Railway Construction in China

Communists strive to restore and to extend the country's railway network.

BY LI CHANG

During the past three years investments in railway rehabilitation and construction in Communist China have been the largest single item of the national expenditure on industry and communications. All railways damaged during the war were repaired in a remarkably short time. Several lines begun by the Nationalists have been completed by the Communists, and some new construction has been undertaken.

The strategic and economic importance of such improvements and additions to the national railway network is obvious. It is, however, difficult to obtain reliable information from Communist China. The data summarized below have been taken in part from releases of the (Communist) New China News Agency, and in part from other sources. They cover the following topics: (1) rehabilitation, (2) railways completed in 1951-52, (3) new railways under construction, and (4) projected railways.

Repair and Rehabilitation

In 1949 alone the Railway Engineering Corps of the People’s Liberation Army (PLA) is reported to have restored over 5,000 miles of railway and 2,715 bridges. By the end of 1949, about 13,020 miles of railway were in full operation. On July 1, 1951 all railway lines on the mainland and Hainan Island, with a total length of 16,740 miles, had resumed full service. The railways from Tientsin to Mukden, Mukden to Harbin, and Mukden to Antung are reported to have been double-tracked. In the work of rehabilitation, considerable assistance and materials were received from the Soviet Union.

In the interests of improving efficiency, special attention was given to the rehabilitation of railway bridges. Especially noteworthy was the strengthening of the Liu Kiang bridge (1,942 feet), connecting the Hunan-Kwangsi and Kwangsi-Kweichow railways. The Huai River bridge and the Yellow River bridge on the Tientsin-Pukow railway, as well as the Chientang River bridge, were repaired and strengthened. The reinforcement of the three-mile Yellow River bridge on the Peking-Hankow railway deserves special mention. This was built by French and Belgian engineers 52 years ago, and when crossing it, trains had to be divided and hauled by light locomotives at low speed. Reinforcement was carried on gradually without interrupting normal traffic, and by November 1952 all trains were able to pass over the bridge at full speed.

Efforts have also been made to improve operating efficiency, with a nation-wide drive for full loads, greater hauls, and an average daily run of 500 kilometers per locomotive.

Railways Built or Rebuilt in 1951-52

With the railway network resuming full service, the Communists launched a program of construction in the summer of 1950. So far, five lines are said to have been completed: two in the southwest, two in the north, and one in the northwest. In each case the Communists followed the original plan of construction laid down by the Nationalists.

Liuchow-Chennankwan line. This is the southern section of the Hunan-Kwangsi railway, a trunk line built during the war and projected originally to connect south China with French Indochina. The two northern sections between Hengyang and Kwei lin (224 miles) and between Kwei lin and Liuchow (108 miles) were completed in 1938 and 1939 respectively. The two southern sections, Liuchow to Nanning (163 miles) and Nanning to Chennankwan on the Indochina border (140 miles) were partly completed at the time that Japanese troops occupied Nanning, in November 1939. Although China recaptured Nanning in December 1940, the Nationalists decided to suspend construction in view of the uncertainties of the war situation. Only a 43-mile section from Liuchow to Laipin and a 35-mile branch line from Laipin to Chienkiang were built in order to obtain coal from this area.

Because of the strategic importance of this line, construction from Laipin was started by the Communists in October 1950. Rails and ties were transported not only from Canton and Hengyang workshops, but even from Manchuria. More than 100,000 drafted peasants, together with other workers and the Railway Engineering Corps, were engaged in laying the tracks at the rate of 5.46 kilometers per team per day. On March 10, 1951 the 123-mile section from Laipin to Nanning was opened to traffic. From Nanning to Chennankwan the terrain is very difficult, but the line was built from both ends simultaneously, completed within eleven months, and opened to traffic on November 7, 1951.

Chennankwan is one of the most important passes between China and Indochina, and a major supply route for the Viet Minh forces in their struggle against the French. Since the early months of 1952 military
transportation is said to have been carried on at night, and an airfield has been built to protect the railway from possible French air raids.

*Chengtu-Chungking line.* Work on this line, from Chungking on the Yangtze to Chengtu, the capital of Szechwan province, was begun before the outbreak of the Sino-Japanese war, and a large part of the foundation work had been completed by the Nationalists. As early as 1940 important work had been finished on the section between Chungking and Neikiang, the sugar center of Szechwan. The line forms part of a projected trunk railway connecting northwest and southwest China.

The Communists began construction on June 15, 1950. On July 1, 1951 train service started on the 102-mile section from Chungking to Yungchuan. On December 7, 1951 traffic was opened to Neikiang, 175 miles from Chungking, and on July 1, 1952 the whole length of the line, a distance of 313 miles, was open to traffic.

