**DATE:** November 10, 2020

**TO:** Honorable Mayor and City Council

**FROM:** Ria Hutabarat Lo, Transportation Manager
Damian Skinner, Assistant Public Works Director
Dawn S. Cameron, Public Works Director

**VIA:** Kimbra McCarthy, City Manager

**TITLE:** **AccessMV: Comprehensive Modal Plan**

STUDY SESSION MEMO

CITY OF MOUNTAIN VIEW

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## PURPOSE

Provide an update on AccessMV, Mountain View's Comprehensive Modal Plan, and obtain input on criteria for identifying priority corridors.

## BACKGROUND

The concept of developing a Comprehensive Modal Plan (Plan) was first identified to help fulfill the City Council's Fiscal Years 2017-18 through 2018-19 major goal to: "Develop and implement comprehensive and coordinated transportation strategies to achieve mobility, connectivity, and safety for people of all ages." Due to staff shortages and heavy workloads, the Plan was not completed by the end of Fiscal Year 2018-19, and the project was carried over for Council's Fiscal Years 2019-20 through 2020-21 major goal for transportation.

At the September 19, 2017 Study Session, the City Council concurred that the purpose of the Plan is to consolidate and integrate existing and current transportation plans, studies, and services within a single, cohesive framework (Table 1). Council also supported a focus on major corridors and last-mile connections with the primary outcome of the Plan being to prioritize corridors for infrastructure improvements and services.

On September 4, 2018, Council approved the Comprehensive Modal Plan, Project 19-63, in the amount of $350,000 as a midyear Capital Improvement Program (CIP) project. Council also reviewed the work plan for Plan development. On June 4, 2019, the City Council approved a contract with TJKM Transportation Consultants, with Alta Planning & Design as a subconsultant, to develop the Comprehensive Modal Plan.

**Table 1: Studies, Plans, and Services Basis for Comprehensive Modal Plan**

| General | Streets and Traffic | Transit | Bicycle and Pedestrian |
|---|---|---|---|
| • 2030 General Plan, 2012<br>• Climate Protection Roadmap, 2015<br>• Environmental Sustainability Action Plans, 2016 and 2019<br>• East Whisman Precise Plan, 2020<br>• North Bayshore Precise Plan 2.0, 2017<br>• Downtown Precise Plan, 2015<br>• San Antonio Precise Plan, 2014<br>• El Camino Real Precise Plan, 2014 | • El Camino Real Streetscape Plan CIP 16-67, 2019<br>• Congestion Management Program (CMP) Multi-Modal Improvement Plan, 2019<br>• Shoreline Boulevard Corridor Study CIP 14-44, 2017<br>• California/Escuela/ Shoreline Complete Streets Feasibility Study CIP 14-41, 2015<br>• Santa Clara County Expressway Plan 2040, under way<br>• Grand Boulevard Initiative Guiding Principles, 2006<br>• VTA Valley Transportation Plan 2040, 2014 | • Automated Guideway Transit Feasibility Study CIP 17-36, 2018<br>• Transit Center Master Plan CIP 16-41, 2017; PE/CEQA CIP 18-65 under way<br>• Draft Caltrain Business Plan, under way<br>• Draft State Route 85 Corridor Transit Study, under way<br>• VTA "Next Network" Fiscal Year 2018-19 Transit Service Plan, 2017<br>• MV Community Shuttle<br>• MVgo Shuttle services<br>• Stanford Marguerite Shuttle<br>• VTA Core Connectivity Study | • Pedestrian Master Plan, 2014<br>• Suggested Routes to School<br>• Bicycle Transportation Plan, 2015<br>• Bike Share Pilot, 2018<br>• VTA Pedestrian Access to Transit Plan, 2017<br>• Caltrans District 4 Bike Plan, 2018<br>• VTA Countywide Bicycle Plan, 2018<br>• VTA Countywide Bikeway Map, 2017<br>• Joint Venture Silicon Valley (JVSV) Bike Vision, 2017<br>• Caltrain Bicycle Access and Parking Plan, 2008<br>• Bay Trail Plan, 1989 |

