80TH CONGRESS
1st Session

SENATE

REPORT
No. 440

INVESTIGATION OF THE NATIONAL DEFENSE PROGRAM

ADDITIONAL REPORT

OF THE

SPECIAL COMMITTEE INVESTIGATING THE NATIONAL DEFENSE PROGRAM

PURSUANT TO

S. Res. 71

(77th Congress; S. Res. 6, 78th Congress;
S. Res. 55, 79th Congress; and S. Res. 46, 80th Congress)

RESOLUTIONS AUTHORIZING AND DIRECTING AN INVESTIGATION OF THE NATIONAL DEFENSE PROGRAM

INTER-AMERICAN HIGHWAY

JULY 7, 1947.—Ordered to be printed with an illustration

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SPECIAL COMMITTEE TO INVESTIGATE THE NATIONAL DEFENSE PROGRAM

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INVESTIGATION OF THE NATIONAL DEFENSE PROGRAM

July 7, 1947.—Ordered to be printed with an illustration

Mr. FERGUSON, from the Special Committee To Investigate the National Defense Program, submitted the following

ADDITIONAL REPORT

[Pursuant to S. Res. 71, 77th Cong.; S. Res. 6, 78th Cong.; S. Res. 55, 79th Cong.; and S. Res. 46, 80th Cong.]

THE INTER-AMERICAN HIGHWAY

CONCLUSIONS

1. The War Department should not have undertaken construction on the so-called Inter-American Highway in Central America as a war project. Thirty-six million dollars were added to the cost of World War II without contributing to the defense of the United States. Indeed, our war effort was hampered by the diversion of vast quantities of construction equipment, road materials, construction manpower, and shipping in 1942 and 1943, when we were facing shortages on all sides and the universal cry was "too little too late."

2. Like the Canol project—which was approved during the same period, in the spring of 1942—the War Department's Inter-American Highway project was conceived hastily and founded upon an absence of sound planning or reasoning. War Department approval was predicated almost wholly upon information supplied by the Public Roads Administration. These estimates clearly specified the conditions under which a highway could be completed within the time desired. The War Department disregarded the conditions and specifications upon which the Public Roads Administration estimates were based and ordered the highway built, notwithstanding clear evidence that it was impossible to execute the project as ordered.

3. Both before and after approval of the Inter-American Highway project, the official position of the War Department had consistently been that an overland route to the Panama Canal was not required for the logistical support of our forces in Panama. Nevertheless, the Secretary of War, on July 23, 1942, advised the Secretary of State that the construction of the Inter-American Highway was an urgent

military necessity. It is clear from the evidence that the urgent military necessity was not military supply, but the promotion of continental solidarity. The committee believes that the War Department invaded the province of the State Department in certifying that the promotion of continental solidarity was an urgent military necessity. The committee further believes that defense funds and scarce manpower, materials, machinery, and shipping should not have been diverted to a project of such questionable and nebulous benefit to our war effort.

4. Execution of the project by the Army engineers was unbusinesslike. Excessive equipment rentals were paid. Records were inadequate. Supervision of contractors was ineffectual. Coordination with the United States Public Roads Administration was poor. Termination of the project was ordered belatedly. Liquidation was slow and expensive. As a result of these and other inefficiencies in handling the project, only 347 miles of road were completed at an expenditure of $36,000,000, although it had been estimated that 905 miles of road could be completed for 14½ million dollars. Only one-third of the work done by the Army engineers is estimated to be useful to the future Inter-American Highway. Much of the work done by the Army engineers was on roads which will not be used by Public Roads Administration as a part of the Inter-American Highway as presently located.

5. Some contractors' profits were excessive. General provisions to prevent inordinate profits, such as price ceilings, income taxes, and renegotiation, as applied to this project, have not proved effective to date. However, tax recoveries against some of the contractors may yet be achieved.

6. United States representatives in the State Department and the Public Roads Administration were ineffective in securing agreements for selecting a route for some sections of the Inter-American Highway. In general, the route is located through the Cordilleras Mountain Range. This necessitates tremendous cuts and fills, adds to the difficulty and cost of construction, and will result in a tortuous, winding highway traversing mountains as high as 10,000 feet. The utility of the road for commercial or defense purposes is thereby limited. If the route had been located on the Pacific coastal plain, the highway would have been straight over long stretches and traffic could move faster. Economy in the movement of heavy cargoes would result from the greater efficiency of motor vehicles at lower altitudes and from avoiding hauling heavy loads over mountains.

7. The route of the Inter-American Highway in some sections is unnecessarily circuitous. In Nicaragua, the official Inter-American Highway is routed to pass by property owned by the former President. This detour adds 42 miles to the length of the highway. In El Salvador the official Inter-American Highway route makes a detour adding 14 miles for the purpose of serving a port. In Guatemala, a wholly new route, deviating from two existing alternative routes, was selected to connect Guatemala City with the Mexican border. In all three of these instances of unnatural location of sections of the route, there was violent disagreement between the United States Public Roads Administration and the Army engineers. This resulted in an anomalous situation where two United States agencies were doing work on routes paralleling each other, while other sections of the highway, where there was no road at all, were neglected.

8. The United States, since 1942, has spent $3,000,000 for partial construction of a 160-mile road in Nicaragua from San Benito to Rama, a river port. This project, which will cost 6½ million dollars, was not approved by Congress. The funds used were taken from the so-called secret or emergency fund of the President, available only for emergencies affecting the national security or defense and not requiring detailed accounting. Another $1,200,000 was spent by the Coordinator of Inter-American Affairs between 1942 and 1944 to construct the 40-mile Lake Yojoa Road in Honduras. This was admittedly a make-work project to relieve unemployment in Honduras and did not have congressional approval. Although built at the expense of the United States, this country has no rights in these roads and there is not even any agreement that they will be maintained. Neither road is a part of the Inter-American Highway. The committee does not consider either of these expenditures of United States funds sufficiently related to national defense to have justified them as proper defense expenditures in World War II.

9. Our State Department has been remiss in failing to negotiate firm agreements providing for the maintenance of the Inter-American Highway after its completion and in guarding against prohibitive restrictions or regulations which would prevent full use of the highway. Failure to maintain any section of the highway or the imposition of onerous restrictions in any section will render the highway useless as a whole, either for commercial or defense purposes, since there are no alternate routes to the Panama Canal below El Salvador.

10. The Army engineers spent a net amount of United States funds in excess of $36,000,000. The United States Public Roads Administration has expended approximately $30,000,000 to date and $8,000,000 more has been allotted to this work. In addition, the Export-Import Bank has loaned to Mexico and the Central American governments, principally for the construction of various sections of the Inter-American Highway, approximately $48,000,000. Thus, a total grant of over $74,000,000 and loans of $48,000,000 of United States funds have been committed to this project. However, the highway is not yet half completed. In September 1946 the Public Roads Administration estimated that it would cost an additional $65,000,000 to complete the highway, but in March 1947 the Public Roads Administration declined to give the committee any estimate of the final total cost. Accordingly, a project which was estimated in 1941 to cost the United States a total of $20,000,000 will now cost at least $139,000,000.

11. Immediate study should be given to the advisability of creating an Inter-American highway commission or authority to be established by multilateral treaty between the interested governments. Such a commission or authority should have power to insure the maintenance and use of the highway, when completed, as an international artery of commerce and as an instrument of hemispheric defense. The results of such a study should be available prior to any further substantial commitment of United States funds to this highway.

12. This committee believes that it should not take any position on the broad question of policy as to the establishment of a through highway between North and South America at the expense of United States taxpayers. This question is within the purview of authority of other committees of the Congress.

However, if such a highway is to be built in the interest of the economic development of the American continents, to strengthen the commercial and political ties between the American nations and to promote the security and defenses of this hemisphere, then the committee believes that the manner in which this highway project is conceived and executed should be businesslike and should be calculated to achieve the objectives stated. To continue to pour out United States funds for highway developments in other countries without a firm, clear, and enforceable arrangement for insuring that the highway will, in fact, be the international artery of commerce and defense intended, as the committee's study discloses is now being done, will be an unjustifiable diversion of United States public funds.

HISTORICAL AND GEOGRAPHICAL BACKGROUND

There has never been an overland transportation system connecting North and South America. Before the establishment of the air lines in 1928 communications and commerce along the great isthmus joining our American continents depended wholly upon ocean vessels.

The great Cordilleras Mountain Range extending the entire length of the isthmus, heavy rains, numerous rivers, and tropical vegetation have constituted such obstacles to transportation that until the opening of the Panama Canal in 1914 most of the Pacific coast of the isthmus was farther from the Atlantic coast in a transportation sense than it was from China. Actually the width of the isthmus varies from only 50 miles at Panama to 300 miles in northern Nicaragua.

The rugged character of the country and the absence of any connecting artery of commerce has had its part in influencing the political character of this area, as well as retarding its economic development. There are six separate and wholly independent sovereignties between Mexico in North America and Colombia in South America, with populations in 1940 ranging from 635,836 in Panama to 3,450,732 in Guatemala, and with annual budgets in that year ranging from $5,000,000 to $13,000,000.

The bulk of the population of the Central American Republics is located on the Pacific slope of the Cordilleras since living conditions are more desirable in the mountains than on the hot, humid, coastal plain. The rainy season which lasts from May to December is less severe on the Pacific side of the Cordilleras than on the Atlantic. Yet, the present state of development of highways and railroads circumscribes these populated areas in every direction except towards the Pacific ports.

The principal products of the Central American Republics have been bananas and coffee. However, the climate and soil favor the production of large quantities of quinine, rubber, oils, copra, hemp, varnish gums, wool, rice, tea, cinnamon, and camphor. Minerals found in limited quantities include gold, silver, copper, lead, iron, mercury, and manganese.

A means of through overland transportation connecting the Central American Republics with North America and South America would contribute greatly to the economic development of these countries.

Overland transportation along the Central American isthmus has been under consideration since 1890 when the Inter-American Conference recommended the construction of a railroad connecting North

and South America and established the Intercontinental Railway Commission for the purpose of studying possible routes and the cost of such a railway. The survey was conducted and a report submitted by the Commission in 1898. A route was selected along the Pacific coastal plain from the border of Mexico and Guatemala to Panama City, a distance of 1,373 miles. The cost of the proposed railroad was estimated at approximately $34,000,000. The profile maps, prepared during this survey, show that the highest elevation which would be reached by the railroad was 3,900 feet in southern Costa Rica. The total cost of the Intercontinental Railway Commission survey was about $292,000, of which $245,000 was contributed by the United States and the balance by Central and South American countries. No construction work, however, was undertaken on an intercontinental railway.

Interest in a highway through Central America dates from the Fifth International Conference of American States, held at Santiago, Chile, in 1923. At this meeting a resolution was adopted calling for the convening of a conference at an early date to study measures to develop automobile highways within and between the American countries.

The development of local highway systems and of a Pan-American Highway was discussed favorably at the following International Conferences:

The First Pan-American Congress of Highways, held at Buenos Aires in 1925.

The Sixth International Conference of American States, held at Habana, Cuba, in 1928.

The Second Pan-American Congress of Highways, held at Rio de Janeiro, Brazil, in 1929.

The First Inter-American Highway Congress, held at Panama, in 1929.

The Pan-American Highway Conference, held at Washington, D. C., in 1930.

The Conference on the Pan-American Highway, held at Buenos Aires in 1936.

The Third Pan-American Highway Congress, held at Santiago, Chile, in 1939.

The Fourth Pan-American Highway Congress, held at Mexico City in 1941.

The railroad and highway systems of Central America are still in their infancy. In 1932 there were only 3,234 miles of railroads in the Central American countries of six different gage tracks ranging from 3 feet to 5 feet 2 inches. Only one country, Guatemala, had a railroad connecting it with its neighboring republics. Only in Costa Rica were the Atlantic and Pacific coasts connected by rail. Most of the railroad mileage in the Central American Republics was designed either to connect banana, coffee, or other plantations with ports, or to provide transportation between inland cities and ports. In 1932 railroad mileage in the various republics was:

Railroads in Central America in 1932

	Miles		*Miles*
Panama	210	Honduras	1,200
Costa Rica	430	El Salvador	375
Nicaragua	246	Guatemala	773

In contrast, in 1932 there were 240,203 miles of standard gage (4 feet 8½ inches) railroad track in the United States.

The highway system in Central America in 1932 consisted of approximately 2,784 miles of gravel or paved road, much of it narrow and with steep grades, but passable in the rainy weather, and 6,278 miles of trails and very poor dirt roads, passable only in the dry season. The better roads were nearly all in the vicinity of the larger cities or were connecting links between ports and inland cities. Guatemala was the only republic that had some type of roadway connecting with its bordering republics. No republic had a coast-to-coast road. In 1932 the Central American highway system consisted of the following:

Roads in Central America in 1932

	Miles gravel or paved	Miles dirt or trail
Panama	350	550
Costa Rica	158	2,000
Nicaragua	384	513
Honduras	316	295
El Salvador	930	2,200
Guatemala	646	720

In contrast, in 1932 there were 879,000 miles of good road in the United States.

In 1932 there were only 14,765 automobiles and 2,384 trucks in all of Central America, about 1 vehicle for every 400 persons. Practically all of these vehicles were confined to the large cities. At the same time motor-vehicle registrations in the United States totaled 24,233,270, or 1 vehicle for every 5 persons.

By 1945, there were only 7,653 trucks, 2,921 busses, and 22,292 automobiles licensed in Central America, about 1 vehicle for every 270 persons. In that year total registration of motor vehicles in the United States was 31,035,420, or 1 for every 4.5 persons.

The economy of Central America is predominantly agricultural and, except for some of the large cattle ranches and coffee and banana plantations, primitive and localized. The country roads and trails are used more by oxcarts and cattle than by motor traffic.

A map of the Central American isthmus, showing the location and present status of completion of the Inter-American Highway is attached as Appendix I.

THE INTER-AMERICAN HIGHWAY AS A PEACETIME PROJECT

APPROVAL BY CONGRESS

The Inter-American Highway is to be a part of a more extensive system of highways joining the South American countries with the United States and Canada, popularly called the Pan-American Highway. The Inter-American Highway is that section of the Pan-American Highway lying between the United States-Mexican border at Laredo, Tex., and the Panama Canal, a distance of approximately 3,250 miles, through Mexico, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, and Panama.

In 1930, by Public Act 78 of the Seventy-first Congress, the United States Government appropriated $50,000 for the purpose of conducting a reconnaissance survey to explore possible routes and estimate the cost of construction of the Inter-American Highway. The report of this survey was filed with the Seventy-third Congress in 1934 as Senate Document No. 224. This report estimated the cost of three different types of highway from Panama to the Mexico-Guatemala border: A road surfaced with local material, $30,409,354; for a road surfaced with local material plus oil treatment, $37,645,822; for a concrete highway, $101,361,208.

This survey showed that in 1934, existing gravel or paved all-weather roads, which could form part of the Inter-American Highway, accounted for only 510 out of 1,518 miles in Central America and 942 out of 1,728 miles in Mexico or 44 percent of the total distance of 3,246 miles between the United States-Mexican border and the Panama Canal.

Until 1934, all of the road building done along this route was local construction designed principally to serve the large cities in the various Republics. Up until 1941, the various local governments had spent a total of $24,700,000, according to their estimates, on roads which subsequently could be utilized as a part of the Inter-American Highway.

In 1934, by Public Law 412 of the Seventy-third Congress, second session, $1,000,000 was appropriated to the State Department to be spent on bridges and roads in Central America expected to form part of the Inter-American Highway.

On January 21, 1941, the United States Public Roads Administration estimated that it would cost $58,000,000 to close the gaps and improve inferior existing roads to complete the Inter-American Highway, exclusive of the section in Mexico. The White House refused to submit a request to Congress for an appropriation in this amount. It was the position of the President that an appropriation would be requested only upon the basis that the Central American Republics would contribute one-third of the cost. Since it was estimated that these countries could not raise more than $10,000,000 for the Inter-American Highway, it was decided that Congress would not be requested to appropriate more than $20,000,000.

The Public Roads Administration by eliminating some of the work included in the $58,000,000 estimate on March 1, 1941, was able to reduce its estimate to $30,500,000 as the cost of completing the highway. The eliminations were of three kinds: First, an item of $13,000,000 for southern Costa Rica was removed on the understanding that this section would be constructed by the Government of Costa Rica out of a loan of $4,600,000 granted it by the United States Export-Import Bank in 1940. Second, work in improving existing inferior roads, largely in Guatemala, was eliminated. Third, a reduction was made in the amount of light and heavy grading on other sections totaling approximately 700 miles.

Admittedly, the road which could be built for 30½ million dollars would be far inferior to the one which the Public Roads Administration had estimated would cost $58,000,000. In fact, it seems clear that the Public Roads Administration and the State Department well knew that the road costing 30½ million dollars would not support any

substantial volume of through traffic and would not approach the quality of road we consider a through highway in this country.

Nevertheless, on April 28, 1941, the State Department addressed a letter to the President recommending legislation authorizing the construction of the Inter-American Highway and an appropriation of $20,000,000 to enable the United States to cooperate with the Central American Republics in surveying and building the Inter-American Highway.

On May 1, 1941, the President requested Congress to consider favorably the above proposal of the State Department. A bill was introduced in the Senate and became Senate bill 1544 of the Seventy-seventh Congress, first session.

On May 21, 1941, the Senate Foreign Relations Committee held a closed hearing on S. 1544 and reported it favorably with an amendment which required each Central American Republic to give satisfactory assurance to the United States that the local government would assume one-third of the expenditures to be incurred within its borders prior to the expenditure of any funds by the United States. The Senate passed this bill as amended on May 26, 1941.

On June 3, 1941, the House Foreign Affairs Committee held public hearings on S. 1544. The committee heard witnesses from the State Department and the Public Roads Administration, but no action was taken until December 10, 1941—3 days after the attack on Pearl Harbor—at which time the House Foreign Affairs Committee members held an informal conference with representatives of the State Department and the War Department. On December 26, 1941, S. 1544, became Public Law 375 of the Seventy-seventh Congress.

STATUS OF THE INTER-AMERICAN HIGHWAY IN DECEMBER 1941

About 1,750 miles, more than one-half of the length of the Inter-American Highway, will be in Mexico and the balance, 1,608 miles, in the Central American countries. By December 1941, Mexico had completed more than a thousand miles, starting at Laredo, Tex., and extending southward through Mexico City. Mexico had also completed several additional unconnected sections of the highway, leaving approximately 400 miles of the proposed highway upon which no work had been done. Mexico had elected not to participate in the Inter-American Highway project on the one-third-two-third basis provided by Public Law 375 of the Seventy-seventh Congress, prior to the passage of that act, but has indicated that she will build her own roads at her own expense. However, she has borrowed $40,000,000 from the United States Export-Import Bank for road building.

Sections of the 1,608 miles of proposed highway through the Central American countries had also been constructed by December 1941. There were, at that time, 376 miles of paved roads; 587 miles of gravel roads usable the year round; 260 miles of dirt roads impassable in the rainy season, and 385 miles where there was no road at all. The completed sections of the highway, however, were separated by long gaps through mountains, jungles, and swamps. The United States Public Roads Administration estimated that there were approximately 650 miles of unimproved gaps in the route through the Central American Republics. Later when the Army engineers decided that some of the road in Guatemala was not suitable for a military road

and rerouted its proposed road in that country, it increased the total road construction work to over 900 miles.

The proposed route of the Inter-American Highway, within the borders of Guatemala, was approximately 300 miles long. Most of this had been completed for year round use by December 1941 although mountainous sections were narrow, winding and steep. In El Salvador the highway extended approximately 200 miles and all of this was paved or graveled, with the exception of 50 miles. In Honduras, out of 100 miles there were only 28 miles of gravel road, the remainder being dirt roads and trails. Of the 250 miles in Nicaragua, there were only 90 miles of paved and gravel roads. Costa Rica, with 380 miles of proposed highway, had only 70 miles of paved and gravel roadway, the balance being trails. Panama, with 380 miles of highway, had 330 miles of paved and gravel roads.

C. SELECTION OF ROUTE

The reconnaissance survey of 1934 selected a route along the Pacific slope of the Cordilleras Mountains. (See map, appendix I.) It connected the large centers of population and took advantage of existing roads where practicable. One reason advanced for adopting a route high in the mountains was that the climate was better than along the semitropical Pacific Coastal Plain. At the request of the Governments of Nicaragua and Costa Rica, the selected route in these countries was changed where it ran parallel to railroads. These countries did not want the highway to compete with the railroads, which were nationally owned.

The highway route was on the same side of the mountains as the route proposed by the intercontinental railway survey of 1898, but was longer and generally at higher elevations. In Guatemala the route of the highway reached an elevation of more than 10,000 feet, and in Costa Rica 11,000 feet, whereas the proposed railway would have reached its highest point—3,900 feet—in southern Costa Rica.

By 1941, other changes had been made in the proposed route of the highway. These changes increased the total mileage of the highway because of circuitous routing. In Nicaragua, a detour passing near property at Jinotega owned by the former President was approved by the State Department. (See map, appendix I.) This added about 42 miles to the length of the highway and routed it through more rugged country where construction would be more difficult and costly. In El Salvador another circuitous route was adopted so that the highway would serve the port of La Union. This added about 14 miles to the length of the highway.

The Army engineers departed from the official route on four sections of the highway to accomplish short cuts or to avoid mountains. In Nicaragua, they eliminated the loop designed to serve the President's property and went back to the previous route of the highway from Sebaco to Esteli. In Costa Rica, the proposed route for the highway from Naranjo to Las Canas went through the mountains. The Army engineers adopted a route through the lowlands where construction would be less difficult and the highway site more easily accessible. In El Salvador, the Army engineers eliminated the circuitous route from San Miguel by way of La Union to the Rio Goascoran. The most extensive change in route made by the Army engi-

neers was in northern Guatemala. The official route of the Inter-American Highway was from Guatemala City through Chimaltenango, Totonicapan, Quetzaltenango, San Marcos, and Malacatan to the Mexican border near Tapachula, over an existing, though inferior, road. However, this route was through mountainous country, reaching elevations of 10,000 feet. The Army engineers decided that this existing road was too steep, narrow, and crooked, and some bridges were too light and narrow. Also the high altitudes reduced the operating efficiency of motor vehicles and frequent dense fogs made parts of the route hazardous. The Army engineers, therefore, selected an entirely new route on an existing but poor road through the lowlands by way of Esquintla.

During 1946, the official route of the Inter-American Highway in Guatemala was again changed. It is now proposed to go from Guatemala City through Quetzaltenango, then in a northerly direction, to a point on the Mexican border near Comitan.

In 1942, the route of the highway in Costa Rica south of San Jose was also changed. The Republic of Costa Rica had begun construction of the highway in this section with a loan from the Export-Import Bank. The route then proposed was from San Jose through San Marcos, San Isidro, to Canas Gordas near the Panama border. The Public Roads Administration considered this route too winding for heavy traffic and too difficult to bring up to the standards of the Inter-American Highway and changed the route to proceed from San Jose through Cartago and Nivel to San Isidro. This routing put the highway on the crest of the Cordilleras Mountains where an elevation of 11,000 feet is attained. This new routing from San Jose to San Isidro, a distance of 85 miles, is over such difficult country that the Public Roads Administration obtained an appropriation of $12,000,000 in 1943 for this section alone (Public Law 140, 78th Cong.). In this section, under this law, Costa Rica is not required to contribute any part of the cost, but does provide the right of way.

There has been a very violent disagreement between the Public Roads Administration and the Army engineers as to the relative merits and disadvantages of the high road through the mountains favored by the Public Roads Administration as compared with the lower road along the Pacific coastal plain favored by the Army engineers. The advocates of the high road argue that the mountainous road is more scenic and would be more interesting for tourists; that the climate is more healthful and cooler; and that it connects the more populous areas, taking maximum advantage of existing roads. The advocates of the high route also point out that the coastal areas are hot, humid, and tropical in character, with an abundance of insects, among which is the filaria, which causes a disease known as filariasis, accompanied by blindness.

The advocates of the low route point out that roads through mountains are necessarily winding and steep and because of those facts and the slides, accompanying deep cuts and fills, are extremely dangerous; that in some of the extremely high altitudes reached by the mountainous route—10 and 11 thousand feet—vehicles are required to operate through dense fog or clouds, making travel even more hazardous; that there is an estimated loss of efficiency of gasoline motors of as much as 10 percent in the higher altitudes, which would be a serious matter for either military or heavy commercial vehicles; and that the

highway would have less capacity for through traffic because of the slower speeds and more difficult operation on a winding mountainous road, as compared with a level, relatively straight road.

The advocates of the low road also point out that the cost of earth moving in mountainous construction is extremely high. The advocates of the high road point out that on the Coastal Plain more and longer bridges are required as the rivers widen approaching the coast, and that the higher cost involved in the heavy cuts and fills in the mountains is about offset by the higher cost of bridge and culvert work in the low road.

As to cost of construction, there probably is no way of determining which route would be preferable, since no estimate has been made of a route on the Coastal Plain. However, even if such an estimate were made, the question would still be far from solution, since the estimates of the Public Roads Administration on the high road have not proved to be very reliable. The Public Roads Administration has declined to give an estimate of the amount of funds now required to complete the highway.

The purpose for which the road is designed would, of course, have a great deal of bearing upon the route to be selected. If it is to be a scenic highway to attract tourist traffic from the United States and elsewhere, then there is much to be said in favor of a mountainous route passing through the capitals and large cities of the various republics, as well as the small villages. However, if the highway is designed to accommodate heavy, high-speed military or commercial traffic, every deviation from a straight line, either to the right or left or up or down, should be avoided where possible. Furthermore, modern, through highway construction seeks to avoid centers of population. From the point of view of hemispheric defense or as an international artery of commerce, a road of the type of the German Autobahn or the Pennsylvania turnpike would obviously be preferable to a winding, hilly road along a mountain range.

The committee believes that the Congress approved construction on the Inter-American Highway partially for defense and partially as an artery of international commerce, not to provide a scenic mountainous route for American or other tourists, nor to serve local, internal traffic.

The committee does not minimize the difficulty of obtaining agreements with other sovereign governments, but believes that if this project is worth doing at all, it is worth doing right. The committee, therefore, believes that our agents, in negotiating for the selection of the route, have been ineffective in securing the type of highway which would be most desirable in accomplishing the objectives advanced as a reason for United States participation. No adequate exploration seems to have been made of the validity of the claimed disadvantages of the route along the Pacific coastal plain. Local political considerations seem to have outweighed economic considerations in the location of the route.

CONSTRUCTION BY THE PUBLIC ROADS ADMINISTRATION

The Public Roads Administration had planned to spread the construction work of the Inter-American Highway over a 5-year period, operating under no emergency conditions during dry seasons only and

utilizing native labor, local materials and the services of local highway departments to the maximum.

By extending the work over a 5-year period, less construction equipment would be required and the estimated useful life of the equipment would be consumed on the project, thereby avoiding the cost of returning equipment to this country. Limiting construction work to the dry seasons would eliminate inefficiencies resulting from attempting to operate equipment in the rain and mud. Local labor was to be used because it would be cheaper and the work would give native workmen experience in road building. Some materials, such as stone, gravel, and timber, were thought to be available locally in sufficient quantities at low cost and their use would save transportation costs. Finally, local highway departments would be used to give them additional experience and reduce the cost of supervisory employees.

The Public Roads Administration has been able to carry out this plan only in part.

When the War Department's Inter-American Highway project was approved in July 1942 and was assigned to the Army engineers for execution, the Public Roads Administration was asked to cooperate and to be responsible for two phases of the contruction work. First, the Public Roads Administration was to undertake the erection of all permanent bridges at various locations along the highway. Second, the Public Roads Administration was to be responsible for the construction of some 71 miles of roadway in the very mountainous regions of southern Costa Rica between Cartago and San Isidro. This construction is one of the most difficult engineering feats ever attempted in road building, since it passes over very rough terrain and mountains reaching an elevation of 11,000 feet, involving tremendous cuts and fills.

