ConnectSF

Active Transportation Study – Corridor Suitability Assessment Memo

BACKGROUND

The purpose of corridor suitability assessment is to assess the ConnectSF's Priority Corridors, (identified in the Network Development component of ConnectSF) for their suitability in the development of a citywide active transportation network and its associated analysis in the remainder of the Active Transportation Study (ATS). This assessment includes comparisons of the original Active Transportation map, developed by Mike Sallaberry, to the modified ConnectSF Priority Corridors map developed for inclusion in the Transit Corridors Study (TCS).

This methodology provides a detailed record of the steps the ATS team took to assess and modify these corridors for suitable analysis of a citywide active transportation network. These corridors and segments of corridors within the ATS zones will be analyzed using the evaluation framework developed in Task 4.

METHODOLOGY

There were seven main steps for conducting the corridor suitability assessment, most of which relied on two sets of corridors: SFMTA's livable streets corridors based on Mike Sallaberry's map and ConnectSF's Transit Corridors Study corridors.

Step 1. Grouping of Sallaberry streets into corridors and establishing baseline understanding of how many Livable Streets corridors and TCS corridors are in the ATS zones

Using ArcGIS, the team first digitized the Livable Streets corridors according to the map created by Mike Sallaberry. These streets were then grouped into logical corridors, which was done by creating continuous corridors along the same street. In ArcGIS, one-quarter mile buffers were created around the Livable Streets corridors.

Because the Livable Streets and TCS corridors will be modified in subsequent steps of this task, staff created a spreadsheet to document baseline conditions. This entails documenting which TCS and Livable Streets corridors fall within each of the ATS zones.

Figure 1. Livable Streets Corridors

Step 2. TCS Corridor modification

The second step of this process was to determine the suitability of the TCS corridors as potential active transportation corridors. There are two main reasons to include the TCS corridors as potential corridors. First, if major transit investments will be directed in these corridors in the future, then parallel efforts should be made to ensure that the future active transportation network aligns with these transit investments. Second, if future transportation dollars are limited and if active transportation projects are to be evaluated alongside transit projects, then it would make sense to ensure that active transportation projects are as competitive as transit projects.

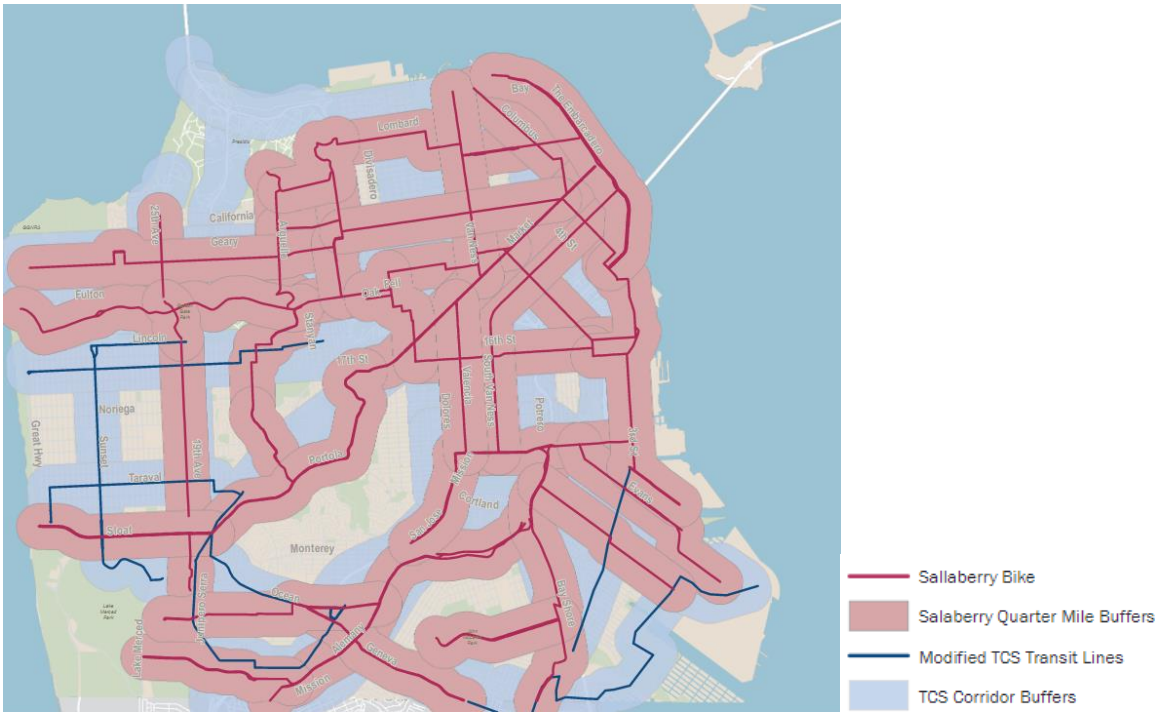
For this step, the team overlaid the Livable Streets corridors on top of the TCS corridors to determine the areas where there is TCS corridor coverage but no corresponding Livable Streets corridor coverage. For areas where there was TCS corridor coverage but no Livable Streets coverage, the team reviewed the suitability of these corridors as active transportation corridors. The team reviewed the transit lines that make up these TCS corridors. Segments of TCS transit lines that are not applicable to an active transportation network were removed. This includes transit lines that are underground (i.e. Muni Metro in Twin Peaks Tunnel).

