

THE AUTOMOBILE AND THE ROADS OF YOSEMITE VALLEY*

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ON APRIL 30, 1913, in a "Memorandum to the Press," Secretary of the Interior Franklin K. Lane proclaimed, "I have decided to allow automobiles to enter the Yosemite Valley."¹

The results of that decision are evident in the landscape of Yosemite Valley; changes have occurred that require analysis if similar decisions are to be made intelligently in the future. This paper inquires into modifications to the roads in the Valley during the period 1913-1966 in an attempt to ascertain the impact of the automobile on one aspect of the cultural landscape.

Vacation travel based upon private automobile transportation has become an established recreational activity, with the vacationing citizen utilizing non-urban recreational resources in ever-increasing numbers (see Tables 1 and 2).² Visitor increase to the outdoor recreational areas has received impetus from many sources. There have been increases in leisure time and in the emphasis upon leisure-time activities as our society has become more highly mechanized. More money has become available for private travel. Our population has steadily increased.

A most significant factor, however, in greater use of the recreational resources is the greater accessibility of the areas to the population as a whole. Such accessibility is made possible by privately owned automobiles and the highways upon which they travel. Each year more automobiles are registered throughout the nation. California alone had almost 9,000,000 autos registered in 1966 compared to 4,000,000 in 1950 and 120,000 in 1914.³ Moreover, the autos travel on a constantly improving system of multilane high-speed highways that greatly reduce time and effort in traveling from urban to scenic areas. The automobile is one of the most important factors which has brought about increased utilization of recreational lands.⁴

THE AUTOMOBILE AND YOSEMITE VALLEY

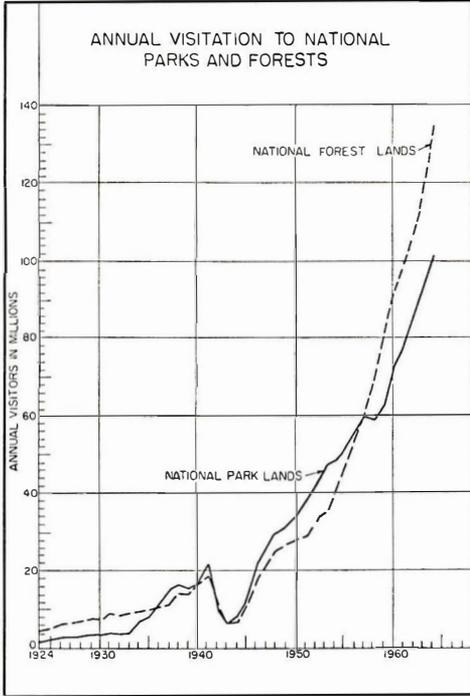
Prior to the automobile era, Yosemite Valley could only be reached by horseback or stage. The stage routes (via Wawona, Big Oak Flat, or up the Merced Canyon) were generally rough, dusty, and long. With the opening of the railroad to El Portal in 1907, a good deal of suffering was removed from a trip to the park, although a 12-mile stage ride was still necessary to reach the Valley from El Portal. The Wawona and Big Oak Flat routes remained jarring and dust-covered. These methods of travel brought slightly less than 11,000 visitors in 1912.

By 1915, two years after the auto had been admitted to the Valley, over 31,000 tourists visited the park.⁵ Visitations steadily increased so that by 1925 they had reached some 180,000 (see Table 3). On July 31, 1926, the all-year highway up the Merced Canyon was dedicated; two years later 340,000 people came to Yosemite Valley.⁶ From 1927 onward, the automobile has annually provided transportation for more than 90 percent of the park visitors.

The tourists required increasingly more facilities to match their increasing numbers. Needed were more accommodations, more restaurants, greater volume capabilities in retail food and dry goods sales, and generally more services of all types. The expanded facilities required expanded employee numbers, more service and support areas, and finally, the employees needed housing and certain "community services."

