



CAMBRIDGE
SYSTEMATICS

Think  Forward

Telework Assumptions and Uncertainties of Transit Ridership Forecasting

presented to

MoMo Conference

presented by

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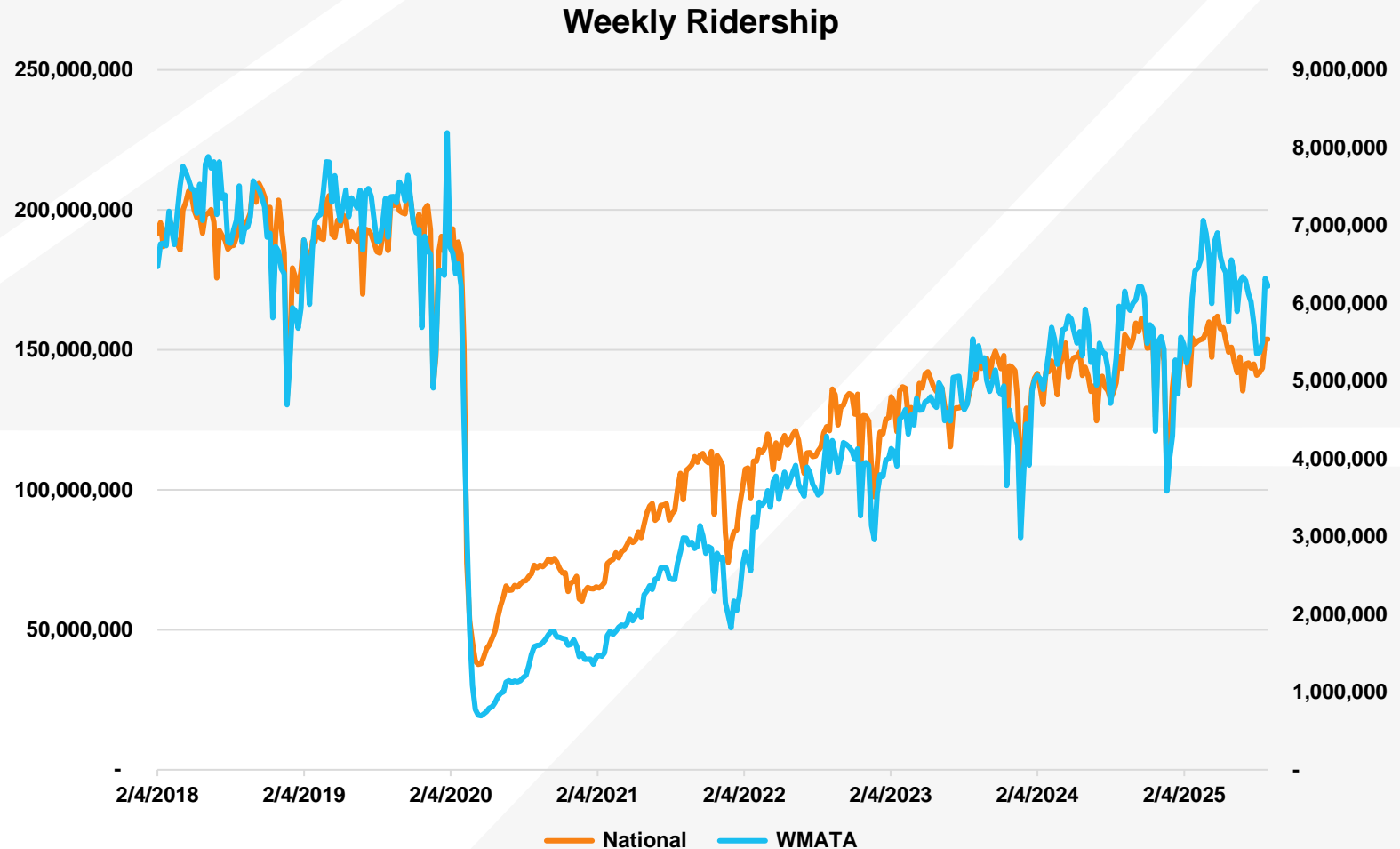
Transit Ridership Trend: National & WMATA

