

# E. Roadway Improvements

## BACKGROUND

The planned roadway improvements needed to reduce existing traffic problems and to accommodate the development anticipated by the General Plan are discussed in detail in the City's Traffic Mitigation Report prepared by Hexagon Transportation Consultants, Inc.

### Target Level of Service

The anticipated growth planned for by the General Plan would result in substantial degradation of traffic conditions at several intersections, if not mitigated. The intent of the Traffic Mitigation Report is threefold: to solve existing congestion problems, to maintain existing traffic conditions where they are good, particularly on residential streets, and to reduce the impacts of anticipated growth.

Only feasible traffic improvements are included in the Report. Determination of "feasibility" involved a number of factors: physical constraints (i.e., right-of-way need versus availability), cost (including construction and right-of-way), and net benefit (the additional roadway capacity gained versus cost, loss of on-street parking, and the impact on neighbors).

## GOALS AND POLICIES

**GOAL 2:** Maintain a street and highway system which accommodates future growth while maintaining acceptable levels of service.

## POLICIES

**C 2.1:** **Acceptable Levels of Service.** Maintain a Level of Service no worse than mid LOS D, average delay of 45.0 seconds, as the acceptable Level of Service for all intersections within the City.

**C 2.2:** **Traffic Improvement Master Plan.** Maintain a master plan for street system improvements necessary to accommodate future growth and maintain acceptable levels of service. Intended improvements within the time frame of the Plan are listed in Appendix D, and may be updated by Resolution of the City Council consistent with Policy C-2.1.

**C 2.3:** **Roadway Improvement Implementation.** Enact fiscal policies to provide that the roadway improvements listed in Appendix D are funded and accomplished throughout the timeframe of the General Plan to achieve the Level of Service standards set forth in Policy C-2.1

A peak hour Level of Service mid-D, average delay of 45 seconds, is the desirable "worst case" Level of Service for intersections. This is generally considered acceptable for peak period

operations under urban traffic conditions such as those in San Mateo. It represents "tolerable" delay in which a motorist would expect to typically wait through one and possibly a maximum of two signal cycles.

The Traffic Mitigation Report prepared by Hexagon Transportation Consultants, Inc. summarizes the anticipated street system improvements that would occur within the time horizon of the General Plan. There are only limited opportunities for new roadway facilities in the heavily built-up areas of San Mateo. In most cases, the assumed intersection improvement would result in an average delay of 45 seconds or better; however, in some cases a situation worse than the desirable target Level of Service is expected due to physical constraints making full mitigation infeasible. In these areas, a combination of techniques should be employed to minimize further traffic congestion, including constraining the permitted scale of development in the vicinity of the congestion problem and requiring the implementation of a Transportation Demand Management Program as a condition of development project approval.

It is intended by the General Plan that all the roadway improvements listed in Appendix D be implemented within the timeframe of the Plan, with the possible exception of improvements indicated as needing further study.

**C 2.4:       Transportation Fee Ordinance.** Require new developments to pay for on-site improvements to meet the needs of development and their proportionate share of the costs for mitigating cumulative traffic impacts within the City of San Mateo. Utilize a Transportation Fee Ordinance to finance necessary off-site improvements equitably. The off-site improvements will include intersection and street improvements to maintain intersection levels of service, traffic safety improvements and improvements to reduce single occupant vehicle trips such as bicycle system enhancements, pedestrian improvements, and trip reduction measures.

It is clear that future development in San Mateo will cause added burden on the transportation system. The revenue generated by a traffic impact fee will offset the cost of roadway improvements which are needed as a result of this development. San Mateo has adopted an Impact Fee Ordinance which establishes a per unit fee amount on new commercial and residential development. This fee structure and amount is derived from the Land Use Plan and the related road improvements needed to achieve an "acceptable" Level of Service established by the Plan. The fee reflects only the incremental increase in demand placed on the circulation system by new development projects and is not imposed retroactively on existing land uses.

The revenues derived from the fee offset only a small portion of the total costs of roadway improvements, and will be used primarily to pay for the less substantial mitigations. The percentage varies depending on the improvement, please see Table 2-1 in the Traffic Mitigation Report (Appendix D), which shows actual percentages. To make up the deficit, a development project may be required to pay the full cost of off-site traffic improvements ~~through the environmental assessment process~~, in addition to paying the impact fee, with a possible provision for reimbursement by the City.

**C 2.5: Traffic Studies.** Require site-specific traffic studies for development projects where there may be a substantial impact-effect on the local street system. Traffic impacts effects caused by a development project are considered to be unacceptable and warrant mitigation if the addition of project traffic results in a cumulative intersection level of service exceeding the acceptable level established in Policy C-2.1; where there may be safety hazards created; or where there may be other substantial impacts effects on the circulation system.

The traffic model does not identify all site specific impacts effects. To ensure that adequate traffic capacity is maintained and project related impacts are identified a traffic impact study is required of all public and private development projects for which an environmental assessment is prepared and where there is the potential for traffic impact. This study should include a traffic flow analysis to determine trip generation and the distribution and assignment of traffic resulting from the proposed project. A development project may be denied or the project may be required to be revised based on the degree of traffic impacts effects created relative to the acceptable Level of Service established by Policy C-2.1, resultant circulation hazards, or other substantial impacts effects on the circulation system.