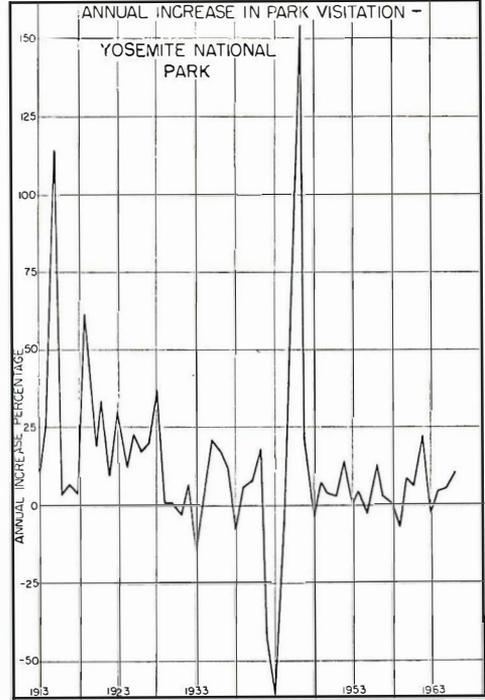
* This study summarizes parts of Mr. Fitzsimmons' master's thesis, *The Auto and the Cultural Landscape of the Yosemite Valley* (Northridge: San Fernando Valley State College, 1969). Mr. Fitzsimmons is currently a graduate student at UCLA.

TABLE 1



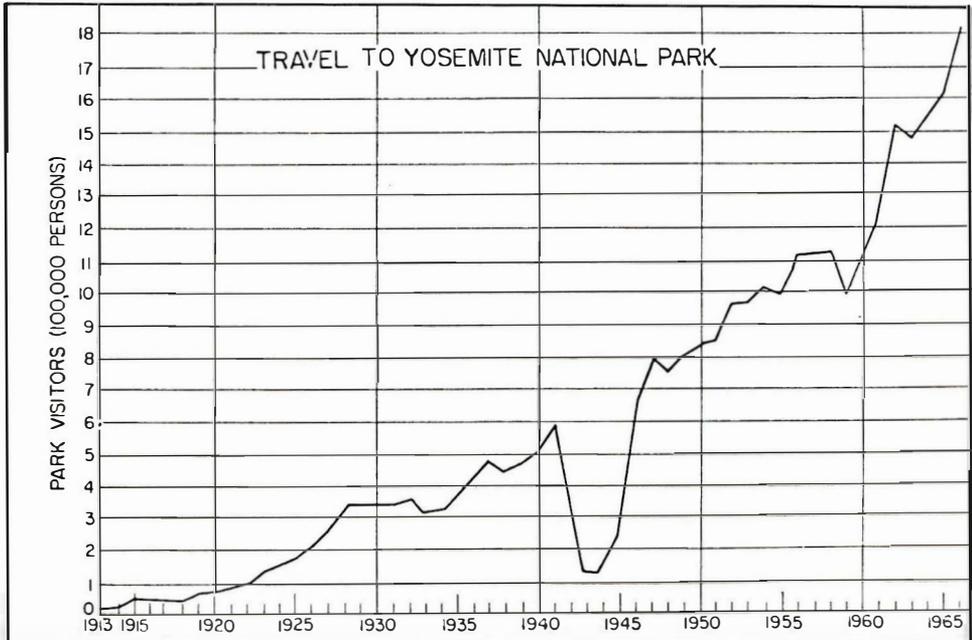
Source: Federal Lands Since 1956—M. Clawson

TABLE 2



Source: National Park Service Travel Summaries

TABLE 3



Source: National Park Service Travel Summaries

The increasing numbers of tourists and the continuing modifications to the landscape have created problems in maintaining the Valley in any semblance of a "natural" state. During the peak tourist season—June, July, and August—problems similar to those in many urban areas are common. Traffic congestion, overcrowding of public facilities, air pollution, and various unlawful activities are all typical summertime occurrences in Yosemite Valley.

CHANGING ROAD PATTERNS

The roads in the Yosemite Valley in 1913 were poor, not only by current standards but by the criteria of that day as well. The network of roads had evolved over a long period of time. The choices that man had made in selecting the early routes were made in the light of expediency: what was the quickest route to travel and which path offered the fewest obstacles to construction? The first report of the acting superintendent of the Valley, H. C. Benson, brought attention to the poorly designed road network. It called for planning and establishing a road system with an eye for aesthetic values.⁷

Benson was not the first to criticize the roads: similar comments appeared in *Century Magazine* in 1890.⁸ William Colby, writing about an 1894 visit to the Valley, regarded the roadways as random and excessive in terms of mileage.⁹ Figure 1 indicates that there were a number of unnecessary roads in the Upper Valley—no less than three routes led from the Old Village to Kennyville, a distance of about a mile. In addition, there were three routes between Camp Curry and the Indian Caves, with only a quarter mile difference in length between the longest and shortest paths. Further examination shows that there was a fairly direct route between each of the habitated sites in the eastern portion of the Valley. The roads were traveled by freight wagons, stages, horses, pedestrians, and occasional bicycles. They were subject to snow and rain in winter, sun and traffic in summer. Initially, the surfaces were composed of whatever substances underlaid the chosen routes. With the onset of the dry season and the accompanying period of heavy traffic, the roads annually turned to ribbons of dust.

