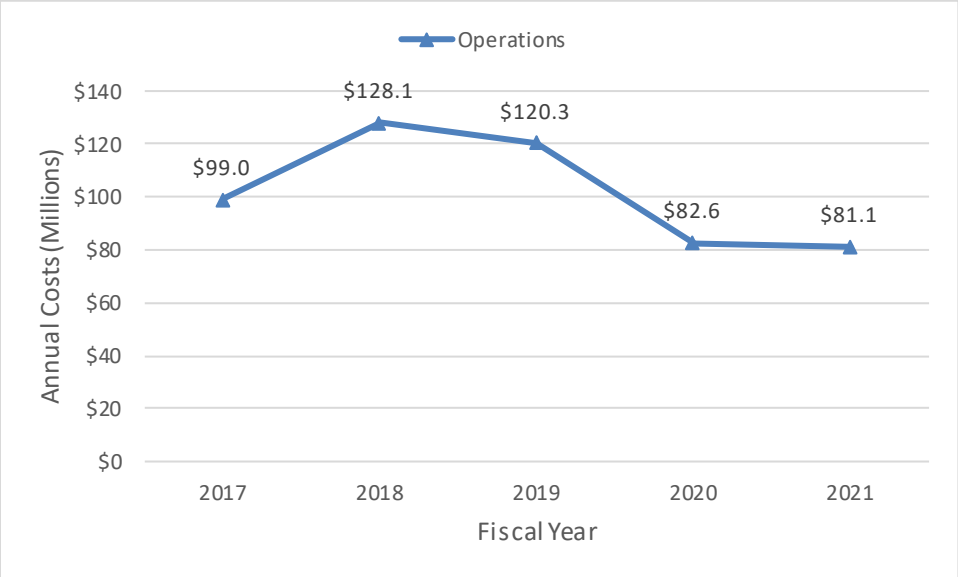

Figure 5-65. Fuel Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Almost all operating costs in the Fuel Subfamily in Fiscal Year 2021 were reported in the Fuel Power & Utilities account category (over 99.9 percent), with relatively minimal costs in all other account categories shown in Figure 5-66.

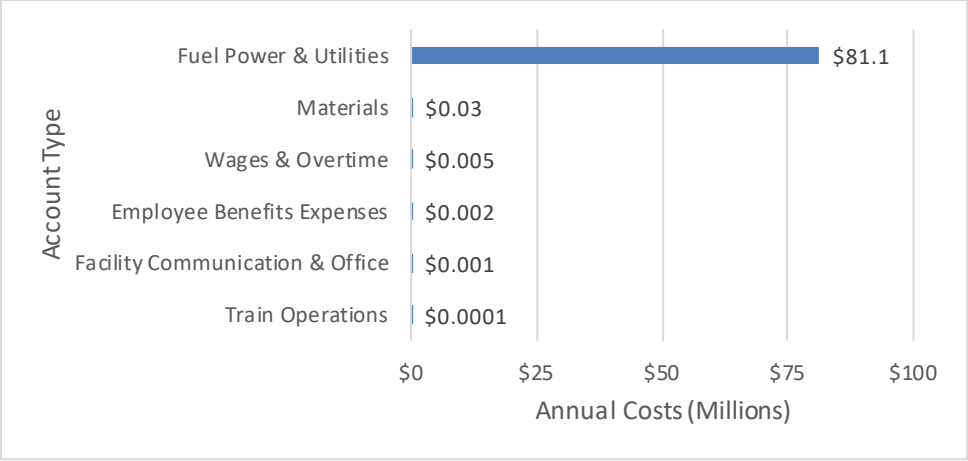

Figure 5-66. Fuel Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The single largest internal order in the Fuel Subfamily is Train Operations (IO_1631), which records "expenses related to enginemen and train-men, and power and fuel used in train operations," and accounts for 93.2 percent of subfamily expenditures. The second most common internal order, Reimbursable – General (IO_4100), is used for 3.2 percent of subfamily expenditures, and records costs billable to outside parties, as shown in Table 5-104.

Table 5-104. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Fuel Subfamily - FM_304

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
TRAIN OPERATIONS	IO_1631	$75.6	ST_DPUFX	93.2%
Reimbursable – General	IO_4100	$2.6	ST_NO_STX	3.2%

Cost Allocation Approach

Almost all costs in the Fuel Subfamily are allocated in the first round, at 93.0 percent of costs (Table 5-105). Significantly fewer costs are allocated via direct assignment (6.0 percent) or in the second round (1.0 percent).

Table 5-105. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Fuel Subfamily - FM_304

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	6.0%
First Round	93.0%

Allocation Round	Percent of Costs Allocated in Allocation Round
Second Round	1.0%

Fuel costs are allocated almost exclusively by the statistic Diesel Power Allocation Factor (ST_DPUFX) using a national allocation, which accounts for 90.9 percent of subfamily expenditures, as shown in Table 5-106. Costs are allocated based on train's systemwide ST_DPUFX and are not tied to the location where fuel was purchased or locomotives were fueled. ST_DPUFX is a calculated statistic that incorporates factors such as a train's weight, trip length, trip time, locomotive type, and car types, as well as certain track and terrain characteristics. Fuel costs at commuter-specific cost centers are assigned directly to the relevant commuter agencies using No Statistic (Direct Charges) (ST_NO_STX). Direct assignment accounts for 6.0 percent of subfamily expenditures.

Table 5-106. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Fuel Subfamily - FM_304

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Diesel Power Allocation Factor	ST_DPUFX	$73.8	90.9%
No Statistic (Direct Charges)	ST_NO_STX	$4.8	6.0%

Service Line Allocation Results

Fuel Subfamily costs are primarily allocated to the NTS – Long Distance service line, accounting for 59.3 percent of expenditures, followed by the NTS – State Supported service line, at 33.4 percent. Fewer costs, 5.7 percent, are allocated to the Commuter Operations service line, and all other service lines, as shown in Table 5-107.

Table 5-107. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Fuel - FM_304

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$48.1	59.3%
NTS-SS	$27.1	33.4%
Commuter Operations	$4.6	5.7%
All Other Service Lines	$1.2	1.5%

5.3.5 Transportation – Multiple Subfamily

Family: Transportation Operations – FM_OPS_TRANS
Subfamily: Transportation – Multiple – FM_305

Scope

Cost centers in the Transportation – Multiple Subfamily perform various activities that are typically found in other Transportation Operations subfamilies. The types of activities performed at cost centers in this subfamily include internal orders that would otherwise be located in the T&E, OBS, Transportation Support, Station Operations, Fuel, and Yard subfamilies. However, the cost centers in this subfamily perform two or more main activities to a degree that precludes their inclusion in a single subfamily.

Transportation – Multiple Subfamily expenditures in Fiscal Year 2021 were $3.3 million, accounting for 0.1 percent of Amtrak's total costs. This subfamily is composed of five cost centers in a single subcategory. Table 5-108 is an overview for the Transportation – Multiple Subfamily in Fiscal Year 2021.

Table 5-108. Subfamily Overview for Transportation - Multiple Subfamily - FM_305

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$3.3
Subcategories Used	Multiple - General 305_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable
Number of Cost Centers	5

Composition of Subfamily Costs

Transportation – Multiple Subfamily costs were $3.3 million in Fiscal Year 2021, a relatively small change from Fiscal Year 2020 ($3.1 million) and Fiscal Year 2019 ($ 4.0 million). However, Fiscal Year 2021 costs are 71.3 percent lower than those reported in Fiscal Year 2018, at $11.5 million, the highest level of costs reported over the five-year period. The shifts in costs largely reflect adjustments in the composition and mission of the cost centers in the subfamily. For example, CC_2834 was renamed from Assistant Superintendent Passenger Services in Fiscal Year 2017, to OBS Empire in Fiscal Year 2018, and renamed again in Fiscal Year 2019 to OBS Empire Builder – SEA, the year it was moved from Transportation – Multiple to OBS. Over the five-year period shown in Figure 5-67, costs were almost entirely operating costs, with minimal capital costs reported in Fiscal Year 2018 and Fiscal Year 2021, and no capital costs reported in Fiscal Years 2017, 2019, and 2020.

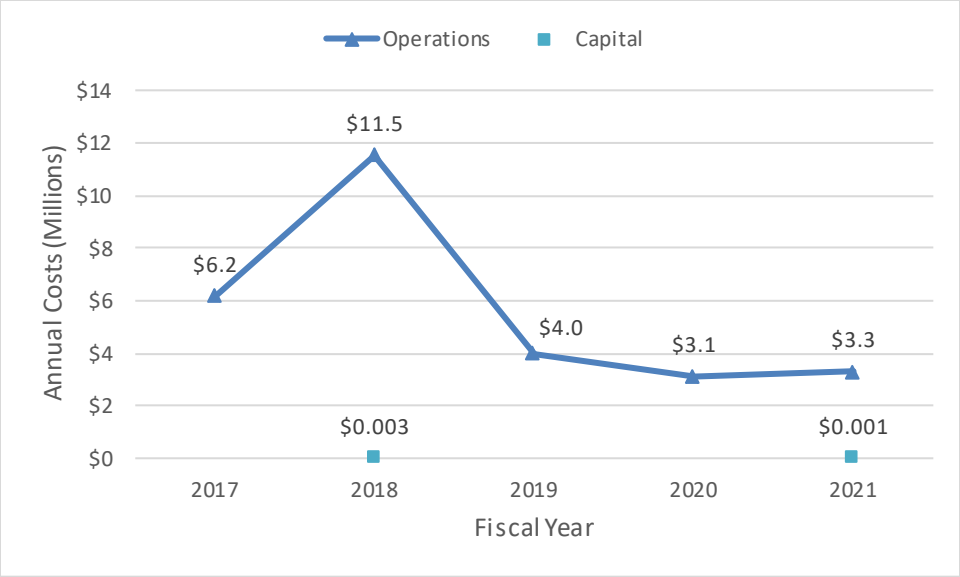

Figure 5-67. Transportation - Multiple Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Transportation – Multiple Subfamily operating costs are largely composed of the Fuel Power & Utilities account category, which represents 56.7 percent of subfamily operating costs. Other common account categories are Salaries (17.9 percent), Employee Benefits Expenses (10.6 percent), and Wages & Overtime (7.7 percent). All other account categories are each less than 5 percent of subfamily operating costs, as shown in Figure 5-68. Capital costs (not shown) in the Transportation – Multiple Subfamily in Fiscal Year 2021 were $0.0006 million and were entirely composed of the Wages & Overtime account category.

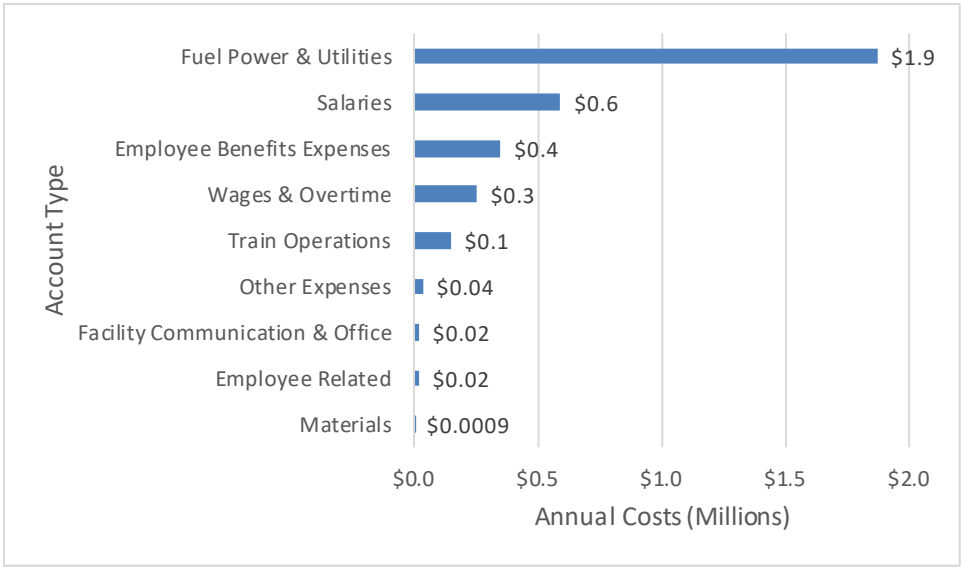

Figure 5-68. Transportation - Multiple Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The single largest internal order in the Transportation – Multiple Subfamily is Train Operations

(IO_1631), which records "expenses related to enginemen and train-men, and power and fuel used in train operations," and accounts for 60.7 percent of subfamily expenditures. This internal order is used in conjunction with train fuel accounts and is allocated primarily by the statistic used to allocate diesel fuel, Diesel Power Allocation Factor (ST_DPUFX). The second most common internal order is Trans. Mgmt & Supv (IO_1601), which accounts for 22.7 percent of subfamily expenditures (Table 5-109). This internal order records expense related to the management and supervision of train operations.

Table 5-109. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Transportation - Multiple Subfamily - FM_305

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
TRAIN OPERATIONS	IO_1631	$2.0	ST_DPUFX	60.7%
TRANS. MGMT & SUPV	IO_1601	$0.8	ST_FTTX	22.7%
No Function	IO_NO_IO	$0.2	ST_NO_STX	6.1%
Reimbursable - General	IO_4100	$0.1	ST_NO_STX	3.4%
PSG. TRN TRAINMEN	IO_1635	$0.0	ST_NO_STX	1.2%
OBS DINING & SNACK	IO_1321	$0.0	ST_NO_STX	1.2%
STA SVCS-TICKETING	IO_1231	$0.0	ST_NONX	1.1%

Cost Allocation Approach

Transportation – Multiple Subfamily costs are primarily allocated in the first round (80.4 percent), with fewer allocated by direct assignment (19.6 percent), and no costs allocated in the second round (Table 5-110).

Table 5-110. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Transportation - Multiple Subfamily - FM_305

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	19.6%
First Round	80.4%

Allocation Round	Percent of Costs Allocated in Allocation Round
Second Round	0.0%

Diesel Power Allocation Factor (ST_DPUFX) is the primary allocation statistic in the subfamily at 56.7 percent, reflecting the overall share of fuel costs that comprise this subfamily. Other statistics used for allocation are dependent on the internal order and account information coded to the expense record. Statistics used in this subfamily include, but are not limited to, Frequency of Train Trips (ST_FTTX) and Conductor and Engineer Labor Hours (ST_TEHX), which account for, 15.5 percent and 12.0 percent of subfamily expenditures, respectively. The T&E and OBS Crew Hours statistic (ST_CHRX) had negative net expenditures in Fiscal Year 2021, used to allocate a transfer credit for management salary assessment. See Table 5-111 for allocation statistic details.

Table 5-111. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Transportation - Multiple Subfamily - FM_305

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Diesel Power Allocation Factor	ST_DPUFX	$1.9	56.7%
No Statistic (Direct Charges)	ST_NO_STX	$0.6	19.6%
Frequency of Train Trips	ST_FTTX	$0.5	15.5%
Conductor and Engineer Labor Hours	ST_TEHX	$0.4	12.0%
T&E and OBS Crew Hours	ST_CHRX	-$0.2	-5.2%

Service Line Allocation Results

Transportation – Multiple Subfamily expenditures are primarily allocated to the three NTS service lines, accounting for 96.7 percent of subfamily expenditures. The largest of these is State Supported service line, at 50.4 percent of expenditures, followed by the Long Distance and NEC service lines, at 37.9

percent and 8.3 percent of expenditures respectively. Subfamily expenditures by service line for Fiscal Year 2021 can be found in Table 5-112.

Table 5-112. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Transportation - Multiple - FM_305

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-SS	$1.7	50.4%
NTS-LD	$1.3	37.9%
NTS-NEC	$0.3	8.3%
Reimbursable	$0.1	3.3%
Commuter Operations	$0.0001	0.003%

5.3.6 Train Movement Subfamily

Family: Transportation Operations – FM_OPS_TRANS
Subfamily: Train Movement – FM_306

Scope

The Train Movement Subfamily performs activities associated with moving passengers from endpoint to endpoint. This includes the management of train dispatching, signal or interlocking operations, and connecting bus service. The subfamily includes the Centralized Electrification Traffic Control Center (CETC) offices, Consolidated National Operations Center (CNOC), block operators at various locations, and staff responsible for setting and enforcing operating rules and standards.

Train Movement Subfamily costs for Fiscal Year 2021 were $77.7 million, and account for 1.3 percent of Amtrak's total costs. This subfamily consists of 29 cost centers in two subcategories. Table 5-113 is a subfamily overview for the Train Movement Subfamily for Fiscal Year 2021.

Table 5-113. Subfamily Overview for Train Movement Subfamily - FM_306

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$77.7
Subcategories Used	General 306_0, Connecting Services 306_3
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial,

Summary Item	Value or Measure
	Infrastructure Access, Other
Number of Cost Centers	29

Composition of Subfamily Costs

Train Movement Subfamily costs were $77.7 million in Fiscal Year 2021, a 14.8 percent decrease from Fiscal Year 2019. Over the five-year period shown in Figure 5-69, costs have been almost entirely operating costs, with fewer capital costs reported. Operating costs increased during the period from Fiscal Year 2017, with costs at $83.6 million to Fiscal Year 2019, when costs were $91.1 million. Operating costs declined to $78.9 million in Fiscal Year 2020 and remained at a similar level in Fiscal Year 2021, reported at $77.3 million.

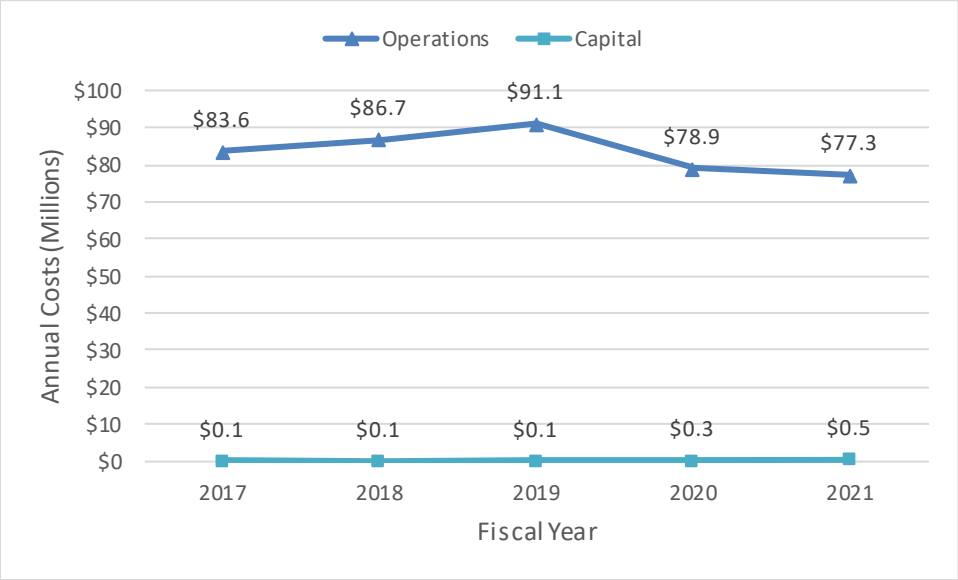

Figure 5-69. Train Movement Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Train Movement Subfamily operating costs are largely in the Wages & Overtime, Train Operations, and Employee Benefits Expenses account categories, representing 34.2 percent, 30.5 percent, and 21.3 percent of operating costs, respectively. Other notable account categories include Salaries (7.7 percent) and Other Expenses (4.6 percent). All other account categories are less than one percent each of subfamily operating costs (Figure 5-70).

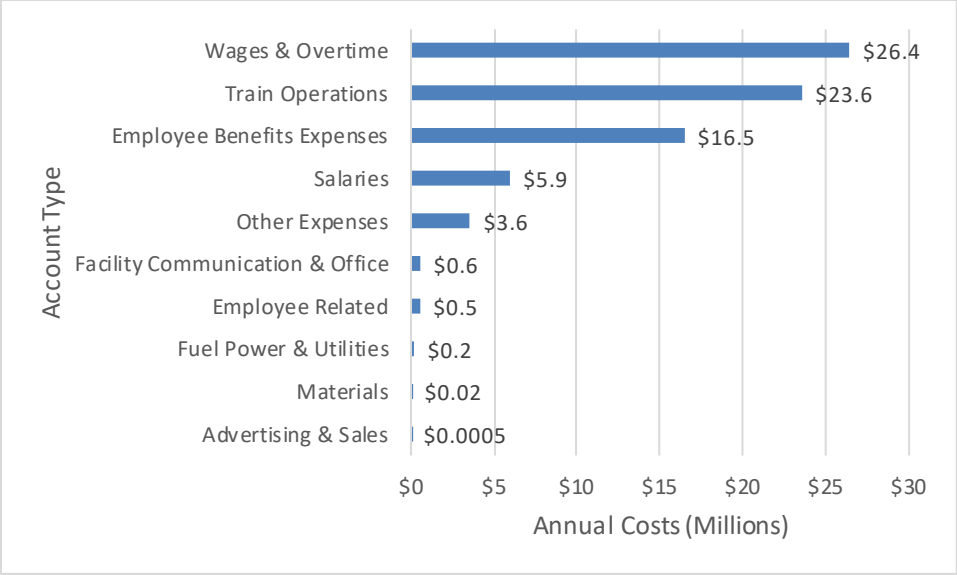

Figure 5-70. Train Movement Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Almost all capital costs in the Train Movement Subfamily are in the Wages & Overtime account category, with 99.9 percent of capital costs. The remaining capital costs are in the Employee Related account category, as shown in Figure 5-71.

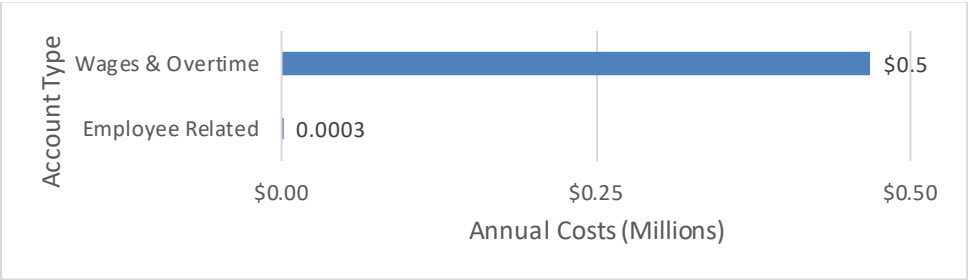

Figure 5-71. Train Movement Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest internal order in the Train Movement Subfamily is Train Dispatching (IO_1632), which reports "expenses related to directing train movements," and accounts for 24.8 percent of subfamily expenditures. Other internal orders include Reimbursable Bus Services (IO_1648), No Function (IO_NO_IO), and Trans. Mgmt & Supv (IO_1601), which account for 22.5 percent, 14.1 percent, and 11.3 percent of subfamily expenditures respectively. Reimbursable Bus Services records costs related to providing bus services reimbursed by third parties, while Trans. Mgmt & Supv records expenses related to the management and supervision of train operations. Table 5-114 shows the top internal orders used in the Train Movement Subfamily.

Table 5-114. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Train Movement Subfamily - FM_306

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
TRAIN DISPATCHING	IO_1632	$19.3	ST_FTTX	24.8%
Reimbursable Bus Services	IO_1648	$17.5	ST_NO_STX	22.5%
No Function	IO_NO_IO	$11.0	ST_FTTX	14.1%
TRANS. MGMT & SUPV	IO_1601	$8.8	ST_FTTX	11.3%
NON-REIMBURSABLE THRUWAY SERVICES	IO_1649	$5.9	ST_NO_STX	7.6%
SIG.& INTERLOCKER OPERATION	IO_1634	$5.4	ST_FTTX	6.9%
CORPORATE SERVICE CENTERS	IO_1121	$3.8	ST_MWDC_DBX	4.9%
SIGNAL & INTERLOCKER MAINT	IO_1713	$1.4	ST_TDC_DBX	1.8%
Capital	IO_4200	$0.7	ST_TDC_DBX	0.9%
M OF W MANAGERIAL	IO_1701	$0.7	ST_MWDC_DBX	0.8%

Cost Allocation Approach

Operating costs in the Train Movement Subfamily are mostly allocated in the first round (54.1 percent), with fewer costs allocated via direct assignment (30.0 percent) and the least costs in the second round (16.0 percent), as shown in Table 5-115.

Table 5-115. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Train Movement Subfamily - FM_306

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	30.0%
First Round	54.1%
Second Round	16.0%

The primary allocation statistic for the subfamily is Frequency of Train Trips (ST_FTTX), which allocates train movement expenses to trains based on the number of trips made on the network, and accounts for 53.6 percent of subfamily expenditures. Direct expenses are recorded for reimbursable business customers including connecting bus services. These expenses are assigned directly to related train numbers using No Statistic (Direct Charges) (ST_NO_STX), and account for 29.8 percent of subfamily Expenditures. Other top statistics used for subfamily cost attribution, as shown in Table 5-116, include the second-round statistics Ops Trans Direct Cost (ST_TDC_DBX) and Maintenance of Way Direct Cost (ST_MWDC_DBX). These statistics are used for indirect shared expenses that cannot be more closely tied to the underlying service.

Table 5-116. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Train Movement Subfamily - FM_306

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Frequency of Train Trips	ST_FTTX	$41.7	53.6%
No Statistic (Direct Charges)	ST_NO_STX	$23.1	29.8%
Ops Trans Direct Cost	ST_TDC_DBX	$6.9	8.9%
Maintenance of Way Direct Costs	ST_MWDC_DBX	$5.3	6.8%

Service Line Allocation Results

Train Movement Subfamily costs are primarily allocated to the Infrastructure Access, NTS – State Supported, and NTS – NEC service lines, accounting for 37.4 percent, 32.4 percent, and 19.5 percent of subfamily expenditures, respectively. Other service lines include the NTS – Long Distance service line (9.9 percent) as shown in Table 5-117.

Table 5-117. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Train Movement - FM_306

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
Infrastructure Access	$29.1	37.4%
NTS-SS	$25.2	32.4%

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-NEC	$15.2	19.5%
NTS-LD	$7.7	9.9%
All Other Service Lines	$0.5	0.7%

5.3.7 Train Movement – Host Railroad Subfamily

Family: Transportation Operations – FM_OPS_TRANS
Subfamily: Train Movement – Host Railroad - FM_307

Scope

The Train Movement – Host Railroad Subfamily captures the costs incurred by Amtrak for services provided by the freight railroads, including infrastructure access, renting or leasing freight locomotives, purchased fuel, repairs to Amtrak rolling stock, dispatching and signal services, and station costs. Also included are incentive payments to host railroads for adherence to scheduled departure and arrival times.

Train Movement – Host Railroad Subfamily costs for Fiscal Year 2021 were $134.8 million, and account for 2.2 percent of Amtrak's total costs. This subfamily consists of 24 cost centers in a single subcategory. Table 5-118 is a subfamily overview for the Train Movement – Host Railroad Subfamily for Fiscal Year 2021.

Table 5-118. Subfamily Overview for Train Movement – Host Railroad Subfamily - FM_307

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$134.8
Subcategories Used	Host Railroad – General 307_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Reimbursable, Infrastructure Access
Number of Cost Centers	24

Composition of Subfamily Costs

Train Movement – Host Railroad Subfamily total costs for Fiscal Year 2021 were $134.8 million, a 24.5 percent drop compared to Fiscal Year 2020, when they were reported at $178.5 million. The drop in costs in Fiscal Year 2021 reflects lower railroad administrative costs charged to Amtrak by host railroads from reduced service during COVID-19. Total costs for the subfamily had been increasing since Fiscal Year 2017, when they were $143.5 million. While the increase in total costs between Fiscal Year 2018

and Fiscal Year 2019 was driven by an increase in capital costs from $7.7 to $25.0 million, the increase in Fiscal Year 2020 was driven by higher operating costs, an increase from $150.5 million to $168.2 million. Over the five-year period, costs have largely been operating costs. No capital costs were reported in Fiscal Year 2017.

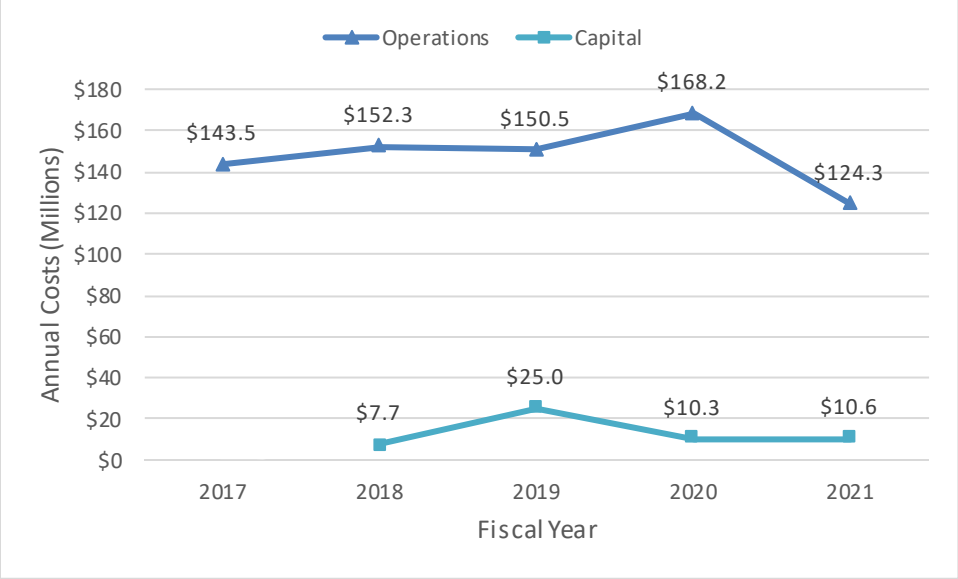

Figure 5-72. Train Movement – Host Railroad Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Almost all operating costs for the Train Movement – Host Railroad Subfamily were in the Train Operations account category, which accounted for 93.7 percent of operating costs. The Fuel Power & Utilities account category represented 4.4 percent of operating costs, while all other account categories each accounted for less than 1 percent each of operating costs (Figure 5-73). All capital costs (not shown) in the Train Movement – Host Railroad Subfamily are in the Other Expenses account category, totaling $10.6 million in Fiscal Year 2021.

