

2.0 Introduction

2.1 Background

The City of Grass Valley, being an historical City, has many streets that are older in design, are narrow, steep, skewed approaches at intersections, and other geometric challenges. Weather can also be an issue, as snow and ice present challenges in winter months. There are significant numbers of pedestrians, bikes and skateboarders that share some of the streets with vehicles. Many of the existing streets were created before the automobile and traffic congestion became a reality. Buildings went up at the road's edge, expansion opportunities lost, and today a challenge for any capital improvement. Today these same originally dirt roads are paved and are being used for automobile and truck traffic. Traffic volumes have increased year by year, until we have several locations that are now at LOS E conditions. Improvements need to be designed, accepted, and implemented to help mitigate traffic impacts.

2.2 Purpose of Study

Several goals for the Street System Master Plan include:

- Ensure consistency between the City's traffic model used in the 2020 General Plan, and the NCTC regional traffic model.
- Define and make clear the links between capital improvement and associated funding priorities within the local and regional transportation plans.
- Identify potential amendments to the Circulation Element of the City's General Plan based on output from the updated NCTC traffic model which takes into consideration revised land use data provided by the City. These potential changes to the Circulation Element will also integrate new or revised improvement priorities, defining Level of Service (LOS) standards, thresholds of significance, and roadway standards.
- Develop street and intersection design standards and policies which address the existing conditions, topography, pedestrian / bicycle access and new urbanism approaches.
- Recommend a monitoring system to periodically check the LOS status of all intersections and streets identified in the General Plan.

2.2 Limits of Study

The Street System Master Plan study is limited to the area within the existing City Limits, plus that additional area surrounding or connected to the City called the "Sphere of Influence."



2.3 Methodology

The Street System Master Plan is based on the current 2020 General Plan and historic growth rates tied to the Year 2000 Census information, Department of Finance projects, etc. As a result, this study utilizes the latest Nevada County Transportation Commission's (NCTC) traffic model updated last year. The NCTC model utilized Year 2000 Census data to further refine growth assumptions for the City and the County. This traffic model was utilized to examine and review the City's current Circulation Element and Capital Improvement Program, and to help in the determination as to which projects will be kept in the program, and if any projects need to be added to the program. It was also used to help determine where any deficiencies would take place in the future. The Street System Master Plan does incorporate the growth projections and land use mix adopted in the 2020 General Plan for the City's Sphere of Influence, including the annexation and development of the four Special Development Areas (SDA's).

The Street System Master Plan (SSMP) has targeted growth and development into the Year 2020, but the reader should be advised that the recommendations are focused on a five (5) year projection. Any alteration in future land use mix and growth rates would prompt a re-evaluation of the SSMP and potentially influence the recommendations and transportation solutions.

The traffic analysis zones (TAZ's) for the Grass Valley planning area were defined in the spreadsheets according to CORE, FRINGE, and PERIPHERY areas. The growth in these TAZ's were adjusted downward incrementally until "balance" in trip generation for productions and attractions was achieved for all trip purposes.

The Grass Valley General Plan (GVGP) assumed target growth rates for employment-generating land uses (commercial, industrial, etc.) shown in Table 2.1 as being 50% built out by Year 2020 for Core Areas, 25% built out for Fringe Areas, and 10% for Periphery Areas (as defined in the GVGP).

Approximately 23,489 workers or 31% of the population located in the west slope of Nevada County (75,847 people) work in the County, and 7,943 people or 10%, travel outside of the County to their job destinations³.

Approximately 2,000 workers currently commute into Nevada County.

³ Source: NCTC summary of Census 2000 Journey to Work data for west slope of Nevada County



Table 2.1
City of Grass Valley General Plan 20-Year Development Levels

Area	Remaining Capacity to be Developed by 2020	
	Residential Land Uses	Employment-Generating Land Uses
CORE	95%	50%
Fringe	75%	25%
Periphery	55%	10%

Source: City of Grass Valley 1999 GP, Figure 3-3 "20 Year Development Level Map"

Based on Census 2000 data, and the NCTC traffic model projections, it has been found that the rates of growth assumed for employment generating land uses in the Grass Valley and Nevada County General Plans, significantly outpace historical trends. To remedy this, the NCTC traffic model assumptions for GVGP employment-generating land uses were adjusted until the internal to external commute patterns were consistent with the current condition (90% / 10% internal to external split for journey to work trips), and the modified General Plan values are shown in Table 2.2.

Table 2.2
City of Grass Valley Modified GP 20 Year Development Levels

Area	Remaining Capacity to be Developed by 2020	
	Residential Land Uses	Employment-Generating Land Uses
CORE	95%	25%
Fringe	75%	12%
Periphery	55%	5%

Source: City of Grass Valley 2020 General Plan, Figure 3-3 "20 Year Development Level Map" and PRISM Engineering

In summary, the regional traffic model has been updated to conform to the 2000 Census data, and some changes to the Circulation Element and Capital Improvement Program (CIP) are necessary.

Additional Details of the Regional Traffic Model Update process can be found in the Appendix.