Initial efforts to improve the road surfaces consisted of spreading gravel from the Merced River on the roadways. This work commenced in 1909 with a three-mile section of the South Road between El Capitan bridge and the Sentinel Hotel.¹⁰ The process continued until some 19 miles of road were covered with gravel by 1918.¹¹ Although gravel was an improvement, it was quickly broken down under the weight of heavy traffic, indicating that still further improvements in road surfaces were necessary.

In addition to inadequate surfaces, the roads of the Valley were narrow with abrupt turns. These conditions were such that in 1913, when autos were first admitted, only the North Road could be used by private automobiles and only for ingress and egress.¹² The roads were not considered suitable for private auto traffic,¹³ and all automobiles had to be parked for the duration of their visit to Yosemite Valley.¹⁴ Thus, when automobiles were admitted to the Valley in 1913, their owners found a poorly planned and overly extended network of dusty, gravel-covered roads extending over narrow and twisting routes.

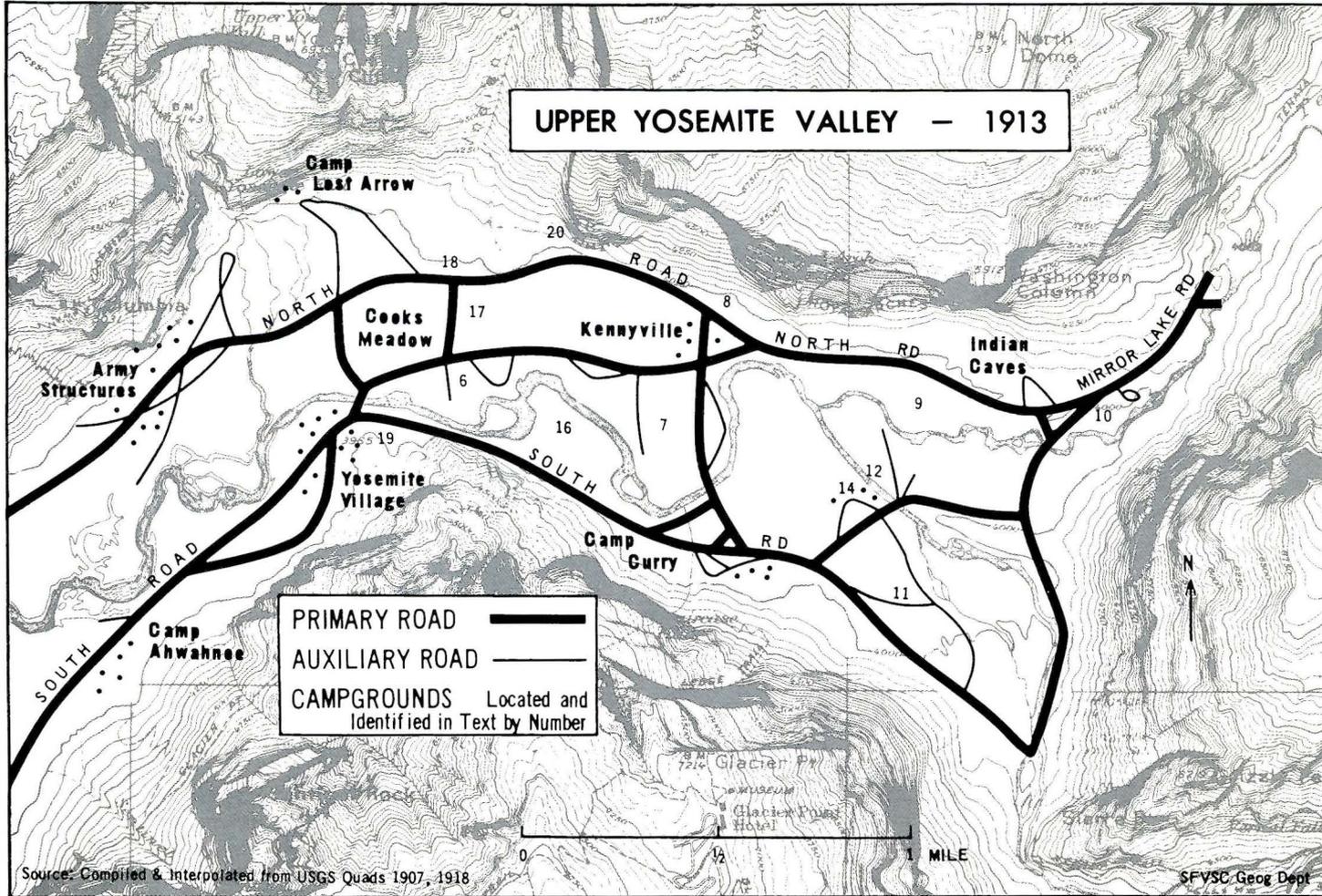
VALLEY ROADS SINCE 1913

The roads of the Valley underwent varying degrees of modification in the years after regular automobile use began. Through time the new vehicles increased in number, weight, and speed and, as they did so, new pressures were applied to the road network—pressure that led to resurfacing, realigning, and construction of new roads.

Prior to the 1920's, work on the primary roads was heavily oriented toward repair, maintenance, and minor improvements of existing routes.† Each spring, repairs were necessary to put the roads into passable condition. The road surfaces needed renovating, ruts needed to be filled, and washed-out portions required reconstruction—this spring repair rite was annually performed until the roads were paved in the late 1920's. During the tourist season constant maintenance work was required to preserve

† The primary roads represent the principal means of through travel in the Valley. They provide routes extending the length of the Valley and link the camps, hotels and various sites of occupation and interest.

Figure 1



the roads in a passable condition, since the gravel surface quickly broke down under the heavy summer usage. Road crews, with horse teams and hand tools, worked throughout the summer and into the fall spreading gravel, sprinkling the roads, and effecting general repairs. These tasks increased in difficulty as more and more vehicles appeared in the Valley.

