

Memorandum

Date: July 26, 2023
 To: Daniel Shockley, San Mateo County Transit District
 From: Fehr & Peers
 Subject: **Bus Stop Improvements Prioritization Methodology**

LA22-3373

This brief memo summarizes the preliminary recommendations for the approach to bus stop amenity prioritization. This prioritization framework will allow SamTrans to more rapidly implement the recommended improvements described in the Amenity Recommendations memo at stops with high need for new improvements based on ridership, equity, and/or public health impacts.

Prioritization Criteria & Indicators

The table below outlines the recommended prioritization criteria and associated indicators within the bus stop dataset.

Criteria	Indicators	Description	Impact on Prioritization Score
Impact	Boardings	Using boardings in prioritization allows SamTrans stops with high utilization to receive amenity upgrades sooner, spreading benefits to the great number of riders. Additionally, SamTrans riders are likely to be non-white, lower-income, and lack access to a car. Given this, improving stops with high ridership has a secondary equity benefit as well.	Increase
Equity	Equity priority area	Stop presence within a SamTrans-defined Equity Priority Areas will be used as the primary equity indicator. 44% of SamTrans stops are in Equity Priority Areas. Equity Priority Areas are defined by <i>Reimagine SamTrans</i> .	Increase
High-heat days	Heat-vulnerability index	SamTrans-defined heat vulnerability zones will be used as the primary climate vulnerability indicator. 23% of stops are in medium-high or high heat vulnerability areas. Heat-vulnerability indices are defined by the <i>SamTrans Adaptation and Resilience Plan</i> .	Increase



Feasibility	Presence of sidewalk	Presence of sidewalk will be used as an indicator of the feasibility of installing amenities within the existing footprint of the stop. Note that 82% of stops with no sidewalks are not located within Equity Priority Areas, as such, this is expected to have limited to no impact on equitable distribution of prioritization.	Decrease
Immediate Need	Existing shelter	Roughly 16% of SamTrans stops already have a shelter installed. As these stops have an above-average level of amenities compared to the majority of stops, they will have a lower prioritization for any amenity improvements.	Decrease

Other Indicators Considered

Several other bus stop attributes were examined for potential inclusion in the prioritization framework. Ultimately, these indicators were either deemed redundant or unnecessary due to the expected desired outcomes being achieved using the prioritization indicators listed above. Some of these indicators included:

- Number of anticipated high-heat days in 2050
- Bus stop categories
- County subareas
- Possible landing pad obstruction
- Stops with existing benches and/or simme seats

Recommended Prioritization Methodology

The recommended approach to prioritization includes both filters that remove stops from prioritization and weighted indicators to develop a prioritization score for each stop. Prioritization scores range from seven (highest priority) to zero (lowest priority). The methodology assumes that all stops are eventually updated with the amenities level called for in the Bus Stop Categories and minimum amenities associated with each category. The prioritization methodology provides a rationale for the grouping and phasing of improvements.

- **Filters:** “Feasibility” and “Existing Amenity” criteria are used as filters. Stops that have no sidewalks and stops that have existing shelters are deprioritized and receive a final prioritization score of “0”.
- **Weighted scores:** “Impact”, “Equity”, and “Climate Resiliency” criteria are given weighted scores. Each bus stop is awarded points for a total prioritization score based on the following rubric –
 - Impact -
 - 5 points – Stops in the 91st to 100th percentile of daily on-boardings.
 - 4 points – Stops in the 81st to 90th percentile of daily on-boardings.



- 3 points – Stops in the 71st to 80th percentile of daily on-boardings.
- 2 points – Stops in the 61st to 70th percentile of daily on-boardings.
- 1 point – Stops in the 51st to 60th percentile of daily on-boardings.
- Equity –
 - 1 point – Stops in Equity Priority Areas.
- Climate Resilience –
 - 1 point – Stops in high and medium-high vulnerability areas.

Note that stops in the bottom half of daily on-boardings do not receive points based on ridership/impact. The framework was designed in this way to accommodate the large number of SamTrans stops that see low ridership. The stops in the 0-50th percentile of daily on-boardings generally have less than five on-boardings a day. Tied scores between stops can utilize the average number of daily boardings as a tiebreak, all else being equal.

Beyond this prioritization based on ridership, SamTrans can allocate a certain percentage of funding for “coverage” stops to help fill in the gaps on geography or other demonstrated needs. A prioritization approach can assume that approximately 25 percent of funding allocation to be utilized for these stops and advance improvements for stops that otherwise would have received a lower prioritization score but have extenuating factors to accelerate amenity construction.