The Public Roads Administration entered into a contract with the Ralph E. Mills Co., of Roanoke, Va., in September 1942 to construct part of this section. When it became apparent that the work would be far more difficult and costly than originally contemplated and that Costa Rica could not finance its one-third share of this cost, the Public Roads Administration obtained an additional $12,000,000 for this section from Congress by Public Law 140 of the Seventy-eighth Congress, approved July 12, 1943. When work was started on this section, it was found that suitable local material for rock and gravel surfacing was not available; that expected rock formations did not exist; that thousands of tons of dirt had to be moved in the rainy season and that a swampy area at an elevation of 8,000 feet had to be traversed.

Excavation on this section was at the rate of about 300,000 cubic yards per mile, and 1 kilometer required excavation at the rate of 750,000 cubic yards per mile. Cuts and fills of more than 100 feet were not unusual. More than 10,000,000 cubic yards of earth was moved on the section between Cartago and San Isidro. Normal heavy highway construction in this country requires excavation at the rate of 50,000 to 60,000 cubic yards per mile. This section has already cost $14,000,000 and only 48 of the 71 miles are open for all-weather traffic.

In contrast to the Army engineers, who paid the high Office of Price Administration equipment rental rates without recapture rights

in the Government, the contract between the Public Roads Administration and the Mills Co. provided for low equipment rental rates. The Public Roads Administration took the position that the contractor's profit should be limited to his fixed fee. When this contract was modified in August 1943, after funds had been obtained from Congress to include all the construction work between Cartago and San Isidro, an equipment recapture clause was added and all of the contractor's equipment was taken over by the Public Roads Administration.

In addition to the work done in southern Costa Rica, since 1941 the Public Roads Administration has done other work on the Inter-American Highway as follows: 50 miles of road in northern Costa Rica have been improved and made passable in all seasons; in northern Panama 5 miles of good road have been constructed; 33 miles of new construction have been added in Nicaragua and 12 miles in Honduras. In El Salvador, 79 miles of road have been improved to a paved or all-weather condition, and in Guatemala, sections of the existing all-weather road have been improved. Permanent bridges have been erected in all of the countries as part of the Inter-American Highway.

Since 1941, the Public Roads Administration has spent over $11,000,000 on the highway, out of cooperative funds authorized by Public Law 375 of the Seventy-seventh Congress—over half of it (5.6 million dollars) in Costa Rica. Also, over 11.7 million dollars has been spent on the highway in southern Costa Rica.

Public Roads Administration officials stated that the cost of their construction work has increased substantially over estimates, as a result of increases in local wages and prices of material; operating in the rainy season and in a wartime emergency. The lack of shipping space and increased transportation charges, as well as inefficiencies caused by the irregular flow of materials and supplies, have also added to the cost.

THE INTER-AMERICAN HIGHWAY AS A WARTIME PROJECT

The War Department had supported the proposal to construct the Inter-American Highway even prior to Pearl Harbor. On July 16, 1941, Gen. George C. Marshall, Chief of Staff of the Army, wrote to the chairman of the House Foreign Affairs Committee in part as follows:

> This highway would be of importance to national defense in that it would assist in maintaining the political and economic stability of Central American Republics. By improving communications within those countries the maintenance of order therein would be facilitated. The friendly attitude toward the United States of all countries in the Western Hemisphere is of great value to the United States.
>
> The construction of this Inter-American Highway cannot be supported by the War Department, purely on the basis of its military importance, as a supply or transit route in time of war for our garrison in Panama, for example. The value of the route to the national defense would result from its great influence on the development and maintenance of more friendly relations with the countries concerned. On that basis I urge the enactment of S. 1544.

The War Department again supported the passage of this act before the House Foreign Affairs Committee on December 10, 1941. At that time, 3 days after Pearl Harbor, Lt. Col. Henry A. Barber, Jr., from the War Plans Division, War Department General Staff,

told members of that committee that he had been authorized by the Chief of Staff to say:

> This road will be of great benefit from a military point of view. It will afford communication by land no matter what difficulties might be encountered by sea. Supplies, funds, and labor for this project should not be given such a priority as will interfere with the urgent defense needs of the present moment.

Lieutenant Colonel Barber further stated at this time:

> Someone just now mentioned shipping. That is a very acute problem as we all know. If, for instance, you were to ask for ships to carry machinery some where to build this road when those ships were needed, for instance, to carry supplies to Puerto Rico, the Chief of Staff would naturally not approve.

From the foregoing comments by General Marshall and Colonel Barber, it is evident that even after Pearl Harbor the War Department did not consider the construction of the Inter-American Highway justifiable as an urgent defense need. The statement by General Marshall, although made prior to Pearl Harbor, was during the defense period when the War Department was making plans for national defense and when it would have been appropriate to plan a long range project such as the Inter-American Highway if it was considered to be needed for the defense of the Panama Canal. At this same period, extensive expenditures were being made on fortifications throughout the entire Caribbean area.

CONSIDERATION AND APPROVAL BY THE WAR DEPARTMENT

The first indication of more than a casual interest on the part of the War Department in the Inter-American Highway project came almost 4 months after Pearl Harbor. On March 30, 1942, Lt. Gen. Brehon H. Somervell, Commanding General, Services of Supply, wrote a memorandum to Brig. Gen. C. T. Gross, Chief of Transportation, directing the latter to give immediate consideration to the desirability of completing the Inter-American Highway as a military route. This memorandum reads as follows:

MEMORANDUM FOR CHIEF OF TRANSPORTATION DIVISION

1. Please give immediate consideration to the desirability of completing the Pan American Highway as far as Panama as a military route. This route is now open in some kind of fashion for a good part of the distance. We now have a survey party in Nicaragua. Would it not be possible for this survey party to select the parts of the highway which need improvement, so that if the worst comes to worst we could use it. If good for no other purpose, it would certainly serve to train some additional engineer regiments.

2. Please discuss this with the Chief of Engineers and with War Plans and let me have your recommendations. Commissioner MacDonald can give you valuable information on the progress which has been made in developing this route.

BREHON SOMERVELL,
Lieutenant General, Commanding.

Copy to General Lutes.

Under date of May 9, 1942, General Gross sent to General Somervell a two-page memorandum concerning the status of the Pan American Highway, to which was attached a more detailed statement containing, for the most part, technical information concerning the cost of construction of a highway, together with maps and other data. This entire memorandum is set forth as Appendix II.

This memorandum is significant not so much for what it contains as what it omits. First, nowhere does General Gross make a flat

recommendation that the War Department construct the Inter-American Highway as a military route, which is the matter to which he was requested to give consideration in General Somervell's memorandum of March 30, 1942. Since General Gross recommended in the memorandum, however, that a letter—a draft of which was attached—be sent to the Secretary of State requesting assistance in negotiating with the Central American countries and Mexico, by implication General Gross recommended the construction of the highway. Second, the memorandum contains no facts upon which a conclusion could be based that the Inter-American Highway would be necessary or useful for the purpose of supplying and supporting the Allied defenses either in the Canal Zone or elsewhere in Central America.

The committee infers from the fact that General Somervell addressed his request of March 30, 1942, to the Chief of Transportation and asked him to give consideration to the construction of the Inter-American Highway as a military route that he desired the best advice available in the War Department as to the need of the Inter-American Highway for purposes of logistics for the defense of the United States in World War II.

It is evident from the statements in the memorandum of General Gross of May 9, 1942, that he did not clearly and unequivocally commit himself on that proposition. From other evidence, it appears that this omission was not a mere oversight.

The Army Inspector General conducted an investigation after public notice of the committee's interest in this subject. A summary of the findings of the Army Inspector General was submitted to the committee and is printed in full as exhibit 2112 of the committee's hearings. Paragraph 17 of that exhibit reports the testimony given by General Gross to the Inspector General and reads in full as follows:

> 17. *With respect to his attachment of military importance to the construction of the Highway, Maj. Gen. Gross also emphasized that the project was not what he considered to be an "urgent military necessity." He testified that any supposition that the highway was needed as a supply route to the Panama Canal was largely fictional and that little if any consideration was given by his office to such a proposition.* He stated that, on the other hand, he was well aware of the past interest of many governmental agencies in the construction of an Inter-American Highway and that the indicated interest which representatives of such agencies took in the proposal before and after he had received the directive from the Commanding General, Army Service Forces, under date of 30 March 1942 to look into the desirability of constructing the road, was a forceful argument in determining the desirability of such a project. He emphasized that, in his opinion, it was a military necessity to foster friendly relations with the Central American countries through which this Highway was intended to be constructed and that it was primarily for this reason that the construction of the Highway was justified. [Italics supplied.]

At the committee's public hearing, held on Friday, September 27, 1946, General Gross testified further on this subject as follows:

> Senator FERGUSON. * * * I would like to have the substance of your recommendation as far as the necessity of the road was concerned in relation to the transportation of goods to the Panama Canal Zone.
>
> Mr. GROSS. I never indicated necessity for the completion of the road.
>
> * * * * * * *
>
> Mr. MEADER. But on the date of March 30, 1942, you were Chief of Transportation.
>
> Mr. GROSS. Right.
>
> Mr. MEADER. You continued in that capacity until you left the War Department—when?
>
> Mr. GROSS. On December 1, 1945.

Mr. MEADER. During the period of your service in that capacity it never was the official position of the War Department that the Inter-American Highway was needed for military supply to the Canal Zone?

Mr. GROSS. That is right: rather, the reverse. The decision of the Chief of Staff, I think on July 4, very definitely indicated that that was not so.

* * * * * * *

Mr. MEADER. It may be that I don't understand the operation of Army division of authority and responsibility, but it would strike me that the question as to whether or not the road could be built would be appropriate for the Corps of Engineers to pass upon. The question as to whether the road would be needed for transportation purposes would be the question that you would pass upon.

Mr. GROSS. You will notice paragraph 2: "Please discuss this with the Chief of Engineers and with War Plans." He gave me a wider scope "* * * and let me have your recommendations."

Mr. MEADER. He of course, wanted you to discuss it with others, but your recommendations——

Mr. GROSS [interposing]. I gave him my recommendations, and I didn't limit them.

Mr. MEADER. You didn't, as a matter of fact——

Mr. GROSS [interposing]. The letters speak for themselves, but in my review of this situation I did not put myself between two fences and say, "Now, you are Chief of Transportation, and you can't think beyond that."

Mr. MEADER. But the memorandum which you just now read, your reply to General Somervell, nowhere states your views or opinion as to the need for this road for transportation purposes.

Mr. GROSS. That is correct. The nearest it comes to it is where it says that construction of such a road will afford an all-weather highway.

* * * * * * *

Mr. MEADER. Nowhere in that memorandum, as I listened to it and as I look at it here, do you say that the highway is necessary for the transportation of supplies.

Mr. GROSS. That is correct.

Mr. MEADER. Did you ever at any time make any such statement, General?

Mr. GROSS. Not that I recall, because to the best of my memory of the matter——

Mr. MEADER (interposing). The very thing General Somervell was entitled to have from you, your judgment as an expert on transportation for the Army, he never received.

Mr. GROSS. There was the understanding, of course, that he shared as well as I, I am sure (while I can't speak for him, but from his memorandum), that if worst came to worst, it might be so used, but that was not the reason for its construction. That dismal possibility and that alone was not what caused me to recommend this construction.

Mr. MEADER. What did cause you to recommend it, General?

Mr. GROSS. My feeling that we might have to defend the Panama Canal an that if we had to defend it, we would need airfields in those Central American countries, and we would need forces to protect those airfields.

Senator FERGUSON. Couldn't we have built roads to the airfields at much less cost?

Mr. GROSS. Oh, absolutely.

Mr. MEADER. We did do that, didn't we?

Mr. GROSS. That is correct.

Senator FERGUSON. It had nothing to do with this. We built other highways to the airfields.

Mr. GROSS. That is correct. It was a question of pleasing those Central American countries to the point that they would permit us to have airfields.

Senator FERGUSON. That is right. Now we are getting down to the point. In other words, the supply route was fictitious.

Mr. GROSS. It certainly was not necessary, except in the extremity which we——

Senator FERGUSON (interposing). Imagination.

Mr. GROSS. If you wish.

Senator FERGUSON. But the real purpose was to try, as far as you were concerned, to get some cooperation by these Central American governments, and we had to go in and build and spend this money in order to get their cooperation. It wasn't a military necessity.

Mr. GROSS. That is the way I felt. As Chief of Transportation—I am only reconstructing backwards, and that is 4 years ago—I had a right to present such views, I knew that the project would have to be presented to War Plans, the Chief of Staff for decision and that those considerations would certainly be reviewed by them.

Senator FERGUSON. So, it could not be said that those countries were declaring war because they were with us wholeheatedly in spirit, if you had to do this to get their cooperation. Why wouldn't an ally allow you to use their land for airfields? Why did we have to do this work?

Mr. GROSS. It is conceivable that they would have done so. It was a policy of our country since 1929, however, to improve our friendly position with them.

Senator FERGUSON. I am wondering what the Transportation Corps in the Army has to do with the good-neighbor policy and whether or not it is not called upon to decide issues in relation to transportation.

Mr. GROSS. That is correct for the Transportation Corps. Remember, this is a letter to Somervell. I am not speaking for the War Department. This is not a War Department decision. This is Gross' recommendation to Somervell.

* * * * * * *

Mr. MEADER. But nowhere in your two letters do you recommend it (the Inter-American Highway project) as a transportation matter, and you say now that your recommendation was based upon the fostering of continental solidarity.

Mr. GROSS. That is correct.

Mr. MEADER. Do you think that the Chief of Transportation should be an expert on friendly relations? Is that a part of your duties?

Mr. GROSS. I think that is entirely immaterial. I was asked whether I believed that this road should be built.

Mr. MEADER. But you were Chief of Transportation. Wouldn't you assume that you were asked as an expert on transportation rather than as an expert on the good-neighbor policy?

Mr. GROSS. From the time I was old enough, by God, to have any attribute of manhood, when I have been asked for an opinion I have given it. I have never put myself in a little compass, a little compartment, and been afraid to be a man. I gave what I thought should be done. You ask me, "Why the hell do you let your mind roam? Why don't you circumscribe your mind to the fact that you were Chief of Transportation and emasculate every other element that makes up your mind or forms your conviction?" I am just not that kind of man, and let the censure fall.

On May 23, 1942, Lt. Gen. Brehon H. Somervell, commanding general of the Services of Supply, wrote a memorandum for the Chief of Staff, which is attached as Appendix III, the first paragraph of which reads as follows:

1. An all-weather pioneer road from the United States to Panama City, as a military road, is urgently needed as a means of supply and communication, in the face of restricted water transportation.

It is significant that nowhere in the War Department records is there any factual basis, nor even an opinion of the Chief of Transportation, to support the conclusion stated in the above-quoted paragraph that the Inter-American Highway was needed for military supply.

With respect to the War Department's memoranda and testimony indicating that the purpose of building the Inter-American Highway as a war project was to foster "continental solidarity," the testimony of representatives of the State Department is extremely interesting.

On September 28, 1946, Mr. John Cabot, former Chief of the Caribbean and Central American Affairs Division of the State Department, who was in charge of the Inter-American Highway project, insofar as the State Department had any connection with it during the war, testified before the committee that he was very much surprised at the testimony given by General Gross at the committee hearing the day before to the effect that the highway was not needed

as a military route for supply purposes, but was engaged in on the basis that it would promote continental solidarity. Mr. Cabot stated that General Gross' testimony was at variance with what representatives of the State Department had been told orally and in letters at the time, and particularly at variance with the letter of July 23, 1942, from the Secretary of War to the Secretary of State in which the Inter-American Highway project was described as an "urgent military necessity."

It was further apparent from Mr. Cabot's testimony that the State Department had some misgivings about the usefulness of the War Department's Inter-American Highway project in promoting friendly relations with the Central American Republics. The State Department thought this project might harm our relations if carried out by Army troops because of the traditional fear and suspicion on the part of the Latin American countries of military operations by the United States in their territory. On this point, Mr. Cabot testified as follows:

Mr. MEADER. Mr. Cabot, your statements now seem to leave the impression—I want to be sure that it is correct, as it goes into our record—that the State Department was concerned only about military advantages, whereas the War Department seems to have been concerned only with diplomatic advantages.

Mr. CABOT. I would not say "only with military advantages." The initiative in both these matters came entirely from the War Department. In the case of the pioneer highway, we felt that it probably would be beneficial from the viewpoint of relations, though I think that the fact that we were somewhat concerned with the subject is indicated by the fact; which I know myself, that we had to redraft the telegrams to the Central American countries half a dozen times before we were satisfied that we had put it in the light that they would accept.

Senator FERGUSON. Now, what were you trying to get away from; the military?

Mr. CABOT. We were afraid that the Central American countries would be sensitive at the idea of military operations in their territory. It is not military operations; it is the idea of the military coming in and building a highway.

Senator FERGUSON. So you tried to disguise that and make it this good-will policy; is that correct?

Mr. CABOT. No, sir; we tried to indicate the advantages which they would derive from having this highway, despite the fact that it was military. We asked, among other things, for permission for military troops and convoys to pass over that road.

On June 4, 1942, Maj. Gen. Dwight D. Eisenhower, then Assistant Chief of Staff, Operations Division of the War Department General Staff, now Chief of Staff of the United States Army, wrote a memorandum for the Chief of Staff in which he said in part:

1. The Operations Division considers that the utility of the proposed road to the present war effort is problematical. Consequently, no justification exists for the diversion to this project of men or critical materials or equipment. * * *

On June 6, 1942, the Chief of Staff of the United States Army authorized the initiation of a survey and preliminary work preparatory to the construction of the highway, but only upon condition that the work would not be allowed to interfere with other military projects.

On June 9, 1942, Mr. E. W. James of the Public Roads Administration, in a memorandum to his contact man in the War Department, pointed out the reasons why the project could not be completed within a year under the limitations and low priorities assigned to the project in the order under contemplation authorizing it (committee exhibit No. 2085).

On June 15, 1942, Mr. James, in a letter addressed to Col. Edwin C. Kelton of the Corps of Engineers, the director of the Inter-American Highway project for the War Department (set forth as Appendix IV),

again pointed out, that unless a green light was given to all phases of this project, it could not be accomplished within the time limit indicated. Mr. James was protesting the limitations and conditions which were then under consideration by the War Department, in effect giving only limited approval to this project.

On June 16, 1942, Maj. Gen. Eugene Reybold, Chief of Engineers, recommended a speedy decision on construction of the highway because of the shortness of time remaining if completion by May 1943 was desired. Attached to this recommendation was a program setting forth dates by which certain phases of the survey and preliminary work must be completed, so that construction could commence by November 15, the beginning of the dry season, together with an estimate of materials required, which had been prepared by Mr. E. W. James of the Public Roads Administration.

On June 17, 1942, Gen. Lucius D. Clay, then brigadier general, Deputy Chief of Staff of the Requirements and Resources Division of the Services of Supply, recommended that the Inter-American Highway project be deferred for at least a year, reciting that 8,000 tons of structural steel would be required in building this highway and suggesting that even that comparatively insignificant amount of steel would interfere with other war programs in which there was already a steel shortage. The entire memorandum is set forth as Appendix V.

On June 17, 1942, the commanding general, Services of Supply, recommended to the Chief of Staff that the construction of the highway be authorized as recommended by the Chief of Engineers. On the same day, the Assistant Chief of Staff, G–4, recommended approval, but only upon the condition "that requirements for critical materials to be shipped from the United States will not be permitted to interfere with more urgent projects."

On June 19, 1942, the Operations Division, in a memorandum to the Chief of Staff, recommended "that this project be approved, subject to the condition that no troops or critical material needed for essential military projects are committed to the undertaking."

On July 3, 1942, the project was approved by order of the Secretary of War by Joseph T. McNarney, Deputy Chief of Staff. The approval was concurred in by Robert P. Patterson, Under Secretary of War.

The committee notes that this project was undertaken by the War Department at about the same time as the Canol project, which was the subject of an earlier committee report (Senate Rept. No. 110, pt. 14, 78th Cong.). This decision by the War Department must be viewed in the light of circumstances as they existed at that time. These circumstances were described by the committee in the report on the Canol project as follows:

> In the spring of 1942, the Germans intensified their submarine onslaught against shipping off the east coast in the Gulf and the Caribbean. Refineries at Aruba were shelled. Month by month, sinkings of tankers increased and exceeded by large tonnages the rate of replacement by new construction. There was a shortage of combat ships for escort purposes, and plans with respect to Caribbean shipping had to be reshaped. The capacity of the shipbuilding industry was limited, and there was need for more naval and commercial vessels and ships of all descriptions than could be produced quickly.
>
> In short, in the spring of 1942, we had many needs for transportation, materials, and manpower on military and naval projects vital to the prosecution of the war, and we did not have sufficient of any of them to fill all of our needs. We had to

study all of the projects and their possible contributions to the war effort, weigh them against each other, and allocate what we had to those projects which were most essential. It is in the light of this background and these facts that the Canol project must be judged.

In testifying in the investigation by the Army Inspector General, General Somervell explained his participation in the approval of this project, which is reported in the summary of the Inspector General's report, paragraph 16, as follows:

16. In outlining what he considered to be the justification for recommending approval of the Pan American Highway to the War Department General Staff, the commanding general, Army Service Forces, stated that this project was considered to be a "border-line case" which, if approved, should be administered under the lowest priority. He emphasized that it was difficult, if not impossible, to reflect accurately upon conditions as they existed over 3 years ago and that all of the considerations which provided a basis for a decision on his part that the highway should be constructed could not at present be adequately set forth. However, he indicated that in view of the possibility that this highway might have been required for military purposes (either to supply the Panama Canal defenses or to use the road in transporting military personnel in the event of a required defense of the Canal), he considered it to be his responsibility to take every possible precaution toward effectuating an adequate defense against possible and what, at that time, was probable enemy action against the Panama Canal. The commanding general, Army Service Forces, also emphasized that this project was not one which was decided upon hurriedly or without adequate study and approval by the responsible agencies concerned and indicated that, to the contrary, it was made the subject of study by the appropriate services under his command and of additional study by the War Department General Staff.

The summary of the report of the Army Inspector General, previously referred to, in paragraph 18 states as follows:

18. The report also points out that from the opinions rendered by representatives of the War Department from time to time before committees of Congress, from the statements made by the commanding general, Army Service Forces, and the Chief of Transportation, and from the qualified endorsement given by the Secretary of War on 6 June 1942, to the initiation of preliminary surveys and the subsequent qualified endorsement given on 19 June 1942, to the actual construction, that justification for the project in question cannot be and *was never represented as* having been based upon the ground that it constituted *an urgent military necessity.* Although the propriety of granting even a qualified approval is subject to doubts which the report does not attempt to resolve, it was stated that in 1942 there existed a possibility, however remote, that a land route to the Panama Canal would become an urgent necessity. Most sensitive to such a possibility were the Army Service Forces upon whom rested responsibility for maintenance of communications and supply. This appears to have been recognized by all concerned in granting an approval which placed the burden of final decision on the commanding general, ASF, who was also in the best position to determine, from time to time, the priorities which might be granted the project. Time and season appeared to force an early decision. In the light of subsequent events, the highway answered no military need. Had the other possibility materialized, the absence of that same decision by the commanding general, ASF, would have become a major military blunder. [Italics supplied.]

The above-quoted paragraph blows hot and cold at the same time and then states it does not attempt to resolve the question of whether or not the highway should have been approved as a defense project. Furthermore, the first sentence in the paragraph contains an inaccuracy of fact in the statement that "justification for the project * * * was never represented as having been based upon the ground that it constituted an urgent military necessity." At least two of the highest officials in the War Department did represent that this project was an urgent military necessity. As pointed out above, General Somervell, on May 23, 1942, certified that the Inter-American Highway was urgently needed as a military road as a means of supply

and communication. On July 23, 1942 (committee exhibit No. 2099), in a letter to the Secretary of State, the Secretary of War stated, "After detailed study, it has been concluded that the completion of an all-weather pioneer road by May 1943 is an *urgent military necessity* * * *."

The summary of the Army Inspector General's report also states in paragraph 98: "* * * According to the report, it appears very questionable that the War Department should have undertaken the project * * *."

The committee is satisfied that under the conditions as they then existed, it should have been plain to General Somervell, as it was to most of the other top officials in the War Department, that the construction of the Inter-American Highway as a defense project for World War II should never have been undertaken by the War Department and that attempting to do so would hinder rather than help the war effort.

From the evidence before the committee, of which portions have been quoted or referred to above, the committee is of the opinion that—

1. No study was made by the War Department for the purpose of developing the facts upon which to base a conclusion that the Inter-American Highway was needed as a military route for transportation of troops, munitions, or supplies for the defense of the United States in World War II. There were no calculations as to the possible tonnages of supplies and munitions or the number of troops that might have to be transported via the Inter-American Highway. No study was made of servicing and refueling supply trains or defending the highway, nor was any exploration made as to the capacity of the Mexican railway, which was the only means of transportation in southern Mexico and which turned out to be inadequate even for the transportation of the construction equipment and material to be used in building the highway. The committee realizes that future possibilities are always speculative, but believes that prior to an undertaking of this character being approved by the War Department some facts should have been obtained and some estimates made before determining that the expenditure of funds and the use of critical materials and manpower was warranted as a defense measure.

2. Aside from the statement of General Somervell in his memorandum of May 23, 1942, and the letter of the Secretary of War of July 23, 1942, that the Inter-American Highway was urgently needed as a military route, all of the opinions in the War Department were to the contrary.

3. The suggestion that we were required to engage in make-work, WPA-type projects in the Central American countries in order to keep them on our side in the war is rejected by the committee as without any evidentiary foundation and a gratuitous insult to our sister American Republics. Even if true, the philosophy involved in this type of justification of defense expenditure is rejected by the committee as unsound, since the committee does not believe that loyalty and friendship can be bought at any price. The use of this basis for defense expenditures would have permitted unlimited spending of United States public funds for almost any purpose, anywhere, no matter how remote the connection with national defense in World War II.

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EXECUTION OF THE PROJECT BY THE ARMY ENGINEERS

The committee believes that the project should not have been undertaken at all by the War Department as a wartime defense project. However, once undertaken on the basis that it was needed for national defense, it should have been accorded sufficient support by the War Department to stand a fair chance of accomplishment. The conditions attached to the approval, on the other hand, foredoomed the project to failure. On this point, the memorandum of the Army Inspector General transmitting the report on the investigation of the Inter-American Highway to the commanding general, ASF, reads, in part, as follows:

* * *. The work was ordered by the commanding general, ASF, subject to the restrictions imposed. By this step, equipment, rubber, gasoline and steel were committed to the work, as must have been foreseen by all concerned with issuing the qualified approval. As shown in the report, continuing restrictions on the use of these items and on shipping space to transport them constituted a brake on progress which prevented completion of the work in 1943 and was the underlying cause of much of the confusion, inefficiency and waste with which the project has been charged.

Awarding of contracts

Many competent road-construction contractors were not interested in bidding on this work because they realized that without high priorities on equipment, materials, repair parts and shipping, it would be impossible to complete the work. This was obviously a disadvantage to Col. Edwin C. Kelton, director of the Pan American Highway, in negotiating the contracts since it restricted the field of choice of contractors. This circumstance placed those who did bid in a superior bargaining position with respect to the terms of the contracts.

Furthermore, the estimate of cost by the Public Roads Administration was low since it had been based upon the assumption that priorities would be practically automatic. The fixed fee allowed the contractor was based upon this low cost. Since low priorities were, in fact, accorded the project, it was obvious to any contractor that the cost estimated would be exceeded, although the fee would remain at the lower figure. This also caused many road-construction contractors to be disinterested in bidding on this work.

For example, the Guy F. Atkinson Co., of San Francisco, stated that it was not interested in bidding in the absence of a priority because of the large quantity of spare parts which would be required. This company indicated it would be interested if a priority rating high enough to insure delivery of necessary parts was obtained for the project.

The Morrison-Knudsen Co., Inc., of Los Angeles, indicated that a priority rating of not less than AA–3 would be necessary to equip and operate the project.

Brown & Root, Inc., of Houston, Tex., stated that it was nearly impossible to complete the project in the allotted time with the present priority. It pointed out that it was unable to maintain a constant flow of repair parts in this country with a higher priority. The Elmhurst Contracting Co., Inc., of Long Island, also objected to the priority rating.

