

Moving Metro Toward Energy Efficiency

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Moving Metro Toward Energy Efficiency

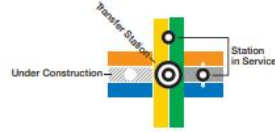


Information: 202-637-7000 | TTY: 202-962-1033
Metro Transit Police: 202-962-2121 | Text: MYMTPO (696873)

Legend

- Red Line • Glenmont / Shady Grove
- Orange Line • New Carrollton / Vienna
- Blue Line • Franconia-Springfield / Largo Town Center
- Green Line • Branch Ave / Greenbelt
- Yellow Line • Huntington / Greenbelt
- Silver Line • Wiehle-Reston East / Largo Town Center

- Station Features
 - Bus to Airport
 - Parking
 - Hospital
 - Airport
- Connecting Rail Systems
 - AMTRAK
 - MDA

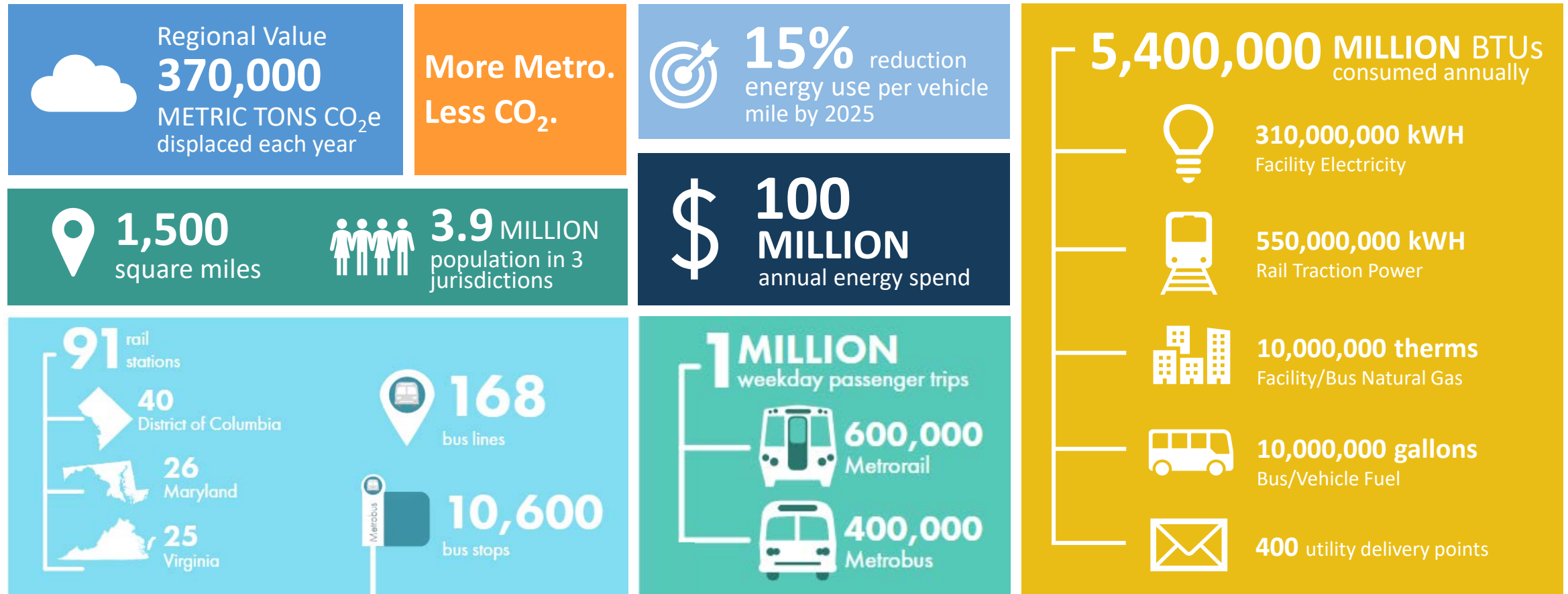


Metro is accessible.