National 78%
Recovery

WMATA 83%
Recovery

Metrorail Only:
79%

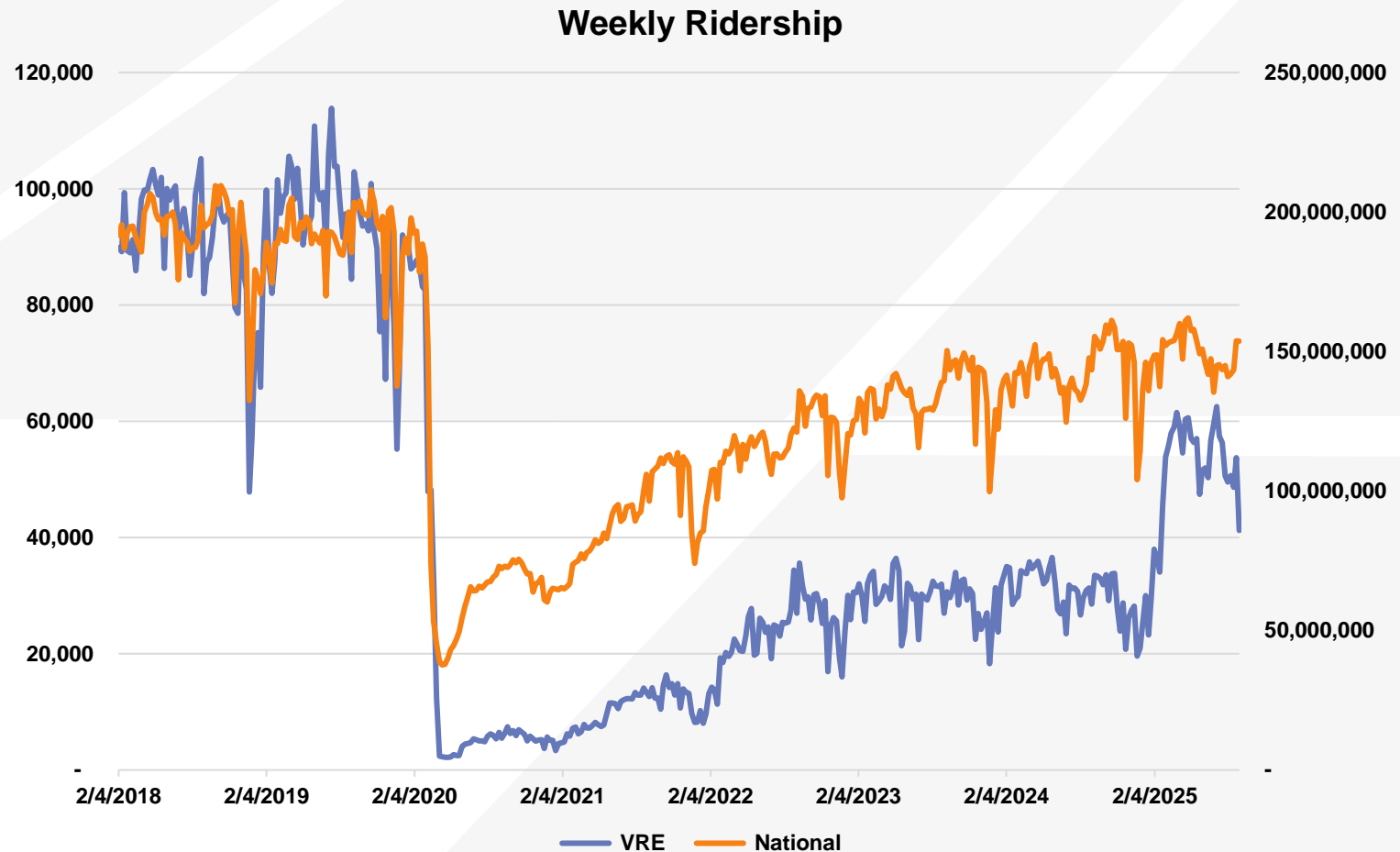
*4 weeks in August



Transit Ridership Trend: National & VRE

National 78%
Recovery

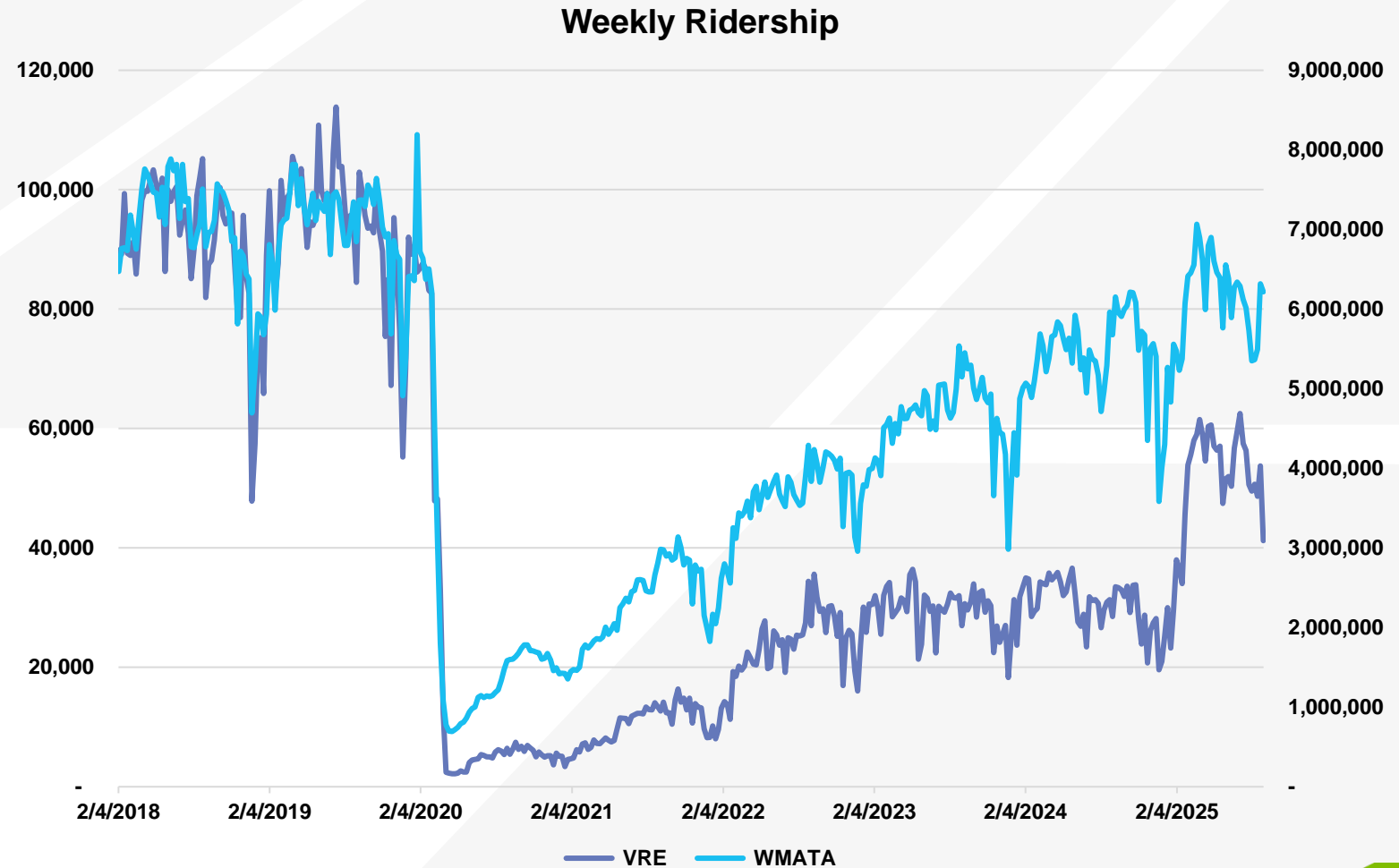
VRE 53%
Recovery



Regional Transit Ridership Trend

WMATA 83%
Recovery

VRE 53%
Recovery

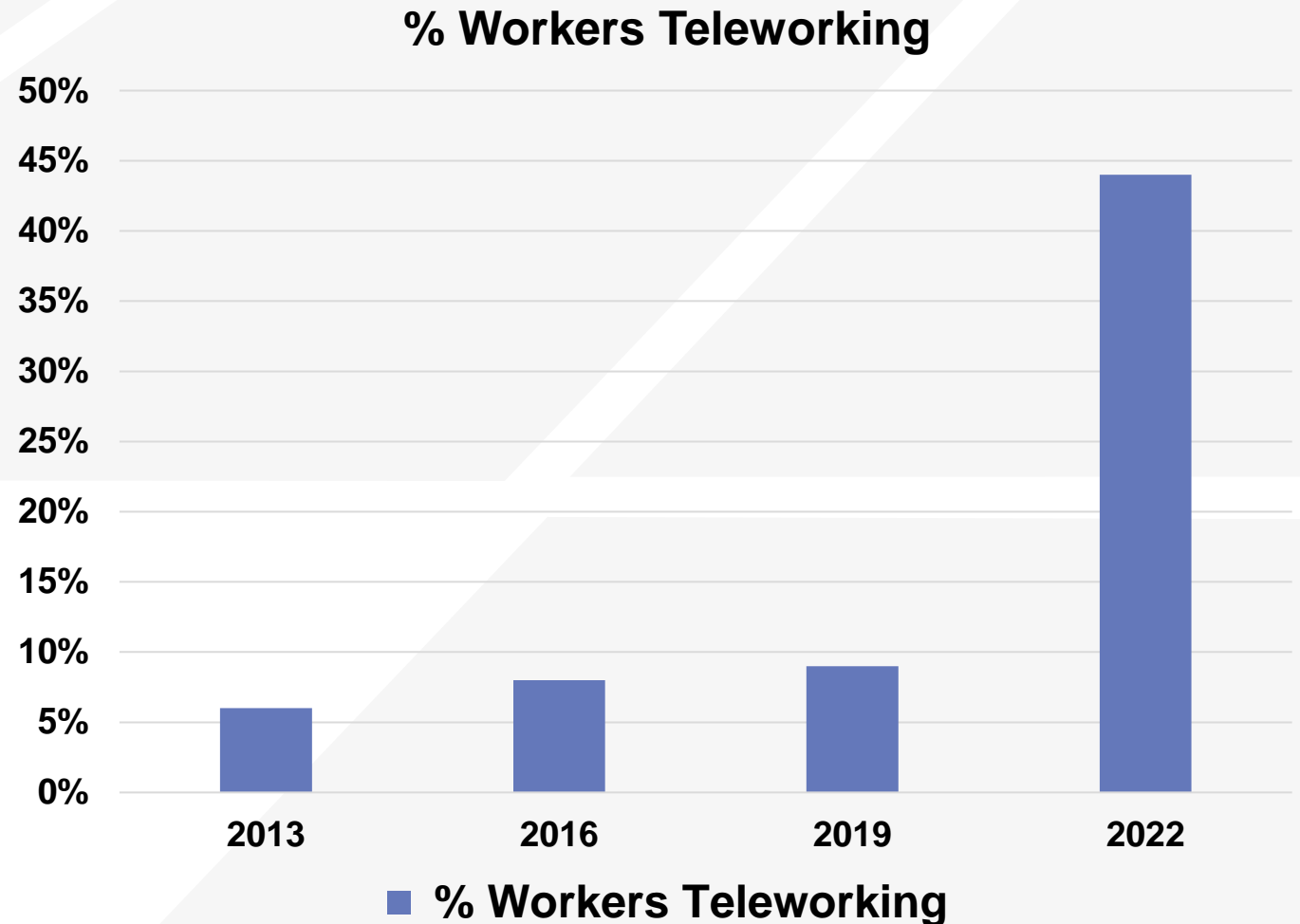