The R. W. Hebbard & Co., Inc., of New York City, stated it was convinced that the time limit could not be realized. This com-

pany also stated later that negotiations were conducted in an atmosphere lacking realism and elementary knowledge of the factors involved in highway construction in Central America.

The L. M. White Contracting Co. of Tucson, Ariz., objected principally to the estimated cost which it considered only a small fraction of the ultimate cost.

Even one of the successful contractors, the joint venture, Swinerton, McClure & Vinnell, during negotiations, disagreed with the estimated cost and requested a priority rating of AA–2.

The low fee also contributed to the inclusion of provisions in the contracts which would permit the contractor to make profits not shown as fees, such as higher equipment-rental rates and the elimination of the recapture clause.

Contracts were awarded to the Martin Wunderlich Co. of Jefferson City, Mo., on August 22, 1942, for work in Costa Rica and Panama. A joint venture, Swinerton, McClure & Vinnell, of Los Angeles, on August 22, 1942, received two contracts, one for work in Honduras and the other for adjacent work in Nicaragua; and the Foundation Co., of New York City, on August 25, 1942, received a contract for work in northern Costa Riva.

These contracts covered only a portion of the road. The balance was awarded to the Central American Republics.

El Salvador was awarded a contract on August 8 for 36 miles, from San Miguel to the Honduras border. On August 19 a contract was awarded to the Republic of Nicaragua for 64 miles from a point near Diriamba to the Costa Rican border. On September 23 a contract was awarded to the Republic of Guatemala for all work in that country, approximately 294 miles. On January 30, 1943, the Republic of Costa Rica was awarded a contract covering the reconditioning of a 4-mile section. In addition, the Republic of Panama committed itself to rebuild the road between El Volcan and La Concepcion.

Other contracts were awarded by the Public Roads Administration which had undertaken the construction of certain permanent bridges and an extremely difficult section in Costa Rica. Part of the latter was awarded by Public Roads Administration to the Ralph E. Mills Co., of Roanoke, Va., on September 1, 1942, and the balance on August 7, 1943. The bridge construction work was awarded to the Frederick Snare Corp., of New York City.

The contracts awarded to the various Central American countries, with the exception of Costa Rica, provided that these countries would be reimbursed only their actual cost. The Costa Rica contract was on a lump-sum basis in view of the small amount of work involved.

Contracts awarded to the three North American concerns were prepared on standard War Department contract forms but included a number of alterations. These are discussed in a nine-page letter from Col. Edwin C. Kelton, the director of the highway, to the Chief of Engineers, dated September 29, 1942, Appendix No. VI. Among the alterations were the following:

1. The equipment-recapture clause was eliminated. The Army engineers claimed that unless they had agreed to this demand by the contractors they could not have induced them to undertake the work.

2. The contracts provided for rental rates approved by the contracting officer instead of "at rates prescribed by the Under

Secretary of War in uniform rental rates." This was necessary, it was stated, because the contractors were unwilling to furnish equipment at the latter rates and could not obtain third-party equipment at those rates. Authority for using Office of Price Administration rental rates had been obtained on August 11, 1942, from the Chief of Engineers.

3. A provision was inserted providing for an equitable adjustment of rental rates if the return of the equipment was unusually delayed by war conditions.

A number of other changes were made in the standard form but those mentioned above are the most important ones.

Notwithstanding the disadvantages of the bargaining position of Colonel Kelton in dealing with the contractors, as above noted, the committee believes that a better job should have been done in selecting contractors and in protecting the Government's interest in the terms of the contracts. One of the contractors selected, the Foundation Co., turned out to be wholly incapable of performance under the contract and the Army itself canceled this contract because of incompetence after $800,000 had been spent.

With respect to the selection of contractors the summary of the report of the Inspector General of the Army finds as follows:

23. The project was not classified, and therefore the entire contracting field could have been circularized. This was not done. However, at least 20 contractors were approached, but little interest was shown because of the low priority assigned the project.

The report itself also says:

51. According to the testimony of Colonel Kelton, the only contracting organizations who were contacted by or who contacted the contract negotiations board, for the purpose of obtaining a portion or all of the proposed construction work, and who were considered to have sufficient qualifications, were the three organizations who were finally given the contracts; in other words, there was no opportunity at bargaining. Furthermore, it appears that little if any direct investigation was made by Colonel Kelton or his assistants into the representations of these companies. They were accepted almost entirely at face values, the reason given therefor being that the limitations of time allowed for no other course of action. As will be shown hereinafter, this acceptance, without adequate investigation of claims, was an error.

The conclusions of the Inspector General's report with respect to the awarding of contracts are as follows:

g. That the selection of the three prime contractors, the Foundation Co., Martin Wunderlich Co., and Swinerton-McClure-Vinnell (coventurers), was hastily made without sufficient deliberation and verification as to their respective qualifications.

h. That specifically the failure of the director, Pan American Highway, to examine into the qualifications of the Foundation Co. resulted in unnecessary expense to the Government as the result of termination of the contract with that concern, for cause.

i. That the contract negotiations board of the Pan American Highway, presided over and dominated by the director, Pan American Highway, acted hastily and without due regard to the best interests of the Government in their negotiations relating to the awarding of contracts for the construction of the highway, in failing to interpose an element of bargaining for the establishment of rental rates to be paid for contractor-owned equipment instead of accepting the propositions offered as the best which could be done under the circumstances.

j. That the director, Pan American Highway, as contracting officer, and his subordinate officers acting in that capacity, proceeded without due regard to the financial obligations involved in approving certain rental agreements for third-party equipment without taking adequate steps to ascertain the value of such

equipment; in failing to establish and maintain a complete and accurate system of accounting for equipment rentals; and in failing to obtain adjustments in rental rates payable on idle equipment.

Surveys

Col. Edwin C. Kelton, district engineer for Los Angeles, was appointed director of the Pan American Highway to supervise both surveys and construction. While authority to initiate preliminary work and surveys had been granted on June 6, it was not until July 19 that the first group of surveyors left Los Angeles for San Jose, Costa Rica, and it was several more weeks before all surveying parties reached Central America. Because of these delays surveys were not completed as contemplated in the original plans, by the end of the wet season, about November 15, 1942. Most surveys were completed by January 1943 but in some sections the survey was not completed until late in 1943.

In the meantime, Colonel Kelton, with representatives of the Transportation Corps and the Public Roads Administration, made an inspection trip through the Central American countries and Mexico. This trip was made between July 1 and July 23, 1942. Discussions with representatives of the various Central American countries resulted in formal agreements relating to the route, use by military and commercial vehicles, and the work to be done by the Central American countries. These countries donated the right-of-way. Shortly after returning from this trip Colonel Kelton concluded his mission was hopeless, but he did not urge either abandonment or a modification of his instructions concerning the project which would make it possible for him to perform as ordered.

Priorities and shipping

Mr. James of the Public Roads Administration had stressed the need of effective priorities in order to complete the project by May 1943. This warning was ignored when the project was approved including a drastic limitation on the use of critical materials.

The first application for a priority rating was not submitted until July 16, 1942. It requested a priority of A–1–a for the project, and stated the preliminary estimates of materials as follows:

Structural steel	tons	8,000
Reinforcing steel	do	2,400
Miscellaneous steel	do	500
Metal culvert	do	1,000
Portland cement	barrels	70,000
Gasoline or Diesel oil	tons	15,200
Oil and grease	do	60

Gen. W. D. Styer, Chief of Staff, Services of Supply, on July 20, returned the application, stating that it had been denied on the ground that the request for nearly 12,000 tons of steel did not comply with the limitation on the project prohibiting use of critical materials needed for essential military projects and also on the ground that the structural steel requirement could not be provided by May 1943, when the project was to be completed.

Directions were issued for the preparation of a new priority request based on the use of timber wherever possible in lieu of steel. On

July 30, a new priority request was submitted which showed the need for only 100 tons of miscellaneous steel products. It was pointed out that the original request included steel for 19 permanent bridges to be constructed by Public Roads Administration. A new study had been made which indicated that only six of these needed to be steel construction and they would require 3,171 tons of steel. In conclusion, the memorandum stated that under present conditions construction of the road was impractical without adequate priority ratings on materials, equipment, and transportation and requested a priority rating of AA–1, the highest at that time, for the entire project with the express limitation that the construction be kept to the bare essentials. This request was signed by Maj. Gen. Thomas M. Robins, Assistant Chief of Engineers.

On August 5, 1942, the Army-Navy Munitions Board denied this request for a rating of AA–1 but approved a rating of A–1–a for the 100 tons of miscellaneous steel. A rating for the 3,171 tons of steel for permanent bridges was denied on the ground that the request should be made by Public Roads Administration. It was also stated that if a rating of AA–1 was granted, it would not be in accordance with the limitation placed on the project. The priority rating granted in the above document was clarified on August 14, 1942, in a memorandum from the Army-Navy Munitions Board to the Chief of Engineers, stating that the preference rating granted, A–1–a, was for all materials and equipment required for construction, including, but not restricted to, the 100 tons of miscellaneous steel, but excluding structural steel and other material required for permanent bridge construction.

The rating of A–1–a was used until November 16, 1942, when all War Department military construction projects were given a minimum rating of AA–5, which was made applicable to this project. This priority rating was superseded by only AAA, AA–1, AA–2, AA–3, and AA–4.

In spite of the limitation on use of critical materials, this project was granted priority ratings of AA–1 and AA–2 for some urgently needed critical materials.

In the construction of the highway, the following critical materials were purchased: $2,300,000 worth of repair parts, 10,700 tires, 9,400 tubes, 1,400,000 pounds of steel, 180,000 feet of galvanized pipe, 2,500,000 gallons of gasoline, 4,000,000 gallons of Diesel fuel, 500,000 gallons of lubricating oil, and 2,000,000 pounds of grease.

A portion of all of these critical materials was purchased in Central America and the balance obtained in this country. Not all of the critical materials purchased for the project were actually consumed. However, when the project was terminated, substantial quantities of critical materials on hand were transferred to the Central American countries.

In view of the statements made prior to approval of the project and at the time of approval to the effect that the small amount of necessary steel could be made available but no rubber would be assigned to the project, and no critical materials needed for essential military construction would be used, the purchases mentioned above not only violated these limitations but placed an unnecessary burden on the limited reserves upon which this country was relying for its essential military requirements.

The problem of obtaining shipping space to transport equipment and supplies to Central America was one of the most difficult ones encountered by the War Department on this project.

Gen. Eugene Reybold, Chief of the Army engineers, testified that lack of shipping space was the most important factor increasing the cost of the work. One reason why this proved costly was that Colonel Kelton had diligently amassed equipment and supplies at ports but failed to correlate procurement and transportation. In a letter to the Chief of Engineers dated January 20, 1943, Colonel Kelton said that equipment standing idle at ports was drawing rental at the rate of $175,000 per month, and reliance upon expected shipping space had increased the cost of the project by approximately 3½ million dollars. By January 20, 1943, no shipping space had been obtained and only 10,000 tons of equipment and supplies had been transported by rail to the project site. In spite of the original program calling for overland shipment, Colonel Kelton had relied upon the hope that shipping space would be available, and resorted to railroad shipment only as a last resort. During the Army project 34,000 tons of material was shipped to Central America, 18,200 tons by rail and the balance by ship.

Mr. James, of the Public Roads Administration, in his various memoranda on this subject, had stated that both the time and cost estimate were based upon using overland transportation. In addition, final approval of construction, on July 3, stated that the Chief of Transportation—

* * * planned to assign only a small amount of shipping from New Orleans, and that the majority of materials involved will be shipped by rail to the southern border of Mexico and thence either by rail or by small coastwise steamer to the countries involved.

The attempt by Colonel Kelton to obtain shipping space was not in accordance with the original plans or the approved plan of construction. He has pointed out that shipment by vessel was both faster and cheaper than shipment by rail, but it is hardly conceivable that the authorities approving the project did not realize this. Approval of the project on the basis of using overland transportation is subject to question, however, as the standard-gage railroad through Mexico was not in condition to handle this additional traffic. Furthermore, it was not connected to the narrow-gage railroad in Guatemala until the Talisman Bridge on the border was completed in November 1942.

Rental of Construction Equipment

War Department Policies

This committee, in its report on camp and cantonment investigations (S. Rept. 480, pt. 2, 77th Cong.), filed with the Senate on August 14, 1941, and in its first annual report (S. Rept. 480, pt. 5, 77th Cong.), filed on January 15, 1942, called attention to the unbusinesslike practices of the War Department with respect to equipment rental contract provisions. In the camp and cantonment report, the committee made the following recommendations:

(*e*) An effort should be made to coordinate the equipment needs of all agencies of the Government presently engaged in construction work such as the War Department, the Navy Department, defense housing agencies, Work Projects Administration, etc., which requirements can be supplied more efficiently and

economically from a coordinated tabulation of the equipment available from those agencies and from the various equipment dealers.

(*f*) With respect to those items, which, it is found necessary to obtain on a rental basis, determination should be made at the time the rental is negotiated as to whether the Government desired ultimately to recapture them. If such recapture is not to the Government's advantage, the waiving of the contingency should if possible, be used to obtain a lower rental.

(g) The Army cost-plus-fixed-fee contract should be rephrased with respect to those provisions governing the rental of contractor-owned equipment to remove the possibility of an interpretation permitting profit to accrue to the prime contractor from this source. Favorable consideration should be given the provision contained in the contracts negotiated by the Navy as follows:

> "rental compensation for items of plant and equipment owned or controlled by the contractors shall be calculated on the basis of cost to the contractors with no allowance for profit."

and further provisions whereby that agency is enabled to withhold 15 percent of the rental payments to be used as a buffer in settlement after the actual cost to the contractor of renting the equipment has been determined.

War Department cost-plus-fixed-fee construction contracts, during the early part of the war program, generally contained the recapture clause. Consequently, a large quantity of construction equipment became the property of the Government. It has been estimated that by March 31, 1942, $30,000,000 worth of equipment had been recaptured and $70,000,000 worth of equipment was subject to recapture.

Following objections by equipment owners, based on the claim that they were being forced out of business, permission to waive the recapture clause in third-party equipment rental agreements—that is, those between prime contractors and equipment lessors—was granted by the War Department in June 1941. Approval of the Under Secretary of War was required for each such waiver. In most cases, the Under Secretary approved such a waiver only upon condition that there be a reduction in the rental rate. On December 3, 1941, the Under Secretary of War advised the Chief of Engineers that requests for waivers were increasing and, notwithstanding the granting of the waiver, rentals remained high.

On March 27, 1942, Major General Robins, Assistant Chief of Engineers, requested, and the same day recieved, authority for the Chief of Engineers to waive the recapture clause as to third-party rentals. He stated that the Office of the Chief of Engineers was ex-experiencing difficulty in renting third-party equipment due to the fear of recapture.

On March 26, 1942, the day before the War Department gave authority to waive recapture, the Bureau of Yards and Docks of the Navy Department directed that, in the future, all third-party rental agreements must contain a recapture clause. This diametrically opposed policy put the Army and Navy at cross-purposes in dealing with equipment lessors. The Navy Department, consequently, experienced so much difficulty in obtaining rental equipment that on May 15, 1942, it was forced to abandon its insistence upon a recapture clause.

On July 15, 1942, the Under Secretary of War authorized the Chief of Engineers to redelegate to officers under his jurisdiction the authority to waive the recapture clause in third-party agreements. On July 21, 1942, the Chief of Engineers did so redelegate this authority to division, district, and area engineers, but required in such waivers that the rental paid the lessor should be at a lower rate than under the usual third-party rental agreement.

At the outset of the defense program, War Department cost-plus-fixed-fee construction contracts allowed no profit for prime-contractor-owned equipment rental and contained a recapture clause. Following complaints from prime contractors that they were losing their equipment as a result of the recapture clause, a schedule, known as the Under Secretary of War's schedule of rates, was adopted on August 27, 1941. This schedule reduced rental rates of contractor-owned equipment from 25 to 40 percent and eliminated the recapture clause.

Office of Price Administration ceilings on equipment rental

Ceiling prices were first established on equipment rental rates by the Office of Price Administration on May 11, 1942. They were designed to reflect rates in effect during the first half of October 1941. By this time, equipment rental prices had risen markedly because of the unusual demand in camp, war plant, and road construction. Moreover, equipment rental rates in the predefense period had been based upon the average use of a particular piece of equipment under normal conditions. Construction equipment, varying as to type of machine, is normally idle for months at a time, whereas in the defense period, by and large, equipment was in full demand the year around with no slack seasons. The Office of Price Administration, in basing its ceilings on rental rates in effect during October 1941 failed to give weight to this fact. Consequently, a D–8 tractor valued at $8,300 could be rented for $775 per month or $9,300 in 1 year, the normal life of the equipment being from 3 to 5 years.

The Public Roads Administration, in the meantime, had adopted a schedule of rates as to prime-contractor-owned equipment designed to prevent the contractor from making a profit on the rental of his equipment. The Navy Department also had adopted a formula providing low rental rates with the same purpose in mind. Although neither the Navy nor Public Roads form of agreement contained a recapture clause, contractors normally could not profit through equipment rental because the rates were so low. The Public Roads Administration did not have to deviate from its schedule in contracts on either the Alcan Highway or the Inter-American Highway. The Bureau of Yards and Docks of the Navy Department in prime contracts has never had to deviate from its low rates designed to eliminate profits.

The Public Roads Administration has submitted to the committee a comparison of its rates with those of the Associated General Contractors and the Office of Price Administration between June 1942 and November 1943. For example, the Public Roads' annual rental for a 1½ cubic yard Diesel power shovel was 46 percent of its cost new, the Associated General Contractor's rate was 83 percent of cost, and the Office of Price Administration rate was 131 percent. The Public Roads Administration rental rates was 57 percent of cost of a D–8 heavy tractor, whereas the Associated General Contractors' rate was 89 percent, and the Office of Price Administration rate was 218 percent. In the case of a 17 cubic yard large carry-all scraper, the Public Roads Administration rate was 63 percent of cost, the Associated General Contractors' rate 89 percent, and the Office of Price Administration rate 258 percent.

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The following tabulation shows monthly rental rates paid by the Public Roads Administration and the Army engineers in Central America:

Item	Rate paid by Public Roads	Rate paid by Army engineers
Wagon drill	$28.85	$150–
Truck, Ford dump, 1942	50.52	400–$496
Truck, Ford pick-up, 1941	24.10	100
Welder power unit	22.80	74– 104
Motor grader	130.21	525
Tractor, D–8	162.63	775
Power control unit	16.81	75
Compressor	127.60	450

Equipment Rental Costs and Contractors' Earnings

Loose policies on the part of the War Department with respect to equipment rentals and the very high price ceilings on rentals established by the Office of Price Administration, when combined with weak and ineffective bargaining on the part of the Director of the Inter-American Highway and his subordinates, produced the inevitable result that contractors and equipment lessors were able to realize exorbitant profits from the rental of equipment.

The shortage of shipping aggravated this drain on public funds by forcing equipment to remain idle on docks and in transit, with the Government paying high rental rates while the equipment was thus idle.

It was in this phase of the construction of the Inter-American Highway that the greatest waste occurred and the greatest benefit accrued to private individuals at the expense of the Government. So far as the committee is able to determine, this is not an instance of corruption or undue influence but rather of poor procurement policies and poor coordination on the part of Government officials and overreaching on the part of contractors and equipment lessors.

A total of 1,796 pieces of equipment valued at $6,373,193 were furnished from the United States for the Army project. Total payments to contractors and equipment lessors for rent, recapture, and recapture premium amounted to $5,127,117. In addition the Army engineers spent $708,936 repairing this equipment.

Of these 1,796 units 927 units drew rental in excess of their agreed value; 12 units were purchased at a price in excess of their agreed value; 61 units were purchased after rental payments exceeded their agreed value; 331 units were recaptured at their agreed value plus one percent per month; 465 units drew rental amounting to less than their agreed value.

The Martin Wunderlich Co. received a total of $488,243 for its work on the project. This included a fee of $175,000; a capital gain of $168,655 on equipment sold to the Army engineers, and rental payments amounting to $144,588. This rental was on equipment valued at only $127, 946 and amounted to 113 percent of this value. This company was renegotiated but no excess profits were discovered. However, renegotiation authorities ruled that the large capital gain on the sale of equipment was not subject to renegotiation.

Martin Wunderlich also had a 75 percent interest in the Wunderlich-Okes Construction Co. which received $644,600 in rental payments on

equipment which was then sold to the Army engineers for $1,031,674, only $272,000 under the total list price of the equipment. Renegotiation officials disallowed excess profits in the amount of $100,000 on these rentals and other business in 1943 but the capital gain on the sale of equipment was not renegotiable. Furthermore, this company, organized in the Canal Zone, has sought to take advantage of section 251 of the Internal Revenue Code which exempts from taxation income earned and received in possessions of the United States if certain qualifications are met and if 80 percent of the company's total income is received in such a possession. The Internal Revenue Bureau has contested the propriety of this exemption. This controversy is now in The Tax Court.

The Foundation Co. received no fee because its contract was canceled. It had no equipment rented to the project. It made no profit and claims a loss of $88,940 was sustained on this work.

The Foundation Co. furnished 545 pieces of equipment owned by third parties. This equipment was valued at $1,694,221 and drew $430,066 in rental even though practically none of it left this country either because it was later rejected as unsuitable or because of lack of transportation.

The joint venture, Swinerton, McClure, & Vinnell furnished only 44 pieces of its own equipment and 39 of these were recaptured. However, each contractor party to this joint venture either rented equipment to the project or was interested in companies that rented equipment to it. The joint venture received a total of $311,059 for its work. This included a fee of $270,000, equipment rentals of $7,430, and a capital gain of $33,629 on equipment sold to the Army engineers. Renegotiation showed excessive profits were not realized but again the capital gain on the equipment sold was not considered renegotiable income.

Lindgren & Swinerton, a partnership, as its distributive share of the joint venture, received a total of $53,002.50. This company had no other income from the project; it estimated its net income after deducting home office overhead and taxes as being $24,892.45. It informed the committee that this contract was the least profitable construction contract undertaken by it in the past 5 years, and, at the same time, it required more of the time and effort of the executives than any other job of equal magnitude in the history of the firm. While Lindgren & Swinerton furnished no rental equipment to the project, it had a financial interest in Engineers, Ltd., which rented three units of equipment to the project with an agreed value of $10,478 and received $14,342.54 in rental payments. Operating expenses, chargeable against these receipts, were estimated at $11,829.78, leaving a profit of $2,880.50.

Tucker McClure, another party to the joint venture, received his share of the income of the joint venture, namely, $53,002.50, which was divided between himself and C. J. Hoffman, trustee of McClure's two trust accounts. Hoffman, as trustee, was also a party to the contract. McClure had a 90 percent interest in the Pan American Co., which rented 76 units of equipment to the project and received rentals in the total amount of $340,783. This equipment was valued at only $275,352. Renegotiation officials disallowed excess profits of the Pan American Co. amounting to $97,500. McClure has arranged his affairs in such a way that he also might claim the benefits

of section 251 of the Internal Revenue Code and thereby avoid taxation by the United States.

The A. S. Vinnell Co., the third party to the joint venture, received its share of the joint venture earnings, $53,002.50, plus $323,152 for equipment rented to the project. This equipment was valued at only $308,648. Renegotiation officials in 1942 disallowed $80,000 excess profits, from which ruling Vinnell has appealed. In 1943 this company realized a profit of $140,000 on earnings of $366,800. Although this profit was considered excessive, renegotiation was impossible because total earnings were less than the $500,000 statutory exemption. The Vinnell company also received a capital gain of $34,354.16 on equipment sold to the project, which was likewise exempt from renegotiation.

A. S. Vinnell also had a 50 percent interest in the Mineral Materials Co., which rented equipment valued at $65,277 to the project and received rent totaling $91,291.

When rentals were mounting on Vinnell's equipment, the Army engineers attempted to buy it. However, Vinnell's best offer was the agreed value plus 60 percent of accrued rentals. He subsequently sold his equipment in Mexico at 85 percent of its original cost.

Vinnell also avoided taxes and helped his friends by selling them equipment on credit which they then rented to the project. This equipment had been almost entirely depreciated on Vinnell's books. Rental from this equipment if he had kept it would have been taxed to Vinnell as part of his income, already in the 90 percent bracket, but his profit on the sale of the equipment would only be taxed as a capital gain. Vinnell received $100,000 for this equipment and the fortunate purchasers were paid $161,000 in rentals. Among the purchasers was the Alhambra Constructors, a partnership composed of Vinnell employees. Some of the partners were also employees of the joint venture. They did not even have to invest their own money in this transaction as Vinnell took a note which was paid off out of rentals received. Their equipment, purchased for $40,400, drew $71,960 in rentals and payment for three units destroyed on the project.

The foregoing figures indicate that the fees paid, although reasonable in themselves, represented only part of the return to the prime contractors and that the earnings from rental and sale of construction equipment were substantial and, in some cases, were determined excessive by renegotiation authorities. The committee notes that some further recovery of excessive profits from some of these contractors may result from the tax litigation now pending.

Third-party equipment lessors under the Wunderlich contract received only 48 percent of the value of their equipment in rentals while third-party lessors under the Swinerton, McClure & Vinnell joint venture contracts received 123 percent of the value of their equipment in rentals. This was principally because most of the Wunderlich third-party equipment was returned to the lessors in January 1943 when it was belatedly realized that shipping was not forthcoming. This equipment was not replaced until July 1943.

The most flagrant case of exorbitant profits made by a third-party equipment lessor was that of Harold G. Rose of Los Angeles who rented 22 Ford 5-yard dump trucks to the joint venture. A valuation of $31,900 was placed on these trucks but this was later increased to $49,174 after Mr. Rose protested. Mr. Rose received $144,504 from

the Army engineers—$32,020 as payment for 14 trucks destroyed on the project, and $112,483 as rental on the 22 trucks.

The following are examples of equipment that drew rental in excess of the agreed valuation of the unit:

Owner	Description	Agreed value	Total rental
John M. Kirst	D-4 tractor	$2,500.00	$5,213.50
Do	Pick-up truck	400.00	1,501.64
Boyce & Igo	D-8 tractor	7,395.00	11,807.44
L. F. Freeborn Co	D-7 tractor	4,000.00	8,135.42
Leonard L. Whipple	do	4,873.05	7,415.84
John Strona	D-4 tractor	2,100.00	4,754.80
Do	Bulldozer	550.00	1,600.15
Ken Royce	D-8 tractor	6,600.00	11,578.99
Do	D-4 tractor	2,600.00	4,960.98
Do	D-8 tractor	6,605.00	11,584.64
Do	RD-8 tractor	6,600.00	12,568.72
Rex V. Igo	D-8 tractor	7,395.00	11,976.94
Do	do	7,395.00	12,743.86
Mineral Materials Co	do	7,000.00	12,136.00
Do	Flat rack sterling Diesel with semi-trailer.	12,500.00	18,239.56
Do	D-8 tractor	7,500.00	10,257.02
Do	do	7,500.00	10,034.43
A. R. McEwen	RD-8 tractor	8,400.00	11,303.71
Do	D-8 tractor	8,400.00	12,216.57
Russell H. Ellis	RD-8 tractor	7,164.00	9,788.41
C. W. Dunton	28-yard carry-all Wooldridge	8,000.00	11,194.95
J. A. Thompson	RD-8 tractor	6,800.00	11,042.94
Do	do	6,800.00	10,462.50
Do	do	6,800.00	10,378.54
David W. Hinds	D-8 tractor	7,000.00	12,863.38
Do	Bulldozer	650.00	2,247.51
Do	do	650.00	2,272.57
Do	D-8 tractor	6,500.00	12,658.34
I. S. Lofstie	RD-8 tractor	4,500.00	9,627.76
Do	do	4,500.00	9,853.81
Wunderlich-Oakes Construction Co	18-cubic yard dump truck	15,300.00	25,415.00
Do	do	15,300.00	30,095.00
Do	12-yard dump truck	11,900.00	15,435.54
Do	do	11,900.00	15,643.96
Do	do	11,900.00	12,782.94
Do	do	11,900.00	15,631.25
Do	do	11,900.00	15,928.62
Do	do	11,900.00	15,412.67
Do	do	11,900.00	15,372.00
A. S. Vinnell	LeRoi light plate	467.50	1,551.74
Do	D-8 tractor	7,000.00	12,155.38
Do	do	7,000.00	12,604.23
Swinerton, McClure & Vinnell	¾-ton pick-up	1,200.00	1,480.00
Do	Chevrolet station wagon	1,600.00	1,850.00
Pan American Co	Carry-all	6,780.51	13,276.11
Do	do	6,780.51	12,282.01
Do	RD-8 tractor	8,255.71	13,612.56
Engineers, Ltd	Tractor	8,318.09	10,073.40
Do	D-8 Angle dozer	1,440.00	2,441.61
Alhambra Constructors	D-8 tractor	7,000.00	10,926.69
Do	do	7,000.00	10,741.01
Martin Wunderlich	do	8,000.00	11,749.31
Do	do	8,000.00	10,677.23

The above is not a complete listing of pieces of equipment that drew rental in excess of agreed valuations. This list, however, does include most of the exorbitant instances.

