

CHAPTER 5: TRAVEL FORECASTS AND TRANSIT DEMAND PROJECTIONS

This chapter describes estimated trip patterns and ridership forecasts for the Central and Southern Marin Transit Study. The methodology is based upon the Marin County Travel Model, data on transit ridership provided by Golden Gate Bridge, Highway and Transit District, and analyses from it.

5.1 Background and Assumptions

Travel projections should be sensitive to the relevant issues for studying local transit service in Marin County. The methodology is designed to address two questions:

- What are the overall trip pattern trends in Marin County?
- What are the transit shares for different system alternatives?

Two sources were used for this analysis: the Census and the Marin County Model. The Year 2000 Census data is now eight years out of date, so that it was determined to be less useable for an existing conditions report. Thus, the travel model chosen for the analysis is the Marin County travel model. This travel model is widely used for studies in Marin County, and it is calibrated to trip lengths for each type of trip, mode shares for each type of mode, and traffic volumes according to field data.

The majority of the development this model has focused on peak hour travel behavior and home-based work trips. For local transit service in Marin County, work trips are a major component of ridership, but they do not represent the only reason that local transit service is taken in Marin County. Using these travel model results directly poses a problem in determining non-peak hour trip probabilities, and it does not provide for non-congestion-related sensitivity in ridership forecasts during these time periods.

The first portion of this study examines overall travel demands between four key areas within Central and Southern Marin. These are:

- Richardson Bay Communities – Sausalito, Tiburon, Mill Valley, Belvedere and surrounding areas such as Marin City
- Lower Ross Valley – Corte Madera, Larkspur and adjacent unincorporated areas
- Upper Ross Valley – San Anselmo, Woodside, and adjacent unincorporated areas such as Kentfield
- San Rafael Basin – the Central San Rafael general area, as well as the Canal District and related areas within the City such as Anderson Drive

In order to fully describe travel patterns, locations beyond these four areas were also examined. This includes three additional areas in Marin County – Las Gallinas Valley (Terra Linda and Lucas Valley areas), Novato, and West Marin. Three areas were identified in Sonoma County – Petaluma, the Sonoma Highway 101 Corridor north of Petaluma (Santa Rosa, Cotati and Rohnert Park) and the remainder of Sonoma County. In San Francisco, the city was divided up into four areas -- the Financial District, the Marina District and Van Ness Corridor, the Richmond and Sunset Districts, and the Excelsior/Mission/ Bayview Districts. All other counties are presented as countywide areas.

5.2 Trip Patterns

The first analysis was made for travel patterns and trends for each of the four subareas. These are presented as Tables 5.1 through 5.8 in Appendix A. For each of the four areas discussed, there is a table summarizing work trips, and then one summarizing all trips. As work trips are most important for transit riders, these are also diagrammed with maps as Figures 5.1 through 5.16.

Richardson Bay Communities

The communities of Sausalito, Marin City, Mill Valley, Tiburon and Belvedere (and surrounding areas) are generally oriented to San Francisco for work trips. As shown in Table 5.1 and Figure 5.1 Almost 30 percent of the residents are estimated to work in San Francisco or further south. This is quite significant, in that home-based work trips incorporate all trip patterns rather than the primary wage earner; secondary wage earner trips (such as student part-time workers at nearby grocery stores or restaurants) are counted equivalently to the primary wage earner. Another 23 percent are projected to work in northern Marin County (Las Gallinas Valley or Novato), with other many workers remaining local in Central and Southern Marin (38 percent). These patterns are generally constant between 2000 and 2018, and only 8 percent more work trips are projected in the 10-year period.

There are slightly less than two jobs for every worker in this area. For those people working in these communities, most come locally. An estimated 17 percent are from this immediate area, with another 27 percent from other parts of Central and Southern Marin and approximately 21 percent come from northern Marin Communities. As with the residents, the travel patterns in this area are expected to remain stable by 2018, with about a 10 percent growth in jobs projected.

The visual patterns of the work trips are further illustrated in Figures 5.1 through 5.4. Figure 5.1 summarizes the resident travel patterns estimated for 2008, with Figure 5.2 doing the same for 2018. Figure 5.3 summarizes the employee trip patterns for 2008, while Figure 5.4 summarizes the same pattern for 2018.

