

**Exhibit "A"**  
**CITY OF GRASS VALLEY**  
**POLICY ADOPTING TRAFFIC IMPACT STUDY METHODOLOGY AND**  
**EVALUATION CRITERIA FOR CRITICAL INTERSECTIONS**

Adopted March 2002

Updated January 2006

**Purpose:**

1. The Highway Capacity Manual (HCM) has undergone numerous and frequent changes in the last 10 years, leading to inconsistent results with the same data sets.
2. Due to a lack of methodology, traffic studies, prepared by various consultants for development projects, have resulted in different conclusions and are often confusing to decision makers.
3. Many intersections in the Grass Valley area are exceeding, or are close to exceeding, the maximum acceptable General Plan standard for Level of Service ("LOS"). It has become necessary to clarify the intent and purpose of Circulation Policy 7-CI of the City General Plan and how development projects can be evaluated against the current LOS
4. Various levels of transportation engineering analyses are necessary to determine if a proposed development project will have a significant impact on certain critical intersections in the Grass Valley area. These levels, or steps, need to be developed as a screening tool to determine if the project will breach an established threshold of significance (relative to the California Environmental Quality Act) and found consistent with the Circulation policies of the City General Plan.
5. In reviewing the lack of consistent criteria governing the preparation of traffic studies and thresholds of significance for impacted intersections, representatives from State, County, City and Regional Transportation Planning Agencies (TAC) have determined that a uniform traffic impact study methodology set within a governing policy is desirable for all development projects in the Grass Valley area.

**Objectives of Policy:**

1. Develop a standard and accepted methodology or approach for preparing traffic reports.
2. Develop a standard and accepted methodology for when a traffic report is required.
3. Develop language that will clarify the intent of General Plan Policy 7-CI and a procedure for determining thresholds of significance for intersections currently operating at LOS D or worse. The procedure would involve a series of transportation engineering analyses to determine if a proposed development project would have a significant impact on the operating capacity and function of critical intersections. These levels, or steps, would be developed as a screening tool to determine if the project would breach an established threshold of significance (relative to the California Environmental Quality Act) and found consistent with the Circulation policies of the City General Plan.
4. Develop a yearly monitoring system for checking the status of all affected intersections/roadways that is tied to the City/Regional Capital Improvement Program.
5. Implement the work programs of the "Street System Master Plan" that would serve to link all local and regional policy documents as to the identification of circulation improvements, funding sources and timing of installation.

## **Threshold for Determining When a Traffic Impact Study is Required:**

**Criteria for Requiring Traffic Reports.** Traffic Reports shall be required for all development applications if any of the criteria listed below has been met:

1. Project is not consistent with 2020 General Plan, NCTC 2027 or City-wide traffic model relative to land use and generation of higher traffic projections;
2. Project generates more than 50 PM Peak Hour Trips. The City may evaluate and apply other non-PM peak periods such as the noon hour based on the location of the site or a unique traffic demand of the development. However, developments within 10% of these criteria could be required to prepare a traffic study at the discretion of the City Engineering Department,
3. Project may create a hazard to public safety; and,
4. There is not an existing or planned mitigation measure to address the impacts generated by project on adjacent critical intersection(s). An existing or planned mitigation measure is defined as an improvement for the intersection that is listed in the City's General Plan, Street System Master Plan, Capital Improvement Program (CIP) or Regional/Local Transportation Fee Program.

If a project meets any of the criteria listed above, a traffic report shall be prepared in accordance with the following:

1. All projects are required to provide a **Volume/Capacity Analysis ("VCA")**.
2. All projects where the **results of the VCA exceed the LOS thresholds** established below, for any intersection, will be required to provide a **Comprehensive Traffic Study ("CTS")**.
3. All projects that are **not consistent with the General Plan** relative to Land Use (resulting in a higher traffic generation than was anticipated on the General Plan for the subject property) will be required to provide a **CTS**.