At the conclusion of construction work on the project, October 31, 1943, agreements were entered into with the various equipment lessors by virtue of which all rental rates were reduced 50 to 75 percent, starting January 1, 1944. This was in accordance with provisions in the contract authorizing such an adjustment in the event that return of the equipment to this country should be delayed by war conditions. A substantial saving resulted from this action as many units of equipment were not returned until April or May 1944. Equipment lessors maintain that further savings resulted from paying an agreed sum

of money in lieu of repairing equipment prior to returning it as provided by the rental agreements. These lessors point out that necessary parts were extremely difficult to obtain and they were unable to rent their equipment until they had obtained spare parts and repaired it. In some cases, repairs could not be made for 3 or 4 months during which the equipment stood idle.

The General Accounting Office has informed the committee that it has raised charges and exceptions on various equipment transactions relating to this project, particularly in cases where equipment has drawn rental in excess of the agreed valuation and in cases where rentals plus recapture payment exceed the agreed value. There is, however, considerable doubt as to whether any recoveries will be realized in view of the fact that such payments were provided in the rental agreements.

In view of the foregoing it is apparent that the authority of the General Accounting Office, which in many instances has recovered for the Government a portion of the inordinate profits of war contractors, has proved ineffective with respect to this project.

With respect to renegotiation, some recoveries were made as above noted. However, large capital gains on equipment acquired especially for this project and then sold to the Government were beyond the reach of renegotiation authorities.

The known capital gains on this project for prime contractors thus exempt from renegotiation totals $236,638. The committee has been unable to ascertain the capital gain derived by the Wunderlich-Okes Co. from the sale of over $1,000,000 worth of equipment.

With respect to the management of the project from the point of view of adequate supervision and maintenance of records, the summary of the Army Inspector General's report states as follows:

29. The organization set-up created in accordance with this authority was defective, a fact which contributed materially to the confusion, misunderstanding, and inefficiencies indicated in the report. Headquarters for the survey were established in Los Angeles, as well as two field offices, one at San Jose, Costa Rica, and the other at Nicaragua. The same organization was expanded and extended to cover field operations when construction work began. The forward echelon was established in November 1942 in Costa Rica, but was not so organized as to be an operating headquarters capable of directing operations and of responding to the needs of the actual working forces. It did not contain an engineering or operations division, no administrative division and no audit and fiscal, property, or personnel division.

30. The Los Angeles office was designated the rear echelon. This office was properly organized, but since the forward echelon provided no means of coordination and direction of the several functions, such coordination and direction came as though from the rear echelon. Actually, the two offices operated with a considerable degree of independence which was not acceptable under the circumstances, rendering prompt response to field requirements by the rear echelon impossible.

101. It was also indicated that in establishing his administrative organization, the Director, Pan American Highway, did not exercise good judgment in that he appointed to the responsible position of Deputy Director a person who had no previous familiarity with cost-plus-a-fixed-fee contracts or experience with highway construction. This officer's inadequacies in these respects, were even more pronounced in view of the fact that much of the time he was in direct charge of administrative activities in the Los Angeles office of the Pan American Highway in the absence of the Director. The report stated it was difficult to say at this time what inadequacies were specifically developed as a result of this assignment. However (it does appear from the record that) the subjects of equipment-rental contracts, shipping and procurement of equipment and personnel, with which the Deputy Director was intimately concerned, were matters which caused great

difficulties and increased costs on the project; also, that during at least the first 9 months of the project there was no correlation of responsibilities in connection with accounting requirements, and insufficient attention was given to the failure of the prime contractors to establish adequate accounting systems. There is no indication that this failure to establish such systems resulted in a loss to the Government. However, it did serve to magnify the possibilities of waste which, to some degree, was apparent in the lack of property control which resulted in the removal from accountabilty records of thousands of dollars' worth of missing property at the termination of the project.

TERMINATION

Prior to the War Department's decision to abandon construction of the Inter-American Highway, there were at least three occasions during the execution of the project by the Army engineers where facts came to the attention of War Department officials which should have given rise to a review and reconsideration of the desirability of continuing with the project.

When Col. Edwin C. Kelton, the director of the Inter-American Highway project, returned from a field trip in July 1942, he was convinced that the project could not be completed as ordered—by May 1943—under the conditions, particularly as to priorities, included in the limited approval given by the War Department. Colonel Kelton, in his discussions at the War Department, brought this to the attention of his superiors and sought to obtain higher priorities for the project. However, he did not urge that, unless such priorities were granted, the project be abandoned, as the facts then known to him should have compelled him to do. Essentially, from his own eyewitness exploration of the project, he had confirmed what had been predicted by Mr. James of the Public Roads Administration in early June 1942, namely, that, unless priorities and export licenses were practically automatic, the project could not be carried out as directed.

If Colonel Kelton had taken this forthright position, many million dollars of tax funds, many thousands of tons of critically short materials, and many critically short man-hours would have been saved.

Again, in January 1943, after equipment had been accumulated at ports lying idle but running up tremendous rental costs to the Government, the facts convinced Colonel Kelton that the project was impossible of accomplishment. In a report dated January 20, 1943, he complained of low priorities, and warned that the cost of completion would be much greater than had been planned. However, even at that time, he did not recommend that the project be abandoned.

In March 1943, a survey trip was made along the route of the Inter-American Highway by Col. F. S. Strong, Jr., of the Office of the Chief of Engineers. The situation, as observed by Colonel Strong, should have convinced him that the project could not be completed as ordered, and, in view of the then improved shipping situation, could no longer, by any stretch of the imagination, be considered necessary as a military route for World War II. Nevertheless, instead of recommending abandonment, Colonel Strong recommended an elaboration in the plans, providing for a two-lane. rather than a one-lane, highway and higher construction standards, which would have further increased the cost of the highway.

On April 9, 1943, after reviewing Colonel Strong's report and recommendations as noted above, the Chief of Engineers reported that a

study was being undertaken to determine the increased cost of the highway, but went on to say:

> It is not believed, however, that work already done has been carried on without interference to the war effort or that work remaining to be done can be accomplished without such interference, since it has been and will continue to be necessary to supplement local labor, equipment and materials with labor (engineers, equipment, operators, administrative personnel, etc.), construction equipment and construction materials from the United States.

This warning by the Chief of Engineers that even the more modest road originally approved was then constituting an interference with other programs in the war effort should have caused the War Department to reconsider the project. It should be noted that this comment by the Chief of Engineers was made only about a month before the entire road was to have been completed according to original plans.

The committee considers it significant that in spite of the foregoing occasions and in spite of the familiarity of War Department officials with the problems being encountered in the day-to-day work on the project it was only when a general review of all construction projects in the Western Hemisphere was made that any serious consideration was given to the discontinuance of work on the Inter-American Highway.

In May 1943, a committee was appointed by the Chief of Staff to make a strategic survey of the world situation and review the necessity of Western Hemisphere construction projects. As a result of the work of this committee, the Operations Division of the War Department General Staff was directed to study the desirability of continuing the construction of the Inter-American Highway among various other projects in this hemisphere.

On August 18, 1943, the Operations Division reported on the various projects it had reviewed. It pointed out that the Inter-American Highway was far behind schedule; that final cost would be greatly in excess of the original estimate; that the Chief of Engineers had stated that the project had interfered with the war effort; and that, although recommendations to expand the highway had been disapproved by the commanding general, Army Service Forces (formerly Services of Supply), there had been a constant tendency to enlarge the project.

The report stated that even if completed within the next year, which was doubtful, the highway would not assist in the conduct of the war, but it might actually interfere with the war effort because of the diversion of critical materials. The report also stated:

> * * * If the project is continued as a military necessity, with an unchecked mounting expenditure of military funds, the War Department is liable to strong and justifiable criticism by Congress. It is believed that the War Department's participation in this project should be terminated when the War Department funds ($27,000,000) presently allocated for the purpose have been exhausted. The project should then be turned over to civil agencies of the Government for completion.
>
> It is recommended that—
>
> Participation by the Army in the Pan-American Highway be terminated when presently allocated War Department funds are exhausted, and that this project then be turned over to civil agencies of the Government for completion.

This report was approved by the Deputy Chief of Staff on August 25, 1943. In the meantime, on August 21, 1943, he asked the commanding general, Army Service Forces, for his recommendations on

the report. Prior to submitting these recommendations, the commanding general, Army Service Forces, was directed, on August 27, to take the necessary steps to terminate the Army's participation in construction of the highway.

On August 25, 1943, the Assistant Chief of Engineers commented on the Operations Division's report in a memorandum to the Army Service Forces. He agreed that it was doubtful that the project would be completed on schedule and that critical materials would continue to be needed. He pointed out that total allotted funds were then not 27 but 40 million dollars, excluding a $4,000,000 equipment revolving fund. On July 31, construction, he said, was only 37.9 percent complete against scheduled 52 percent completion, and the transferring of War Department obligations to another agency would probably be more costly than the continuance of the project on the present basis. He pointed out that the commitments and contracts with Central American Republics appeared to be of such importance to Pan American relations as to warrant completion of the road as planned. He recommended that the whole subject be discussed by the Secretary of War and the Secretary of State prior to taking action on discontinuance of work by the Corps of Engineers.

This recommendation was adopted by the commanding general, Army Service Forces, in his memorandum to the Chief of Staff on September 3, and was approved on September 10 by the Deputy Chief of Staff. On the same day, the Secretary of War advised the Secretary of State that construction was undertaken by the War Department on the basis of war necessity evident at that time. He said the strategic situation had changed and eliminated the war necessity, therefore the War Department's participation in the project must be terminated. He asked for the State Department's recommendations on the course of action to be followed in terminating the War Department's activity in view of the State Department's concern in the matter.

On September 14, the director of the Inter-American Highway was requested to submit a plan to cover an orderly termination of the work. He submitted this plan on September 16, and it was made available to the State Department on September 22. The next day the Secretary of State replied to the Secretary of War's letter of September 10, pointing out that the international implications of the War Department's decision to terminate were important and that in making plans for the termination, consideration should be given to possible disruptive effects on the economy of the countries involved and also that steps be taken to mitigate any prejudicial effects on our prestige in those countries. He expressed general complete satisfaction with the plan of termination prepared by the director of the highway.

Only one country, the Republic of Costa Rica, protested the termination of the Army's work on the highway.

On September 24, representatives of the War Department, the State Department and Public Roads Administration agreed on a final definite plan of termination. Under this plan it was anticipated that total War Department expenditures on the project could reach approximately $40,000,000 contingent upon the availability of shipping space for demobilization. This was approved by the Army Service Forces on October 8. In the meantime, work in southern Costa Rica and Panama had been terminated as of September 30.

On October 7, 1943, in a letter to the Secretary of State, the Secretary of War described the termination procedure to be followed in each Central American country. This was as follows:

Guatemala.—The War Department-owned equipment, material and supplies within the country to be transferred to the Republic in return for which the Reoublic would continue construction of the project to the extent of the fair value of the equipment.

El Salvador.—All work was completed.

Honduras.—War Department construction to be terminated October 31. In the meantime, every effort to be made to provide an all-weather road in all unfinished sections of the road.

Nicaragua.—In northern Nicaragua the same procedure to be followed as in Honduras. Construction in southern Nicaragua to ge completed by October 15.

Costa Rica.—Construction in northern Costa Rica to be terminated October 31. Work in southern Costa Rica was in process of termination.

Panama.—Work in Panama was in the process of termination.

He also stated that United States equipment and supplies not required elsewhere would be offered for sale first to the Republic in which they were located, second, to the United States Public Roads Administration, and, third, to the general public.

Thus, the project which was directed to be terminated on August 27, 1943, was finally abandoned on October 31, 1943—a lapse of over 2 months.

As a result of the priority system adopted for the disposal of surplus Army equipment and supplies, much material needed by the Public Roads Administration for work on the peacetime highway was obtained instead by the Central American Republics. Although the Public Roads Administration did purchase a large quantity of the Army's surplus, in general, it acquired only left-over material which was not wanted by the Central American Republics. Scarce items, such as nails, were taken by the Republics.

A most remarkable arrangement was made in Guatemala. When the Army engineers abandoned work there, they turned over to Guatemala equipment valued at 1½ million dollars under an agreement stipulating that the equipment could be used only on the route adopted by the Army engineers in Guatemala until its value in work had been expended. The route adopted by the Army engineers through northern Guatemala was through a wholly different section of Guatemala than the official route of the Inter-American Highway. The cost of all the work done in northern Guatemala by the engineers, plus the value of this equipment, was a complete loss to this country. In addition, Public Roads Administration officials testified that some of this equipment has since been used on sections of the peacetime highway under Public Roads supervision. The United States pays two-thirds of the rental of this equipment to Guatemala.

The committee believes this is an example of wanton waste of United States taxpayers' money resulting from poor coordination between the Army engineers and the Public Roads Administration. The stubborn insistence by the Army engineers that work be done on their route—even after abandonment of the project and even though it delayed, hindered, and added to the cost of the Inter-American Highway to the United States—is an example of pettiness in high public officials at the taxpayers' expense, which the committee cannot condone.

The committee also finds no justification for the disposal of equipment by the Army to the Central American Republics in preference

to our own agency, the Public Roads Administration. This arrangement was unbusinesslike and resulted in an unnecessary diversion of public funds.

Demobilization of this project continued from October 1943 through May 1944 and was accomplished only at a cost of nearly $3,000,000. On the Martin Wunderlich contract alone demobilization charges amounted to just under $1,000,000 and demobilization of the joint-venture contracts cost over 1.5 million dollars. War Department records show that on the Wunderlich contract the contractor's overhead charges including mobilization, surveys and engineering, access roads, camps and demobilization amounted to more than 50 percent of the entire expenditures under the contract.

WORK ACCOMPLISHED

When the War Department project was terminated in October 1943, only 347 of the 905 miles of road undertaken had been completed to design standards. An additional 140 miles of road had been opened but was not suitable for military traffic. Access roads were built, camp sites erected and some clearing, grading, and grubbing was completed. Much of this work has since been wiped out by the heavy rains and fast-growing vegetation. Moreover, a great deal of this work was done on routes which will not be used in the peacetime Inter-American Highway.

When the Army engineers stopped their work it was possible to drive from the southern border of Mexico to the southern border of Nicaragua by using existing roads, by-passes, and access roads. The only sections actually completed were those undertaken by the Republics of El Salvador and Nicaragua.

South of Nicaragua through traffic to Panama was, and still is, impossible. In northern Costa Rica practically no work was done by the Foundation Co. before its contract was canceled in January 1943. The Army engineers continued work on this 150 mile section but succeeded only in clearing the route and grading and surfacing short unconnected sections. Even the 4 miles of reconditioning undertaken by the Republic of Costa Rica was only two-thirds complete. Less than half the 71-mile mountainous section in southern Costa Rica under Public Roads Administration supervision had been opened by October 1943. The Martin Wunderlich Co. had completed only 42 of the 144 miles it had undertaken in southern Costa Rica and Panama.

The Army engineers' work actually did very little to provide through transportation in Central America because most of its work was done in sections where some means of transportation already existed. In southern Costa Rica and northern Panama where there never had been any road at all there still was no useable road when operations were terminated. There is none today. What grubbing and clearing was done has by now reverted to jungle growth.

The committee believes that greater effort should have been made to open a road where none existed instead of improving existing roads or paralleling existing roads and railroads. In fact the Army engineers and the Public Roads Administration actually worked simultaneously on different roads between the same points in El Salvador.

Of the Army engineers' costly work only a small part is of value to the peacetime highway project. Mr. E. W. James of Public Roads Administration discussed the value of the Army's work when he testified before this committee on September 27, 1946 as follows:

Mr. MEADER. Mr. James, about how much of the $40,000,000 that the engineers spent on parts of this highway during the war is of value to you now in your project.

Mr. JAMES. That is rather difficult to answer. At one time I went over the operations resulting from the Pioneer Highway construction with considerable care and I figured that 197 miles of the work done by the Army had a salvagable value on the line of the Inter-American Highway, as we understand it. That salvage ranged from 25 to 90 percent.

Senator FERGUSON. Mr. James, what percentage is useable?

Mr. JAMES. Averaging it at say 50 percent, the 197 miles was about two-thirds of what the Army built, I think.

* * * * * * * *

Mr. MEADER. Mr. James, can't you give the committee a rough idea (I think you were about on the point of concluding it) as to the percentage of the$40,000,000 that the engineers spent during wartime which is salvagable for your highway?

Mr. JAMES. About two-thirds of that would represent the roads we could use in whole or in part.

Mr. MEADER. Two-thirds of what they built, which is approximately 200 miles.

Mr. JAMES. So that would be about $26,000,000. Now the salvage varies from 25 to 90 percent. Say we take an average of 50 percent. That would mean $13,000,000 worth of it represents what we can actually use.

The most recent Public Roads Administration report on the status of the Inter-American Highway dated January 1947 shows that of the total distance from Guatemala to the Panama Canal, 1,641 miles, there are still 422 miles of road work to be done. This consists of 185 miles that are impassable and 237 miles that are open only during the dry season. In addition there are 58 miles impassable in Mexico and 209 miles useable only in the dry season.

The committee believes that certain optimistic, glowing reports of the Inter-American Highway which have appeared in American publications have not been helpful in giving the public the true picture of the status of the highway today. Some reports leave the impression that only a few minor stretches of road remain to be improved, whereupon American tourists can get in their cars and drive through the colorful Central American countries to South America. For instance, the feature article in Holiday Magazine for September 1946, has as its title and subtitle the following: "Can You Drive to South America? The Inter-American Highway With Few Remaining Gaps or Problems is Linking the Spectacular Terrain From Texas to Panama Faster Than We Realize."

A subcommittee of this committee visited this highway and rode in cars or jeeps over the majority of the passable sections in August 1946, just at the time the article above-referred to was published. The fact is that there are long stretches where there is no road at all. The Inter-American Highway cannot be completed until some agency contributes many millions of dollars. Furthermore, construction over very difficult terrain, in view of the inability to do work in the rainy season, will take months or possibly years after the financing has been provided.

As previously noted, the United States Public Roads Administration, having made a number of estimates of the cost of constructing

this highway—each one substantially larger than its predecessor—now refuses to make guesses as to the cost necessary to complete the highway for through traffic. At about the time of the subcommittee's visit to Central America, Mr. E. W. James, who probably is more familiar with this highway than any other living person, guessed that the cost of construction of roadways to close the gaps in the Inter-American Highway South of Mexico would be $65,000,000. Engineers from the Corps of Army Engineers were somewhat skeptical of this figure and made a guess that the stretch in Guatemala from the capital to the Mexican border alone, under the conditions and in view of the quality of roadway being built by the Public Roads Administration, would cost at least $60,000,000. There is a stretch of over 100 miles in southern Costa Rica from San Isidro de El General to El Volcan in northern Panama where there is nothing at all but jungle. After viewing this terrain, the subcommittee was doubtful if any kind of vehicle—such as a bulldozer or a tank—could negotiate this distance under present circumstances.

The subcommittee rode over the section from San Isidro in Costa Rica northward toward the capital, San Jose, passing over an 11,000 foot mountain pass where the roadway was literally carved out of the steep mountainside, where there are no guard rails and where slides, especially during the rainy season, repeatedly render the road wholly impassable. Although there are many stretches of fine paved road, particularly in southern Nicaragua and through El Salvador, a great deal of the remainder of existing roads are winding, narrow, steep, and rough.

Many of the existing sections of the highway are of the type we would have called a fair country road 20 years ago. Others are simply mountain trails. A driver on these roads is continually overtaking or meeting droves of cattle, chickens or swine or slow-moving oxcarts. Outside of the principal cities, one rarely sees a service station for gasoline or repairs. What we consider the ordinary adjuncts of a through highway in this country are practically nonexistent, except in isolated sections of the proposed Inter-American Highway.

The Subcommittee rode over one mountainous stretch of road in northern Guatemala which had been a part of the original route of the Inter-American Highway. The road surface was so rough and full of rocks that it was impossible to proceed except in low gear and at a rate of 4 or 5 miles an hour. It was here that the Subcommittee was surprised to see pigs wearing shoes.

The Subcommittee was also told by the manager of an RFC cinchona plantation in northern Guatemala that when the clouds or fogs were dense in the mountainous sections, it was impossible to use an automobile on the highway unless a runner preceded the automobile to point out the road.

It will take many years and many millions of dollars before the highway reaches the quality and degree of completion which some of the more optimistic reports indicate as its status today.

COMPARISON OF ESTIMATED AND ACTUAL COSTS OF CONSTRUCTION

As previously noted, the survey conducted by the Public Roads Administration and presented to Congress in 1934 contained three estimates of the cost of completing the Inter-American Highway in

Central America based on the type of surfacing desired. These estimates were $30,409,354 for an 18-foot road surfaced with local materials; $37,645,822 for an 18-foot road surfaced with local materials with an oil treatment; and $101,361,208 for a 20-foot concrete road.

On January 21, 1941, Public Roads Administration estimated that it would cost $58,849,000 to complete the highway with an 18-foot width and a bituminous treated surface. On March 1, 1941, Public Roads Administration reduced its estimate to $30,500,000. Public Roads Administration representatives insist that minimum construction standards were not reduced to meet this lower figure and that minimum standards have not since been raised.

On December 26, 1941 the Congress, relying on assurances from the State Department and Public Roads Administration that the highway could be constructed for $30,000,000, authorized the expenditure of $20,000,000 by the United States to be matched by $10,000,000 from the Central American Republics.

In April 1942 when the War Department was considering the desirability of closing the gaps in the Inter-American Highway in one year by constructing a truck road through these sections Public Roads Administration gave the War Department an estimate in the amount of $14,452,000 to accomplish this work, an estimated 650 miles of construction.

The War Department actually spent $43,188,000, less credits for salvage, reducing its total net expenditures to $36,064,000 and it completed only 347 miles of road. When the War Department terminated its work it estimated its project would have cost a total of 58.5 million dollars.

Public Roads Administration has spent $30,599,153 on the Inter-American Highway, including $5,000,000 to construct a heavy-duty concrete highway in Panama which was required by the Army. The Central American Republics have spent $6,530,483 since 1941 on the highway, largely out of loans totaling $8,000,000 granted by the Export-Import Bank.

In 1945 it was estimated that an additional $25,000,000 would be needed to finish the highway and on May 9, 1945, a bill, H. R. 3172 of the Seventy-ninth Congress, was introduced to authorize these funds. This bill was never reported from the House Foreign Affairs Committee and there is now no bill in Congress requesting additional funds.

On March 31, 1947, Mr. Thomas MacDonald, Commissioner, Public Roads Administration, testified before this committee that his office was not in a position to estimate the amount necessary to complete the highway at this time. However, on September 4, 1946, his subordinate, Mr. E. W. James, testified that it would cost about $65,000,000 to complete the highway.

The United States has spent $66,660,000 and allotted $8,000,000 more on a highway estimated in 1941 to cost us only $20,000,000. It now appears that at least $65,000,000 more, or a total of $139,000,000, will be required to finish the work, outside of the section in Mexico for which we have loaned Mexico $40,000,000.

Public Roads Administration officials attempt to justify this 650 percent increase in cost by stating that the 1941 estimate was based on constructing the highway under normal conditions and over a period of 5 years. Costs of transportation, material, and labor have increased substantially they state, and the lack of shipping, especially during

the time of the Army's project, adversely affected costs by preventing an even flow of materials and spare parts. Pushing the work through the rainy season of 1943 resulted in inefficient construction and added to the cost of the work. Furthermore, it is contended that only $13,000,000 of the War Department's expenditures should be charged to the work, since the balance of Army construction work is not on the present route of the Inter-American Highway, is constructed to standards not acceptable for a permanent highway, or has been reclaimed by the jungles.

Public Roads Administration has furnished the committee comparisons of costs during various years in the Central American Republics. (See Appendix VII.) These comparisons show that generally speaking the cost of material and labor has about doubled in the Central American countries. These comparative costs do not alone justify a 650 percent increase in the cost of the work over the estimate of 1941, even if all the work was done at the higher rates during 1946 and 1947 which was not the case.

Detailed information showing the extent to which each of the factors mentioned above is responsible for the present increased costs and the now expected total cost of about $139,000,000 has not been furnished this committee. Such data might well be obtained and studied by the appropriate committees of Congress when a future request is received for additional funds to continue work on the highway.

Other factors that have increased the cost are the change in the route of the road in Guatemala, and the gross underestimate of the cost of the work in Costa Rica. The new route in Guatemala will cost from $9,000,000 to $60,000,000 it is estimated, while the work in southern Costa Rica for which no funds were requested in 1941 has cost about $14,000,000 and about 100 miles are still impassable.

Public Roads Administration officials testified that minimum construction standards for the highway have not been increased since the estimate of January 1941 was prepared, and therefore increased costs cannot be attributed to this factor. However, the unreliability of minimum construction standards as a means of checking cost is evidenced by the fact that both the $58,000,000 estimate of January 1941 and the 30.5-million-dollar estimate of March 1941 were based on identical standards according to Mr. MacDonald, even though one estimate was nearly double the other. The standards of actual construction may be higher and more costly than the minimum standards set up for a project.

Consideration should be given, when a request is received for additional funds for this highway and if further construction by this country is considered desirable by Congress, to fixing maximum construction standards and also requiring that prior to the authorization of additional funds a thorough survey be completed to be used as a basis for estimating the final cost.

OTHER ROAD PROJECTS IN CENTRAL AMERICA

In addition to work on the Inter-American Highway, the United States also provided funds during the war for work on other highway projects in Central America.

A road was built in northern Honduras from Potrerillos to Pito Solo around Lake Yojoa. Work was started in October 1942 and completed

in September 1944. It was originally estimated that the cost of this road would be $1,400,000, but actual costs were only $1,236,267. These funds were furnished by the Coordinator of Inter-American Affairs. This road is approximately 40 miles long and was constructed, according to testimony before the committee, as a WPA or make-work project to relieve unemployment in Honduras. This unemployment resulted from the disruption of the banana trade by the withdrawal of ships, particularly refrigerator ships, from service.

The committee has been informed that a minimum amount of equipment was used on this project, and that maximum employment reached 2,000. The construction standards adopted provided for a width of 5 meters with a 3-meter surface. This was considered preferable to the 7-meter width with a 5-meter surface proposed by the Public Roads Administration, because it would provide a greater length of highway, would be sufficient for local traffic, and would reduce future maintenance expenses. Prior to the construction of this road, it had been necessary to cross Lake Yojoa by ferry.

The other important United States road construction during the war in Central American was the Rama Road. This road extends from San Benito on the Inter-American Highway, a short distance north of Managua, Nicaragua, to Rama, a river port on the Escondido River, a distance of 160 miles. The purpose of this highway is to provide an overland route from Rama to the central and western part of Nicaragua, connecting the Atlantic and Pacific coastal sections of Nicaragua.

In 1914, the United States obtained an option to construct a canal across Nicaragua. In 1939, the Army engineers completed a survey and located a proposed canal. The estimated cost of such a canal, however, was very high and construction was not recommended. President Anastasio Somoza of Nicaragua, obtained an agreement from President Roosevelt to build the Rama Road instead of a canal. The original estimated cost of this highway, to be built to Nicaraguan highway standards, was $2,000,000. However, the Public Roads Administration recommended that higher construction standards be used in order to provide a road less susceptible to erosion, estimating the cost of such a road at $4,000,000. Construction standards similar to those of the Inter-American Highway, with the exception of width, were adopted. The Rama Road was to be surfaced to a 5-meter width rather than 6 meters.