Figure 5.1: Richardson Bay Residents, 2008

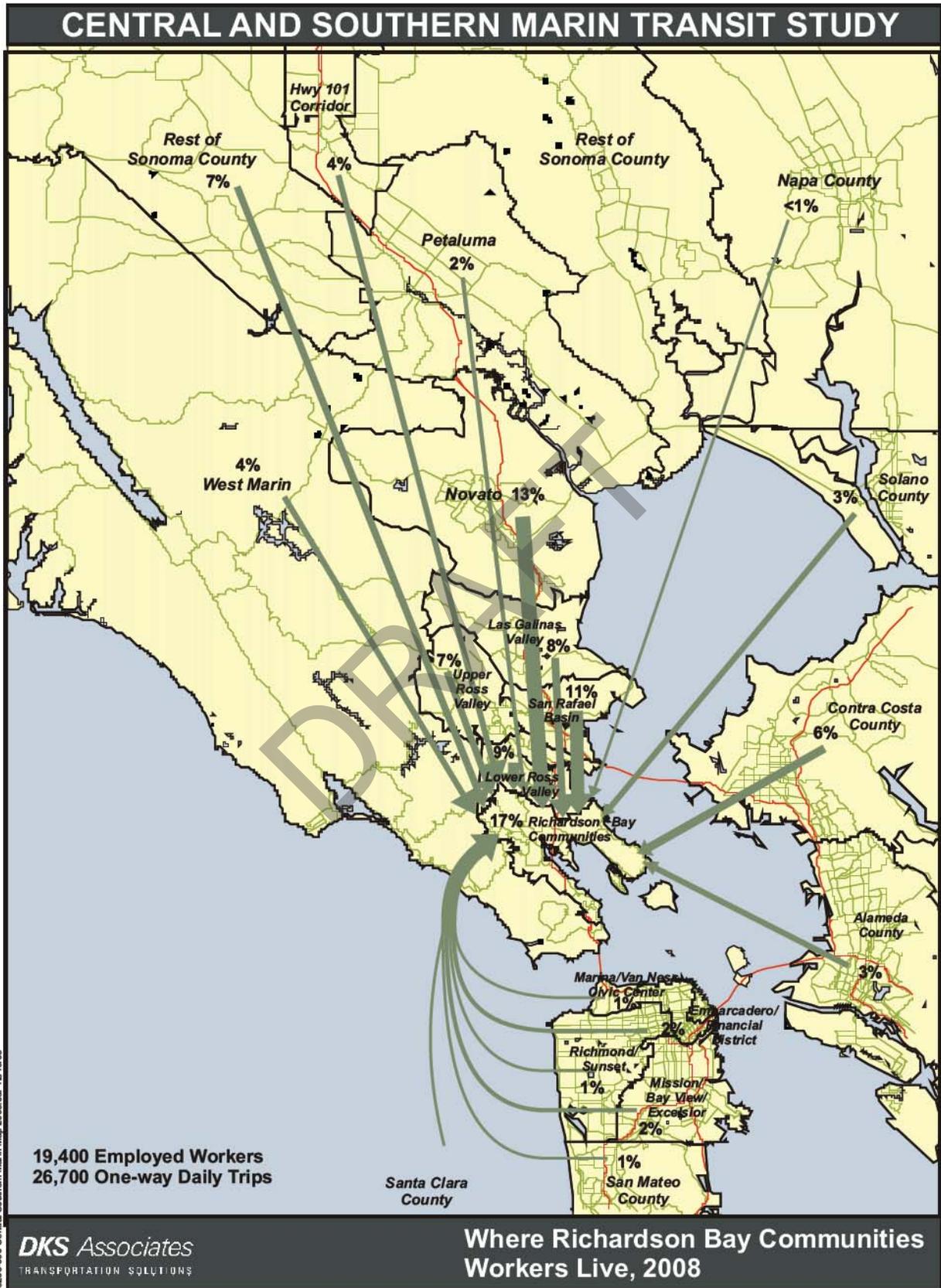


Figure 5.2: Richardson Bay Residents, 2018

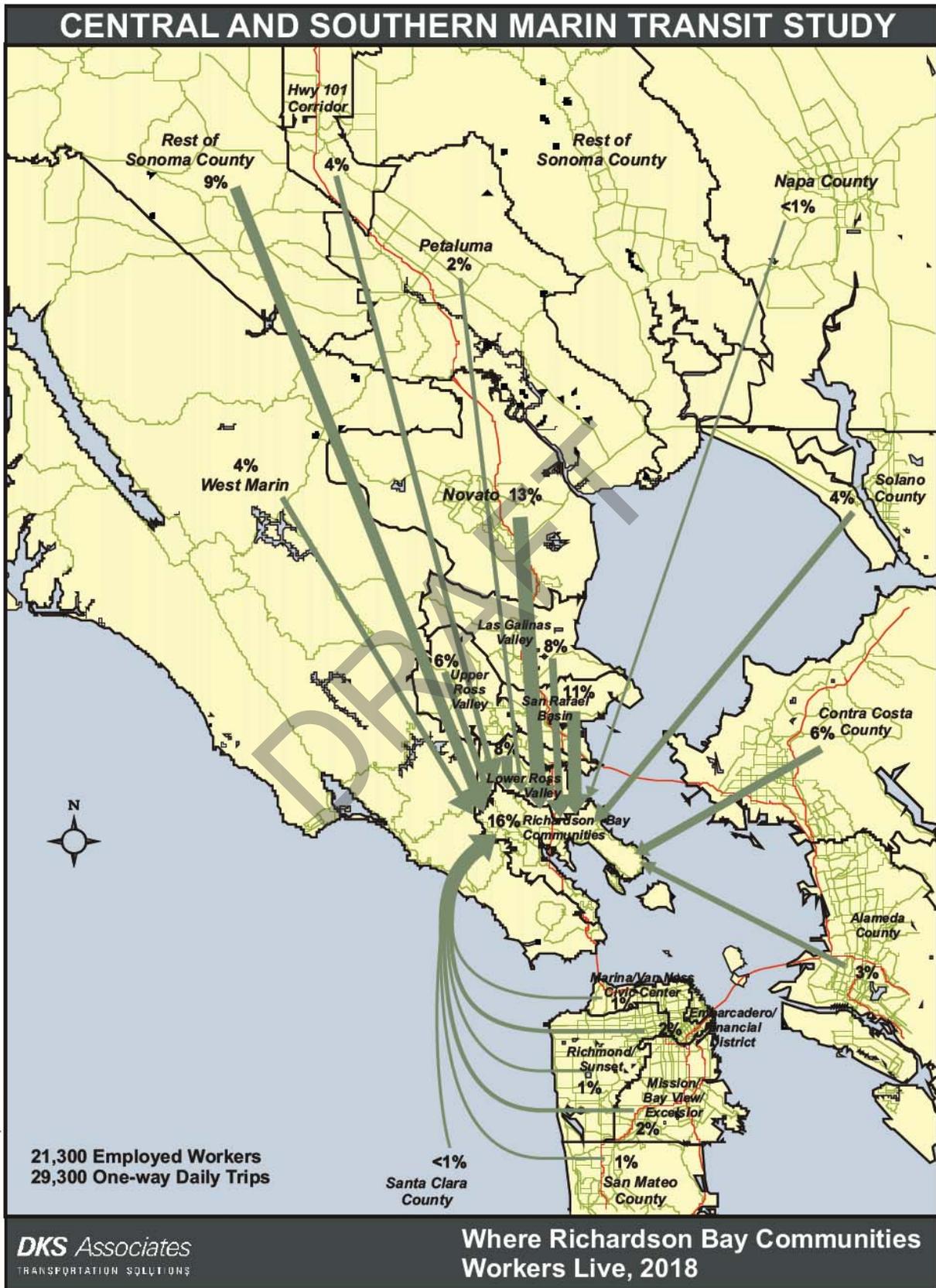


Figure 5.3: Richardson Bay Workers, 2008

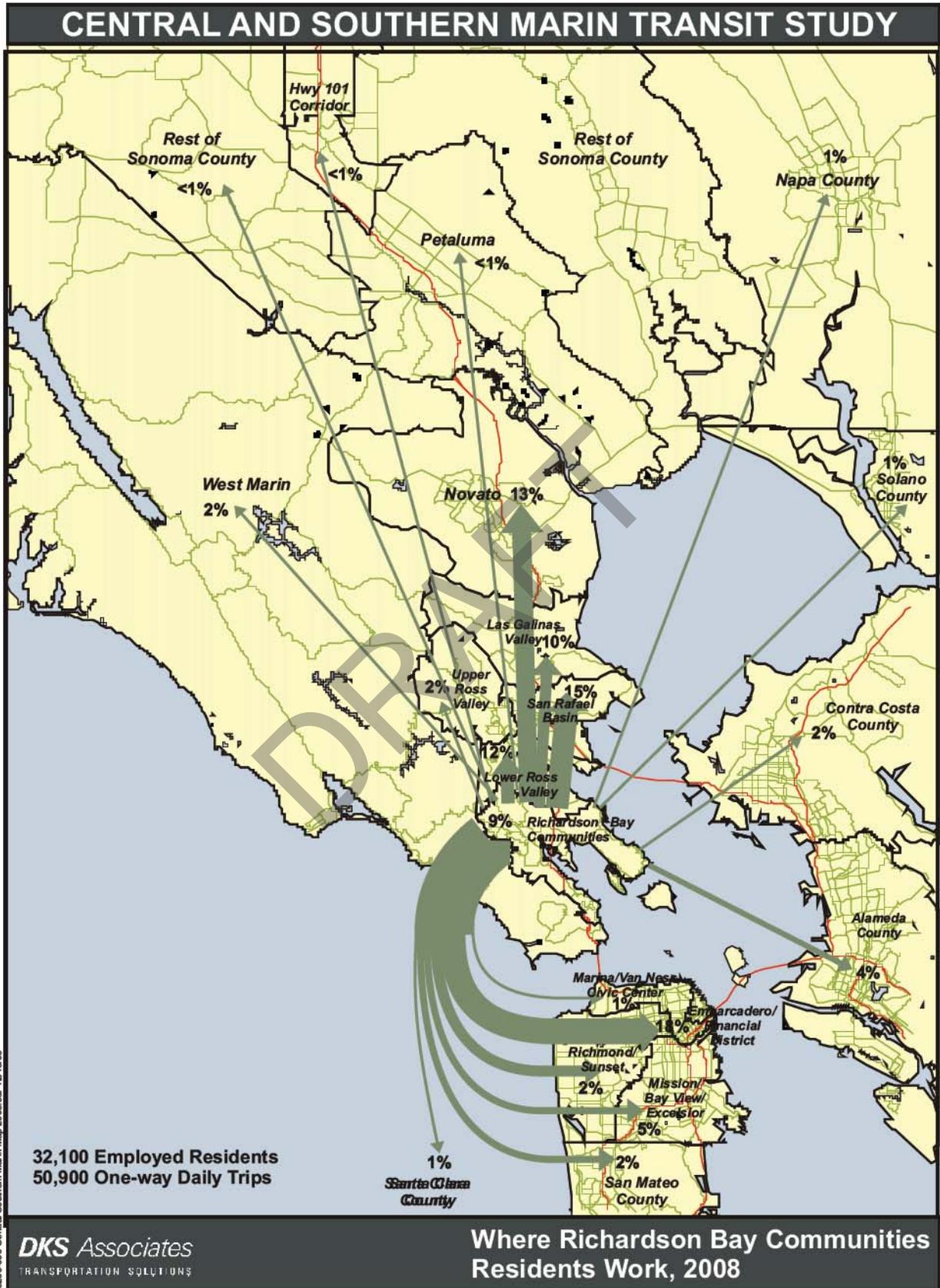
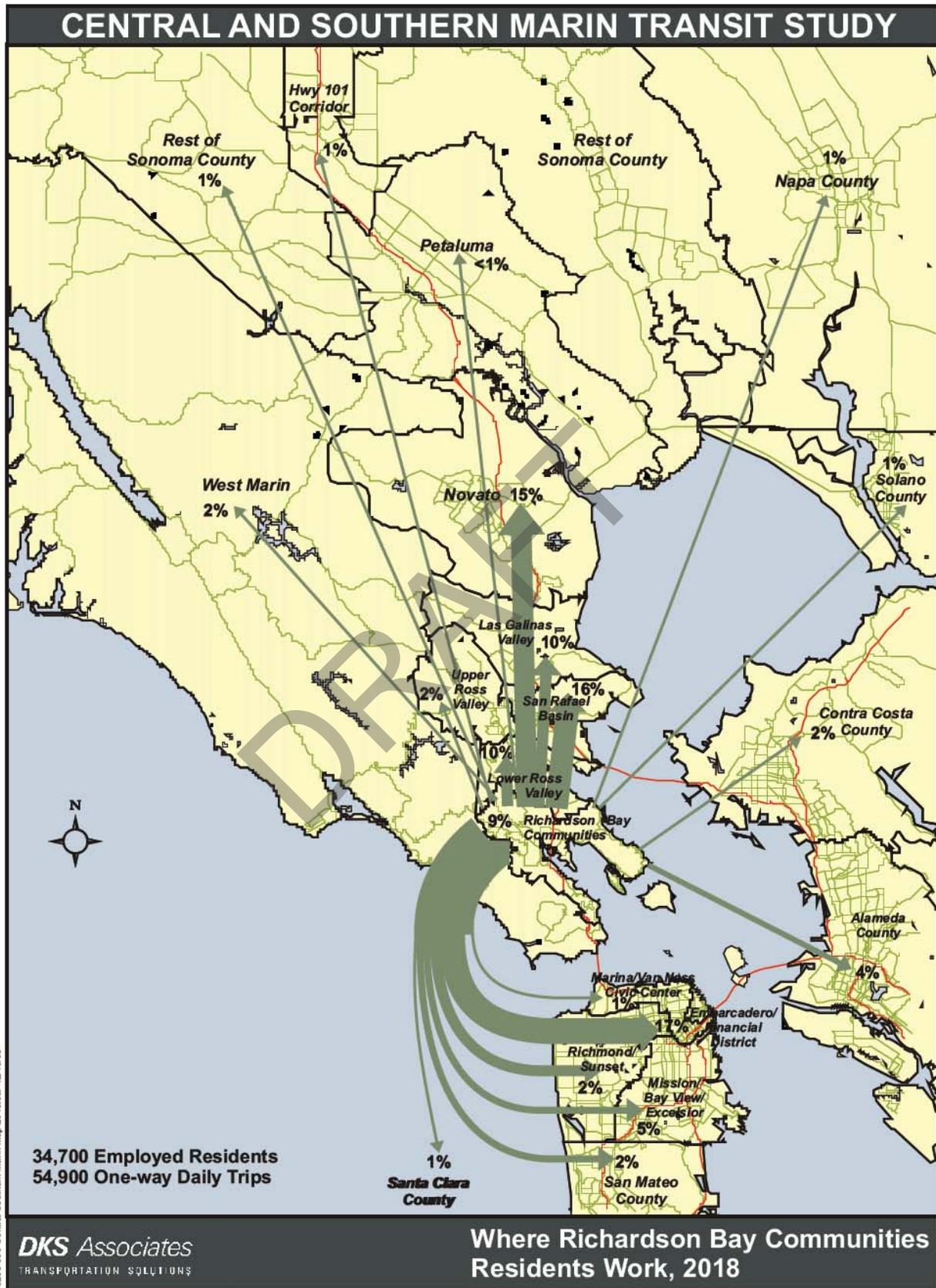


Figure 5.4: Richardson Bay Workers, 2018



In Table 5.2 (Appendix A), the aggregate trip patterns are shown for the Richardson Bay Communities. As this table shows, more trips occur locally when all trips are considered, as shopping, recreational and school trips tend to remain closer to home. Almost half of the resident trips remain in the immediate area, and over 62 percent of the trips to the non-residential destinations are made by local residents.

Lower Ross Valley

The communities of Larkspur, Corte Madera and surrounding areas also show a strong trend to San Francisco. As shown in Table 5.3 and Figure 5.5. Almost 30 percent of the residents are estimated to work in San Francisco or further south. This is quite significant, in that home-based work trips incorporate all trip patterns rather than the primary wage earner; secondary wage earner trips (such as student part-time workers at nearby grocery stores or restaurants) are counted equivalently to the primary wage earner. Another 26 percent are projected to work in northern Marin County (Las Gallinas Valley or Novato), with many other workers remaining local in Central and Southern Marin (39 percent). These patterns are generally constant between 2000 and 2018, and only 8 percent more work trips are projected in the 10-year period.

There are about 30 percent more jobs than workers. Much of this results from the high volume of retail activity. For those people working in these communities, most come locally. An estimated 9 percent are from this immediate area, with another 33 percent from other parts of Central and Southern Marin and approximately 20 percent come from northern Marin Communities. As with the residents, the travel patterns in this area are expected to remain stable by 2018, with only about a 1 percent growth in jobs projected.