The cost of construction was low as the road was built entirely with native materials by Chinese workers and engineers. In addition to 25,000 men from the PLA, 100,000 drafted workers were engaged in the work, which required 40 tunnels and 970 bridges. Construction went on day and night, and a new record of laying five kilometers of rail per day was set. Since the job was hastily done, part of the roadbed was entirely washed away after a heavy rain, and train service was interrupted from August 26 to September 11, 1952.

Linking the rich Chengtu plain with Chungking, where the Yangtze and Chiafing Rivers meet, this railway may produce a great change in the economic life of the whole southwest, including Sikang and Tibet. The province of Szechwan is especially rich in natural resources. With the completion of this railway, a transport network has been centered around it which has greatly increased commodity exchange in the area.

**Lunghai Line Extended**

*Tienshui-Lanchow line.* This new line is the westernmost extension of the Lunghai trunk line, which stretches 1,083 miles westward from Haichow on the China Sea. Before construction could be started, rehabilitation of the 103-mile Paoki-Tienshui sector had to be undertaken. This section of the Lunghai line was begun in May 1939, but because of the difficulty of importing materials during the war, progress was very slow. The route passes over high mountains and deep gorges, and more than 520 bridges and culverts had to be built. It was not opened to traffic until December 1945. Since it was poorly built, rehabilitation was started by the Communists in November 1949. The entire roadbed was improved, and the most difficult section, with 126 tunnels in thirteen miles, was reinforced. This prepared the way for the construction of the Tienshui-Lanchow line.

Actual construction of the latter began in May 1950, but went slowly, owing to the mountainous nature of the terrain. By December 1, 1951 only 40 miles were ready for service. By August 23, 1952, however, trains were pulling into Lanchow, having covered a distance of 215 miles, and the formal opening to traffic took place on October 1.

Traversing the Lunghai ranges, which tower over 9,900 feet above sea level, this railway is said to be an achievement of modern engineering. Tunnels totaling more than six miles had to be dug, the longest more than 6,500 feet in length. More than 1,000 bridges had to be built and many complex engineering problems had to be solved. The problem of supply also presented difficulties. Millions of tons of building materials had to be brought from other parts of the country, while drinking water, food, and fuel had to be provided from centers miles away. Like the Chengtu-Chungking line, this railway was built entirely with domestic materials and labor. In addition to civilian workers, 100,000 men from the PLA performed 3,450,000 man-days of work in 1950 and 1951, while in 1952 another 9,000 workers joined in the construction.

Lanchow, now the western terminus of the Lunghai railroad, is the key economic center of northwest China. Through it the products of Sinkiang, Chingshai, Ninghsia, and Kansu provinces can flow to other areas in exchange for industrial goods. The completion of this railroad has therefore given an impetus to the economy of the whole northwest region.

*Northern section of Shansi railway.* The Shansi (Tung-Pu) railway traverses the province of Shansi from Tatung in the north to Puchow in the south, facing Tungkwan on the other side of the Yellow River. It was completed before the Sino-Japanese war, but during the war the entire line, 613 miles in length, fell into the hands of the Japanese army. The Japanese widened the northern section from meter to standard gauge, and also widened the railway from Taiyuan to Shihkiachwang on the Peking-Hankow railway, in order to facilitate the movement of their troops. They also built the Yuanping-Shuo Hsien section, which was opened to traffic on December 10, 1939.

During the civil war the Chinese Communists, after their military occupation of Tatung and other nearby points, completely destroyed this 64-mile section in order to prevent General Yen Hsi-shan from attacking them in the rear. In the autumn of 1950 they began to rebuild the line which they themselves had destroyed in 1945-46. Disrupted for six years, traffic along the whole line was resumed on July 1, 1951. Since then
SKETCH MAP OF CHINESE RAILWAYS

Completed by Communists.

Projected.

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the Tung-Pu railway has been linked up again with the Peking-Paotow line at Tatung, and with the Lung-hai railway at Tungkwan.

Chinchow-Chengteh line. In order to link Jehol with the railway network of Manchuria, the Japanese, shortly after the Mukden incident, built a railway connecting Chinchow with Chengteh, the capital of Jehol, a distance of some 200 miles. This line was completed in 1936. Two years later, Chengteh was brought into direct rail communication with Peking.

After V-J Day the Russians spread out over Manchuria and deep into the provinces of Jehol and Chabar. On the heels of the Russian evacuation in May 1946 the Chinese Communists advanced, helping themselves to territory and munitions left by the Japanese. But when Chengteh fell before a Nationalist drive, the Communists again adopted the strategy of disrupting Nationalist communications, and thoroughly wrecked the entire railway.

Rebuilding was begun by the Communists in March 1952. A construction team composed of over 5,000 railway workers and 4,000 drafted peasants built 3,000 feet of bridges and 610 feet of tunnels and culverts. The reconstruction of the line was completed in October.