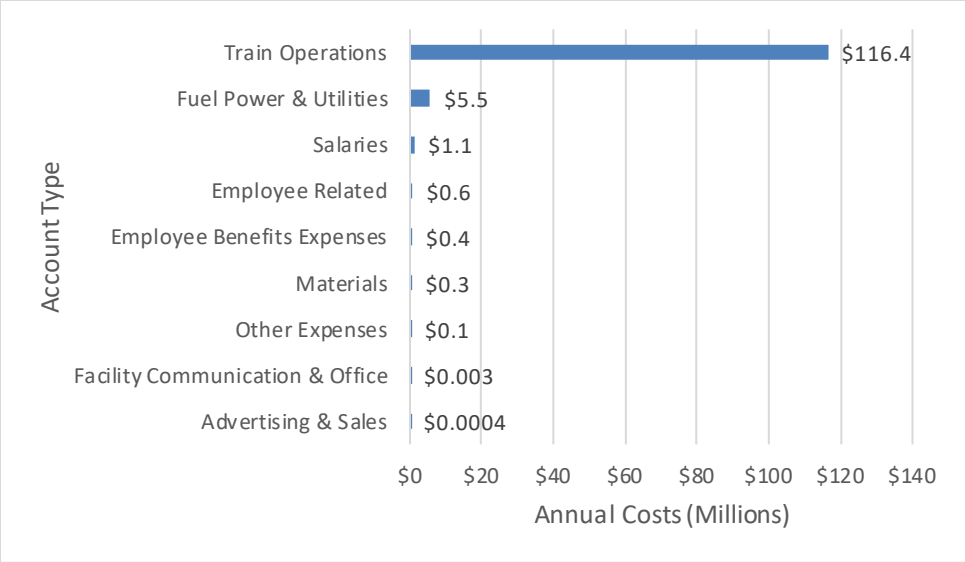

Figure 5-73. Train Movement - Host Railroad Distribution of Operating Costs, Fiscal Year 2021 (Millions)

About half (49.6 percent) of expenditures in the Train Movement – Host Railroad Subfamily use internal order Train Operations (IO_1631), which reports "expenses related to enginemen and train-men, and power and fuel used in train operations." Other internal orders include Transportation Ops Railroad (IO_1641) and RR Incentives & Avoidable Cost (IO_1691), which allocate 20.1 percent and 12.8 percent of expenditures, respectively. IO_1641 records "expenses incidental to train line operations," while IO_1691 records payments made to contracting railroads for performance and avoidable costs. Table 5-119 shows the top internal orders used for the Train Movement – Host Railroad Subfamily.

Table 5-119. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Train Movement – Host Railroad Subfamily - FM_307

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
TRAIN OPERATIONS	IO_1631	$66.8	ST_NO_STX	49.6%
TRANSPORTATION OPS RAILROAD	IO_1641	$27.1	ST_TTMX	20.1%
RR INCENTIVES & AVOIDABLE COST	IO_1691	$17.3	ST_NO_STX	12.8%
Capital	IO_4200	$10.6	ST_FTTX	7.9%
No Function	IO_NO_IO	$10.1	ST_TBDX	7.5%

Cost Allocation Approach

Most operating costs in the Train Movement – Host Railroad Subfamily are allocated via direct assignment (64.9 percent), and the remained are allocated in the first round (35.2 percent) as shown in

Table 5-120.

Table 5-120. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Train Movement – Host Railroad Subfamily - FM_307

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	64.9%
First Round	35.2%
Second Round	0.0%

The host railroads bill the majority of their costs coded to specific Amtrak train numbers. These costs enter APT with a train WBSE and are directly assigned with no allocation needed. This is represented by the use of No Statistic (Direct Charges) (ST_NO_STX), which accounts for 59.8 percent of total subfamily expenditures.[65] Other expenses in this subfamily are allocated by Total Operated Train Miles (ST_TTMX), allocating host railroad costs to trains or commuter customers based on their share of train miles traveled over a railroad's territory. This subfamily uses Stat Qualifiers to allocate expenses to trains operating over specified portions of each host railroad's network. A host railroad Stat Qualifier is the combination of city pairs that make up the geographic area of each host railroad. ST_TTMX is available by city pair and an individual train's proportion of all train activity over that city pair can be determined. ST_TTMX accounts for 20.5 percent of subfamily expenditures. Top statistics used for subfamily cost attribution are shown in Table 5-121.

Table 5-121. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Train Movement – Host Railroad Subfamily - FM_307

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
No Statistic (Direct Charges)	ST_NO_STX	$80.6	59.8%
Total Operated Train Miles	ST_TTMX	$27.6	20.5%
Frequency of Train Trips	ST_FTTX	$12.3	9.1%
Total Boards and Deboards	ST_TBDX	$8.6	6.4%

[65] The 59.8 percent of costs by ST_NO_STX (Table 5-121) represent total subfamily costs, both operating and capital, while row for Direct Assignment (Table 5-120) reflects only operating costs.

Service Line Allocation Results

Train Movement – Host Railroad Subfamily costs are primarily allocated to the three NTS service lines, in total accounting for 97.3 percent of subfamily expenditures. The largest of these is the State Supported service line, at 37.4 percent of expenditures, followed by the NEC (30.3 percent) and Long Distance (29.5 percent) service lines, as shown in Table 5-122.

Table 5-122. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Train Movement – Host Railroad - FM_307

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-SS	$50.5	37.4%
NTS-NEC	$40.9	30.3%
NTS-LD	$39.8	29.5%
Infrastructure Access	$3.5	2.6%
Reimbursable	$0.1	0.1%

5.3.8 Transportation Support Subfamily

Family: Transportation Operations – FM_OPS_TRANS
Subfamily: Transportation Support – FM_308

Scope

The Transportation Support Subfamily performs supervision and support for the operation of passenger train service. The subfamily includes the overhead cost centers (and related benefit cost transfers) for the Transportation Operations Family, the costs of general and assistant superintendents, railroad foremen,[66] assistant foremen, and other transportation-related activities. Cost centers in the Transportation Support Subfamily support other Transportation Operations cost centers that directly perform transportation services.

[66] "Railroad foremen" in this subfamily are distinct from "road foremen" discussed in the T&E Subfamily. The immediate supervisors of train engineers are referred to as road foremen and the immediate supervisors of conductors are "trainmasters." T&E crew immediate supervisors, road foremen and trainmasters are charged in the T&E Subfamily (FM_302) while railroad foremen are charged here. Railroad Foremen, also a General Foreman, support railroad operations and are responsible for directing the operation of an area performing inspections, running repairs, modifications, and/or light overhauls for cars and/or locomotives in an operating division. This operation includes, but is not limited to numbers of mechanics, laborers, and technicians using large and small production machinery and moderate amounts of material.

Transportation Support Subfamily costs for Fiscal Year 2021 were $116.7 million, 1.9 percent of Amtrak's total costs. This subfamily is composed of 85 cost centers in four subcategories. Table 5-123 is an overview for the Transportation Support Subfamily for Fiscal Year 2021.

Table 5-123. Subfamily Overview for Transportation Support Subfamily – FM_308

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$116.7
Subcategories Used	General 308_0, Crewbase 308_1, Route Mgmt 308_2, Operations Research & Planning 308_3
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	85

Composition of Subfamily Costs

Subfamily costs for the Transportation Support Subfamily were $116.7 million in Fiscal Year 2021, a 24.3 percent decrease from Fiscal Year 2017, but a 36.7 percent increase compared to Fiscal Year 2020. The composition of subfamily costs has varied substantially over the five-year analysis period shown in Figure 5-74. Operating costs have declined annually from a high of $99.9 million in Fiscal Year 2017 to $52.9 million in Fiscal Year 2021. The drop in operating costs aligns with the trend in the number of cost centers in the subfamily, from a high of 123 in Fiscal Year 2017 to a low of 85 in Fiscal Year 2021. Capital costs have varied in trend, from a peak of $72.2 million in Fiscal Year 2018 to a low of $27.1 million in Fiscal Year 2020. Capital costs increased in Fiscal Year 2021, reported at $63.8 million.

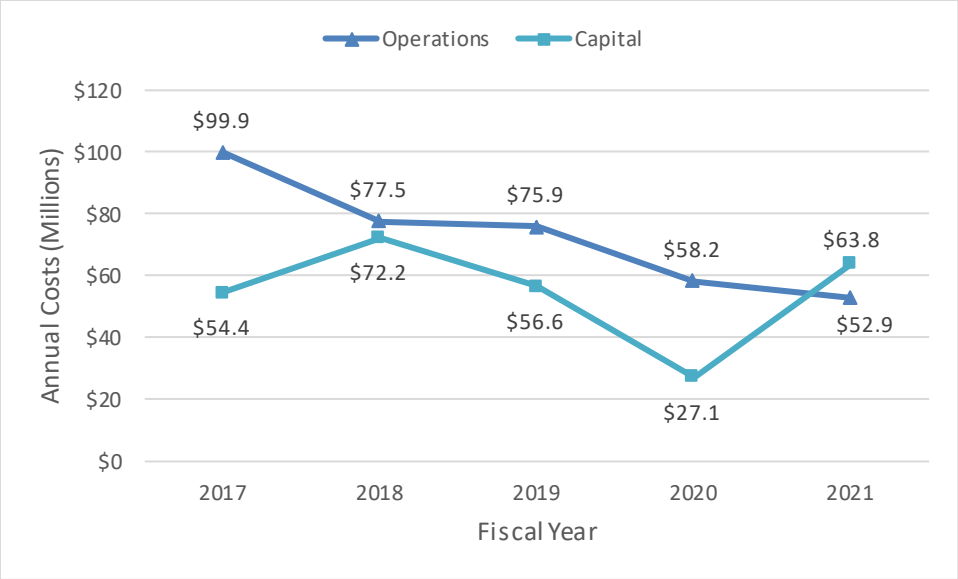

Figure 5-74. Transportation Support Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Operating costs for the Transportation Support Subfamily are largely composed of the Salaries and Employee Benefits Expenses account categories, representing 45.6 percent and 18.5 percent of operating costs, respectively. Transportation Support recorded -$10.0 million (13.7 percent of operating costs in magnitude) in the Indirect Costs Capitalized to P&E account category, representing the net transfer of indirect transportation costs out of operating to capital as part of a capitalized project. The Facility Communication & Office and Wages & Overtime account categories represent less than 9.4 percent and 5.9 percent, respectively, operating costs, while the remaining account categories in Figure 5-75 each account for less than 3 percent of operating costs in magnitude. The Materials account category has a negative net cost.

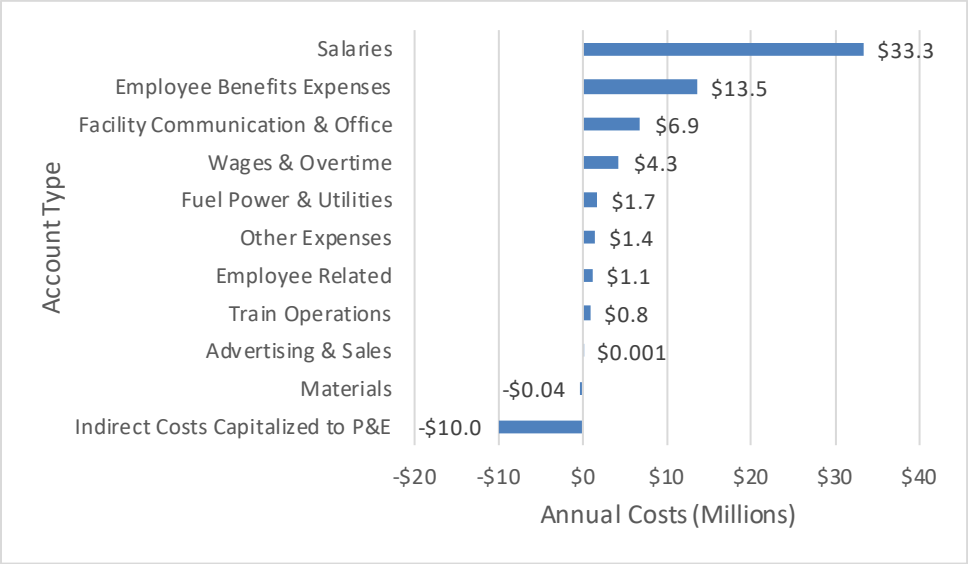

Figure 5-75. Transportation Support Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Capital costs for the Transportation Support Subfamily are largely composed of the Other Expenses account category, representing 57.3 percent of capital costs. Indirect Costs Capitalized to P&E and Train Operations account categories represent for 15.7 percent and 15.1 percent of capital costs, respectively. The Indirect Costs Capitalized to P&E represents indirect Transportation Operations Family overhead operating costs capitalized as part of a completed capital project. The Facility Communication & Office account category represents 7.4 percent of capital costs, while the remaining account categories in Figure 5-76 each account for less than 3 percent of capital costs.

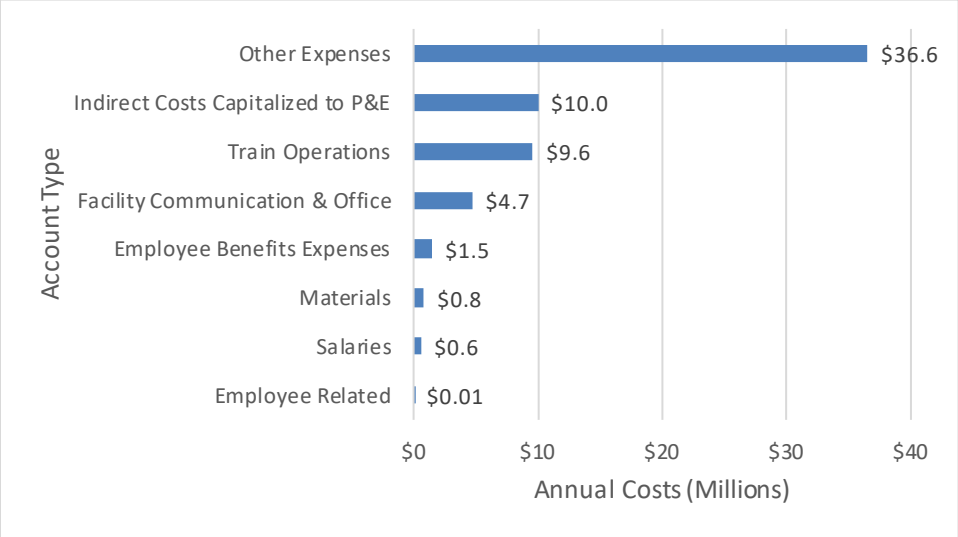

Figure 5-76. Transportation Support Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest internal order in the Transportation Support Subfamily is Capital (IO_4200), which accounts for 45.1 percent of subfamily expenditures. This internal order records "all capital related costs" including operating labor costs on capital projects that are later capitalized, reflecting the negative operating balance for this account category. The second most used internal order in terms of allocations is Trans. Mgmt & Supv (IO_1601), which accounts for 26.1 percent of subfamily expenditures. This internal order records costs related to the management and supervision of train operations. Table 5-124 shows the top internal orders in this subfamily.

Table 5-124. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Transportation Support Subfamily - FM_308

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Capital	IO_4200	$52.6	ST_FTTX, ST_TTMX	45.1%
TRANS. MGMT &	IO_1601	$30.4	ST_TDC_DBX	26.1%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
SUPV				
SAFETY OPERATIONS	IO_1675	$7.3	ST_TDC_DBX	6.3%
No Function	IO_NO_IO	$7.3	ST_NO_STX	6.3%
CORPORATE ADMINISTRATION	IO_1001	$6.3	ST_TDC_DBX, ST_UTX	5.4%
TRAIN OPERATIONS	IO_1631	$1.9	ST_TDC_DBX	1.7%
CORPORATE SERVICE CENTERS	IO_1121	$1.6	ST_TDC_DBX	1.4%
OFF. BLDG MAINTENANCE	IO_1727	$1.4	ST_TBDX	1.2%
DIVISION ADMINISTRATIVE	IO_1002	$1.0	ST_TDC_DBX, ST_TRDX	0.8%
OBS MGMT & SUPV. STAFF	IO_1301	$0.9	ST_TDC_DBX	0.8%

Cost Allocation Approach

Transportation Support Subfamily operating costs are allocated primarily in via direct assignment or in the second round, at 44.3 percent and 44.2 percent of costs respectively, with the remained allocated in the first round (Table 5-125).

Table 5-125. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Transportation Support Subfamily - FM_308

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	44.3%
First Round	11.5%
Second Round	44.2%

The Transportation Support Subfamily contains most of the Overhead cost centers for the Transportation Operations Family. These Overhead cost centers contain large, mostly off-setting debit and credit transactions accounting for all of the benefits transfer charges between projects and Cost Centers. The expenditures are assigned directly to projects with No Statistic (Direct Charges) (ST_NO_STX) while the balancing credit transaction is allocated by Transportation Direct Cost (ST_TDC_DBX). While ST_NO_STX allocates the majority of total transactions including typical overhead and management expenses, shown as 180 percent of expenditures in Table 5-126, the benefits credits

from the Overhead cost centers are larger resulting in ST_TDC_DBX showing a net credit for the subfamily, shown as -128.5 percent of subfamily expenditures. Top statistics used for subfamily cost attribution for the Transportation Support Subfamily are shown in Table 5-126. Other statistics in this subfamily with net credits include Total Allocated Costs (ST_TAC_DBX) and Straight-Line Allocation (1) (ST_NONX).

The primary allocation statistic for Transportation Support's benefit credit transactions and other second-round allocations is ST_TDC_DBX, a dollar-denominated second-round statistic that captures the first-round allocation of each train from a particular cost center. This subfamily supports train activity indirectly but does not directly provide train operations. The ST_TDC_DBX allocations use a cost center group Stat Qualifier to allocate costs, identifying the direct and first-round allocations at other Transportation Operations Family cost centers that each Transportation Support cost center supports. This allocates higher support costs to the trains each Transportation Support cost center indirectly supports, similar to other second-round statistics such as Maintenance of Way Direct Cost (ST_MWDC_DBX), Maintenance of Equipment Direct Cost (ST_MDC_DBX), and Police Direct Cost (ST_PDC_DBX).

Table 5-126. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Transportation Support Subfamily - FM_308

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
No Statistic (Direct Charges)	ST_NO_STX	$210.1	180.0%
Frequency of Train Trips	ST_FTTX	$35.7	30.6%
Total Operated Train Miles	ST_TTMX	$13.5	11.6%
Total Boards and Deboards	ST_TBDX	$11.3	9.7%
Passenger Car Unit Trips	ST_PUTX	$9.4	8.1%
Average Locos and Cars Used per Day	ST_UUX	$7.7	6.6%
T&E and OBS Crew Hours	ST_CHRX	$7.4	6.3%

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Straight-Line Allocation (1)	ST_NONX	-$12.8	-11.0%
Total Allocated Costs	ST_TAC_DBX	-$37.5	-32.1%
Ops Trans Direct Cost	ST_TDC_DBX	-$150.0	-128.5%

Service Line Allocation Results

Transportation Support Subfamily expenditures are primarily in the three NTS service lines, together accounting for 67.6 percent of subfamily expenditures. The largest of these in terms of subfamily expenditures is the Long Distance service line, accounting for 28.7 percent. The State Supported and NEC service lines account for 21.5 percent and 17.4 percent of subfamily expenditures, respectively. Subfamily expenditures by service line are shown in Table 5-127.

Table 5-127. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Transportation Support - FM_308

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$33.5	28.7%
NTS-SS	$25.1	21.5%
NTS-NEC	$20.3	17.4%
Infrastructure Access	$20.0	17.1%
Commuter Operations	$11.0	9.5%
Reimbursable	$6.4	5.5%
All Other Service Lines	$0.3	0.3%

5.3.9 Power – Electric Traction Subfamily

Family: Transportation Operations – FM_OPS_TRANS
Subfamily: Power – Electric Traction – FM_309

Scope

The Power – Electric Traction Subfamily captures the direct cost of powering electrified train service on the NEC as well as the Keystone route. The NEC is divided into northern and southern segments (north

and south of New York City, respectively) with Amtrak purchasing power from approximately 10 vendors on the entire corridor, as well as from a commuter agency, the Metropolitan Transportation Authority Metro North, for the portion of the NEC between New Rochelle, New York, and New Haven, Connecticut. In addition to purchasing electric power, Amtrak is reimbursed through agreements by commuter rail agencies for their power consumption on the southern segment, though this is treated as a revenue transaction.

Power – Electric Traction Subfamily costs were $65.7 million in Fiscal Year 2021, 1.1 percent of Amtrak's total costs. The subfamily is composed of three cost centers in a single subcategory. Table 5-128 is a subfamily overview for the Power – Electric Traction Subfamily for Fiscal Year 2021.

Table 5-128. Subfamily Overview for Power – Electric Traction Subfamily - FM_309

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$65.7
Subcategories Used	Electric Traction - General 309_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, – Infrastructure Access
Number of Cost Centers	3

Composition of Subfamily Costs

Power – Electric Traction Subfamily costs were $65.7 million in Fiscal Year 2021, a 24.8 percent decrease compared to costs in the peak of subfamily costs of $87.3 million in Fiscal Year 2017. Costs declined every year from Fiscal Year 2017 to Fiscal Year 2021, with the largest drop in Fiscal Year 2020 due to reduced service levels on the NEC due to COVID-19. Subfamily costs were entirely operating costs, with no capital costs reported during the period shown in Figure 5-77.

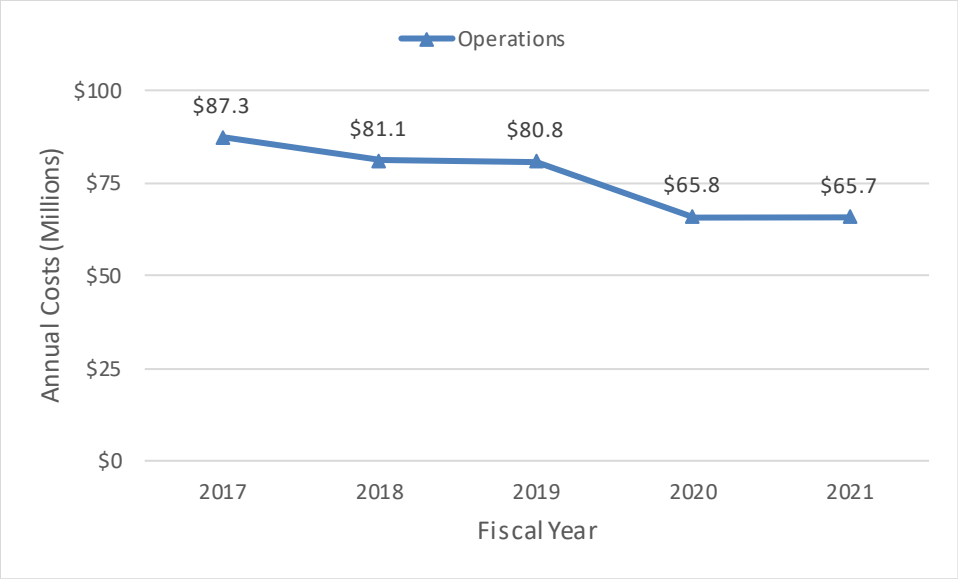

Figure 5-77. Power – Electric Traction Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Power – Electric Traction Subfamily operating costs are almost entirely in the Fuel Power & Utilities account category, which represents 99.5 percent of operating costs. The remaining operating costs are in the Other Expenses account category, as shown in Figure 5-78.

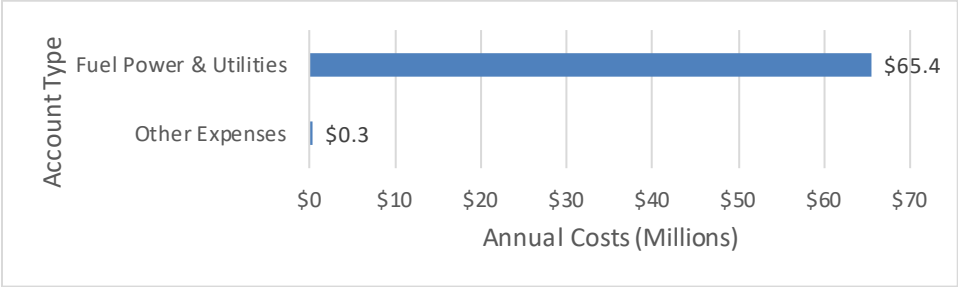

Figure 5-78. Power – Electric Traction Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The most common internal order in the Power – Electric Traction Subfamily is Train Operations (IO_1631), which records "expenses related to enginemen and trainmen, and power and fuel used in train operations," and accounts for 94.8 percent of subfamily expenditures. Table 5-129 shows top internal orders in the Power – Electric Traction Subfamily.

Table 5-129. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Power – Electric Traction Subfamily - FM_309

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
TRAIN	IO_1631	$62.3	ST_EPUFX	94.8%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
OPERATIONS				
TRANSPORTATION OPS RAILROAD	IO_1641	$3.4	ST_UMX	5.2%

Cost Allocation Approach

Power – Electric Traction Subfamily costs are allocated entirely in the first round, as shown in Table 5-130.

Table 5-130. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Power – Electric Traction Subfamily - FM_309

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	0.0%
First Round	100.0%
Second Round	0.0%

As the three cost centers in this subfamily each serve a particular area, the allocation is regionally based. Costs at Northend Propulsion (CC_0738) are allocated to trains on the northern segment of the NEC (except for the 56 miles of Metro North-owned track between New Rochelle, NY, and New Haven, CT) entirely using the statistic Electric Traction Power Allocation Factor (ST_EPUFX). ST_EPUFX estimates power consumed by a train based on distance, car weight, and "hotel" power for onboard services. A station pair Stat Qualifier called "Electric North" is used to allocate costs only to those trains that travel on the individual segments specified by the Stat Qualifier.

Costs at Southend Propulsion (CC_0739) are allocated to trains on the southern segment of the NEC, including the Keystone Corridor, by ST_EPUFX using an Allocation Ratio in combination with a station pair Stat Qualifier. ST_EPUFX accounts for 47.9 percent of costs in CC_0739. Four commuter agencies operate electric train service on the southern segment, but the limited operational data that they provide to Amtrak does not allow for their allocation by ST_EPUFX.

A study by SYSTRA Consulting, Inc. simulated electric power usage by NEC users and a Customer Electric Percentage (CEP) for each was estimated from this data. These percentages are used as the factors in an Allocation Ratio that splits CC_0739 costs among Amtrak and the other southern segment commuter operators. Overall, Amtrak receives 47.9 percent of the total, but specific route percentages were also identified in the latest SYSTRA study, and these are used to apportion a fixed share to each Amtrak route. Within the 47.9 percent Amtrak share as identified in the annual study, the ST_EPUFX statistic then allocates to individual trains within each route using appropriate Station Pair Stat Qualifiers. A

station pair Stat Qualifier called "Electric South" is used to allocate costs to only those trains that travel on the individual segments specified by the Stat Qualifier. Some expenses Cost Center 0739 are recorded with Account 510419 (Electricity Hedge Settlement) and are allocated to specific Amtrak passenger trains by ST_EPUFX with the Stat Qualifier "AmtrakElectric," which includes all Station Pairs in Amtrak's electrified network.

The remaining 52.1 percent of Southend costs are individually apportioned to each commuter agency. Within the fixed total percentage assigned to each commuter agency, the costs are allocated to individual commuter trains by the Frequency of Train Trips (ST_FTTX) statistic, which accounts for 35.3 percent of costs in this cost center. Table 5-131 summarizes CEP by user. Other statistics in this Cost Center include Electric Loco and EMU Unit Miles (ST_EUMX), which accounts for 16.3 percent of costs in Cost Center 0739.

Table 5-131. Southend Customer Electric Percentages (CEP) by User (Fiscal Year 2021)

User	Southend Customer Electric Percentages (CEP)
Amtrak	47.9%
NJT	35.3%
SEPTA	14.8%
MARC	1.5%
DelDOT	0.6%

Costs at Power Purchased from RR (CC_0740) consists of power expenses paid to Metro North incurred for the Amtrak trains using its 56 miles of track between New Rochelle, NY, and New Haven, CT. Amtrak is billed for these costs based on each train's Locomotive and Car Unit Miles (ST_UMX) and for consistency purposes these expenses are allocated to its trains in the same manner, accounting for 91.0 percent of costs in this cost center. A "MetroNorth" station pair Stat Qualifier is used to calculate each Amtrak train's ST_UMX within the 56-mile Metro North segment.

Because the SYSTRA study calculated CEP using service level estimates at a point in time, the Allocation Ratios used to allocate costs in this subfamily are updated by SYSTRA periodically as new estimates are made or as commuter agencies adjust service levels.

Overall, 54.4 percent of subfamily expenditures are attributed using ST_EPUFX, and 27.4 percent are attributed using ST_FTTX. Other expenditures are allocated using Electric Loco and EMU Unit Miles (ST_EUMX), which attributes 12.6 percent of costs, and ST_UMX, which attributes 4.7 percent of costs, as shown in Table 5-132.

Table 5-132. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Power – Electric Traction Subfamily - FM_309

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Electric Traction Power Allocation Factor	ST_EPUFX	$35.8	54.4%
Frequency of Train Trips	ST_FTTX	$18.0	27.4%
Electric Loco and EMU Unit Miles	ST_EUMX	$8.3	12.6%
Locomotive and Car Unit Miles	ST_UMX	$3.1	4.7%

Service Line Allocation Results

Power – Electric Traction Subfamily costs are primarily allocated to the service lines related to the NEC. The NTS – NEC service line accounts for 53.0 percent of subfamily expenditures, and the Infrastructure Access service line accounts or 40.4 percent of subfamily expenditures. Other service lines include the other NTS service lines, as shown in Table 5-133.

Table 5-133. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Power – Electric Traction - FM_309

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-NEC	$34.8	53.0%
Infrastructure Access	$26.6	40.4%
NTS-LD	$2.8	4.3%
NTS-SS	$1.5	2.3%

5.3.10 Stations Subfamily

Family: Transportation Operations – FM _OPS_TRANS
Subfamily: Stations – FM_310

Scope

The Stations Subfamily performs station service activities at station cost centers.[67] These activities include ticketing, operating first class lounges, Red Cap and porter services, baggage and express services, stationmaster and usher activities, station cleaning and maintenance, snow and ice removal, making passenger inconvenience payments, and training and supervision of staff. The Stations Subfamily consists of four subcategories to identify and track distinct portions of station activity, each composed of groups of cost centers with similar missions and activities:

- Route (FM_301_1), those that serve a single route,
- Shared (Commuters Present) (FM_310_2), those that service a combination of Amtrak and commuter trains,
- Shared (No Commuters Present) (FM_310_3), those that serve multiple Amtrak routes, but no commuters, and
- Station Support (FM_310_4), administrative management of all Amtrak station activity.

A number of routes utilize unstaffed stations without their own distinct cost center. These unstaffed stations, identified by a unique WBSE, are frequently combined with other unstaffed stations at a single cost center for a broader geographic region. While a single unstaffed station may serve one route, the combined cost center may serve multiple routes and would be listed in one of the Shared subcategories.

Stations Subfamily expenditures for Fiscal Year 2021 were $235.1 million, 3.9 percent of Amtrak's total costs. This subfamily consists of 284 cost centers in the four subcategories. Table 5-134 is a subfamily overview for the Stations Subfamily for Fiscal Year 2021.

Table 5-134. Subfamily Overview for Stations Subfamily – FM_310

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$235.1
Subcategories Used	Route 310_1, Shared (Commuters Present) 310_2, Shared (No Commuters Present) 310_3, Station Support 310_4
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	284

[67] Stations was originally an independent Family FM_500 with Subfamily FM_501 Stations – Route and FM_502 Stations – Shared. Stations was moved to the Ops-Transportation Family in 2012 and combined into a single subfamily with 4 subcategories.