Rama is a river port. Up to this point, the Escondido River channel is at least 30 feet deep, a sufficient draft for large oceangoing vessels. However, a bar at the mouth of the river, where the depth is only 12 feet, now blocks its navigation by ocean-going vessels.

Mr. E. W. James of the Public Roads Administration testified that about $3,000,000 had been spent on this highway, and that the $4,000,000 estimate to complete the work was no longer accurate, as it was now thought that total construction would cost approximately $6,500,000.

The funds for the Rama road were taken from the "secret" or emergency fund of the President, thereby avoiding the need for approval by, or accounting to, the Congress. Although Congress has never had an opportunity to debate the merits of the Rama road, nor even knew about it until this committee's investigation,

State Department representatives take the position that the United States is committed to complete this road regardless of how high its cost may mount.

The committee does not consider either of these expenditures of United States funds sufficiently related to national defense to have justified them as proper defense expenditures in World War II. Furthermore, with respect to the Rama Road, the use of funds from the "secret" or emergency fund of the President, an appropriation available only for emergencies affecting the national security or defense, appears questionable.

NEGOTIATION OF AGREEMENTS CONCERNING MAINTENANCE AND USE

The problems connected with establishing the Inter-American Highway as an artery of through international commerce are not confined to the physical problems of construction of a modern road through difficult mountainous terrain. The problem of financing construction is more difficult than the actual road building itself. Surpassing even the problem of finance in difficulty is the political problem, on a still higher level, of providing for the future upkeep and maintenance of the highway once it is built and in warding off any efforts to exploit the highway through the imposition of onerous restrictions on its use or by exaction of excessive tolls or taxes which would make the cost of using the highway practically prohibitive.

Up to the present time, the financial problem has been settled, at least on a temporary basis, by the Government of the United States contributing by far the major portion of the cost, either directly through grants or indirectly by loans. The committee does not consider this a satisfactory solution of the financial problem, since a common undertaking, to be successful, should be participated in more fully by those who are to receive the major share of its benefits.

This temporary solution of the financial problem is all the more unsatisfactory in the light of the very meager progress that has been made in solving the political problem. Aside from any philanthropic gratification which the United States may have gained from contributing to the welfare of its neighboring republics, any economic advantage to the United States would consist in the future use of this highway by its citizens, either for pleasure or for the transportation of goods from or to the United States.

To insure those benefits, firm and unequivocal commitments should be obtained from the governments of the countries through which the highway passes prior to the completion of the highway and the expenditure of United States funds thereon. Otherwise, the United States will be in a position of requesting certain benefits from the highway after we have placed ourselves in a very poor bargaining position because of having delivered all of our contribution to the creation of the highway—namely, financial support.

The committee is disappointed that little progress has been made by the State Department in obtaining satisfactory agreements insuring the maintenance and use of the highway as a through artery of international commerce. The committee is further disappointed that in making the request to the Congress for funds to build the highway, representatives of the State Department have not presented a complete and accurate picture on this subject. For example, Secretary of

State Cordell Hull wrote to the chairman of the House Foreign Affairs Committee on June 5, 1941, in part as follows:

> One of the prime features of these assurances will be satisfactory stipulations with regard to the operation and maintenance of the road and its free use by the United States and the other 20 American Republics, which stipulations are in fact already a matter of treaty obligation under the provisions of the "convention on the Pan American Highway" signed at Buenos Aires in 1936.
>
> Article 1 of the convention cited between the United States of America and other American Republics regarding the Pan American Highway reads as follows: "The High Contracting Parties agree to collaborate, with all diligence and by all adequate means, in the speedy completion of a Pan American Highway, which will permit at all times the transit of motor vehicles." This convention has been ratified by the United States and by all the countries mentioned in the pending legislation and is therefore binding upon all as a formal treaty obligation.

The language referred to in article I of the convention of 1936 is extremely broad and somewhat ambiguous. A fair interpretation of article I of that convention might be no more than that the signatories were simply defining the type of highway they had in mind. It could hardly be held to be an enforceable agreement on the part of the signatories to contribute to the expense of upkeep and maintenance nor a commitment to any specific measures to prevent extortionate tolls being levied or onerous and unworkable regulations and restrictions being imposed by the governments through which the highway passes.

Article II of that same treaty required the signatories to appoint a commission to study the technical means of completing the highway and to coordinate the work of the different governments. That commission has never been created. Aside from the appointment of a United States representative no effort seems to have been made on the part of any government to establish it.

Article III of that treaty required the immediate appointment of a Financial Committee of representatives of three governments and required this Committee to report, within 6 months from the date of its creation, on a study of the problems involved in the speedy completion of the Pan American Highway. Representatives were appointed from Nicaragua, Mexico and the United States to this Financial Committee and reports were submitted in October and November 1938 and February 1940, but no action has resulted therefrom. The Committee has been inactive since its last report.

A further example of the character of information supplied by the State Department to the Congress in connection with this project is the testimony of Mr. Lawrence Duggan, political advisor to the Secretary of State, before the House Foreign Affairs Committee on June 3, 1941. Members of the House committee sought to learn what provisions would be made for the upkeep of the highway and for its availability for use by the United States after completion. Mr. Duggan assured the committee that commitments would be obtained from the Central American Governments relating to maintenance of the road, tolls, etc., as well as use. He stated that the State Department had a very detailed idea of what assurances on those subjects should cover and that it was confident that it could obtain such assurances from the Central American Republics in a matter of days or weeks; that the State Department would obtain such assurances before United States funds were expended; and that the State Department preferred that no such conditions

be included in the legislation since it would be easier for the State Department to work out the details without being bound by such provisions in a statute.

In actual fact, however, the only assurance requested or obtained by the State Department was the one required by the statute—namely, that the Central American Republics agreed to provide one-third of the estimated cost of construction prior to the commitment of United States funds to the project. The matter of maintenance of the highway after completion and the matter of protection against exorbitant tolls or burdensome restrictions and regulations on international commerce was wholly neglected.

Aside from the treaty of 1936, the only other treaty of importance relating to the use of the highway is the General Convention on the Regulation of Inter-American Automotive Traffic, signed at the Pan American Union in Washington on December 15, 1943, and ratified by the United States on August 8, 1946. This treaty deals principally with the size, weight, and other characteristics of motor vehicles and provisions for international license plates and international drivers' licenses. Although article I of this treaty provides that each country agrees to the international use of its highways as specified therein, nowhere else in the treaty are any such terms of international use specified. It is true that article IV provides that the contracting states shall not allow customs measures to be put into effect which will hinder international travel, but this terminology is so broad and the variety of opinion on what would constitute a hindrance to international travel might be so great as to render this broad prohibition relatively meaningless.

Article XXII provides that the convention may be denounced by any country by giving 1 year's notice, after which the treaty would not be effective in that country.

The United States signed this treaty with the reservation that it would not be required to maintain the detailed records of incoming vehicles called for by article XV. The State Department feared that strict compliance with this article might cause a serious impairment of the movement of international traffic.

At the committee's hearing in September 1946, Mr. Cabot of the State Department and his successor, Mr. William F. Cochran, testified that there were no agreements, including Executive agreements, providing for maintenance of the highway, or governing taxes, tolls, and regulations which might interfere with the free use of the highway.

The committee believes that proper provision for maintenance of the highway and proper assurance against prohibitive restrictions, regulations, tolls, and taxes are just as much a vital part of the establishment of an international artery of commerce as the original construction of the highway and proper provisions for financing that construction. The committee is particularly impressed with the necessity of these provisions in advance of the commitment of United States public funds to the construction of a highway in other countries, beyond its control.

With respect to maintenance, the financial condition of the countries through which the highway passes is material. Compared with the 37½-billion-dollar budget of the United States in 1947, the annual

receipts and expenditures of the Central American Republics are almost microscopic. The committee has been furnished with a table showing receipts, expenditures, and the national debts of the various countries through which the Inter-American Highway passes from 1940 up to the most recent figures available. These tabulations are set forth as appendix VIII to this report.

Anyone who has traveled in the Central American countries without the special blessing of the foreign offices of those countries can appreciate that border controls, such as immigration and sanitary regulations and customs inspections, may well constitute a serious obstacle to the free movement of tourists or of cargoes. The committee does not minimize the rather delicate character of any regulation or restriction on the laws (or the administration of them) relating to border controls. However, the committee believes that, if this problem is to be solved, it should be through an agreement entered into prior to the actual completion of the highway. Certainly, the United States should not request any of the Central American governments to limit border controls to any greater extent than the United States, itself, is willing to limit its own. However, the committee fears that unless some standard, which is made uniform for all of the countries through which the highway passes, is adopted with respect to border controls, we may find ourselves in the position of having created a great international public work only to see it lie idle and unused simply because we failed to provide for sensible and workable border controls.

With respect to taxes, every motor vehicle user in the United States is conscious of license fees, both for vehicle and operator, and gasoline taxes. The committee has obtained, from the State Department, a summary of the direct taxes paid in the various countries involved in this highway on gasoline, and the approximate retail price per gallon of gasoline. This table discloses that gasoline taxes range from a low of 7.95 cents per gallon in Mexico to a high of 24.19 cents per gallon in Costa Rica, and that the approximate retail price of gasoline ranges from 25 cents per gallon in Mexico to 50 cents per gallon in El Salvador and Costa Rica. It is perfectly obvious that with a highway passing through seven separate sovereignties, gasoline taxes, alone, might be imposed by any one of those sovereignties, which would be so high as to be extortionate, unless prevented by agreement.

The committee also requested the State Department to provide a summary of provisions regulating the operation of motor vehicles in Mexico and the Central American Republics. This summary, together with the summary of gasoline taxes and retail prices of gasoline, as prepared by the State Department is set forth as Appendix IX.

The treaties, two of which have been referred to above, growing out of conferences between the American States, relating to the Pan-American Highway, have for the most part contained only very broad and, in some instances, ambiguous phraseology.

Because of the fact that the Inter-American Highway passes through seven separate sovereignties and because of the continuing future need for maintenance of the highway and the prevention of the establishment of onerous restrictions on its use, and because of the international character of this undertaking, it occurred to the committee that

serious and detailed consideration ought to be given to the desirability of establishing a permanent international highway commission or authority. This Commission should be responsible for maintaining the highway as an international artery of commerce and for governing its use to a limited extent by coordinating and making uniform the regulations and restrictions affecting the flow of international traffic.

It seemed to the committee that a permanent international commission or authority of this character would provide the flexibility necessary to permit the highway to continue to be in future years the international artery of commerce which it is designed to be by meeting problems as they arise in the economic development of the countries in this hemisphere, and particularly those in Central America, which cannot possibly be foreseen by anyone at this time.

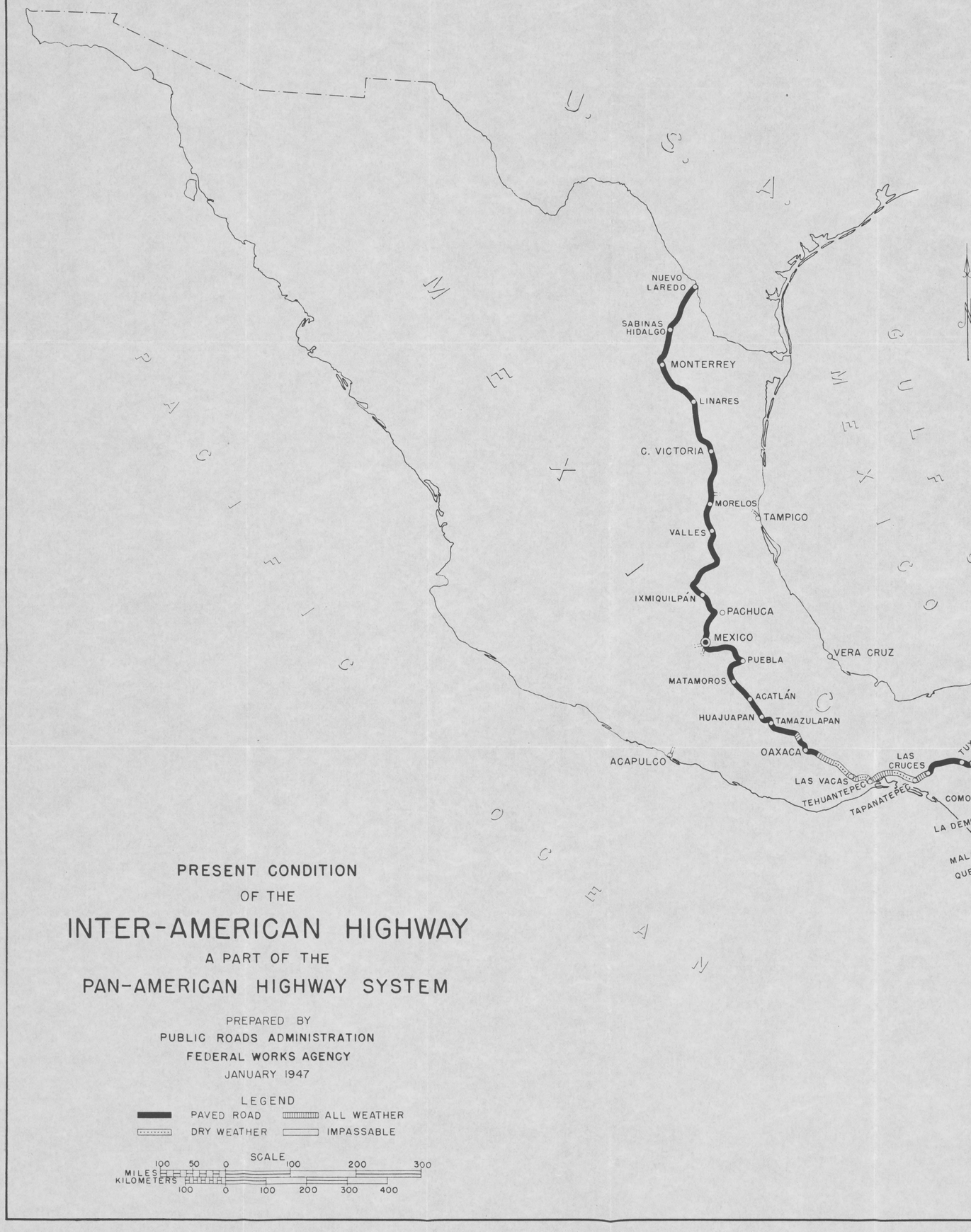
The result of a failure to meet this problem now can well be visualized by those who recall the status of highways in the United States when they were under the exclusive control of local government agencies before there was any Federal aid program and before there were through Federal highways. In the light of the history of the development of through highways in this country, it does not require a great deal of imagination to foresee the type of highway that would result, regardless of the quality of its original construction, if no uniformity of maintenance and regulation is required with respect to the seven separate and independent sovereignties through which this highway passes.

Just as uniformity was obtained in the Federal highway aid program by commitments obtained at the time the grant of funds was extended, the committee believes that commitments from the Central American Republics will be more easily attainable prior to the expenditure of funds than after the United States contribution has been fully made.

During its hearings in September 1946, the committee sought to learn what consideration had been given by our State Department to the creation of an international highway commission. The committee discovered that no one in the State Department had given any thought at all to this proposition.

It should be recalled that in the treaty of 1936, article II provided for the creation of a technical commission for the Pan American Highway. Although the phraseology contained in that article is very broad and the authority of that commission ill-defined, it would appear that the intention was merely to create a commission for the rather limited purpose of considering ways and means of completing the connecting links between existing sections of the proposed highway. It should also be noted that that commission has never been brought into existence. The committee learned that our State Department had taken no action whatever in this matter.

The committee concludes that the State Department has failed to act diligently in the interest of the United States to solve the problems of maintenance and use of the highway after completion and to carry out the provisions of the treaty of 1936.



PRESENT CONDITION OF THE INTER-AMERICAN HIGHWAY A PART OF THE PAN-AMERICAN HIGHWAY SYSTEM

PREPARED BY
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY
JANUARY 1947

LEGEND

PAVED ROAD — ALL WEATHER
DRY WEATHER — IMPASSABLE

SCALE

MILES: 100 50 0 100 200 300
KILOMETERS: 100 0 100 200 300 400

CONDITION AND LENGTH OF THE INTER-AMERICAN HIGHWAY
AS OF JANUARY 1947

	Condition	Length Kms.	Length Miles
MEXICO			
Nuevo Laredo-Mexico City	Paved	1228	763
Mexico City-Siete Cabrillas	Paved	475	295
Siete Cabrillas - Km. 492	All weather	17	11
Km. 492 - Oaxaca	Paved	55	34
Oaxaca-Tlacolula	Paved	30	19
Tlacolula-Totolapa	All weather	44	27
Totolapa-Nejapa	Dry weather	73	45
Nejapa-Rio Hondo	All weather	25	15
Rio Hondo-Tequisistlan	Dry weather	35	22
Tequisistlan-Ingenio de Sto. Domingo	All weather	118	74
Ingenio de Sto. Domingo-Los Amates	Dry weather	98	61
Los Amates-Las Cruces	All weather	33	20
Las Cruces-Tuxtla Gutrrz.	Paved	104	64
Tuxtla Gutrrz.-Escopetazo	Paved	30	19
Escopetazo-San Cristobal Las Casas	All weather	51	32
San Cristobal Las Casas-Comitan	Dry weather	98	61
Comitan-Guatemala Border	Impassable	94	58
TOTAL MEXICO		2608	1620
GUATEMALA			
Mexican Border-Colotenango	Impassable	53	33
Colotenango-San Cristobal Branch Road	Dry weather	106	65
Quezaltenango-Totonicapan	All weather	25	16
San Cristobal-Guatemala City	All weather	185	115
Guatemala City-El Salvador Border	All weather	162	101
TOTAL GUATEMALA		531	330
EL SALVADOR			
Guatemala Border-San Salvador	Paved	97	61
San Salvador-San Miguel	Paved	134	83
San Miguel - Km. 160	Paved	23	14
Km. 160 - La Union	All weather	24	15
Sirama Y-Honduras Border	All weather	34	21
TOTAL EL SALVADOR		312	194

	Condition	Length Kms.	Length Miles
HONDURAS			
EL Salvador Border-San Lorenzo	All weather	53	33
San Lorenzo-San Francisco	All weather	73	45
San Francisco-Nicaragua Border	Dry weather	25	16
TOTAL HONDURAS		151	94
NICARAGUA			
Honduras Border - Km. 202	Dry weather	35	22
Km. 202 - Esteli	All weather	54	34
*Esteli-Jinotega	Impassable	53	33
*Jinotega-Matagalpa	Dry weather	35	22
*Matagalpa-Sebaco	All weather	28	17
Sebaco-Managua	Paved	102	62
Managua-Jinotepe	Paved	45	28
Jinotepe-Costa Rica Border	All weather	102	64
TOTAL NICARAGUA		454	282
*Alternate route Esteli-Sebaco	All weather	48	30
COSTA RICA			
Nicaragua Border-Bagaces	Dry weather	105	65
Bagaces-Las Canas	All weather	22	14
Las Canas-Rio Lagarto	Dry weather	39	24
Rio Lagarto-San Ramon	All weather	74	46
San Ramon-San Jose	Paved	76	47
San Jose-Cartago	Paved	22	14
Cartago-Nivel	All weather	77	48
Nivel-San Isidro	Dry weather	37	23
San Isidro-Panama Border	Impassable	147	91
TOTAL COSTA RICA		599	372
PANAMA			
Costa Rica Border - Km. 45	Impassable	45	28
Km. 45 - David	All weather	62	39
David-Santiago	All weather	234	145
Santiago-Rio Hato	Paved	132	82
Rio Hato-Panama City	Paved	120	75
TOTAL PANAMA		593	369
GRAND TOTAL		5248	3261

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APPENDIX II

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WAR DEPARTMENT

HEADQUARTERS, SERVICES OF SUPPLY, OFFICE OF THE CHIEF OF TRANSPORTATION

WASHINGTON, D. C., *May 9, 1942.*

SPRYC 611–F (Pan-American Highway).

Memorandum for the Commanding General, Services of Supply:
Subject: Pan-American Highway.

1. Attached are maps and revised estimates of the cost of completing an all-weather pioneer road between the United States and Panama City, pursuant to attached memoranda dated March 30, 1942, and April 8, 1942, above subject.

2. The attached summary, based on the best available information from Public Roads Administration, indicates completion of an all-weather pioneer road in one year is possible, provided surveys are begun early in June and construction equipment is on the ground ready to begin work immediately at the end of the wet season (November 15). On the basis of a one-year schedule, it is estimated that the total cost of a pioneer road, including surveys and construction, would be $24,748,400, of which $10,034,200 is for Mexico and $14,714,200 for Central America.

3. The State Department and Public Roads Administration officials indicate the Mexican Government might be willing to complete its unfinished portion of the proposed route as a pioneer road, utilizing funds from a $30,000,000 loan made last year by the United States Export-Import Bank. They further indicate informally that negotiations with the several countries involved can be adequately handled by Public Roads Administration (Mr. James) and a representative of the War Department through military attachés in each country, after initial contact by the State Department. A formal request for assistance should be made to the State Department. The Assistant Chief of Staff, G–2 (Major Galloway), concurs informally.

4. Sufficient funds are now available from a Congressional appropriation (Public Law 375) for the construction of permanent structures required for the road in Central America (Paragraph III, 2, attached study). There remains a total cost of $10,562,200 to complete the route in Central America, including $680,200 for surveys.

5. The Chief of Engineers agrees in principle to the use of Army Engineer troops for survey operations in Central American countries but indicates there are several obstacles, including the lack of trained personnel and the difficulty in maintaining communication and supply channels in the territory to be surveyed (Paragraph VI, 1, attached study). The use of Army Engineer troops for construction work is considered inadvisable by the Chief of Engineers, due to the present allocation of such troops to Task Forces and the lack of heavy equipment.

6. Operations Division, War Department General Staff (Colonel Mathewson), indicates completion of the highway is desirable but the War Department should not provide construction funds. It is believed, however, that if completion of the route is desirable, it matters little out of which United States pocket the money comes; and if undertaken, it should be completed in the minimum possible time, regardless of expenditure or obstacles.

7. It is recommended, therefore, that the attached letter to the Secretary of State, requesting assistance in negotiating with the several countries involved be signed by the Secretary of War, and that plans for completion of the proposed pioneer road between the United States and Panama City be undertaken on the following basis:

a. Immediate negotiations with the several countries concerned to be undertaken as indicated in paragraph 3 above.

b. The Mexican Government to be encouraged to complete her portion of the roadway from funds now available.

c. The Chief of Engineers to collaborate with the Public Roads Administration on detailed arrangements, utilizing Army Engineer troops for survey work, unless civilian survey parties, capable of completing the work in the specified time, can be made available.

d. Additional funds in the amount of $10,562,200, required for contract construction in Central America, to be made available from War Department funds and included in the next supplemental estimate.

8. It is further recommended that the Commanding General, Army Air Forces, be advised of the plans in the event the heavy road construction equipment can be used on landing strips.

/s/ C. P. Gross,
Brigadier General,
The Chief of Transportation

Incls.
Rept. on Pan Am. H'way
w/Tabs A to F.
Ltr to S/S fm S/W.
Memo, CG, SOS.

Pan-American Highway

I. REQUIREMENTS TO COMPLETE ALL-WEATHER PIONEER ROAD

1. The following are revised cost estimates for an all-weather pioneer road between the United States and Panama City to be completed in approximately one year, based on the latest and best available information from Public Roads Administration (Mr. E. W. James). This estimate contemplates completion of surveys during the present wet season (ending in late November), and requires the proper placement of sufficient heavy construction equipment by the end of the wet season to complete pioneer construction by the end of the next dry season (May 1943). Attached maps (Tab A) indicate the location of surveys and construction required.

	Mexico	Central America
A. Surveys	$621,200	$680,200
B. Construction:		
(1) Pioneer road	7,464,000	9,476,000
(2) Drainage structures	1,430,000	2,068,000
(3) Temporary bridges	119,000	406,000
(4) Permanent bridges	400,000	2,084,000
Total	10,034,200	14,714,200
Grand total	24,748,400	

2. Public Roads Administration is of the opinion the proposed pioneer road can be completed in one year provided a close schedule is maintained; otherwise a two-year period will be required. Proposed minimum construction standards include 10-foot roadway width, 8-inch gravel surface, maximum grades of 12 percent, and absolute minimum curvature of 20 meters (66-foot radius). Parts of the road would be 16 feet wide and most grades would not exceed 10 percent. A distribution of the estimated costs by items and by road sections in each country, with a recapitulation showing total construction cost by countries, is shown in Tab B.

II. MEXICO

1. The Export-Import Bank of the United States has loaned $30,000,000 to Mexico for use on strategic highway construction during the next three years. $10,000,000 has been drawn for the first year ending December 31, 1942. It is probable that since a greater portion of the Mexican section of the Pan-American Highway is complete (Laredo, Texas, to Cuatla, Mexico), most of this loan will be spent on Mexico's west coast highway or on other projects not a part of the proposed Pan-American route.

2. As indicated above, the total estimated cost of an all-weather pioneer road from the United States to Panama City is $24,748,400, of which $10,034,200 is for surveys and construction in Mexico.

3. It is believed that the Mexican Government should be encouraged to allocate sufficient funds from her loan to assure the completion of the route through Mexico as an all-weather pioneer road within a minimum period of time. Surveys have been completed over a considerable portion of the unfinished route in Mexico, and it is possible that with proper negotiations the Mexican Government would agree to complete its part of the Pan-American route in accordance with the proposed plan.

4. Information from the Public Roads Administration (Mr. James) and the State Department (Mr. Wright) reveals that the Mexican Government has never asked nor permitted the United States to assist in the construction of any of the completed portion of the Pan-American Highway. Since the early construction of the present completed section of this highway (United States to Mexico City) was a pioneer road, it is believed that the Mexican Government could be encouraged to expedite the completion of the remaining portion of this route as a pioneer road, rather than constructing short sections of a high type road as is now the case.

5. In the event negotiations fail to secure the Mexican Government's cooperation in completing that portion of the Pan-American route in accordance with the proposed plan for the Central American countries, a standard gauge railroad exists paralleling this route, connecting Guatemala and the United States, which would provide a satisfactory means of over-land transportation between the United States and the Central American Republics.

III. CENTRAL AMERICA

1. Assuming that the Mexican Government will finance the remaining portion of the route in that country, as indicated above, the total remaining cost for completing the route through the Central American countries is estimated to be $14,714,200. Of this total, $680,200 is for surveys, while the remaining $14,034,000 is for construction of the pioneer road.

2. The present Congress, in Public Law 375, authorized appropriation of a sum not to exceed $20,000,000 to enable the United States to cooperate with the Central American countries in completing the proposed Pan-American Highway. Of this sum, $7,000,000 has been appropriated for immediate expenditure in the various countries on receipt of satisfactory assurances and definite commitments that these countries will assume at least one-third of the expenditures proposed to be incurred in survey and construction of such a highway within the borders of each country.

3. On the basis of this cooperative agreement, the Central American countries can match this $7,000,000 allocation with $3,500,000 to provide a maximum of $10,500,000 for immediate expenditure. While it is improbable that the Central American countries would agree to the allocation of the funds for construction of a pioneer road, Public Roads Administration (Mr. James) believes that the several Republics will agree to the use of these funds for construction of bridges and small drainage structures required for the pioneer road. With $4,152,000, the estimated cost of permanent bridges and small drainage structures, deducted from this $10,500,000, a total of $6,348,000 would then be available this year to convert portions of the pioneer road to a high type road corresponding to other completed sections of this route.

4. With the assurance that the cost of the permanent bridges and small structures will be absorbed by the countries concerned, there remains the estimated pioneer construction costs of $9,882,000 to complete this all-weather pioneer road as proposed.