On February 12, 2019, Council approved adding $100,000 to the Comprehensive Modal Plan, Project 19-63, for a Shuttle Study. The purpose of the Shuttle Study was to explore the possible modification, expansion, and/or consolidation of local transit and shuttle services to better serve Mountain View residents and employees. This Study was undertaken as a separate contract by a consulting firm that specializes in transit service planning with the intention for the results to feed into the Comprehensive Modal Plan. The Shuttle Study's major findings were presented to Council in a Study Session on February 24, 2020.

## Project Approach

The Comprehensive Modal Plan has been named "AccessMV" to help portray the intentions of the Plan for the public during the community outreach process. As noted above, AccessMV aims to identify the City's primary transportation network serving all modes, with a focus on major corridors and first-/last-mile connections.

In order to identify the primary transportation network, AccessMV is synthesizing existing conditions and planned improvements from more than 30 different City and regional plans affecting each mode of transportation in Mountain View. The project approach is outlined in Figure 1.

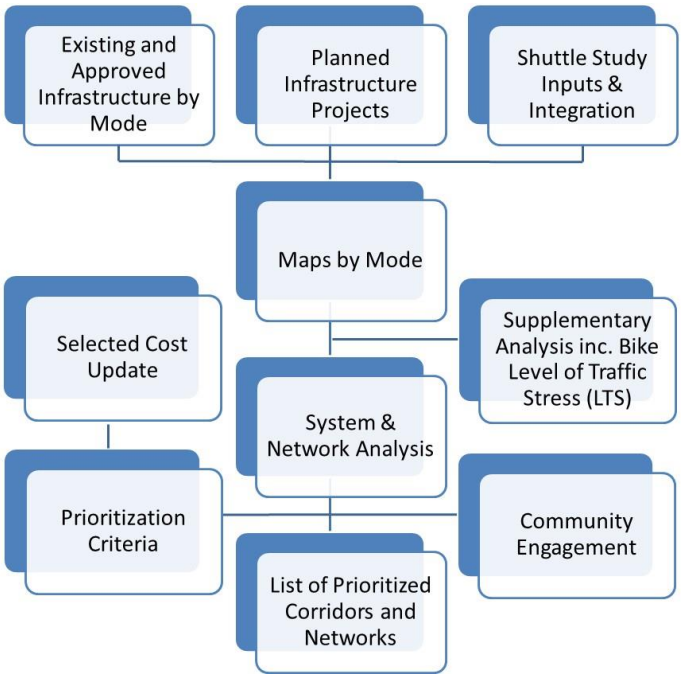


**Figure 1: Project Approach**

The scope of work for AccessMV was expanded to include supplementary analyses that further detailed existing conditions for the pedestrian and bicycle networks in the City.

The extensive data collection and analysis conducted to date includes the following:

- Pedestrian Infrastructure: In addition to mapping the existing and planned pedestrian facilities, a supplementary analysis was conducted to evaluate pedestrian Quality of Service (QOS). The QOS metric was developed to equate information on the pedestrian network facilities to user experience. The

methodology used for this work incorporates data on land-use density and mix, street connectivity, sidewalk continuity, traffic speed, and street width.

- Bicycle Infrastructure: In addition to updating the existing and planned bicycle facilities maps, a supplementary analysis was conducted related to bicycle Level of Traffic Stress (LTS). Bicycle LTS methodology incorporates data on street width (number of lanes) and configuration, posted speed limit, and presence and type of bicycle facilities. LTS scores rate facilities based on the bicyclist's comfort level from LTS 1 (All Ages and Abilities (AAA)) to LTS 4 (Highly Confident).