The visual patterns of the work trips are further illustrated in Figures 5.5 through 5.8. Figure 5.5 summarizes the resident travel patterns estimated for 2008, with Figure 5.6 doing the same for 2018. Figure 5.7 summarizes the employee trip patterns for 2008, while Figure 5.8 summarizes the same pattern for 2018.

Figure 5.5: Lower Ross Valley Residents, 2008

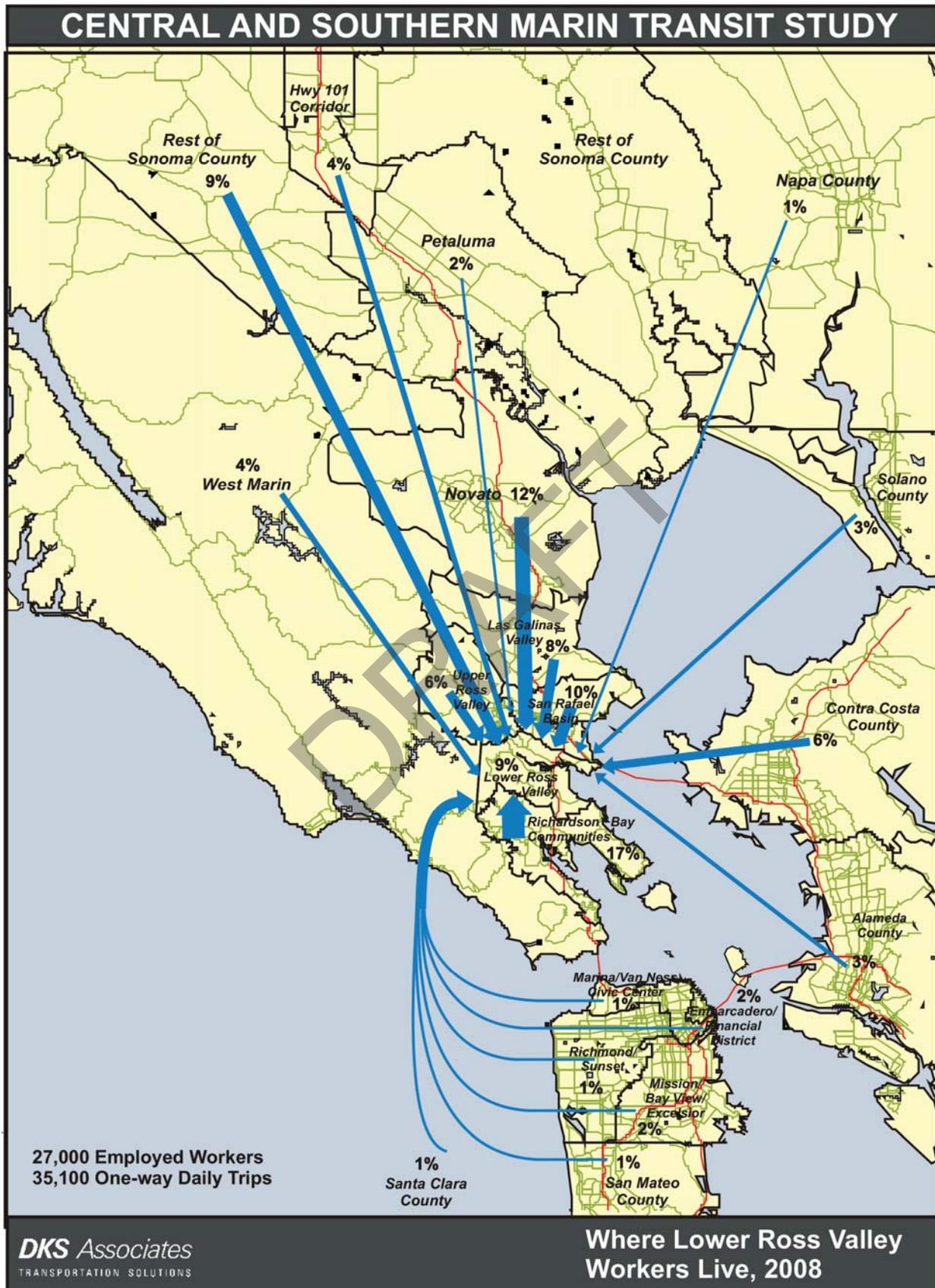


Figure 5.6: Lower Ross Valley Residents, 2018



Figure 5.7: Lower Ross Valley Workers, 2008

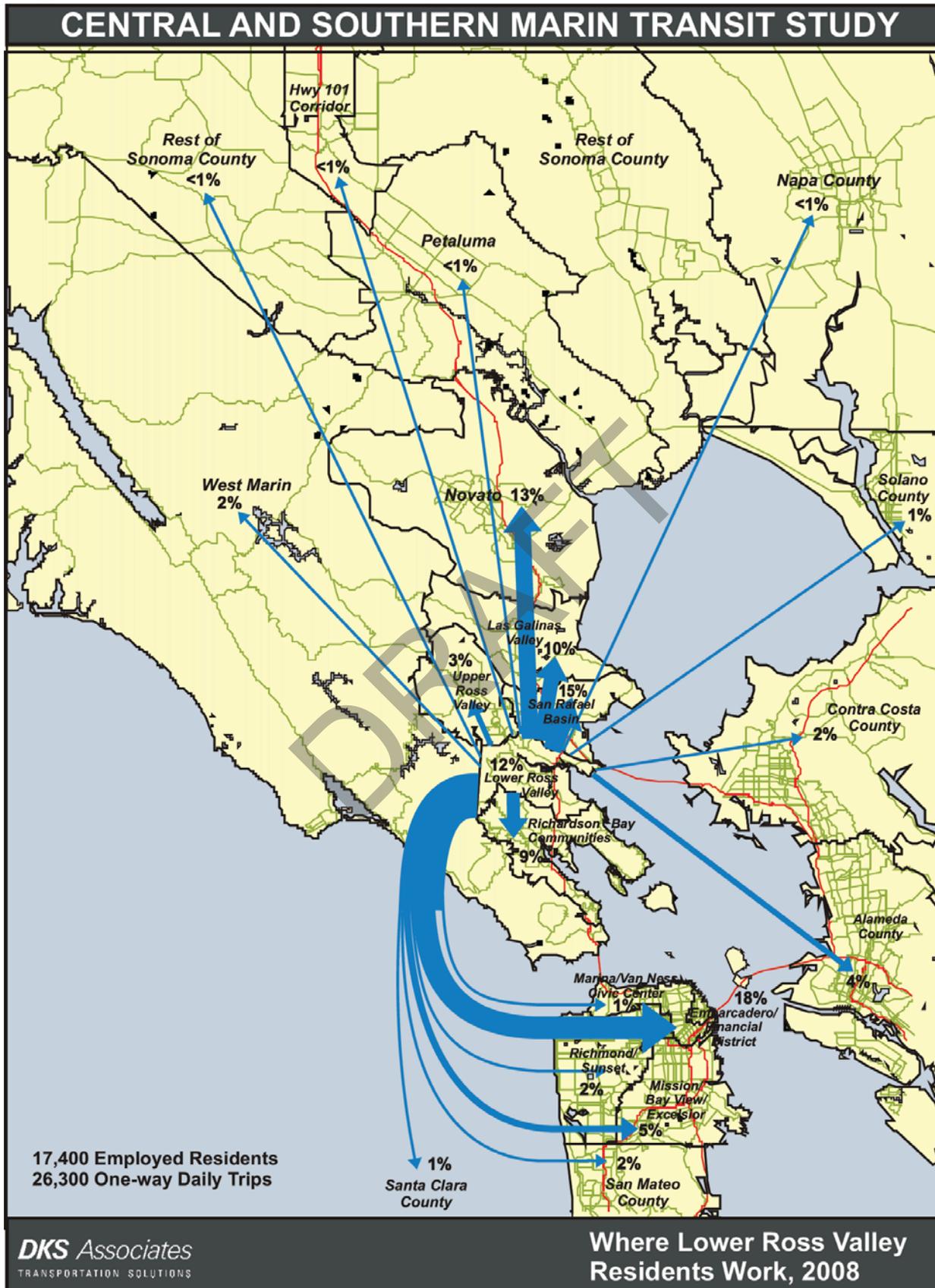
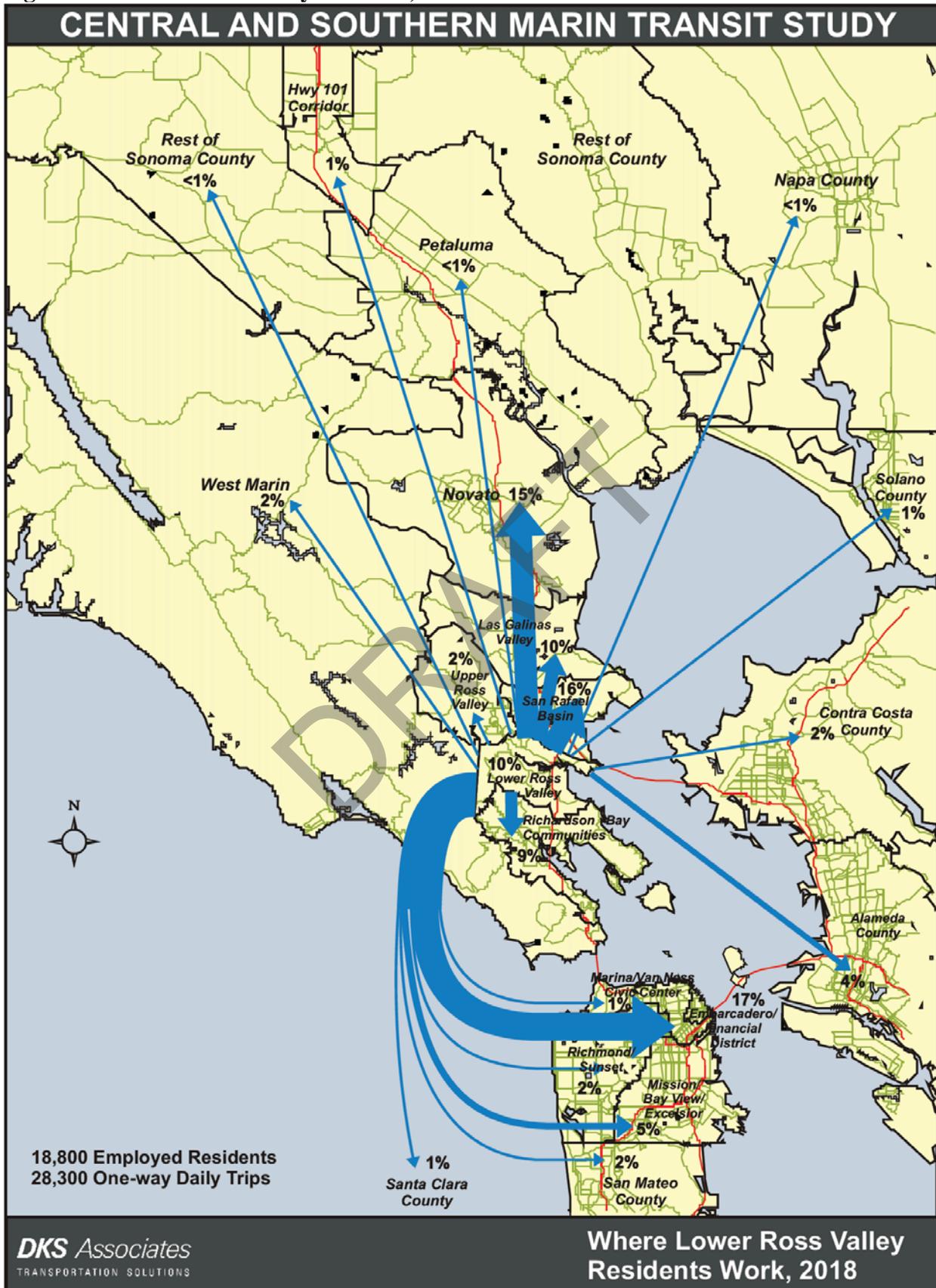


Figure 5.8: Lower Ross Valley Workers, 2018



The prominence of local retail activity tends to result in a high proportion of trips remaining in the immediate Lower Ross area, as shown in Table 5.4. About 40 percent of the resident trips today are estimated to be doing this. Of the remaining trips, the Central San Rafael basin accounts for an estimate 20 percent more of these trips. The proportion of non-resident trip ends in this area are slightly lower (33 percent for 2008) because of the strong regional shopping centers in the area.

Upper Ross Valley

The communities of San Anselmo, Fairfax, Woodside and surrounding areas also show a strong trend to San Francisco, but slightly less than the communities in more southerly parts of Marin County. As shown in Table 5.5 and Figure 5.9, almost 26 percent of the residents are estimated to work in San Francisco or further south. This is quite significant, in that home-based work trips incorporate all trip patterns rather than the primary wage earner; secondary wage earner trips (such as student part-time workers at nearby grocery stores or restaurants) are counted equivalently to the primary wage earner. Another 23 percent are projected to work in northern Marin County (Las Gallinas Valley or Novato), with many other workers remaining local in Central and Southern Marin (37 percent). These patterns are generally constant between 2000 and 2018, and only 16 percent more work trips are projected in the 10-year period.

There are about five workers to every job in this area. Most employment is associated with local-serving businesses. For those people working in these communities, most come locally. An estimated 7 percent are from this immediate area, with another 35 percent from other parts of Central and Southern Marin and approximately 26 percent come from northern Marin Communities. As with the residents, the travel patterns in this area are expected to remain stable by 2018, with only about a 7 percent growth in jobs projected.

The visual patterns of the work trips are further illustrated in Figures 5.9 through 5.12. Figure 5.9 summarizes the resident travel patterns estimated for 2008, with Figure 5.10 doing the same for 2018. Figure 5.11 summarizes the employee trip patterns for 2008, while Figure 5.12 summarizes the same pattern for 2018.