Pandemic and Teleworking



Teleworking in the COG/TPB region

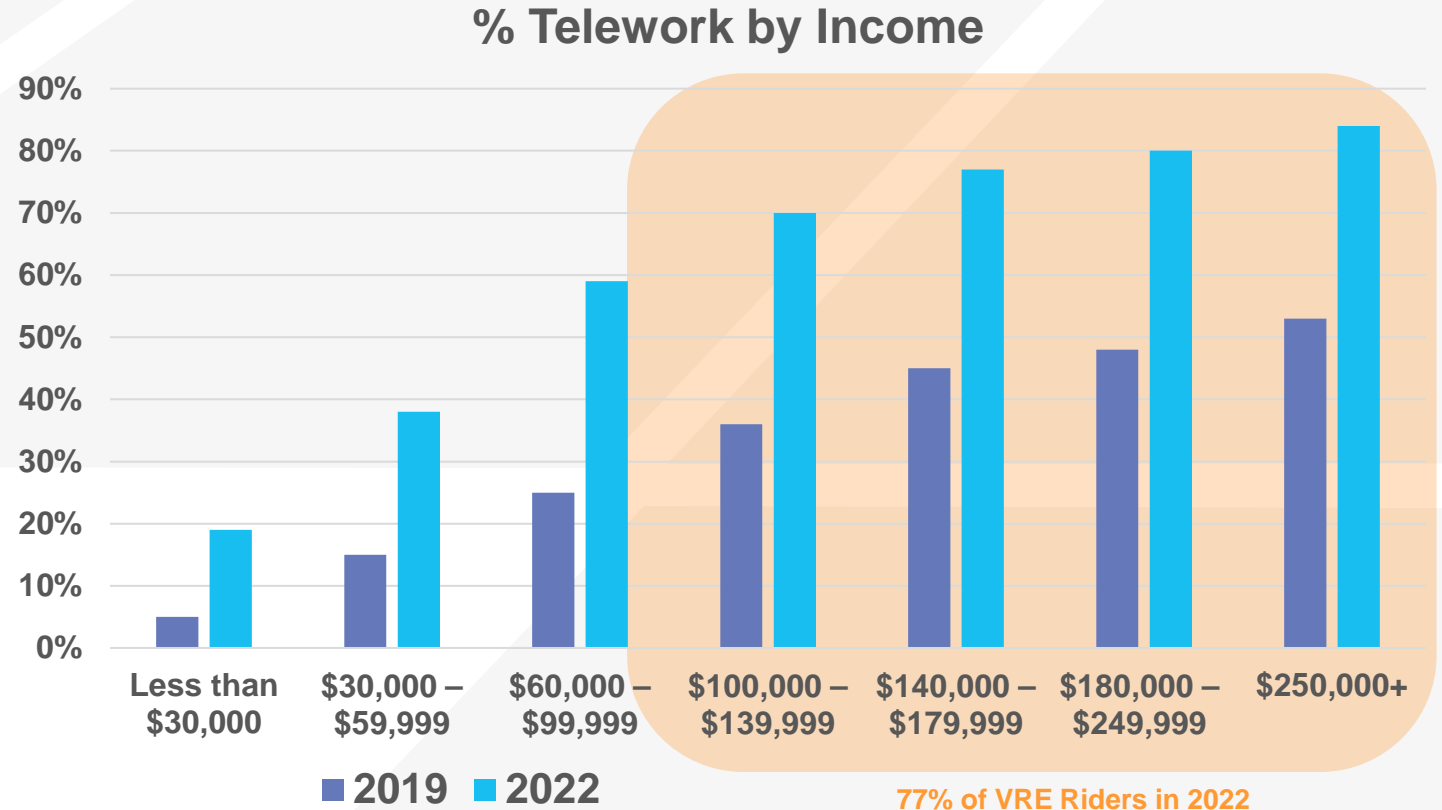
- » an annual growth rate of 4.5% between 2007 and 2019
- » Approximately 44% of all regional workers teleworked or worked at home on a typical workday in early 2022.
- » The regional telework rate grew by more than x5 between 2019 and 2022



