CITY OF MOUNTAIN VIEW

MEMORANDUM

Public Works Department
Community Development Department

DATE: November 7, 2016

TO: Council Transportation Committee

FROM: Eric Anderson, Associate Planner
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Michael A. Fuller, Public Works Director

SUBJECT: Multimodal Improvement Plan

RECOMMENDATION

Provide feedback on actions for inclusion in the Multimodal Improvement Plan.

BACKGROUND

On November 10, 2015, the City Council authorized staff to begin work on a Multimodal Improvement Plan to comply with Santa Clara Valley Transportation Authority's (VTA) Congestion Management Program (CMP). The project team consultant is TJKM, a transportation consulting firm with experience on many projects in the City.

The City's Multimodal Improvement Plan will include measures to address future congestion impacts in the area, including improvements at impacted intersections to improve vehicle flow and improvements and programs to support travel by other modes.

Congestion Management Program (CMP)

The CMP is mandated by State law and is maintained for the County by the VTA. The CMP is a comprehensive transportation improvement program with the goal to reduce traffic congestion, improve air quality, and inform land use decision making. The VTA has established a list of major intersections monitored for congestion with level of

service (LOS) standards set by the CMP statute. Attachment 1 shows all CMP facilities in the Mountain View area.

According to CMP legislation, if a city fails to meet LOS standards for one or more of these intersections, it risks forfeiting roughly 25 percent of gas tax allocations from the State (about $405,000 per year for Mountain View). Based on analyses of 2030 General Plan growth, as well as regional growth, several intersections are projected to fall below the CMP LOS standard.

Avoidance of Street Widening with Multimodal Improvement Plan

In general, LOS standards have been achieved through street widening. The Mountain View 2030 General Plan's policy direction, however, does not support street widening as a strategy (see Policy MOB 10.3: Avoidance of Street Widening, Page 114). This is due to limited space for additional right-of-way, increased crossing distances for pedestrians, induced demand, and other issues related to the City's desired future character. Instead, the General Plan directs future efforts to include transportation demand management, operational improvements, and multimodal improvements and services.

The VTA supports multimodal policies and programs instead of street widening. However, the VTA requires cities to prepare a Multimodal Improvement Plan to document existing and future efforts to address increased congestion. If the Multimodal Improvement Plan is adopted and approved by the VTA Board of Directors, the City will be in conformance with the CMP, even if intersections fall below the LOS standard, and will not risk losing gas tax revenue.

A Multimodal Improvement Plan is a key tool in the transition from vehicle-centered LOS standards toward a more multimodal future. It documents the City's commitment to improving transportation and air quality outcomes. It also provides a road map for improving transportation in the City, which is fully built-out and has significant space constraints to road-widening.

A Multimodal Improvement Plan allows the City flexibility when meeting LOS standards is impossible or undesirable. For example, the City has already invested significant planning efforts to create pedestrian- and bicycle-friendly streets (also known as "complete streets"), support sustainable development, and create connections to neighboring cities. These and other projects improve systemwide multimodal transportation instead of strictly adhering to a traffic LOS standard that may contradict other community goals.

The Multimodal Improvement Plan effectively consolidates City measures to combat congestion and support sustainable transportation. In doing so, it communicates the progress the City is making to its community and region. It is also a plan for implementing and funding these measures. Funding can be accomplished through grants (such as the One Bay Area Grant), "Public Benefits" from developers, other City funding sources, and developer mitigations (such as location-specific improvements or payment of an impact fee).

Other Intersections

Intersections outside the City must also be addressed by the Multimodal Improvement Plan. They may be mitigated in any way agreed upon between the two jurisdictions, including widening, minor reconfigurations, or performance enhancements. In addition, multimodal actions may also be proposed to offset any facilities that cannot be mitigated.

While the CMP only requires the City to study CMP intersections, the project team is also studying other (non-CMP) intersections in the City that are projected to fall below the City's LOS standards based on 2030 General Plan growth. These intersections are also shown in Attachment 1.

ANALYSIS

Intersections Below LOS Standards

Some facilities in the Mountain View area are projected to fall below CMP and City LOS standards by 2030 (the CMP LOS standard is "E," and the City LOS standard is "D" in most areas and "E" in the downtown and San Antonio areas). In some cases, minor changes to lane configurations can improve LOS performance without street widening. However, other City policies and plans often include multimodal improvements (such as bicycle lanes or bulb-outs) that may conflict with these reconfigurations.

The project team conducted an overview analysis of intersections to determine where LOS improvements might be possible, and where LOS improvements might conflict with multimodal improvements. A summary of this analysis is in Attachment 2 (Study Intersections). Since it is Citywide, this analysis should be considered "high-level," and not a comprehensive engineering of specific intersections. Future analyses may find opportunities to combine vehicle and multimodal improvements, or make other conclusions about specific priority in specific locations.

The question below asks the Council Transportation Committee (CTC) to broadly (i.e., at a Citywide level) weigh in on the trade-off between: (a) mitigation of LOS at intersections (i.e., vehicle priority); and (b) consideration of multimodal improvements that constrain mitigation (i.e., multimodal priority). This input is specifically for selection of actions and identification of deficient facilities in the Multimodal Improvement Plan, and not a general statement of priority in future transportation decisions. Even if the Multimodal Improvement Plan includes actions based on prioritizing multimodal improvements, City staff will continue to look for specific opportunities to improve LOS, either as mitigations for specific developments or through the CIP process.