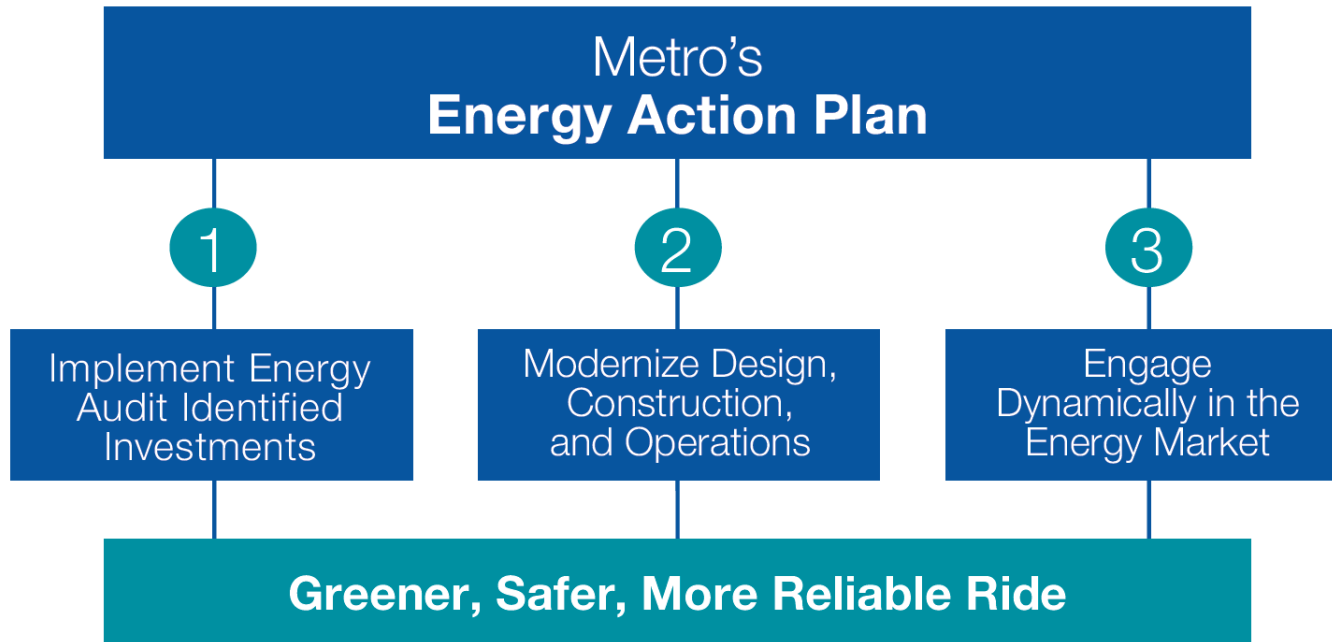
- No Smoking
- No Eating or Drinking
- No Animals (except service animals)
- No Audio (without earphones)
- No Littering or Spitting
- No Dangerous or Flammable Items

