



Massachusetts Bay Transportation Authority

Final Workforce Assessment Results

MBTA Board of Directors

July 25, 2024

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Agenda

Background and context of workforce assessment

Results of workforce assessment

Items to keep in mind

Next steps

Context: Workforce assessment required by FTA in 2022



FTA Finding

MBTA's **staffing levels are not commensurate** with the demand for human resources required to carry out current rail transit operations and maintenance in addition to executing capital program activities.



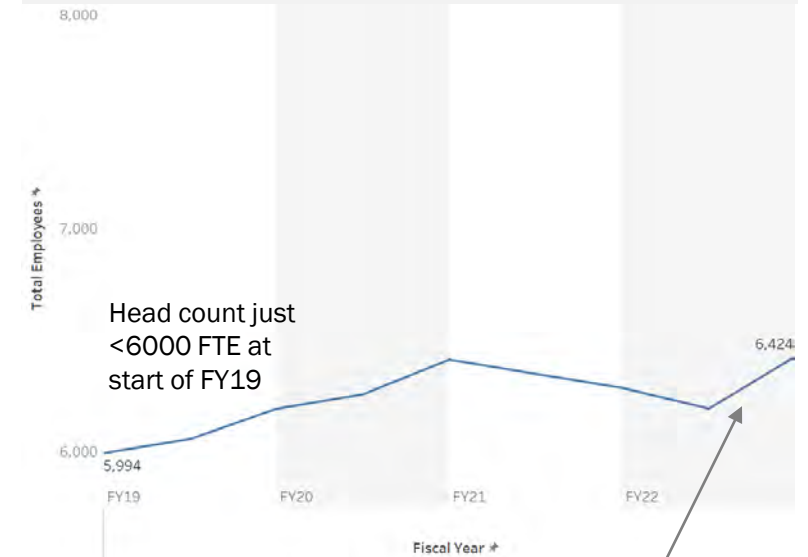
FTA Directive

MBTA must conduct and submit to FTA a workforce assessment and associated workforce planning to include:

1. Required activities that must be performed for rail transit operations, maintenance, and capital projects delivery
2. Required resources to perform mission-critical activities
3. Current staffing capabilities for mission-critical activities
4. Safety risk(s) associated with current staffing shortages and how they are or will be mitigated

From 2022 FTA SMI Final Report

MBTA headcount: FY19 - FY22



FTA SMI audit conducted April 14 to June 30, 2022

Healey Administration Hiring Update

As of: 6/30/2024

2,871 Total Hires | 798 Separations

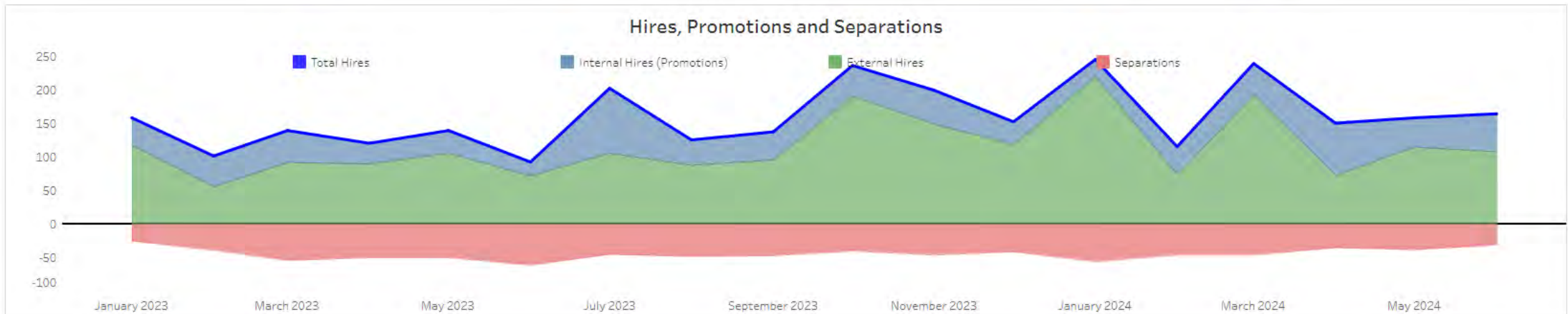
Headcount + 1,268 (Achieved Gov's goal of hiring 1,000 people)