The following discussion describes the effects of each option:

Projects in Multimodal Improvement Plan—With vehicle priority, more vehicle-oriented improvements, such as dedicated turn lanes, would be included in the Multimodal Improvement Plan. With multimodal priority, some vehicle improvements would be included (if they do not conflict with identified multimodal improvements), but there would be more multimodal improvements, such as bicycle lanes.

Vehicle Performance—Since the full LOS mitigation (vehicle-priority) option puts a higher priority on vehicles, LOS performance and vehicle delay at these intersections would be better. The table in Attachment 2 gives an estimate of the improvement. However, these are long-term projections and are subject to changing conditions over the next 15 years.

Multimodal Performance—The vehicle priority option may make it more difficult to implement the City's Bicycle Transportation Plan and other multimodal plans, since the prioritized vehicle improvements in the Multimodal Improvement Plan may conflict with those multimodal plans.

City Obligations to the VTA—If the City prioritizes LOS conformance through the vehicle-priority option, the VTA may expect the City to maintain that LOS, despite continued local and regional growth. In this way, prioritizing the multimodal improvements gives the City more flexibility in the future design of the facility.

Based on the discussion above, staff recommends broadly prioritizing the multimodal improvements over LOS conformance in the Multimodal Improvement Plan.

Question 1. For the development of the Multimodal Improvement Plan actions and identification of deficient facilities, does the CTC support

staff's recommendation that multimodal improvements should be given broad priority over vehicle LOS conformance?

Multimodal Improvement Plan Actions

The VTA's Deficiency Plan Requirements set the categories of actions a Multimodal Improvement Plan can include. These action categories are developed by the VTA and the Bay Area Air Quality Management District, and are all related to reduction of single-occupancy and private vehicle use. They are intended to offset increases in vehicle congestion and to improve air quality. Attachment 3 (Draft Action Summary) is a summary of City actions consistent with the VTA categories.

Actions in the Multimodal Improvement Plan must be implemented for the City to stay in conformance with the CMP. The City must conduct annual monitoring and reporting to the VTA to verify that these actions are being implemented. If the City is not meeting the implementation schedule set forth in the Multimodal Improvement Plan, the VTA may require the City to expedite the implementation schedule, or otherwise find the City in nonconformance with the CMP.

Actions can be implemented directly by developers, or they can be implemented by the City and funded through an impact fee which would be levied on new development. The City Council will be reviewing the potential impact fee options later in the process.

CTC input will help the project team refine the Multimodal Improvement Plan actions. After this meeting, the project team will fully develop the actions with implementation timing and cost estimates. The project team will return to the City Council with those data later in the process.

Draft Action Summary—Existing Actions

Attachment 3 identifies how actions in the Multimodal Improvement Plan will be selected from City-adopted plans and documents, such as the new Precise Plans, Bicycle Transportation Plan Update, Pedestrian Master Plan, other feasibility studies, and others. In general, the project team will use the following considerations to select actions for the Multimodal Improvement Plan:

Action Selection Considerations:

1. **Priority.** Priority or near-term projects identified in these other documents will be included.

2. **Effectiveness.** Actions in the Multimodal Improvement Plan must measurably improve multimodal performance and have a positive effect on air quality. Projects will be selected based on their effectiveness toward multimodal performance and contribution to air quality improvements.

3. **Cost.** Actions in the Multimodal Improvement Plan will be the basis for an impact fee on new development. Since the impact fee consolidates funds from multiple developments, high-cost projects will be more feasible than they would otherwise be if they are included in the Multimodal Improvement Plan.

4. **Certainty.** The project team will determine whether significant constraints make implementation of the action uncertain. Significant constraints may include neighborhood quality-of-life impacts, such as the loss of large amounts of parking. If after future study, these uncertain actions are determined feasible, the City can include them in updates to the Multimodal Improvement Plan and impact fee.

Question 2. Does the CTC agree with the considerations for including specific actions from other plans and documents (priority, effectiveness, cost, and certainty)?

Draft Action Summary—New Actions

Most of the Multimodal Improvement Plan will be made up of actions taken from existing documents. However, the project team has identified the following topics for new, previously unidentified actions that could be included as part of the Multimodal Improvement Plan:

New Action Topics:

1. **Bicycle Facilities and Showers at Development:** Update to the bicycle parking and amenity requirements in the Zoning Ordinance.

2. **Improvement of Bus, Rail, and Ferry Transit Services:** The project team can develop ideas for programs or policies to support regional transit serving the City. This would include working with the VTA to identify transit expansion opportunities and funding sources.

3. **Expanded Public Education Programs:** The project team can identify and propose actions that expand public education around transportation and air quality, possibly in partnership with the Mountain View Transit Management Association and other organizations.

4. **Signalization Improvements and Computerized Traffic Management:** The project team can identify possible actions to improve signal timing and computerized traffic management.

With the CTC's concurrence, the project team will continue to develop implementable actions based on these topics. These actions will be presented to the City Council for their review along with the draft Multimodal Improvement Plan.