Figure 5.9: Upper Ross Valley Residents, 2008

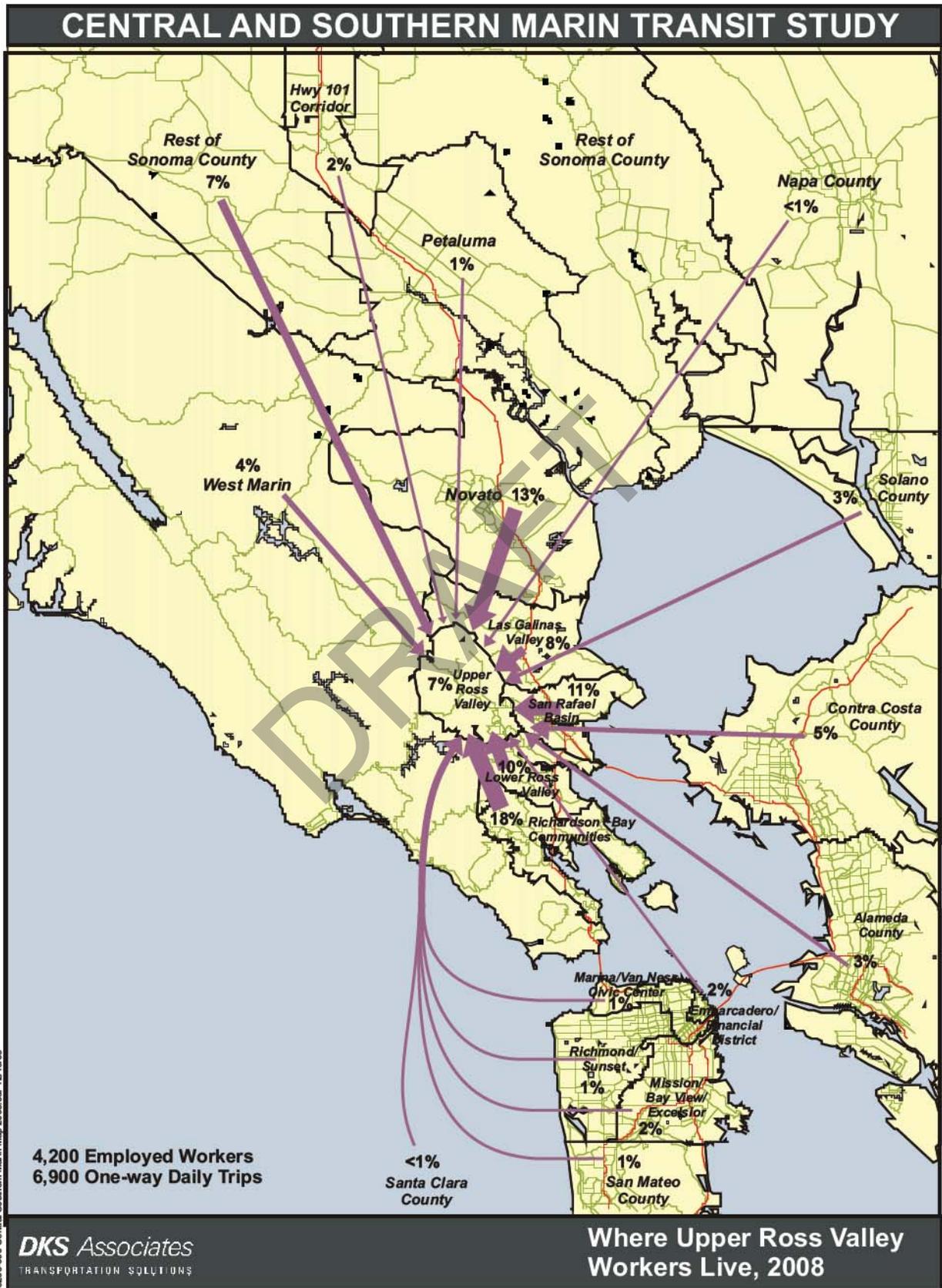


Figure 5.10: Upper Ross Valley Residents, 2018