Teleworking by Household Income

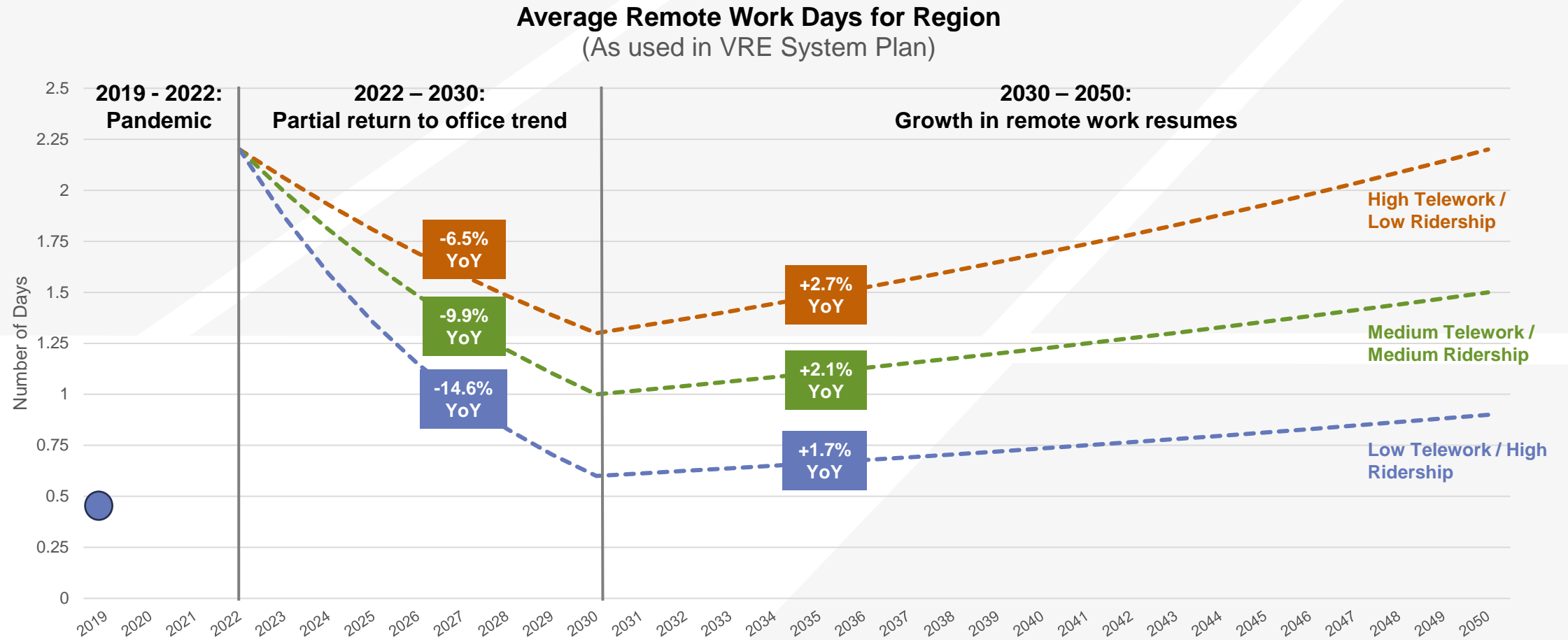
Teleworking in the D.C. region...

- A strong pattern of increasing rates of telework as household income increases
- High proportion of regional rail riders are among high-earners