Question 3. Does the CTC recommend the project team continue to develop new actions based on the "New Action Topics" above?

NEXT STEPS

Based on input from the CTC, the project team will develop a Draft Action Plan, which will include phasing and cost estimates for items in the Draft Action List. The cost estimates will inform the development of an impact fee. The City Council will review this information to provide input on the range of potential impact fees, the detailed action plan, and implementation measures (such as funding and coordination with other jurisdictions). After the City Council reviews it, VTA advisory groups will also review the Draft Action Plan. Comments from both organizations will be incorporated into a final Multimodal Improvement Plan and proposed impact fee, which is expected to be adopted by the City Council and VTA in fall 2017.

CONCLUSION

Staff is seeking CTC input on content for the Multimodal Improvement Plan, including the following questions:

1. For the development of the Multimodal Improvement Plan actions and identification of deficient facilities, does the CTC support staff's recommendation that multimodal improvements should be given broad priority over vehicle LOS conformance?

2. Does the CTC agree with the considerations for including specific actions from other plans and documents (priority, effectiveness, cost, and certainty)?

3. Does the CTC recommend the project team continue to develop new actions based on the "New Action Topics" above?

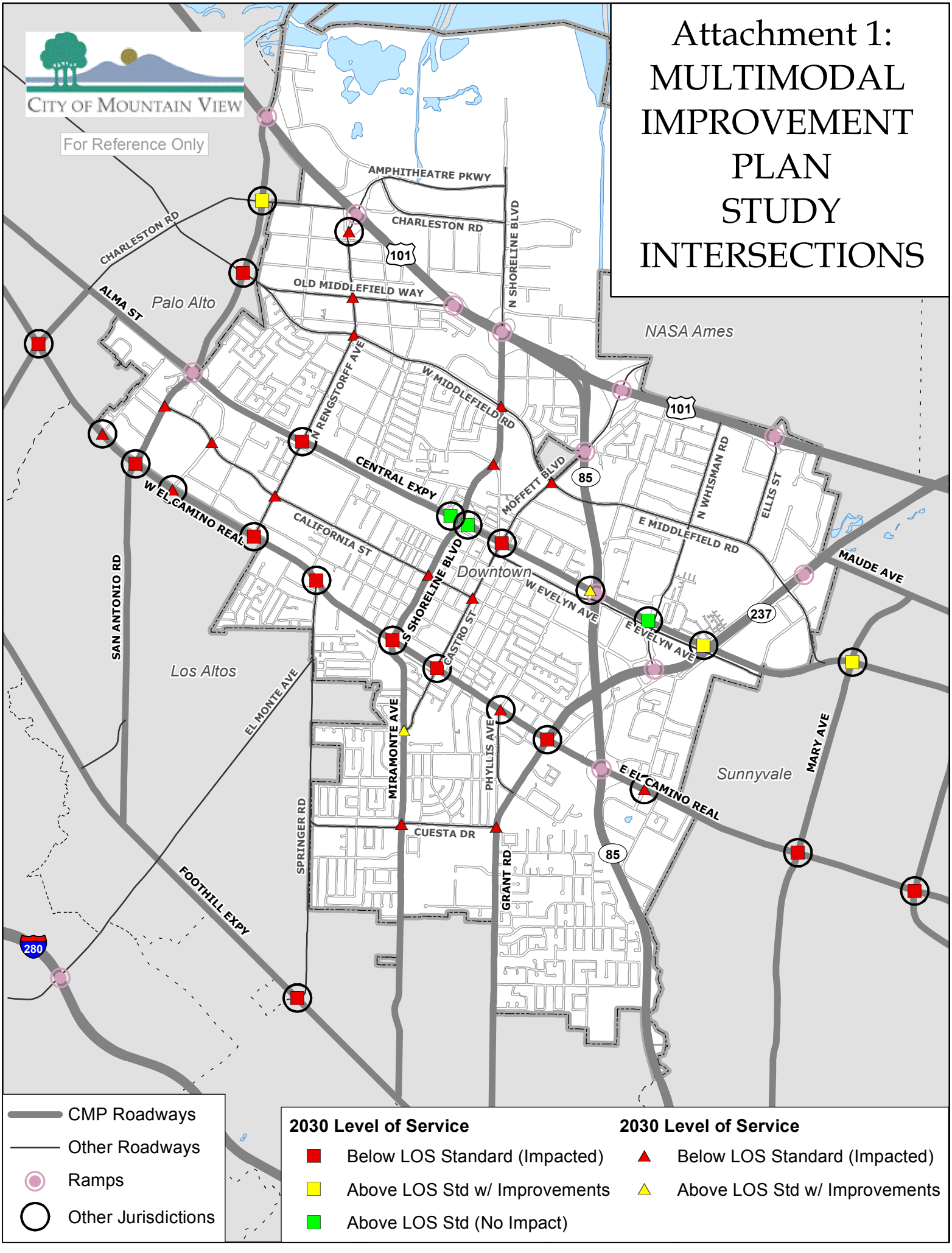
PUBLIC NOTICING

Agenda posting, and interested parties were notified of the meeting.