**C 2.6: Prioritization and Timing of Roadway Improvements.** Roadway improvements shall be periodically prioritized to be correlated with the distribution and pace of development, and to reflect the degree of need for mitigation.

**C 2.7: Exceeding the Acceptable Level of Service.** In addition to paying the transportation impact fee, a development project may be required to fund off-site circulation improvements which are needed as a result of project generated traffic, if:

- a. The level of service at the intersection drops below mid-level LOS D (average delay of more than 45 seconds) when the project traffic is added, and
- b. An intersection that operates below its level of service standard under the base year conditions experiences an increase in delay of four or more seconds, and
- c. The needed improvement of the intersection(s) is not funded in the applicable five-year City Capital Improvement Program from the date of application approval.

The cost of the off-site improvements may be reimbursed by the City if a reimbursement program is established throughout the timeframe of the Traffic Mitigation Report or at the time when the improvement was initially scheduled.

Roadway improvements will be prioritized by the City Public Works Department and phased over the timeframe of the General Plan based on the degree of need and availability of funds. It

is intended that the Traffic Mitigation Report be periodically reviewed and updated to reflect changes in growth projections and traffic conditions.

Situations may arise where the traffic of a proposed development project would result in an intersection Level of Service in excess of what is determined to be acceptable, and the improvement of the intersection is not scheduled for years to come. If the ~~impact-effect~~ is ~~significant~~substantial, the City may require the development project to wait until the roadway improvements are made or require the developer to pay the cost of needed off-site improvements with a provision for City reimbursement throughout the timeframe of the Plan or at the time when the improvement was initially scheduled.

**C 2.8: Traffic Signal Installation.** A development project may be required to fund signalization of off-site unsignalized intersections if warranted as a result of project generated traffic. In addition, existing conditions may warrant signalization of unsignalized intersections. A warrant analysis to determine the need for signalization shall include consideration of both existing and projected traffic and pedestrian volumes, traffic delays and interruptions, accident history, and proximity of sensitive land uses, such as schools.

The installation of properly located traffic signals will provide for the orderly movement of traffic, increase the capacity of the intersection, reduce frequency of accidents, can allow for continuous movement along a given route, and permit minor street traffic to enter and cross major streets in a safe and continuous manner. Improper or unwarranted signal installation may cause excessive delay, increased accident frequency, circuitous travel along alternate routes and disobedience of signal indications.

The need for traffic signals will be measured by acceptable traffic engineering standards, such as the Federal Highway Administration Manual on Uniform Traffic Control Devices for traffic signal standards. Where appropriate traffic signal warrants are met, the City may require installation of a traffic signal after consideration of ~~impacts-effects~~ on surrounding land uses and the need for coordination with other existing and planned intersection improvements.

**C 2.9: Dedication of Needed Right-of-Way for Roadway Improvements.** Require dedication of needed rights-of-way for roadway improvements shown in Appendix D, which are deficient in land area. Dedication shall be required where the development project contributes to the need for the roadway improvement and where the cost of dedication is not so disproportionate to the size of the project or traffic generated to make it unreasonable.

In some cases, adequate public right-of-way is not available to accomplish necessary roadway improvements. The City will need to purchase right-of-way or require its dedication as a condition of development project approval. Dedication is required where a development project creates the need for the roadway improvement and where the required mitigation is reasonable (i.e., where the severance impact on the property is not excessive to the degree that it is greater than the benefit to the street system).

- C 2.10: Transportation Demand Management (TDM).** Participate in the TDM Program as outlined by the San Mateo City/County Association of Governments (C/CAG). Encourage TDM measures as a condition of approval for development projects, which are anticipated to cause substantial traffic ~~impact~~effects. C/CAG requires the preparation of a TDM program for all new development that would add 100 peak hour trips or more to the regional road network.

To minimize traffic congestion, a comprehensive program is needed that provides mitigation to solve traffic problems. The City of San Mateo, which is almost built-out, offers limited opportunities for physical improvements on the roadway network. In cases where it is impractical or prohibitively expensive to increase the physical capacity of the street, the demand on the roadway system must be reduced.

The Transportation Demand Management (TDM) program involves measures designed to change travel behavior so that the number of vehicles on the roadway system during peak traffic periods is reduced. The program provides a basis for crediting project trips based on specific trip reduction measures for a variety of land uses such as retail, office, and residential. TDM programs can involve a number of measures, including: Ridesharing, Work Pattern Changes, Transit and Bicycle Use, Shuttles, Telecommuting, and Preferential Parking Controls. TDM measures for residential development also may include development of schools and/or community facilities in new subdivisions, creation of housing within one-quarter mile of rail stations, and transportation kiosks.

- C 2.11: Transportation Demand Management (TDM) in Rail Corridor Transit-Oriented Development Plan (Corridor Plan).** Establish and implement a TDM program consistent with the Corridor Plan policy and program requirements for development within Transit-Oriented Development (TOD) areas designated by the Corridor Plan, as well as for all properties within the Hillsdale Station Area Plan.
- C 2.12: Transportation Demand Management (TDM) in Downtown.** Establish and implement a TDM program, a Transportation Management Association (TMA), and other measures to reduce vehicle trips and encourage transit use and promote bicycle and pedestrian accessibility for development within one-half mile of the Downtown transit center.