A flurry of activity took place in the 1920's and early 1930's; roads were widened, realigned, and paved. Beginning with the Mirror Lake Road in 1919, several of the roads were realigned.¹⁵ The Mirror Lake Road was relocated only a few yards from its previous route, but was wider and straighter. A new road was constructed through Camp 7 in 1921; with the eastern portion of the now dissected camp designated as Camp 15. The road across Cook's Meadow was built in 1924.¹⁶ The construction of the New Yosemite Village, dedicated in 1924, and the opening of the Ahwahnee Hotel in 1926 caused a realignment of routes in their immediate vicinity. The road to Kennyville via Camp 20 was truncated by the Ahwahnee Hotel, which was built on the former Kennyville site. The North Road was relocated southward, while a new road connecting Ahwahnee and North Roads was built in 1925.¹⁷ This period of activity also saw the completion of the Camp Curry bypass road and the relocation of the El Capitan Bridge and accompanying approaches about one-half mile eastward. Taken together, these modifications constitute the most significant change in the primary road pattern in all of the years since 1913.

While new roads were being constructed, the remainder of the system was also improved. *Construction Reports* consistently refer to work done in continued widening, the spreading of more and more gravel, and the improvement of bridge approaches. However, the foremost achievement was the paving of the Valley roads. The Bureau of Public Roads commenced paving operations in 1927 and continued work into the early 1930's. In the early fifties, the road across the Valley floor at the Old Village was eliminated and a realignment effected to provide a cross-Valley route just east of the old road. In 1956, a bypass road was constructed north of Yosemite Lodge. Nonetheless, from the mid-thirties until 1966, the close of this study, the primary roads underwent little change; the pattern and mileage of the roads remained nearly constant, as shown in Figure 2.

AUXILIARY ROADS

When the automobile entered Yosemite Valley in 1913, some five miles of auxiliary roads were to be found.‡ With the greatest efforts being expended upon improving the primary roadways, the auxiliary tracks received little attention prior to 1920. However, during the twenties the construction of the New Yosemite Village necessitated the building of access roads to and among that growing complex of structures; campgrounds also received new or extended roadways at that time. As new facilities were constructed, the auxiliary network expanded to provide access to the newly habited areas.