For each TCS corridor with a Livable Streets corridor already in place, the TCS segment was replaced with the Livable Streets segment. The Livable Streets corridors take preference as they are more relevant to active transportation. In cases where there is overlap but not *direct* overlap, the Livable Streets corridor was chosen over the TCS corridor.

For any TCS corridors with no corresponding Livable Streets corridor, a corresponding bike route was identified and then a quarter-mile buffer was applied. For example, the Van Ness corridor from the TCS was not included. Instead, it was replaced with Polk Street, which is an existing bike corridor, and then a quarter-mile buffer was applied to Polk Street. If there was no corresponding bike route, then the transit line used to create TCS corridor was included and a quarter-mile buffer was applied.

All changes to the corridors are documented in a spreadsheet.

Figure 2. TCS Corridors and Livable Streets Corridors



Step 3. Cleaning up the corridor buffers

The resulting network of Active Transportation Corridors has a number of overlapping corridors. To address redundancy, steps were taken to address the parts of corridors where there was overlap. If there are cases where there is a lot of overlap between certain parts of corridors (i.e. three corridors intersect at a certain neighborhood or destination), then staff first documented the extent of overlap. The following criteria were used for inclusion/exclusion of parts of overlapping corridors:

- NCD and NCT zoning – these are areas of the City with commercial activity and generate foot and bicycling activity
    - The NCD and NCT zoning shapefile was added to corridors map in ArcGIS. If there is overlap in areas designated as NCD or NCT, then these corridors were not modified.

If overlap occurs outside NCD or NCT zoning, then one of the overlapping segments was removed.

- If a corridor buffer overlaps with two or more other buffers in the same direction, consider removing (e.g. M line of Muni Metro)

Step 4. Conduct a gap analysis

Staff then reviewed the resulting active transportation network and searched for gaps in the ATS corridors that were not already captured.

To identify whether there were gaps in the active transportation corridors, staff cross referenced the corridors with the following resources:

a. SFMTA's network of existing Class I and Class IV bicycle facilities
b. SFMTA Capital Improvement Plan (CIP) for FY 2019-2023
c. Neighborhood plans from SFMTA and San Francisco Planning (i.e. Bayview CBTP, Excelsior Outer Mission Neighborhood Strategy, etc.)

Staff also sought feedback on the preliminary corridors during the SFS meeting on January 22, 2020. The gap analysis resulted in the revision of 1 corridor and the addition of 3 corridors. After the gap analysis was conducted, there was a total of 35 corridors (see Figure 3).