- Transit/Shuttle Services: As noted above, the results of the Shuttle Study, in particular, the Transit Propensity Map, are integrated into the AccessMV analysis. Transit Propensity indicates likelihood of using transit on a scale of 1 (low) to 5 (high). It incorporates information on youths per acre, seniors per acre, population per acre, low-income population per acre, and number of zero-vehicle households per acre.

- System and Network Analysis: This analysis focused on overlaps and inconsistencies in the City's existing plans and identified gaps in the planned networks.

The maps and findings from the data collection and analyses listed above are summarized in Attachment 1. This information will feed into proposed criteria and metrics for prioritizing the corridors for infrastructure improvements.

## DISCUSSION

In order to develop a framework for prioritizing corridors and transportation improvements on a Citywide scale, key goals and policies have been identified based on General Plan policies. As listed in Table 2, these goals include equity, mobility, connectivity, safety, and sustainability.

**Table 2: Goals and Relevant General Plan Policies**

| Goal | Description | Relevant General Plan Policies |
|---|---|---|
| **Equity** | Equitable distribution of amenities and services/expanded access for all users. | LUD 4.1. Well-distributed and accessible neighborhood centers. Plan for improved pedestrian accessibility to commercial areas from each neighborhood to increase access to retail, goods, and services that serve local residents.<br><br>Other relevant policies: LUD 6.2, MOB 1.2, MOB 1.5. |
| **Mobility** | Complete streets/synergies between modes. | MOB 1.2. Accommodating all modes. Plan, design, and construct new transportation improvement projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists, and persons of all abilities.<br><br>Other relevant policies: MOB 1.1. |
| | Improved transit services. | MOB 5.4. Connecting key areas. Identify and implement new or enhanced transit services to connect downtown, El Camino Real, San Antonio, North Bayshore, East Whisman, and NASA Ames Research Park. |
| **Connectivity** | Reduced gaps in the network. | MOB 4.1. Bicycle network. Improve facilities and eliminate gaps along the bicycle network to connect destinations across the City.<br><br>Other relevant policies: MOB 3.2, MOB 5.4. |
| | Improved connections to community destinations. | MOB 3.2. Pedestrian connections. Increase connectivity through direct and safe pedestrian connections to public amenities, neighborhoods, village centers, and other destinations throughout the City. |

| Goal | Description | Relevant General Plan Policies |
|---|---|---|
| | | Other relevant policies: MOB 1.3, MOB 4.1, MOB 5.4, MOB 6.3. |
| | Improved first-/last-mile connections. | MOB 5.5. Access to transit services. Support right-of-way design and amenities consistent with local transit goals to make it easier to get to transit services and improve transit as a viable alternative to driving.<br><br>Other relevant policies: MOB 6.3. |
| **Safety** | Improved safety for vulnerable users, especially pedestrians and bicyclists. | MOB 1.6. Traffic calming. Provide traffic calming, especially in neighborhoods and around schools, parks, and gathering places.<br><br>Other relevant policies: MOB 3.1, MOB 3.3, MOB 4.1, MOB 4.2, MOB 6.2. |
| **Sustainability** | Reduced Vehicle Miles Traveled (VMT) and greenhouse gas emissions. | MOB 9.2. Reduced vehicle miles traveled. Support development and transportation improvements that help reduce greenhouse gas emissions by reducing per-capita vehicle miles traveled.<br><br>Other relevant policies: LUD 9.2, MOB 3.4, MOB 10.3. |

In addition to the above goals, the General Plan sets out priorities for different street typologies in the City. These are displayed in Figure 2 and Table 3 respectively. This framework will help to refine analysis results with respect to specific corridors.