Composition of Subfamily Costs

Stations Subfamily costs for Fiscal Year 2021 were $235.1 million, an 18.1 percent increase compared to Fiscal Year 2017. Since Fiscal Year 2017, costs have been almost entirely operating costs, with minimal capital costs reported. Operating costs were relatively level between Fiscal Year 2017, at $199.0 million, and Fiscal Year 2018, at $196.9 million, before increasing in Fiscal Year 2019 to $241.7 million. Operating costs decreased somewhat to $228.0 million in Fiscal Year 2020 and increased to $235.0 million in Fiscal Year 2021. Minimal capital costs were reported during this period, except for Fiscal Year 2018, when no capital costs were reported, as shown in Figure 5-79.

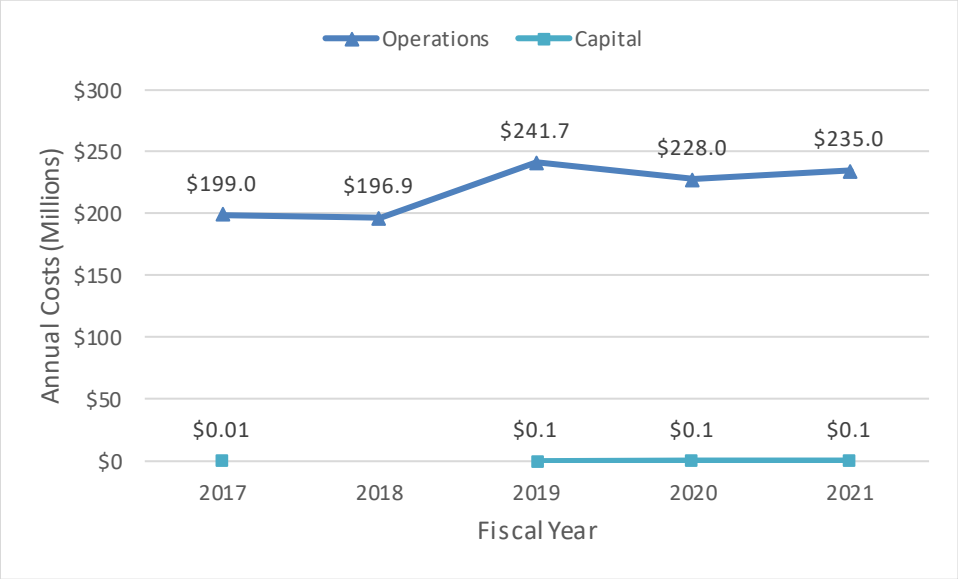

Figure 5-79. Stations Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Stations Subfamily operating costs are primarily allocated to the Wages & Overtime, Facility Communication & Office, and Employee Benefits Expenses account categories, which represent 35.5 percent, 31.2 percent, and 20.0 percent of operating costs in magnitude, respectively. All other account categories in the subfamily (Figure 5-80) represent less than 5 percent each of operating costs in magnitude, including a net credit in the Indirect Costs Capitalized to P&E account category.

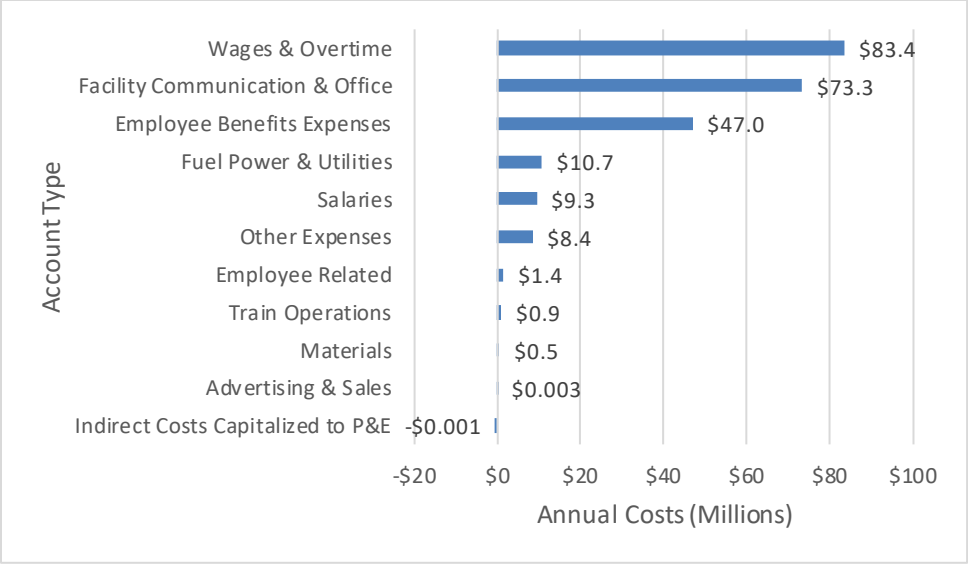

Figure 5-80. Stations Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Stations Subfamily capital costs are almost entirely composed of the Wages & Overtime account category, which represents 92.9 percent of subfamily capital costs in magnitude. Other account categories with Fiscal Year 2021 capital costs are show below in Figure 5-81.

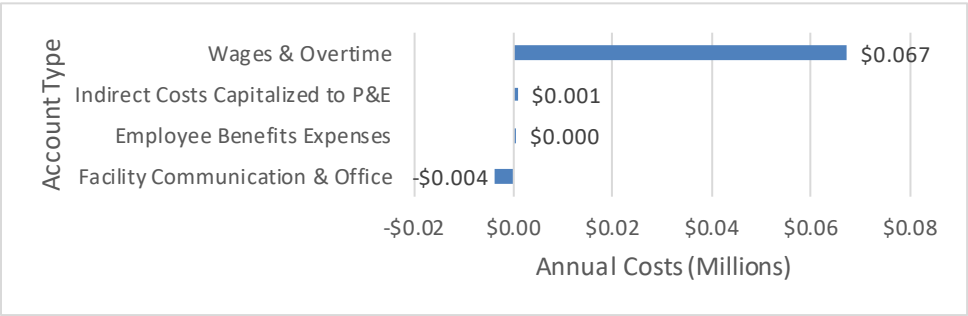

Figure 5-81. Stations Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The two largest internal orders in the Stations Subfamily are Sta Svcs Ticketing (IO_1231) and St Svcs – Station Operations (IO_1271), which each account for 24.2 percent of subfamily expenditures. These internal orders report "expenses incurred in providing ticketing services at stations" and "payroll costs of janitorial and other personnel not specifically covered in" other station services internal orders, as well as station rent and utilities, respectively. Other prominent internal orders include No Function (IO_NO_IO), Sta Svcs – Bldg Maint (IO_1281), and Sta Svcs – Mgmt & Supv (IO_1241), which account for 13.7 percent, 11.0 percent, and 7.8 percent of subfamily expenditures, respectively. The remaining internal orders in the Stations Subfamily account for less than 5 percent of subfamily expenditures, as shown in Table 5-135.

Table 5-135. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Stations Subfamily – FM_310

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
STA SVCS-TICKETING	IO_1231	$56.9	ST_STKTX	24.2%
STA SVCS-STATION OPERATIONS	IO_1271	$56.9	ST_TBDX, ST_PUTX	24.2%
No Function	IO_NO_IO	$32.2	ST_NO_STX	13.7%
STA SVCS-BLDG MAINT	IO_1281	$25.9	ST_PUTX	11.0%
STA SVCS-MGMT. & SUPV	IO_1241	$18.3	ST_TBDX	7.8%
STA SVCS-BAGGAGE/EXPRESS	IO_1261	$8.0	ST_WBDX	3.4%
JOINT TERMINAL FACILITY	IO_1651	$7.6	ST_TBDX	3.2%
CORPORATE ADMINISTRATION	IO_1001	$6.7	ST_TDC_DBX	2.9%
STA SVCS-STATIONMSTRS & USHERS	IO_1266	$5.0	ST_TBDX	2.1%
STA SVCS-RED CAPS & PORTERS	IO_1251	$3.7	ST_WBDX	1.6%

Cost Allocation Approach

Stations Subfamily operating costs are mostly allocated in the first round, with 55.2 percent of costs, with the remainder allocated in the second round (22.6 percent) or via direct assignment (22.2 percent), as shown in Table 5-136.

Table 5-136. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Stations Subfamily – FM_310

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	22.2%
First Round	55.2%
Second Round	22.6%

The cost allocation approach differs for each of the four Stations subcategories which are grouped together using the number of routes and service lines those station cost centers support. Route stations,

(FM_310_1) can isolate a higher share of their costs to a single route and 59.9 percent of costs in this subcategory are directly assigned (ST_NO_STX), and 28.1 percent allocated by Total Boards and Deboards (ST_TBDX). Although individual stations may serve a single route and can be directly assigned, in some cases multiple unstaffed stations are tracked with a single cost center making direct assignment difficult and Total Boards and Deboards are used to allocate those costs.

For the Shared (Commuters Present) (FM_301_2) subcategory, the largest allocation statistic is Total Boards and Deboards (39.1 percent) for cases where a cost can be isolated to those services where passenger counts are known. However, where a cost is shared between Amtrak and a commuter service without detailed passenger data, the Passenger Car Unit Trips (ST_PUTX) statistic is used. ST_PUTX accounts for 28.2 percent of subcategory costs. Other statistics commonly used in this subcategory include Station Ticket Issuance (ST_STKTX) and Ops Trans Direct Cost (ST_TDC_DBX), representing 13.1 percent and 8.5 percent of costs, respectively.

For the Shared (No Commuters Present) (FM_310_3) subcategory, the largest allocation is ST_TBDX (51.2 percent), which is used where passenger counts are known, followed by ST_STKTX, at 27.0 percent of subcategory costs.

Station Support (FM_310_4) subcategory costs are allocated largely using the ST_TDC_DBX, ST_NO_STX, ST_PUTX, and ST_TBDX statistics. ST_TDC_DBX accounted for 40.1 percent of costs in magnitude but resulted in a net credit in this subcategory. Other costs are primarily directly assigned, accounting for 25.6 percent of costs in magnitude. The ST_PUTX and ST_TBDX statistics accounted for 18.0 percent and 12.7 percent of costs in magnitude, respectively.

Overall, about half of Stations Subfamily costs are driven by the number of passengers served at that station and, as a result, are allocated by Total Boards and Deboards (ST_TBDX), a direct statistic maintained in Amtrak's Revenue Data Warehouse that reports the passenger counts at specific stations. ST_TBDX accounts for 48.1 percent of subfamily expenditures. However, at those stations also used by outside commuter agencies alongside Amtrak routes, most station operations costs are allocated using Passenger Car Unit Trips (ST_PUTX) because the ST_TBDX statistic is unavailable for commuter activity. In such cases, ST_PUTX for Amtrak trains is calculated automatically within APT using a city pair Stat Qualifier, while ST_PUTX for commuters is calculated manually from data provided by the Amtrak Contract Audit and Financial Controls group. ST_PUTX accounts for 28.0 percent of subfamily expenditures.

While most Stations costs are allocated using ST_TBDX or ST_PUTX, other statistics are used to allocate the costs of some specific Internal Orders. Red Cap, porter, and baggage costs, which are driven by activity on Long Distance routes and not corridor (commuter type) services, are allocated by Trip-length-weighted Boards and Deboards (ST_WBDX). This statistic is calculated by dividing Passenger Miles for riders boarding or deboarding from a particular station by the ST_TBDX of boarding or deboarding passengers at that station, creating a trip-length weight which is applied to ST_TBDX at that station.

No Statistic (Direct Charges) (ST_NO_STX) accounted for 40.4 percent of subfamily expenditures, directly assigning costs as appropriate. Stations Subfamily expenditures under the Ops Trans Direct Cost (ST_TDC_DBX) statistic resulted in a net credit in Fiscal Year 2021. Table 5-137 shows top statistics used for subfamily cost attribution for the Stations Subfamily.

Table 5-137. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Stations Subfamily – FM_310

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Total Boards and Deboards	ST_TBDX	$113.0	48.1%
No Statistic (Direct Charges)	ST_NO_STX	$95.1	40.4%
Passenger Car Unit Trips	ST_PUTX	$65.9	28.0%
Station Ticket Issuance	ST_STKTX	$35.5	15.1%
Trip-length-weighted Boards and Deboards	ST_WBDX	$10.8	4.6%
Ops Trans Direct Cost	ST_TDC_DBX	-$96.7	-41.1%

Service Line Allocation Results

Stations Subfamily expenditures are primarily allocated to the three NTS service lines, together accounting for 78.1 percent of subfamily expenditures. The largest of these is the State Supported service line, at 33.8 percent, followed by the Long Distance and NEC service lines, which account for 27.7 percent and 16.6 percent of expenditures, respectively. Other service lines include the Infrastructure Access which accounts for 18.4 percent of subfamily expenditures, with other service lines accounting for 2 percent or less of subfamily expenditures, as shown in Table 5-138.

Table 5-138. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Stations – FM_310

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-SS	$79.4	33.8%

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$65.2	27.7%
Infrastructure Access	$43.4	18.4%
NTS-NEC	$38.9	16.6%
Commercial	$4.7	2.0%
Commuter Operations	$2.6	1.1%
All Other Service Lines	$0.9	0.4%

5.4 Sales and Marketing Family (FM_SALES_MKTG)

The Sales and Marketing Family is charged with the selling of tickets for Amtrak trains, Amtrak's advertising efforts, services related to the customer service information, and the management of Amtrak's commercial service lines. This includes marketing activities, staffing of call centers for information and reservations, other sales-related activities such as payment of travel agent commissions/fees, operating on-board and station Wi-Fi access and information systems, and the commercial management of Amtrak's service lines.

Most costs in the Sales and Marketing Family are operating costs, which historically have been approximately $175 million over the five-year analysis window, apart from a decrease to $143.1 million in Fiscal Year 2018, as shown in Figure 5-82. Over the five-year analysis window, operating costs were at their highest in Fiscal Year 2019 ($179.7 million), where most of the increase over Fiscal Year 2018 was due to the introduction of the Service Line Management Subfamily. Since 2019, operating costs have declined slightly to $170.2 million in Fiscal Year 2021. Capital costs represented a smaller share of total Sales and Marketing Family costs but have increased substantially over the five-year period, from $36.2 million in Fiscal Year 2017, dropping to $22.5 million in Fiscal Year 2018, then increasing to $131.4 million in Fiscal Year 2020 before dropping to $114.0 million in Fiscal Year 2021.

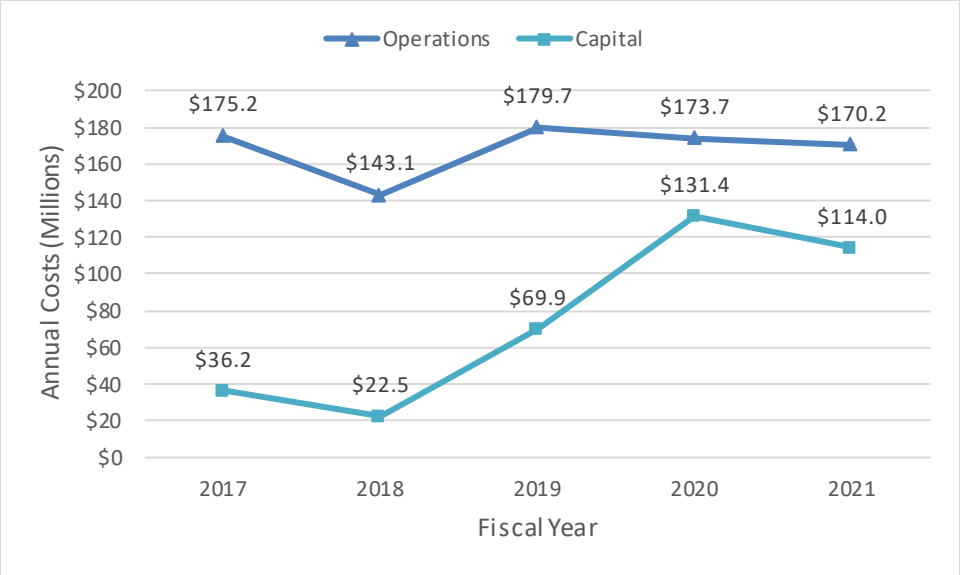

Figure 5-82. Sales and Marketing Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

A single year's operating costs for Fiscal Year 2021 gives the relative sizes of each Sales and Marketing subfamily in Fiscal Year 2021. The largest Sales and Marketing subfamily by operating costs is Marketing (FM_403) at $79.4 million, followed by Information & Reservations (FM_402) at $42.9 million, and Service Line Management (FM_405) at $37.4 million (Figure 5-83).

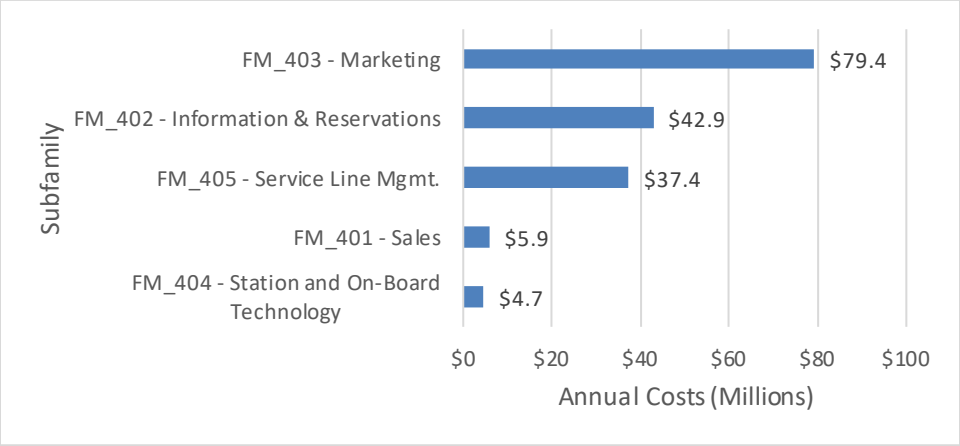

Figure 5-83. Subfamily Distribution of Sales and Marketing Operating Costs, Fiscal Year 2021 (Millions)

Fiscal Year 2021 Sales and Marketing Family capital costs, shown in Figure 5-84, are concentrated primarily in the Service Line Management Subfamily, representing 95.3 percent of Sales and Marketing capital costs. Minor capital costs are found in the Marketing Subfamily and Station and On-Board Technology Subfamily. The Information & Reservations and Sales subfamilies had no capital costs in Fiscal Year 2021.

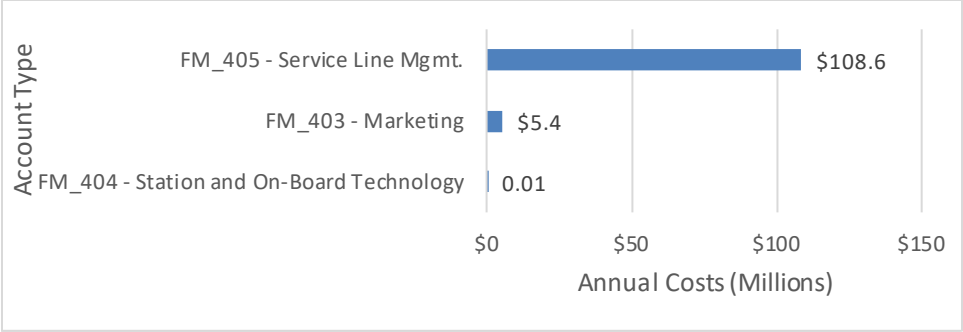

Figure 5-84. Subfamily Distribution of Sales and Marketing Capital Costs, Fiscal Year 2021 (Millions)

The subsections below describe each Sales and Marketing subfamily in detail, including the activities performed, a breakdown of account costs, the approach to cost allocation, and a summary of allocation data.

5.4.1 Sales Subfamily

Family: Sales & Marketing – FM_SALES_MKTG
Subfamily: Sales – FM_401

Scope

The Sales Subfamily is responsible for such activities as field sales, sales administration, travel agent services, and commercial account services and includes expenditures for travel agency commissions, credit card commissions, passenger experience, and airline system access fees.

Total costs for the Sales Subfamily in Fiscal Year 2021 were $5.9 million, accounting for approximately 0.1 percent of Amtrak's total costs. The subfamily consists of three cost centers in a single subcategory. Table 5-139 is an overview of Fiscal Year 2021 for the Sales Subfamily.

Table 5-139. Subfamily Overview for Sales Subfamily – FM_401

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$5.9
Subcategories Used	General 401_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable
Number of Cost Centers	3

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $5.9 million, a 53.0 percent drop from Fiscal Year 2019. Sales costs are exclusively operating costs recorded for the five-year analysis period, apart from Fiscal Year 2017, which has a capital cost value of -$0.4 million. Year over year, sales costs were relatively level before Fiscal Year 2020, but have dropped substantially in Fiscal Years 2020 and 2021 as Amtrak's sales have fallen due to decreased passenger demand during the COVID-19 pandemic.

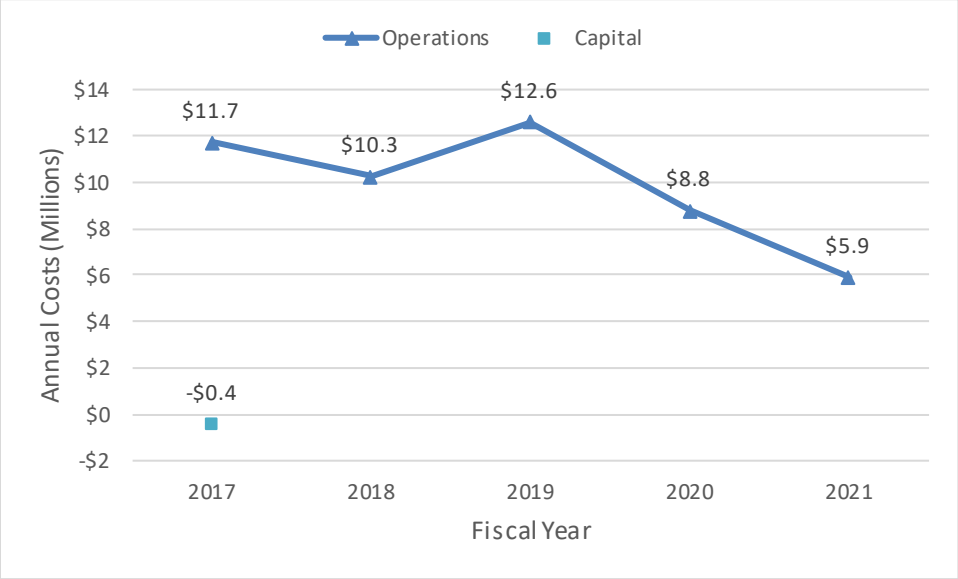

Figure 5-85. Sales Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Sales costs are concentrated largely in Salaries, Advertising & Sales, and the Employee Benefits Expenses account categories at 47.9 percent, 19.7 percent, and 18.5 percent of operating costs, respectively (Figure 5-86). Other noteworthy account categories include Facility Communication & Office (8.6 percent), and Other Expenses 4.85 percent). Wages & Overtime and Employee Related account categories account for less than 1 percent each of Sales operating costs.

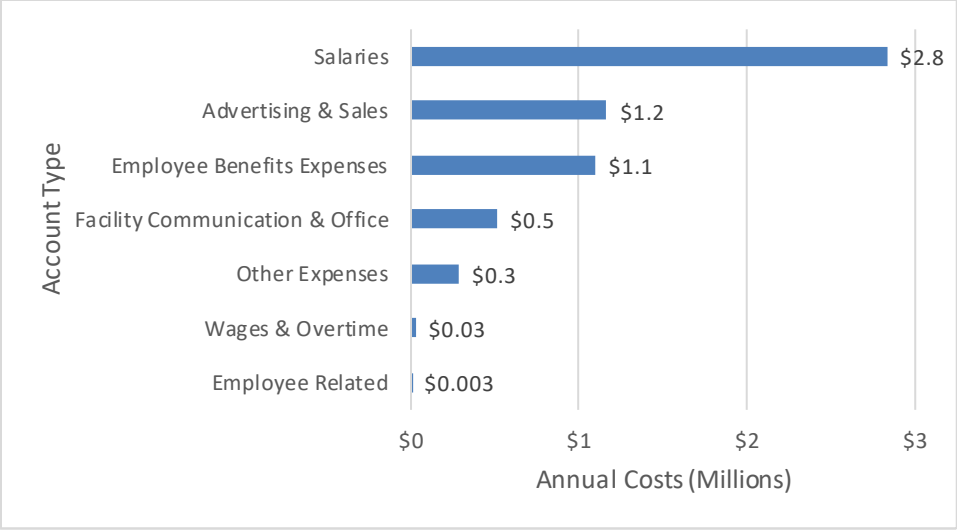

Figure 5-86. Sales Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The largest single internal order in the Sales Subfamily is Marketing (IO_4300), at 28.2 percent of costs. This internal order records "expenses incurred in support of direct marketing activities." The internal orders for Corporate Administration (IO_1001), Resv. Mgmt Admin (IO_1220), Sales (IO_1201), and No Function (IO_NO_IO), round out the top five. These internal orders capture payroll and related costs at the corporate level and at Reservation Sales Offices, as well as other expenses related to sales. See Table 5-140 for the top internal orders that make up Sales Subfamily costs and the primary statistic used to allocate each.

Table 5-140. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Sales Subfamily – FM_401

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Marketing	IO_4300	$1.7	ST_TASCOMX	28.2%
CORPORATE ADMINISTRATION	IO_1001	$1.3	ST_PRVX	22.7%
RESV.MGMT ADMIN	IO_1220	$0.7	ST_TRDX	12.3%
SALES	IO_1201	$0.6	ST_TRDX	10.4%
No Function	IO_NO_IO	$0.4	ST_TRDX	7.3%
CORPORATE SERVICE CENTERS	IO_1121	$0.4	ST_TRDX	7.2%
MARKETING OVERHEAD	IO_1210	$0.3	ST_TRDX	5.0%
Capital	IO_4200	$0.2	ST_TRDX	4.0%

Cost Allocation Approach

Costs in the Sales Subfamily are primarily allocated in the first round but can be directly assigned to trains. Directly assigned costs account for 1.4 percent of the subfamily total. First-round allocated costs make up 98.6 percent of the subfamily total with no costs allocated by second-round statistics (Table 5-141).

Table 5-141. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Sales Subfamily – FM_401

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	1.4%
First Round	98.6%
Second Round	0.0%

As Sales activities and expenditures are driven by the number of tickets sold for a service, most costs are allocated to all Amtrak trains based in proportion to their share of Total Riders (ST_TRDX), which allocates 55.6 percent of the subfamily total. Passenger Related Transportation Revenue (ST_PRVX) makes up 24.4 percent of the subfamily allocations, and Travel Agency Sales Commissions (ST_TASCOMX), a manual statistic available from PAS/ALMS that calculates the level of a train's sales by outside travel agents, makes up 21.8 percent (Table 5-142). Within IO_1201, Sales, account data is used to separate those expenditures related to travel agent commissions and airline reservation system access expenditures. These expenditures are largely allocated by Travel Agency Sales Commissions (ST_TASCOMX).

Table 5-142. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Sales Subfamily – FM_401

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Total Riders	ST_TRDX	$3.3	55.6%
Passenger Related Transportation Revenue	ST_PRVX	$1.4	24.4%
Travel Agency Sales Commissions	ST_TASCOMX	$1.3	21.8%

Service Line Allocation Results

Sales costs are primarily allocated to the three NTS service lines, together comprising 98.6 percent of the subfamily total, the largest of which is the Long Distance service line at 38.1 percent. Additionally, Sales costs are allocated to the NEC and State Supported service lines, with more minor expenditures in the Reimbursable and Commuter Operations service lines as shown in Table 5-143.

Table 5-143. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Sales – FM_401

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$2.3	38.1%
NTS-SS	$1.9	31.3%
NTS-NEC	$1.7	29.2%
Reimbursable	$0.1	1.4%
Commuter Operations	$0.000002	0.00004%

5.4.2 Information & Reservations Subfamily

Family: Sales & Marketing – FM_SALES_MKTG
Subfamily: Information & Reservations – FM_402

Scope

The Information & Reservations Subfamily provides reservation services to the general public and interacts with outside travel agency reservations and information service systems. The subfamily captures the costs of Reservation Sales Call Centers (RSCCs) as well as the costs of the operating information systems required for Amtrak reservation services.

The Information & Reservations Subfamily expenditures for Fiscal Year 2021 were $42.9 million and accounted for 0.7 percent of Amtrak's total expenses. The subfamily consists of four cost centers in a single subcategory. Table 5-144 is an overview of Fiscal Year 2021 for the Information & Reservations Subfamily.

Table 5-144. Subfamily Overview for Information & Reservations Subfamily – FM_402

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$42.9
Subcategories Used	Reservations and Call Centers 402_1

Summary Item	Value or Measure
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Infrastructure Access
Number of Cost Centers	4

Composition of Subfamily Costs

Prior to Fiscal Year 2020, subfamily costs were approximately $73 million: reported at $73.1 million in Fiscal Year 2017 and $73.0 in Fiscal Year 2018 and declining slightly to $70.5 million in Fiscal Year 2019. Operating costs dropped substantially to $46.3 million in Fiscal Year 2020, and continued to decline, although by a smaller amount, reaching $42.9 million in Fiscal Year 2021. Total costs in Fiscal Year 2021 represent a 39.1 percent decline compared to Fiscal Year 2019. This decline is partially due to the consolidation of call centers and reduced passenger demand due to the COVID-19 pandemic. Capital costs for the Information & Reservations Subfamily have been consistent since Fiscal Year 2017, with no capital costs reported, aside from minimal costs in Fiscal Year 2018.

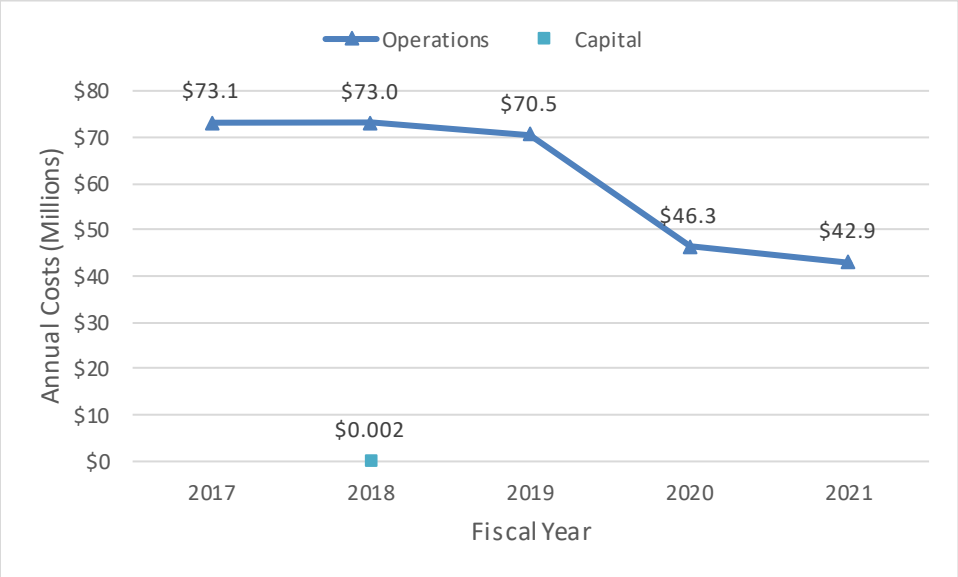

Figure 5-87. Information & Reservations Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Information & Reservations Subfamily operating costs are concentrated largely in the Wages & Overtime and Employee Benefits Expenses account categories at 42.9 percent and 27.0 percent of operating costs, respectively (Figure 5-88). Other noteworthy cost types include the Other Expenses (15.6 percent), Salaries (10.0 percent), and Facility Communication & Office (3.5 percent) account categories. The Advertising & Sales, Fuel Power & Utilities, Employee Related, Materials, and Train Operations account categories comprise less than 1 percent each of Information & Reservations operating costs.