EA-RG-JAS-MAF/7/CDD
899-11-07-16M-E

Attachments:
1. Study Intersection Map
2. Study Intersections
3. Draft Action Summary

Attachment 1: MULTIMODAL IMPROVEMENT PLAN STUDY INTERSECTIONS



ATTACHMENT 2: Study Intersections

The table below shows the intersections that are projected to fall below LOS standards. The column on the left shows the LOS at the intersection if vehicle improvements are prioritized over multimodal improvements and some additional right-of-way is acquired (LOS shown is the lower of a.m. peak period and p.m. peak period). The column on the right shows the LOS if the multimodal improvements are prioritized over vehicle improvements. Attachment 1 (Study Intersection Map) shows their locations.

Since it is City-wide, this analysis should be considered "high-level", and not a comprehensive engineering of specific intersections. Future analyses may find opportunities to combine vehicle and multimodal improvements, or make other conclusions about specific priority in specific locations.

List 1: Intersections projected to fall below LOS standards with multimodal priority

Intersection (**CMP intersections in BOLD**)	Jurisdiction*	Year 2030 Condition (Lowest LOS)	
		Vehicle Priority	Multimodal Priority
Charleston Rd-Arastradero Rd/El Camino Real	Palo Alto/State	E	**F**
San Antonio Rd/El Camino Real	MV/Los Altos/State	**F**	**F**
Rengstorff Ave/El Camino Real	MV/Los Altos/State	**F**	**F**
El Monte Ave/El Camino Real	MV/State	D	**F**
Shoreline Blvd/El Camino Real	MV/State	E	**F**
Castro St/El Camino Real	MV/State	E	**F**
SR 237-Grant Rd/El Camino Real	MV/State	E	**F**
Rengstorff Ave/Central Expy	MV/County	E	**F**
Moffett Blvd-Castro St/Central Expy	MV/County	E	**F**
San Antonio Rd/Middlefield Rd	Palo Alto	**F**	**F**
Foothill Expy/Springer Rd	Los Altos/County	D	**F**
Mary Ave/El Camino Real	Sunnyvale/State	E	**F**
Mathilda Ave/El Camino Real	Sunnyvale/State	**F**	**F**
Rengstorff Ave/US 101 SB Ramps	MV/State	**F**	**F**
Del Medio Ave/El Camino Real	MV/Los Altos/State	D	**F**
Showers Dr/El Camino Real	MV/Los Altos/State	D	**F**
Calderon Ave-Phyllis Ave/El Camino Real	MV/State	D	**F**
Sylvan Ave-The Americana /El Camino Real	MV/State	D	**F**
San Antonio Rd/California St	MV	E	**F**
Showers Dr/California St	MV	D	**E+**

Intersection (**CMP intersections in BOLD**)	Jurisdiction*	Year 2030 Condition (Lowest LOS)	
		Vehicle Priority	Multimodal Priority
Rengstorff Ave/California St	MV	D	**F**
Shoreline Blvd/California St	MV	D	**F**
Castro St/California St	MV	D	**F**
Rengstorff Ave/Old Middlefield Way	MV	**E-**	**E-**
Rengstorff Ave/Middlefield Rd	MV	**E**	**E**
Shoreline Blvd/Middlefield Rd	MV	**F**	**F**
Shoreline Blvd/Montecito Ave-Stierlin Rd	MV	D	**F**
Moffett Blvd/Middlefield Rd	MV	D	**F**
Miramonte Ave/Cuesta Dr	MV	D	**F**
Grant Rd/Cuesta Dr	MV	D	**E**

*Priorities for other jurisdictions are subject to their review

List 2: Intersections without conflict between vehicle improvements and multimodal improvements

Intersection (**CMP intersections in BOLD**)	Jurisdiction*	Year 2030 Condition (Lowest LOS)	
		Vehicle Priority	Multimodal Priority
San Antonio Rd/ Charleston Rd	Palo Alto	E	E
Mary Ave/Central Expy	Sunnyvale/County	E	E
Ferguson Dr/Central Expy	MV/County	C	C
SR 85 SB Off-Ramp/Central Expy	MV/State/County	C	C
Miramonte Ave/Castro St-Marilyn Dr	MV	C	C

*Priorities for other jurisdictions are subject to their review

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ATTACHMENT 3: Draft Action Summary

for the Citywide Multimodal Improvement Plan

This memo summarizes the key sources for Citywide Multimodal Improvement Plan actions. The list is organized into six categories based on the Valley Transportation Authority Deficiency Requirements, followed by respective sub-categories. The six categories are:

A. Bicycle and Pedestrian Actions
B. Transit
C. Carpooling, Buspooling, Vanpooling, Taxipooling, Jitneys, Casual carpooling and other Shared Rides (Ridesharing)
D. High Occupancy Vehicle (HOV) Facilities
E. Other TCMs Related Measures
F. Traffic Flow Improvements

Further information is provided for each action item in the following pages.