IV. AVAILABILITY OF FUNDS

1. Public Law 375, which authorizes the appropriation of $20,000,000 for survey and construction of this proposed highway in the Central American Republics, could be amended to provide immediate availability of this fund with elimination of the "matching" provision. Such an amendment, however, would depend on the action of Congress, and the countries concerned might not be willing to have this fund expended for a pioneer road, since under present provisions a high type road can be eventually obtained through matching on the one-to-two basis. $7,000,000 has already been appropriated in accordance with provisions of this authority.

2. It would also be possible to obtain by new enabling legislation an appropriation for the full amount. The possible delay pending Congressional action on this matter would make such a course of action questionable.

3. The National War Agencies, Lease-Lend (Mr. Sturm), has indicated an active interest in the development of the Inter-American Highway and could under its operating policies make available a portion of the supplies and equipment necessary for the construction, although funds would not be available for the actual construction. It is questionable, however, as to whether the countries concerned would favor such a loan agreement, since eventual repayment for the materials advanced would be required, and the resultant pioneer road would offer little inducement over the high type road, which eventually would be provided under the existing Public Law 375.

4. The Coordinator of Inter-American Affairs (Mr. Robbins) indicates that office has no available funds for this project.

5. A War Department supplemental estimate offers another possibility, utilizing funds to supply the immediate need from current War Department sources and inclusion of the project in the next supplemental estimate.

6. It is believed that the latter, namely, the use of War Department funds and inclusion in a supplemental estimate, offers the most expedient means of providing funds; and such is necessary if the road is to be completed in one year. The Legal and Fiscal Division, Transportation Service (Major Mitchell), was consulted on the fiscal question.

V. NEGOTIATIONS WITH CENTRAL AMERICAN COUNTRIES

1. Diplomatic relations and negotiations necessary to secure the consent of the various countries to push this pioneer road through in a minimum time apparently present no difficulties. Public Roads Administration (Mr. James), the State Department (Mr. Bonsal, Mr. Daniels, and Mr. Cabot), the Coordinator of Inter-American Affairs (Mr. Robbins), and the War Department, G–2 (Major Galloway) agree that all contacts and negotiations can be quite satisfactorily handled by Public Roads Administration (Mr. James) and an officer from the War Department, in company with our respective military attachés and local State Department representatives. Above agencies offer all possible assistance.

2. It is believed that, since this is primarily a War Department necessity requiring War Department action and supervision, diplomatic negotiations in these various countries can be handled as indicated above in a minimum amount of time. In order that surveys may begin without delay, the War Department representative and Mr. James should be authorized to make all necessary decisions on such matters as the selection of the route and to make other commitments within the policies set forth in this study.

3. As a matter of record, Mr. Daniels requests a letter be forwarded to the State Department, outlining the proposed plan in general, and requesting assistance in negotiating with the several countries.

VI. USE OF ARMY ENGINEER TROOPS

1. In the initial discussion of this project, the Chief of Engineers (Colonel Adcock) concurred in the proposal of utilizing Army Engineer troops for survey operations in Central American countries. Operations and Training Division (Colonel Garlington, Lt. Colonel Canan, and Lt. Colonel Gorlinski) in a subsequent meeting, although not indicating nonconcurrence, stated that Engineer troops comprising Topographic Battalions are not trained nor properly equipped for road location surveys, and taking a Survey Company from a Topographic Battalion renders the battalion temporarily inoperative; that distribution of troops into survey crews would necessitate additional personnel for each crew to maintain a headquarters, and the location of the respective crews would create a difficult situation in maintaining communications and supplies; that availability of necessary troops for these Survey operations would be difficult to ascertain at this time due to other troop requirements; and that the use of troops is not economically sound from a money, time, personnel, or efficiency standpoint. Number and location of survey parties are shown in Tab C.

2. The allocation and distribution of Army Engineer troops and construction equipment to Task Forces for use in strategic theaters of operation precludes their use for the construction of this pioneer road, according to the Chief of Engineers (Colonel Adcock). It is believed that in order to expedite this pioneer road to completion in a minimum amount of time, all construction work should be handled by contract, and thus utilize much heavy equipment and contracting organizations now idle.

3. The State Department, Public Roads Administration, and G–2 are of the opinion there will be no objection to the use of Army Engineer troops in Central

America. There is some question about Mexico, however, which is another sound reason for encouraging the Mexican Government to complete its portion of the road on the same schedules.

4. The utilization and distribution of Army Engineer troops for the surveys, as shown in Tab C, will expedite the project. Because of the time, supply and maintenance problems, it probably affords the only means by which the route can be completed in one year.

VII. EQUIPMENT

1. The possibility of utilizing heavy construction equipment now being used in the construction of Air bases in the Central American countries was discussed informally with Army Air Forces (Colonel Sergeant). Due to the construction schedule still to be completed on these Air bases, it is believed none of this equipment can be utilized on the construction of this pioneer road.

2. The necessary heavy construction equipment required to complete the proposed route through Central America is based on thirteen construction units, each capable of moving 750,000 cubic yards per dry season. The number and location of the necessary construction units and the amount of equipment required per unit is shown in Tab D. Public Roads Administration (Mr. Harrison and Mr. James) indicate that there is considerable heavy road construction equipment suitable for this work now lying idle in southwestern United States due to the curtailment of road construction in this country.

3. It is believed that sufficient equipment can be made available; that there will be contractors in a position to accept contracts for this construction work on a cost-plus basis; and that construction can be completed within the one dry season.

4. It should be remembered, however, that due to the extreme wet and dry seasons, equipment must be available to begin work on the first day of the short dry season (five months) or it will require another year to complete the work.

VIII. CONCLUSIONS

1. The proposed highway from the United States to the Panama Canal as a means of supply and communication will probably become increasingly important to the War Department in the face of restricted water transportation. The route, as originally planned, offered great economic advantages to several Central American countries and now offers strategic advantages. The attached maps (Tab A) show important ports, many of which could be serviced from the highway. A brief description of these is contained in Tab E. The attached map (Tab F) shows the general location of airports.

2. The completion of a pioneer road seems entirely practical, particularly if Mexico can be induced to complete the unfinished parts of the road in that country. Operations Division, War Department General Staff (Colonel Mathewson) indicates completion of the highway is desirable but the War Department should not provide construction funds. If the route is desirable for any reason, it matters little out of what United States pocket the money comes; consequently, the most expeditious means of supplying the necessary money; namely, use of War Department funds, would seem to be most feasible.

3. Use of Army Engineer Survey troops is desirable unless sufficient funds are made available and the Chief of Engineers can supply civilian survey crews capable of completing the surveys before the end of the present wet season.

4. Construction should be on a contract cost-plus basis utilizing idle equipment. Effective priorities must be secured, but use of critical materials should be held to a minimum.

5. After the State Department has advised the several countries concerned, subsequent negotiations should be by Public Roads Administration (Mr. James) and a representative of the War Department through military attachés.

6. If construction of this route is undertaken, the Chief of the Army Air Forces should be advised in the event construction equipment could be utilized for building landing strips after completion of the pioneer road.

7. Unless the pioneer road is to be completed in a minimum of one year and a maximum of two years, the expenditure is not justified as a War Department necessity.

IX. RECOMMENDATIONS

1. A pioneer road between the United States and Panama City should be completed in minimum time, provided Mexico will complete her part of the route.

2. Army Engineer troops should be used for the survey and civilian contractors for construction on a cost-plus basis in Central America, unless the Chief of

Engineers can supply civilian survey parties that are capable of accomplishing the surveys in the same time and with the same facility as military personnel.

3. Mr. James, of the Public Roads Administration, and a War Department representative should proceed immediately to complete negotiations with the several countries through military attaches and local State Department representatives on the following basis:

a. Mexico to be encouraged to complete her portion of the road.

b. Presently appropriated funds (Paragraph III, 2) to be used for permanent structures.

c. Additional funds in the amount of $9,882,200, required for construction in Central America, to be furnished by the War Department.

d. Construction costs to be made available from existing War Department funds and included in a future supplemental estimate.

4. The Commanding General, Army Air Forces, should be advised of detailed plans in the event construction equipment could be used on landing strips or air fields after completion of the road.

APPENDIX III

MAY 23, 1942.

SPRNC 611 (3–30–42).

Memorandum for the Chief of Staff:

Subject: Pan-American Highway.

I. DISCUSSION

1. An all-weather pioneer road from the United States to Panama City, as a military road, is urgently needed as a means of supply and communication, in the face of restricted water transportation.

2. The attached maps (Tab A) show many important ports which could be serviced from the highway. A brief description of these is contained in Tab E. The attached map (Tab F) shows the general location of airports.

3. Completion of this pioneer road is possible within one year provided surveys are begun early in June and construction equipment is on the ground ready to begin work at the end of the next rainy season (November 15).

4. Funds in the amount of $10,502,200 are required for the survey and construction of this pioneer road in the Central American countries (Tab C—Paragraph I). The Office of Lend-Lease Administration states (Mr. Sturn and Mr. Shirer informally) that funds up to $18,000,000 will be made available for this project upon formal application by the War Department (Tab E).

5. Negotiations with the various countries can be accomplished by the Public Roads Administration (Mr. James) and a War Department representative in collaboration with the respective military attaches and local State Department representatives (Tab C—Paragraph VI).

6. Construction of the pioneer road will be accomplished by contract under the direction of the Chief of Engineers. Civilian survey parties will be utilized on the survey work, or if such is impracticable, by the use of Army Engineer Troops.

II. ACTION RECOMMENDED

1. That the Secretary of War sign the attached draft of letter to the Secretary of State, requesting assistance in negotiating with the several countries involved, for this construction.

2. The Secretary of War directs—

a. That the Chief of Engineers be advised of action taken and additionally as follows:

1. Upon completion of the necessary negotiations with the Central American countries involved, it is desired that you construct a pioneer military road on the uncompleted portion of the Pan-American Highway, except the permanent structures, which are to be constructed by the Central American countries.

2. It is desired that you collaborate with the Public Roads Administration on the detailed arrangements for the survey work, utilizing civilian survey parties, and if such is impracticable, then by the use of Army Engineer Troops.

3. It is also desired that you submit a formal request for funds in the amount of $10,362,200 from the Office of Lend-Lease Administration for surveys and contract construction in Central America.

b. That the Commanding General, Caribbean Defense Command, Commanding General, Army Air Forces and all other interested agencies be advised of action taken.

BREHON SOMERVELL,
Lieutenant General,
Commanding.

Incls:
Tabs. A thru H inclusive.
Draft of Ltr. to 5/5 fm.
5/5, w/incl.

Concurrence
Operations Division, WLOS. ( ).

APPENDIX IV

[Copy]

FEDERAL WORKS AGENCY,
PUBLIC ROADS ADMINISTRATION,
Washington, June 15, 1942.

J-1

Subject: Pan American Highway, Pioneer Road.

Memorandum for—
Col. EDWIN C. KELTON,
Corps of Engineers, U. S. Army,
Room 3131, Munitions Building, Washington, D. C.:

Supplementing our conversation of Saturday, June 13, I am summarizing the reasons why authorization for construction should not be wholly contingent upon completion of surveys by November 15, 1942.

In the first place, the entire program was predicated on a quite different arrangement, as indicated in my memorandum of May 2, 1942, to Mr. MacDonald, Commissioner of the Public Roads Administration, copy of which was furnished Capt. Wetzel.

The program requires not only surveys during the rainy season, but also—

1. Early completion of designs and contracts for those steel bridges which are to be built as permanent structures;
2. Early completion of designs for temporary wooden structures and the production of timber for framing such temporary wooden structures;
3. The execution of contracts with construction contractors and the actual shipment of equipment to all sections of the work so that such equipment may be conveniently located by November 15, ready for immediate use on all sections;
4. The construction of camps with either local or imported lumber at all locations where contract or other labor will have to be housed;
5. The preparation of materials and a start on the construction of small drainage structures. This will require the manufacture on the ground of considerable reinforced concrete culvert pipe, and where possible, the building of substructures for both permanent and temporary bridges where the conditions in the rainy season permit.

Obviously, the items enumerated are to be classed under construction and not surveys, and therefore authorization for construction to the extent required by the above arrangement should be had practically at once, inasmuch as the casting of culvert pipe, the production of local dimensioned timber, and the erection of construction camps should be started as early as possible, and contracts for the fabrication of steel bridges and for grading should be entered into at once, if the necessary full advantage of the dry season is to be had.

An immediate decision should be reached regarding the allocation of steel for the project.

The attached tabulation of June 13, entitled Gross Tonnage Data, indicates the amount of steel required for the bridges listed in the table. Plans for the structure involved, or such of them as are approved, must be available and contract with the steel fabricators affected so that the required shapes may be listed in the production rating programs of July for September rolling. This requirement fixes the date for final negotiations with the steel fabricators at July 15.

Should it be found necessary to reduce the allotment of steel below the quantities cited in the attached table, the above conditions will not otherwise be altered, because for any bridge program in steel September rolling will be necessary.

Without waiting for a final bill of materials the immediate production of reinforced concrete culvert pipe of suitable sizes can be started. Production can be checked against a bill of materials developed as the survey proceeds.

Similar action must be taken with regard to the production of dimensioned timber for temporary wooden bridge construction.

Because of existing unsurveyed gaps, the total number of openings requiring greater than 20-ft. span is not definitely known, but the reconnaissance already completed indicates the existence of 19 crossings where the use of timber structures is sufficiently hazardous to warrant the installation, if possible, of the permanent structures at this time. Many of the streams crossed are torrential in the rainy season; some carry heavy boulders; and others, heavy drift. The use of intermediate bents is to be avoided in such cases and permanent structures built. These are listed in the attached table.

Should the allotment of steel be reduced, the bridges will have to be built on the basis of a priority established by the hazard at the location.

Owing to existing conditions affecting marine transport in the Gulf and Caribbean, and to the shortage of bottoms, the shipment of equipment, materials and supplies should be made overland so far as possible. By either land or water, transportation of equipment for Costa Rica and Nicaragua should be started from the United States not later than August 15, 1942; for Honduras and Salvador, not later than September 15, 1942. To accomplish this, it will be necessary to enter into a grading and surfacing contract about the first of August.

With respect to critical materials, the attached table indicates the quantities of each which will probably be required, and the months in which shipments should be made.

/s/ E. W. JAMES,
Chief, Inter-American Regional Office.

Enclosure.

June 15, 1942

Proposed Permanent Steel Bridges on Pioneer Road

	Number		Number
Panama: Chiriqui Viejo—P	365	Honduras:	
Costa Rica:		Esteca	137
El General—P	300	Pespire—P	500
Tenerio	200	Guacirope—P	400
Blanco	200	Goascoran—P	420
	200	El Salvador: Pasequina	100
Nicaragua:		Guatemala:	
Limon	200	Rio Cabuz	140
Ochomogo	200	Rio Cuzulchima	280
Rio Grande (Diaro)	300		
Rio Viejo	200		
Rio Negro—P	500		

JUNE 13, 1942.

Gross tonnage data: Pioneer road—Inter-American Highway

	Total tonnage	Tonnage for shipping period		
		Aug.-Oct.	Nov.-Feb.	After Feb.
Equipment: 12 outfits at 658 tons—roughly	8,000	8,000		
*Gasoline: 38,500 gal. per unit per month or roughly 450,000 gal.—1,900 tons per month, for 8 Mo	15,200	2,000	8,000	5,200
Oil & Grease: 30 Bbls. per unit per month—360 Bbls. per month—for 8 months	60	10	40	10
Rubber: Shipped per unit as equipped when shipped 20 tons or, for 12 units 240 tons. Replacements during work period about 30%	75		60	15
Steel: Structural. See list attached	8,000		7,000	1,000
Reinforcing:				
For pipe 400 T, box culverts 1,500 T	2,400	1,500	900	
Bridge floors 500 T				
Misc.: Nails, rods, plates, etc., for timber structures	500	250	250	
Metal Pipe Culverts	1,000	500	500	
Cement: 70,000 Bbls	14,000	4,000	9,000	1,000
Totals	49,235	16,260	25,750	7,225
*Shown as gasoline—actually about half—say 50,000—per month will be Diesel Oil		5,300	6.400	3,600
25 ton cars per day at 25 days per month		8½	10	6

JUNE 13, 1942.

Tentative list of steel bridges in Inter-American pioneer road program

Location	No. bridges	Type	Length, ft.	Reinf. steel, lbs.	Str. steel, lbs.
Panama	1	Deck Arch	365	62,000	1,240,000
Nicaragua	1	Thru Truss	200	34,000	440,000
Do	1	do	200	34,000	440,000
Do	1	do	300	51,000	950,000
Do	1	do	200	34,000	440,000
Do	1	do	3 at 167 equals 501.	85,100	1,056,000
Costa Rica	1	do	450	76,400	2,570,000
Do	1	do	350	59,400	1,370,000
Do	1	do	300	51,000	950,000
Do	1	do	200	34,000	440,000
Do	1	do	200	34,000	440,000
Do	1	do	200	34,000	440,000
Honduras	1	do	137	25,300	270,000
Do	1	do	3 at 167 equals 501.	85,100	1,056,000
Do	1	do	3 at 133 equals 399.	67,800	792,000
Do	1	do	3 at 140 equals 420.	71,400	825,000
El Salvador	1	do	100	17,000	187,000
Guatemala	1	do	140	23,000	275,000
Do	1	do	280	47,600	800,000
Totals				924,900	14,981,000
Nicaragua	1	Deck I Beam	60	8,500	38,400
Do	1	do	60	8,500	38,400
Do	1	Deck Truss	140	13,700	165,600
Do	1	Pony Truss	80	9,500	67,200
Do	1	do	96	11,300	94,260
				51,500	403,920
Grand Total				976,400	15,384,920
Possible addition for 4 long spans, if required.					400,000
				976,400	15,784,900
Roughly				500 Tons and	8,000 Tons.

Characteristic data on standard construction units, pioneer road

	Use per day		Oil	No.	Tire sizes	Weight	Gross Wt. of Unit (Tons)
	Gasoline	Gals.					
15 Tractors—80 H. P	15 at 40	600	15				185
5 Bulldozers							17
5 Angledozers							17
8 Carry-alls				32	18" x 24"	19,840	88
2 Winches							2
2 Rooters							8
2 Sheepsfoot Rollers							7
1 Shovel, ¾ or 1 yd	1 at 50	50	2				30
3 Compressors, 210 c. f	3 at 15	60	2	12	6½ x 20	600	10
10 Jackhammers							Nominal
2 Crushing & Screening Plants	2 at 50	100	2				20
15 Trucks, 2½ ton	15 at 20	300	8	105	8¼ x 20	10,500	105
2 Motor Graders	2 at 20	40	1	12	7 x 24	1,104	18
6 Tractors	6 at 20	120	4				48
1 Service Truck, Greasing	1 at 20	20		4	6½ x 16	200	3
10 Trucks—Misc	10 at 20	200	6	66	8¼ x 20	6,600	50
Misc. Other Equipment		50	[1] 5				50
Totals		1,540	45			[2] 38,644	658
Days per Month		25	Monthly Gasoline				144
Use per Month		38,500	26 Bbls. Oil Monthly Oil 4 Bbls. Grease				5

[1] Oil and grease.

[2] Roughly 30% will have to be replaced during construction period. Tonnage for replacement roughly 6 tons of tires per construction unit. With extras for hose etc., 20 tons.

TAB C
JUNE 16, 1942.

Estimate of the cost of surveys and construction of a pioneer road—Pan American Highway—from Panama City, Panama, to Guatemala-Mexican Border

[Revised]

	Total distance km.	Present status	Surveys		Pioneer Road			Cost			
			Length, km.	Cost	Type	Length	Cost	Small drainage structure	Temporary bridges	Permanent bridges	Total
Panama:											
Panama–Rio Hato	128	Completed									
Rio Hato–Santiago	134	Paved									
Santiago–David	234	All weather									
David–Conception	25	Dry weather			L	25	$100,000		$20,000		
Conception–Volcan	30	All weather									
Volcan–North	10	Trail	10	$10,000	H	10	120,000	$22,000	6,000		
North–Costa Rica Border	30	Trail	(1)		H	30	360,000	66,000	18,000	$130,000	
Total	591		10	10,000		65	580,000	88,000	44,000	130,000	$852,000
Costa Rica:											
Panama Border–Paso Real	60	Trail	60	60,000	H	60	720,000	132,000			
Paso Real–Buenos Aires	30	Trail	30	30,000	H	30	360,000	66,000	40,000	424,000	
Buenos Aires–San Isidro	45	Trail	28	22,400	M	45	360,000	99,000			
San Isidro–El Empalme	95	Trail			H	95	1,140,000	209,000			
El Empalme–Cartago	29	Dry weather	(2)	(2)	(2)						
Cartago–San Jose	22	Paved									
San Jose–Zarcero	78	Paved									
Zarcero–Tileran	100	Trail	100	100,000	H	100	1,200,000	220,000			
Tileran–Liberia	62	Trail	62	37,200	L	62	248,000	136,400	80,000	280,000	
Liberia–Nicaragua Border	78	Dry weather	78	46,800	L	78	312,000	171,600			
Total	599		358	296,400		470	4,340,000	1,034,000	120,000	704,000	6,494,400
Nicaragua:											
Costa Rica Border–Rivas	40	Trail	40	24,000	L	40	160,000	77,000	36,000	130,000	
Rivas–Nandaime	46	Dry weather	30	18,000	L	46	184,000	101,200			
Nandaime–Diriamba	30	Dry weather	(2)	(2)	(2)						
Diriamba–Managua	46	Paved									
Managua–Maderas	50	Paved									

[1] Surveyed.
[2] Under construction.

Estimate of the cost of surveys and construction of a pioneer road—Pan American Highway—from Panama City, Panama, to Guatemala-Mexican Border—Continued

	Total distance, km.	Present status	Surveys		Pioneer Road			Cost			
			Length, km.	Cost	Type	Length	Cost	Small drainage structure	Temporary bridges	Permanent bridges	Total
Nicaragua—Continued											
Maderas–Sebaco	51	All weather									
Sebaco–Jinotega	55	Trail	55	$55,000	H	55	$360,000	$121,000			
Jinotega–Condega	80	Trail	80	80,000	H	80	960,000	176,000	$45,000	$260,000	
Condega–Honduras Border	60	Trail	60	60,000	H	60	720,000	132,000			
Total	458		265	237,000		281	2,684,000	607,200	81,000	390,000	$3,999,200
Honduras:											
Nicaragua Border–San Marcos	10	Trail	10	10,000	H	10	120,000	22,000	23,000		
San Marcos–Cholúteca	60	Dry weather	60	60,000	H	60	720,000	132,000			
Choluteca–Jicaro Galan	48	All weather			L				18,000	30,000	
Jicaro Galan–El Salvador Border	46	Dry weather	46	36,800	M	46	368,000	101,200	15,000	630,000	
Total	164		116	106,800		116	1,208,000	255,200	56,000	660,000	2,286,000
El Salvador:											
Honduras Border–Junction	38	Trail	(1)		M	38	304,000	83,600	5,000	30,000	
La Union–San Miguel	42	Dry weather									
San Miguel–Lama Cruz	30	All weather									
Lama Cruz–San Salvador	110	Paved									
San Salvador–Guatemala Border	98	Paved									
Total	318					38	304,000	83,600	5,000	30,000	422,600
Guatemala: El Salvador Border–Mexico Border	483	All weather	30	30,000	H	30	360,000		100,000	170,000	660,000
Total	2,613		779	680,200		1,000	9,476,000	2,068,000	406,000	2,084,000	14,748,400
Transportation costs in Mexico including any necessary railroad rehabilitation											750,000
Construction of terminals and storage											750,000
Contingencies 15%											2,437,260
											18,685,660
Less cost of permanent bridges and drainage structure to be charged to funds authorized under Public Act 375, approved December 26, 1941											4,152,000
Cost to be charged to funds authorized under Public Law 375, approved December 26, 1941, Say											14,533,660 15,000,000

[1] Surveyed.

APPENDIX V

WAR DEPARTMENT,
HEADQUARTERS, SERVICES OF SUPPLY,
Washington, D. C., June 17, 1942.

SPER/LDC/6469.
Memorandum for the Chief of Staff, Services of Supply.
Subject: Pan American Highway.

1. The District Engineer at Los Angeles reports that an immediate decision is essential so that work may be placed under way on November 15 if the proposed Pan American Highway is to be completed by May 1943, thus taking advantage of the "dry season." If this work is not placed under way, the completion of the road would be delayed until the end of the next "dry season," May, 1944.

2. The District Engineer has submitted estimates for an unpaved roadway ten feet in width to include, however, permanent bridges. The total estimated cost is $15,000,000 which indicates a relatively large project.

3. An analysis of materials indicates that approximately 8,000 tons of structural steel will be required for the permanent bridges. In addition, the construction of the road will require a fairly substantial amount of road-building machinery to include tractors, bulldozers, angledozers, etc.

4. While the amount of materials involved appears realtively insignificant in comparison with the total available materials, it must be pointed out that there is a substantial shortage now in structural steel and that this quantity can be obtained for rolling only from an Army allocation which now barely suffices for our needs. Similarly, we are experiencing material difficulty in securing construction equipment due in part to lack of materials and also the conversion of part of the construction industry to the production of finished munitions. Here again the amount to be diverted is relatively small, but since there is already a shortage, even this diversion will to some extent affect our "going program."

5. It would be my recommendation that the project be deferred for at least a year when most of the construction for troops and defense plants will have been completed. However, since the proposed diversion of materials and equipment is relatively small, the effect on our present program can not be considered as critical if the project is deemed to warrant expedition.

LUCIUS D. CLAY,
Brigadier General, General Staff Corps,
Deputy Chief of Staff for Requirements & Resources.

Incl.:
File

APPENDIX VI

SEPTEMBER 29, 1942.

Pan–0.

Registered mail

Contracts Nos. W–8022–Eng. –1, –3, –4, –5, Construction of Pan American Highway.

The CHIEF OF ENGINEERS, U. S. ARMY,
Washington, D. C.

1. Reference is made to letters, Office, Chief of Engineers, dated June 18, 1942, File No. CE 611 SPEKY, and July 16, 1942, File No. CE–SPEON, Directive N–6, Pan American Highway N–1.

2. Decision was made by this office to award contracts for the work as follows:

a. To the Foundation Company, 120 Liberty Street, New York, New York, for the construction of a portion of the Pan American Highway from the northern border of Costa Rica to the vicinity of El Zarcero, in the Republic of Costa Rica.

b. To Martin Wunderlich Company, Jefferson City, Missouri, for the construction of a portion of the Pan American Highway from San Isidro in Costa Rica, south to the Panama border, thence to the vicinity of El Volcan, Panama; and from Concepcion, Panama, to David, Panama.

c. To Swinerton–McClure–Vinnell, for the construction of a portion of the Pan American Highway in the Republic of Nicaragua from the border of Honduras via Condega, Zeteli, and San Isidro to Sebaco.

d. To Swinerton–McClure–Vinnell, for the construction of a portion of the Pan American Highway in the Republic of Honduras, from the El Salvador border near Gosscoran via Nacome, to approximately 25 kilometers beyond Jicero Colan, and from Choluteca via San Marces to the border of Nicaragua.

3. Inclosed are four copies of the affidavit and two copies of the record of negotiations with each of the contractors referred to in paragraph 2 of this letter.

4. Included in this paragraph is an explanation of the differences to the inclosed contracts from the Standard War Department Form No. 3:

(1) Article 1. Paragraph 1 of prescribed Contract Form WD3 splits the work into two parts—

a. Definite units.

b. Indefinite units.

The inclosed contracts show all work lumped together, because of the definite character of the work to be performed, thereby rendering paragraph 1*b* unnecessary.

(2) Paragraph 5 of Article 1 of Form WD3 refers to "work to be done under Paragraph 1*a* of this Article," while the inclosed contracts refer to "work to be done under this contract." Paragraph 1*a* reference is unnecessary as 1*b* has been eliminated from the inclosed contracts. See (1) above.

The following has been omitted from Paragraph 5, Article 1 of the inclosed contracts: "provided, however, nothing contained in this article shall be taken to authorize or require any adjustment of the fee to be paid the contractor on account of any additional instructions, work or services ordered or performed by the Contractor with regard to the construction work described in Paragraph 1*b* of this Article and there shall be no increase or decrease in the fee to be paid the contractor in any event on account of any increase or decrease in the quantity or character of the work to be performed under Paragraph 1*b* of this Article." This omission is necessary because of the elimination of Paragraph 1*b* under Article 1.