1. Metro at a Glance
2. Energy Action Plan
3. Capital Program Integration
4. Conclusions and Takeaways

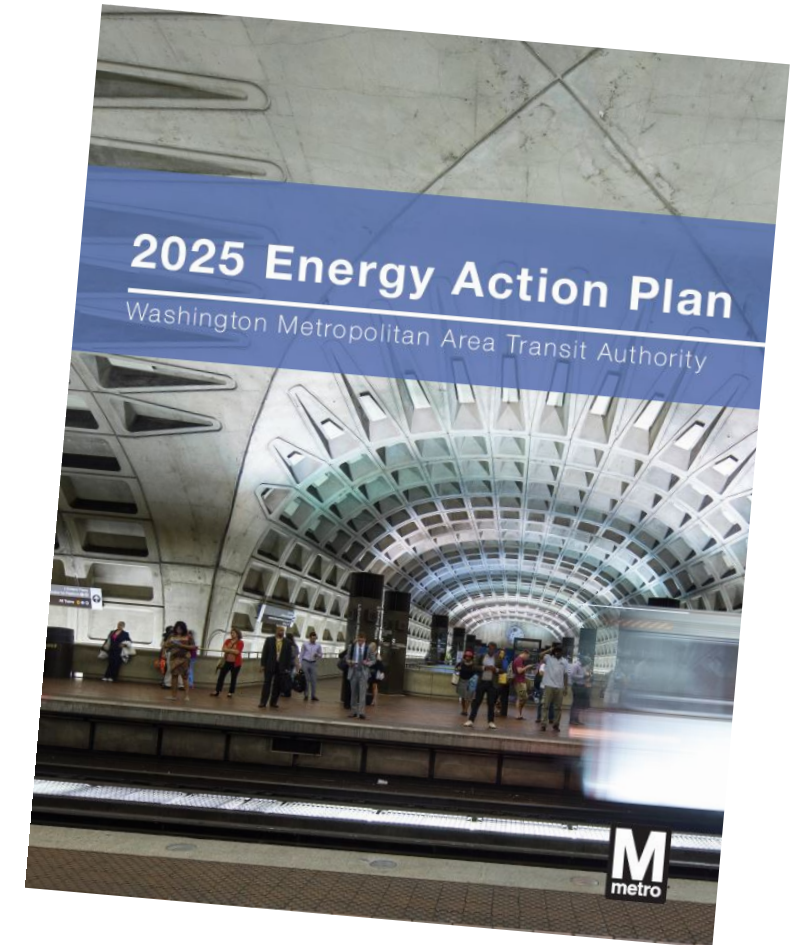
Metro at a Glance



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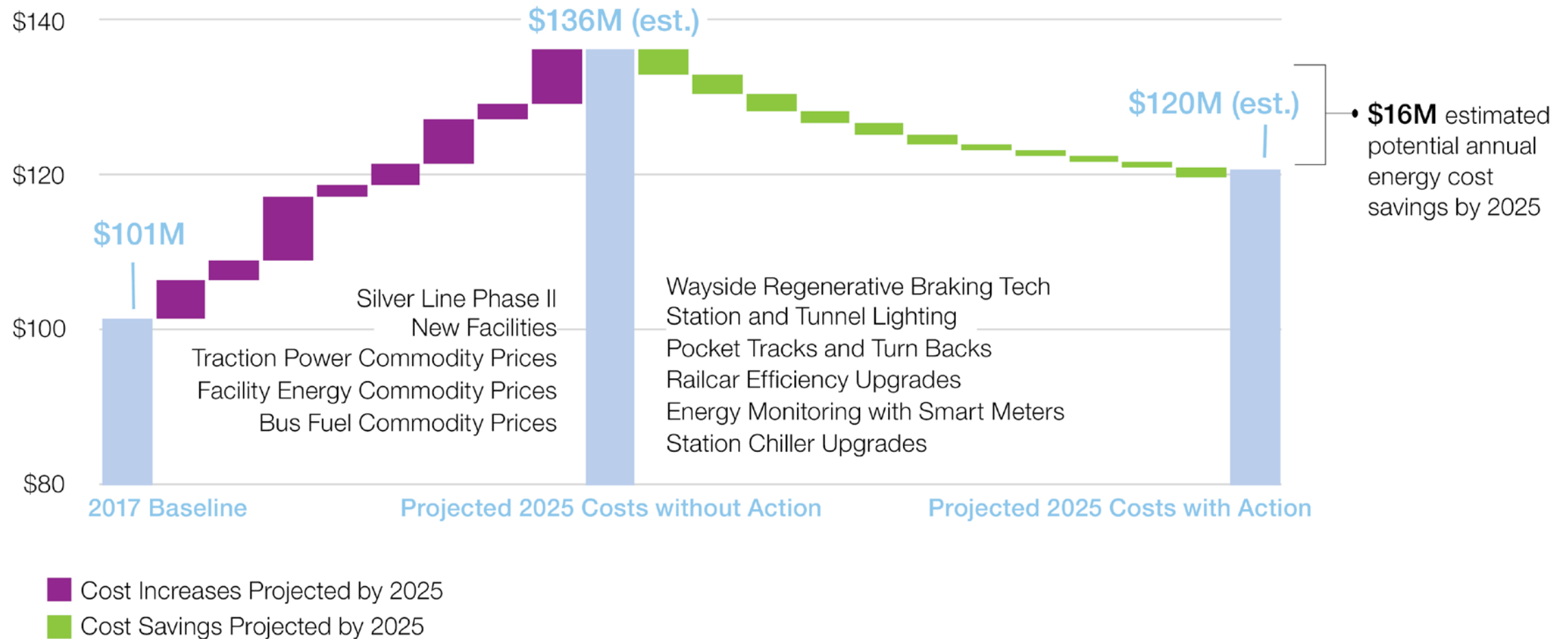
- ▶ **\$65 million investment** by 2025
- ▶ approx. **\$16 million** annual energy savings
- ▶ est. **12% reduction** in energy use



Moving Metro Toward Energy Efficiency

Energy Action Plan Efficiency Investments

Annual Energy Costs (\$ millions)



Metro's Capital Program

- “Build a prioritized capital program based on asset management principles and incorporating sustainable practices”
- Dedicated funding for Metro's largest Capital Improvement Program – \$8.5 billion investment over six years
- Role of the **Office of Sustainability**:
 - Sustainability Lab
 - Energy savings/business case development
 - Cultural change and adoption of new practices



Station Lighting Upgrades



- LED fixtures fabricated off site = streamlined plug and play installation
- Design maintains architectural integrity
- Phase 1 platform upgrades: approximately 50% complete
- Average annual energy savings per station is enough to power 40 homes

