Metropolitan Transportation Commission
Policy Advisory Council

September 22, 2023 **Agenda Item 5b**

Next Generation Bay Area Freeways Study: Round 1 Analysis Findings

Subject:

Summary of performance and equity impacts of pricing pathways that were shared previously in March 2023.

Background:

As identified during Plan Bay Area 2050, Bay Area freeways will remain severely congested in the future and the region will be unable to meet state-mandated greenhouse gas emissions reduction targets in the absence of bold pricing strategies. The Next Generation Bay Area Freeways Study, kicked off in early 2022 in partnership with Caltrans, is reimagining an alternative future for our freeways by exploring pricing strategies. In March 2023, staff shared five goals for Next Generation Freeways and an initial portfolio of seven pathways – packages of pricing and complementary strategies – to advance those goals. The pathways were co-created with the study's advisory groups (which include several Policy Advisory Council members) and are rooted in community concerns related to traffic congestion, a lack of sufficient transit options, and overall regional unaffordability. This portfolio includes a "baseline" pathway with no new pricing initiatives, as well as a set of six pathways built on one of three pricing strategies, as shown in the table below:

	Pricing Strategy	Complementary Strategies
1	No New Pricing Initiatives	*n/a*
2A	Cordon Pricing *(San Jose, San Francisco, Oakland)*	Transit Double-Down
2B	Cordon Pricing *(San Jose, San Francisco, Oakland)*	Affordability Focus
3A	All-Lane Highway Tolling in Transit-Rich Corridors	Transit Double-Down
3B	All-Lane Highway Tolling in Transit-Rich Corridors	Affordability Focus
4A	All-Lane Highway and Arterial Tolling in Transit-Rich Corridors	Transit Double-Down

	Pricing Strategy	Complementary Strategies
4B	All-Lane Highway and Arterial Tolling in Transit-Rich Corridors	Affordability Focus

Staff has completed the first round of analysis, attempting to understand the potential of these pathways in advancing the goals. This memo outlines the findings of the analysis and identifies key challenges that need to be addressed in refining the pathways.

Round 1 Analysis Findings at a High Level

Among the three pricing strategies, all-lane highway tolling and all-lane highway and arterial tolling (Pathways 3A, 3B, 4A and 4B) had the greatest potential to advance regional goals – yielding up to three percent reduction in regional Vehicle Miles Traveled (VMT). While this may sound like a very modest impact, for context, even a two percent reduction in VMT is substantial – equivalent to 150,000 fewer commute trips in a day, or two times Caltrain's pre-pandemic daily boardings, or 2,500 express buses operating at 80 percent capacity. **This VMT impact is well above any other single transportation strategy in Plan Bay Area 2050,** and reduces miles driven more than over $60 billion of near-term local and regional transit investments that are included in the Plan. The cordon pricing pathways had positive outcomes at the local level, decreasing VMT within and into/out of the cordons by 6 to 12 percent; however, it had limited VMT impact at the regional level (0.5% decrease) and did not meaningfully improve freeway reliability and efficiency, despite other locally beneficial outcomes. As such, the cordon pricing strategy may be better suited for local implementation rather than a regional-scale pricing strategy.

With regards to the complementary strategies, analysis revealed no clear frontrunner among the two versions of each pricing pathway (Affordability Focus or Transit Double Down). While new long-distance express bus routes operating primarily on major freeways initially seemed promising in Transit Double Down, reinvesting revenues in local transit services may in fact yield greater mode shift. Toll discounts for very low-income drivers in Affordability Focus played a meaningful role in mitigating affordability concerns, whereas transit discounts proved as beneficial as transit capital and operating investments to grow ridership.

Other impacts are highlighted below by goal, but it is important to note that challenges remain despite strong performance on VMT reduction. The second round of analysis will aim to identify ways to reduce local street diversion and increase mode shift.

Round 1 Analysis Findings: By Goal

Reliable - Reduce traffic congestion and improve reliability for people and goods. All-lane tolling reduced travel times on freeways by 10 percent on average, and by up to 24 percent on the busiest corridors. This was accompanied by an undesirable average increase of travel times on major parallel local streets by 8 percent, which was effectively mitigated when arterials were also tolled.

Efficient - Maximize capacity of existing infrastructure by improving multimodal alternatives to driving. Transit alternatives became faster but so did driving, limiting transit's competitiveness. Mode shift of commute trips to non-auto modes was modest at less than one percent, questioning the efficacy of the existing mix of complementary transit strategies.

Affordable: Ensure everyone has affordable and cost-effective travel options. Pricing strategies burdened only a small share of Bay Area drivers, with the median household seeing a negligible increase in cost burden. Relatively few households saw a significant increase in annual toll expenditures. With modeled toll rate inputs – ranging from $0 in low-congestion corridors to $6 for a 20-mile segment in the busiest corridors, with a 50% discount for very low-income households – 4 percent of very low-income households may see annual toll expenditures exceeding $300. This points to an opportunity for targeted cost burden relief to make further headway toward the affordability goal.

Reparative: Support freeway-adjacent communities impacted by 20th-century transportation policy decisions. Low-income communities saw more benefits than costs by nearly a factor of four, pointing to the strong potential of redistributing tolling revenues to advance equitable outcomes. Benefits include transit frequency improvements, fare and toll discounts, safety investments and reparative investments such as urban greening or highway pedestrian crossings. Freeway-adjacent communities stand to benefit from tolling revenues that can be set aside to fund community needs.

Safe: Promote safer travel by all modes and on all facilities, while also improving environmental health. With prioritization of road safety strategies such as complete street enhancements for improved sidewalks and bike lanes, and safety design elements such as speed bumps, lane narrowings and intersection bulbouts, estimated fatalities decrease substantially relative to current rates by nearly 30 percent. However, arterial diversion may dampen the pathways' effects on safety and environmental health.

Next Steps

Four main challenge areas need to be addressed for the second of analysis: diversion to local streets; limited mode shift to transit and carpooling; high cost burden for a small share of low- and middle-income drivers who use freeways frequently; and improving performance to meet the region's demanding climate goals. These challenges must be addressed by enhancing pricing strategies, altering and/or introducing new complementary strategies and better allocating tolling revenues between complementary strategies. With several ideas already under consideration, staff is actively working with the staff-level and executive-level advisory groups to refine pathways over the next few months. Staff is also planning to gather community input this fall through small group discussions, public webinars, stakeholder workshops and potentially a statistically valid poll. Staff will return to the Council to share engagement learnings in winter 2024 and a proposal for a refined portfolio of pathways for the second round of analysis.

Issues:

None identified.

Attachments:

- Attachment A: PowerPoint Presentation