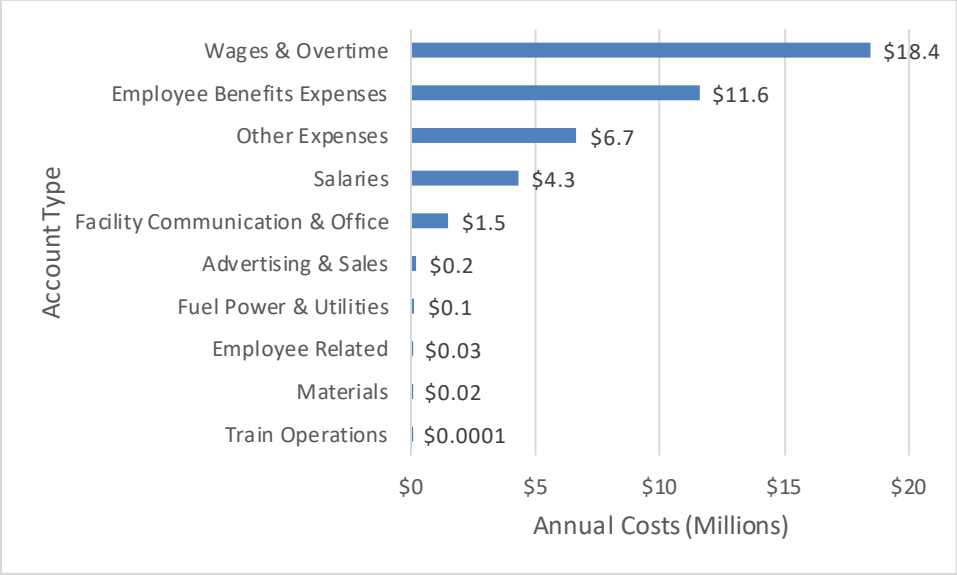

Figure 5-88. Information & Reservations Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The largest single internal order in the Information & Reservations Subfamily is Reservations (IO_1221), at 28.5 percent of costs. This internal order records "all payroll and other expenses incurred by Reservations Sales Offices associated with providing direct public and travel agency reservations and information services." No Function (IO_NO_IO), Marketing (IO_4300), Resv. Mgmt. Admin (IO_1220), Marketing Overhead (IO_1210), compose the top five. These internal orders capture expenses incurred for direct marketing activities and payroll and other expenses at Reservation Sales Offices regarding managerial and clerical support and for General and Administrative (G&A) work for the Marketing Department. See Table 5-145 for the top internal orders that make up the Information & Reservations costs and the primary statistic used to allocate each.

Table 5-145. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Information & Reservations Subfamily – FM_402

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
RESERVATIONS	IO_1221	$12.2	ST_RSOX	28.5%
No Function	IO_NO_IO	$7.9	ST_RSOX	18.4%
Marketing	IO_4300	$6.5	ST_RSOX	15.2%
RESV.MGMT ADMIN	IO_1220	$6.2	ST_RSOX	14.4%
MARKETING OVERHEAD	IO_1210	$4.4	ST_RSOX	10.4%
RESV. SPECIAL SVCS	IO_1219	$2.0	ST_RSOX	4.8%

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
CORPORATE SERVICE CENTERS	IO_1121	$1.8	ST_RSOX	4.2%

Cost Allocation Approach

Costs in the Information & Reservations subfamily are exclusively allocated in the first round, as shown in Table 5-146.

Table 5-146. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Information & Reservations Subfamily – FM_402

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	0.0%
First Round	100.0%
Second Round	0.0%

As Information & Reservations activities and expenditures are driven by customer talk time at RSCCs, almost all costs are allocated to all Amtrak trains based in proportion to their share of Usage Time for RSO Operations (ST_RSOX), which allocates 96.8 percent of the subfamily's total expenditures (Table 5-147). This statistic assigns Information & Reservations costs to Amtrak routes based on the share of talk time at RSCCs spent booking reservations for each route relative to total talk time. ST_RSOX is calculated based on a 3-month rolling average talk time survey of calls at RSCCs.

Table 5-147. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Information & Reservations Subfamily – FM_402

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Usage Time for RSO Operations	ST_RSOX	$41.5	96.8%

Service Line Allocation Results

Information & Reservations costs are allocated exclusively to the three NTS service lines, together comprising 100 percent of the subfamily total, the largest of which is the Long Distance service line at 46.9 percent. The share of Information & Reservations costs allocated to the three service lines is shown in Table 5-148.

Table 5-148. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Information & Reservations – FM_402

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$20.1	46.9%
NTS-SS	$14.5	33.9%
NTS-NEC	$8.2	19.2%
All Other Service Lines	-$0.00001	-0.00003%

5.4.3 Marketing Subfamily

Family: Sales and Marketing – FM_SALES_MKTG
Subfamily: Marketing – FM_403

Scope

The Marketing Subfamily performs marketing and sales support activities for Amtrak's core passenger rail business. Activities include market research, customer relations, general advertising, telephone directory advertising, production of timetables, and sales promotions. Some cost centers in this subfamily are systemwide in scope and are responsible for marketing for all routes, whereas others correspond to regions or, in some cases, individual routes.

Total costs for the Marketing Subfamily in Fiscal Year 2021 were $84.7 million, accounting for approximately 1.4 percent of Amtrak's total costs. The subfamily consists of 16 cost centers in two subcategories. Table 5-149 is an overview of Fiscal Year 2021 for the Marketing Subfamily.

Table 5-149. Subfamily Overview for Marketing Subfamily – FM_403

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$84.7
Subcategories Used	General 403_0, Marketing Support 403_1
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	16

Composition of Subfamily Costs

Total Marketing Subfamily costs for Fiscal Year 2021 were $84.7 million, a 23.6 percent decrease compared to Fiscal Year 2017. Marketing costs are primarily operating costs recorded for the five-year analysis period, but the amount of capital and operating costs have varied. Marketing operating costs decreased between Fiscal Year 2017 ($74.2 million) and Fiscal Year 2018 ($54.8 million) before increasing to $61.4 million in Fiscal Year 2019, and again to $84.4 million in Fiscal Year 2020. Fiscal Year 2021 shows a slight decline to $79.4 million. Over the five-year period, capital costs have decreased steadily, from $36.6 million in Fiscal Year 2017 to $15.8 million in Fiscal Year 2019, to $5.4 million in Fiscal Year 2021 (Figure 5-89). The drop in Marketing capital costs reflect the completion of the NEC Trackside wireless broadband network and a project to improve the Amtrak mobile application.

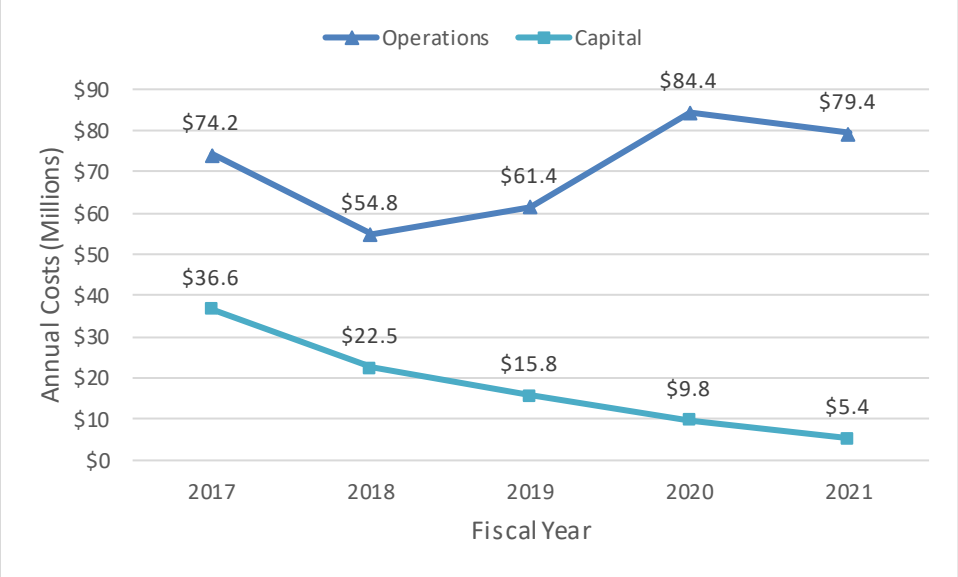

Figure 5-89. Marketing Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Marketing operating costs are concentrated largely in the Advertising & Sales, Other Expenses, and Salaries account categories at 41.6 percent, 36.6 percent, and 15.0 percent of operating costs, respectively (Figure 5-90). The Employee Benefits Expenses account category is 5.9 percent of operating costs. Facility Communication & Office, Employee Related, Wages & Overtime, Materials, and Train Operations account categories account for less than 1 percent each of Marketing operating costs.

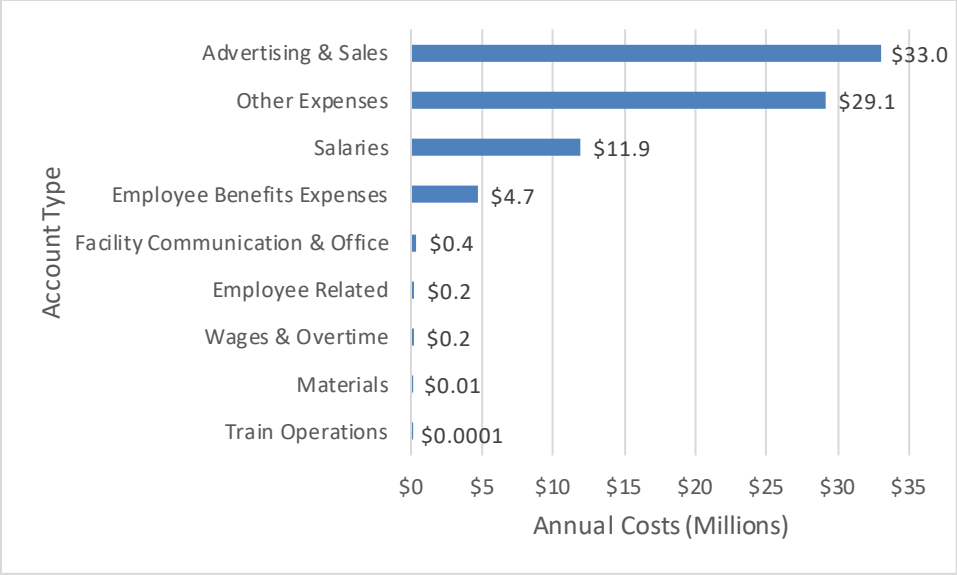

Figure 5-90. Marketing Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Marketing capital costs are concentrated largely in the Other Expenses category at 72.2 percent with smaller amounts in the Salaries (13.0 percent), and Materials (7.4 percent) account categories (Figure 5-91). Other cost types include Facility Communication & Office, Wages & Overtime, and Employee Related, each at 5 percent or less of Marketing capital costs.

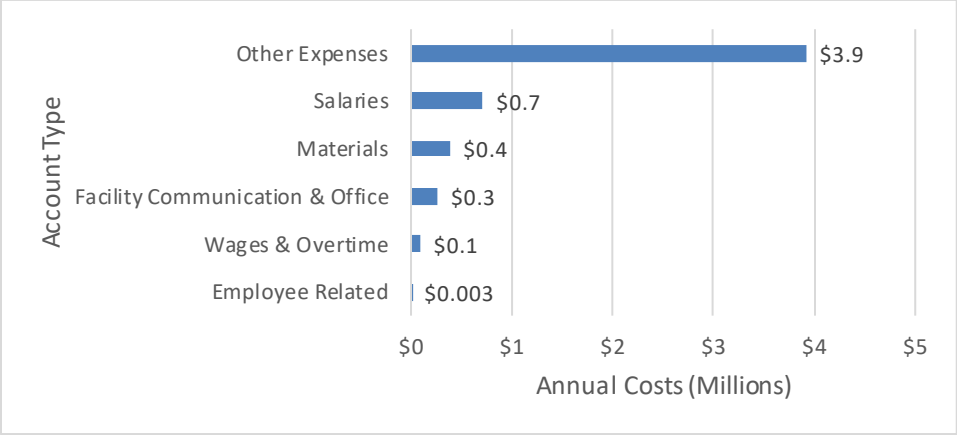

Figure 5-91. Marketing Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest single internal order in the Marketing Subfamily is Marketing (IO_4300), at 44.2 percent of costs. This internal order records "expenses incurred in support of direct marketing activities." Corporate Service Centers (IO_1121), Corporate Administration (IO_1001), Capital (IO_4200), and Marketing Overhead (IO_1210), round out the top five. These internal orders capture payroll and other costs related to administrative work within Amtrak's Marketing Department and related capital project costs. See Table 5-150 for the top internal orders that make up the Marketing costs and the primary statistic used to allocate each.

Table 5-150. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Marketing Subfamily – FM_403

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Marketing	IO_4300	$37.4	ST_PRVX	44.2%
CORPORATE SERVICE CENTERS	IO_1121	$26.3	ST_PRVX	31.0%
CORPORATE ADMINISTRATION	IO_1001	$6.6	ST_PRVX	7.8%
Capital	IO_4200	$5.6	ST_TBDX	6.6%
MARKETING OVERHEAD	IO_1210	$5.3	ST_PRVX	6.2%
Reimbursable – General	IO_4100	$2.1	ST_NO_STX	2.5%

Cost Allocation Approach

Costs in the Marketing Subfamily are primarily allocated in the first round but can be directly assigned to trains or allocated in the second round. Where a cost center is focused exclusively on a single route or other route information is available, it may be directly assigned. Directly assigned costs for marketing efforts benefiting a single route account for 24.4 percent of the subfamily total and are captured using WBS project codes specific to that route's marketing projects. Second-round allocated costs account for 16.6 percent. First-round allocated costs make up 59.0 percent of the subfamily total.

Table 5-151. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Marketing Subfamily – FM_403

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	24.4%
First Round	59.0%
Second Round	16.6%

Half of expenditures (50.0 percent) in this subfamily, consisting of general Amtrak marketing not tied to a specific route, are allocated using the Passenger Related Transportation Revenue (ST_PRVX) statistic, the total passenger ticket revenue for Amtrak trains. Other statistics used include No Statistic (Direct Charges) (ST_NO_STX) for route-specific marketing initiatives, which accounts for 22.9 percent of expenditures, and Total Allocated Costs (ST_TAC_DBX), which accounts for 12.9 percent of expenditures. Total Allocated Costs (ST_TAC_DBX) is a second-round allocation statistic used for senior indirect marketing costs not tied to a specific route or marketing initiative. Table 5-152 shows top statistics used

for the Marketing Subfamily.

Table 5-152. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Marketing Subfamily – FM_403

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Passenger Related Transportation Revenue	ST_PRVX	$42.4	50.0%
No Statistic (Direct Charges)	ST_NO_STX	$19.4	22.9%
Total Allocated Costs	ST_TAC_DBX	$10.9	12.9%
Total Riders	ST_TRDX	$3.6	4.3%
Customer Allocated Costs	ST_CAE_DBX	$2.3	2.7%
Total Boards and Deboards	ST_TBDX	$2.0	2.4%

Service Line Allocation Results

Marketing Subfamily costs are primarily allocated to the three NTS service lines, together comprising 92.5 percent of the subfamily total, the largest of which is the NEC service line at 39.6 percent of expenditures. Additionally, Marketing costs are allocated to the Long Distance (32.7 percent) and State Supported (20.2 percent) service lines, with minor allocations to the Reimbursable, Infrastructure Access, and other service lines as shown in Table 5-153.

Table 5-153. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Marketing – FM_403

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-NEC	$33.5	39.6%
NTS-LD	$27.7	32.7%
NTS-SS	$17.1	20.2%

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
Infrastructure Access	$3.5	4.1%
Reimbursable	$2.5	2.9%
All Other Service Lines	$0.4	0.5%

5.4.4 Station & On-Board Technology Subfamily

Family: Sales and Marketing – FM_SALES_MKTG
Subfamily: Station & On-Board Technology – FM_404

Scope

The Station & On-Board Technology Subfamily is responsible for the operating and maintenance costs associated with both on-board and station passenger-facing technologies. On-board technologies include those installed on rolling stock (e.g., Wi-Fi, on-board information systems (OBIS), etc.), while station technologies include systems installed at stations (e.g., public information display systems (PIDS), station-based Wi-Fi, etc.).

Total costs for the Station & On-Board Technology Subfamily in Fiscal Year 2021 were $4.7 million, accounting for approximately 0.1 percent of Amtrak's total costs. The subfamily consists of two cost centers in a single subcategory. Table 5-154 is an overview of Fiscal Year 2021 for the Station & On-Board Technology Subfamily.

Table 5-154. Subfamily Overview for Station & On-Board Technology Subfamily – FM_404

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$4.7
Subcategories Used	General 404_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Reimbursable, Commercial, Infrastructure Access
Number of Cost Centers	2

Composition of Subfamily Costs

Station & On-Board Technology Subfamily costs for Fiscal Year 2021 were $4.7 million, a 70.8 percent decrease compared to Fiscal Year 2017. Costs are exclusively operating costs, when any costs were reported, over the five-year analysis period, but the amount of operating costs has varied substantially.

Station & On-Board Technology operating costs decreased between Fiscal Year 2017 ($16.1 million) and Fiscal Year 2018 ($5.0 million). Very minimal operating costs were reported in Fiscal Year 2019 and none were reported in Fiscal Year 2020, as the Station & On-Board Technology Subfamily was functionally eliminated, with expenses allocated to other subfamilies using Work Breakdown Structure (WBS) elements. However, as the subfamily was reactivated again to track and manage these activities, costs increased to $4.7 million in Fiscal Year 2021. Over the five-year period, no capital costs were reported in Fiscal Year 2019 and Fiscal Year 2020, and minimal capital costs were reported in Fiscal Year 2017, Fiscal Year 2018 (where capital costs were negative) and Fiscal Year 2021 as shown in Figure 5-92.

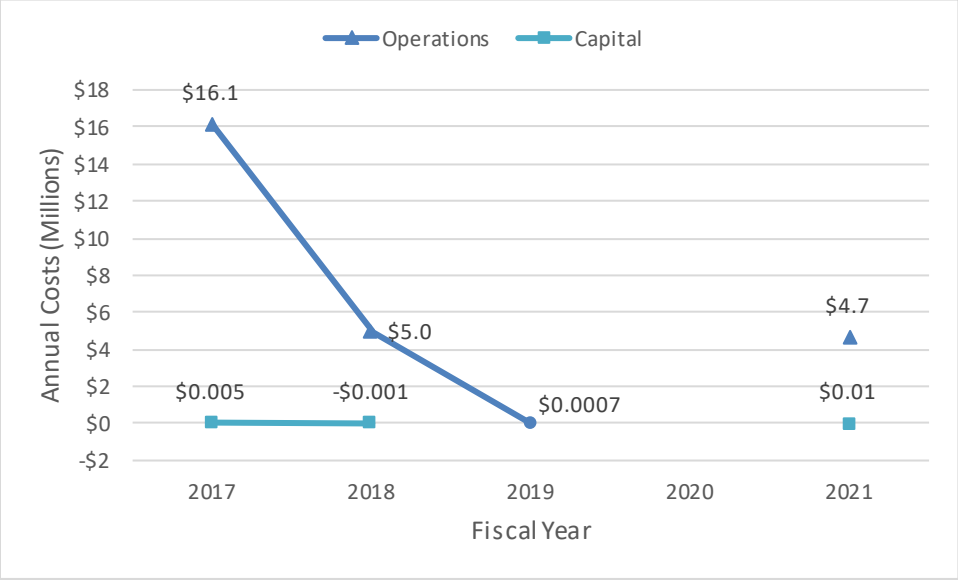

Figure 5-92. Station & On-Board Technology Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Station & On-Board Technology operating costs are concentrated largely in the Other Expenses category, 70.2 percent of the subfamily, which includes the underlying account Professional Fees & Services to operate and maintain technology systems. The Facility Communication & Office and Salaries account categories have 14.9 percent, and 10.6 percent, respectively (Figure 5-93). Employee Benefits Expenses accounts for 4.3 percent of operating costs, while all other account categories account for less than 1 percent each of Station & On-Board Technology operating costs. Station & On-Board Technology capital costs (not shown) are entirely in the Wages & Overtime account category, totaling $0.01 million in Fiscal Year 2021.

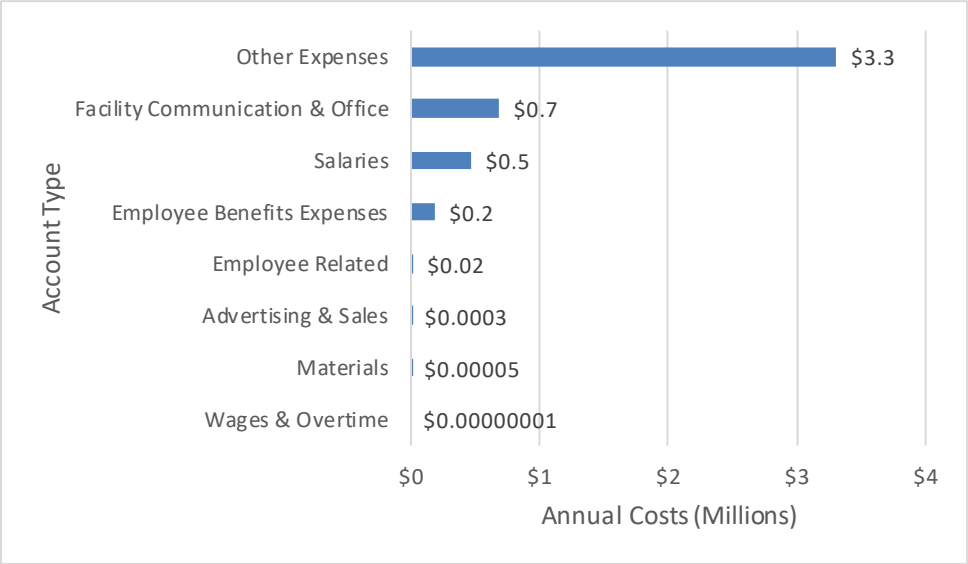

Figure 5-93. Station & On-Board Technology Distribution of Operating Costs, Fiscal Year 2021 (Millions)

The largest single internal order in the Station & On-Board Technology Subfamily is Marketing (IO_4300), at 62.4 percent of costs. This internal order records "expenses incurred in support of direct marketing activities." Other major internal orders, as seen in Table 5-155, are Corporate Service Centers (IO_1121), Sta Svcs – Station Operations (IO_1271), and Reimbursable – General (IO_4100). These internal orders record payroll and other expenses for Reservation Sales Offices, and for janitorial and other personnel not specifically covered in other internal orders as well as rent, utilities, and outside janitorial services as well as labor and other costs billable to outside parties.

Table 5-155. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Station & On-Board Technology Subfamily – FM_404

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Marketing	IO_4300	$2.9	ST_UUX	62.4%
CORPORATE SERVICE CENTERS	IO_1121	$1.2	ST_TRDX	25.3%
STA SVCS-STATION OPERATIONS	IO_1271	$0.5	ST_PUTX	10.3%
Reimbursable – General	IO_4100	$0.3	ST_NO_STX	5.8%

Cost Allocation Approach

Costs in the Station & On-Board Technology Subfamily are primarily allocated in the first round but can

be directly assigned to trains. Where the station or on-board system can be isolated to a single service such as a route-station's Wi-Fi, that cost is directly assigned to the route while costs at shared facilities are allocated. These directly assigned costs account for 29.1 percent of the subfamily total, while first-round allocated costs make up 70.9 percent of the subfamily total.

Table 5-156. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Station & On-Board Technology Subfamily – FM_404

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	29.1%
First Round	70.9%
Second Round	0.0%

The most common statistics used for cost attribution in the Station & On-Board Technology Subfamily are Total Riders (ST_TRDX), Average Locos and Cars Used per Day (ST_UUX), No Statistic (Direct Charges) (ST_NO_STX), Passenger Car Unit Trips (ST_PUTX), and Straight-Line Allocation (ST_NONX) (see Table 5-157 for distribution). These statistics, apart from ST_NO_STX and ST_NONX, are related to the number of riders, number of cars and locomotives used, and number of passenger trips for a train.

Table 5-157. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Station & On-Board Technology Subfamily – FM_404

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Total Riders	ST_TRDX	$1.7	35.8%
Average Locos and Cars Used per Day	ST_UUX	$1.5	33.2%
No Statistic (Direct Charges)	ST_NO_STX	$1.4	29.3%
Passenger Car Unit Trips	ST_PUTX	$0.5	9.9%
Straight-Line Allocation	ST_NONX	-$0.4	-9.5%

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
(1)			

Service Line Allocation Results

Station & On-Board Technology Subfamily costs are primarily allocated to the three NTS service lines, together comprising 89.3 percent of the subfamily total, the largest of which is the NEC service line at 35.2 percent of expenditures. Additionally, costs are allocated to the State Supported (31.3 percent) and Long Distance (22.8 percent) service lines, with smaller allocations to the Infrastructure Access, Reimbursable, and Commercial service lines as shown in Table 5-158.

Table 5-158. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Station & On-Board Technology – FM_404

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-NEC	$1.6	35.2%
NTS-SS	$1.5	31.3%
NTS-LD	$1.1	22.8%
Infrastructure Access	$0.2	5.2%
Reimbursable	$0.2	5.1%
Commercial	$0.01	0.3%

5.4.5 Service Line Management Subfamily

Family: Sales and Marketing – FM_SALES_MKTG
Subfamily: Service Line Management – FM_405

Scope

The Service Line Management Subfamily is responsible for commercial activity, including managing service lines within Amtrak's revenue generating businesses (e.g., National Train Services and Commuter Operations). The cost centers that track this commercial activity had previously been in the General and Administrative (G&A) Family but were shifted to the Sales and Marketing Family in Fiscal Year 2019 to better track these costs separately from the broader corporate administration.

Total costs for the Service Line Management Subfamily in Fiscal Year 2021 were $146.1 million, accounting for approximately 2.4 percent of Amtrak's total costs. The subfamily consists of 18 cost centers in a single subcategory. Table 5-159 is an overview of Fiscal Year 2021 for the Service Line

Management Subfamily.

Table 5-159. Subfamily Overview for Service Line Management Subfamily – FM_405

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$146.1
Subcategories Used	Service Line Management General 405_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	18

Composition of Subfamily Costs

Service Line Management Subfamily costs for Fiscal Year 2021 were $146.7 million, a 64.3 percent increase compared to Fiscal Year 2019, the first year the subfamily was introduced after the cost centers were shifted from the G&A Family. Capital costs represent the majority for the subfamily's three-year history since Fiscal Year 2019, but the amount of capital costs has varied substantially. Capital costs increased from $54.1 million in Fiscal Year 2019 to $121.6 million in Fiscal Year 2020 largely due to real estate projects related to NEC mater planning. There was a slight decrease in capital costs in Fiscal Year 2021 to $108.6 million. Over the period since Fiscal Year 2019, when the subfamily was introduced, operating costs were relatively consistent, at $35.2 million in Fiscal Year 2019, $34.3 million in Fiscal Year 2020, and $37.4 million in Fiscal Year 2021.

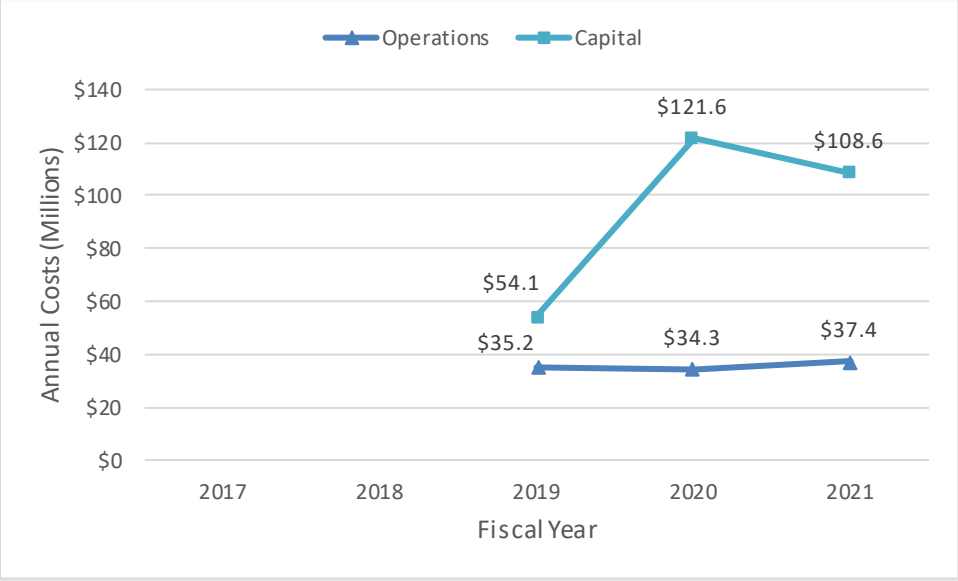

Figure 5-94. Service Line Management Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Service Line Management operating costs are concentrated largely in the Other Expenses (including professional services and MoW services) and Salaries account categories at 55.3 percent and 25.7 percent, respectively (Figure 5-95). Other noteworthy cost types include Employee Benefits Expenses (8.2 percent), Facility Communication & Office (5.3 percent), Train Operations (3.5 percent) and Fuel Power & Utilities (1.3 percent). Other categories account for less than 1 percent each of Service Line Management operating costs.

