



DATE: September 4, 2018

CATEGORY: New Business

DEPT.: Community Development

TITLE: **North Bayshore Trip Cap Report**

RECOMMENDATION – Review and accept the North Bayshore Trip Cap Report.

BACKGROUND

The City started monitoring North Bayshore gateways in February 2014 as part of the North Bayshore Precise Plan. This monitoring now occurs in fall and spring of each year. Annual reports are generally submitted to the City Council in June. These reports are available on the City's website at:

<https://www.mountainview.gov/depts/comdev/planning/activeprojects/northbayshore/default.asp>.

North Bayshore Precise Plan

The City adopted an updated North Bayshore Precise Plan in December 2017. The Precise Plan carried over most of the vehicle trip policy language from the previously approved Precise Plan. A key change was modifying the vehicle trip monitoring period from peak period (7:00 a.m. to 10:00 a.m.) to peak hour:

North Bayshore Gateway Peak Hour Vehicle Trip Cap. The District Vehicle Trip Cap is established as the maximum allowed number of trips at the three North Bayshore gateways during the following peak hour periods: 8,290 trips (a.m.) and 8,030 trips (p.m.). (Note: the vehicle trip numbers represent both inbound and outbound trips).

Staff notes that the 2017 vehicle trip cap policy was modified to account for changes in vehicle trip patterns with the addition of new residential uses in North Bayshore. This results in more outbound trips and less inbound trips in the morning peak hour, and more inbound trips and less outbound trips in the evening peak hour, as noted in Table 1 below.

**TABLE 1: 2014 and 2017 Vehicle Trip Cap Comparison –
 All Three Gateways Combined**

	Morning Peak Hour			Evening Peak Hour		
	Inbound	Outbound	Total	Inbound	Outbound	Total
2014	6,980	1,120	8,100	1,780	6,160	7,940
2017	6,300	1,990	8,290	2,310	5,720	8,030

As a reminder, the following are key Precise Plan vehicle trip cap policies:

- Vehicle trip cap.** If monitoring shows that the trip cap is reached at any of the three gateway locations after two consecutive data reporting periods, the City will not grant any new building permits for net new square footage in the North Bayshore Precise Plan area until the number of morning peak-hour vehicle trips is reduced below the trip cap, except as described in the next paragraph.

An application for new development may propose strategies, including, but not limited to, physical improvements to the transportation network and additional Transportation Demand Management measures, along with traffic analysis demonstrating the proposed strategies and/or improvements will comply with the district vehicle trip cap prior to project occupancy. Proposed strategies and/or improvements shall be implemented prior to building occupancy, unless deemed otherwise by the City Council. The City Council will consider applications proposing improvements to the transportation network and/or additional Transportation Demand Management measures according to the review process established by Council policy.

- North Bayshore District Transportation Performance Monitoring.** The City shall prepare an annual North Bayshore district transportation performance monitoring report with the objective to assess gateway vehicle operations and potentially accommodate additional residential development. This report will include data from the district vehicle trip cap monitoring program, including the number of vehicle trips at each gateway and each gateway’s vehicle trip capacity. The report will also document any trends or data regarding progress toward achieving the Precise Plan’s mode share targets. The report may also include, but is not limited to, the following: single-vehicle occupancy percentage; implementation of commercial and residential TDM programs; the timing and implementation of area transportation improvements; analysis of the location and number of office and residential projects built or proposed in the area; and a survey of North Bayshore residents, indicating their general travel behavior.

- **North Bayshore District Transportation Performance Monitoring Evaluation.** The City Council shall review the annual monitoring report and may adjust the trip cap to reflect any new capacity at the gateways. If the report shows that the vehicle trip cap is not being achieved to the satisfaction of the City, the City Council may consider, but is not limited to, any of the following:
 - require new development to implement additional project and/or area-wide TDM strategies;
 - increase the amount of City or developer contributions to fund area transportation improvements and implement a congestion pricing program for the area; and
 - implement a congestion pricing program for the area.

The Dynamic Nature of North Bayshore Transportation

As Council is aware, the City has spent considerable time and resources on planning the transformation of North Bayshore's future land uses and multi-modal transportation system. Although there have been a number of plans and projects adopted and approved to help implement this vision, much work remains.

There are a number of underlying transportation assumptions, policies, and projects that will need to be continually assessed and refined over time to fulfill North Bayshore's vision. The models can be difficult to predict actual transportation conditions, but are used to help the City make the best possible decisions given known information.

The City's long-term strategy and assumptions for North Bayshore will need years to be continually tested to confirm how they result in changes to the transportation system and vehicle trip behavior.

Some of the key transportation related North Bayshore Precise Plan assumptions include:

- **New residential uses.** The Precise Plan expects a substantial amount of new housing will be built, which will result in a significant amount of "trip internalization" in North Bayshore and, therefore, help reduce the number of inbound trips to the district. However, it is unclear how much or when this housing will be built, or what the actual internalization rate will be. The Precise

Plan analyzed a 27 percent morning peak-hour internalization rate for the residential trips, which is similar to Mountain View's current live-work percentage and on the higher end of internalization rates observed in similar communities and neighborhoods.