Hiring Activity	External Hires	Internal Hires (*Promotions)	Total
Capital	108	84	192
Operations	446	518	964
Programmed Hiring	1,159	57	1,216
Support	353	146	499
Grand Total	2,066	805	2,871

Separations	Retirement	Voluntary	Involuntary	Total
Capital	16	41	7	64
Operations	90	56	32	178
Programmed Hiring	100	182	160	442
Support	22	78	14	114
Grand Total	228	357	213	798

2,871 Total Hires: 2,066 external hires | 805 internal hires (promotions)

798 Separations: 228 Retirements | 357 Voluntary | 213 Involuntary



* Promotions include selection process internal hires only



Fiscal Year 2024 Hiring Update

As of: 6/30/2024

2,122 Total Hires | 519 Separations

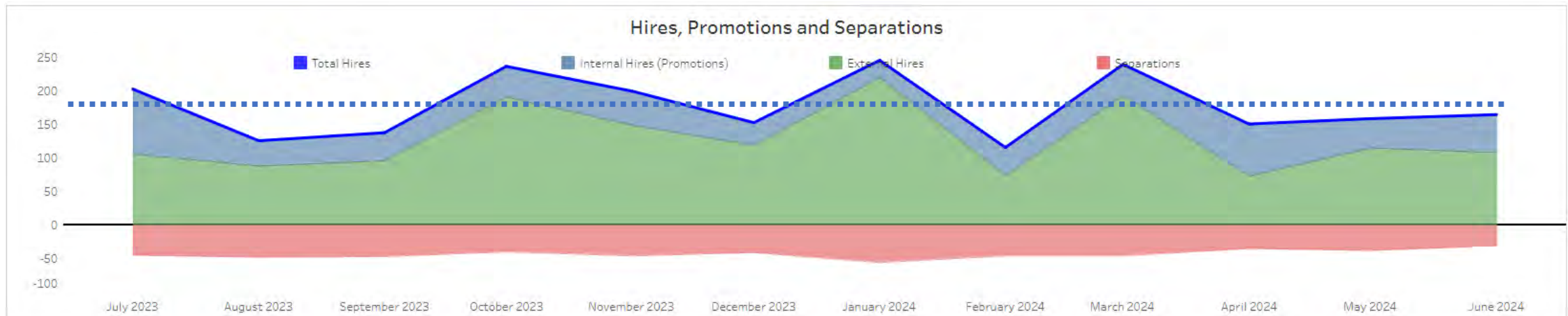
Headcount + 1,013

Hiring Activity	External Hires	Internal Hires (*Promotions)	Total
Capital	67	53	120
Operations	329	383	712
Programmed Hiring	888	48	936
Support	248	106	354
Grand Total	1,532	590	2,122

Separations	Retirement	Voluntary	Involuntary	Total
Capital	7	22	6	35
Operations	64	37	22	123
Programmed Hiring	55	113	116	284
Support	15	53	9	77
Grand Total	141	225	153	519

2,122 Total Hires: 1,532 external hires | 590 internal hires (promotions)

519 Separations: 141 Retirements | 225 Voluntary | 153 Involuntary



Goal: 183

* Promotions include selection process internal hires only



Workforce Assessment approach helps hone hiring efforts

MBTA SMI Response

- Written into Corrective Action Plans (CAPs) for Special Directive (SD) 22-9, responsive to Findings 1 and 2
- Develop a **workforce model** of our organization to perform the workforce assessment to quantify resources needed to complete mission-critical activities
- Using the outputs to develop a **5-year hiring plan**

What it is or includes ...