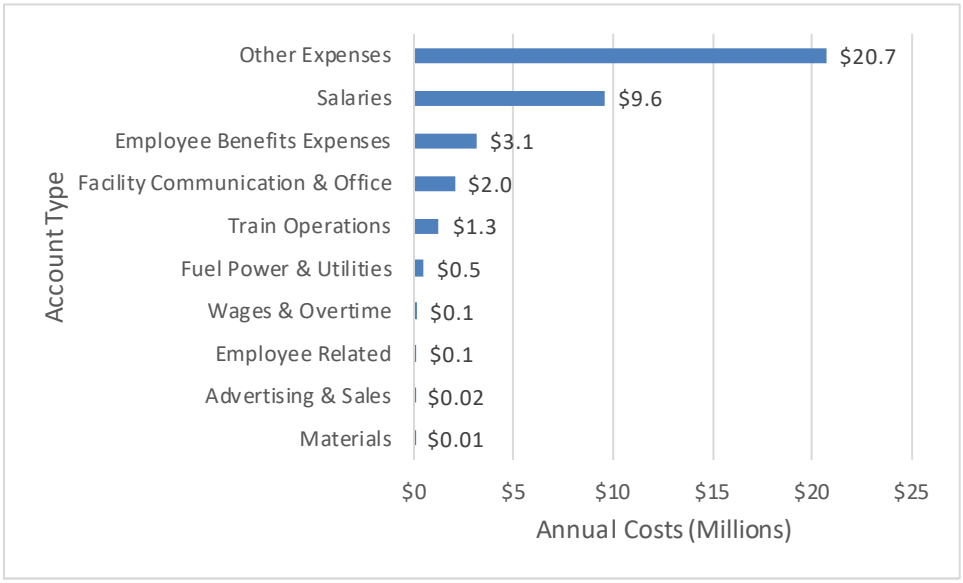

Figure 5-95. Service Line Management Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Service Line Management capital costs are largely in the Facility Communication & Office and Other Expenses account categories at 50.5 percent and 42.4 percent, respectively (Figure 5-96), which incorporate the capital real estate and planning activities of the subfamily. Salaries, Materials, Train Operations, Employee Related and Wages & Overtime account categories each account for 4 percent or less of Service Line Management capital costs.

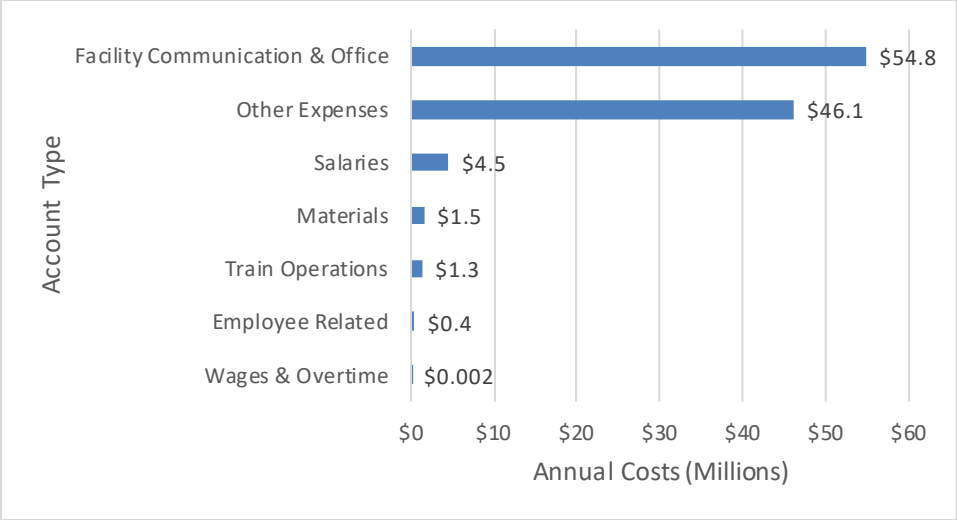

Figure 5-96. Service Line Management Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest single internal order in the Service Line Management Subfamily is Capital (IO_4200), at 89.7 percent of costs (Table 5-160). This internal order records "all capital project related costs." The second most common is Corporate Administration (IO_1001). This internal orders records "payroll and other costs involved in General and Administrative (G&A) work at the corporate level."

Table 5-160. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Service Line Management Subfamily – FM_405

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Capital	IO_4200	$130.9	ST_PUTX	89.7%
CORPORATE ADMINISTRATION	IO_1001	$8.9	ST_TAC_DBX, ST_NO_STX	6.1%

Cost Allocation Approach

Operating costs in the Service Line Management Subfamily are primarily allocated in the first round but can be directly assigned to train or assigned in the second round. Directly assigned costs account for 15.1 percent of the subfamily total, while first-round allocated costs make up 69.3 percent of the subfamily total and second-round allocated costs account for 15.6 percent of the subfamily total.

Table 5-161. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Service Line Management Subfamily – FM_405

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	15.1%

Allocation Round	Percent of Costs Allocated in Allocation Round
First Round	69.3%
Second Round	15.6%

The most common statistic used for cost attribution in the Service Line Management Subfamily is Passenger Car Unit Trips (ST_PUTX), which accounts for 57.1 percent of subfamily expenditures and represents the number of passenger trips for a train. Other common statistics are Frequency of Train Trips (ST_FTTX), No Statistic (Direct Charges) (ST_NO_STX), Total Boards and Deboards (ST_TBDX), and Total Allocated Costs (ST_TAC_DBX). Top statistics used for subfamily cost attribution are shown in Table 5-162.

Table 5-162. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Service Line Management Subfamily – FM_405

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Passenger Car Unit Trips	ST_PUTX	$83.4	57.1%
Frequency of Train Trips	ST_FTTX	$23.6	16.2%
No Statistic (Direct Charges)	ST_NO_STX	$12.3	8.4%
Total Boards and Deboards	ST_TBDX	$11.0	7.5%
Total Allocated Costs	ST_TAC_DBX	$4.4	3.0%
Average Locos and Cars Used per Day	ST_UUX	$2.7	1.9%
Total Operated Train Miles	ST_TTMX	$2.3	1.6%

Service Line Allocation Results

The majority of Service Line Management Subfamily costs are allocated to the three NTS service lines, together comprising 57.3 percent of the subfamily total, the largest of which is the NEC service line at 29.4 percent of expenditures. Additionally, costs are allocated to the State Supported (14.6 percent) and

Long Distance (13.4 percent) service lines. The largest single service line by expenditures in this subfamily is Infrastructure Access at 38.0 percent of expenditures. There are minor allocations to the Commercial and other service lines as shown in Table 5-163.

Table 5-163. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Service Line Management – FM_405

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
Infrastructure Access	$55.5	38.0%
NTS-NEC	$42.9	29.4%
NTS-SS	$21.3	14.6%
NTS-LD	$19.5	13.4%
Commercial	$5.6	3.8%
All Other Service Lines	$1.3	0.9%

5.5 General and Administrative (G&A) Family (FM_G_A)

The General and Administrative (G&A) (G&A) Family contains high-level management activities not closely associated with a particular family or portion of the business, but instead with all of Amtrak. This includes executive activities such as the president and board activities as well as general administrative activities such as finance and human relations that support the entirety of the enterprise. Other examples of costs recorded in the G&A family include Amtrak's Office of the Inspector General, commercial expenses from Amtrak's real estate operations, and depreciation, Amtrak's single largest annual expense.

Most costs in the G&A Family are operating costs, which historically have been approximately $1,400 million over the five-year period shown in Figure 5-97. Over this period, operating costs were at their highest in Fiscal Year 2019, at $1,450.7 million, and declining in Fiscal Year 2020 to $1439.8 million, and further to $1,380.5 million in Fiscal Year 2021. Capital costs have represented a smaller share of total costs for the G&A Family, generally around $250 million, except for Fiscal Year 2017, when capital costs were $512.5 million. Fiscal Year 2021 capital costs were $233.0 million, a decrease from Fiscal Year 2020 at $257.2 million.

Restructuring of the G&A Family occurred in Fiscal Year 2019, when the Subsidiary Subfamily (FM_605) was renamed Claims Management, and the Utilities Subfamily (FM_801) was renamed Centralized Expense and moved from the now defunct Utilities Family to the G&A Family. As a result, the G&A Family includes Subfamilies numbered FM_601 through FM_605 and FM_801. While trends through

Fiscal Year 2019 were relatively flat overall, this restructuring resulted in a shift in the distribution of costs for the G&A Family, where over half of costs were shifted out of existing subfamilies and into the Centralized Expense Subfamily.

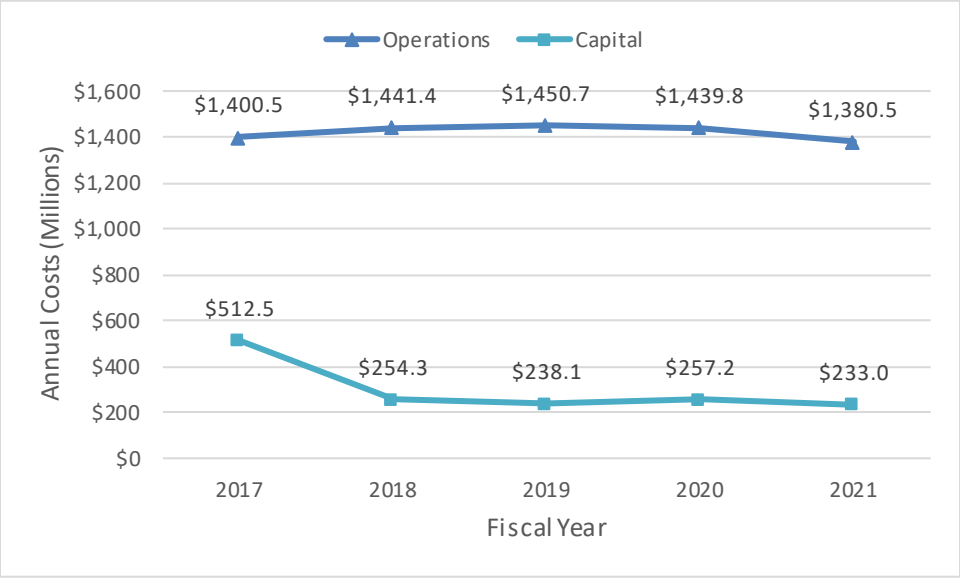

Figure 5-97. G&A Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

A single year's operating costs for Fiscal Year 2021 gives the relative sizes of each G&A subfamily. As seen in Figure 5-98, most operating costs in the G&A Family are in the Centralized Expense Subfamily, at $1,026.2 million. The next largest subfamily in terms of operating costs is Centralized Services, at $204.1 million. Other subfamilies have relatively fewer operating costs, with Corporate Administration accounting for $82.1 million, Qualified Management $28.2 million, Direct Customer (Non-NTS) $20.2 million, and Claims Management $19.7 million in operating costs in Fiscal Year 2021.

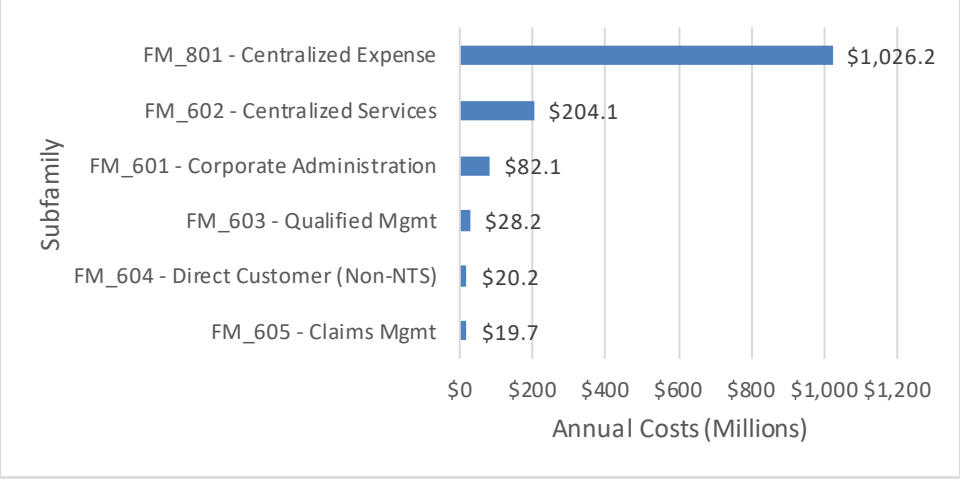

Figure 5-98. Subfamily Distribution of G&A Operating Costs, Fiscal Year 2021 (Millions)

G&A Family capital costs are largely in the Qualified Management Subfamily, which accounts for $121.4 million in capital costs. The Centralized Services and Centralized Expense subfamilies account for $78.1 million and $33.4 million in capital costs, respectively, while the Direct Customer (Non-NTS) and Corporate Administration subfamilies have comparably much smaller capital costs (Figure 5-99).

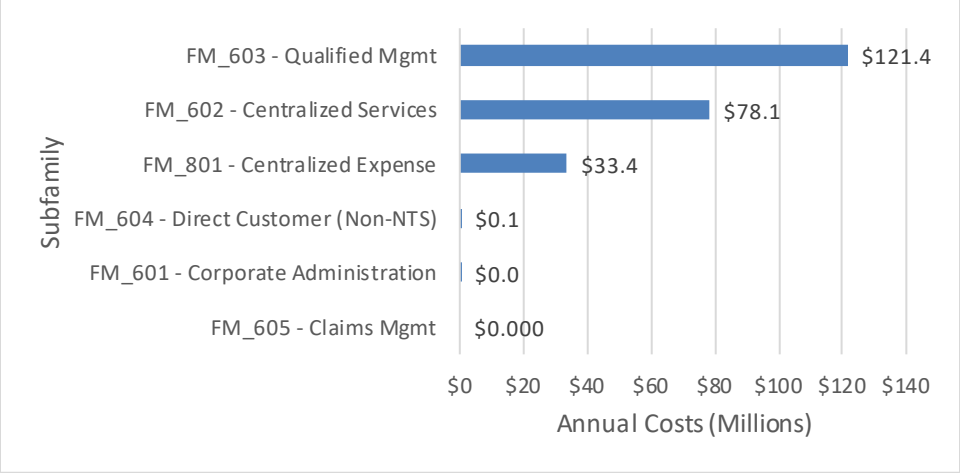

Figure 5-99. Subfamily Distribution of G&A Capital Costs, Fiscal Year 2021 (Millions)

The subsections below describe each G&A subfamily in detail, including the activities performed, a breakdown of account costs, the approach to cost allocation, and a summary of allocation data.

5.5.1 Corporate Administration Subfamily

Family: General & Administrative – FM_G_A
Subfamily: Corporate Administration – FM_601

Scope

The Corporate Administration Subfamily performs managerial and administrative tasks that are properly considered corporatewide in scope. Expenses included in the Corporate Administration Subfamily are expenses such as the president's salary, the chief financial officer, and similar executive level department costs that support the overall mission of Amtrak rather than a subset of operations.

Subfamily expenditures for Fiscal Year 2021 were $82.1 million and account for 1.4 percent of Amtrak's total expenses. The subfamily consists of 38 cost centers in nine subcategories. Table 5-164 is an overview of Fiscal Year 2021 for the Corporate Administration Subfamily.

Table 5-164. Subfamily Overview for Corporate Administration Subfamily – FM_601

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$82.1
Subcategories Used	General 601_0, Corp Operations 601_11, Legal 601_2, Govt Affairs Corp Communications 601_3, Financial Planning 601_4, Controller 601_5, CFO Office 601_6, CEO_President 601_7, Corp Strategy 601_9
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	38

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $82.1 million, a 61.2 percent drop from the five-year high in Fiscal Year 2017. Corporate Administration Subfamily costs have been mostly operating costs over the five-year period, but the amount of operating and capital costs have varied substantially. Subfamily operating costs fell between Fiscal Year 2017, reported at $173.3 million, and Fiscal Year 2019, when they were reported to be $68.2 million, but have since increased to $82.1 million in Fiscal Year 2021. Similarly, capital costs fell in Fiscal Year 2019, from $46.2 million in Fiscal Year 2018 to $7.6 million. The decrease in Corporate Administration Subfamily costs in Fiscal Year 2019 was due to the introduction of the Centralized Expense Subfamily, which caused a large shift in distribution of G&A Family costs. No capital costs were reported in Fiscal Year 2020, and minimal capital costs were reported in Fiscal Year 2021.

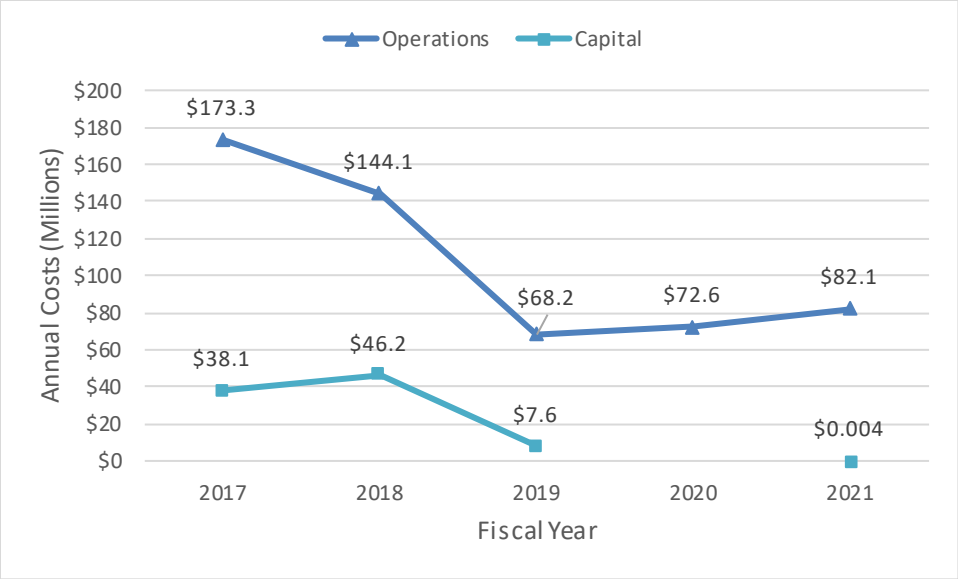

Figure 5-100. Corporate Administration Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Corporate Administration Subfamily operating costs are largely composed of the Salaries, Other Expenses, and Employee Benefits Expenses account categories, which reflect 42.8 percent, 34.1 percent, and 16.9 percent of operating costs, respectively. The Facility Communication & Office account category makes up 4.4 percent of operating costs, and all other account categories compose 1 percent or less of operating costs in magnitude (Figure 5-101). However, the Fuel Power & Utilities and Materials account categories both record net negative operating costs for the Corporate Administration Subfamily in Fiscal Year 2021. Corporate Administration Subfamily capital costs (not shown) are entirely composed of the Wages & Overtime account category, totaling $0.004 million in Fiscal Year 2021.

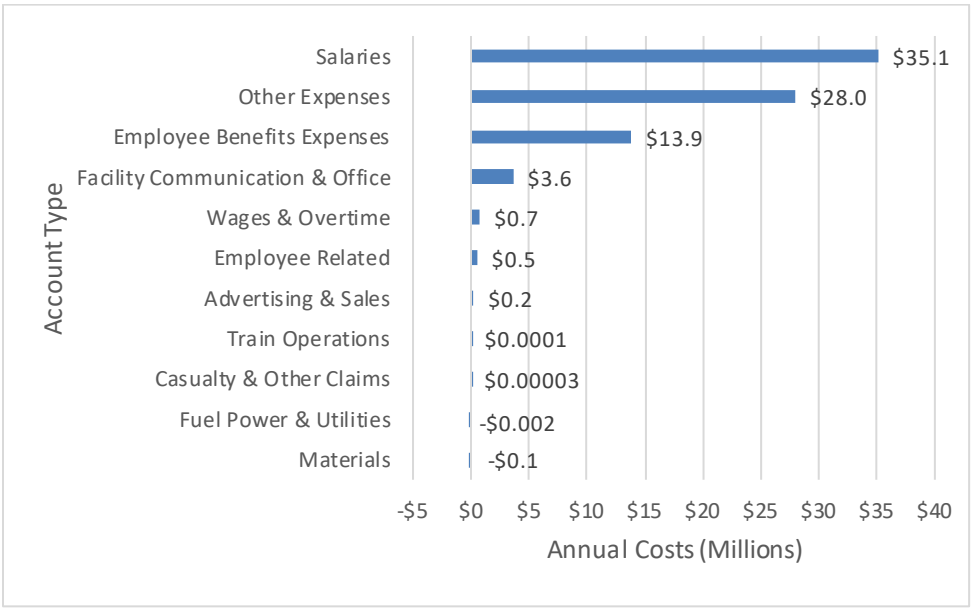

Figure 5-101. Corporate Administration Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Most costs in the Corporate Administration Subfamily are recorded with Corporate Administration (IO_1001), as shown in Table 5-165. This internal order "records all payroll and other costs involved in General and Administrative (G&A) work at the corporate level." Other internal orders used include Marketing (IO_4300), No Function (IO_NO_IO), and Corporate Service Centers (IO_1121), which reflect expenses incurred for marketing for payroll and other costs involved with administration of operations.

Table 5-165. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Corporate Administration Subfamily – FM_601

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
CORPORATE ADMINISTRATION	IO_1001	$59.8	ST_TAC_DBX	72.9%
Marketing	IO_4300	$11.0	ST_NO_STX	13.4%
No Function	IO_NO_IO	$5.8	ST_TAC_DBX	7.1%
CORPORATE SERVICE CENTERS	IO_1121	$3.0	ST_TAC_DBX	3.7%

Cost Allocation Approach

The majority of costs in the Corporate Administration Subfamily (85.2 percent) are allocated in the second round, with some costs allocated via direct assignment (13.5 percent), and the remainder in the first round (1.3 percent).

Table 5-166. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Corporate Administration Subfamily – FM_601

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	13.5%
First Round	1.3%
Second Round	85.2%

For a large share of operating expenses in this subfamily, the allocation statistic is Total Allocated Costs (ST_TAC_DBX), the total cost of each train or business type "cost object," including all direct costs and earlier round cost allocations. ST_TAC_DBX is available for customers of every business type and all customers receive a share of Corporate Administration costs based on their proportion of total Amtrak cost as reflected in the ST_TAC_DBX statistic.

The directly assigned costs are almost entirely captured in Marketing (IO_4300) with relevant WBSEs

identifying the appropriate route for direct assignment. The No Statistic (Direct Charges) (ST_NO_STX) statistic is used for these expenses (Table 5-167).

Table 5-167. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Corporate Administration Subfamily – FM_601

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Total Allocated Costs	ST_TAC_DBX	$69.2	84.3%
No Statistic (Direct Charges)	ST_NO_STX	$11.1	13.5%

Service Line Allocation Results

Corporate Administration Subfamily costs are mostly allocated to the three NTS service lines, together comprising 78.4 percent of the subfamily total, the largest of which is the NEC service line at 37.5 percent of expenditures, followed by the Long Distance (22.6 percent) and State Supported (18.3 percent) service lines. The only other service line above 10 percent is Infrastructure Access at 15.3 percent of expenditures. There are smaller allocations to the Reimbursable, Commuter Operations, and other service lines as shown in Table 5-168.

Table 5-168. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Corporate Administration – FM_601

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-NEC	$30.8	37.5%
NTS-LD	$18.5	22.6%
NTS-SS	$15.0	18.3%
Infrastructure Access	$12.5	15.3%
Reimbursable	$2.6	3.2%
Commuter Operations	$2.1	2.6%
All Other Service Lines	$0.4	0.5%

5.5.2 Centralized Services Subfamily

Family: General & Administrative – FM_G_A
Subfamily: Centralized Services – FM_602

Scope

The Centralized Services Subfamily performs services for other portions of the Amtrak enterprise and is considered corporatewide in scope. These services include computer services, payroll operations, human resources, and other employee services available corporatewide. Centralized Services costs represent services provided to and benefiting all employees and businesses operating under the Amtrak corporate umbrella.

Subfamily expenditures for Fiscal Year 2021 were $282.2 million and account for 4.7 percent of Amtrak's total expenses. The subfamily consists of 79 cost centers in nine subcategories. Table 5-169 is an overview of Fiscal Year 2021 for the Centralized Services Subfamily.

Table 5-169. Subfamily Overview for Centralized Services Subfamily – FM_602

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$282.2
Subcategories Used	General 602_0, IT Operations 602_05, Training 602_07, Personnel & Benefits Mgmt 602_08, HCM Support 602_09, HCM Technology Support 602_10, Payroll 602_11, Procurement & Purchasing 602_12, Central Svc Corp Common 602_13
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	79

Composition of Subfamily Costs

Total costs for the Centralized Services Subfamily were $282.2 million in Fiscal Year 2021, approximately the same as in Fiscal Year 2017, but a 30.9 percent drop from their peak over the five-year period in Fiscal Year 2019. Over the five-year period between Fiscal Year 2017 and Fiscal Year 2021, costs were largely operating costs. In Fiscal Year 2017, operating costs were $230.6 million, and rose to $265.9 million in Fiscal Year 2019, before declining through Fiscal Year 2020 to $204.1 million in Fiscal Year 2021. While capital costs have been consistently lower than operating costs over the five-year period, there is variation in their magnitude. Capital costs were $59.2 million in Fiscal Year 2018 and increased

substantially to $142.6 million in Fiscal Year 2019, before declining to $65.0 million in Fiscal Year 2020, and increasing slightly to $78.1 million in Fiscal Year 2021. Much of the shift can be explained by cost centers shifting between subfamilies, including an influx in Fiscal Year 2019, when six cost centers were added to the subfamily for a total of 95 before shrinking by 18 cost centers in Fiscal Year 2020.

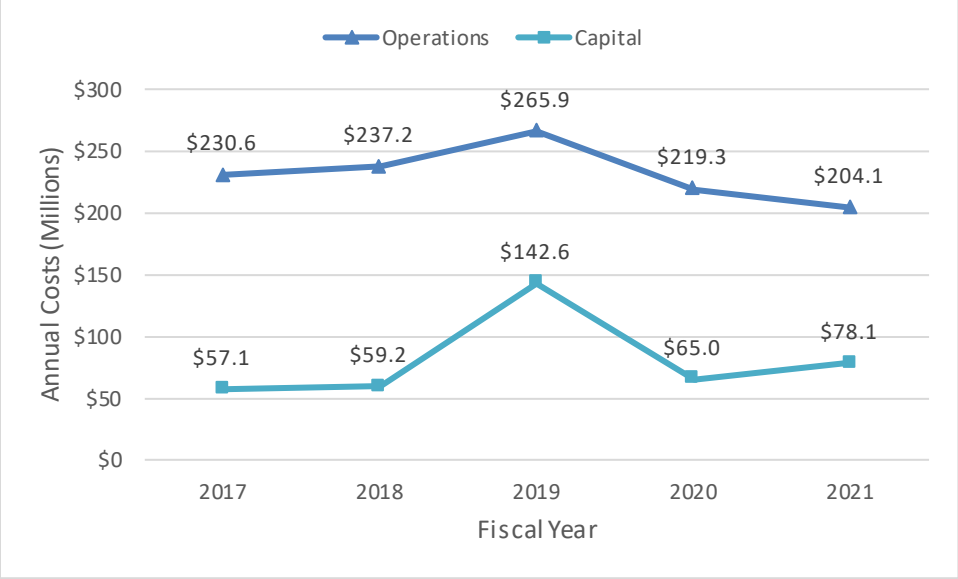

Figure 5-102. Centralized Services Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Centralized Services Subfamily operating costs are largely composed of the Other Expenses, Salaries, Facility Communication & Office, and Employee Benefits Expenses account categories, which reflect 43.2 percent, 26.7 percent, 16.7 percent, and 9.8 percent of operating costs, respectively. All other account categories each compose less than 3 percent of subfamily operating costs (Figure 5-103).

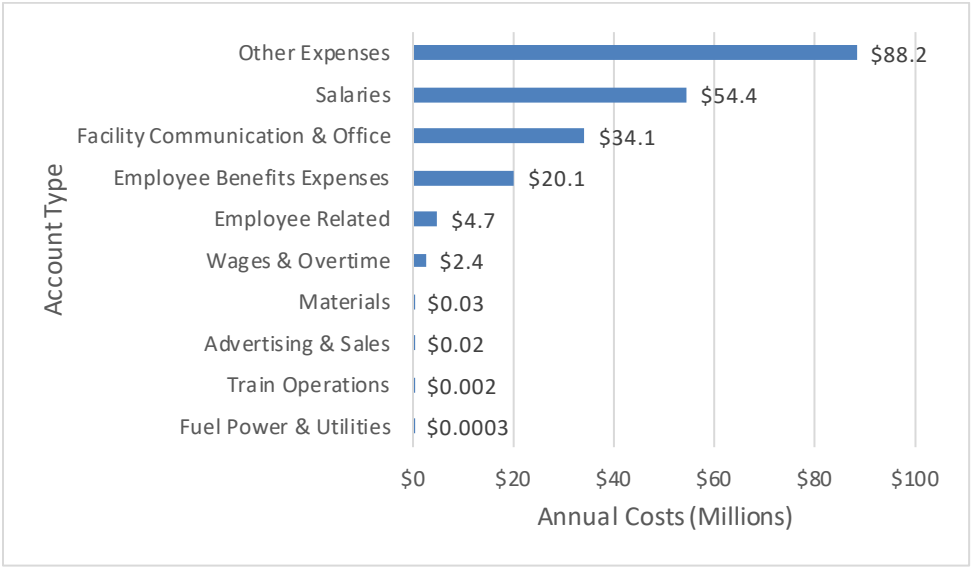

Figure 5-103. Centralized Services Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Centralized Services Subfamily capital costs are largely composed of the Other Expenses account category, at 71.8 percent of costs. Other major account categories are Salaries (17.2 percent) and Facility Communication & Office (9.5 percent). All other account categories each compose less than 2 percent of subfamily capital costs (Figure 5-104).

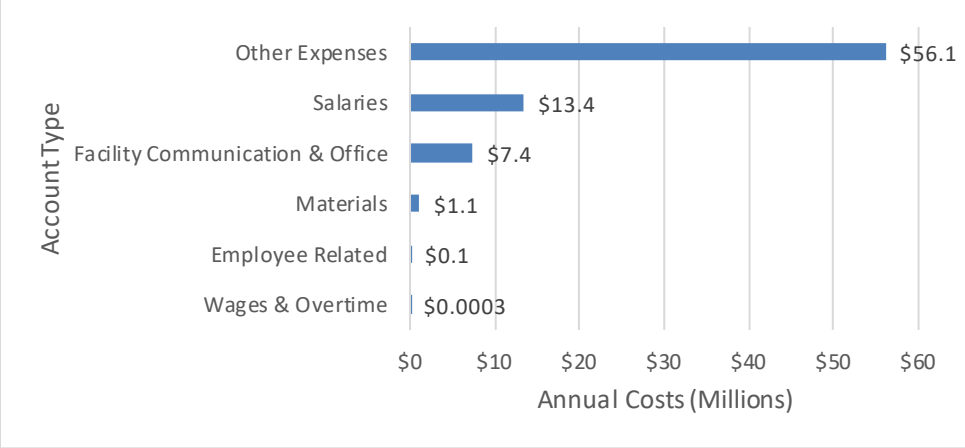

Figure 5-104. Centralized Services Distribution of Capital Costs, Fiscal Year 2021 (Millions)

Most costs in the Centralized Services Subfamily are found in only two internal orders, Corporate Service Centers (IO_1121) and Capital (IO_4200), as shown in Table 5-170. The Corporate Service Centers internal order records "payroll and other costs involved in the administration of operations and providing services that support other specific areas of the Company," while Capital records costs related to capital projects. Other internal orders include Corporate Administration (IO_1001) and No Function (IO_NO_IO).