## **Procedure for Preparing, Formatting and Filing of Traffic Impact Studies:**

1. The Nevada County Transportation Commission (NCTC) has developed a baseline cumulative model that should be used for each CTS. Traffic Area Zone Land Use assumptions will be provided by the NCTC or any City-wide model that maybe developed in the future.
2. All intersections that are currently at LOS D, E or F are determined to be critical intersections.
3. Trip generation estimates shall come from the latest edition of the Institute of Transportation Engineers (ITE) Trip Generation publication. When adequate trip generation information is not available for the proposed project, the consultant may be required to provide a trip generation study for the proposed project.
4. All traffic counts, as well as recently prepared traffic reports can be reviewed and utilized from the NCTC website at [www.nctc.ca.gov](http://www.nctc.ca.gov). For critical intersections, trip counts shall be valid for a one year period only. All trip counts, unless stated otherwise in this policy, shall be taken at typical weekday PM peak hours between 4:00 p.m. to 6:00 p.m. during

the normal school period (i.e. September to May). All traffic reports shall show the average delay versus the worst leg of the intersection as part of their analysis. In all cases, the overall LOS for the intersection to be reported shall be based on the average delay for all vehicles. Based on the location of the site or a unique traffic demand, the City may require a traffic report to evaluate other potential peak demand periods of the day such as the noon hour. Please note that the California Department of Transportation may require additional traffic analysis if the projected traffic would impact a State of California facility.

5. Analysis for a VCA shall include, as a minimum, p.m. peak hour trip generation, distribution, assignment, in/out percentage and project location (relative to critical intersections), the additional delay, or the increase in the volume to capacity (v/c) ratio (if applicable) that will be created by the proposed project on the critical intersection(s) and tied to following time frames: existing, and existing plus project. Upon review of this data by staff, a determination will be made if the project has the potential to exceed the thresholds of significance (as defined below). A VCA shall use and evaluate the traffic conditions at the PM Peak hour unless otherwise directed by the City as noted in #4 above. The City, at the discretion of the City Engineering Department, may require a VCA to address the informational and formatting provisions for preparing a Traffic Report as specified in the City's Public Improvement Standards, Section 3, Subsections 3-2.01 to 3-2.14, excluding the subsection on "Significant Adverse Impacts".
6. Analysis for a CTS shall include, at a minimum, the additional delay, or the increase in the volume to capacity (v/c) ratio (if applicable) that will be created by the proposed project. This applies to any critical intersection where the proposed project generates more than 10 pm peak hour trips and any intersection where the project generates more than 50 p.m. peak hour trips. The City Engineer could also require an analysis of the capacity of any adjoining or connecting roadway. The NCTC or the City's traffic model assumed project trip generation should be backed out of the projections. Actual project trip generation shall be manually distributed and assigned to produce cumulative + project projections. The following time frames must be analyzed: existing, existing plus project, cumulative, and cumulative plus project. The CTS shall identify the extent of the traffic impacts created by the proposed project and shall include recommended measures to mitigate such impacts to an acceptable level (as described in item 2 & 3 of "Thresholds of Significance"). A CTS shall use and evaluate traffic conditions at the PM and AM Peak hour. Based on the location of the site or a unique traffic demand, the City may require the CTS to evaluate other times of the day such as the noon hour. The CTS shall address the informational and formatting provisions for preparing a Traffic Report as specified in the City's Public Improvement Standards, Section 3, Subsections 3-2.01 to 3-2.14, excluding the subsection on "Significant Adverse Impacts".
7. Projects affecting intersections requiring long lead time improvements for mitigation will require an interim analysis (VCA and CTS). Generally this will be a 5-year analysis.
8. A list of "Critical" intersections will be posted on the City's and NCTC's Internet website and available at the City Engineering Department. All traffic counts and/or traffic

reports prepared pursuant to this methodology shall be posted on the City and NCTC website for future reference

9. All traffic reports prepared for projects meeting the “Traffic Improvement Phasing Policy” shall evaluate both the existing and future improved conditions of the critical intersection and/or roadway.

### **Traffic Impact Methodology:**

1. To maintain consistency, the TAC has determined that all traffic impact studies will use the same methodologies or the latest version of these methodologies as accepted by the City Engineer. For signalized intersections, ICU 2000 methodology must be used; for unsignalized intersections, the methodology shall be HCS2000.
2. Other software packages (Traffix, Synchro, etc) may be used (after the initial screening process identified by items 1 & 2) if they produce consistent results with the above listed methods.
3. Intersections with non-standard traffic control (i.e. McKnight and South Auburn) should be analyzed using the consultant’s best judgment with review and approval by the City Engineering Department. In some cases, this may require simulation.
4. Standard lane utilization may not occur at all intersections. This is particularly true at SR 20/49 interchanges. The assumed lane utilizations should reflect actual conditions (i.e. Nevada City Highway @ Brunswick), which may require counts for each lane.