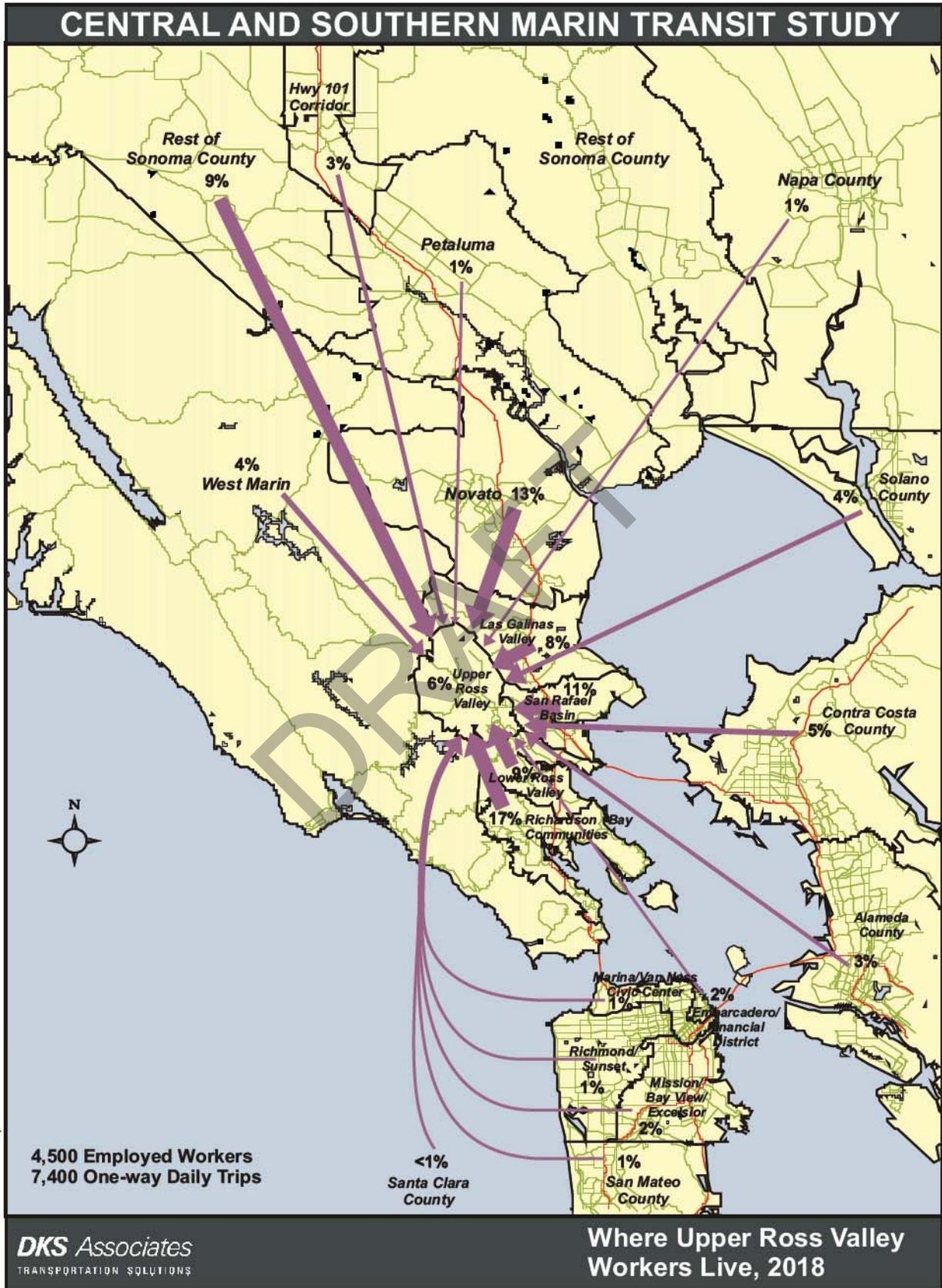


Figure 5.11: Upper Ross Valley Workers, 2008

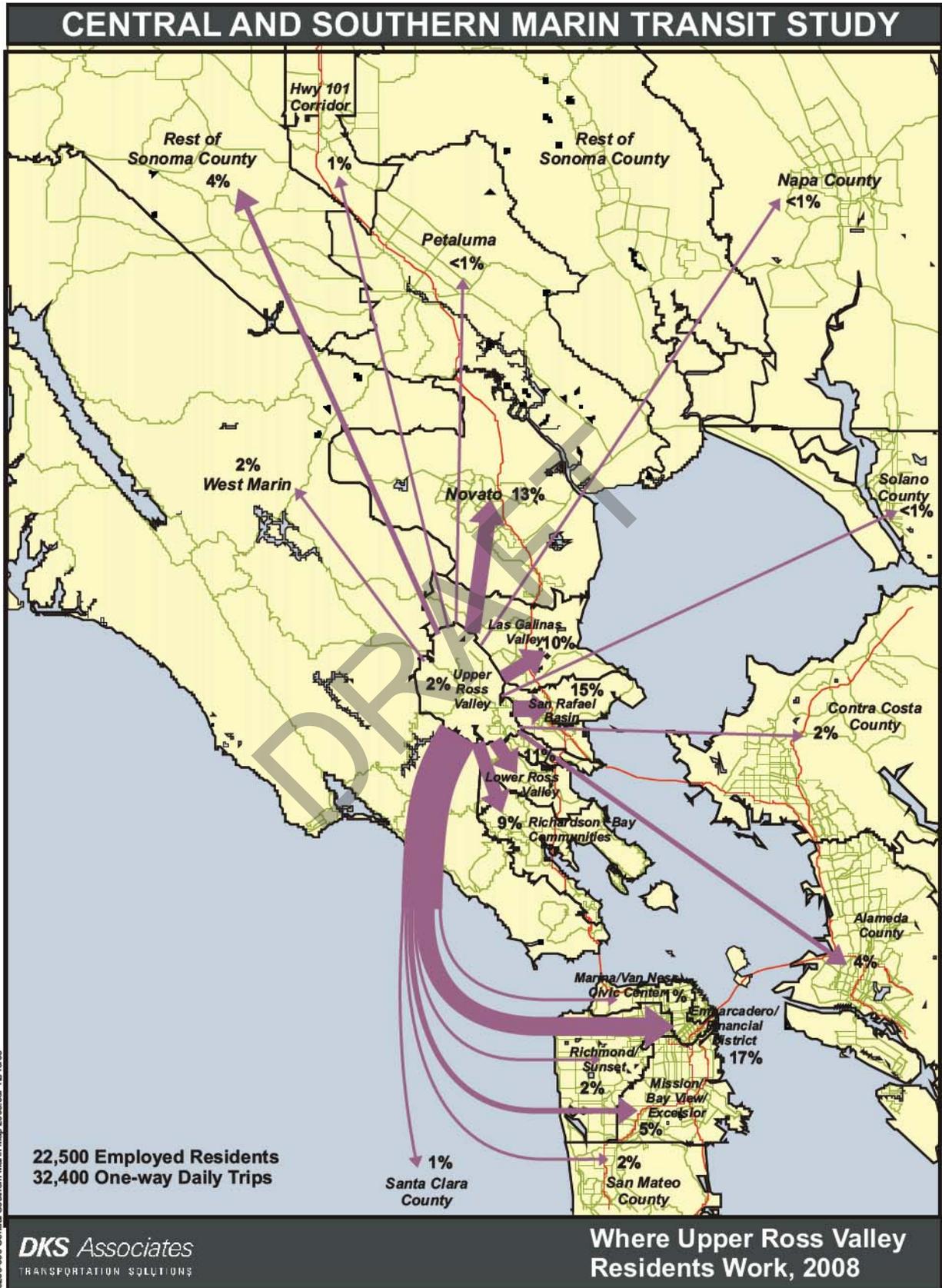
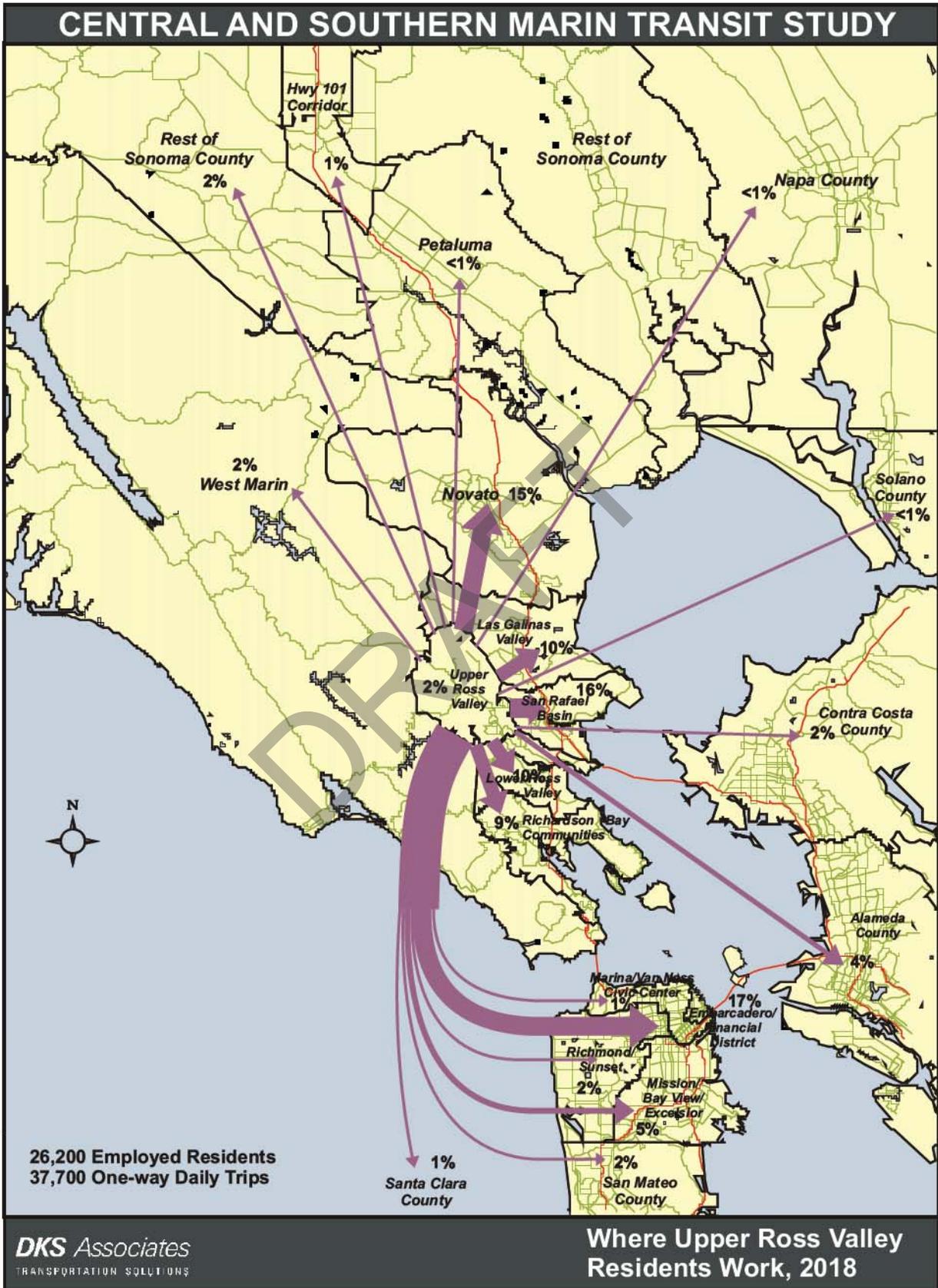