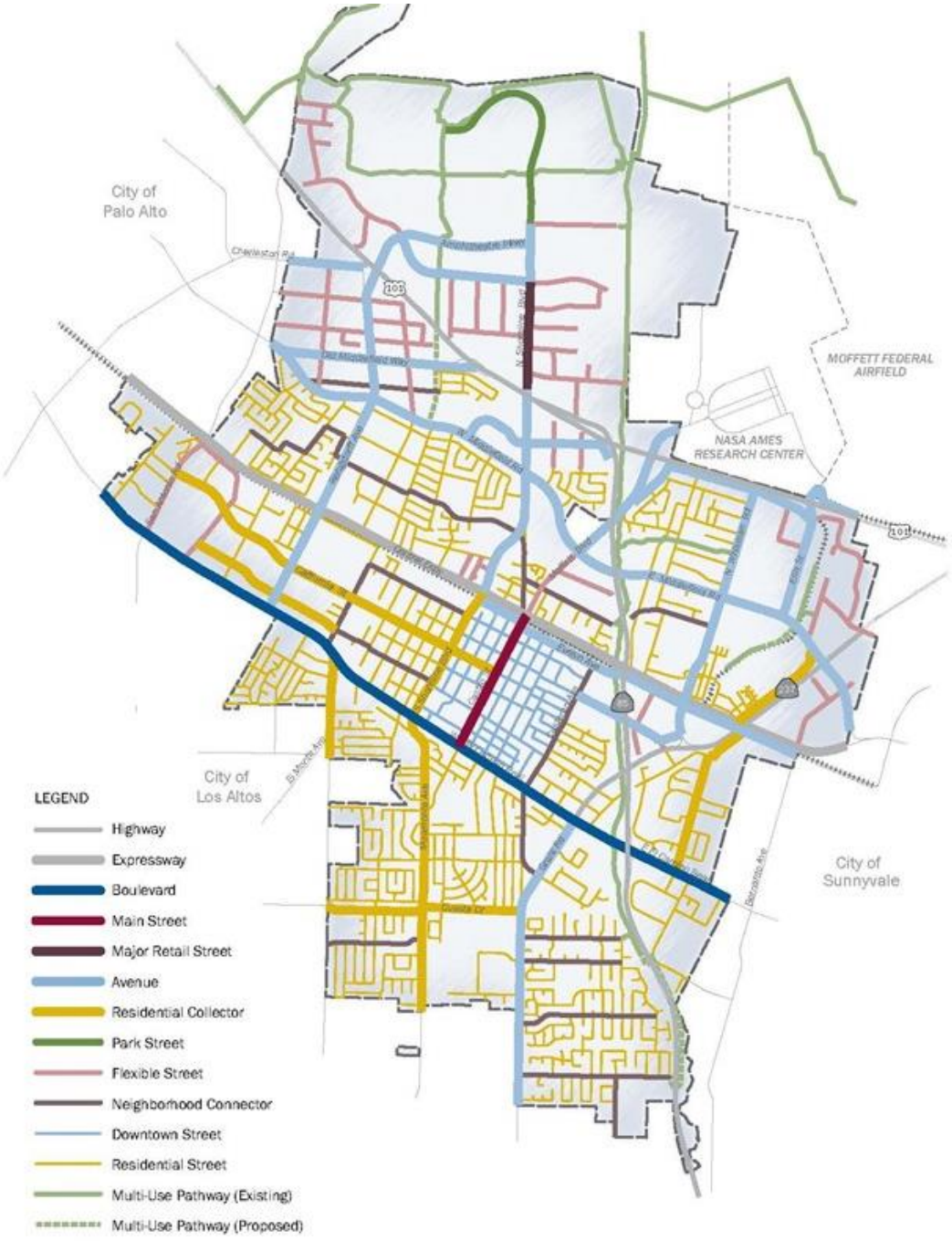


**Figure 2: General Plan Street Typologies**

**Table 3: General Plan Mode Priority by Street Typology**

| Street Type | General Plan Mode Priority | | | |
|---|---|---|---|---|
| | **Pedestrian** | **Bicycle** | **Transit** | **Vehicle** |
| **Highway** | - | - | - | High |
| **Expressway** | Low | Low | Low | High |
| **Boulevard** | High | Medium/ Low | High | High |
| **Avenue** | Medium | High/ Medium | Medium/ Low | Medium |
| **Main Street (Castro)** | High | Medium/ Low | Medium | Medium |
| **Major Retail Street (North Bayshore)** | High | High | High | High |
| **Downtown Street** | High | High/ Medium | Medium/ Low | Medium |
| **Flexible Street** | High | High/ Medium | Medium/ Low | Medium |
| **Residential Collector** | High | High | Low | Medium |
| **Neighborhood Collector** | High | High | Low | Medium/ Low |
| **Residential Street** | High | High | Low | Low |
| **Park Street** | High | High | Low | Low |
| **Multi-Use Pathway** | High | High | - | - |

**Proposed Criteria and Metrics**

In order to rank corridors with respect to the goals in Table 2, specific criteria and metrics are proposed for each goal. These criteria and metrics are shown in Table 4 along with proposed weighting.

**Table 4: Proposed Criteria and Metrics**

| Goals | Criteria | Points | Metrics |
|---|---|---|---|
| **Equity**<br><br>**(20 point max)** | Corridor serves disadvantaged residents. | 0<br>5<br>10 | CalEnviroScreen Score 1% to 20%<br>CalEnviroScreen Score 21% to 40%<br>CalEnviroScreen Score 41+%<br>*(see Note 1)* |
| | Corridor has a high transit propensity score. | 0<br>5<br>10 | Transit Propensity Score 1<br>Transit Propensity Score 2-3<br>Transit Propensity Score 4-5<br>*(see Note 2)* |
| **Mobility**<br><br>**(26 point max)** | Corridor is a high-priority corridor for the mode according to the General Plan street typology (cumulative). | 1<br>2<br>3<br>4 | N/A<br>Low<br>Medium<br>High |
