THE CENTRAL HIGHWAY OF CUBA

Edwin J. Foscue

ISLANDS, particularly those with an extensive coast line in relation to area, usually depend upon coastwise trade for communications between different sections, and rarely develop unified land communications until late in their history. Yet the Republic of Cuba, scarcely three decades old, with a good trunk line railroad, has recently completed a highway that is a model of scientific construction, branch lines serving the various ports, a highway which would make for cheaper transportation has long been needed. Rates on Cuban railroads were becoming almost prohibitive, as shown by the price of a ticket from Consolación del Sur, in Pinar del Rio Province, to Havana, a distance of about ninety miles, being $10.00, or more than ten cents per mile. Busses operating along the new highway between

Figure 1.—Typical section of the Carretera Central before the new highway was constructed. (Courtesy of Horace C. Ash.)

scenic beauty, and economic usefulness. The Central Highway, or “Carretera Central” as it is known in Cuba, extends practically the entire length of the island from Pinar del Rio in the west to Santiago de Cuba, a distance of more than 700 miles, and represents the first and most important unit of an elaborate road system designed to serve every part of the island.

In spite of a railroad running the length of the island, with numer-

the two points carry passengers for $2.55, or approximately one-fourth of the former rate. Freight rates were proportionately high. Before the construction of the Central Highway, Cuba’s roads were of little value to the rural sections, as many of them became impassable during the rainy season, which, for most of the island, lasts from May to October. Patches of improved macadam road, such as the highway between Havana and Batabanó, were
found near the cities, and a central highway extended the length of the island, but much of it was hardly more than a trail (Figure 1). Such were the conditions of the highways of Cuba at the inception of the present roadbuilding plan of the government.

**History of the Project**

Recognizing the importance of good roads in the advancement of agriculture and commerce of Cuba, General Gerardo Machado, soon after becoming president, commissioned the Secretary of Public Works to formulate a plan for building highways throughout the republic. The developed plan, admirably adapted to the physiography of the island, consisted of a main trunk highway to extend the length of the island, and feeder lines to connect with the main line. The plan was presented to the National Congress and was approved on July 15, 1925. After making preliminary surveys, the Cuban government asked for bids on the bases of these surveys. The final contract was awarded in two sections, for Matanzas and Santa Clara Provinces, approximately 30 per cent, to the Associated Cuban Contractors, Inc., and for the remaining four provinces, to Warren Brothers Company of Boston. The formal contract was signed at Havana February 19, 1927, and actual construction

![Figure 3.—Clearing the right of way through jungle vegetation in Oriente Province. (Courtesy of Horace C. Ash.)](attachment:image)
work started in the six provinces about the first of May of that year. The contract called for the completion of the Central Highway within five years. The contract price for the 705.6 miles was $75,870,000, or more than $107,000 per mile.

Influence of the Physical Environment of the Island upon the Route and Construction of the Highway

Because of the extreme length of Cuba, nearly 800 miles, in comparison to its width, varying from 20 to 100 miles, the Central Highway was designed to extend along the backbone or drainage divide of the island and to touch the coast only in three places, Havana, Matanzas, and Santiago de Cuba. Important towns in a large measure determined the route of the highway (Figure 2), necessitating several wide deviations from the most direct route, although several important seaports, as Cardenas and Cienfuegos, were left off.

The relatively simple topography of the island presented few handicaps to construction. The two major mountain chains extend along the north shore of the Pinar del Rio Province in the extreme west, and along the south shore of the Oriente Province in the extreme east. The highway route lay entirely south of the western mountains, hence only in the eastern mountain province did the building of mountain roads become necessary. Throughout the length of the island the topography comprises a rolling, upland plain, which offered no serious handicaps to road building. By following the backbone of the island, the highway avoided most of the short but torrential rivers, thereby reducing bridge construction to a minimum.

Natural vegetation offered a more serious obstacle to highway building than topography. Originally most of Cuba was forested, but lumbering operations, carried on over a period of four centuries, have deforested much of the land. At present dense forests appear only in Oriente Province, and there the clearing of the palm jungle for the highway right-of-way was a stupendous task (Figure 3).

Some Details of the Construction

The contract called for the road to be paved 20.66 feet wide throughout its full length with Warrenite Bitulithic on a concrete base with thickened edges. One of the first problems was to determine the sources...
for raw materials, particularly supplies of sand and stone. The only stone available in sufficient quantities to be of value in the work was found in two quarries in the town of Camoa in Havana Province, and the only available sands were along the beaches near Havana, and in the river beds in Pinar del Rio Province. High railroad freight rates made shipments from these localities to other parts of the island prohibitive, and necessitated a thorough geological survey of the island for additional stone and sand resources. This survey discovered sand and stone in workable quantities in many places on the island where previously they were not known to exist.

Bridge construction presented other problems. While Cuba has few rivers, the torrential summer rains produce an extremely rapid run-off. This necessitated the building of substantial steel or concrete bridges (Figure 5) over draws, or arroyos, that throughout most of the year are practically dry, but that become raging torrents during the wet season. One section of twenty miles of road averaged four large bridges per mile.