- **Effectiveness of transportation improvement projects.** The Precise Plan assumes that existing capacity at all existing gateways will be fully utilized. The Precise Plan also includes priority transportation projects to improve the effectiveness of the multi-modal transportation system in the area. These projects, all of which are at some stage of planning or implementation, include: northbound 101 off-ramp realignment; Plymouth Street-Space Park Way realignment; Shoreline Boulevard dedicated bus lane; Shoreline Boulevard cycle tracks; Charleston Road transit corridor improvements; bicycle/pedestrian bridge over 101; the 101 Frontage Road; and the Inigo Way extension.

The City expects these improvements to increase travel options for transit, biking, and walking in North Bayshore, and to improve traffic flow at key "hot spots." However, it is unknown how effective these new improvements will be until they are built.

- **Project trip cap compliance.** Each new North Bayshore development is required to meet their project-level trip cap through their TDM Plan and site trip cap monitoring. New developments such as the Broadreach office, Google Charleston East, Shashi Hotel, and the Microsoft campus redevelopment will have to monitor their project-level vehicle trips and demonstrate compliance with their approved TDM Plans. If not, they will be assessed financial penalties and be required to modify their TDM Plan until they are in compliance. While the City expects all projects to comply with their trip caps, this will not be known until projects are built and their vehicle trip are monitored.
- **Reduction of existing vehicle trips.** To implement the Precise Plan's ambitious transportation objectives, existing SOV vehicle trips must be reduced to accommodate additional North Bayshore development. The Precise Plan expresses this shift as a mode share target of 45 percent single-occupancy vehicles, and 10 percent carpool, which is what the Plan's EIR studied as a combined mode-share target. The City cannot require existing businesses to reduce their SOV rates; however, when area multi-modal improvements and services are completed, the expectation is that some of the existing SOV trips will shift to other modes.
- **T.M.A. (Transportation Management Association) services.** The T.M.A. operates the MV-GO transit shuttle in North Bayshore. The T.M.A. can help the City

achieve its district trip cap goals through their existing shuttle services, and potentially through other actions as well. For example, as new residential is built in North Bayshore, the expectation is that T.M.A. services will expand to cater to residential uses, and perhaps offer other services that help both existing and new businesses in the area reduce their vehicle trips. However, the extent of these services and their effectiveness will not be known until later.

ANALYSIS

Spring 2018 North Bayshore District: Transportation Monitoring Summary

The *Spring 2018 North Bayshore District: Transportation Monitoring Report* includes a large amount of data regarding North Bayshore Area transportation behavior. The following discussion focuses on the key findings from the report regarding single-occupant vehicle (SOV) mode-share and gateway peak-hour vehicle trip volumes.

1. Single Occupancy Vehicle (SOV) Mode Share

The Precise Plan has a 45 percent SOV mode-share target. The spring 2018 monitoring shows that the inbound a.m. peak-hour SOV mode split is 52 percent. The following table shows the historical SOV trend for North Bayshore since monitoring began in 2014.

TABLE 2: Historical Inbound Morning Peak Hour Mode Split Comparison

Mode	Spring 2014	Spring 2015	Fall 2015	Spring 2016	Fall 2016	Spring 2017	Fall 2017	Spring 2018
SOV	51%	56%	53%	60%	56%	52%	49%	52%
HOV	12%	12%	14%	17%	14%	13%	15%	14%
Transit	33%	26%	26%	17%	23%	28%	32%	30%
Bike	3%	6%	6%	5%	6%	6%	3%	4%
Ped	1%	1%	1%	1%	1%	1%	1%	1%
Total	100%	100%	99%	100%	100%	100%	100%	100%

Discussion

- 45 Percent SOV Mode-Share Target.** As noted, the SOV mode-share target is not being achieved. If the 45 percent target were achieved, peak-hour vehicle trips on Shoreline Boulevard could be reduced by approximately 150 to 250 trips. The City, private developers, and the T.M.A. must continue to work towards reducing the SOV mode share through area multi-modal projects, TDM Plans, areawide bike sharing, and T.M.A shuttle services.

2. Two-Way Peak-Hour Gateway Vehicle Trips

As shown in the table excerpt below, the San Antonio Road and Rengstorff Avenue gateway peak-hour vehicle volumes are below capacity, while Shoreline Boulevard vehicle volumes exceeds its capacity by approximately 110 vehicles during the inbound peak-hour morning period. Attachment 1 includes a table showing the historical inbound peak-hour and peak period vehicle trips.