| | Corridor accommodates all modes. | 2<br>6<br>10 | Accommodates 1 mode<br>Accommodates 2 to 3 modes<br>Accommodates all modes |
| **Connectivity/ Walkability/ Bikeability**<br><br>**(38 point max)** | Corridor connects residents to major destinations. | 0<br><br>3<br>6<br>9 | Not within 1/4 mile of any destinations<br>Within 1/4 mile of 1 destination<br>Within 1/4 mile of 2-4 destinations<br>Within 1/4 mile of 5+ destinations |
| | Planned improvements for this corridor close a gap in the existing network. | 0<br>3<br>6<br>9 | Does not close a gap<br>Closes a gap (has existing facility)<br>Closes a gap (no existing facility)<br>Reduces the number of low-stress islands |
| | Corridor improves first-/last-mile connections. | 0<br>5<br>10 | Not within 1/2 mile of any transit<br>Within 1/2 mile of shuttle/bus<br>Within 1/2 mile of Caltrain, light rail, or El Camino Real |

| Goals | Criteria | Points | Metrics |
|---|---|---|---|
| | Corridor improves directness of travel to destinations. | 0<br>5<br><br>10 | Low density of 4-way intersections<br>Medium density of 4-way intersections<br>High density of 4-way intersections |
| **Safety**<br><br>**(25 point max)** | Planned improvements make corridor accessible to all ages and abilities. | 0<br><br>5<br><br>10 | None of the corridor meets AAA threshold<br>Some of corridor meets AAA threshold<br>All of corridor meets AAA threshold<br>*(see Note 3)* |
| | Corridor is part of the high-injury network (HIN) identified through Vision Zero. | 0<br>5<br>10 | None of the corridor is on the HIN<br>Some of corridor is on the HIN<br>All of corridor is on the on HIN |
| | Corridor is on a suggested route to school (SRTS). | 0<br>5 | Not on SRTS route<br>On SRTS route |
| **Sustainability**<br><br>**(10 point max)** | Planned improvements for this corridor reduce VMT and greenhouse gas emissions. | 0<br><br>5<br><br>10 | Motor vehicle project that results in increased/unchanged VMT<br>Motor vehicle project that results in reduced VMT<br>Bike, pedestrian, or transit project |