(3) From Paragraph 1*c* of Article II, the recapture clause has been eliminated from the inclosed contracts. The following has been added: "subject to the same conditions stated in Paragraph 2 hereof for rental of construction plant owned by the constructor. No recapture clause will be required in said contract on equipment rented from third parties." This was done to avoid unnecessary repetition of the conditions, and because of the extreme difficulty experienced in securing rented equipment with recapture provisions included in contract.

(4) In Paragraph 1*d* of the inclosed contracts the following statement is made: "Dismantling, loading and unloading, and assembling of construction plant owned or rented by the Contractor" while Form WD3 states "unloading and assembling at the site of work of construction plant owned or rented by the contractor." The inclosed contracts do not include the statement "loading at the site of origin and unloading when returned to the original shipping point or other return shipping point will not be paid by the Government and is not a reimbursable item." Article II, Paragraph 1 *b*, has been rewritten to provide for the costs made necessary by the unusual operating conditions of this particular contract, i. e., because of the possibility of it being necessary to dismantle this equipment prior to shipment in order for it to be within the weight limit of the lifting facilities, both on the ship and at the point of destination. It is contemplated that, in instances where no dismantling will be necessary and when equipment is rented from third parties, the lessor will pay the cost of loading at point or origin and unloading when the equipment is returned to the point of origin.

(5) Form WD3 limits Paragraph 1*g* of Article II to "field" forces. The word "field" has been eliminated from the inclosed contracts because it has been found necessary to open offices in the United States to expedite obtaining equipment, supplies, and personnel, and the word "field" in the original contract was interpreted to mean "at the site of the work"; whereas, in connection with the inclosed contracts it was necessary to open the offices above-mentioned in the United States for the successful, efficient prosecution of the contract.

(6) Paragraph 1*h* of Article II of the inclosed contracts eliminates "resident" and adds "either on the site of the work or at locations in the United States approved by the Contracting Officer." Form WD3 limits to "field" throughout. Also, payment of excess salaries must be approved under Form WD3 by the Chief of the Supply Service, while the inclosed contracts require approval by Contracting Officer only. The inclosed contracts eliminate the word "resident." The reason for elimination is the same as for the elimination of "field" from the standard form.

(7) Paragraph 1*i* of Article II of inclosed contracts adds "dormitories, housing, eating * * * facilities." Also, the following is added to the inclosed contracts: "The charges for these services to the employees will be at rates approved by the Contracting Officer." The inclosed contracts enumerate in detail the facilities intended to be furnished, for the purpose of clarification of the contract. The purpose of this was that while Form WD3 provided for these additions under the provision for "other facilities," this office is of the opinion that a more detailed list is preferable.

(8) Paragraph 1*a* of Article II of inclosed contracts adds "domestic or foreign." Also, "or any tax or charge imposed by the laws of _____, or any of its political subdivisions." It is necessary to provide for reimbursements for expenditures required by *foreign* laws, and taxes or charges imposed upon the contractor by *foreign* laws.

(9) Paragraph 1*o* of Article II of inclosed contracts adds "for travel performed within the continental limits of the United States and Seven Dollars ($7.00) per day for travel performed outside of such limits." This is necessary to conform with payments to Government employees, and because the standard contract form made no reference or provision for per diem outside the continental limits.

(10) Paragraph 1*p* of Article II of inclosed contracts requires approval by the Contracting Officer while Form WD3 requires approval by Chief of Supply Service. This was done to conform to all of the other requirements of the contract which provides that the approval of the Contracting Officer must be secured. To make this contract consistent because the work is located in a foreign country this Article was changed to require the approval of the Contracting Officer rather than the Chief of Supply Service.

(11) In paragraph 1*q* of Article II of inclosed contracts the words "and exchanging currency of the United States and _____" and "in effecting such exchanges, the official rate of exchange shall be used," were added. Because the costs of exchanging foreign currency is a necessary procedure, and should not be borne by the contractor nor his employees. The reason for the inclusion of the statement that the official rate of exchange was to be used, is that in the Central American countries several rates of exchange are currently used, so in order to make a definite rate apply to this contract it was decided to use the official rate of exchange as published by the recognized fiscal authority.

(12) Paragraph 1*r* of inclosed contracts has been added, providing for employment contracts between contractor and employees; this procedure is considered necessary in a contract involving work by American citizens in foreign countries, to avoid future controversies.

(13) Paragraphs 1*s* and 1*t* of inclosed contracts have been added to provide for reimbursing the contractor for losses or damage, not compensated by insurance, to plant owned by the contractor or rented from third parties, while in transit to or from the site of the work, in order to clarify the situation which might arise if equipment was lost or damaged in transit.

(14) Paragraphs 2*a* and *b*, Article II of inclosed contracts states "at rental rates approved by the Contracting Officer," while Form WD3 provides for "rates prescribed by the Under Secretary of War in "Uniform Rental Rates, etc." The contractors were unwilling to rent equipment to the Government at the Under Secretary of War "Uniform Rental Rates," nor could they secure equipment from third-parties at those rates, and it was found necessary to use the OPA rental rates. Authority to use OPA rental rates was granted by telegram, Office, Chief of Engineers, dated August 11, 1942, reference SPEAC 1454.

(15) Paragraph 2*d*, Article II, has been added to as follows: "No equipment shall be delivered to a common carrier for shipment until after it has been inspected and accepted by a representative of the Contracting Officer." Because of the location of the work, the transportation charges, transportation problems involved, and repair problems, it was necessary that no equipment be shipped to the site of work unless it is in good condition and can perform the work for which it is intended, therefore, it was necessary for this contract to provide that it be inspected and accepted before shipment.

(16) Paragraph 2*e* of inclosed contracts (Paragraph 1*d* of Form WD3) requires approval of Contracting Officer when delivered to common carrier while Form WD3 designates site of work. The same applies as in No. (15) above.

(17) Paragraph 2*e* of Form WD3 has been eliminated. This is because the plant must be in sound and workable condition before shipment.

(18) The following has been omitted from Paragraph 2*f* of inclosed contracts: "In the event a change is made in the vaulation of the construction plant, a corresponding change shall be made in the rental rate in accordance with said "Uniform Rental Rates for Contractor—Owned Construction Plant." Thereafter the valuation and the related rental rate shall be binding unless the rental is modified as specified below. This change was made because the rental rates are based upon the OPA rates and not based upon the valuation of the construction plant.

(19) The following has been added to Paragraph 2*g* of inclosed contracts: "If such excess is due to the fault or negligence of the contractor and after taking into consideration the unusual operating conditions of the project." This change was made for the following reason: If the prime contractor is unable to repair equipment within a normal period of time due to the scarcity of competent mechanics in Central America, or due to the unusual wear and tear upon equipment by reason of the severe operating conditions at the site of work, the exess time can be allowed by the Contracting Officer, if in his judgment the conditions referred to justify such allowance.

(20) The following has been added to Paragraph 1*h* of the inclosed contracts: "and transit to the point of origin. In case of unusual delay in the return shipment due to war conditions, as equitable adjustment shall be made between the Contractor and the Contracting Officer." This provision was included to provide for the payment of rental in cases where due to war conditions it was found impossible to return the plant to the United States within a normal period of time.

(21) Paragraph 2*i*, relating to purchase of equipment by the contractor on priority, has been added to inclosed contracts in order to give the Government the option to acquire title to construction plant which has been purchased by the contractor with the assistance of priorities issued by the Government.

(22) In paragraph 3 the inclosed contracts state that title shall vest in the Government at point of procurement in the United States, while Form WD3 prescribes such point as the Contracting Officer may designate in writing. The inclosed contracts also add that title to articles procured in _____ shall vest in the Government at such points as the Contracting Officer may designate in writing. It is considered necessary to take title at the point of procurement, due to difficulties and delays of transport.

(23) Paragraph 6 of inclosed contracts designate that work shall be under the direction of one or more senior officers, or principal partners, instead of in the general terms of Form WD3, because full time resident direction of senior officers is not considered necessary or practicable for work in foreign countries.

(24) In Paragraph 9 of inclosed contracts the Government reserves the right to make direct payments only in case the contractor fails to do so, while in Form

WD3 the Government reserves the right without limitation. It has been reworded in a manner which this office considered would aid clarification.

(25) Article V, Paragraph 1*b*, of inclosed contracts states "or any State, Territory, or political subdivision thereof, or of any foreign country" in lieu of "of the State, Territory, or political subdivision thereof" mentioned in Form WD3. It is considered necessary because the work is in a foreign country.

(26) Article V, Paragraph 1*a*, states "no purchase in excess of $2,000," in lieu of "$500" mentioned in Form WD3. Permitted by existing instructions from Chief of Engineers, Circular Letter No. 2008 (Contracts and Claims No. 190), dated September 7, 1942.

(27) Article IX, Paragraph 1, of inclosed contracts states "at wage rates determined by the Contracting Officer" in lieu "at wage rates not less than those determined by the Secretary of Labor for the work herein specified and stated in the attached schedule of minimum wage rates * * * and said schedule of minimum wage rates will be posted by the Contractor in a prominent and easily accessible place at the site of the work" in Form WD3. (1) Because this work is in a foreign country and the rates as fixed by the Secretary of Labor are not applicable, the determination of the wage rates are to be made by the Contracting Officer. (2) It was decided to eliminate the requirements for posting minimum wage rates because of the differences which might result from publicly posting rates of pay of the employees hired in the United States and the native employees.

(28) Article IX, Paragraph 2 of inclosed contracts add "in the United States" in prescribing overtime compensation for laborers and mechanics. The words "in the United States" were added because the work is to be done both in the United States and Central America and this addition was made to provide for the payment of overtime to all of the contractors' employees who worked within the continental limits of the United States.

(29) Article IX, Paragraph 5*a*, of inclosed contracts states "employed in the United States by the Contractor" in lieu of "employed by the Contractor" in Form WD3. Same explanation as applies to paragraph (28) above.

(30) Article IX, paragraph 7, of inclosed contracts adds "with respect to all of the work performed in connection with this contract within the continental limits of the United States," to phrasing in Form WD3. This is because compliance with the regulations of the Secretary of Labor is not required on work outside the United States.

(31) Article X, caption adds "and Employers Liability Insurance" also adds "including Employers Liability Insurance" throughout paragraph wherever the words "Workmen's Compensation Insurance" occurs. Also adds "or statutes of any foreign country or political subdivision thereof" in the two places in this paragraph where reference is made to "Federal or State statutes." The Manual requires "Workmen's Compensation" and while it is customary for Workmen's Compensation Insurance policy to provide Employees Liability Insurance, it was felt that this should specifically be set forth so that under no circumstances would the Employer's Liability Insurance not be included as a part of the Workmen's Compensation Insurance policy. There was also added the provision that insurance as required by the statutes of any foreign country or political subdivision be secured, so as to comply with the existing laws of the country in which the work is to be done.

(32) Article XIII of inclosed contracts adds "of the United States, or similar official of any foreign country" to Form WD3 phrasing, because the work is to be performed in a foreign country.

5. Forwarded herewith are the following:

a. Computation of Fixed Fee of Contract No. W–8022–Eng.–1, dated August 25, 1942, with The Foundation Company, in the amount of $100,000.00.

b. Computation of Fixed Fee of Contract No. W–8022–Eng.–3, dated August 22, 1942, with Martin Wunderlich Co., in the amount of $148,000.00.

c. Computation of Fixed Fee of Contract No. W–8022–Eng.–4, dated August 22, 1942, with Swinerton-McClure-Vinnell, in the amount of $84,000.00.

d. Computation of Fixed Fee of Contract No. W–8022–Eng.–5, dated August 22, 1942, with Swinerton-McClure-Vinnell, in the amount of $80,000.00.

e. For approval:

(1) Contract No. W–8022–Eng.–1. dated August 25, 1942, with The Foundation Company, with letter-contract dated August 25, 1942, and Amendment No. 1 to letter-contract, dated September 3, 1942, attached, each in triplicate.

(2) Contract No. W–8022–Eng.–3, dated August 22, 1942, with Martin Wunderlich Co., with letter-contract dated August 22, 1942, attached, each in triplicate.

(3) Contract No. W–8022–Eng.–4, dated August 22, 1942, with Swinerton-McClure-Vinnell, with letter-contract dated August 22, 1942, and Amendment No. 1 to letter-contract dated August 31, 1942, attached, each is triplicate.

(4) Contract No. W–8022–Eng.–5, dated August 22, 1942, with Swinerton-McClure-Vinnell, with letter-contract dated August 22, 1942, and Amendment No. 1 to letter-contract, dated August 31, 1942 attached, each in triplicate.

f. Supporting documents:

(1) Two certified copies of Trust Agreement, dated June 30, 1942, between Tucker McClure and Charles J. Hoffman, in connection with the authority of Charles J. Hoffman to sign Contract No. W–8022–Eng.–4.

(2) Two certified copies of Power of Attorney, dated June 27, 1942, from Tucker McClure to A. T. Cassell, in connection with the authority of A. T. Cassell to sign Contract No. W–8022–Eng.–4.

(3) Two certified copies of Trust Agreement, dated June 30, 1942, between Tucker McClure and Charles J. Hoffman, in connection with the authority of Charles J. Hoffman to sign Contract No. W–8022–Eng.–5.

(4) Two certified copies of Power of Attorney, dated June 27, 1942, from Tucker McClure to A. T. Cassell, in connection with the authority of A. T. Cassell to sign Contract No. W–8022–Eng.–5.

6. None of the above-named contractors have any cost-plus-a-fixed-fee contracts with the Government.

EDWIN C. KELTON,
Colonel, Corps of Engineers,
Director, PanAmerican Highway.

LRS: TE.

20 Incls.:
Incl. 1—Affidavit—Cont. W–8022–Eng.–1, in quad.
Incl. 2—Affidavit—Cont. W–8022–Eng.–3, in quad.
Incl. 3—Affidavit—Cont. W–8022–Eng.–4, in quad.
Incl. 4—Affidavit—Cont. W–8022–Eng.–5, in quad.
Incl. 5—Rec. of Neg.—Cont. W–8022–Eng.–1, in dup.
Incl. 6—Rec. of Neg.—Cont. W–8022–Eng.–3, in dup.
Incl. 7—Rec. of Neg.—Cont. W–8022–Eng.–4, in dup.
Incl. 8—Rec. of Neg.—Cont. W–8022–Eng.–5, in dup.
Incl. 9—Comp. of Fixed-Fee—Cont. W–8022–Eng.–1, in quad.
Incl. 10—Comp. of Fixed-Fee—Cont. W–8022–Eng.–3, in quad.
Incl. 11—Comp. of Fixed-Fee—Cont. W–8022–Eng.–4, in quad.
Incl. 12—Comp. of Fixed-Fee—Cont. W–8022–Eng.–5, in quad.
Incl. 13—Contract No. W–8022–Eng.–1, w/ltr. contract & Amend. No. 1 attached, in trip.
Incl. 14—Contract No. W–8022–Eng.–3, w/ltr. contract attached, in trip.
Incl. 15—Contract No. W–8022–Eng.–4, W/ltr. contract and Amend. No. 1 attached, in trip.
Incl. 16—Contract No. W–8022–Eng.–5, W/ltr. contract and Amend. No. 1 attached, in trip.
Incl. 17—Trust Agreement re Contract No. W–8022–Eng.–4, in dup.
Incl. 18—Power of Attorney re Contract No. W–8022–Eng.–4, in dup.
Incl. 19—Trust Agreement re Contract No. W–8022–Eng.–5, in dup.
Incl. 20—Power of Attorney re Contract No. W–8022–Eng.–3 in dup.

APPENDIX VII

El Salvador

Comparison of Costs and Labor Rates

COSTS

	Unit	Unit Costs (United States Dollars)				
		1937 [1]	1942-3	1944	1945	1946
Bridges:						
Structural Excavation	C. Y.	0.24		0.69	0.43	0.51
Concrete Reinforced	C. Y.	24.83		31.35	55.55	72.40
Stone Masonry	C. Y.	4.14		5.41	9.95	10.04
Road Construction:						
Earth Excavation	C. Y.	.10	0.15	.30	.39	.48
Borrow	C. Y.	.13	.16	.33	.34	.42
Rock Excavation	C. Y.	.54	.58	.73	1.04	1.56
Structural Excavation	C. Y.	.13	.39	.58	.63	.64
Concrete Reinforced	C. Y.		20.64	28.85	49.46	84.29
Concrete Unreinforced	C. Y.	6.44	17.48	20.47	21.41	30.49
Stone Masonry	C. Y.	4.34	5.65	5.40	10.69	12.67
36" Concrete Pipe	Ft.	2.00	3.46	6.00	5.44	5.84
Penetration Macadam	S. Y.	.72	.73	1.48	1.28	2.17

LABOR RATES

	Labor rates (dollars per hour)				
	1937	1939	1942	1945	1947
Carpenter	0.10	0.08¾	0.08¾	0.16	0.20
Stone Mason	.10	.12½	.10	.16	.20
Mechanic	.20	.20	.20	.20	.20
Shovel Operator					
Tractor Operator	.22½	.20	.20	.30	.40
Reinforcing Steel Setter		.05	.07½	.12	.16
Asphalt Man	.06¼	.06¼	.06¼	.08	.10
Common Labor	.05	.05	.05	.06	.08

[1] Constructed by El Salvador.

Panama

Comparison of Costs and Labor Rates

COSTS

	Unit	Unit Costs (United States Dollars)				
		1937 Chiriqui Bridge [1]	1942 Trans-Isthmian [2]	1942 Rio Hato [3]	1945 Via Espana [2]	1946 Airport Road [2]
Bridges.						
Structural Excavation	C. Y.	7.72	8.06	5.71	5.44	15.86
Class A Concrete	C. Y.	28.94	41.37	57.07	45.89	70.34
Class B Concrete	C. Y.	17.41				
Reinforcing Steel	Lb.	.052	.082	.088	.067	.082
Structural Steel	Lb.	.096		.152		.086
Roadway:						
Clearing and Grubbing	Acre		265	163	267	50.21
Unclassified Excavation	C. Y.	.45	.41	.82	1.22	.53
Structural Excavation	C. Y.		2.38	5.71	2.35	2.91
Reinforcing Steel	Lb.		.068	.098	.066	.061
Class A Concrete	C. Y.		26.73	40.76	24.83	34.63
36" Reinforced Concrete Pipe	Ft.		(4)	(5)	[5] 11.22	[4] 10.24
Concrete Paving	S. Y.		3.53	4.16	3.85	3.90

[1] Constructed by PRA and Panama.
[2] Constructed by PRA.
[3] Constructed by Panama.
[4] 9".
[5] 8".

Panama—Continued

Comparison of Costs and Labor Rates—Continued

LABOR RATES

	Labor Rates (Dollars per Hour)		
	1930—Rio Tabasaro Bridge	1937—Rio Chiriqui Bridge	1947
Carpenter	0.35	0.35	0.60
Stone Mason	----------	----------	----------
Mechanic	----------	.56	.65
Shovel Operator	.45	----------	1.00
Tractor Operator	----------	----------	.70
Steel Worker	.40	----------	.60
Common Labor	.20	.15	.35

Costa Rica

Comparison of costs and labor rates

COSTS

	Unit	Unit Costs (United States Dollars)			
		Prior to 1939	1942	1940 to 1946	1947
Roadway:					
Earth Excavation	C. Y	0.14	0.16	0.21	----------
Rock Excavation	C. Y	.54	----------	.68	----------
Concrete Reinforced	C. Y	23.85	28.62	47.70	----------
Concrete Unreinforced	C. Y	14.99	17.99	30.67	----------
Stone Masonry	C. Y	11.58	13.90	21.81	----------
30″ Concrete Pipe (not reinforced)	Ft	1.74	1.30	3.53	----------
Gravel Surface	S. Y	.59	----------	.89	----------
Waterbound Macadam (4.7″)	S. Y	.67	.80	.97	----------
Bituminous Surface 3″	S. Y	.93	----------	1.34	----------
Materials:					
Crushed Stone	C. Y	1.09	----------	1.91	1.64
Reinforcing Steel	Lb	.03	----------	.09	.10
Gasoline	Gal	.31	----------	.45	.45
Asphalt	Gal	.10	----------	.14	----------
Structural Steel	Lb	.04	----------	----------	.07

LABOR RATES

	Labor Rates (Dollars per Hour)			
	Prior to 1938	1939	1940 to 1946	1947
Carpenter	----------	0.13	----------	0.24
Stone Mason	----------	.13	----------	.24
Mechanic	----------	.13	----------	.26
Foremen	0.13	.22	0.31	.40
Truck Drivers	.13	----------	.27	----------
Common Labor	.04+	.04+	.09	.12

GUATEMALA

Comparison of Costs and Labor Rates

COSTS

	Unit	Unit Costs (in U. S. Dollars)			
		1939 [1]	1940 [1]	1941 [1]	1942–1943 [2]
Roadway:					
Grading, small drainage structures and surfacing—cost per mile.	Mile	1,913	2,336	6,640	8,519
Unclassified Excavation	C. Y.				.20
Crushed Stone Base	C. Y.				4.20

[1] During these years the bulk of the labor was "Vialidad" and the land owners benefited by the road donated the services of ox carts, labor, and materials which do not appear in the above costs.

[2] This work consists only of widening the roadway, flattening curves, and a small amount of full construction and some surfacing with gravel.

LABOR RATES

	Labor Rates (U. S. Dollars per Hour)	
	1941	1947
Common Labor	0.02+	0.06¼

Comparison of costs of bridges built in 1934 and 1938 as a cooperative project with cost of bridges built in 1943 and 1944 by the Frederick Snare Corporation under Public Law 375

BUILT IN 1943 AND 1944 BY SNARE CORPORATION

Name and location	Type	Length (feet)	Total cost	Cost per foot	Average cost per foot
Goascoran—El Salvador, Honduras	Steel truss	481	$316,262	$658	
Grande—Honduras	Steel truss	480	361,209	753	$705
Guacirope—Honduras	Steel truss	520	421,033	810	
Ochomogo—Nicaragua	Steel truss	175	104,986	600	
Barranca—Costa Rica	Steel truss and steel I-beam approaches	324	214,149	661	661
Superstructure [1] only of the following bridges:					
Aguacatasta—Nicaragua	Steel I-beam	61	12,391	203	190
Calabazas—Nicaragua	Steel I-beam	61	10,723	176	
Grande—Nicaragua	Steel truss	140	27,942	200	200
Malacatoya—Nicaragua	Steel truss and concrete approach span.	332	65,918	199	

BUILT IN 1934 AND 1938

Chiriqui—Panama	Suspension	470	$347,921	$740	
Choluteca—Honduras	Suspension	880	549,876	625	$569
Tamasulapa—Guatemala	Suspension	440	150,573	342	
Platanal—Panama	Steel Arch	120	53,743	448	403
Sebaco—Nicaragua	Steel Arch	120	42,923	358	
Chirigagua—Panama	Steel Truss	96	26,264	274	
Esteli—Nicaragua	Steel Truss	96	23,063	240	351
Maderas—Nicaragua	Steel Truss	96	32,251	336	
Amatel—Guatemala	Steel Truss	96	53,343	556	
San Cristobal—Panama	Steel I-Beam	100	15,253	153	
Mongoy #2—Guatemala	Steel I-Beam	31	7,408	239	208
Tahuapa—Guatemala	Steel I-Beam	30	10,328	344	
Tiucal—Guatemala	Steel I-Beam	20	1,916	96	

[1] Substructures for these bridges were built prior to 1943 and costs are not available. It is approximately correct to assume that the substructure will represent 50 percent of the cost of these bridges and therefore for comparative purposes the figures shown under "Cost per Foot" should be multiplied by two.

GUATEMALA—Continued

Average Cost of Principal Foodstuffs Consumed in Nicaragua (in Cordobas)

Article	Class	Unit	1937	1938	1939	1940	1941	1942	1943	1944	June 1945
Garlic		Bunch	0.033	0.046	0.050	0.113	0.148	0.178	0.235	0.156	0.200
Rice	Superior	Lb	.095	.103	.135	.263	.185	.184	.261	.430	.700
Rice	Inferior	Lb	.080	.090	.121	.230	.162	.162	.231	.301	
Coffee	1st	Lb	.146	.188	.225	.234	.483	.588	.610	.604	.775
Coffee	2nd	Lb	.122	.161	.192	.203	.424	.504	.505	.524	.600
Coffee	3d	Lb	.096	.140	.164	.175	.346	.427	.413	.448	.550
Cacao	Nicaragua	Lb	.351	.400	.469	.592	.663	.833	.849	1.509	
Cacao	Cauca	Lb	.231	.291	.322	.355	.395	.494	.506	.579	.950
Beef	Loin	Lb	.110	.162	.217	.286	.308	.302	.421	.802	1.000
Beef	Roast	Lb	.086	.129	.178	.222	.231	.233	.310	.579	.850
Beef	Soup	Lb	.056	.080	.109	.145	.130	.135	.199	.223	.300
Pork	Loin	Lb	.120	.186	.281	.376	.392	.421	.659	1.574	2.000
Onions	Large	Dozen	.122	.143	.146	.279	.340	.594	.595		
Onions	Small	Dozen	.078	.086	.098	.100	.242	.357		.372	.375
Hard sugar	White	Bundle	.091	.159	.289	.468	.433	.411	.435	.618	1.350
Hard Sugar	Black	Bundle	.091	.134	.252	.378	.386	.348	.346	.435	1.100
Beans		Lb	.040	.053	.101	.118	.126	.147	.216	.311	.825
Hens		Each	.400	.710	.915	1.005	1.169	1.495	2.352		
Eggs		Each	.017	.027	.039	.045	.057	.068	.104	.177	.200
Flour	Foreign	25 Lb	3.672	6.632	6.156	7.606	7.795	10.227	12.319	10.744	12.300
Milk	Raw	Liter	.061	.095	.125	.168	.159	.218	.288	.394	.650
Corn			.286	.478	.780	.744	.666	1.135	1.114	1.947	2.600
Lard		Bottle	.320	.559	1.012	.995	.762	1.445	1.892	3.597	2.650
Butter	Superior	Lb	.308	.509	.814	.924	.992	1.424	1.795	3.122	3.600
Butter	Inferior	Lb	.242	.374	.587	.753	.698	1.109	1.529	2.781	
Pinol	White	Lb	.049	.079	.121	.126	.135	.182	.229	.276	.450
Bananas	Green	Each	.009	.014	.022	.033	.042	.054	.055	.088	.175
Potatoes	Large	Lb	.075	.095	.099	.124	.146	.179	.254	.272	.250
Potatoes	Small	Lb	.062	.080	.077	.102	.123	.153	.236	.215	.210
Cheese	Fresh	Lb	.164	.273	.387	.430	.406	.625	.789	1.296	1.750
Cheese	Dry	Lb	.182	.273	.407	.495	.414	.680	.902	1.445	1.850
Salt	Domestic	Lb	.031	.044	.048	.067	.072	.083	.171	.140	.135
Wheat	Native		.265	.412	.648		.655	1.036			
Coal		Tin	.163	.219	.258	.380	.380		.612		

Sources: "Estadistica" Managua, Nicaragua—Year 1, Vol. 1, No. 4, August 15, 1955. "Estadistica" Managua, Nicaragua—Year 2, Vol. 2, Nos. 9 and 10, Feb. 15, 1945. "Estadistica" Managua, Nicaragua—Year 2, Vol. 2, No. 14, June 15, 1945.

COSTA RICA

Inter-American highway construction cost to date

SECTION 5—MILLSVILLE TO SAN ISIDRO—K. 0+000 TO K. 36+954.3

Date: MAY 10, 1947.

[Length: 36.954 Km. (22.963 Mi.)]

