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INFORMATION ITEM

BOARD MEMORANDUM

TO: Technical Advisory Committee
Santa Clara Valley Transportation Authority
Board of Directors

THROUGH: Michael T. Burns
General Manager

FROM: John H. Ristow
Chief CMA Officer

SUBJECT: South County Circulation Study Report Findings

FOR INFORMATION ONLY

BACKGROUND:

The *South County Circulation Study (SCCS)* is a planning study that evaluated existing and projected future conditions of land use and travel patterns in the southern part of Santa Clara County between SR 85 in south San Jose and SR 25 south of Gilroy. The main objective of the study is to identify transportation improvements that improve travel and increase mobility options for travelers in and through the study area. The results and recommendation of the study are intended to provide key policy, program, and project input to the next update of the countywide transportation plan for Santa Clara County, Valley Transportation Plan 2035 (VTP 2035).

The South County Circulation Study is a follow-up to another study, the *Southern Gateway Transportation and Land Use Study (Southern Gateway Study)*, which was completed in 2004. The Southern Gateway Study evaluated inter-county travel in the multi-county region south and east of Santa Clara County, including but not limited to Santa Cruz, San Benito, Monterey, and Merced Counties.

DISCUSSION:

Projected Travel and Land Use Patterns Analysis Results

The VTA regional travel demand model was used to identify existing and projected travel patterns in the study area. The following are key findings regarding travel patterns and land use projections:

- The 2030 ABAG projections for the study area indicate about 17,000 vehicle trips for the peak hour. The available vehicle trip capacity for the study area is about 12,000. The

difference of 5,000 trips between projected demand and available capacity is equal to about an additional two and half freeway lanes worth of traffic during the peak hour.

- The Beyond 2030 scenario is projected to increase the total peak hour vehicle trips to about 20,000. The total amount of traffic over capacity in this case is equivalent to about four freeway lanes of traffic.
- The 2030 traffic forecasts show that about 55 to 60 percent of the US 101 traffic originates outside Santa Clara County for the peak direction of travel (e.g., northbound for the morning commute). If both travel directions are considered, about 30 to 40 percent of the traffic in the study area is projected to be linked to land uses outside Santa Clara County for 2030 ABAG land use scenario. In the Beyond 2030 scenario, the share of traffic from outside Santa Clara County is projected to be 20 to 30 percent.
- The planned Coyote Valley development is projected to generate about 7 percent of the trips in year 2030, with this figure increasing to about 12 percent under a Beyond 2030 growth scenario.
- Planned City of Morgan Hill developments would generate about 20 percent of total traffic within and north of the City of Morgan Hill and about 10 percent of total traffic south of the City of Morgan Hill.
- Planned City of Gilroy developments would generate about 10 percent of total traffic north of the City of Morgan Hill and about 20 percent of total traffic within and north of the City of Gilroy.

South County Circulation Study Findings

The *SCCS* examined key questions in regards to travel demand, system capacity and internal local circulation patterns of the southern Santa Clara County area. The following is a summary of the findings regarding these key questions:

1. How best can the transportation network be developed to serve both the local circulation needs and regional travel demands? The key finding is that there are both local traffic circulation needs and regional travel demands that need to be accommodated associated with the improvements studied. These travel demands really cannot be separated. Improvements to the major highways and increased transit service would result in less traffic on the local roadways.
2. Is there adequate access to US 101 from local roadways? The *SCCS* concluded that the already existing and planned interchanges would provide an adequate level of access to US 101 from local roadways. The study identified the need for a new interchange at Buena Vista Avenue as well as previously planned interchanges at Middle Avenue, Coyote Valley Parkway, and SR 25.

A related issue is the need to activate ramp metering in the corridor to assist in optimizing traffic flow levels on US 101. The use of ramp metering and similar traffic control measures reduce the chance of longer trips that are best suited for freeway travel from diverting to local roadways. At the same time, the activation of ramp meters needs to be coordinated with local agencies and queuing related to ramp traffic needs to be addressed in ramp meter implementation plans.

3. Is there adequate access for east-west connection, traffic not destined for US 101, to cross over the freeway? The study found that the US 101 corridor could benefit from additional non-interchange crossings of US 101. These crossings would allow local traffic wanting to get from one side of the freeway to other to do so without having to mix with regional traffic destined for US 101 at interchanges. The two crossings projected to attract the most traffic are crossings that would connect International Order of Odd Fellows (IOOF) Avenue across US 101 in the City of Gilroy and Burnett Avenue across US 101 in Morgan Hill. The attraction of cross-town trips to the existing Burnett Avenue crossing would increase if Mission View Drive were extended north of Cochrane Road to Vista De Lomas Avenue. The IOOF Avenue crossing would be new.

Another key east-west connection is the extension of Santa Teresa Boulevard that is part of the preliminary engineering work underway for the US 101/SR 25 interchange. This connection is projected to have peak period volumes of over 1,000 vehicles per hour.

4. Is there a north-south roadway, paralleling US 101, that can be developed to an adequate roadway standard to serve north-south traffic? On the west side of US 101, a north-south route extends from the City of Gilroy to South San Jose generally along Monterey Road. This route through the City of Morgan Hill would be via Butterfield Boulevard. Santa Teresa Boulevard between the proposed Coyote Valley development area and South San Jose serves as another north-south route. Santa Teresa Boulevard also extends as a north-south route south of the proposed Coyote Valley development as part of Hale Avenue, Dewitt-Sunnyside extension and eventually as Santa Teresa Boulevard again through the City of Gilroy. Uvas Road and Mc Kean Road are rural county roads that provide a north-south connection between SR 152 (Hecker Pass Road) and Almaden Expressway. These routes (Monterey Highway, Santa Teresa Boulevard, and Uvas Road) predominantly serve local traffic between the cities of Gilroy, Morgan Hill and San Jose with limited capacity to carry regional traffic from US 101.