Figure 5.12: Upper Ross Valley Workers, 2018



The local focus of retail activity tends to result in a high proportion of trips remaining in the immediate Upper Ross area, as shown in Table 5.6. About 40 percent of the resident trips today are estimated to be doing this. Of the remaining trips, the Central San Rafael basin accounts for an estimated 18 percent more of these trips. The proportion of non-resident trip ends in this area is much higher (56 percent for 2008) because of the strong orientation of local-serving businesses.

San Rafael Basin

Central San Rafael and the surrounding neighborhoods of the San Rafael Basin show a strong trend to San Francisco, but slightly less than the communities in more southerly parts of Marin County. As shown in Table 5.7 and Figure 5.11., almost 23 percent of the residents are estimated to work in San Francisco or further south. This is quite significant, in that home-based work trips incorporate all trip patterns rather than the primary wage earner; secondary wage earner trips (such as student part-time workers at nearby grocery stores or restaurants) are counted equivalently to the primary wage earner. Another 23 percent are projected to work in northern Marin County (Las Gallinas Valley or Novato), with many other workers remaining local in Central and Southern Marin (38 percent). These patterns are generally constant between 2000 and 2018, and only 6 percent more work trips are projected in the 10-year period.

There are slightly over two jobs to every worker in this area. An estimated 16 percent are from this immediate area, with another 30 percent from other parts of Central and Southern Marin and approximately 19 percent come from more northerly Marin areas. As with the residents, the travel patterns in this area are expected to remain stable by 2018, with only about a 13 percent growth in jobs projected.

The visual patterns of the work trips are further illustrated in Figures 5.13 through 5.16. Figure 5.13 summarizes the resident travel patterns estimated for 2008, with Figure 5.14 doing the same for 2018. Figure 5.15 summarizes the employee trip patterns for 2008, while Figure 5.16 summarizes the same pattern for 2018.

Figure 5.13: San Rafael Basin Residents, 2008

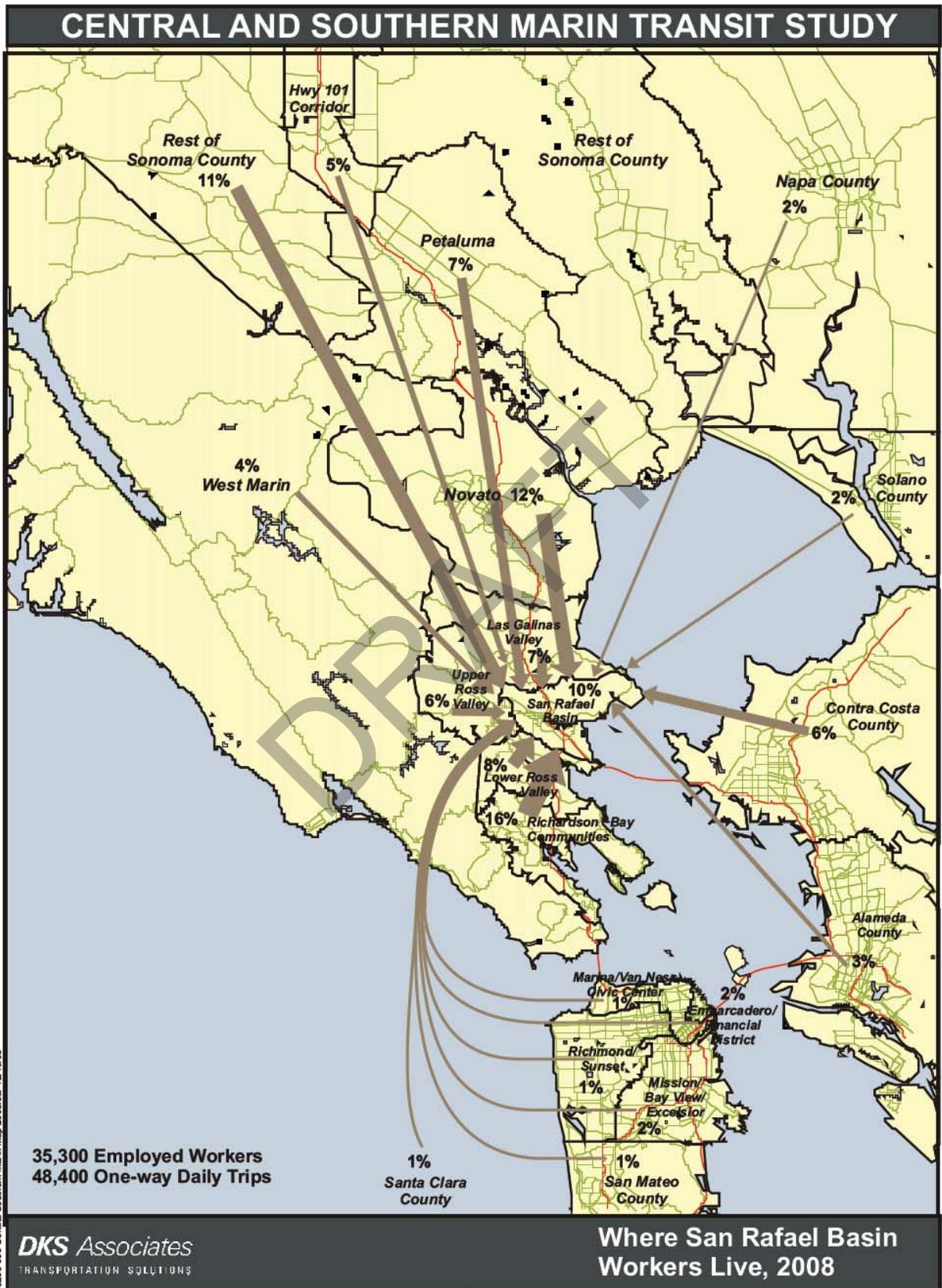


Figure 5.14: San Rafael Basin Residents, 2018