Figure 3. Preliminary Active Transportation Corridors – 35 total

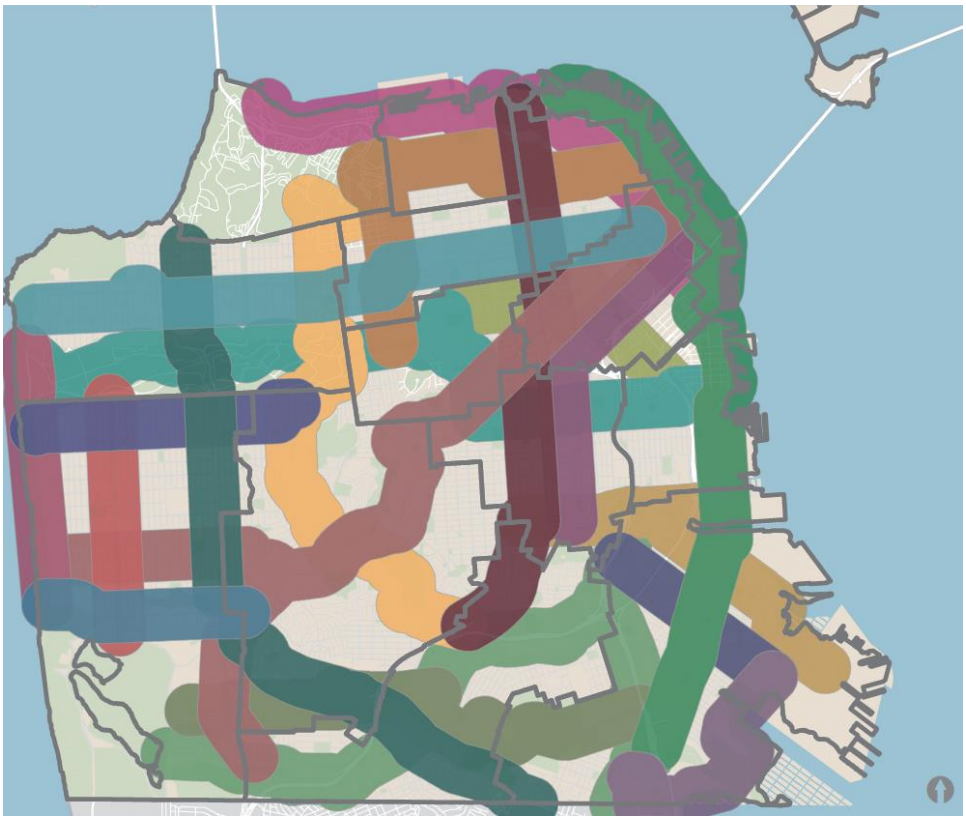
Step 5. Corridor consolidation to cut down on number of corridors

This step did not remove any corridors. Rather, this step is focused on consolidating buffers into logical, lengthier corridors that traverse multiple zones.

For this step, the assumption is that it would be most useful to combine corridors that traverse multiple zones in order to be able to decipher whether there are differences between corridor segments. Analyzing segments of corridors that fall within each zone will help to determine the suitable typology for that portion of the corridor in that zone. Overlapping corridors which follow the same path (e.g. T-Third to Embarcadero) were combined.

After this step was completed, the number of corridors decreased from 35 corridors to 20 corridors (see Figure 3). Again, no corridors were removed and were just consolidated.

Figure 3. Consolidated Active Transportation Corridors (20 total) with Zone Overlay



Step 6. ATS corridors that intersect each zone

Using ArcGIS, staff produced a list of which resulting ATS corridors intersect with each zone. The purpose of this is to analyze each zone based on the context of potential future bike corridors within that zone.

Step 7. Calculate corridor percent coverage of each zone

The last step of this process was to calculate the percentage of the zone that is covered by the corridor. This step will inform the thresholds for inclusion and exclusion of corridors for modeling purposes in Task 4.