Item	Unit	Completed	Unit Cost	Total Cost To Date	Est. Total Quantities	% Complete
Maint. Exist. Roads	Km	37	$800.00	$29,600.00	37	[1]
Clearing and Grubbing	Acre	368	600.00	220,800.00	368	100
Unclass. Excavation	C. M	6,144,510	1.18	7,250,521.80	6,344,510	97
Slides (Misc.)		5,889	.75	4,416.75	5,889	100
Unclass. Excav. for Struct	C. M	13,116	1.50	19,674.00	13,116	100
Unclass. Excav. for Borrow	C. M	10,620	.50	5,310.00	10,620	100
Fine Grad. of Sub-Gr. & Should.	Km	24.8	275.00	6,820.00	37	0
Cr. Stone Base Course	C. M	15,871	2.00	31,742.00	64,497	25
Special Borrow		50,352	1.50	75,528.00	52,352	96
Class "A" Concrete	C. Yd	63.30	30.00	1,899.00	63.3	100
Watering Base Course	M. G				420	0
Pavement (Plant Mix)	Sq. M		.70		297,391	0
Class "B" Concrete	C. Yd	94.49	30.00	2,834.70	94.49	100
Reinf. Steel	Lb	793	.09	71.37	793	100
Class "A" Cem. Rub. Masonry	C. Yd				400	0
Paved Ditches	Sq. M	1,482.23	1.50	2,223.35	1,482.23	100
Conc. Culvert Pipe 6"	Lin. Ft	530	.70	371.00	530	100
6" Perf. M. P	Lin. Ft	500	.70	350.00	500	100
8" Perf. M. P	Lin. Ft	372	.80	297.60	372	100

[1] Continuous.

COSTA RICA—Continued

Inter-American highway construction cost to date

SECTION 5—MILLSVILLE TO SAN ISIDRO—K. 0+000 TO K. 36+954.3

[Length: 36.954 Km. (22.963 Mi.)]

Date: MAY 10, 1947.

Item	Unit	Completed	Unit Cost	Total Cost To Date	Est. Total Quantities	% Complete
18" Perf. M. P	Lin. Ft	1,004	2.50	2,510.00	1,004	100
18" C. M. Pipe	Lin. Ft	2,346	2.50	5,865.00	2,346	100
18" Half Round C. M. P	Lin. Ft		1.25		600	0
24" C. M. Pipe	Lin. Ft	4,576	3.10	14,185.60	4,576	100
30" C. M. Pipe	Lin. Ft	240	5.00	1,200.00	240	100
36" C. M. Pipe	Lin. Ft	5,374	7.00	37,618.00	5,374	100
60" C. M. Pipe	Lin. Ft	1,014	15.00	15,210.00	1,014	100
48" C. M. Pipe	Lin. Ft	2,830	10.00	28,300.00	2,830	100
90" C. M. Pipe	Lin. Ft	313	40.00	12,520.00	313	100
Barbed Wire Fencing	Lin. Ft	32,235	.20	6,447.00	42,655	76
Access Roads	C. M	18,992	.75	14,244.00	18,992	100
Temp. Surfacing	C. M	12,595	1.50	18,892.50	12,595	100
Pioneer Roads	C. M	159,660	.50	79,830.00	159,660	100
Blind Drain	Lin. Ft		1.00		500	0
				7,889,281.67		
Engr. 4%				315,571.27		
Total				8,204,852.94		

Cost per Kilometer $222,028.82
Cost per Mile 357,307.54

PBB/rdp.

Date: MAY 10, 1947.

COSTA RICA

Inter-American Highway Construction Cost to Date

SECTION 4—EMPALME TO MILLSVILLE—K. 0+000 TO K. 48+000

[Length: 48.000 km. (29.827 mi.)]

Item	Unit	Completed	Unit Cost	Total Cost To Date	Est. Total Quantities	% Complete
Maint. Exist. Roads	Km	48	$800.00	$38,400.00	48	100
Clearing & Grubbing	Acre	280	600.00	168,000.00	280	100
Unclass. Excavation	C. M	2,134,542	.90	1,921,087.80	2,134,542	100
Slides (Misc.)		71,645	.75	53,733.75	71,645	100
Unclass. Excav. for Struct	C. M	18,378	1.50	27,567.00	18,378	100
Unclass. Excav. for Borrow	C. M	67,826	.50	33,913.00	67,826	100
Fine Grad. Of Sub-Gr. & Should.	Km	48	275.00	13,200.00	48	0
Cr. Stone Base Course	C. M	55,695	2.00	111,390.00	110,559	50
Pavement (Plant Mix)	Sq. M		.70		385,851	0
Class "A" Concrete	C. Yd	1,226	30.00	36,780.00	1,226	100
Watering Base Course	M. G		5.00		480	0
Reinf. Steel	Lb	100,350	.09	9,031.50	100,350	100
Conc. Culvert Pipe 6"	Lin. Ft	2,805	.70	1,963.50	2,805	100
6" Perf. C. M. P	Lin. Ft	200	.70	140.00	200	100
8" Perf. C. M. P	Lin. Ft	240	.80	192.00	240	100
18" C. M. Pipe	Lin. Ft	7,072	2.50	17,680.00	7,072	100
24" C. M. Pipe	Lin. Ft	6,304	3.10	19,542.40	6,304	100
36" C. M. Pipe	Lin. Ft	4,634	7.00	32,438.00	4,634	100
42" C. M. Pipe	Lin. Ft	60	8.50	510.00	60	100
48" C. M. Pipe	Lin. Ft	1,766	10.00	17,660.00	1,766	100
Barbed Wire Fencing	Lin. Ft	21,265	.20	4,253.00	21,265	100
Crusher Run Ballast	C. M	71,902	1.75	125,828.50	71,902	100
Access Road	C. M	43,107	.50	21,553.50	43,107	100
				2,654,863.95		
Engr. 4%				106,194.55		
		Total		2,761,058.50		

Cost per Kilometer $57,522.05
Cost per Mile 92,569.10

PBB/rdp.

COSTA RICA

Inter-American Highway construction cost to date

Date: MAY 10, 1947.

SECTION 3—CASCAJAL TO EMPALME—K. 6+000 TO K. 23+367.5

[Length: 17.367 km. (10.792 mi.)]

Item	Unit	Completed	Unit Cost	Total Cost To Date	Est. Total Quantities	% Complete
Maint. Exist. Roads	Km	17.3	$800.00	$13,840.00	17.3	100
Clearing & Grubbing	Acre	120	600.00	72,000.00	120	100
Unclass. Excavation	C. M	1,590,379	.90	1,431,341.10	1,590,379	100
Slides (Misc.)		98,213	.75	73,659.75	98,213	100
Unclass. Excav. for Struct	C. M	11,584	1.50	17,376.00	11,584	100
Unclass. Excav. for Borrow	C. M	116,016	.50	58,008.00	116,016	100
Fine Grad. of Sub-Gr. & Should	Km	17.3	275.00	4,757.50	17.3	0
Cr. Stone Base Course	C. M	33,206	2.00	66,412.00	44,636	74
Bituminous Pres. Treat	Sq. M	21,845	.20	4,369.00	21,845	100
Pavement (Plant Mix)	Sq. M		.70		139,060	0
Class "A" Concrete	C. Yd	512	30.00	15,360.00		
Watering Base Course	M. G		5.00		100	0
Concrete Cribs	Ea	499	2.00	998.00	499	100
Reinf. Steel	Lb	47,534	.09	4,278.06	47,534	100
Class "A" Cem. Rub. Masonry	C. Yd	175	25.00	4,375.00	175	100
Conc. Culvert Pipe 6"	Lin. Ft	832	.70	582.40	832	100
8" Perf. C. M. P	Lin. Ft	243	.80	194.40	243	100
18" C. M. Pipe	Lin. Ft	2,854	2.50	7,135.00	2,854	100
24" C. M. Pipe	Lin. Ft	2,896	3.10	8,977.60	2,896	100
36" C. M. Pipe	Lin. Ft	1,720	7.00	12,040.00	1,720	100
42" C. M. Pipe	Lin. Ft	100	8.50	850.00	100	100
48" C. M. Pipe	Lin. Ft	2,058	10.00	20,580.00	2,058	100
Barbed Wire Fencing	Lin. Ft	51,181	.20	10,236.20	51,181	100
Crusher Run Ballast	C. M	14,626	1.75	25,595.50	14,626	100
Access Road	C. M	3,140	.50	1,570.00	3,140	100
				1,854,535.51		
Engr. 4 %				74,181.42		
Total				1,928,716.93		

Cost per Kilometer $111,056.42
Cost per Mile 178,717.28

SECTION 2—SAN ISIDRO DE CARTAGO TO CASCAJAL—K. 0+406 TO K. 6+000

[Length: 5.594 km. (3.476 mi.)]

Item	Unit	Completed	Unit Cost	Total Cost To Date	Est. Total Quantities	% Complete
Maint. Exist. Roads	Km	5.6	$800.00	$4,480.00	5.6	Continuous.
Clearing & Grubbing	Acre	10.62	600.00	6,372.00	10.62	100
Unclass. Excavation	C. M	156,481	0.80	125,184.80	156,481	100
Slides		27,608	0.75	20,706.00	27,608	100
Unclass. Excav. for Struct	C. M	3,048	1.50	4,572.00	3,048	100
Unclass. Excav. for Borrow	C. M	6,750	.50	3,375.00	6,750	100
Fine Grad. of Sub-Gr. & Should	Km	1,704	275.00	468.60	1,704	100
Cr. Stone Base Course	C. M	4,553	2.00	9,106.00	4,553	100
Bituminous Pres. Treat	Sq. M	37,068	.20	7,413.60	37,068	100
Class "A" Concrete	C. Yd	865	30.00	25,950.00	865	100
Pavement (Plant Mix)	Sq. M		0.70		45,020	0
Class "B" Concrete	C. Yd	116	30.00	3,480.00	116	100
Reinf. Steel	Lb	114,980	.09	10,348.20	114,980	100
Class "A" Cem. Rub. Masonry	C. Yd	55	25.00	1,375.00	55	100
8" Perf. M. P	Lin. Ft	16	.80	12.80	16	100
18" C. M. Pipe	Lin. Ft	206	2.50	515.00	206	100
24" C. M. Pipe	Lin. Ft	134	3.10	415.40	134	100
36" C. M. Pipe	Lin. Ft	40	7.00	280.00	40	100
48" C. M. Pipe	Lin. Ft	220	10.00	2,200.00	220	100
60" C. M. Pipe	Lin. Ft	46	15.00	690.00	46	100
Barbed Wire Fencing	Lin. Ft	2,830	0.20	566.00	36,745	8
Crusher Run Ballast	C. M	2,498	1.75	4,371.50	2,498	100
				231,881.90		
Engr. 4%				9,275.28		
Total				241,157.18		

Cost per Kilometer $43,109.97
Cost per Mile 69,377.78

PBB/rdp.

Date: MAY 10, 1947.

COSTA RICA

Inter-American Highway Construction Cost to Date

SECTION 1—CARTAGO TO SAN ISIDRO DE CARTAGO—K. 0+000 TO K. 6+486

[Length: 6.486 km. (4.030 mi.)]

Item	Unit	Completed	Unit Cost	Total Cost To Date	Est. Total Quantities	% Complete
Maint. Exist. Roads	Km	6.50	$800.00	$5,200.00	6.50	(1)
Clearance & Grubbing	Acre	5.10	200.00	1,020.00	5.10	100
Unclass. Excavation	C. M	21,853	0.50	10,926.50	21,853	100
Slides	C. M	309	0.50	154.50	309	100
Unclass. Excav. for Struct	C. M	927	1.50	1,390.50	927	100
Unclass. Excav. for Borrow	C. M	700	0.40	280.00	700	100
Fine Grad. of Sub-Gr. & Should.	Km	6.486	275.00	1,783.65	6.486	100
Cr. Stone Base Course	C. M	13,288	2.10	27,904.80	13,288	100
Cr. Stone Top Course	Sq. M	2,512	2.50	6,280.00	2,512	100
Bituminous Surfacing	Sq. M	5,091	1.00	5,091.00	59,769	9
Bituminous Preserv. Treat	Sq. M	36,990	.20	7,398.00	36,990	100
Class "A" Concrete	C. Yd	305	30.00	9,150.00	305	100
Class "B" Concrete	C. Yd	17	30.00	510.00	17	100
Reinf. Steel	Lb	33,467	.09	3,012.03	33,467	100
Conc. Culvert Pipe 12"	Lin. Ft	1,045	2.00	2,090.00	1,045	100
Conc. Culvert Pipe 24"	Lin. Ft	124	3.10	384.40	124	100
Conc. Culvert Pipe 36"	Lin Ft	85	7.00	595.00	85	100
18" C. M. Pipe	Lin. Ft	600	2.50	1,500.00	600	100
24" C. M. Pipe	Lin. Ft	72	3.10	223.20	72	100
36" C. M. Pipe	Lin. Ft	190	7.00	1,330.00	190	100
Riprap	C. Yd	725	5.00	3,625.00	725	100
Barbed Wire Fencing	Lin. Ft	12,194	.20	2,438.80	12,194	100
				92,287.38		
Engr. 4%				3,691.50		
Total				95,978.88		

Cost per Kilometer	$14,797.85
Cost per Mile	23,816.10

[1] Continuous.

PBB/rdp.

NICARAGUA

Cost of Construction of the Inter-American Highway

TIPITAPA TO DARIO

[Length: 43 Kms. (26.7 miles)

Item	Unit	Amount	Unit Cost [1]	Total Cost
Clearing and Grubbing	Hct	$103	$108.24	$11,148.85
Unclassified Excavation	Cu. Mt	[2] 736,319	.45	[2] 330,394.70
Macadam Base	Cu. Mt	[2] 48,975	6.91	[2] 338,521.01
Fencing	Km	[2] 32.8	143.70	[2] 4,713.31
Bituminous Surface	Sq. Mt	[2] 382,818	.81	[2] 310,891.94
Stone Masonry	Cu. Yd	5,735	5.50	31,562.93
Concrete	Cu. Mt	805	31.64	25,468.26
Pipe Culverts	Ft	5,311	6.32	33,567.54
Reinforcing Steel	Lb	99,777	.039	3,939.84
Concrete Pipe	Ft	84	9.97	837.95
Riprap	Cu. Yd	40	6.68	267.20
Maintenance during construction		[3]		69,294.88
Subtotal				1,160,608.41
Location Engineering				1,683.20
Construction Engineering				14,866.11
Total				1,177,157.72

Cost per kilometer	$27,376
Cost per mile	44,088

[1] To the nearest cent.

[2] The report from which this was taken gave these items as 90, 75, 90 and 65 percent complete respectively. In this statement the reported figures have been expanded to 100 percent.

[3] As required.

NICARAGUA

Cost of Construction on the Inter-American Highway

KM. 10—SOUTH OF MANAGUA TO DIRIAMBA—KM. 43

[Length: 33 Km. (20.5 miles)]

Item	Unit	Amount	Unit Cost [1]	Total Cost
Clearing and Grubbing	Hcts	67.27	$98.38	$6,618.06
Unclassified Excavation	Cu. Mt	660,149	.36	240,595.40
Macadam Base	Cu. Mt	[2] 2,821	8.28	[2]233,836.068
Fencing	Km	44	213.56	9,396.70
Bituminous Surface	Sq. Mt	[2]180,945	1.21	[2] 219,247.47
Stone Masonry	Cu. Yd	2,100	23.87	50,119.05
Concrete	Cu. Mt	285	14.28	4,069.08
Pipe Culverts	Ft	2,586	4.33	11,205.86
Reinforcing Steel	Lb	15,892	0.024	382.58
Concrete Pipe	Ft	332	15.31	5,083.54
Riprap	Cu. Yd	500	4.69	2,345.45
Grouted Stone Cutters	Mt	9,400	1.36	12,747.26
Maintenance during construction		[3]		89,520.14
Subtotal				885,166.65
Location Engineering				25,206.88
Construction Engineering				14,430.06
Total				924,803.59

Cost per kilometer	$28,024
Cost per mile	45,112

[1] To the nearest cent.
[2] The report from which this was taken gave these items as 95 percent complete. In this statement the reported figure has been proportionally expanded to 100 percent.
[3] As required.

NICARAGUA

Cost of Construction on the Inter-American Highway

KM. 10—NORTH OF MANAGUA TO TIPATAPA

[Length: 12.86 km. (7.99 miles)]

Item	Unit	Amount	Unit cost [1]	Total cost
Clearing and Grubbing	Hct	11.6	$99.68	$1,156.28
Unclassified Excavation	Cu. Mt	123,000	.34	42,413.10
Macadam Base	Cu. Mt	11,925	4.29	51,206.46
Fencing	Km	19.1	177.66	3,393.29
Bituminous Surface	Sq. Mt	65,850	0.74	48,908.85
Concrete	Cu. Mt	331	24.53	8,119.45
Pipe Culverts	Ft	300	5.46	1,636.98
Reinforcing Steel	Lb	3,140	0.065	204.29
Concrete Pipe	Ft	1,643	4.86	7,991.60
Maintenance during construction		[2]		10,485.83
Subtotal				175,516.13
Location Engineering				1,864.46
Construction Engineering				3,880.78
Total				181,261.37
Labor				60,462.02
Material				120,799.35
Total				181,261.37

Cost per kilometer	$14,095
Cost per mile	22,686

[1] To the nearest cent.
[2] As required.

APARTADO 372,
San Salvador, El Salvador, May 20, 1947.

Mr. E. W. JAMES,
Chief, Inter-American Regional Office,
Public Roads Administration,
Federal Works Agency Building, Washington, 25 D. C.

DEAR MR. JAMES: Reference is made to your cable of April 29 in which you have requested various unit costs per kilometer of construction in El Salvador.

Immediately upon receipt of your cable we took the matter up with the El Salvador Government Officials requesting this information and have since been contacting their office continuously to obtain this data. We have just this minute received the data and are listing below the information which you have requested:

Section	Item	Distance	Total cost	Cost per km.
		Km.		
San Salvador-Sta. Ana, Guatemala frontier.	Grading & asphalt paving	98.4	$1,615,169.88	$16,414.33
San Salvador–Lempa	Grading & small drainage struct	90	535,295.44	5,947.72
	Asphalt paving	90	356,335.37	3,959.28
Lempa–San Miguel	Grading & small drainage struct	49.5	427,425.64	8,634.86
	Asphalt paving	49.5	274,405.38	5,543.54
San Miguel–La Union	Grading & small drainage struct	42	422,611.16	10,062.17
	Asphalt paving	19.9	242,747.42	12,198.36
La Union-Pasaquina–Goascoran	Grading & small drainage struct	34	513,798.23	15,111.71

Very truly yours,

W. C. A. PALMER,
Resident Engineer.
By EARL A. TERZIAN,
Structural Engineer.

2 cc. Washington.
1 cc. file.
EAT/dq.

APPENDIX VIII

The following tables are the figures reported to represent the government receipts, government expenditures, and national debt of the respective countries for the dates indicated:

MEXICO

Fiscal year	Receipts	Expenditures	Debt at end of year
1940	$103,000,000	$123,000,000	$377,000,000
1941	113,000,000	121,000,000	410,000,000
1942	132,000,000	155,000,000	480,000,000
1943	189,000,000	185,000,000	290,000,000
1944	229,000,000	261,000,000	256,000,000
1945	243,000,000	278,000,000	285,000,000
1946 (estimate)	309,000,000	248,000,000	[1]

GUATEMALA

1940	$12,150,000	$10,950,000	$10,327,000
1941	11,590,000	10,375,000	[2] 10,341,000
1942	[3] 10,223,000	[3] 10,223,000	[2] 10,100,000
1943	13,712,000	12,753,000	[4] 10,200,000
1944	[3] 10,576,000	[3] 10,033,000	[2] 11,606,000
1945	16,880,000	21,884,000	[1]
1946	[3] 29,300,000	[3] 29,300,000	[4] 2,187,000
1947	[3] 33,351,000	[3] 33,351,000	[1]

EL SALVADOR

1940	$6,951,000	$8,043,000	$16,571,000
1941	7,133,000	7,937,000	17,343,000
1942	8,059,000	8,117,000	16,174,000
1943	9,219,000	8,580,000	21,151,000
1944	9,497,000	9,660,000	[4] 20,508,000
1945 [5]	12,700,000	12,500,000	18,127,000
1946 [5]	14,927,000	14,889,000	[6] 14,126,000
1947 [5]	18,669,000	18,610,000	----------

HONDURAS

1940	$5,313,000	$5,900,000	$8,541,000
1941	5,116,000	5,427,000	8,463,000
1942	5,491,000	5,626,000	8,397,000
1943	5,360,000	5,456,000	8,447,000
1944	6,493,000	6,096,000	7,545,000
1945	7,369,000	7,670,000	6,898,000
1946	[7] 7,746,000	[7] 7,381,000	6,777,000
1947 (estimated)	7,488,000	7,291,000	[1]

[1] Not available.
[2] January 1.
[3] Estimate.
[4] December 31.
[5] Budget includes special funds.
[6] External debt only, as of January 1.
[7] Projected on basis of actual figures for first nine months.

NICARAGUA

Fiscal year to June 30	Receipts	Expenditures	Debt on Dec. 31
1940	$5,630,000	$4,678,000	[1]
1941	6,595,000	5,613,000	$5,251,000
1942	8,139,000	7,610,000	5,362,000
1943	8,228,000	8,244,000	5,671,000
1944	12,228,000	10,036,000	5,843,000
1945	12,753,000	13,276,000	5,687,000
1946	[8] 14,078,000	[8] 14,078,000	6,213,000

COSTA RICA

1940	$7,507,000	$7,780,000	[1]
1941	7,669,000	9,355,000	[1]
1942	6,645,000	8,732,000	$31,840,000
1943	9,063,000	12,878,000	37,223,000
1944	9,509,000	12,063,000	40,170,000
1945	10,899,000	13,399,000	44,226,000
1946	[9] 11,326,000	[9] 14,173,000	46,153,000

PANAMA

Fiscal Year	Receipts	Expenditures	Debt at end of year
1940 [10]	$13,189,000	$13,043,000	[10] $22,292,000
1941 [10]	[11] 21,622,000	[11] 22,017,000	[10] 19,855,000
1942 [10]	23,310,000	21,616,000	[10] 18,971,000
1943 [4]	27,568,000	26,633,000	[4] 20,448,000
1944 [4]	27,198,000	26,280,000	[4] 18,497,000
1945 [4]	27,526,000	32,158,000	[4] 17,256,000
1946 [4]	36,895,000	37,791,000	[1]

[1] Not available.
[8] Budget stimates.
[9] Figures are preliminary.
[10] June 30.
[11] Include income and disbursements pertaining to bond refunding operations.

MAY 29, 1947.

APPENDIX IX

MAY 26, 1947.

Direct Taxes Paid in Various Countries on Gasoline, per Gallon

	Taxes	Approximate Retail Price
Mexico	[1] $0.0795	[1] $0.25
Guatemala	.2176	.48
El Salvador	.2372	.50
Honduras	.1776	.45
Nicaragua	.1334	.40
Costa Rica	.2419	.50
Panama	.2026	.31

[1] An additional tax of approximately $0.55 a gallon is charged on gasoline imported into Mexico.

The first air line offering commercial transportation between the United States and Panama via Central American countries was established in 1928 (probably October) by Pan American Airways.

The restrictions and regulations concerning automobiles entering the various countries are as follows:

Mexico.—Tourists may visit border towns in Mexico, not to exceed 24 hours, without permits. For visits of more than 24 hours or for any visit into the interior, tourist cards and automobile permits must be obtained which cost approximately $2.00 each and are valid for six months. Automobile permits may be obtained upon presentation of a certificate of ownership and a driving license issued in the country of origin.

Guatemala.—Tourists must petition the Collector of Customs, on a printed form, for a sixty-day permit, setting forth in his petition the grounds on which he claims to be a bona fide tourist. Petitions must be in Spanish. Sixty-day permits are given to bona fide tourists without a bond. Foreign license plates are valid for 30 days but a tourist must report the circulation of his car to the police. A local driving license is usually issued for $3.00 upon presentation of a United States license, without the necessity of taking a road test. After a stay of 30 days a circulation tax is required which amounts to $28.00 a year on local cars.

El Salvador.—A U. S. driving permit is valid for 15 days. For longer visits, a local driving license can be obtained for $2.40 upon presentation of a medical certificate. Application for permission to use U. S. license plates may be made locally. If the application is denied, petition must be made for local plates which cost approximately $7.80. For a stay of less than six months, the duty must be deposited on an automobile; but full refund is made upon exportation of the automobile.

Honduras.—Automobiles are entered free of customs duty. Tourists with U. S. license plates will probably not be required to use local plates, if they remain less than 30 days. They do not require a Honduran driving license and are exempt from payment of the circulation tax which amounts to $14.50 a year.

Nicaragua.—Under the "Convention on Regulation of Inter-American Automobile Traffic," Nicaragua permits the circulation of automobiles through the use of three documents, issued by the American Automobile Association, as follows: an international automobile certificate, an international driving license, and an international registration marker to fit on the car's license.

Costa Rica.—Legislation is pending to legalize international documents issued by the American Automobile Association. No customs duty is required on automobiles for a stay of less than 30 days, but a bond equal to the amount of such duty must be posted on entry, to be refunded on exit. License plates issued in the U. S. are valid for 2 months. If the stay is longer, the visitor must apply for local plates. A local driving license will be issued for approximately $1.80, upon presentation of a valid U. S. driving license.

Panama.—Permits circulation of automobiles through the use of the three international documents issued by the American Automobile Association. (See Nicaragua.) If tourists stay longer than 90 days, they must obtain local license plates and driving license.

PUBLISHED REPORTS

The Special Committee Investigating the National Defense Program, United States Senate, pursuant to Senate Resolution 71 (77th Cong.), authorizing and directing an investigation of the national defense program.

Report No. 480 (77th Cong., 1st sess.):
- Part 1—Aluminum.
- Part 2—Camp and Cantonment Construction.
- Part 3—Priorities and the Utilization of Existing Manufacturing Facilities.
- Part 4—Statement of Committee Policy.

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Report No. 480 (77th Cong., 2d sess.):
- Part 5—Annual Report of Committee Investigations.
- Part 6—Light Metals, Aircraft, and Other Matters.
- Part 7—Rubber.
- Part 8—Conversion to War Production Program of War Production Board
- Part 9—Conversion Program, War Production Board. (Accompanies pt. 8.)
- Part 10—Investigation in Connection with Senator Albert B. Chandler's Swimming Pool in Kentucky.
- Part 11—Manpower.
- Part 12—Shipbuilding at the South Portland Shipbuilding Corp.
- Part 13—Gasoline Rationing and the Fuel Oil Situation.
- Part 14—Lumber.

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Report No. 10 (78th Cong., 1st sess.):
- Part 1—Barges.
- Part 2—Farm Machinery and Equipment.
- Part 3—Interim Report on Steel.
- Part 4—Second Annual Report.
- Part 5—Renegotiation of War Contracts.
- Part 6—Labor.
- Part 7—Concerning Faking of Inspections of Steel Plate by Carnegie-Illinois Steel Corp.
- Part 8—Shipbuilding and Shipping.
- Part 9—Conflicting War Programs.
- Part 10—Aircraft.
- Part 11—Comparative Merits of Rayon and Cotton Tire Cord.
- Part 12—Outlines of Problems of Conversion From War Production.
- Part 13—Transportation.
- Part 14—The Canol Project.

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Report No. 10—(78th Cong., 2d sess.):
- Part 15—Investigations Overseas: Section I—Petroleum Matters.
- Part 16—Third Annual Report.
- Part 17—Magnesium.
- Part 18—Merchant Shipping.
- Part 19—Ream General Hospital.
- Part 20—Accumulation of Surpluses.

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Report No. 110 (79th Cong., 1st sess.):
- Part 1—Disposal of Surpluses Other Than Industrial Plants.
- Part 2—Investigations Overseas.
- Part 3—Aircraft—Conditions at Curtiss-Wright Corp., Buffalo, N. Y., Plants.
- Part 4—Fourth Annual Report.

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Report No. 110 (79th Cong., 2d sess.):
- Part 5—Investigations Overseas—Surplus Property Abroad.
- Part 6—Aircraft—Production, Development, and Research.
- Part 7—Fifth Annual Report.
- Part 8—Transactions Between Senator Theodore G. Bilbo and Various War Contractors.