| Goals | Criteria | Points | Metrics |
|---|---|---|---|
| **Consistency**<br><br>**(15 point max)** | Planned improvements for this corridor are identified in multiple previous plans. | 2<br>6<br>10 | Identified in 1 other plan<br>2 to 3 previous plans<br>4+ previous plans |
| | Corridor is on a VTA Across Barrier Connection (ABC) or Cross County Bicycle Connection (CCBC). | 0<br>5 | Not an ABC or CCBC<br>Is an ABC or CCBC |
| **Maximum Possible Points** | | 134 | |

1. CalEnviroScreen is a standard equity screening tool used to help identify communities disproportionately burdened by multiple sources of pollution and with population characteristics that make them more sensitive to pollution.
2. Transit Propensity indicates likelihood of using transit on a scale of 1 (low) to 5 (high).
3. AAA—All Ages and Abilities, which relates to bicycle facilities with a LTS of 1.

These metrics would be applied to corridors throughout the City. For longer corridors, analysis will be undertaken by segment as illustrated in Figure 3.

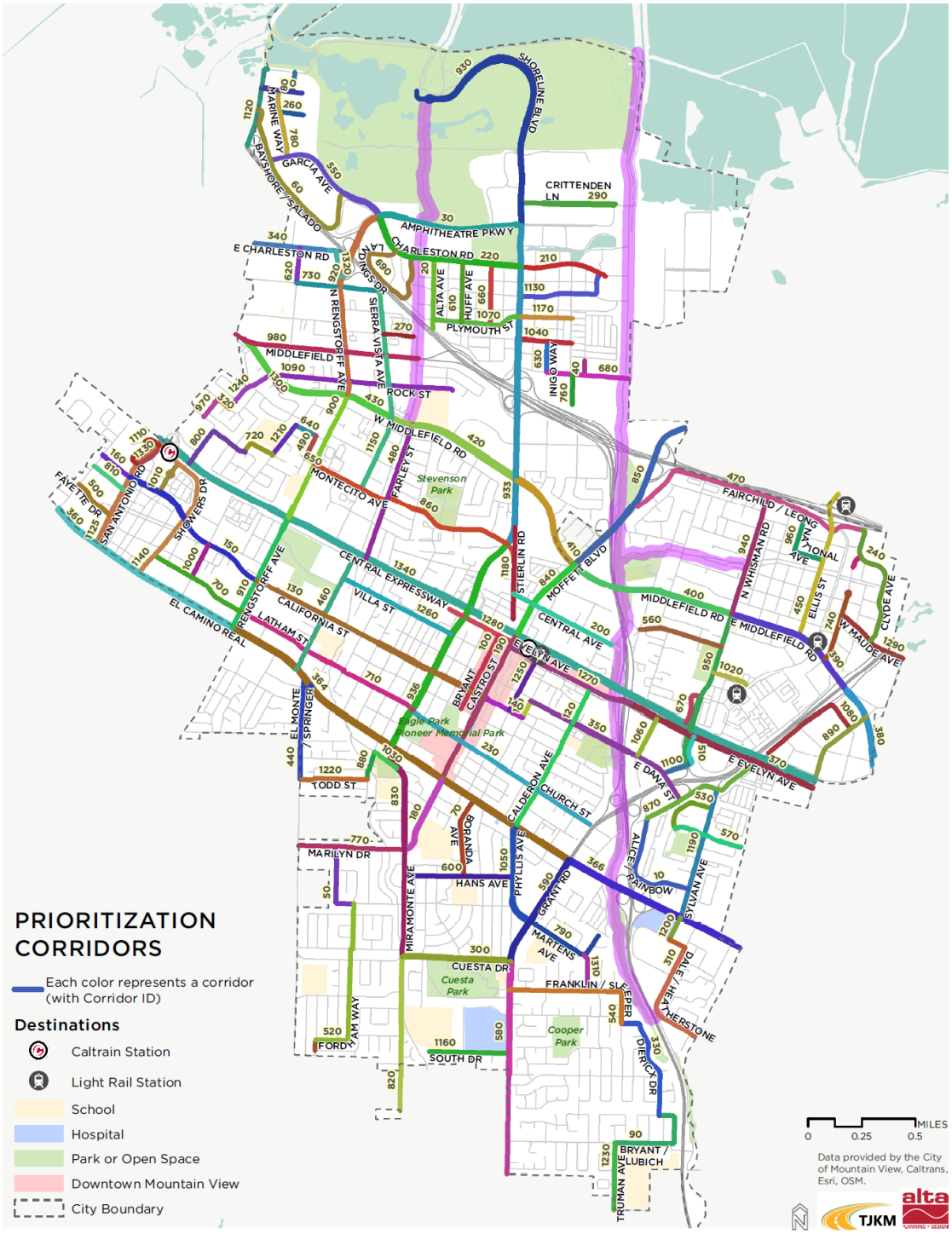


**Figure 3: Corridor Segmentation for Analysis**

An example of how the weighted criteria and metrics would be applied to a corridor segment and its planned improvements is shown in Table 5. The corridor segment

evaluated is California Street between Rengstorff Avenue and Castro Street, which includes a planned improvement for a Complete Street pilot project involving various pedestrian and bicycle improvements.

**Table 5: California Street Example**

| Goals | Criteria | Maximum Points | California Street |
|---|---|---|---|
| **Equity** | Corridor serves disadvantaged residents. | 10 | 5 |
| | Corridor has a high transit propensity score. | 10 | 10 |
| **Mobility** | Corridor is a high-priority corridor for the mode according to the General Plan street typology. (Cumulative) | 16 | 13 |
| | Corridor accommodates all modes. | 10 | 10 |
| **Connectivity** | Corridor connects residents to major destinations. | 9 | 9 |