Table 5-170. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Centralized Services Subfamily – FM_602

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
CORPORATE SERVICE CENTERS	IO_1121	$138.9	ST_TAC_DBX	49.2%
Capital	IO_4200	$93.6	ST_TAC_DBX	33.2%
CORPORATE ADMINISTRATION	IO_1001	$28.6	ST_TAC_DBX	10.1%
No Function	IO_NO_IO	$7.0	ST_TAC_DBX	2.5%

Cost Allocation Approach

The majority of costs in the Centralized Services Subfamily (93.0 percent) are allocated in the second

round, with a small proportion of costs allocated via direct assignment (3.6 percent), or in the first round (3.4 percent).

Table 5-171. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Centralized Services Subfamily – FM_602

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	3.6%
First Round	3.4%
Second Round	93.0%

The primary allocation statistic is Total Allocated Costs (ST_TAC_DBX), the total cost of each train or "cost object," including all direct costs and prior-round cost allocations, which accounts for 82.0 percent of subfamily expenditures. For reporting and management reasons, the Centralized Services Subfamily includes several subcategories to identify specific costs such as payroll, procurement, and IT. These subcategories are all allocated in the same manner.

Other primary statistics used for subfamily cost attribution (Table 5-172) are No Statistic (Direct Charges) (ST_NO_STX), Total Riders (ST_TRDX), Passenger Related Transportation Revenue (ST_PRVX), and Frequency of Train Trips (ST_FTTX), each between approximately 1 and 5 percent of the subfamily total.

Table 5-172. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Centralized Services Subfamily – FM_602

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Total Allocated Costs	ST_TAC_DBX	$231.4	82.0%
No Statistic (Direct Charges)	ST_NO_STX	$13.3	4.7%
Total Riders	ST_TRDX	$12.9	4.6%
Passenger Related Transportation Revenue	ST_PRVX	$9.4	3.3%

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Frequency of Train Trips	ST_FTTX	$2.3	0.8%

Service Line Allocation Results

Centralized Services Subfamily costs are mostly allocated to the three NTS service lines, together comprising 75.2 percent of the subfamily total, the largest of which is the NEC service line at 28.7 percent of expenditures followed by the Long Distance (25.1 percent) and State Supported (21.5 percent) service lines. Another notable service line in terms of expenditure in this subfamily is Infrastructure Access at 16.4 percent of expenditures. There are minor allocations to the Reimbursable, Commuter Operations, Other – Unallocated, and Commercial service lines as shown in Table 5-173.

Table 5-173. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Centralized Services – FM_602

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-NEC	$80.9	28.7%
NTS-LD	$70.7	25.1%
NTS-SS	$60.7	21.5%
Infrastructure Access	$46.2	16.4%
Reimbursable	$9.6	3.4%
Commuter Operations	$6.8	2.4%
Other-Unallocated	$5.9	2.1%
Commercial	$1.3	0.5%

5.5.3 Qualified Management Subfamily

Family: General & Administrative – FM_G_A
Subfamily: Qualified Management – FM_603

Scope

The Qualified Management Subfamily performs high-level managerial and supporting activities related to a subset of the total Amtrak enterprise. Although the cost centers in this subfamily perform missions similar to the other G&A Subfamilies, because they do not support the entire operation, they are not considered corporatewide and their allocation method needs to reflect this.

Subfamily expenditures for Fiscal Year 2021 were $149.6 million and accounted for 2.5 percent of

Amtrak's total expenses. The subfamily consists of 19 cost centers in four subcategories. Table 5-174 is an overview of Fiscal Year 2021 for the Qualified Management Subfamily.

Table 5-174. Subfamily Overview for Qualified Management Subfamily – FM_603

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$149.6
Subcategories Used	General 603_0, Fleet Strategy 603_1, NEC IID 603_2, Operations Support 603_5
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	19

Composition of Subfamily Costs

Total costs for the Qualified Management Subfamily were $149.6 million in Fiscal Year 2021, an 88.5 percent decrease from Fiscal Year 2017. Most of this decrease occurred in Fiscal Year 2019, when the introduction of the Centralized Expense Subfamily resulted in changes in the distribution of costs in the G&A Family. During the realignment of the G&A family, Amtrak's single largest cost center, Corporate Common (CC_0202) shifted from this subfamily to the Centralized Expense Subfamily (FM_801), with that subfamily recording an opposite increase. Prior to Fiscal Year 2019, the Qualified Management Subfamily was overwhelmingly made up of operating costs, but since Fiscal Year 2019, costs are mostly capital costs, with $121.4 million in capital costs and $28.2 million in operating costs in Fiscal Year 2021.

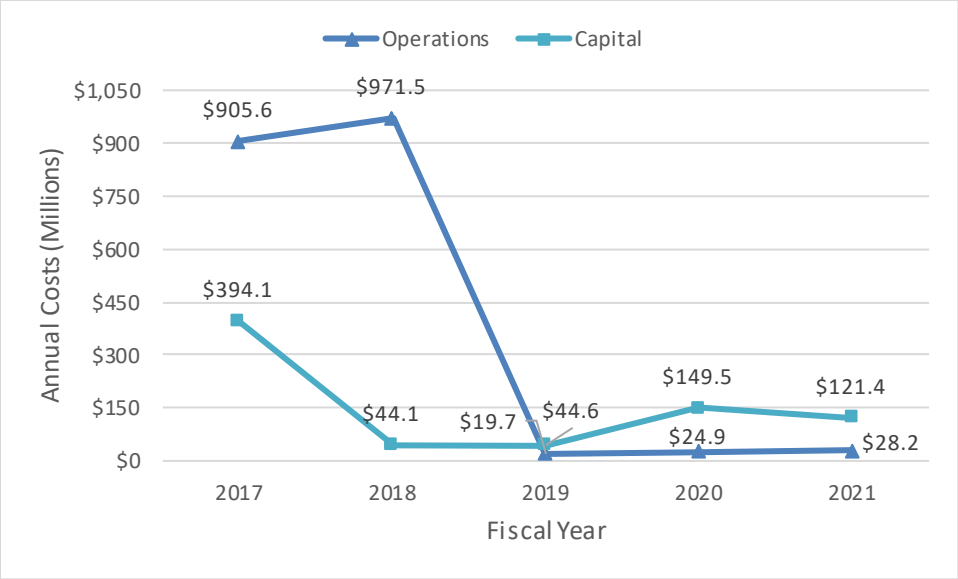

Figure 5-105. Qualified Management Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Qualified Management Subfamily operating costs are largely composed of the Other Expenses and Salaries account categories, which reflect 38.7 percent and 30.1 percent of operating costs, respectively. Additionally, the Employee Benefits Expenses account category reflects 13.5 percent of operating costs, compared to 8.2 percent for Facility Communication & Office and 5.7 percent for Wages & Overtime. All other account categories comprise less than 3 percent each of subfamily operating costs (Figure 5-106).

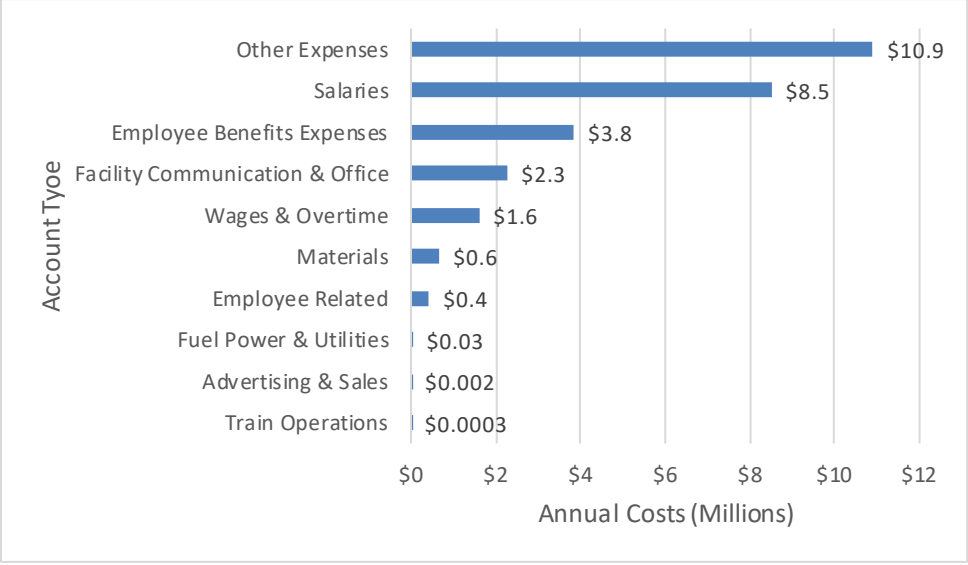

Figure 5-106. Qualified Management Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Qualified Management Subfamily capital costs are largely composed of the Other Expenses and Facility Communication & Office account categories, which reflect 56.3 percent and 35.6 percent of costs, respectively. These costs are primarily for professional fees and data processing services. All other

account categories compose less than 5 percent each of subfamily capital costs. (Figure 5-107).

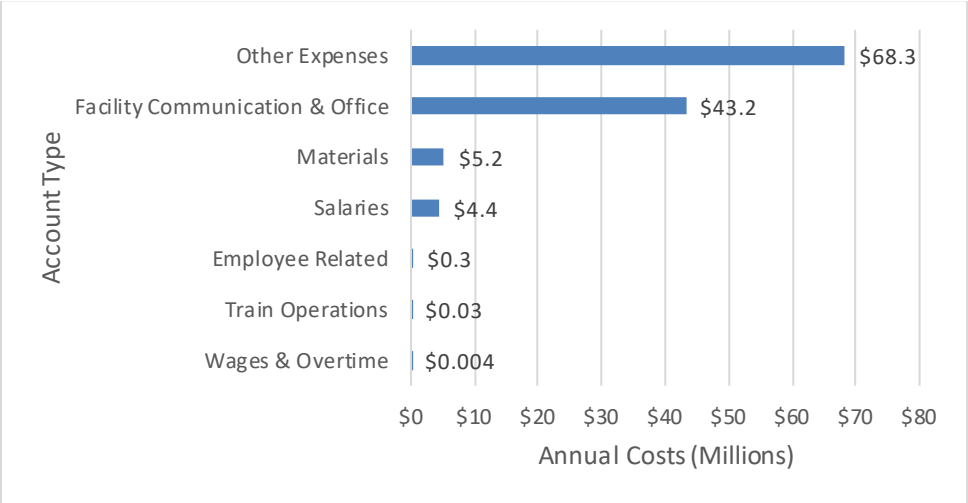

Figure 5-107. Qualified Management Distribution of Capital Costs, Fiscal Year 2021 (Millions)

Almost all costs, 84.8 percent, in the Qualified Management Subfamily are allocated under Capital (IO_4200), as shown in Table 5-175. The Capital internal order records costs related to capital projects and are directly assigned. Other internal orders include Corporate Service Centers (IO_1121) and Corporate Administration (IO_1001).

Table 5-175. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Qualified Management Subfamily – FM_603

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Capital	IO_4200	$126.9	ST_NO_STX	84.8%
CORPORATE SERVICE CENTERS	IO_1121	$11.7	ST_TAC_DBX	7.8%
CORPORATE ADMINISTRATION	IO_1001	$7.4	ST_CAE_DBX	4.9%

Cost Allocation Approach

Although a minority of costs in the subfamily, operating costs are primarily allocated. The large majority of operating costs in the Qualified Management Subfamily are allocated in the second around (85.3 percent), while fewer are allocated by direct assignment (9.6 percent) or in the first round (5.1 percent).

Table 5-176. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Qualified Management Subfamily – FM_603

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	9.6%
First Round	5.1%
Second Round	85.3%

Capital costs make the majority of costs in this subfamily, and they are directly assigned to the benefiting routes, including Amtrak's Next Generation High Speed Rail Trainset procurements that are directly assigned to the Acela route. Total Activity Cost (ST_TAC_DBX), the total cost of each train or other business "cost object," including all direct costs, and earlier round cost allocations, is used to attribute 11.1 percent of subfamily costs. An additional 8.4 percent of costs are allocated using Straight-Line Allocation (1) (ST_NONX), as shown in Table 5-177.

Table 5-177. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Qualified Management Subfamily – FM_603

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
No Statistic (Direct Charges)	ST_NO_STX	$99.0	66.2%
Total Allocated Costs	ST_TAC_DBX	$16.7	11.1%
Straight-Line Allocation (1)	ST_NONX	$12.6	8.4%
Customer Allocated Costs	ST_CAE_DBX	$7.6	5.1%
Mechanical Direct Costs	ST_MDC_DBX	$2.6	1.7%
Ops Trans Direct Cost	ST_TDC_DBX	$2.6	1.7%
Total Transportation Revenue	ST_TRVX	$2.5	1.7%

Service Line Allocation Results

Qualified Management costs are mostly allocated to the NTS service lines, together comprising 96.0 percent of the subfamily total, the largest of which is the NEC service line at 62.4 percent of

expenditures followed by the Long Distance service line (26.7 percent), with a smaller proportion in the State Supported service line (6.9 percent). There are minor allocations to the Infrastructure Access and other service lines as shown in Table 5-178.

Table 5-178. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Qualified Management – FM_603

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-NEC	$93.3	62.4%
NTS-LD	$40.0	26.7%
NTS-SS	$10.3	6.9%
Infrastructure Access	$4.0	2.7%
All Other Service Lines	$2.0	1.3%

5.5.4 Direct Customer (Non-NTS) Subfamily

Family: General & Administrative – FM_G_A
Subfamily: Direct Customer (Non-NTS) – FM_604

Scope

The Direct Customer (Non-NTS) Subfamily performs activities that support only ancillary businesses including Commercial or Commuter customers such as managing commuter operating contracts, real estate assets, and other support to customers outside of Amtrak's core train operations. These cost centers are exclusively outside the NTS and have specific non-NTS customers. The subfamily also records expenses for Amtrak's Office of the Inspector General.

Subfamily expenditures for Fiscal Year 2021 were $20.3 million and account for 0.3 percent of Amtrak's total expenses. This Subfamily consists of nine cost centers in three subcategories. Table 5-179 is an overview of Fiscal Year 2021 for the Direct Customer (Non-NTS) Subfamily.

Table 5-179. Subfamily Overview for Direct Customer (Non-NTS) Subfamily – FM_604

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$20.3
Subcategories Used	General 604_0, OIG 604_1, Real Estate 604_2
Service Lines to Which Costs Are	NTS-NEC, NTS-SS, NTS-LD,

Summary Item	Value or Measure
Allocated	Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	9

Composition of Subfamily Costs

The Direct Customer (Non-NTS) Subfamily recorded total costs of $20.3 million in Fiscal Year 2021, a 62.6 decrease from Fiscal Year 2017. Trends in operating and capital cost over the five-year period between Fiscal Year 2017 and Fiscal Year 2021 have varied substantially. In Fiscal Year 2019, operating and capital costs were relatively similar, with $31.2 million in operating costs and $23.3 million in capital costs reported. However, in Fiscal Year 2018, operating costs increased to $49.4 million while capital costs increased substantially to $104.8 million. However, since Fiscal Year 2019, capital costs have been minimal or zero, primarily due to shifts in the cost center composition of the subfamily from a high of 22 cost centers in Fiscal Year 2018 to the five-year low of 8 in Fiscal Year 2020.

In Fiscal Year 2019, operating costs were reported at $24.7 million, and increased substantially in Fiscal Year 2020 to $90.2 million before decreasing in Fiscal Year 2021. The annual swing in operating costs is largely due to the Voluntary Separation Incentive Program (VSIP) which recorded a large expense in Fiscal Years 2018 and 2020 with smaller negative expenses (credits or transfers) in Fiscal Years 2019 and 2021

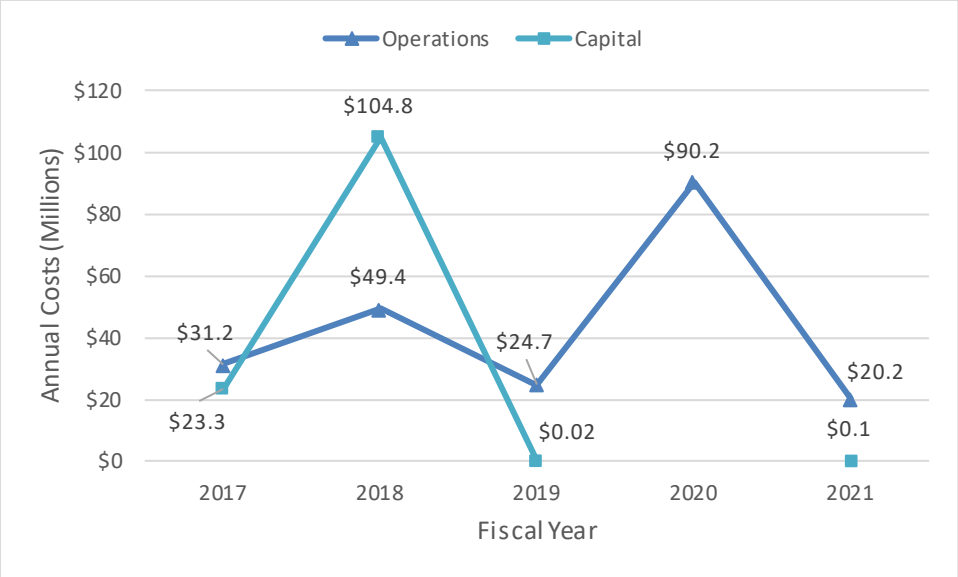

Figure 5-108. Direct Customer (Non-NTS) Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Direct Customer (Non-NTS) Subfamily operating costs are composed of the Salaries, Employee Benefits Expenses, and Other Expenses account categories, which account for 70.2 percent, 23.3 percent, and 22.3 percent of Fiscal Year 2021 operating costs, respectively. The Wages & Overtime account category

accounts for 25.2 percent of total recorded expenses in magnitude, however the net expenses incurred in this account category were negative, largely related to the credits & transfers in the VSIP cost center. All other account categories have net positive costs and are each less than 5 percent of operating costs in the Direct Customer (Non-NTS) Subfamily (Figure 5-109).

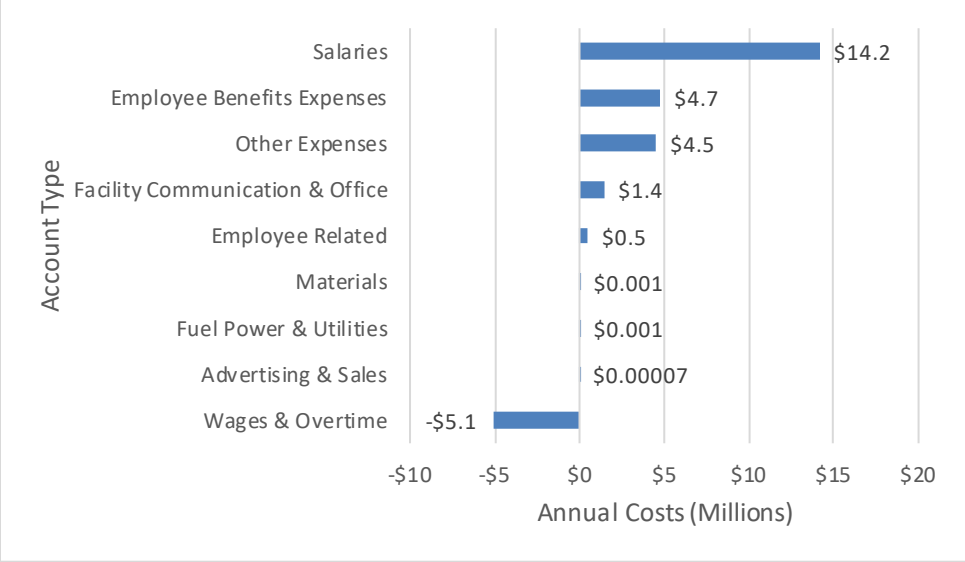

Figure 5-109. Direct Customer (Non-NTS) Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Direct Customer (Non-NTS) Subfamily capital costs are composed almost entirely of the Facility Communication & Office account category, which has 99.9 percent of reported capital costs. Other capital costs in this Subfamily are recorded in the Salaries account category (Figure 5-110).

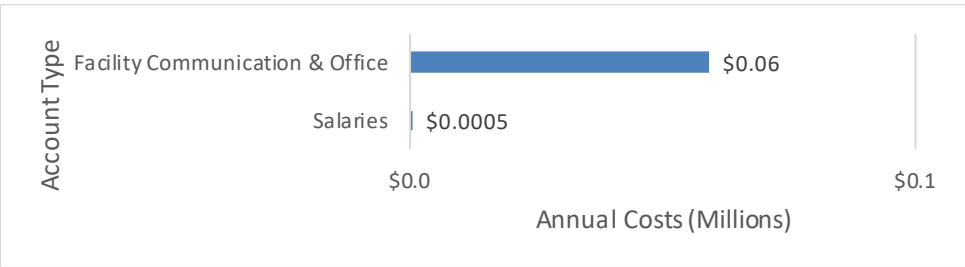

Figure 5-110. Direct Customer (Non-NTS) Distribution of Capital Costs, Fiscal Year 2021 (Millions)

Most costs in the Direct Customer (Non-NTS) are allocated under No Function (IO_NO_IO), as shown in Table 5-180. Other internal orders include Corporate Service Centers (IO_1121) and Corporate Administration (IO_1001), with a large negative value recorded under Corporate Administration, the IO used to record the VSIP credits/transfers.

Table 5-180. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Direct Customer (Non-NTS) Subfamily – FM_604

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
No Function	IO_NO_IO	$27.6	ST_TAC_DBX	136.2%
CORPORATE SERVICE CENTERS	IO_1121	$1.5	ST_NO_STX	7.4%
CORPORATE ADMINISTRATION	IO_1001	-$10.4	ST_NO_STX	-51.4%

Cost Allocation Approach

Most costs in the Direct Customer (Non-NTS) Subfamily are allocated in by direct assignment (79.8 percent), with some allocated in the second round (20.2 percent), and no costs allocated in the first round.

Table 5-181. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Direct Customer (Non-NTS) Subfamily – FM_604

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	79.8%
First Round	0.0%
Second Round	20.2%

The directly assigned costs, using No Statistic (Direct Charges) (ST_NO_STX) are almost entire related to the OIG along with some commercial costs. All remaining costs are allocated using the Total Allocated Costs (ST_TAC_DBX) statistic. However, the net expenditures allocated under ST_TAC_DBX are negative.

Table 5-182. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Direct Customer (Non-NTS) Subfamily – FM_604

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
No Statistic (Direct Charges)	ST_NO_STX	$27.2	133.9%
Total Allocated Costs	ST_TAC_DBX	-$6.9	-33.9%

Service Line Allocation Results

Direct Customer (Non-NTS) Subfamily costs are mostly allocated to the Other – Unallocated service line and there are minor expenditures in the Commercial service line. All other service lines have negative net expenditures in Fiscal Year 2021, as shown in Table 5-183.

Table 5-183. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Direct Customer (Non-NTS) – FM_604

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
Other-Unallocated	$24.2	119.4%
Commercial	$2.9	14.4%
Commuter Operations	-$0.2	-1.1%
Reimbursable	-$0.3	-1.4%
Infrastructure Access-NEC	-$1.2	-5.9%
NTS-SS	-$1.5	-7.5%
NTS-NEC	-$1.7	-8.4%
NTS-LD	-$1.9	-9.4%

5.5.5 Claims Management Subfamily

Family: General & Administrative – FM_G_A
Subfamily: Claims Management – FM_605

Scope

The Claims Management Subfamily represents expenses for staff and contracts related to the management and payment of insurance claims (however, actual claim expenses are paid from the Corporate Common (CC_0202). The Claims Management Subfamily was a new subfamily in Fiscal Year 2019; however, it retained the subfamily code, FM_605, previously used with the Subsidiary Subfamily. This change resulted after the Chicago Union Station subsidiary business was eliminated and absorbed into Amtrak, and remaining cost centers were moved to the Centralized Expense Subfamily, which was also added in Fiscal Year 2019 and resulted in redistribution of costs in the G&A Family.

Subfamily expenditures for Fiscal Year 2021 were $19.7 million and account for 0.3 percent of Amtrak's total expenses. The Claims Management Subfamily consists of two cost centers in a single subcategory. Table 5-184 is an overview for Fiscal Year 2021 for the Claims Management Subfamily.

Table 5-184. Subfamily Overview for Claims Management Subfamily – FM_605

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$19.7
Subcategories Used	Claims Management 605_1
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	2

Composition of Subfamily Costs

Total costs for the Claims Management Subfamily were $19.7 million in Fiscal Year 2021, a 22.7 percent decrease from Fiscal Year 2019, when the subfamily was first introduced. In the period since the Claims Management Subfamily was introduced, costs have been entirely operating costs, with no capital costs reported.

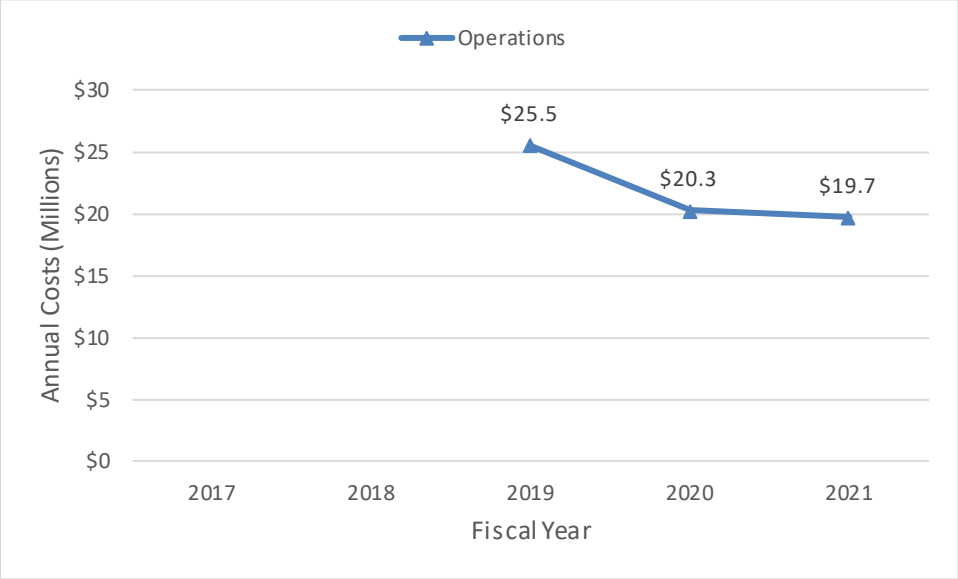

Figure 5-111. Claims Management Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Claims Management Subfamily operating costs are largely in the Other Expenses and Salaries account categories, composing 49.2 percent and 27.9 percent, respectively. Other notable account categories in Claims Management Subfamily operating costs are Casualty & Other Claims (12.2 percent) and Employee Benefits Expenses (10.7 percent). All other account categories in this subfamily account for less than one percent each of subfamily operating costs (Figure 5-112).

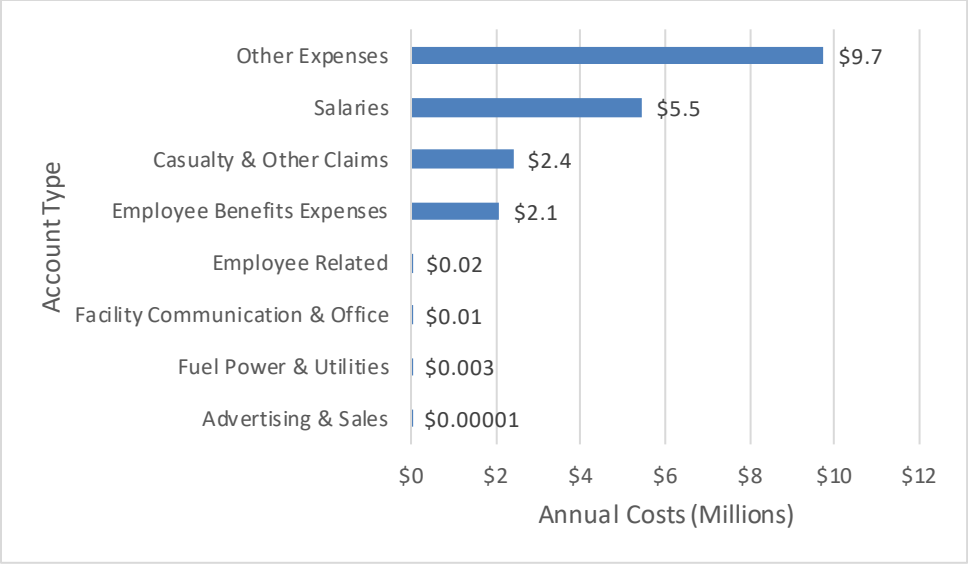

Figure 5-112. Claims Management Distribution of Operating Costs, Fiscal Year 2021 (Millions)

As shown in Table 5-185, almost all expenses in the Claims Management Subfamily are recorded using the internal order for Corporate Administration (IO_1001). This internal order records "all payroll and other costs involved in General and Administrative (G&A) work at the corporate level."

Table 5-185. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Claims Management Subfamily – FM_605

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
CORPORATE ADMINISTRATION	IO_1001	$18.8	ST_TAC_DBX	95.4%

Cost Allocation Approach

Costs in the Claims Management Subfamily are almost entirely allocated in the second (57.7 percent) or first round (42.1 percent). Very few costs, 0.2 percent, are allocated via direct assignment.

Table 5-186. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Claims Management Subfamily – FM_605

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	0.2%
First Round	42.1%
Second Round	57.7%

Costs in the Claims Management Subfamily are primarily allocated using the Total Allocated Costs (ST_TAC_DBX) and Total Operated Train Miles (ST_TTMX) statistics. ST_TAC_DBX is used in the second round to allocate 57.5 percent of expenditures, while ST_TTMX is used in the first round to allocate 42.1 percent (Table 5-187). These statistics measure the relative size of a train or other ancillary business as the dollar value of all prior allocation rounds, and train miles traveled by trains, respectively.

Table 5-187. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Claims Management Subfamily – FM_605

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Total Allocated Costs	ST_TAC_DBX	$11.4	57.7%
Total Operated Train Miles	ST_TTMX	$8.3	42.1%

Service Line Allocation Results

Claims Management Subfamily costs are mostly allocated to the three NTS service lines, together comprising 85.0 percent of the subfamily total, the largest of which is the Long Distance service line at 36.2 percent of expenditures followed by the State Supported (32.0 percent) and the NEC (16.8 percent) service lines. Another notable service line in terms of expenditure in this subfamily is Infrastructure Access, with 10.7 percent of expenditures. There are minor allocations to the Reimbursable, Commuter Operations, and other service lines as shown in Table 5-188.

