

Getting Smart About Growth

A transit-centric walkable strategy to remedy traffic congestion

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Mill Valley is a city in Marin County, California, located about 14 miles north of San Francisco via the Golden Gate Bridge. For six hours a day, Mill Valley's roads are completely gridlocked, and its carbon footprint ranks among the highest in the world. Unfortunately, it is only getting worse.

Since the 1970s, the income inclusivity that gave the city its desirable small town character has been all but extinguished by the soaring real estate values its desirability inadvertently caused. While the population grew only about five percent, the number of people who both live and work in Mill Valley plummeted from 60 percent, down to 10 percent. At the same time, the traffic on the main thoroughfares to the freeway increased by nearly 80 percent. How was this possible?

Pushed out by skyrocketing rents and diminished housing availability, over 2,000 local workers left the town along with most basic retailers. At one time, those residents had the luxury of a three-block walk to work. However, after they were forced to move out of the city, many now suffer from a congested commute—worsened by traffic jams they contribute to. With retailers pushed out, residents must drive out of town even for the most basic of necessities. As the gridlock became increasingly untenable, Mill Valley was forced to find a solution to relieve traffic and improve the quality of life in the city. If the problem is loss of town workers, one answer is to bring them back. But where can we house them?

Smart Growth in Action

All over the world, public officials are under increasing pressure to meet carbon reduction mandates. At the same time, the general public is suffering from crippling traffic jams. Smart Growth principles offer a remedy to both problems. These principles focus on where to best locate town workers and small businesses to expedite a transition from auto-dependent to transit-centric, pedestrian-oriented communities.

The city developed the 2015-2023 Mill Valley Housing Element, which is a blueprint for the future. It is based on guiding principles that manage growth and development, including housing, transportation, conservation, open space, land use and the economy. The Housing Element is working toward two major goals—to protect and enhance the natural beauty and small town character of Mill Valley, and to encourage sustainable diversity of housing, income levels and lifestyles in the community. In this case, the need is to relocate 1,500 local workers to affordable transit-oriented communities with proximity to their place of employment.

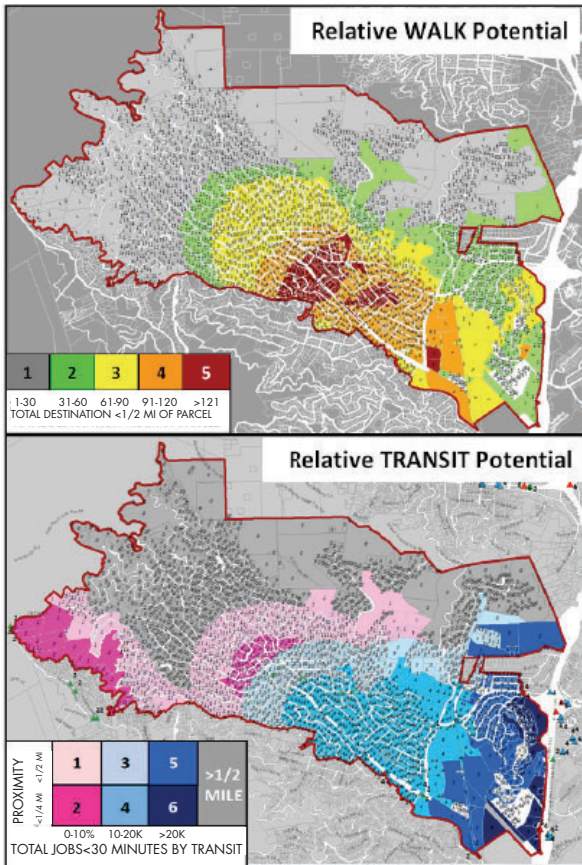
The Mill Valley Affordable House Committee retained Boundary Solutions, Inc. (BSI) to help determine the high-transit walk overlay areas in an equitable way. Using 2MAPS, a parcel-mapping system developed by BSI, we were able to assign a Relative Walk and Relative Transit position to every parcel, which will help the city make their development decisions. The results will be used to plan for housing and retail that encourages more people to look at alternatives to using their autos. One of the most attractive aspects of this 2MAP Smart Growth Application is that, by increasing housing inventory in exactly the right places, traffic reduction will be maximized, eliminating town worker commute trips and many service trips once retail returns. More people living where they work also reduces high carbon generating gridlock all over the regional highway network.