| | Planned improvements for corridor close a gap in the existing network. | 9 | 3 |
| | Corridor improves first-/last-mile connections. | 10 | 10 |
| | Corridor provides directness of travel to destinations. | 10 | 10 |
| **Safety** | Corridor is accessible to all ages and abilities. | 10 | 5 |
| | Corridor is part of the high-injury network. | 10 | 10 |
| | Corridor is on a suggested route to school. | 5 | 0 |
| **Sustainability** | Planned improvements for corridor reduce VMT and greenhouse gas emissions. | 10 | 10 |

| Goals | Criteria | Maximum Points | California Street |
|---|---|---|---|
| **Consistency** | The planned improvements for this corridor are identified in multiple previous plans. | 10 | 6 |
| | Corridor is on an ABC or CCBC. | 5 | 5 |
| **TOTAL** | | **134** | **106** |

Based on this initial analysis, California Street would receive a score of 106 points out of a maximum of 134. This corridor would likely score high for its planned improvements in the final prioritized list, although the exact ranking would be determined after all other corridor segments are evaluated.

During the CIP process, additional consideration will be given to project-specific issues, such as total cost associated with the project, the availability of grant funding, funding deadlines, legal mandates, and synergistic opportunities, such as that associated with street repaving.

## Community and Stakeholder Engagement

*Bicycle/Pedestrian Advisory Committee*

Elements of AccessMV have been reviewed by the Bicycle/Pedestrian Advisory Committee (B/PAC) at their meetings on February 26, 2020, June 24, 2020, and September 30, 2020. At these meetings, B/PAC provided input on early deliverables and draft prioritization criteria. Input from individual B/PAC members included recommendations to:

- Elevate the transit center and schools as destinations;
- Add additional sustainability points;
- Consider utilization as a factor in prioritization criteria; and
- Test scoring on more examples.