Table 5-188. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Claims Management – FM_605

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$7.1	36.2%
NTS-SS	$6.3	32.0%
NTS-NEC	$3.3	16.8%
Infrastructure Access	$2.1	10.7%
Reimbursable	$0.4	2.1%
Commuter Operations	$0.3	1.6%
All Other Service Lines	$0.1	0.7%

5.5.6 Centralized Expense Subfamily

Family: General & Administrative – FM_G_A
Subfamily: Centralized Expense – FM_801

Scope

The Centralized Expense Subfamily includes pooled expenses such as depreciation, FELA, insurance payments, benefits transfers, and other corporatewide costs. Subfamily number FM_801 was formerly Utilities, which was eliminated in Fiscal Year 2019. When the Utilities Family was eliminated, subfamily number FM_801 was repurposed and renamed Centralized Expense, moving the subfamily from the now defunct Utilities Family to the General and Administrative (G&A) Family.

Subfamily expenditures for Fiscal Year 2021 were $1,059.7 million and account for 17.5 percent of Amtrak's total expenses. The Claims Management Subfamily consists of 12 cost centers in two subcategories, including Corporate Common (CC_0202), Amtrak's single largest cost center. Table 5-189 is an overview for Fiscal Year 2021 for the Centralized Expense Subfamily.

Table 5-189. Subfamily Overview for Centralized Expense Subfamily - FM_801

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$1,059.7
Subcategories Used	Employee Benefits 801_0, Corporate Common 801_1
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	12

Composition of Subfamily Costs

Total costs for the Centralized Expense Subfamily were $1,059.7 million in Fiscal Year 2021, a 2.7 percent decrease from Fiscal Year 2019, when the Subfamily was first introduced under the G&A Family. In the period since the Centralized Expense Subfamily was introduced, costs have been relatively stable, and are mostly composed of operating costs. Fiscal Year 2021 operating costs were $1,026.2 million, while capital costs were $33.4 million.

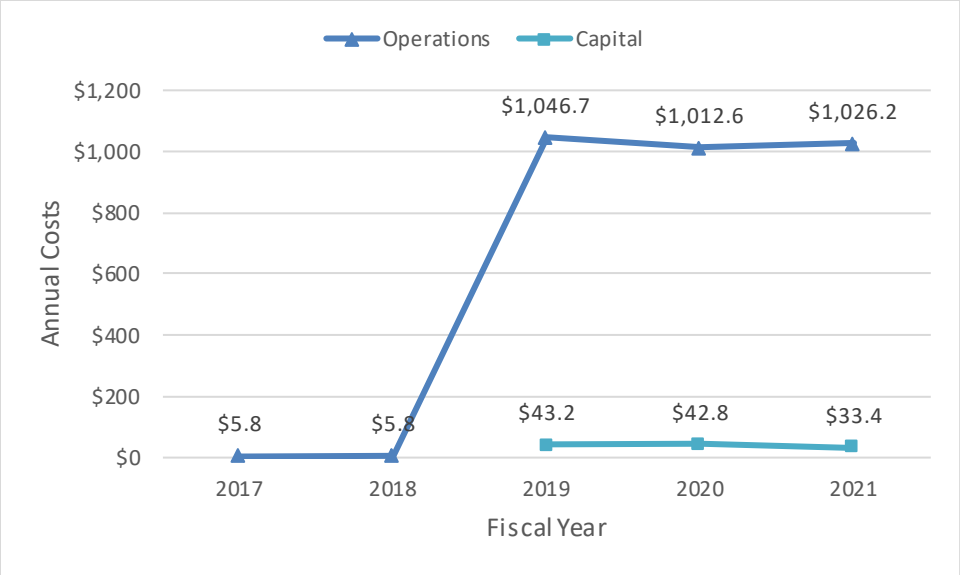

Figure 5-113. Centralized Expense Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Centralized Expense Subfamily operating costs are mostly composed of the Depreciation account category, which is 88.2 percent of operating costs. Other notable account categories are Other Expenses (10.4 percent), and Casualty & Other Claims (8.5 percent). The Employee Benefits Expenses account category accounts for 11.5 percent of operating costs, however the net costs for this account category are negative, capturing the benefits transfers from the overhead cost centers. All other account categories are less than 5 percent of operating costs in magnitude including some account categories with net negative costs in Fiscal Year 2021, as seen in Figure 5-114.

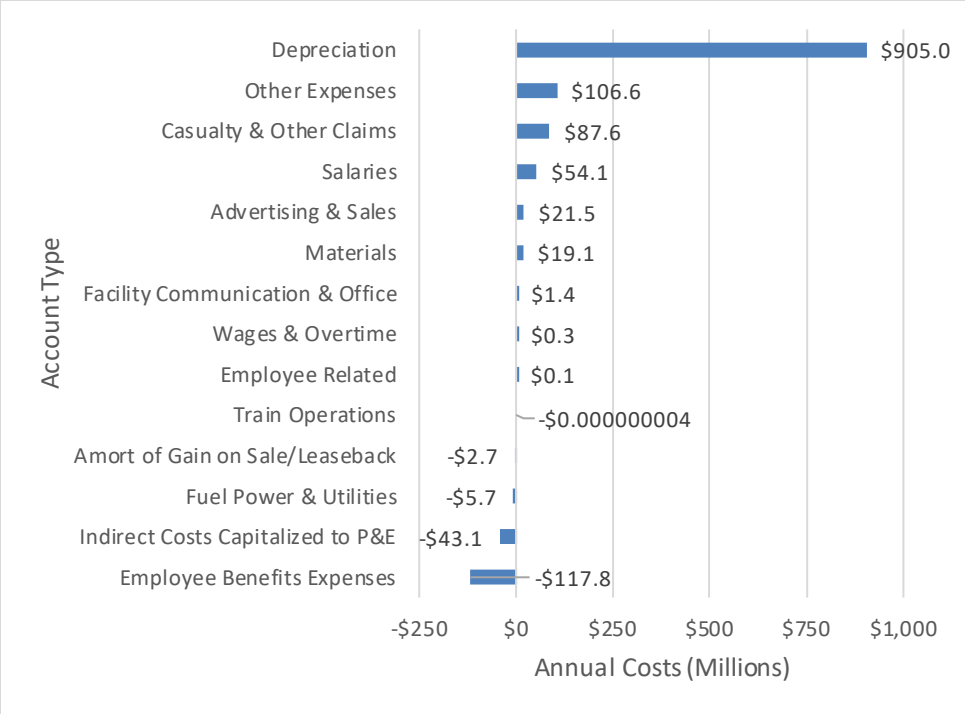

Figure 5-114. Centralized Expense Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Centralized Expense Subfamily capital costs are almost entirely composed of the Indirect Costs Capitalized to P&E account category (93.7 percent), with the remainder within the Employee Benefits Expenses category (Figure 5-115).

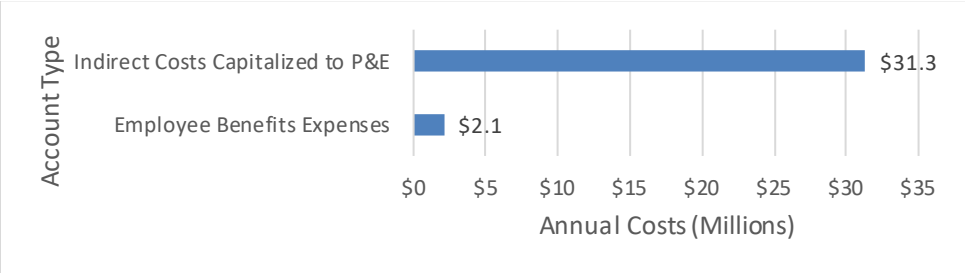

Figure 5-115. Centralized Expense Distribution of Capital Costs, Fiscal Year 2021 (Millions)

Most expenses in the Centralized Expense Subfamily are allocated using the internal orders for No Function (IO_NO_IO) or Corporate Service Centers (IO_1121). Depreciation and benefits are both coded to IO_NO_IO accounting for its size, while Corporate Service Centers records "all payroll and other costs involved in General and Administrative (G&A) work associated with special projects." Other internal orders include Insurance & Taxes (IO_1181) and Corporate Administration (IO_1001), as shown in Table 5-190. These internal orders record costs associated with insurance policies, self-insurance and taxes, and expenses involved in General and Administrative (G&A) work at the corporate level, respectively.

Table 5-190. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Centralized Expense Subfamily

- FM_801

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
No Function	IO_NO_IO	$410.2	ST_NO_STX	38.7%
CORPORATE SERVICE CENTERS	IO_1121	$360.8	ST_TAC_DBX	34.1%
INSURANCE & TAXES	IO_1181	$119.8	ST_TAC_DBX	11.3%
CORPORATE ADMINISTRATION	IO_1001	$118.9	ST_TAC_DBX	11.2%
SUB OPERATING ACTIVITY	IO_1004	$22.2	ST_TAC_DBX	2.1%

Cost Allocation Approach

Almost all operating costs in the Centralized Expense Subfamily are directly assigned (91.8 percent), with a small proportion allocated in the first (5.9 percent) or second (2.4 percent) rounds.

Table 5-191. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Centralized Expense Subfamily - FM_801

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	91.8%
First Round	5.9%
Second Round	2.4%

Directly assigned costs in the Centralized Expense Subfamily include depreciation (the largest expense in the subfamily) as well as benefits transfers using No Statistic (Direct Charges) (ST_NO_STX). A variety of other statistics allocate between 1 and 4 percent of expenditures, as shown in Table 5-192. In overall magnitude, Total Allocated Costs (ST_TAC_DBX) is the second largest statistic allocating a variety of expenses but in aggregate is negative due to the benefits transfers along with other transfers for capitalized expenses.

Table 5-192. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Centralized Expense Subfamily - FM_801

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
No Statistic (Direct Charges)	ST_NO_STX	$990.9	93.5%
Passenger Related Transportation Revenue	ST_PRVX	$33.3	3.1%
Mechanical Direct Costs	ST_MDC_DBX	$26.2	2.5%
Total Operated Train Miles	ST_TTMX	$24.3	2.3%
Customer Allocated Costs	ST_CAE_DBX	$22.3	2.1%
Ops Trans Direct Cost	ST_TDC_DBX	$15.9	1.5%
Frequency of Train Trips	ST_FTTX	$13.8	1.3%
Total Allocated Costs	ST_TAC_DBX	-$94.4	-8.9%

Service Line Allocation Results

Given the magnitude of the depreciation expenses as a share of the total subfamily that are not allocated broadly across Amtrak's business but assigned to the cost object for depreciation expenses, Depreciation (TR_UNDEP), the large majority of expenditures in the Centralized Expense Family are in the Other – Unallocated service line (88.3 percent). All other service lines account for less than 3 percent each of Subfamily expenditures (Table 5-193).

Table 5-193. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Centralized Expense - FM_801

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
Other – Unallocated	$935.4	88.3%
NTS-SS	$30.2	2.8%
Infrastructure Access	$23.4	2.2%

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-NEC	$20.1	1.9%
NTS-LD	$19.4	1.8%
Reimbursable	$15.9	1.5%
Commuter Operations	$11.5	1.1%
Commercial	$3.7	0.3%

5.6 Capital Family

The Capital Family consists of a single cost center, Capital Acquisitions (CC_CAPACQ) not assigned to a subfamily but to the Capital (FM_CAPITAL) family itself and so the description of the family, subfamily, and underlying cost center are one and the same. However, for consistency with other sections in this report, the discussion below will refer to Capital Subfamily costs.

From APT's inception until Fiscal Year 2019, the Capital Subfamily recorded the Asset Usage Allocation (AUA), a synthetic capital charge. However, the AUA was not reported publicly and so the family did not appear in published materials capturing APT's operating and capital costs. However, beginning in Fiscal Year 2020, Amtrak recorded capital transactions in the Capital Subfamily and that current scope is reflected here.

5.6.1 Capital Subfamily

Family: Capital – FM_CAPITAL
Subfamily: Capital – FM_CAPITAL

Scope

Prior to Fiscal Year 2020, Amtrak utilized the Capital Subfamily to record and track the Asset Usage Allocation. However, beginning in Fiscal Year 2020, Amtrak began recording capital transactions in the Capital Subfamily and allocating those capital costs to the benefiting service. Amtrak made this change to prevent the cost's influence on the allocation of dollars by the Total Allocated Costs (ST_TAC_DBX) statistic. As the Capital Subfamily is excluded from the estimation of TAC, Amtrak utilized the subfamily to separate the capital acquisition from statistic's calculation and the resulting allocation of overhead by that statistic. The capital costs recorded in the subfamily for Fiscal Year 2021 are comprised of two acquisitions, new rolling stock for the NTS along with a large land and air rights acquisition related to the new Hudson Tunnel Project.

Subfamily expenditures for Fiscal Year 2021 were $738.3 million and accounted for 12.2 percent of Amtrak's total expenses. Table 5-194 is an overview for Fiscal Year 2021 for the Capital Subfamily.

Table 5-194. Subfamily Overview for Capital Subfamily - FM_701

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$738.3
Subcategories Used	None
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	1

Composition of Subfamily Costs

The Capital Subfamily has reported costs for only the last two fiscal years, jumping from the initial $356.3 million in Fiscal Year 2020 to $738.3 million in Fiscal Year 2021. Fiscal Year 2020 costs for rolling stock acquisitions were repeated in Fiscal Year 2021, along with right of way acquisition for the Gateway project. The costs are nearly exclusively capital costs.

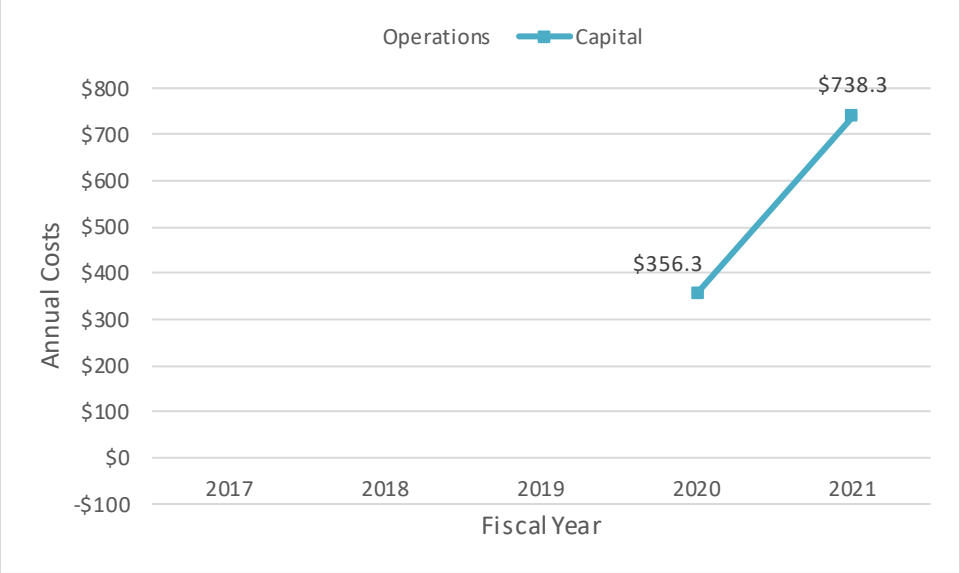

Figure 5-116. FM_Capital Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Of the Fiscal Year 2021 Capital Subfamily capital costs, the new rolling stock acquisition costs are included within the Materials account category while the land and air rights acquisition costs are recorded under the Facility, Communication & Office category. These two account categories were roughly equal in size, at $375.3 million and $363.0 million, respectively, in Fiscal Year 2021 (Figure 5-117). The minor operating costs in this subfamily (not shown) are Materials account costs, totaling $0.003 million in Fiscal Year 2021.

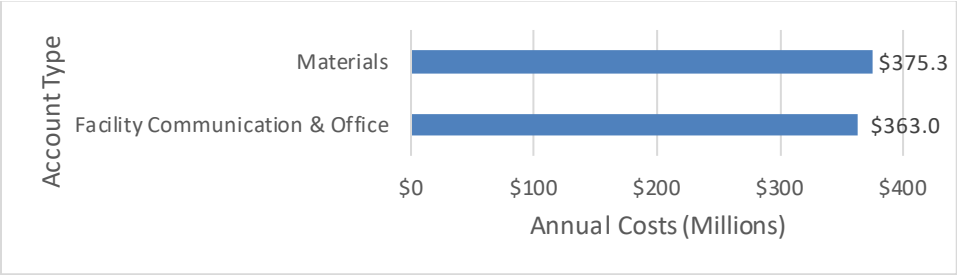

Figure 5-117. Capital Distribution of Capital Costs, Fiscal Year 2021 (Millions)

Costs in the Capital Subfamily are exclusively coded to the internal order for capital transactions, Capital (IO_4200), as shown in Table 5-195.

Table 5-195. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Capital Subfamily - FM_701

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Capital	IO_4200	$738.3	ST_FTTX, ST_UUX, ST_NO_STX	100%

Cost Allocation Approach

Almost all the directly assigned costs in the Capital Subfamily are related to the next generation high speed rail equipment acquisition and are directly assigned to the Acela, under No Statistic (Direct Charges) (ST_NO_STX), which accounts for 18.7 percent of subfamily expenditures. The remaining equipment acquisition costs, not related to the high-speed trainsets, are allocated to the services that utilized that equipment based on the Average Locos and Cars Used per Day (ST_UUX). The land and air rights acquisition are allocated to the services that utilize the Hudson Tunnels based on their Frequency of Train Trips (ST_FTTX). The ST_FTTX and ST_UUX statistics account for 49.1 percent and 32.1 percent of subfamily expenditures, respectively, as shown in Table 5-196.

Table 5-196. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Capital Subfamily – FM_701

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Frequency of Train Trips	ST_FTTX	$362.9	49.1%

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Average Locos and Cars Used per Day	ST_UUX	$237.1	32.1%
No Statistic (Direct Charges)	ST_NO_STX	$138.4	18.7%

Capital Subfamily costs are primarily allocated to the NTS service lines, which collectively account for 65.5 percent of subfamily costs, along with the Infrastructure Access – NEC service line. With the high-speed trainsets allocated exclusively to the Acela Express route along with the Hudson Tunnel land and air rights acquisition, the largest individual service line is the NTS – NEC, accounting for 40.0 percent of Capital costs. The second largest is the Infrastructure Access – NEC service line at 34.5 percent. The remaining NTS service lines, NTS – Long Distance and NTS – State Supported represent the remaining Capital Subfamily costs at 17.6 and 7.8 percent respectively.

Table 5-197. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Capital - FM_701

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-NEC	$296.0	40.0%
Infrastructure Access	$255.1	35.5%
NTS-LD	$129.6	17.6%
NTS-SS	$57.7	7.8%

5.7 Police, Environmental and Safety Family

The Police, Environmental and Safety Family protects Amtrak's physical network and passengers through traditional policing at and around stations or other Amtrak facilities, conducting broader strategic safety coordination other Federal agencies, ensuring Amtrak's environmental health & compliance, and promoting the safety and security of Amtrak's employees.

Costs in the family have been stable for the five-year period from Fiscal Year 2017 to 2021. A majority of costs in the Police, Environmental & Safety Family are operating costs, which ranged from $89.2 to $95.8 million of over the five-year analysis window, as shown in Figure 5-118. Capital costs represented a smaller share of total Police, Environmental & Safety Family costs, with costs of $19.9 million in 2017

and 2021, but a peak of $22.9 million in 2018.

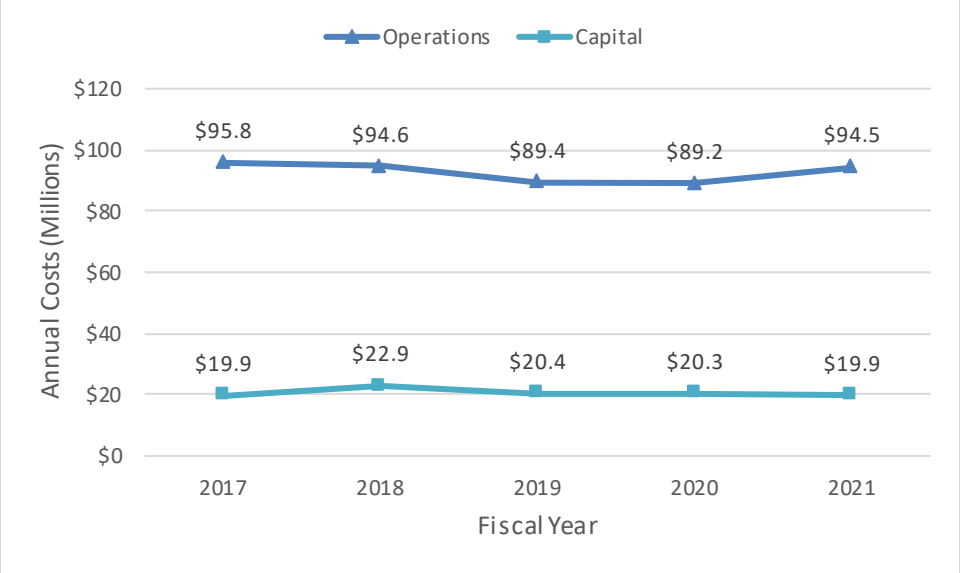

Figure 5-118. Police, Environmental & Safety Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Figure 5-119 shows operating costs for Fiscal Year 2021 by individual subfamily. The Police Subfamily comprises the greatest share of family operating costs at $78.5 million, accounting for 83.1 percent of the family total. Emergency Management and Corporate Security (9.8 percent) and Environmental & Safety (7.1 percent) comprise a smaller share of total family operating costs.

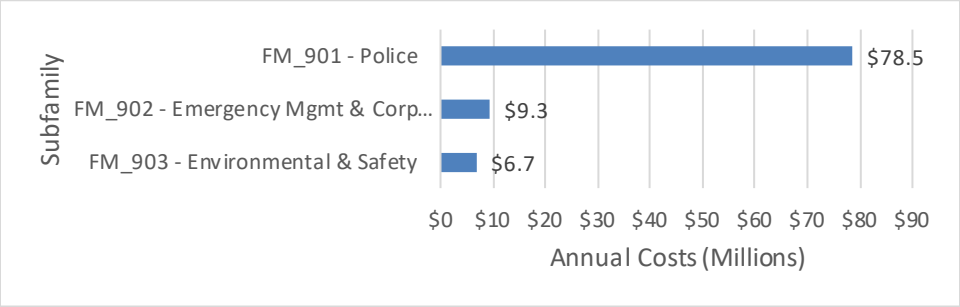

Figure 5-119. Subfamily Distribution of Police, Environmental & Safety Operating Costs, Fiscal Year 2021 (Millions)

Figure 5-120 shows capital costs for Fiscal Year 2021 by individual subfamily. The Environmental & Safety Subfamily comprises the greatest share of Family capital costs at $15.4 million, 77.3 percent of the family total. Emergency Management and Corporate Security (11.6 percent) and Police (11.1 percent) comprise a smaller share of total family capital costs.

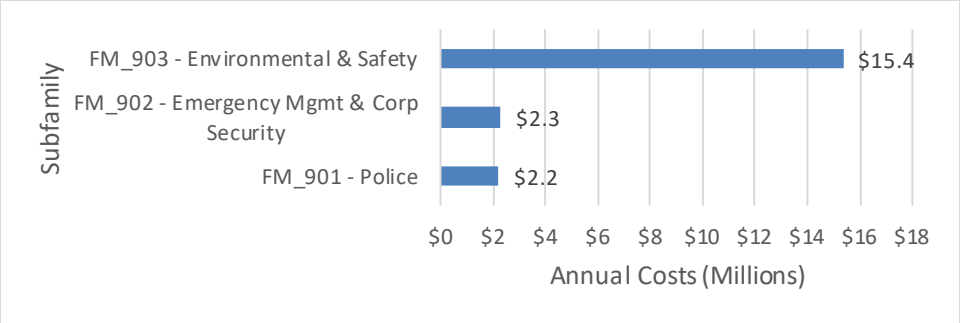

Figure 5-120. Subfamily Distribution of Police, Environmental & Safety Capital Costs, Fiscal Year 2021 (Millions)

The subsections below describe each Police, Environmental & Safety subfamily in detail, including the activities performed, a breakdown of the composition of their costs, the approach to cost allocation, and a summary of allocation data.

5.7.1 Police Subfamily

Family: Police, Environmental and Safety – FM_POLICE_SAFETY
Subfamily: Police – FM_901

Scope

The Police Subfamily performs traditional patrolling duties in support of Amtrak trains, facilities, stations, and right-of-way. The Police Subfamily consists of two subcategories: Regional/Local and National. The Regional/Local Subcategory provides front-line policing duties while the National Subcategory coordinates and supports the operations across the Amtrak network.

Total costs for the Police Subfamily in Fiscal Year 2021 were $80.7 million, accounting for approximately 1.3 percent of Amtrak's total costs. The subfamily consists of 19 cost centers across the National and Regional/Local subcategories. Table 5-198 is an overview of Fiscal Year 2021 cost allocation for the Police Subfamily.

Table 5-198. Subfamily Overview for Police Subfamily - FM_901

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$80.7
Subcategories Used	National 901_1, Regional/Local 901_2
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial,

Summary Item	Value or Measure
	Infrastructure Access, Other
Number of Cost Centers	19

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $80.7 million, an increase of 8.6 percent from 2020 and an increase of 40.1 percent from 2017. Police costs are largely operating costs ($78.5 million operating, $2.2 million capital in Fiscal Year 2021). Police operating costs were relatively stable from 2017 to 2019, but saw large annual increases from 2019 to 2021, with a 19.7 percent increase in Fiscal Year 2020, followed by a 11.5 percent increase in Fiscal Year 2021. The increase in costs reflect a shift in three cost centers from the Emergency Management and Corporate Security (FM_902) to this Police subfamily over the analysis period; Special Operations Unit (CC_3033), Police Non-Spine Canine Unit (CC_3034), and Canine Unit (CC_3038).

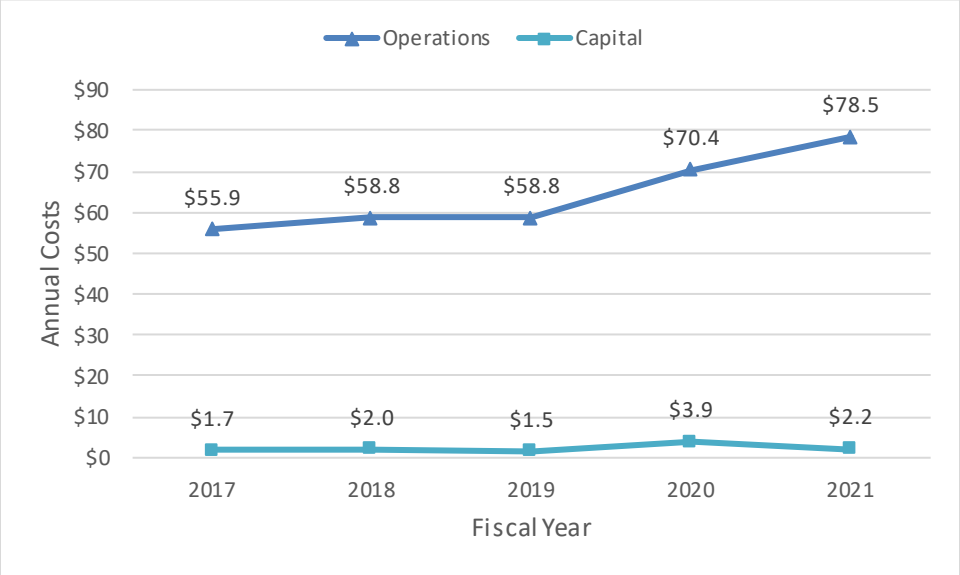

Figure 5-121. Police Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at operating costs by account type, labor related costs are the largest share of subfamily operating costs, with Wages & Overtime and Employee Benefit Expenses comprising 52.9 percent and 29.6 percent, respectively (Figure 5-122). Facility Communication & Office, Salaries, and Other Expenses round out the top five account categories, which collectively account for 98.5 percent of the subfamily total operating costs.

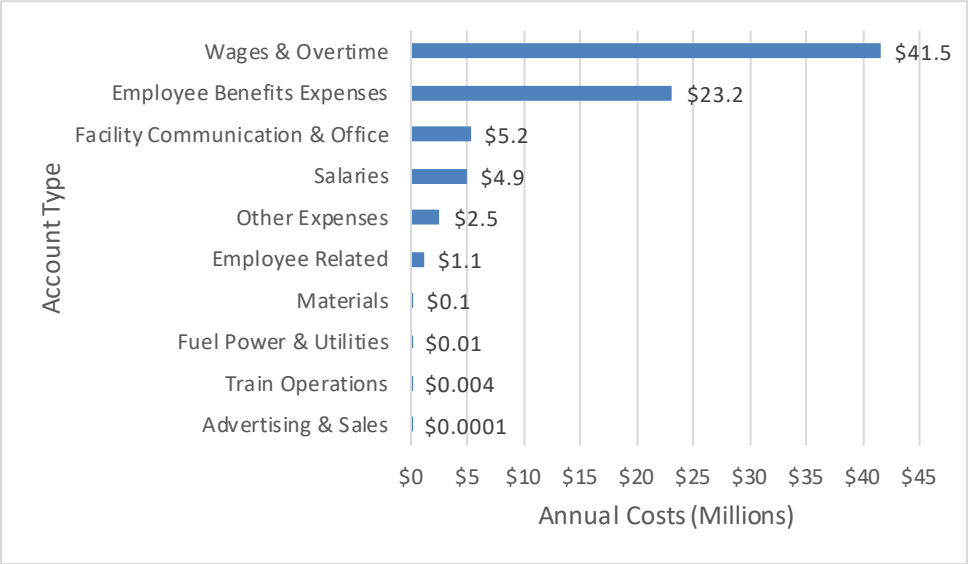

Figure 5-122. Police Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Figure 5-123 shows subfamily capital costs by account type, with Other Expenses accounting for 86.4 percent of subfamily capital costs. Wages & Overtime, Facility Communication & Office, and Salaries make up 6 percent, 4 percent, and 4 percent, respectively.

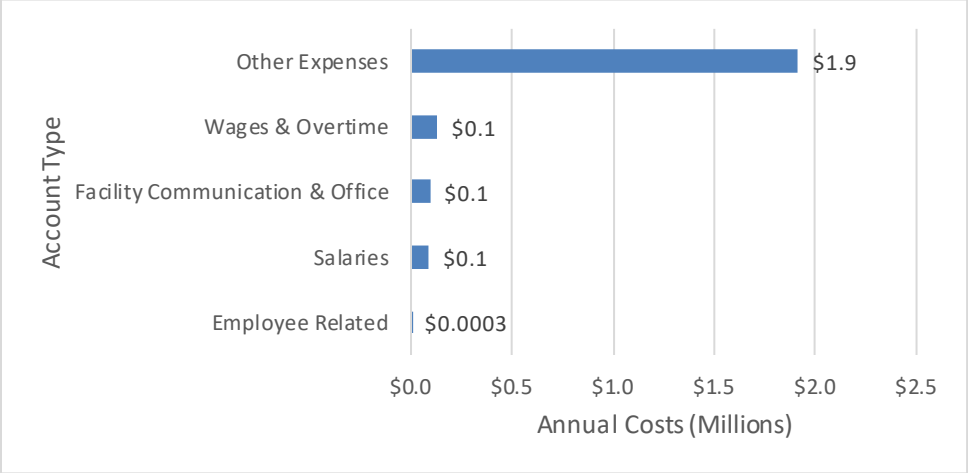

Figure 5-123. Police Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest internal order in the Police Subfamily is Police, Security, and Environment (IO_1124), comprising a majority of subfamily costs at 68.4 percent. This internal is used to capture "all payroll and other costs involved in the administration of operations and providing services that support police security and environmental safety." Next largest is the No Function internal order (IO_NO_IO) at 18.7 percent of subfamily costs, used largely for employee benefits transfers between overhead cost centers. See Table 5-199 for the top internal orders that make up the Police costs and the primary statistic used to allocate each.