Relative Walking and Transit Potential

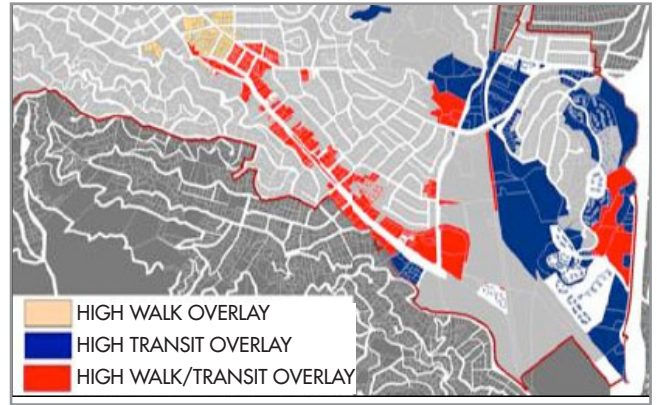
In evaluating proximity, it is now possible to use 2MAPS to display hot spot areas in which transit-oriented development would have the greatest remedial effect in Mill Valley. Collaboration is ongoing between the Affordable Housing Committee, assisted by BSI, and local officials to assign trip generation reduction rates to each land use of every parcel in the town, according to its Relative Walk and Relative Transit potential.

To plan for trip generation reduction, we use a four-step process. The first step is to produce 2MAPS by combining a county standard digital parcel map along with every bus stop location and the number of jobs accessible from it within 1/2 hour. The latter is public domain point data content sponsored by the University of Minnesota's Accessibility Observatory Transit for America. The result is a Relative WALK and a Relative TRANSIT category assigned to every parcel. For example, Highly Walkable parcels have more than 120 destinations less than 1/2 mile away and Unwalkable areas have less than 30.

The second step involves developing a Candidate Development Area. This requires assembling your town, city or county's footprint of all parcels zoned and/or those considered to be located in a desirable area for increased pedestrian-oriented, highly-walkable, transit-centric



The Relative Walk and Relative Transit Maps show city planners how many destinations are available within a half-hour trip using non-automobile transportation options. This information can be crucial when determining optimal development areas.



The map above shows the designated development area with an overlay of its pedestrian and transit trip potential data. City planners can use this information to zero in on improving traffic congestion and quality of life in the community.

development, including rent controlled units and retail in mixed-use parcels.

Next, we worked to identify the High-Walk High-Transit overlay zones for maximum traffic reduction in the designated development area. All Candidate Parcels with a Relative Walk category of 4 or better are considered High Walk zones. Likewise, all Candidate Parcels with a Relative Transit category of 4 or better are considered High Transit zones. All Candidate Parcels that are both High Walk and High Transit are considered in the Traffic Reduction Overlay Zone.

Finally, we identified areas subject to reduced trip generation. This time, the Relative Walk Potential category assigned to each individual parcel is added to the same parcel's Relative Transit category. With a maximum score of 11, all parcels with a combined value of 6 or more are assigned a lower than prevailing trip generation based on Smart Growth trip generation findings relative to the projected conditions. Then multiply all the lower trip generation parcels by the reduced rate and all the other parcels by their prevailing trip generation rate. Compare this combined number against all parcels multiplied by the prevailing trip generation to see how much full development of the Overlay Zones will reduce the traffic.

Summary

While development project decisions have yet to be finalized by the planning commission and city council in this case, using the 2MAPS Smart Growth plan can provide valuable information that indicates which parcels, if developed, will help to reduce auto dependency and its associated carbon footprint the most. By using relative walking and transit metrics to direct investments in future development, cities everywhere can improve their traffic congestion while enhancing the quality of life for their communities. We look forward to seeing how Mill Valley moves forward with its development plan and are excited by the possibilities it holds. 🌟



Dennis is CEO and President of Boundary Solutions, Inc., a national parcel layer content service provider. With over 30 years of experience in municipal utility and GIS mapping systems, he originated 2MAPS to expedite increased inclusive housing. Visit www.boundarysolutions.com.