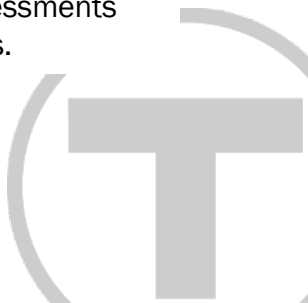
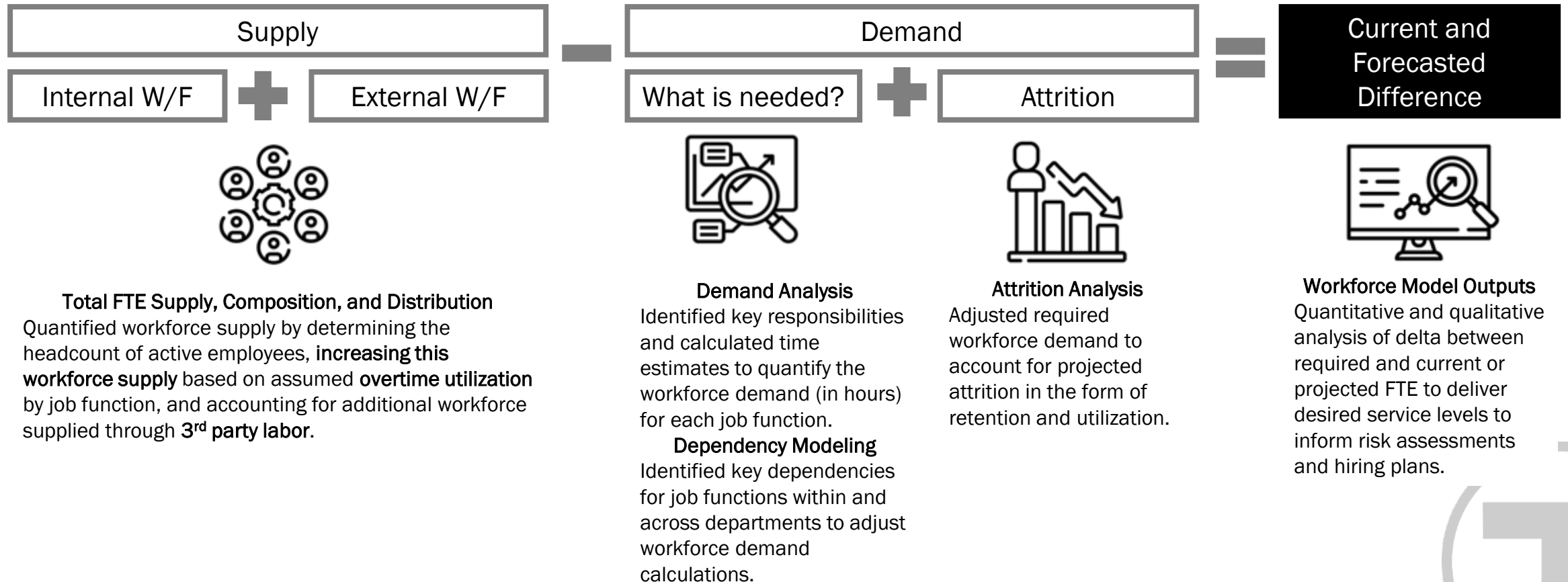
- Staffing within **Rail Transit Operations, Maintenance, Capital, and Safety divisions based on:**
 - Activities performed by MBTA employees to deliver service
 - Backlog of state of good repair work
- Historical “utilization” rates (FMLA, etc.), overtime and fatigue management (hours of service requirements)
- Reflecting reorganizations up to beginning of 2024
- Creating process on maintenance and management of model for Finance and Human Resources

What it is not or excludes...

- Performance assessment or recommendations about efficiencies
- Revision of job scope and responsibilities
- Parts of the org not required by the FTA – for the time being...
 - Operational support roles
 - Other modes (bus, commuter rail, etc)
- FTE data is as of a point in time in May 2024, have to set a line in the sand for data
- Org changes after the beginning of 2024

Workforce model built using significant data to better understand the organizational dynamics and needs

The workforce assessment uses a “bottoms up” or activity-based method to quantify demand, or need, in terms of Full Time Equivalent employees (FTEs) and supply, or workforce (W/F), again also equated to FTEs, across the organization understand any shortfalls based on the differences



Any shortfalls were subject to a Safety Risk Assessment (SRA)

As workforce shortfalls in specific roles were identified, we conducted Safety Risk Management (SRM) Workshops to analyze risks and hazards that a shortfall could introduce and identified mitigation strategies to ensure we are operating safely.



Workforce Model Outputs: All In-Scope Divisions show a delta

Total FTE Supply is determined by totaling Active Headcount and additional “FTE” gained through OT utilization (Active Headcount * OT Utilization) and 3rd party staff augmentation. Total FTE Supply is then compared against FTE Demand to determine the FTE Delta.