Table1. Valley Transportation Authority Implementation Action List

VTA Action Item Summary
A. BICYCLE AND PEDESTRIAN ACTIONS
A1. Improved Roadway Bicycle Facilities and Bike Paths
A2. Transit and Bicycle Integration
A3. Bicycle Lockers and Racks at Park and Ride Lots
A4. Bicycle Facilities and Showers at Development
A5. Improved Pedestrian Facilities
A6. Pedestrian Signals
A7. Lighting for Pedestrian Safety (north Bayshore and Shoreline)
B. TRANSIT
B1. Improvement of Bus, Rail and Ferry Transit Services
B2. Expansion of Rail Transit Service
B3. Expansion of Ferry Services
B4. Preferential Treatment for Buses and In-Street Light Rail Vehicles (LRVs)
B5. Transit Information and Promotion
B6. Transit Pricing Strategies to Encourage Ridership and, where applicable, Reduce Transit Vehicle Crowding
B7. Transit Fare Subsidy Programs
B8. Transit Centers
B9. Improved and Expanded Timed Transfer Programs
B10. Improved and Expanded Fare Coordination
B11. Signal Preemption by Transit Vehicles
B12. Bus Stop Bulbs
B13. School Bus Transit Service
C. CARPOOLING, BUSPOOLING, VANPOOLING, TAXIPOOLING, JITNEYS, CASUAL CARPOOLING AND OTHER SHARED RIDES (Ridesharing)
C1. Preferential Treatment for Shared Ride Vehicles
C2. Increased Use of Commuter/Employer Services
D. HIGH OCCUPANCY VEHICLE (HOV) FACILITIES
D1. Preferential Treatment for HOVs
D2. Bus Priority Lanes on Local Arterials
D3. Accelerated Implementation of the 2005 HOV Master Plan
D4. HOV to HOV Facilities
D5. Direct HOV Lane Entrance/Exit Ramps to Arterials and Special Generators
E. OTHER TCMs RELATED MEASURES
E1. Stricter Travel Demand Management/Trip Reduction Ordinance

E2. Expanded Public Education Programs
E3. Child Care Facilities at or close to Employment Sites, Transit Centers and Park and Ride Lots
E4. Retail Services at or close to Employment Sites, Transit Centers and Park and Ride Lots
E5. Telecommuting Centers and Work-at-Home Programs
E6. Parking Management
E7. Parking "Cash-Out" Program/Travel Allowance
E8. Land Use Measures

F. TRAFFIC FLOW IMPROVEMENTS

F1. Preferential Treatment of HOVs
F2. Ramp Metering
F3. Auxiliary Lanes of Up to One Mile in Length Where HOV Lanes are Provided
F4. Signalization Improvements
F5. Computerized Traffic and Transit Control/Management on Arterials
F6. Turn Lanes at Intersections
F7 .Turn Restrictions at Intersections
F8. Reversible Lanes
F9. One Way Streets
F10. Targeted Traffic Enforcement Programs
F11. Restrictions on Curb Side Deliveries and On-Street Parking

A. BICYCLE AND PEDESTRIAN ACTIONS

A1. Improved Roadway Bicycle Facilities and Bike Paths

Description:
These actions add and improve bicycle facilities and bike paths to encourage bicycle use. The actions are aimed to facilitate and promote the use of bicycle for commutes.

Existing Actions:
Projects are included in the following documents. Projects will be included as Multimodal Improvement Plan actions if they are City-wide in scope, a high-priority or high-cost.

- Bicycle Transportation Plan
- California / Escuela / Shoreline Complete Streets Feasibility Study
- El Camino Real Precise Plan
- San Antonio Precise Plan
- North Bayshore Precise Plan & Bonus FAR project improvements

Proposed Actions:

None.

A2. Transit and Bicycle Integration

Description:
These actions integrate bicycle facilities and bike paths with transit stations to provide improved bicycle amenities, circulation at or near transit stations. Physical improvements include bike lane improvements and upgrades, the creation of bicycle access to transit nodes, and the provision of bicycle amenities.

Existing Actions:
Projects related to bicycle-transit connectivity and accessibility are included in the following documents. Projects will be included as Multimodal Improvement Plan actions if they are City-wide in scope, a high-priority or high-cost.

- Bicycle Transportation Plan
- San Antonio / Mayfield Pedestrian and Bicycle Tunnel Plan
- Downtown Transit Center Master Plan

- Bike Share programs

Proposed Actions:
None.

A3. Bicycle Lockers and Racks at Park and Ride Lots

Description:
These actions increase bike parking facilities to make park and ride lots accessible to bicycles. There are no Park and Ride Lots in Mountain View.

Existing Actions:
None

Proposed Actions:
None.

A4. Bicycle Facilities and Showers at Development

Description:
These actions increase requirements for bicycle facilities and showers at private development projects. Typical bicycle facilities include bicycle lockers, racks, shower and changing facilities.

Existing Actions:
The current bicycle parking ordinance applies to new developments and redevelopments, building expansions and changes in use. Developers must comply with guidelines and standards stated in the City of Mountain View Municipal Code based on the City's General Plan and Bicycle Transportation Plan Update. General guidelines will be included as part of the Multimodal Improvement Plan. Additional bicycle parking and bicycle amenity requirements also apply to large developments in Precise Plan areas.

Proposed Actions:
Update to the bicycle parking and amenity requirements in the Zoning Ordinance.

A5. Improved Pedestrian Facilities

Description:

These actions install improvements and new pedestrian facilities, including improvements to sidewalk condition, sidewalk expansion, sidewalk gap closures, wayfinding signage, lighting, and other pedestrian safety treatments.

Existing Actions:
Proposed pedestrian facility improvements are included in the following documents. Projects will be included as Multimodal Improvement Plan actions if they are City-wide in scope, a high-priority or high-cost.