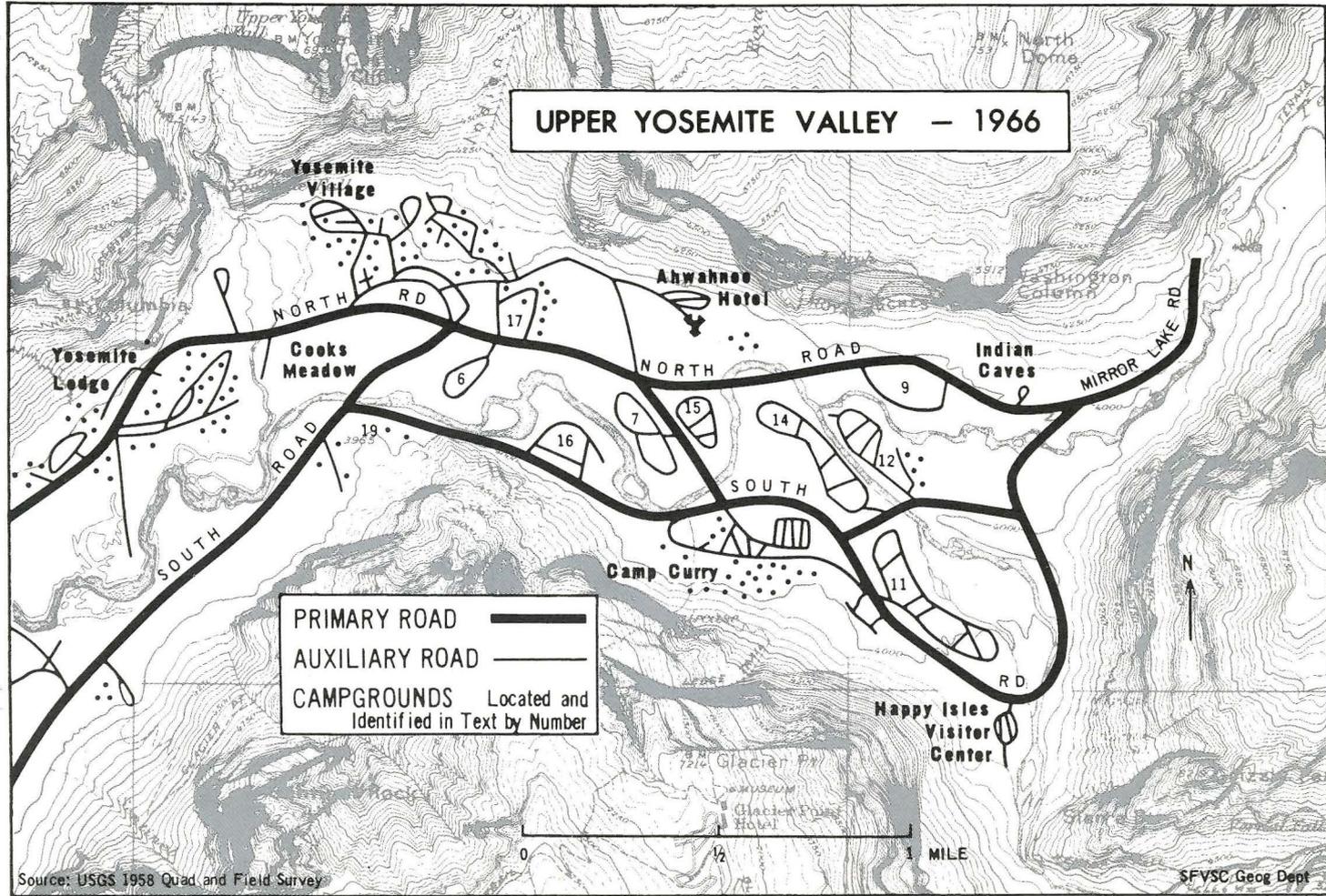
The early and mid-thirties was an active period in the development of access and service routes. While some new auxiliary road construction occurred in the western portion of the Yosemite Valley, most of the work was accomplished in the eastern half of the Valley within the campgrounds, primarily Camps 11, 12, and 14. Little additional work, save maintenance, was done until the fifties when expansion of Yosemite Village, its adjacent maintenance and residential area, and Yosemite Lodge necessitated substantial extension of the auxiliary roadways.