Source: MWCOG, 2022

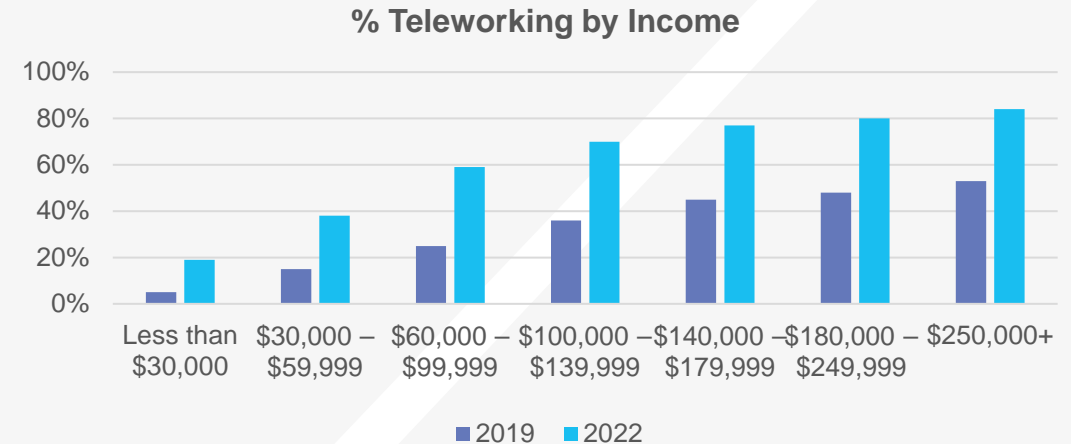
VRE Telework Scenarios



Source: Cambridge Systematics

Modeling Approach

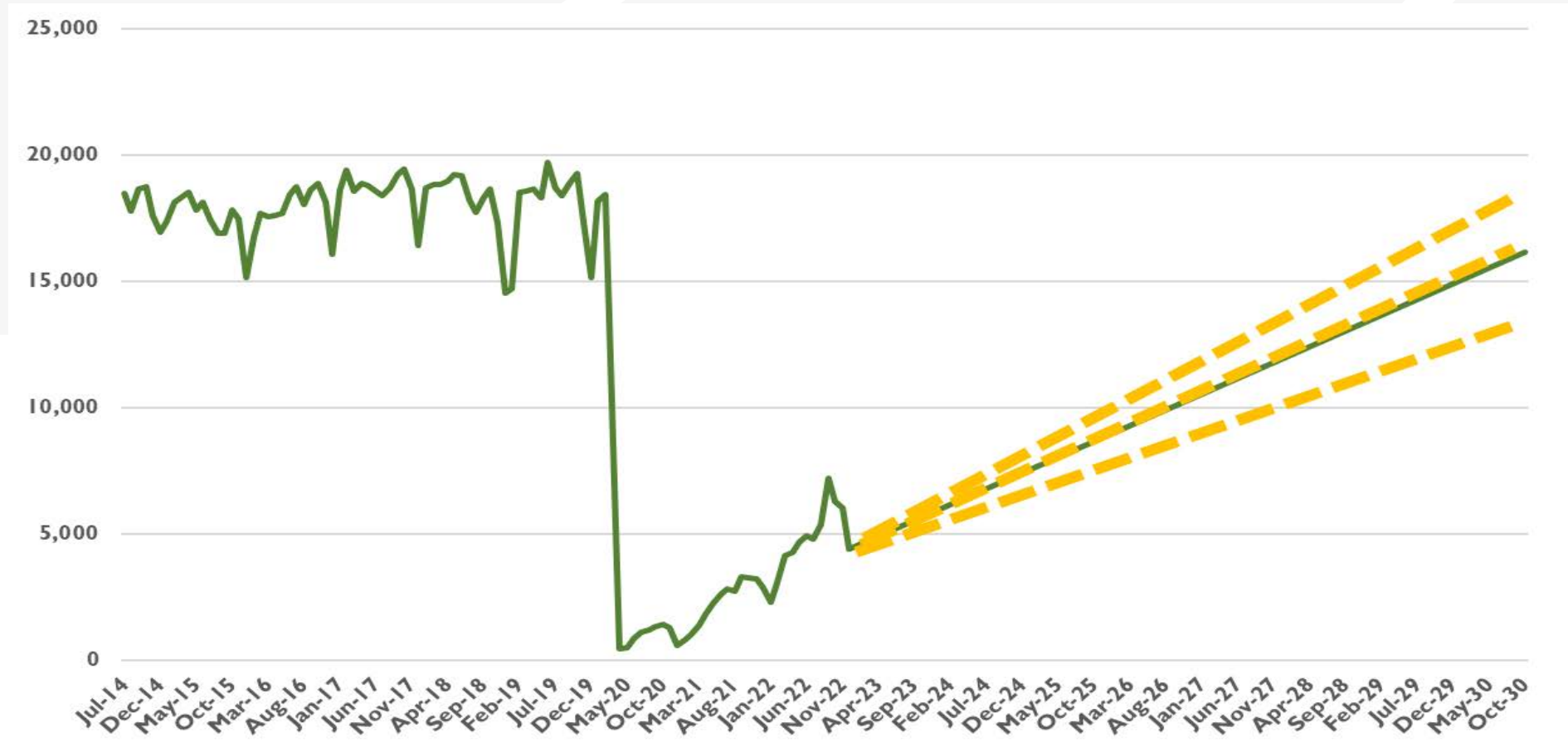
- Adjust trip rates based on regional rates for work from home (WfH)
- Adjustment factors vary significantly by income
 - » 4 income groups in COG/TPB model
- Work trips (home-based work and non-homed work)