The problem of getting supplies to the construction work was solved by the use of trucks where possible, but frequently bull carts (Figure 6) provided the cheapest and most reliable means of transportation. The contract stipulated that seventy per cent of the labor on the pay roll at all times must be Cuban. This was adhered to with scrupulous care. Except for American engineers and contractors, practically all common

Figure 7.—Bunk house for Cuban and Spanish laborers near Contramaestre, Oriente. Note hammocks for sleeping. (Courtesy of Horace C. Ash.)

Figure 6.—A bull team gasoline supply wagon on the way to the shovels, near Bayamo, Oriente. This method frequently proved to be the most economical for short hauls, especially during the rainy season. (Courtesy of Horace C. Ash.)
laborers were either Cuban or of other Spanish descent. The use of native and Spanish help proved quite satisfactory. They were more easily cared for in simple bunk houses (Figure 7) than could be possible for laborers in the United States.

Some of the unique features of the highway include an absence of grade crossings with the railroad, and the insertion of granite block grade crossings for bull carts. For many miles bull cart roads are built parallel to the main highway, and where a crossing is necessitated, granite blocks are inserted to keep the pavement from destruction by the cart wheels.

The Completed Highway and Its Significance

Since the official opening of the Carretera Central, traffic has increased steadily, showing the need of the highway.

Various types of wheeled vehicles, from the passenger automobile to the heavily laden freight truck, now use the highway. Numerous passenger busses have been put into service on the various sections of the highway, so that it is now possible to travel the entire length of the island by motor bus. While through travel is increasing rapidly, most of the passenger and freight traffic is, as yet, local in nature, moving from the small towns and rural districts to the larger towns and cities. Busses have brought about a marked reduction in both freight and passenger rates, and have proved a benefit to the island in that respect, as well as providing a faster and more convenient means of transportation.

In providing an outlet to the rural sections of Cuba, the new highway has been of untold value. The route passes through the most productive sections of the island. Starting with the famous tobacco lands of Pinar del Rio Province, the highway traverses the industrial sections of Havana Province, and ties the western part of the island to the Capital and chief city, Havana. East of Havana the route traverses the great sugar plantations of Havana and Matanzas Provinces, passing large sugar centrals (Figure 8) that are beginning to ship their products by truck to the larger port cities of Havana and Matanzas. Around Matanzas, and also near
Cardenas, are extensive acreages of sisal or henequin (Figure 9), that, through their cordage factories, are providing additional traffic for the road. In Santa Clara and Camaguey Provinces the route crosses some of the more important grazing lands of the island, much of which is being placed in sugar or tobacco. As better outlets are provided, these two provinces will increase in their productivity, and provide additional commodities for trade. In Oriente Province the highway again passes through extensive sugar plantations and scattered areas of citrus fruit production. As the highway crosses the Maestra Mountains before descending upon Santiago de Cuba, extensive areas of hardwood forests are encountered, and numerous mineralized zones are traversed. These will use the highway as an outlet to the port of Santiago. On the south slope of the mountains are extensive coffee plantations which may ultimately provide additional traffic for the highway.

Another interesting aspect of the Carretera Central is its ever increasing use by American tourists. Because of the scenic beauty of the highway (Figure 10), many miles of which run through arbors of large old trees, the wild luxuriance of the tropical vegetation, and the historic interest of the land traversed, tourists are bringing their automobiles to the island in increasing numbers. Automobiles may be ferried across to Havana from Tampa, Miami, or Key West, but as the distance from Key West is the shortest of the three, that route is most used. Originally cars were allowed to remain in Cuba for 90 days duty free, but recently this has been extended to 180 days. Every courtesy is shown the American automobile tourist, and everywhere he is welcomed on the island. As Cuba plans to pay for the highway largely through a gasoline tax, it naturally behooves her to attract the American automobile tourist. Gasoline rates are somewhat higher than in the United States, but even with the tax added they are by no means prohibitive.

The Future

With the opening of the Carretera Central all Cuba seems to have taken on new life. The rural sections, while losing none of their quaint appearance, are becoming more modern. The small villages are cleaning up their streets and painting their houses. The cities, particularly Havana, are becoming more beautiful. While still maintaining an old world atmosphere about its parks, its boulevards, and its public buildings, Havana is blending a modern American type of architecture nicely with the prevailing continental type. The Central Plaza in Havana with its National Theatre and elaborate new Capitol Building, is one of the show places of the Western world.

What Cuba has accomplished with limited funds, but with a strong determination to progress, should
set an example for her sister Latin American republics. In the brief period since the opening of the Carretera Central to traffic, the value of good roads has been demonstrated. When all of the feeder lines are completed, Cuba will have a highway system such as few countries possess. Other Latin American countries have recently become interested in highway construction. Mexico is slowly pushing a stupendous highway project to completion. Already a paved road connects Monterrey with the American border, and before long it will be possible for the American tourist to drive on paved roads to Mexico City. Other countries badly in need of such highway programs include Guatemala, Honduras, Costa Rica, and Colombia.

Good highways tend to stimulate trade, and break down isolation. As transportation binds the sections of the island into one interdependent whole, revolutions, like the present catastrophe, may be more easily avoided, and, it may be hoped, ultimately eradicated. That other countries of the Caribbean and South America may profit by Cuba's example is likely.