- Pedestrian Master Plan
- Shoreline Boulevard Corridor Study
- California / Escuela / Shoreline Complete Streets Feasibility Study
- El Camino Real Precise Plan
- San Antonio Precise Plan
- North Bayshore Precise Plan & Bonus FAR project improvements
- Other pedestrian visibility/safety improvements throughout the City

In addition, development in El Camino Real, San Antonio, North Bayshore and East Whisman areas are required to provide new public connections through large blocks.

Proposed Actions:
None.

A6. Pedestrian Signals

Description:
This action consists of installation and improvements of pedestrian signals on major arterials to enhance safety. Major corridors include El Camino Real, California Street, Central Expressway, Middlefield Road, San Antonio Road, Rengstorff Avenue, Shoreline Boulevard, and Moffett Boulevard-Castro Street.

Existing Actions:
Pedestrian signals are well-developed at most of the signalized intersections and mid-block crossings in the City of Mountain View. Actions are included in the following documents.

- Capital Improvement Program
- Pedestrian Master Plan

- North Bayshore Precise Plan
- El Camino Real Precise Plan
- San Antonio Precise Plan

Proposed Actions:
None.

A7. Lighting for Pedestrian Safety

Description:
These actions install lighting along pedestrian facilities, including sidewalks, transit stops, and bicycle parking areas.

Existing Actions:
Projects will be included as Multimodal Improvement Plan actions if they are City-wide in scope, a high-priority or high-cost. The following document made emphasis on implementation of lighting on major arterials in the City of Mountain View.

- Shoreline Boulevard Corridor Study
- California/Escuela/Shoreline Complete Streets Feasibility Study
- El Camino Real Precise Plan

Proposed Actions:
None.

B. TRANSIT

B1. Improvement of Bus, Rail, and Ferry Transit Services

Description:
This consists of City efforts to initiate collaborations with local and regional transit authorities, e.g., Caltrain and VTA, or private operators, along with community input, to identify deficient services and needs for new routes, reduced headways, and other improvements.

Existing Actions:
Existing projects include Shoreline Boulevard dedicated transit lanes, Transit Center Improvements and other spot treatment throughout the City. The MVGo shuttle operated by the Mountain View Transportation Management Association also expands transit service in the City.

Proposed Actions:
The project team can develop ideas for programs or policies to support regional transit serving the City. This would include working with VTA to identify transit expansion opportunities and funding sources.

B2. Expansion of Rail Transit Service

Description:
This measure is directed at extending or expanding rail transit beyond the projects included in MTC's New Rail Starts Program outlined in MTC Resolution 1876.

Existing Actions:
The City is currently studying an automated transit system between the Downtown Transit Center and North Bayshore, and a light rail expansion into North Bayshore from NASA.

Proposed Actions:
Consider this measure in conjunction with a program or policy to support regional transit (B1. Improvement of Bus, Rail, and Ferry Transit Services).

B3. Expansion of Ferry Service

Description:
Ferry service is not applicable to the City of Mountain View.

Existing Actions:
None.

Proposed Actions:
None.

B4. Preferential Treatment for Buses and In-Street Light Rail Vehicles (LRVs)

Description:
This measure includes strategies giving preference to buses and in-street light rail vehicles, including exclusive bus lanes and by-pass lanes.

Existing Actions:
New bus-only lanes are being studied for both Shoreline Boulevard and Charleston Road.

Proposed Actions:
None.

B5. Transit Information and Promotion

Description:
This action consists of advertising available transit services, branding, and enhance access to transit via non-motorized modes, e.g., bicycling and walking.

Existing Actions:
Existing actions are stated in A2. Transit and Bicycle Integration. Other proposed actions are included in the Pedestrian Master Plan. The Mountain View Transportation Management Association provides transit information and services to its members, and many private developments are required to disseminate information as well.

Proposed Actions:
Consider this measure in conjunction with a public information and education strategy (see E2. Expanded Public Education Programs).

B6. Transit Pricing Strategies to Encourage Ridership and Reduce Transit Vehicle Crowding

Description:
This action consists of modified pricing structure and incentives to increase transit ridership and reduce transit vehicle crowding.

Existing Actions:
Proposed strategies are included in the Shoreline Boulevard Corridor Study focused on the study area. No other proposed City-wide actions at this point of time.

Proposed Actions:
None.

B7. Transit Fare Subsidy Programs

Description:
This action describes programs implemented at employment sites to promote transit use and meet trip reduction goals.

Existing Actions:
Existing programs are included as part of area-specific Transportation Demand Management regulations and policies (eg, requirement for subsidized "EcoPasses"). This measure will be implemented on a city-wide basis through the adoption of a city-wide Transportation Demand Management Ordinance.

Proposed Actions:
None.

B8. Transit Centers

Description:
This action primarily describes the creation of "transit center" to disseminate transit, ridesharing, and non-motorized travel information. Information includes maps of bike routes, bicycle commuter handbooks, City walking guides, etc. Locations can include transit center, pop-up stores, kiosk centers.

Existing Actions:
The Downtown Transit Center Master Plan will include public information about transit.

Proposed Actions:

Consider this measure in conjunction with a public information and education strategy (see E2. Expanded Public Education Programs).