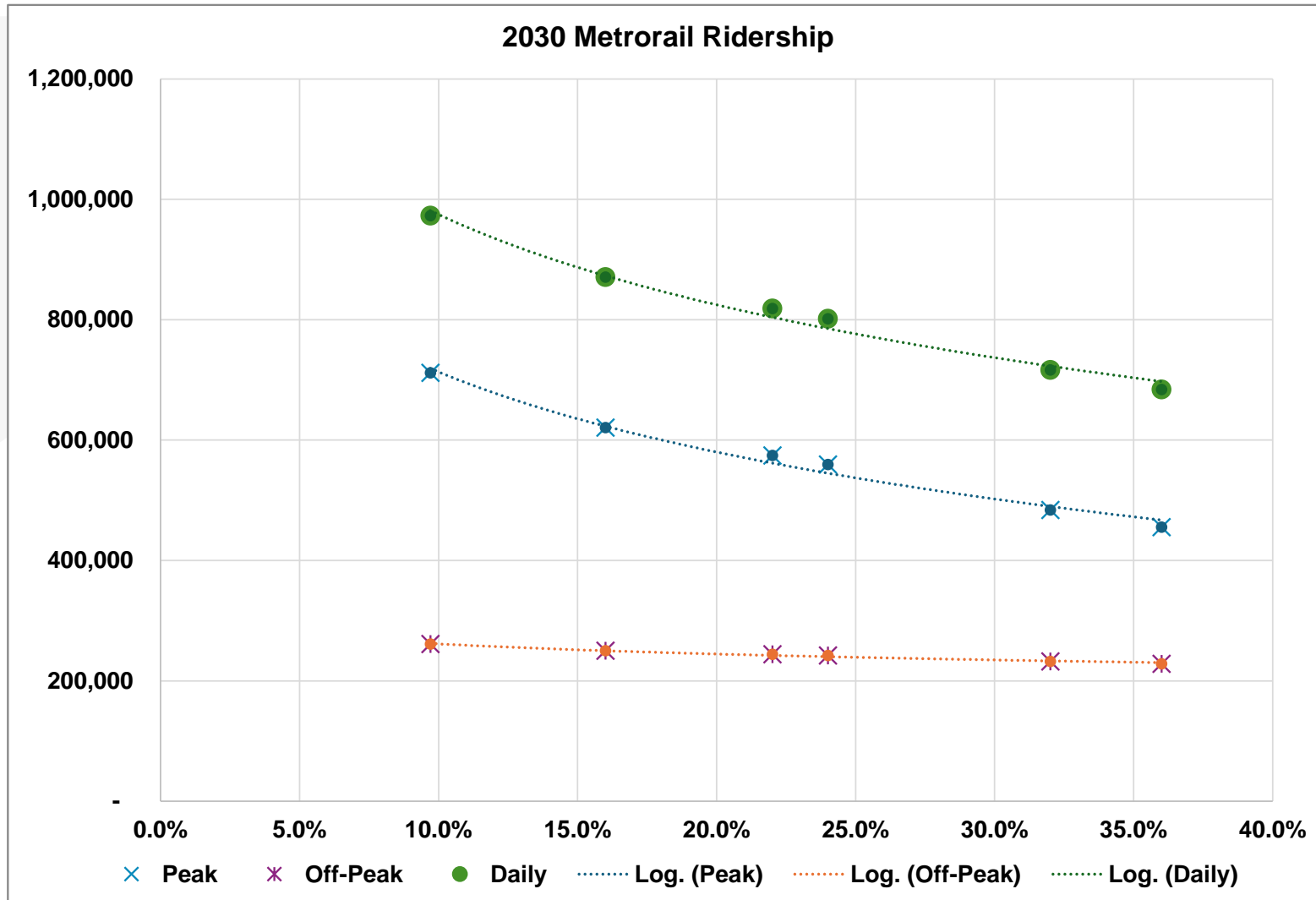
| 2045 Trip Rate Adjustment Factors (22% WfH rates) | | |
|--|--------------------------------|-------------------------------------|
| Income Group | Expected HBW Reduction 2045 | HBW Trip Rates Adjustment Factor |
| 1 | 6% | 0.94 |
| 2 | 13% | 0.87 |
| 3 | 19% | 0.81 |
| 4 | 25% | 0.75 |

2030 Ridership Forecast: No Build (2023 Service)

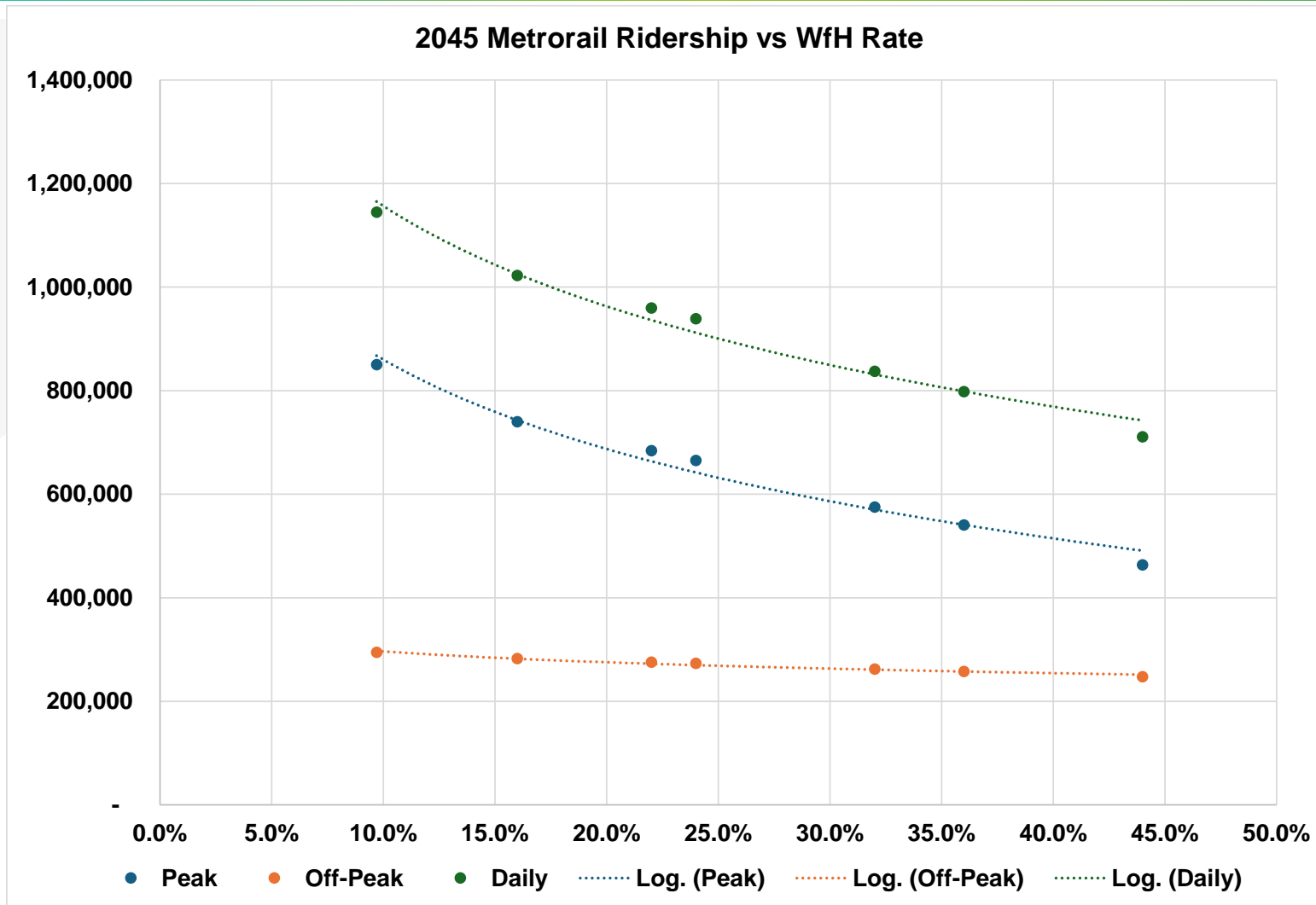
2030 average daily ridership with no change to VRE service pattern