Division	Base Active (FTE) as of 5/1/24	Active Equivalent OT use (FTE)	Active 3 rd Party Supply (FTE)*	Total Active Supply (FTE)	Total FTE Demand	FTE Difference between Total Active Supply & Demand
Rail Transit Operations	1,570.0	121.0	76.7	1,767.7	1,880.6	-174.1
Maintenance	1,743.0	301.8	116.1	2,161.0	2,687.4	-633.5
Capital	455.0	17.7	89.8	562.4	651.8	-106.9
Safety	70.0	0.0	33.3	103.3	211.7	-108.5
TOTAL	3,838.0	440.5	315.9	4,594.4	5,431.5	-1,023.0

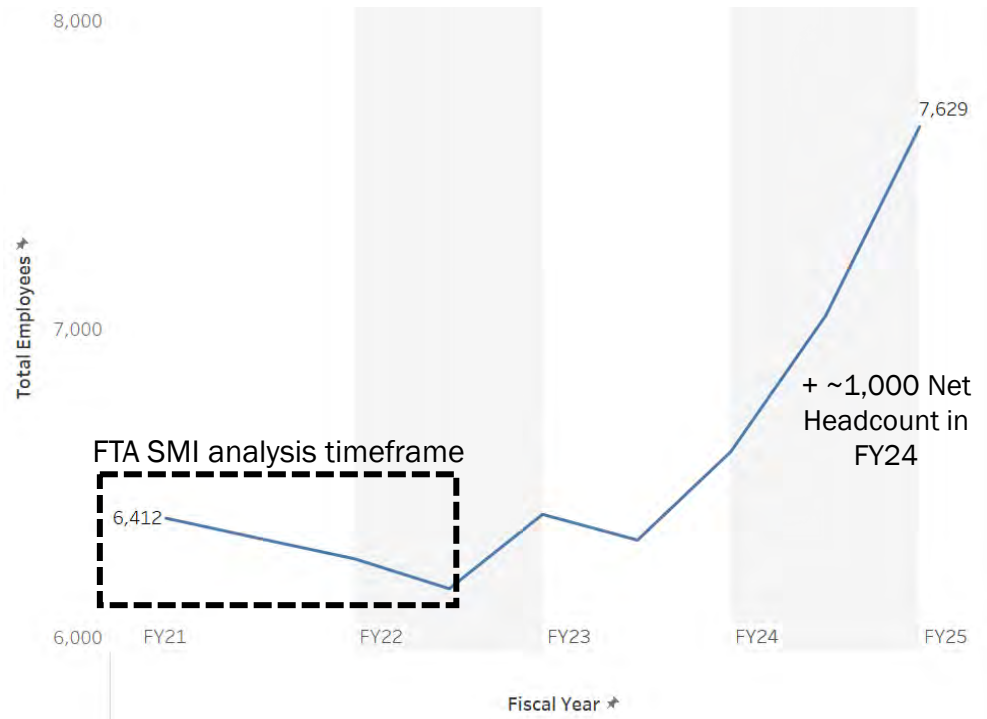
*3rd party labor supply assumptions as of 5/23, figures are subject to change as additional analysis is conducted.

Utilization of overtime and 3rd party staff augmentation helps increase the Active FTE Supply by ~756 FTEs.



MBTA will continue to make significant progress closing the shortfall in the next fiscal year

Based on hiring progress



Recent hiring trends show that MBTA has developed significant capability that will support closing the shortfall

Based on approved budget

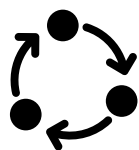
- The FY25 budget largely accounts for the additional employees that have been identified as necessary (~1600 current open positions with additional FY25 roles and current vacancies)
 - Working to determine how the needed positions align with current vacancies of ~1000 positions
- MBTA is developing a five-year hiring plan to fill workforce shortages and priority positions
 - Not all of the WFA shortfall can be closed in one year based on where the positions and hiring interdependencies



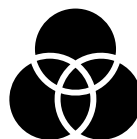
Items to keep in mind



Analysis is a point in time “snap shot” of an org in change



As our operation or service changes, so will the analysis and our needs



First attempt to model a complex system with interdependence



Uses significant data with various limitations



Report and numbers therein only covers part of the authority



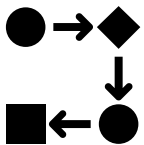
Next steps



Aligned with the FTA's required action under Special Directive 22-9, Finding 2, the direct follow-on work designed to come out of the workforce assessment will be to develop a plan to close the identified shortfalls with a five-year hiring plan



Monitor any safety risk mitigations in place or established as a result of this assessment to ensure they have the expected and intended effect



Iteratively update the model and hiring plans with refreshed datasets and/or as appropriate dictated by the operating environment or managerial decisions of the organization





Questions?