B9. Improved and Expanded Timed Transfer Programs

Description:
This measure supports shorter transit wait times by working with transit agencies to identify timed transfers and routes.

Existing Actions:
None.

Proposed Actions:
Consider this measure in conjunction with a program or policy to support regional transit (B1. Improvement of Bus, Rail, and Ferry Transit Services).

B10. Improved and Expanded Fare Coordination

Description:
This action consists of coordination and integration of fare collection among multiple transit authorities.

Existing Actions:
None.

Proposed Actions:
None.

B11. Signal Preemption by Transit Vehicles

Description:
This measure supports transit vehicle flow through signal preemption equipment on the transit fleet to trigger or lengthen green time.

Existing Actions:
The Shoreline Boulevard Corridor Study includes signal preemption.

Proposed Actions:
None.

B12. Bus Stop Bulbs

Description:
This measure describes extended sidewalks to provide faster passenger pick-up and drop-off for buses.

Existing Actions:
Guidance for bus bulbs are included in the El Camino Real and North Bayshore Precise Plans.

Proposed Actions:
None.

B13. School Bus Transit Services

Description:
This action is for the provision of school bus services in school districts.

Existing Actions:
None.

Proposed Actions:
None.

C. CARPOOLING, BUSPOOLING, VANPOOLING, TAXIPOOLING, JITNEYS, CASUAL CARPOOLING AND OTHER SHARED RIDES (Ridesharing)

C1. Preferential Treatment for Shared Ride Vehicles (N/A)

Description:
This measure consists of new strategies that give preference to carpools, including private development parking and by-pass lanes on public streets.

Existing Actions:
The North Bayshore Precise Plan includes minimum parking requirements for carpools. Transportation Demand Management requirements for development may include minimum carpool parking requirements and preferential parking for carpools. The City is developing a city-wide Transportation Demand Management Ordinance, which may include guidance on carpool parking.

Proposed Actions:
None.

C2. Increased Use of Commuter/Employer Services

Description:
This leverages employers to provide commute services to their employees. The measure is aimed to increase the number of buspool services and other programs reducing single occupant vehicle (SOV) trips.

Existing Actions:
The existing actions include the services provided by the Mountain View Transportation Management Association (MVTMA). The MVTMA continually works to increase the commute services it offers.

Proposed Actions:
None.

D. HIGH OCCUPANCY VEHICLE (HOV) FACILITIES

D1. Preferential Treatment for HOVs

Description:
Please see B4 and C1 for description.

Existing Actions:
See B4 and C1.

Proposed Actions:
None.

D2. Bus and Carpool/Buspool/Vanpool/Taxipool Priorities Lanes on Local Arterials

Description:
This measure supports carpool ridership by providing HOV priority lanes on local arterials.

Existing Actions:
The City is considering an HOV-only connection between North Bayshore and NASA.

Proposed Actions:
None.

D3. Accelerated Implementation of the 2005 HOV Master Plan

Description:
This measures supports implementation of the HOV Master Plan.

Existing Actions:
There are no existing actions related to this subject.

Proposed Actions:
None.

D4. HOV to HOV Facilities

Description:
This measure consists of planning and installation of connections between two HOV facilities.

Existing Actions:
There are no existing HOV facilities in the City (except 101 and 85 which already have an HOV to HOV ramp).

Proposed Actions:
None.

D5. Direct HOV Lane Entrance/Exit Ramps to Arterials and Special Generators

Description:
This action consists of planning and installation of HOV ramps from arterials to freeways or expressways.

Existing Actions:
There is no existing actions related to this subject.

Proposed Actions:
None. Given the limited right-of-way, additional ramps to 85 and 101 are not recommended.

E. OTHER TCMs RELATED MEASURES

E1. Stricter Travel Demand Management/Trip Reduction Ordinance

Description:
This measure involves updating the City's Transportation Demand Management requirements on development, including trip-reduction measures. It can include ordinances, policies or guidelines related to site design, parking or programs such as congestion pricing, employee transit cash-out program, promotion of transit-oriented development.

Existing Actions:
The City's transportation demand management requirements are spread among a number of documents, including the Greenhouse Gas Reduction Program, Precise Plans, the Transit Overlay Zone in the Zoning Ordinance, and the General Plan. The most aggressive transportation demand management is in North Bayshore, where new development is required to reduce single occupancy vehicle use to below 45%. The City is beginning work on an update to the City-wide transportation demand management regulations.

Proposed Actions:
None.

E2. Expanded Public Education Programs

Description:
This measure consists of the creation of educational materials and programs that support the efficient use of the transit system, and improvements to air quality.

Existing Actions:
There are no City actions specific to public education about transportation. However, the MVTMA and private developments are required to provide information to their constituents, and the City engages in outreach related to Safe Routes to Schools and other transportation programs.

Proposed Actions:
The project team can identify and propose actions that expand public education around transportation and air quality, possibly in partnership with the MVTMA and other organizations.

E3. Child Care Facilities at or close to Employment Sites, Transit Centers and Park and Ride Lots

Description:
This measure includes policies and programs to develop new child care facilities near employment sites or transit centers.

Existing Actions:
New Precise Plan land use regulations allow child care facilities in North Bayshore.

Proposed Actions:
None.