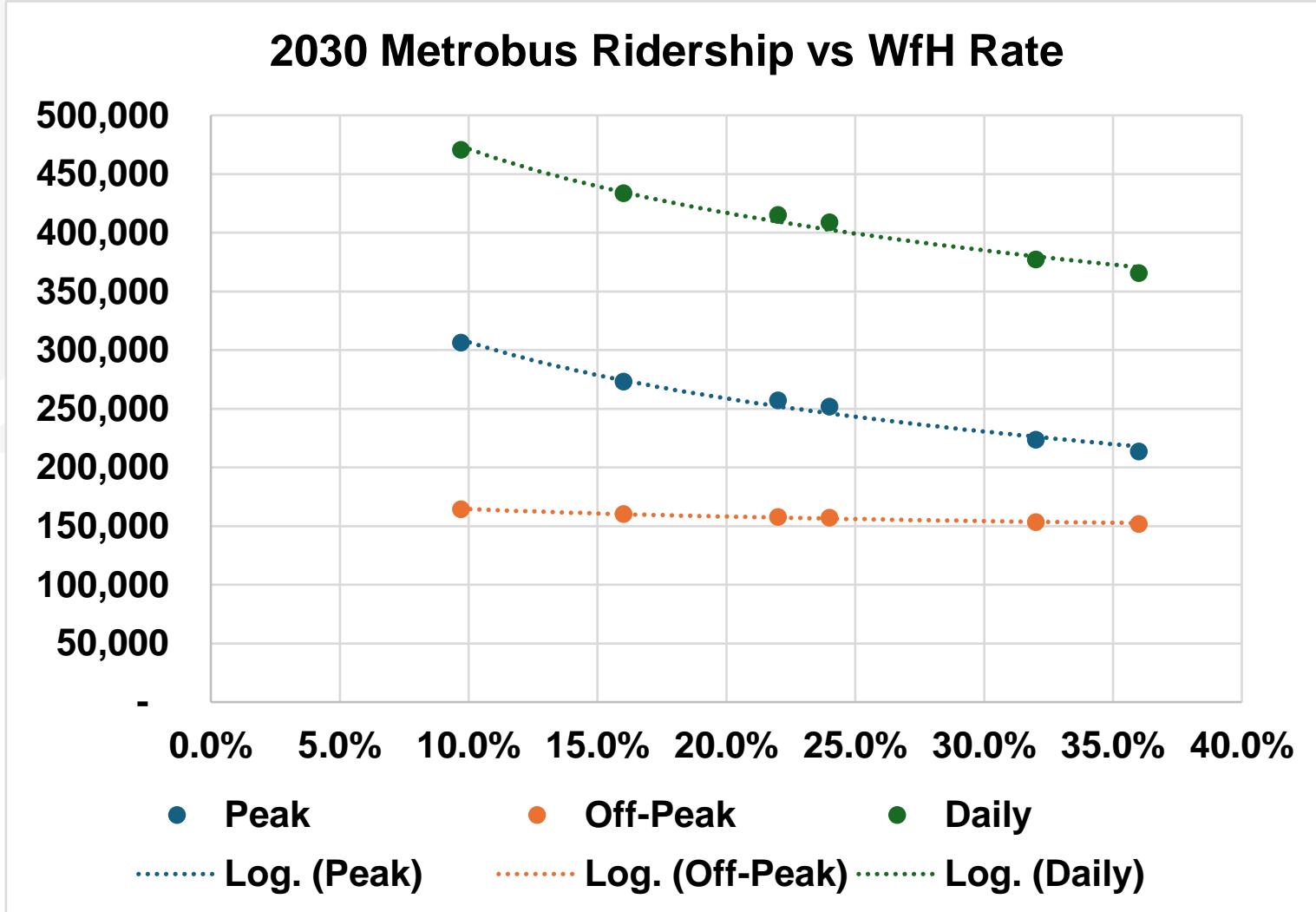
2030 Metrorail Ridership vs WfH Rate



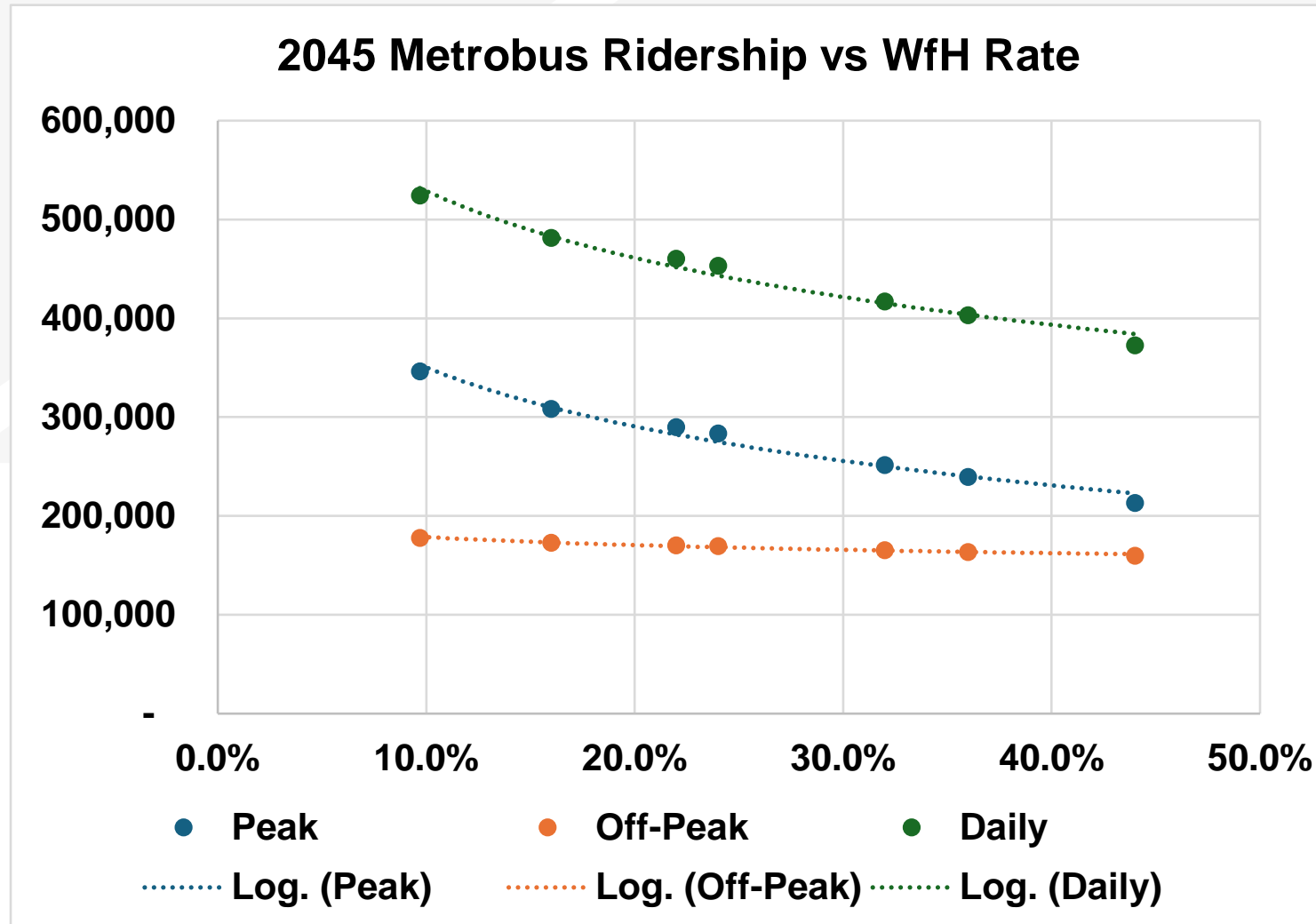
2045 Metrorail Ridership vs WfH Rate



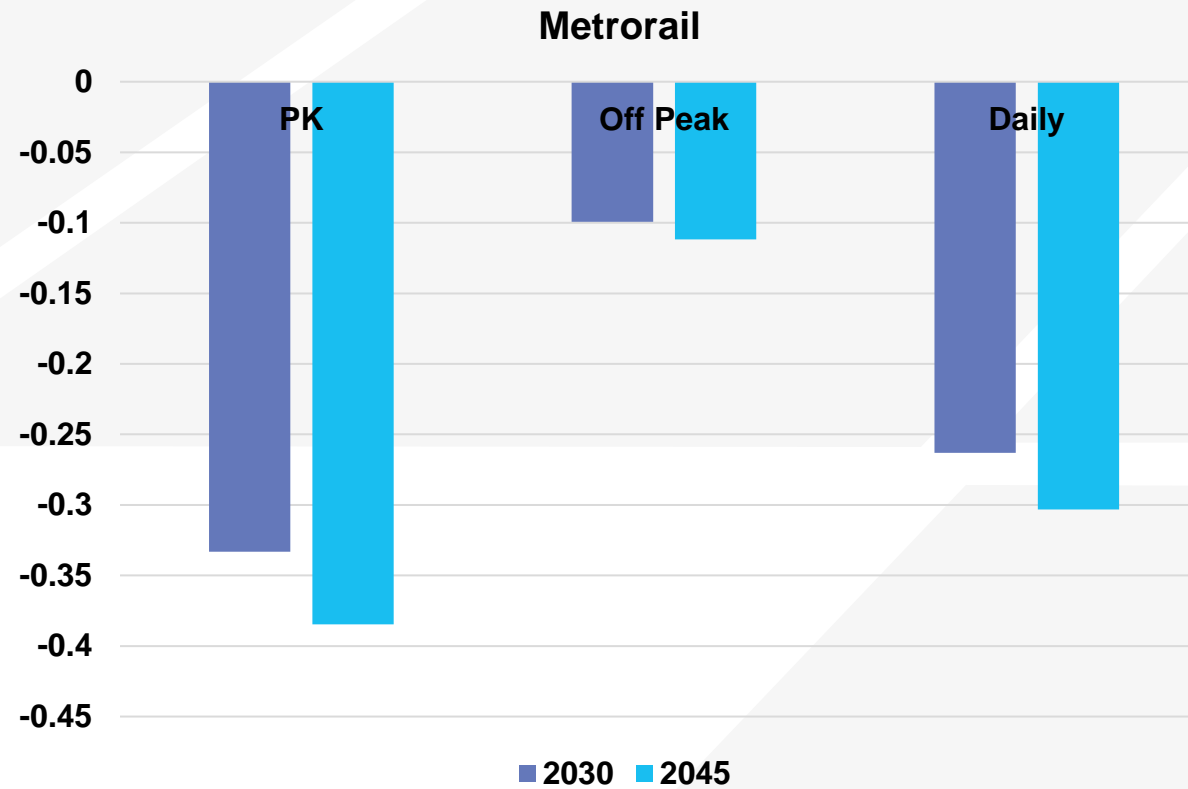
2030 Metrobus Ridership vs WfH Rate



2045 Metrobus Ridership vs WfH Rate



Metrorail Ridership Elasticities w/ WfH Rates



Metrobus Ridership Elasticities w/ WfH Rates