TABLE 3: Two-Way Peak-Hour Gateway Vehicle Trips

Gateway	Morning				Evening			
	Volume ¹	Target ²	Difference	Percent Difference	Volume ¹	Target ²	Difference	Percent Difference
San Antonio Road	1,350	1,890	540	29%	1,030	1,830	800	44%
Rengstorff Avenue	2,670	3,290	620	19%	2,240	2,440	200	8%
Shoreline Boulevard	3,220	3,110	-110	-4%	3,160	3,760	600	16%
Total	7,240	8,290	1,050	13%	6,430	8,030	1,600	20%

Discussion

- Precise Plan Compliance.** As noted earlier in this report, the Precise Plan policy states that if monitoring shows that the trip cap is reached at any of the three gateway locations after two consecutive data reporting periods, the City will not grant any new building permits for net new square footage in the North Bayshore Precise Plan area until the number of vehicle trips is reduced below the trip cap. However, the policy does allow new development to propose strategies that could result in compliance with the trip cap.
- 4 Percent Vehicle Trip Increase.** The approximate 110 Shoreline Boulevard vehicle trips in the morning peak hour exceeds available capacity by about 4 percent and is therefore not in compliance with the Precise Plan. The increase could be due to general North Bayshore employment growth, construction-related traffic, more people choosing to drive, or other reasons. Further monitoring will help verify these vehicle trip volumes.
- Shoreline Boulevard – Continuing Constraints.** Given past trip monitoring trends, the large number of North Bayshore employees and limited gateways,

and continued growth in the area, Shoreline Boulevard will likely continue to be constrained moving forward.

- **New Development—Looking Ahead.** The report notes that additional planned North Bayshore projects with a potential impact on Shoreline Boulevard include the Sobrato mixed-use project on Pear Avenue, Google-Landings, the Microsoft campus redevelopment, Shashi Hotel, and SyWest/Google at the Gateway area. These projects will need to demonstrate how they comply with the Precise Plan’s trip cap policies through their TDM Plans, and more particularly how their projects may impact Shoreline Boulevard vehicle trip capacity.
- **Planned Improvements.** Several Shoreline Boulevard gateway improvements are under development (bus lane, ramp realignment, Shoreline cycle track and bridge, etc.) which will add vehicle capacity and help achieve further mode shifts away from SOVs. However, these projects may not be completed for two to three years, and the timing may not be completely in alignment with the completion of key development projects such as Charleston East and Microsoft.

Considerations Moving Forward

Given that current vehicle trip monitoring shows that Shoreline Boulevard traffic volumes are not in compliance with the North Bayshore Precise Plan, staff recommends the following responses for City Council consideration:

1. **Continue Scheduled Vehicle Trip Monitoring.** The next vehicle trip monitoring will be in October, with the analysis of the data available in early 2019. As in past years, staff will submit a memo through the City Manager’s Office with the results. If the vehicle trip monitoring results do not exceed the capacity of any gateway, then the district would be in compliance with the Precise Plan trip cap policy, and no further trip cap-related work would be needed, and trip cap monitoring would continue into 2019.

However, if the vehicle trip monitoring results continues to show noncompliance with the Precise Plan, then a Council Study Session could be scheduled in early 2019 to consider further options to address the issue. These options could potentially include a further restriction on new development’s number of vehicle trips, reduce the size or land use mix of new projects, defer building occupancy of future entitlements until gateway demand is reduced or after new transportation projects are completed, consider new policies such as parking pricing or

congestion pricing, increased TDM requirements for new development, or other strategies.

2. **Proactive Outreach.** Staff proposes to reach out to North Bayshore companies and the T.M.A. to communicate that Shoreline Boulevard currently does not comply with the Precise Plan trip cap policy. This would give North Bayshore employers and the T.M.A. time to strategize and potentially implement actions to help reduce their trips on Shoreline Boulevard through enhanced TDM services, or other strategies that help reduce the number of vehicle trips coming into North Bayshore, particularly the number of SOVs.
3. **North Bayshore Circulation Feasibility Study.** This approved CIP will study areawide vehicle circulation throughout North Bayshore. The study will also include engineering feasibility analysis of potential new gateways into North Bayshore--the 101/Charleston Road undercrossing and the Stevens Creek transit bridge. Information from this study will be useful in further understanding vehicle trip behavior in North Bayshore.

FISCAL IMPACT

None. Funding for this work is already in the City's annual budget as a C.I.P.

CONCLUSION

In conclusion, the Shoreline Boulevard gateway vehicle volumes (a.m. inbound, peak hour) do not comply with the adopted North Bayshore Precise Plan vehicle trip cap policy. The staff report outlines several considerations for addressing this issue.

NEXT STEPS

The City is contracting with Fehr and Peers to conduct the annual trip monitoring work. Key tasks include gateway vehicle observations, bus occupancy observations, summary of existing travel patterns, gateway operation observations, and near term growth assessment by North Bayshore gateway. The next trip counts will take place in fall 2018. This data will be shared with Council in a memo in early 2019, and will be available on the City's website. If the fall trip counts show that any gateway is still not in compliance with the Precise Plan trip cap policy, then the Precise Plan (Section 8.3.3) states that the City will not grant any further building permits until the number of gateway(s) trips are reduced below the gateway vehicle trip cap.

ALTERNATIVES

The City Council may wish to provide staff with additional direction regarding issues in this report.

PUBLIC NOTICING – Agenda posting and link sent to the T.M.A.

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- Attachments: 1. Historical Gateway Vehicle Trip Counts
2. Spring 2018 North Bayshore District Transportation Monitoring Report