E4. Retail & Services at or close to Employment Sites, Transit Centers and Park and Ride Lots

Description:
This measure includes policies and programs supporting new retail & services near employment sites or transit centers.

Existing Actions:
Development projects in the North Bayshore Precise Plan (Bonus FAR Projects) include local retail. New precise plans in North Bayshore and East Whsiman include land use policies and standards encouraging local retail. The El Camino Real Precise Plan requires retail in areas close to Rapid Bus stops.

Proposed Actions:
None.

E5. Telecommuting Centers and Work-at-Home Programs

Description:
This supports employers to create remote work centers for their employees and programs that allow employees to work at home.

Existing Actions:
Developers are encouraged to utilize this and other strategies to reduce vehicle trips, through their transportation demand management and trip-reduction requirements.

Proposed Actions:

None.

E6. Parking Management

Description:
This measure includes programs, policies and regulations that manage the demand of parking, including parking requirements at developments, parking fees, shared parking programs and others.

Existing Actions:
The City recently adopted a Residential Parking Permit Program. In addition, the City has or is developing maximum parking requirements in North Bayshore and East Whisman areas.

Proposed Actions:
None.

E7. Parking "Cash-Out" Program/Travel Allowance

Description:
This measure encourages employers to provide a parking "cash-out" program, or to subsidize travel by other modes.

Existing Actions:
Developers are encouraged to utilize this and other strategies to reduce vehicle trips, through their transportation demand management and trip-reduction requirements.

Proposed Actions:
None.

E8. Land Use Measures

Description:
This measure includes strategies, regulations and guidelines that support the efficient use of the transportation system through the siting and design of land uses in the community.

Existing Actions:

The 2030 General Plan establishes land use policies and direction emphasizing sustainability in transportation. The following major land use direction are consistent with that emphasis:

- Higher intensity land uses are allowed near transit
- New mixes of land uses are allowed near transit and within large employment areas
- Design guidelines and policies support pedestrian, bicycle and transit-oriented design
- Policies supporting affordable housing

The City continues to implement this direction through Zoning, Precise Plans, Affordable Housing programs and others.

Proposed Actions:
None.

F. TRAFFIC FLOW IMPROVMENTS

F1. Preferential Treatment of HOVs

Description:
Please see B4 and C1 for description.

Existing Actions:
See B4 and C1.

Proposed Actions:
None.

F2. Ramp Metering

Description:
This measure supports the smooth flow of traffic on freeways through ramp metering.

Existing Actions:
None.

Proposed Actions:
None.

F3. Auxiliary Lanes

Description:
This action describes primarily the addition of freeway auxiliary lanes between interchanges of not more than one mile in length.

Existing Actions:
None.

Proposed Actions:
None.

F4. Signalization Improvements

Description:
This measure consists of improvements to signal timing and coordination, to smooth traffic flow on arterials during peak periods.

Existing Actions:
Signal timing and coordination are being developed on Grant Road and Shoreline Boulevard.

Proposed Actions:
The project team can identify possible actions to improve signal timing and computerized traffic management (in conjunction with F5. Computerized Traffic and Transit Control/Management on Arterials).

F5. Computerized Traffic and Transit Control/Management on Arterials

Description:
This measure consists of installation of intelligent transportation system on arterials, such as traffic sensors, CCTV, highway-advisory radio, and centrally controlled changeable message signs for traffic information dissemination.

Existing Actions:
None.

Proposed Actions:
The project team can identify possible actions to improve signal timing and computerized traffic management (in conjunction with F4. Signalization Improvements).

F6. Turn Lanes at Intersections

Description:
This measure adds turn lanes on major arterials. The purpose of this action is to reduce stopped delay on at the intersections.

Existing Actions:
Existing projects are included in the Capital Improvement Program. The Multimodal Improvement Plan will identify new turn lanes at deficient intersections where feasible.

Proposed Actions:

None.

F7. Turn Restrictions at Intersections

Description:
This action describes restricting turns at some intersections to better manage congestion throughout the day or during peak periods.

Existing Actions:
Some turn restrictions may be implemented through other improvements (such as transit or bicycle improvements), but no existing actions propose to limit turning movements for its own sake.

Proposed Actions:
None.

F8. Reversible Lanes

Description:
This measure would alternate roadway design to accommodate peak period traffic. This is most effective in areas of high employment, in which congestions occurs in inbound direction in the morning and outbound in the evening.

Existing Actions:
The Shoreline Boulevard Corridor Study includes a reversible transit lane.

Proposed Actions:
None.

F9. One Way Streets

Description:
Converting roadways to one-way streets may improve flow of vehicular traffic locally.

Existing Actions:
None.

Proposed Actions:

None.

F10. Targeted Traffic Enforcement Programs

Description:
This measure includes enforcement of traffic regulations to manage congestion during peak periods. Infractions affecting vehicle flow might include double-parking, parking in bus stops, or illegal use of HOV lanes.

Existing Actions:
None.

Proposed Actions:
None.

F11. Restrictions on Curb Side Deliveries and On-Street Parking

Description:
This measure would implement parking restrictions that can alleviate congestion during peak hour periods. This can include on-side parking restriction, no loading/unloading during peak periods, etc.

Existing Actions:
None.

Proposed Actions:
None.