Foggy Bottom Station: approximately 20 times brighter

Chiller Plant Upgrades



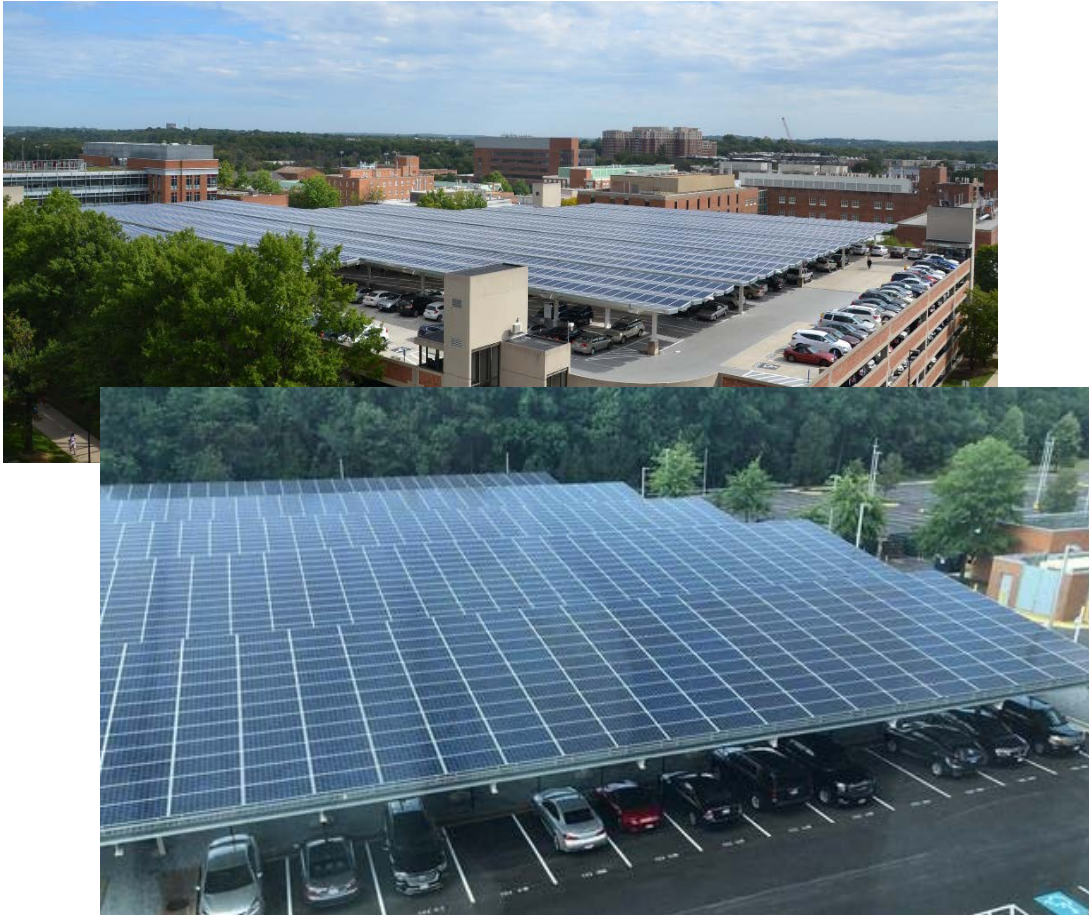
- Magnetic oil-less bearings and variable frequency drives (VFDs) for energy and maintenance cost savings
- Approximately 50% complete
- Estimated annual energy savings of \$10,000 per chiller ~ enough to power 20 homes
- *Additional investment:* installed remote chiller water treatment system on all sites to reduce calcium buildup and extend life of investment

Electric Bus Implementation Study



- Launched in March 2019
- Interoperability of infrastructure across the region
- Alternatives analysis to be completed this summer
- Test/evaluate technology across 3 utilities and jurisdictions

Solar PV Ground Lease



- RFP for 7-9MW released in July
- Includes four parking lots/garages
- Implementation = 3rd party design, install, and maintain with lease payments to Metro
- Benefits = revenue, infrastructure improvements/customer amenities, and support for regional solar market

Conclusions and Takeaways

■ Key entry points

- Test/evaluation, studies, purchasing/procurement, data analysis, support existing efforts

■ Data is powerful

- Using asset performance data to inform investments and efficiency opportunities

■ Leverage external partners

- DC Sustainable Energy Utility, peer bus operators/agencies, General Services Administration

■ Communications

- Internal and external messaging to communicate benefits of transit and make Metro the region's sustainable transportation provider of choice