Appendix





Workforce Model Outputs: All In-Scope Divisions shows a shortfall

Total FTE Supply is determined by totaling Active Headcount and additional “FTE” gained through OT utilization (Active Headcount * OT Utilization) and 3rd party staff augmentation. Total FTE Supply is then compared against FTE Demand to determine the FTE Delta.

Division	Based on 5/1 Headcount			Target Service Level						
	FY24 Budget (FTE)	Active (FTE)	OT Utilization (%)	Active OT Supply (FTE)	Active 3 rd Party Supply (FTE)*	Total Active Supply (FTE)	Total FTE Demand	FTE Delta (vs. Active)	FTE Delta (vs. FY24 Budget)	FTE Delta (vs. Total Active Supply)
Rail Transit Operations	1,778.8	1,570.0	8%	121.0	76.7	1,767.7	1,880.6	-334.8	-227.8	-174.1
Maintenance	1,920.0	1,743.0	17%	301.8	116.1	2,161.0	2,687.4	-1,001.4	-814.0	-633.5
Capital	587.0	455.0	4%	17.7	89.8	562.4	651.8	-214.4	-129.2	-106.9
Safety	91.0	70.0	0%	0.0	33.3	103.3	211.7	-141.8	-121.8	-108.5
TOTAL	4,376.8	3,838.0	11%	440.5	315.9	4,594.4	5,431.5	-1,692.4	-1,292.8	-1,023.0

*3rd party labor supply assumptions as of 5/23, figures are subject to change as additional analysis is conducted.

Utilization of overtime and 3rd party staff augmentation helps increase the Active FTE Supply by ~756 FTEs.



Workforce Model Outputs: Rail Transit Operations

Total FTE Supply is determined by totaling Active Headcount and additional “FTE” gained through OT utilization (Active Headcount * OT Utilization) and 3rd party staff augmentation. Total FTE Supply is then compared against FTE Demand to determine the FTE Delta.

Business Unit	Based on 5/1 Headcount			Target Service Level						
	FY24 Budget (FTE)	Active (FTE)	OT Utilization (%)	Active OT Supply (FTE)	Active 3 rd Party Supply (FTE)*	Total Active Supply (FTE)	Total FTE Demand	FTE Delta (vs. Active)	FTE Delta (vs. FY24 Budget)	FTE Delta (vs. Total Active Supply)
OCC	125.0	95.0	3%	3.1	9.8	107.9	133.7	-42.9	-22.2	-30.1
OPSS	78.0	65.0	0%	0.0	30.2	95.2	85.2	-20.9	-11.6	9.3
OPSTR	142.0	106.0	10%	10.2	30.0	146.3	180.4	-74.4	-39.2	-34.1
T_HR	658.0	561.5	10%	58.3	6.2	626.0	604.8	-62.6	-14.9	-26.1
T_LR	775.8	742.5	7%	49.3	0.4	792.2	876.5	-134.0	-139.9	-91.2
TOTAL	1,778.8	1,570.0	8%	121.0	76.7	1,767.7	1,880.6	-334.8	-227.8	-174.1

*3rd party labor supply assumptions as of 5/23, figures are subject to change as additional analysis is conducted.

Utilization of overtime and 3rd party staff augmentation helps increase the Active FTE Supply by ~198 FTEs.



Workforce Model Outputs: Maintenance

Total FTE Supply is determined by totaling Active Headcount and additional “FTE” gained through OT utilization (Active Headcount * OT Utilization) and 3rd party staff augmentation. Total FTE Supply is then compared against FTE Demand to determine the FTE Delta.