Table 5-199. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Police Subfamily - FM_901

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
POLICE SECURITY & ENVIRO SAFETY	IO_1124	$55.1	ST_PUTX	68.3%
No Function	IO_NO_IO	$15.1	ST_PUTX	18.7%
GEN SUPT SPECIAL PROJ.	IO_1198	$3.2	ST_CAE_DBX	4.0%
Capital	IO_4200	$2.3	ST_CAE_DBX	2.8%
AUTOMOTIVE VEHICLE EXPENSES	IO_1844	$1.7	ST_PUTX	2.1%

Cost Allocation Approach

Costs in the Police Subfamily are generally not directly assigned to trains, but instead are shared costs allocated in the first or second round. Directly assigned costs account for only 0.02 percent of the subfamily total. First-round allocated costs make up 72.5 percent of the subfamily total with the remaining 27.4 percent allocated by second-round statistics.

Table 5-200. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Police Subfamily - FM_901

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	0.02%
First Round	72.5%
Second Round	27.4%

Regional/Local Subcategory costs are primarily allocated using Passenger Car Unit Trips (ST_PUTX) with a Station Stat Qualifier and where appropriate an Allocation Ratio to spread costs among station pairs or stations by a fixed ratio based on headcounts or other relevant metric. This statistic comprises 61.2 percent of subfamily expenditures, as shown in Table 5-201. For example, if a Police cost center has police assigned to several stations, the allocation ratio would reflect the proportion of police for each specific station. The key driver of Police costs are passenger levels in and around stations, but as passenger related statistics are not available for all service lines (primarily in this case commuter railroad passengers) they cannot be used in the allocation. For that reason, where possible, Passenger Car Unit Trips (ST_PUTX) is used to allocate expenses around stations. The Police Subfamily uses a Station Pair Stat Qualifier to allocate costs to the specific geographic area supported and patrolled by each

Regional/Local Cost Center.

Costs in the National subcategory are broader in scope, incorporating the national policing strategy and coordination with other Federal agencies. These costs are more separated from the "on the ground" policing found in the Regional/Local subcategory and are appropriately allocated by the second-round statistic, Customer Allocated Costs (ST_CAE_DBX). Customer Allocated Costs captures the sum of direct and first-round allocated costs for each train, and then allocated shared costs based on that total. This distributes second-round costs in proportion to each train's utilization of resources as captured by direct and first-round allocations.

In Fiscal Year 2021, Amtrak created a new statistic Police Direct Cost (ST_PDC_DBX) that will be used for second-round police costs moving forward. This statistic is calculated similarly to Mechanical Direct Costs (ST_MDC_DBX), Maintenance of Way Direct Costs (ST_MWDC_DBX), and Ops Trans Direct Cost (ST_TDC_DBX) and will be used in a manner similar to those three families.

Table 5-201. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Police Subfamily - FM_901

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Passenger Car Unit Trips	ST_PUTX	$49.4	61.2%
Customer Allocated Costs	ST_CAE_DBX	$16.2	20.1%
Frequency of Train Trips	ST_FTTX	$4.5	5.6%
Maintenance of Way Direct Costs	ST_MWDC_DBX	$2.7	3.3%
Straight-Line Allocation (1)	ST_NONX	$2.3	2.8%
Mechanical Direct Costs	ST_MDC_DBX	$2.3	2.8%

Service Line Allocation Results

When viewed collectively, the three NTS service lines represent the largest share of Police costs at 48.5 percent, however that is composed of three separate service lines from 12 to 19 percent. When disaggregated, the largest single portion of Police Subfamily costs are allocated to Infrastructure Access service line at 48.4 percent. Additional detail on subfamily expenditures by service line can be seen in

Table 5-202.

Table 5-202. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Police - FM_901

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
Infrastructure Access	$39.0	48.4%
NTS-NEC	$15.0	18.5%
NTS-SS	$14.0	17.4%
NTS-LD	$10.2	12.6%
All Other Service Lines	$1.4	1.7%
Commercial	$1.1	1.4%

5.7.2 Emergency Management & Corporate Security Subfamily

Family: Police, Environmental and Safety – FM_POLICE_SAFETY
Subfamily: Emergency Management & Corporate Security – FM_902

Scope

The Emergency Management & Corporate Security Subfamily works together with the Police Subfamily to provide traditional patrolling, intelligence, and counterterrorism efforts in support of Amtrak trains, facilities, and right-of-way. Additionally, the Emergency Management & Corporate Security Subfamily manages all capital and grant projects related to security operations such as the installation of new security cameras on tunnels, bridges, and other right-of-way as well as all projects funded by the U.S. Department of Homeland Security.

Total costs for the Emergency Management & Corporate Security Subfamily in Fiscal Year 2021 were $11.6 million, accounting for approximately 0.2 percent of Amtrak's total costs. The subfamily consists of nine cost centers across a single Emergency Management & Corporate Security subcategory. Table 5-203 is an overview of Fiscal Year 2021 for the Emergency Management & Corporate Security Subfamily.

Table 5-203. Subfamily Overview for Emergency Management & Corporate Security Subfamily - FM_902

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$11.6
Subcategories Used	Emergency Management and

Summary Item	Value or Measure
	Corporate Security 902_0
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	9

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $11.6 million, a decrease of 23.9 percent from Fiscal Year 2020 and a decrease of 62.8 percent from Fiscal Year 2017. Emergency Management & Corporate Security costs are majority operating costs with $9.3 million in operating costs and $2.3 million in capital costs in Fiscal Year 2021. Emergency Management & Corporate Security operating costs saw a major drop from 2017 to 2020, from $30.7 million to $10.0 million, a decrease of 67.3 percent, but saw a relatively modest decrease to $9.3 million in 2021. The decrease in costs in explained by fewer cost centers in the subfamily, decreasing from 15 in Fiscal Year 2018 to 9 in Fiscal Year 2021. Over that period, three cost centers were eliminated while three shifted from the Emergency Management & Corporate Security Subfamily to the Police subfamily (FM_901), representing much of the increase in that subfamily's costs over the same period. Capital costs varied from year to year, ranging from $0.4 million in Fiscal Year 2017 to $6.0 million in 2018, as shown in Figure 5-124.

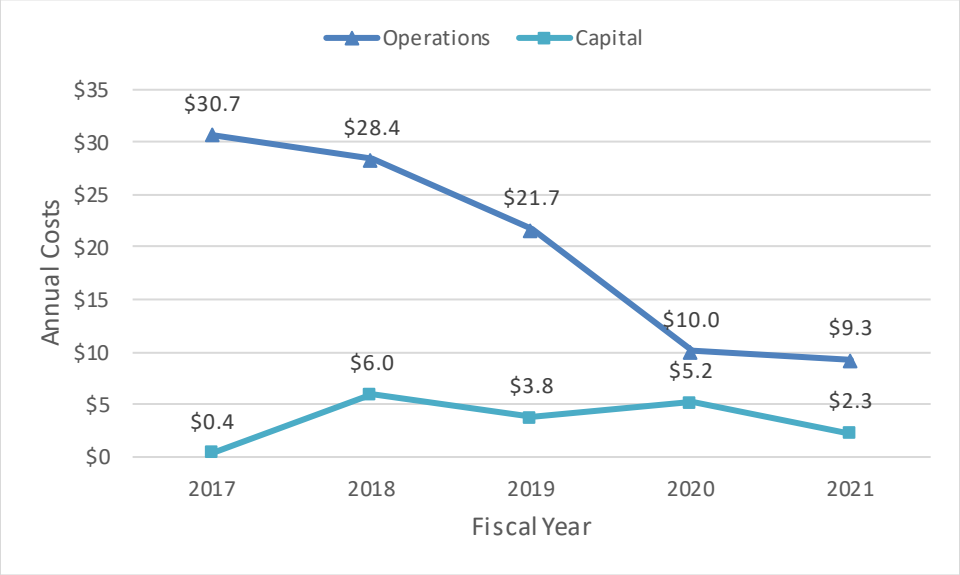

Figure 5-124. Emergency Management & Corporate Security Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Considering operating costs by account type, Other Expenses are the largest share of subfamily operating costs at 38.7 percent (Figure 5-125). Labor related costs including Salaries, Employee Benefits Expenses, and Wages & Overtime comprise the next three largest account categories at 28.0, 15.1 and

9.7 percent respectively. Facility Communication are 5.3 percent of the subfamily operating costs, with the remaining five account categories containing a total three percent of subfamily operating costs.

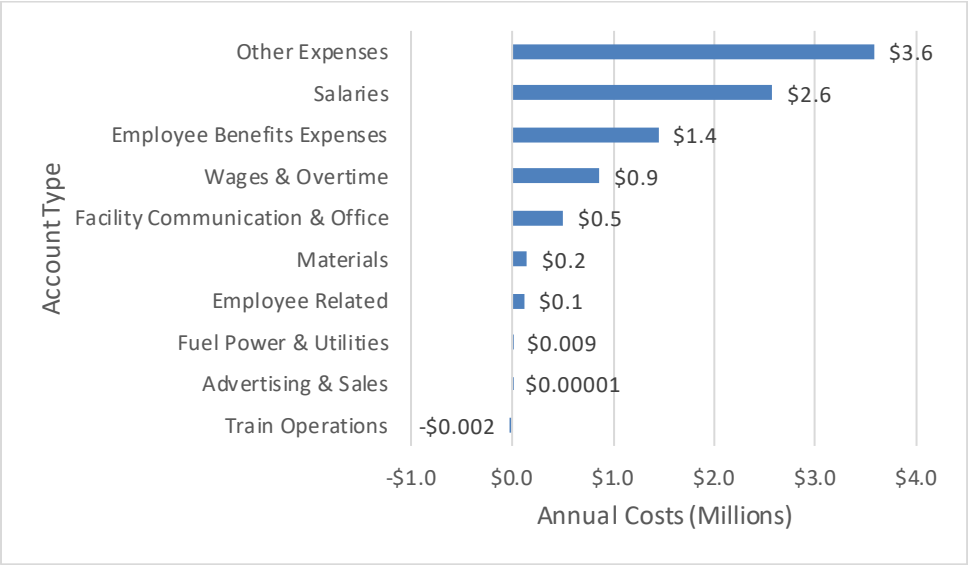

Figure 5-125. Emergency Management & Corporate Security Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Figure 5-126 shows subfamily capital costs by account type, with Other Expenses (47.8 percent) and Facility Communication & Office (43.5 percent) comprising most costs. The remaining capital costs are Salaries (8.7 percent), Employee Related (1.3 percent) and Materials (less than 1 percent).

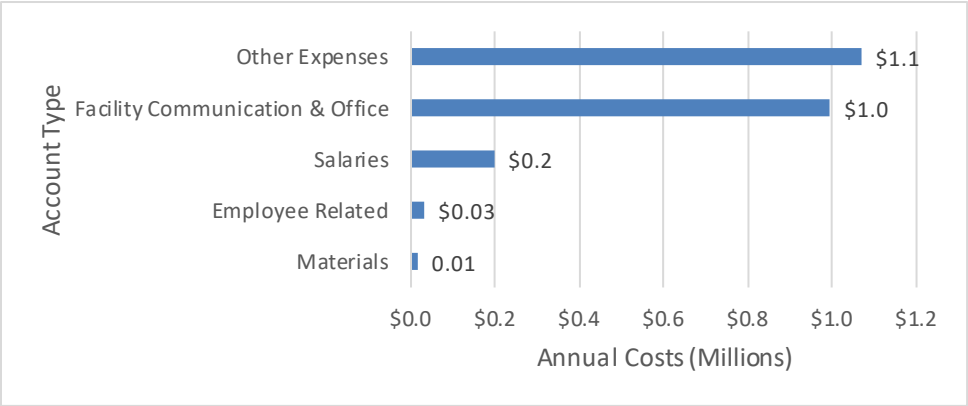

Figure 5-126. Emergency Management & Corporate Security Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The subfamily largely distributes costs across five internal orders with the largest internal order being Corporate Administration (IO_1001) at 29.8 percent of subfamily costs. This internal order records all payroll and other costs involved senior executive administration activities. The next largest is the Capital (IO_4200) internal order at 21.9 percent of subfamily costs, which includes capital project related costs. Third is Corporate Service Centers (IO_1121) at 18.2 percent of costs, which includes payroll and other

costs involved in the administration of operations and providing services that support other specific areas of Amtrak. Next is Police Security & Environmental Safety (IO_1124) at 17.9 percent of costs, which includes payroll and other costs involved in the administration of operations and providing services that support police security and environmental safety. Rounding out the top five is Safety Operations (IO_1675) at 7.7 percent of costs, which includes direct and indirect expenses associated with providing safety to Amtrak's operations. See Table 5-204 for the top internal orders comprising the Emergency Management and Corporate Security costs and the primary statistics used to allocate each.

Table 5-204. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Emergency Management & Corporate Security Subfamily - FM_902

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
CORPORATE ADMINISTRATION	IO_1001	$3.5	ST_CAE_DBX	29.8%
Capital	IO_4200	$2.5	ST_PUTX, ST_MWDC_DBX	21.9%
CORPORATE SERVICE CENTERS	IO_1121	$2.1	ST_TAC_DBX	18.2%
POLICE SECURITY & ENVIRO SAFETY	IO_1124	$2.1	ST_CAE_DBX	17.9%
SAFETY OPERATIONS	IO_1675	$0.9	ST_CAE_DBX	7.7%

Cost Allocation Approach

Operating cost allocations for the Emergency Management & Corporate Security Subfamily are allocated almost exclusively in the second round, distributing the costs nationally to all customers including Amtrak trains and other businesses and customers, accounting for 99.1 percent of subfamily operating costs. Directly assigned costs account for only 0.2 percent of the subfamily total and first-round allocations account for only 0.7 percent.

Table 5-205. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Emergency Management & Corporate Security Subfamily - FM_902

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	0.2%
First Round	0.7%
Second Round	99.1%

The primary allocation statistics in the subfamily are statistics Customer Allocated Costs (ST_CAE_DBX) and Total Activity Cost (ST_TAC_DBX), capturing 60.5 percent and 22.1 percent of total costs respectively. Both are second-round statistics that allocate costs based on the sum of all prior direct and allocated costs. However, Total Activity Cost (ST_TAC_DBX) is used for the final round of allocation and includes prior all prior allocations in its calculation, including allocations by Customer Allocated Costs (ST_CAE_DBX). Where information allows costs to be allocated using first-round statistics such as Passenger Car Unit Trips (ST_PUTX) or Frequency of Train Trips (ST_FTTX) to be allocated, these are selected, most often with capital project expenses.

Table 5-206. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Emergency Management & Corporate Security Subfamily - FM_902

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Customer Allocated Costs	ST_CAE_DBX	$7.0	60.5%
Total Allocated Costs	ST_TAC_DBX	$2.6	22.1%
Passenger Car Unit Trips	ST_PUTX	$0.8	6.7%
Maintenance of Way Direct Costs	ST_MWDC_DBX	$0.6	5.5%
Frequency of Train Trips	ST_FTTX	$0.3	2.7%

Service Line Allocation Results

As a group, the three NTS service lines represent a majority of Emergency Management & Corporate Security costs at 64.5 percent. However, when disaggregated, Infrastructure Access service is allocated more subfamily costs than the NTS-State Supported Service line at 23.2 percent. Reimbursable account for 9.4 percent of allocations. Additional detail on subfamily expenditures by service line can be seen in Table 5-207.

Table 5-207. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Emergency Management & Corporate Security - FM_902

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$2.7	23.4%
Infrastructure Access	$2.7	23.2%
NTS-NEC	$2.5	21.4%
NTS-SS	$2.3	19.7%
Reimbursable	$1.1	9.4%
Commuter Operations	$0.3	2.5%
All Other Service Lines	$0.1	0.5%

5.7.3 Environmental & Safety Subfamily

Family: Police, Environmental and Safety – FM_POLICE_SAFETY
Subfamily: Environmental & Safety – FM_903

Scope

The Environmental & Safety Subfamily performs activities to ensure and oversee environmental, health, and safety issues of Amtrak and its employees. These activities include reporting and safety compliance requirements by State and Federal agencies as well as compliance with environmental regulations. The Environmental & Safety Subfamily consists of 10 cost centers in three subcategories.

Total costs for the Environmental and Safety Subfamily in Fiscal Year 2021 were $22.1 million, accounting for approximately 0.4 percent of Amtrak's total costs. The subfamily consists of 10 cost centers. Table 5-208 is an overview of Fiscal Year 2021 for the Environmental and Safety Subfamily.

Table 5-208. Subfamily Overview for Environmental & Safety Subfamily - FM_903

Summary Item	Value or Measure
Fiscal Year 2021 Expenditures (Millions)	$22.1
Subcategories Used	General 903_0, Environmental 903_1, Safety 903_2
Service Lines to Which Costs Are Allocated	NTS-NEC, NTS-SS, NTS-LD, Commuter Operations, Reimbursable, Commercial, Infrastructure Access, Other
Number of Cost Centers	10

Composition of Subfamily Costs

Subfamily costs for Fiscal Year 2021 were $22.1 million, an increase of 10.4 percent from 2020, but within the range of $20.0 million to $27.0 million from 2017 to 2020. Capital costs comprise the majority of Environmental and Safety Subfamily costs ($6.7 million operating, $15.4 million capital in Fiscal Year 2021). Total subfamily operating costs in 2021 are down 26.8 percent from their height in 2017 but have not shown consistent increases or decreases from year to year. Capital costs have increased by 36.5 percent from 2020 to 2021, but the overall change from 2017 to 2021 was a decrease of 13.7 percent.

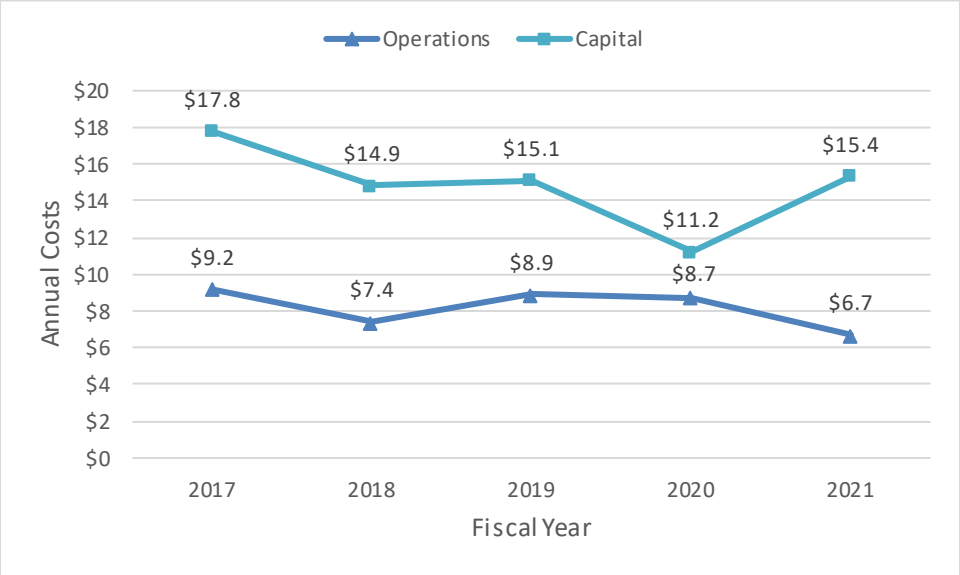

Figure 5-127. Environmental & Safety Operating and Capital Costs, Fiscal Years 2017-2021 (Millions)

Looking at operating costs by account type, as shown in Figure 5-128, Salaries are the largest category at 43.3 percent of total Environmental and Safety Subfamily operating costs. Other Expenses are the next largest category, at 36.6 percent of subfamily operating costs, followed by Employee Benefits Expenses at 16.9 percent. The remaining 3.1 percent of subfamily operating costs are Employee Related, Facility Communication & Office, Wages & Overtime, Materials, Fuel Power & Utilities, and Advertising & Sales.

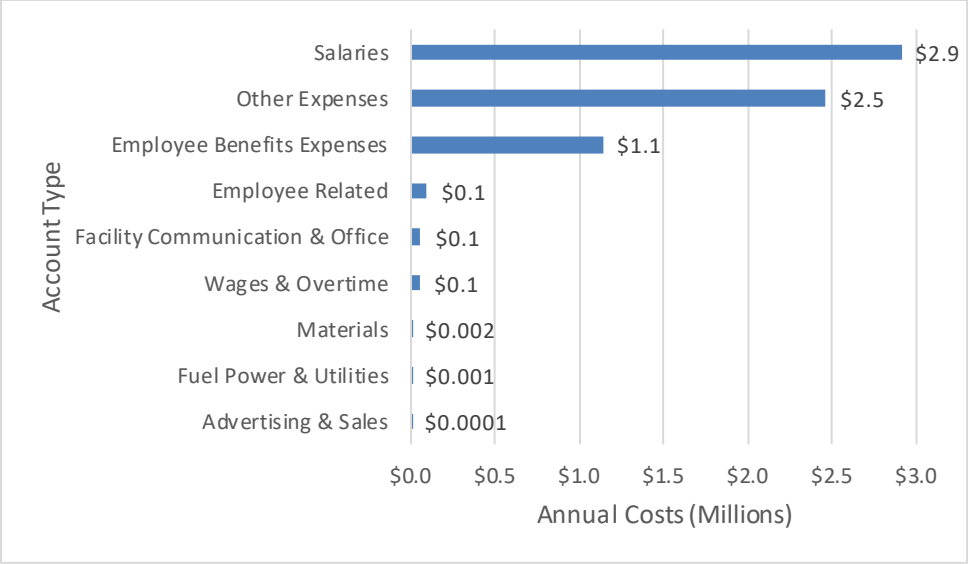

Figure 5-128. Environmental & Safety Distribution of Operating Costs, Fiscal Year 2021 (Millions)

Figure 5-129 shows subfamily capital costs by account type, with Other Expenses comprising 96.8 percent of subfamily capital costs. The remaining 3 percent of subfamily capital costs are in Salaries, Materials, Facility Communications & Office, Employee Related, and Wages & Overtime.

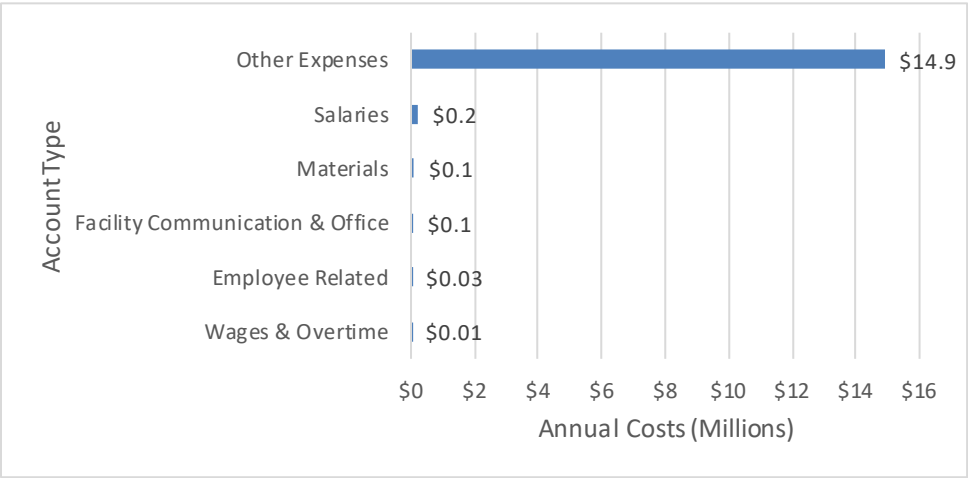

Figure 5-129. Environmental & Safety Distribution of Capital Costs, Fiscal Year 2021 (Millions)

The largest internal order in the Environmental & Safety Subfamily is the Capital (IO_4200), comprising 74.8 percent of subfamily costs. This internal order records all capital project costs. Corporate Administration (IO_1001), is the next largest at 13.4% and captures payroll and other costs involved in General and Administrative (G&A) work at the corporate level. See Table 5-209 for the top internal orders that make up the Environmental & Safety costs and the primary statistics used to allocate each.

Table 5-209. Top Internal Orders Ranked by Allocations (Fiscal Year 2021) for Environmental & Safety Subfamily - FM_903

Internal Order	Code Number	Expenditures (Millions)	Dominant Statistics	Percent of Subfamily Expenditures
Capital	IO_4200	$16.5	ST_DPUFX, ST_PUTX, ST_MDC_DBX	74.8%
CORPORATE ADMINISTRATION	IO_1001	$3.0	ST_CAE_DBX	13.4%
SAFETY OPERATIONS	IO_1675	$1.2	ST_CAE_DBX	5.3%
GEN SUPT SPECIAL PROJ.	IO_1198	$0.7	ST_CAE_DBX	3.0%

Cost Allocation Approach

A large majority of Environmental & Safety subfamily operating costs, 79.4 percent, are allocated by second-round statistics, with directly assigned and first-round allocations roughly splitting the remaining 20 percent. Table 5-210 details the specific share of operating costs by allocation round.

Table 5-210. Distribution of Operating Costs by Allocation Round (Fiscal Year 2021) for Environmental & Safety Subfamily - FM_903

Allocation Round	Percent of Costs Allocated in Allocation Round
Direct Assignment	11.1%
First Round	9.5%
Second Round	79.4%

When looking at both operating and capital costs, there is not a single dominant statistic used within the subfamily. Three of the primary allocation statistics are Diesel Power Allocation Factor (ST_DPUFX), Mechanical Direct Costs (ST_MDC_DBX), and Passenger Car Unit Trips (ST_PUTX) and comprise a total 51.7 percent of expenditures (22.1 percent, 15.1 percent, and 14.5 percent respectively). Within the Environmental & Safety Subfamily, these statistics are generally used to allocate capital expenses.

A large portion of operating cost allocations for the Environmental & Safety subfamily use Customer Allocated Cost (CAE), a second-round statistic that allocates based on the sum of all direct and prior allocated costs. Customer Allocated Costs (ST_CAE_DBX) are used to allocate 20.7 percent of subfamily costs, as shown in Table 5-211. Mechanical Direct Cost (ST_MDC_DBX) is also used for environmental and safety expenses at mechanical facilities.

Table 5-211. Top Statistics Used for Subfamily Cost Attribution (Fiscal Year 2021) for Environmental & Safety

Subfamily - FM_903

Statistic	Code	Expenditures (Millions)	Percent of Subfamily Expenditures
Diesel Power Allocation Factor	ST_DPUFX	$4.9	22.1%
Customer Allocated Costs	ST_CAE_DBX	$4.6	20.7%
Mechanical Direct Costs	ST_MDC_DBX	$3.3	15.1%
Passenger Car Unit Trips	ST_PUTX	$3.2	14.5%
Maintenance of Way Direct Costs	ST_MWDC_DBX	$1.4	6.4%
Straight-Line Allocation (1)	ST_NONX	$1.3	6.0%
Engineer Labor Hours	ST_ELHX	$1.2	5.4%
No Statistic (Direct Charges)	ST_NO_STX	$1.0	4.3%
Total Allocated Costs	ST_TAC_DBX	$0.6	2.6%

Service Line Allocation Results

Collectively, the three NTS service lines represent a majority of Environmental & Safety Subfamily costs at 73.2 percent. Infrastructure Access accounts for most of the remaining costs allocated at 20.6 percent of total subfamily expenditures. Additional detail on subfamily expenditures by service line can be seen in Table 5-212.

Table 5-212. Subfamily Expenditures by Service Line (Fiscal Year 2021, Millions) for Environmental & Safety - FM_903

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-LD	$7.3	33.2%

Service Line	Expenditures (Millions)	Percent of Subfamily Expenditures
NTS-SS	$5.0	22.8%
Infrastructure Access	$4.5	20.6%
NTS-NEC	$3.8	17.2%
Commercial	$1.0	4.4%
Reimbursable	$0.2	1.1%
All Other Service Lines	$0.2	0.7%

6. APT's Long Term Outlook

Deployed in 2009, APT is in its second decade as Amtrak's fully allocated cost system for required reporting. Amtrak has planned improvements to the current system, but a full replacement is not yet contemplated. The following improvements are planned or in development and are related to APT as currently deployed.

6.1 Annual APT Report to FRA

Amtrak submits to FRA an annual report on APT and potential changes for the year ahead to support FRA's oversight of Amtrak's financial systems. The report notes APT's current input systems, the name, purpose, and users of key APT reports, as well as recent changes and planned improvements. The Fiscal Year 2021 report described the process for APT's periodic rule review and maintenance as discussed in Section XX above as well as a roadmap of potential changes that Amtrak would investigate for Fiscal Year 2022.

The most recent APT Annual Report from November 2021 contained a roadmap of potential APT changes to be investigated that fiscal year. These changes included:

- Continued refinement of WBS allocation rules. Reviewing additional cost center allocation rules for their potential inclusion in the WBS rules table could reduce the total rule count.
- Review statistical data for enhanced allocations, starting with police expenses and fuel gallons.
- Improved data feed for some statistics, potentially automating existing manual processes.
- Investigate other system processes to reduce the run time of the allocation engine.
- Improves validation rules to eliminate miscoding.

It is expected that Amtrak will submit an updated report on APT at the conclusion of each fiscal year.

6.2 Long Term Replacement

At this time, Amtrak does not have a planned end of life date for APT. However, Amtrak has investigated other systems that might integrate better with SAP to help reduce maintenance of APT and improve allocation results. Any replacement of the APT allocation engine would require development to simplify the allocation process. Amtrak intends to utilize APT for the foreseeable future.

6.3 Business Segment Reporting

Amtrak is developing a new reporting framework for the Amtrak business that will eventually be incorporated into APT. The new business reporting will present Amtrak costs and revenues in two new

segment or business views. The first is the "Train Operating Business" (TO), capturing costs and revenues associated with operating the current network and services. Second is the "Development and Capital Investment Business" (D&CI), tracking costs of major capital improvements and expansion activities. Amtrak's intent is to better segment transactions that primarily serve one business or the other, allowing it to improve cost tracking of the operating business while ensuring adequate investment in capital and development activities.

The initial business reporting will be separate from, and will not impact, the current APT allocations. However, upon full development, a second allocation engine procedure will allocate costs to the two business segments. Eventually, the process will be incorporated into APT's own allocations but there is not yet a date for full implementation.

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