### **Determination of Thresholds of Significance:**

This section provides guidance on what projects would be viewed as significant and subject to the provisions and procedure outlined in General Plan Policy 7-CI. The criteria listed below establishes an acceptable level of traffic generation into critical intersections for certain development projects and further clarifies the provisions and intent of General Plan Policy 7-CI. For critical intersections, the following standards of significance will apply:

A Project is considered significant if it meets any of following criteria:

1. Project is not consistent with 2020 General Plan and NCTC traffic model or future City-wide Traffic Model relative to land use and generation of higher traffic projections.
2. There are no feasible mitigation measures to reduce the impact of the project to less-than-significant levels. “Feasible” means mitigation has been identified in City’s General Plan, Street System Master Plan, Capital Improvement Program (CIP) or Regional/Local Transportation Fee Program.
3. Results in a roadway/intersection operating at acceptable LOS to deteriorate to unacceptable levels of “D” or worse. If no mitigation measure identified, project will be responsible 100% for restoring LOS

4. The traffic study prepared for the project documents that traffic volumes of the intersection exceeds the thresholds listed below of any intersection operating at unacceptable levels (LOS D or worse).
  - A) Projects that do not increase the volume-to-capacity ratio (v/c) by more than **.02 (2.0%) for signalized intersections** will be determined to have a less than significant effect on that intersection.
  - B) Projects that do not increase the average intersection delay by more than **2.0 seconds for unsignalized intersections** will be determined to have a less than significant effect on that intersection.

If a project exceeds the criteria for thresholds of significance listed above, the applicant would have the following options to mitigate the impacts of the project to a level of insignificance:

1. Prepare an Environmental Impact Report (EIR) in accordance with the provisions of the California Environmental Quality Act (CEQA). If the impact of the project could not be mitigated below the thresholds identified in Section #4 above, the EIR would evaluate and work to mitigate the impacts of the project. .
2. Mitigate the Traffic Impact to a Level of Insignificance. A project could provide mitigation that would lessen the impact of the project below the thresholds identified in Item 4 above. The CTS would need to identify and evaluate any proposed mitigation and document how the impact has been mitigated to a level of insignificance.
3. Create an “Area of Benefit” for Installing Traffic Improvement and Provide Fair Share Payment. The impacts of a project can be determined to be mitigated to a level of insignificance through the payment of a “fair share” mitigation fee to a local or regional transportation improvement project. The “fair share” mitigation fee would have to be based on an existing “Area of Benefit” or one that would be created by the developer involving the revision of the City or Local Transportation Fee Program or establishment of another infrastructure financing mechanism.
4. Roadway/intersection meets criteria of “Traffic Improvement Phasing Policy”. The impacts of a project can be determined to be mitigated to a level of insignificance if the impacted intersection or roadway met the criteria of the City’s “Traffic Improvement Phasing Policy”. The City hereby establishes a “Traffic Improvement Phasing Policy” for those projects which exceed the City’s threshold of significance at a critical intersection, but the traffic impacts of such an intersection or road has been determined to be effectively mitigated by a pending mitigation or improvement. Such a mitigation measure(s) or transportation improvement(s) must be in the form of a secured funding source, a schedule for completion and a fully executed contract for construction. As an added option, a development may be required to provide traffic control staff at identified intersections to efficiently move traffic through specified intersections or by

implementation of other transportation demand measures until the improvement is complete.

All traffic reports prepared for projects meeting the “Traffic Improvement Phasing Policy” shall evaluate both the existing and future improved conditions of the critical intersection and/or roadway. The City shall maintain a list of all intersections and roads meeting the criteria listed above.

Prepared by: City Engineering and Community Development Departments, March 2002

Adopted by: City Council via resolution 02-18

Amendments: City Council via resolution 06-\_\_