As a result of this input, points were added for suggested routes to school and VTA bikeway designation (shown in Table 4). Utilization has not been included as a criterion due to lack of Citywide data on this factor. In order to avoid concerns about biasing the analysis, additional corridors will not be evaluated on a test basis.

*Stakeholders – Public Agencies*

A virtual stakeholder meeting was held on October 5, 2020 to obtain input on AccessMV from staff from neighboring State and local agencies. Staff from the Cities of Los Altos, Palo Alto, and Sunnyvale as well as the County of Santa Clara, Valley Transportation Authority (VTA), Caltrain, and Caltrans participated. These stakeholders generally supported the metrics proposed. Individual stakeholders suggested that the City consider potential metrics for transit speed, community support, and utilization. Stakeholders also recommended utilizing suggested routes to school, across-barrier connection (ABC), and cross-county bicycle connection (CCBC) designations as additional metrics. Staff from neighboring cities also recommended considering destinations across City borders, and VTA staff provided points of interest to assist in this analysis. This input is reflected in the metrics provided in Table 4.

*Community Outreach*

Community members provided input on the project at a virtual community meeting held on October 22, 2020. Staff advertised the virtual community meeting and online survey via yard signs, social media posts, e-mail blasts, the City calendar, website, and committee subscription e-mails. Twenty-one (21) members of the community attended this meeting. During the meeting, several polling questions were asked of attendees:

- Respondents indicated that they lived (83 percent) and/or worked (67 percent) in Mountain View.

- They typically get around by driving (75 percent), walking (75 percent), biking (58 percent), and transit (17 percent).

- Their priorities for AccessMV were safety for all road users (75 percent), convenient bicycle and pedestrian routes (75 percent), reduced greenhouse gas emissions (58 percent), and vehicular travel times (42 percent) as well as access to transit services and destinations (25 percent) and equitable distribution of services (17 percent).

- They would like to see the City prioritize access by bicycles (86 percent), transit (71 percent) and walking (64 percent), carpool (14 percent) and single-occupancy vehicles (7 percent).

- A majority of respondents indicated that they support the proposed metrics (69 percent) and suggested scoring system (71 percent).

Attendees provided open-ended suggestions that the City consider destinations in neighboring cities, potential ridership or utilization rates, and implications for more diverse transportation modes, including skateboards, e-scooters, transportation network company services (like Uber and Lyft), and autonomous vehicles. Attendees also expressed support for completing the low-stress bikeway network with more Class IV protected bikeways (specifically including Fairchild Drive and California Street) and street trees to improve walkability. Participants also requested information on how cost and feasibility would be integrated into project prioritization.

An online survey was developed to supplement input provided at the virtual community meeting and was advertised in a similar manner to the virtual public meeting. The survey was launched on October 22, 2020 and remains open until November 12, 2020. As of October 30, 2020, 16 people have responded to the online survey.

## RECOMMENDATION

Provide input on the following questions:

- Are there any other key themes or goals which should be considered in the prioritization of corridors and planned transportation projects?

- Do you concur with the presented criteria and metrics for assessing the corridors against these key themes or goals for transportation in Mountain View?

- Do you concur with the weights suggested by the above scoring system for each metric?

## NEXT STEPS

Staff will finalize the proposed criteria and metrics and then proceed to score all the corridor segments to develop a prioritized ranking of corridors with their associated planned improvements. Cost estimates for the major planned improvements will also be updated. The results of the prioritization process will be included in the draft AcessMV Plan for public review and Council approval in early 2021. The planned improvements for corridors identified as highest priority will be considered for the upcoming five-year Capital Improvement Program.

## PUBLIC NOTICING

Agenda posting and distribution to B/PAC members and subscribers.

RHL-DS-DSC/TS/6/CAM/947-11-10-20SS

Attachment: 1. Summary of Data Collection and Analysis

cc: APWD—Skinner, TM, TP—Bodduna, TP—Kim