Business Unit	Based on 5/1 Headcount			Target Service Level						
	FY24 Budget (FTE)	Active (FTE)	OT Utilization (%)	Active OT Supply (FTE)	Active 3 rd Party Supply (FTE)*	Total Active Supply (FTE)	Total FTE Demand	FTE Delta (vs. Active)	FTE Delta (vs. FY24 Budget)	FTE Delta (vs. Total Active Supply)
MOW	373.0	380.0	14%	54.3	70.2	504.5	495.5	-151.9	-126.5	-38.7
PSM	296.0	249.0	20%	48.9	0.8	298.7	355.2	-116.9	-83.0	-79.0
SCM	221.0	194.0	15%	28.9	2.3	225.2	226.2	-34.0	-12.1	-17.3
TFM	313.0	257.0	17%	44.0	42.2	343.3	552.9	-298.7	-248.6	-220.4
EVE	220.0	197.0	13%	25.0	0.0	222.0	276.1	-81.9	-56.3	-61.3
MRAIL	497.0	466.0	22%	100.7	0.6	567.3	781.5	-318.0	-287.4	-216.7
TOTAL	1,920.0	1,743.0	17%	301.8	116.1	2,161.0	2,687.4	-1,001.4	-814.0	-633.5

*3rd party labor supply assumptions as of 5/23, figures are subject to change as additional analysis is conducted.

Utilization of overtime and 3rd party staff augmentation helps increase the Active FTE Supply by ~418 FTEs.



Workforce Model Outputs: Capital

Total FTE Supply is determined by totaling Active Headcount and additional “FTE” gained through OT utilization (Active Headcount * OT Utilization) and 3rd party staff augmentation. Total FTE Supply is then compared against FTE Demand to determine the FTE Delta.

Business Unit	Based on 5/1 Headcount			Target Service Level						
	FY24 Budget (FTE)	Active (FTE)	OT Utilization (%)	Active OT Supply (FTE)	Active 3 rd Party Supply (FTE)*	Total Active Supply (FTE)	Total FTE Demand	FTE Delta (vs. Active)	FTE Delta (vs. FY24 Budget)	FTE Delta (vs. Total Active Supply)
CAPDL	89.0	72.0	0%	0.0	5.9	77.9	104.5	-32.5	-16.1	-26.6
CAPSP	276.0	236.0	7%	15.8	9.8	261.6	325.7	-95.9	-63.4	-70.4
ECAT	12.0	7.0	0%	0.0	0.0	7.0	12.0	-5.0	-2.3	-5.0
ENG	101.0	69.0	1%	0.0	23.4	92.4	121.5	-59.9	-39.8	-36.5
ITP	53.0	32.0	0%	0.0	50.7	82.7	42.9	-12.7	-5.5	38.0
VHENG	56.0	39.0	5%	1.9	0.0	40.9	45.3	-8.3	-2.0	-6.5
TOTAL	587.0	455.0	4%	17.7	89.8	562.4	651.8	-214.4	-129.2	-106.9

*3rd party labor supply assumptions as of 5/23, figures are subject to change as additional analysis is conducted.

Utilization of overtime and 3rd party staff augmentation helps increase the Active FTE Supply by ~108 FTEs.



Workforce Model Outputs: Safety

Total FTE Supply is determined by totaling Active Headcount and additional “FTE” gained through OT utilization (Active Headcount * OT Utilization) and 3rd party staff augmentation. Total FTE Supply is then compared against FTE Demand to determine the FTE Delta.

Business Unit	Based on 5/1 Headcount			Target Service Level						
	FY24 Budget (FTE)	Active (FTE)	OT Utilization (%)	Active OT Supply (FTE)	Active 3 rd Party Supply (FTE)*	Total Active Supply (FTE)	Total FTE Demand	FTE Delta (vs. Active)	FTE Delta (vs. FY24 Budget)	FTE Delta (vs. Total Active Supply)
SAFET - Leadership	6.0	6.0	0%	0.0	0.0	6.0	10.3	-4.3	-4.3	-4.3
SAFET - Management	25.0	20.0	0%	0.0	5.5	25.5	38.6	-18.6	-14.6	-13.1
SAFET - Operational	33.0	27.0	0%	0.0	2.0	29.0	75.5	-48.6	-42.6	-46.6
SAFET - Engineering & Construction	27.0	17.0	0%	0.0	25.8	42.8	87.3	-70.3	-60.3	-44.5
TOTAL	91.0	70.0	0%	0.0	33.3	103.3	211.7	-141.8	-121.8	-108.5

*3rd party labor supply assumptions as of 5/23, figures are subject to change as additional analysis is conducted.

Utilization of overtime and 3rd party staff augmentation helps increase the Active FTE Supply by ~33 FTEs.

