

Technical Memorandum

May 11, 2022

Project# 24846.001

To: Gail Payne,
City of Alameda

From: Mike Alston, RSP; Michael Ruiz-Leon

Project: Citywide Roundabout Analysis

Subject: Citywide Roundabout Screening Assumptions

Kittelison performed a citywide roundabout screening along all arterial and collector streets to roundabout suitability based on available right-of-way. The screening included using approximate roundabout sizes based on guidance from NCHRP Report 672 – *Roundabouts: An Informational Guide* ("Roundabout Guide"). The Roundabout Guide provides planning-level footprint size estimates based on the number of lanes and presence of large trucks.

Locations were screened out if the tested footprint size (including space for pedestrians and bicyclists) did not fit within existing curb line or right-of-way. The remaining locations were prioritized using screening criteria that align with the City's General Plan goals and an additional category to capture "strengths, weaknesses, opportunities, and threats (SWOT)."

The following criteria were then applied:

- **Social equity:** Points were assigned to the intersections located within the City's most socially vulnerable areas based on the San Francisco Bay Conservation & Development Commission (BCDC) community vulnerability rankings. Five points were assigned to intersections in areas ranked as highest, three points in areas ranked as high, one point in areas ranked as moderate, and zero points in areas ranked as low social vulnerability.
- **Safety:** Points were assigned to intersections based on the City's Vision Zero Action Plan. Five points were assigned to intersections located on a designated High Injury Corridor, and an additional five points were assigned to any High Crash Intersections.
- **Choices:** Points were assigned to intersections depending on existing, planned, or recommended bus, bike, and truck routes. Two points each were assigned to intersections on (1) bus routes, (2) truck routes, and (3) existing or planned bike routes.
- **Sustainability:** Points were assigned to the intersections based on projected level of inundation in future sea level rise scenarios, to a maximum of 5 points.

- **SWOT:** Five points were assigned to existing signalized intersections to represent an opportunity to reduce future maintenance costs. Negative five points were assigned to Caltrans facilities to represent a challenge to successful project implementation.

Criteria scores were aggregated to get a total score. The top three screening locations with the highest scores and no planned or identified development projects were selected for future concept development.

The city identified the following locations as the top three highest-scoring viable locations:

- High Street/Fernside Boulevard
- Marina Village Parkway/Constitution Way
- Stargell Avenue/Mariner Square Loop