The conclusion of the *SCCS* was that a cost effective parallel north-south arterial routes on the east side of US 101 that traverses the entire length of the study does not exist. However, the east side of the freeway has a north-south route that extends from Leavesley Road in the City of Gilroy to Cochrane Road in the City of Morgan Hill along Marcella Road, Center Avenue, Hill Road, and Peet Road. There is a second possibility of a more limited route on the east side of US 101 along Murphy Avenue between Middle Road and Cochrane Road.

5. Can rural roadways sustain adequate safety, operations and maintenance levels while accommodating higher projected travel demands? Even with the implementation of highway and arterial improvements identified in the *SCCS*, the rural roads are still projected to experience a high travel demand that exceeds capacity. One example is the north-south Uvas Road-McKean Road rural roadway route, where the demand is projected to exceed capacity by 40 percent even with the proposed VTP 2030 network improvements. The issue is the controlling of traffic levels on rural roads, while also maintaining safe operations and adequate upkeep of roadway pavement conditions. Options include implementation of traffic safety management elements such as turn lanes, traffic control devices, roundabouts and increased pavement rehabilitation. Such measures and other improvements would be necessary to ensure that increased deterioration of pavement and other roadway elements does not occur, as many of the rural roads have not been constructed for higher traffic levels.

6. Is there adequate local arterial connectivity to accommodate the projected travel demands?
The SCCS has proposed additional street connections to accommodate better local circulation, as well as better access to regional highway facilities. One example of improved local road circulation network is the plan for an orbital roadway around the City of Gilroy to move regional traffic on SR 152 around downtown and to improve local circulation. This orbital route would require a new US 101 interchange at Buena Vista Avenue. The orbital route would include connecting a series of roads, namely Santa Teresa Boulevard, Day Road, Buena Vista Avenue, New Avenue and Ferguson Road. The Gilroy area would also benefit from an inner orbital route formed by connecting Cameron Boulevard and Luchessa Avenue to help traffic circulation around the major shopping areas.
7. Is there adequate transit capacity to accommodate projected future demand?
Transit is projected to be operating at about 70 percent of available capacity based on ABAG 2030 projections. The SCCS analysis shows that increasing frequency of transit trips did not attract sufficient auto trips to reduce the excess demand on the roadway system primarily due to the projected transit travel times.

Study Conclusions

The study concluded that the level of capital roadway improvements needed to keep pace with projected growth in travel demand within and through the South County area would be almost ten times greater than the funding amount that is projected to be available. As such, one element of the work conducted for the study endeavored to identify a near-term transportation improvement strategy that includes the implementation of cost-effective traffic operations improvements on existing facilities. The following are key near-term implementations that could be a focus for the next ten years:

Lower-Cost Solutions

- Lower cost local roadway improvements that improve the flow of traffic should be pursued. Examples of such improvements include operational treatments at local intersections and county roadways, and traffic signal system improvements.
- Strategies to attract more riders should be explored by VTA to take advantage of the available transit capacity in the area.
- A complete system of responsive ramp meters that is able to control the flow of traffic onto US 101 without detrimentally affecting local roadway operations. Such an implementation would be vital for keeping traffic throughput on US 101 at a maximum level. Such implementations need to be coordinated with local agencies, with queuing related to ramp traffic being considered in the ramp meter implementation plans.
- Implementation of High Occupancy Toll (HOT) operations by converting the existing carpool lanes along US 101 would allow for the ability to use unused capacity in the carpool lanes and possibly provide additional revenue that could be used to fund capital improvements in the corridor and enhanced transit services, while providing an added option for commuters.
- The implementation of lower cost ramp improvements and merge lanes at selected locations along US 101 particularly between Cochrane Road and Dunne Avenue would help address existing traffic congestion.

More Capital Intensive Solutions

The study identified that there will be a continued need for improvements that are more capital intensive. Preliminary studies on such improvements are already underway in some cases, but these improvements will likely take a longer period time to implement. An example is the current work that is underway to improve the US 101/SR 25 interchange, which includes the studying of connection improvements to Santa Teresa Boulevard and SR 25. The following are a few key strategies currently being studied that will require a higher level of funding:

- Local roadway improvements on north-south roadways such as Monterey Road and Santa Teresa Boulevard to improve local circulation between cities, and east-west connections to minimize congestion at freeway interchanges.
- Implementation of interchange improvements along US 101 at Tennant Avenue and Buena Vista Avenue.
- Continued extension of carpool lanes and HOT lane network providing a high level of travel time reliability.
- Other more capital intensive improvements include reversible lanes that take advantage of unused capacity in the reverse commute direction, and technology-based enhancements such as dynamic speed advisory systems to improve throughput by controlling travel speeds.

The traffic growth projected for the area is linked to the land use approvals for the South County area and those adjacent areas where housing has been built and continues to be built. Addressing the effects of the projected traffic growth in the South County area resulting from the projected land use developments requires coordination between agencies not only in Santa Clara County, but also with those outside Santa Clara County. Santa Clara County and San Benito County agencies have taken initial steps to address inter-regional travel demands for a travel corridor between the two counties, but more such dialogue is needed.

A balanced approach that considers local and regional roadway improvements along with transit and other solutions that are coordinated for improving mobility for the region is needed. This includes a need to educate the public on what role they can play to be part of the long-term solution for continued mobility for the South County area.

The findings and recommendations of the SCCS will be incorporated into the update of Santa Clara County's countywide transportation plan, Valley Transportation Plan 2035, which is currently under development. The VTA Board of Directors will consider the programs, projects and funding allocation levels for this area as well as the rest of the County during deliberations on VTP 2035 scheduled for the fall of 2008.

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