SUMMARY

The pattern of the primary roads has remained remarkably constant through time, especially when the vast increase in the number of visitors is considered.¹⁸ There are, to be sure, differences between the 1913 and 1966 patterns: the El Capitan bridge has been moved, some relocation of mid-Upper Valley roads has occurred, and two bypass roads are now evident. However, these changes represent only minor modifications of

‡ The auxiliary roads consist of camp roads, roads in concessionaire and residential areas, roads to service facilities and the like.

FIGURE 2



the overall network. There are still three routes from the Old Village site to the Kennyville site and there remain three ways to go from Camp Curry to the Indian Caves just as there were in 1913. The mileage of the primary system has remained essentially constant; there were approximately 19 miles of road in 1913 and 18 miles of road in 1966. However, the roadways of 1966 are wider and straighter, are paved, and have a much greater carrying capacity than did their 1913 predecessors.

Modification of the auxiliary road network was accomplished by expansion into areas previously lacking such roads, and by intensification of the existing pattern. The most notable changes occurred in the area north of the New Village. These changes represented an expansion into a previously undeveloped area and were made to provide access to the growing service and residential complex located there. All the facilities constructed in the Valley to provide warehousing, maintenance, and support for the tourist centers required access routes. Thus, the auxiliary system increased from five to 15 miles in length, while the primary system remained nearly static.

CONCLUSION

The substantial lack of change to either the length or pattern of the primary roads since the admission of the automobile may be accounted for by several phenomena. First, the limited size of the Valley, some 2,400 acres, and its long, narrow, often-constricted shape restrict possible route changes. Additionally, the periodically flooded Merced River and the limited, permanent ingress-egress points inhibit practical choices for wholesale pattern modification. Finally, the extended nature of the pre-1913 network made substantial changes of pattern and length unnecessary. While no marked change to the pattern or length of the primary road network was caused by the auto, paving of the roads was primarily a response to the continued and lasting presence of the auto in Yosemite Valley.

The extension of the auxiliary network was made necessary by the influx of auto-borne visitors over the years. And, visitors' needs expanded with their numbers. These constantly increasing needs were fulfilled by the construction of more and more facilities within Yosemite Valley, each requiring access and connecting roads.

In general, changes to the roads of Yosemite Valley since 1913 have made a less significant impact on the Valley scene than changes made to other elements of the cultural landscape. Modifications to residential patterns, tourist accommodations, maintenance and service facilities are all quite visible in the Valley scene. The change in meadow usage from providing feed for the substantial pre-auto animal population to providing scenic attractions for auto-borne tourists is another post-auto landscape modification.

There is room for a great deal of improvement in the movement of people about the Valley. Traffic problems are serious and harmful to both the park and the park-experience of the visitors. Several methods of alleviating transportation difficulties are being studied and some are being implemented.¹⁹ Additional possibilities include restricting the use of automobiles in the park with local transportation handling all travel in Yosemite Valley. Reconstructing the road network to optimize traffic flow and simultaneously reduce the impact on the natural scene is another approach.

The ultimate solution involves prohibiting the use of automobiles in the Valley. But whether such a solution could be implemented, is a real question. Society must accept the fact that more stringent regulations on the use of resources are needed to cope with the increasing population pressures on the land.

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⁸ Lucius P. Deming, "Destructive Tendencies in Yosemite Valley," *Century Magazine*, XXXIX (Jan. 1890) p. 477, and George MacKenzie, "Destructive Tendencies in Yosemite Valley," *Century Magazine*, XXXIX (Jan. 1890), p. 476, and "The Care of the Yosemite Valley," *Century Magazine*, XXXIX (Jan. 1890) an editorial, p. 474.

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¹¹ Stephen T. Mather, *Report of the Director of the National Park Service*, 1918, p. 133.

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¹⁴ William T. Littebrant, *Report of the Acting Superintendent of the Yosemite National Park*, 1913, p. 37.

¹⁵ Gabriel Sovulewski, *Construction Reports of Gabriel Sovulewski 1916-1927*, Nov. 1919.

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¹⁷ *Ibid.*, Aug., 1925 and Dec. 1925.

¹⁸ Some 12,000 visitors in 1913 compared with 1,800,000 in 1966.

¹⁹ The use of inter-Valley shuttle buses and the conversion of several Valley routes to one-way roads are examples.