As the province of Jehol abounds in coal, iron, petroleum, copper, lead, and mica, this renovated line will help to exploit the resources of the area, and its cotton and other products can be exchanged for the industrial products of Manchuria.

A 90-mile branch of the Chinchow-Chengteh railway to Chihfeng (Hata), also built by the Japanese, was likewise demolished during the civil war. Steps to rebuild it were begun in October and finished in November 1952. Extending into the heart of Jehol on the border of the “Autonomous Territory of Inner Mongolia,” this railway will help to open up the rich resources of the northern part of the province.

Railways Under Construction

In the construction of new railways, the Chinese Communists are following closely the plans laid down by the Nationalists, with special emphasis on the southwestern and northwestern provinces. Four new lines are now under construction, two in the southwest, one in the west and one in the northwest.

Nanning-Yamchow line. To extend her influence in southwest China, France was for some time interested in building a railway from Yamchow to Chungking, for which she had been given a priority right. The Nanning-Yamchow railway, a distance of 125 miles, is the southern section of this route. Leading directly to the South China Sea, this line was strongly recommended by Dr. Sun Yat-sen in his program for a southwestern railway system. It provides another outlet to the sea for the railways of southwest China.

For economic and military reasons, the Chinese Communists have rapidly laid the rails as far as Lungmen Harbor. When completed, this road will serve as another supply line for the Viet Minh forces in Indochina.

Linking the Southwest Provinces

Kunming-Kweiyang line. Kunming in Yunnan province is the terminus of the 289-mile Yunnan-Indochina railway. Early in 1936 a priority was granted to a French syndicate to extend this line to Kweiyang in Kweichow province, which would permit the products of southwest China to be swiftly transported to Indochina, and greatly increase the business of the port of Haiphong. Owing to the outbreak of war with Japan and the consequent suspension of work on the Hunan-Kweichow railway, this project was also abandoned. The construction of both lines, now projected by the Chinese Communists, together with the Chungking-Kweiyang line, would knit the provinces of Szechwan, Yunnan, Kweichow, and Hunan into one economic unit, and would, in addition, provide a direct rail route from southwest China all the way to Manchuria.

Chengtu-Tiensui line. This 469-mile line, linking Chengtu in Szechwan with the Lunghai railroad, was decided on by the Nationalists in 1939, in preference to the more difficult route from Chengtu to Paoki. Field surveys were completed while the war with Japan was going on. Eighteen miles of tunnels will be required. The Communists intend to give priority to this route, in order to link the southwest with the northwest. Another engineering survey was undertaken in January 1951, and construction was begun on July 1, 1952, the day that the Chengtu-Chungking road was completed. The first section of 112 miles, across flat country, is expected to be finished within a year. The next 104 miles are through rolling country, while most of the final 253-mile stretch is through difficult mountainous terrain. When completed, this road will give access to the coal, minerals, and oil of China’s northwest, which has great possibilities for industrial development.

Lanchow-Sinkiang line. The main object of this northwest artery is to carry the railway system into the heart of Sinkiang and ultimately establish a link with the Turkestan-Siberia (Turksib) railway in central Asia. Started on October 1, 1952, this important line will extend from Lanchow through the Kansu corridor, via the Yumen oil district to Tihwa (Urumchi), the capital of Sinkiang province, a distance of more than 1,500 miles. The route passes through difficult terrain with high mountains and steep passes. Hence railway construction must be preceded by highway building to facilitate transport of materials. It is reported that surveying parties are now strung out at frequent intervals.
for some 250 miles ahead of the actual railway construction, and that the survey work on the 850-mile Lanchow-Kiuchuan sector is nearing completion.

At the other end of the line, it is said that engineering surveys between Tihwa and Tacheng (450 miles) have been completed and that construction has actually started from Tachen southward to Tihwa. Although no information has been released, it is possible that the Russians have built a branch line from Sergiopol to Tachen, thus making it possible for the Chinese to continue the line from Tacheng to Tihwa via Wusu, an oil center in northwestern Sinkiang. This is expected to be the main junction point, from which one road will extend to Sergiopol and another to Alma Ata.

According to an unconfirmed source from Communist China, a Sino-Soviet agreement was signed in December 1950 providing for the construction of the Lanchow-Sinkiang railway. No such agreement has been made public, but it seems likely that the Russian and Chinese Communists are anxious to connect their transportation systems in this way as well as to penetrate this unexploited region, although the difficulties of the project will make its construction a protracted affair extending over a period of years.

Tatung-Fengtai line. In north China, a cutoff is now under construction from Tatung on the Tientsin-Paotow railway to Fengtai, the junction of the Peking-Mukden and Peking-Hankow lines. This would make it possible to transport coal from Tatung to Mukden, Tientsin, or Hankow without breaking up the trains at Nankow Pass.

Projected Railways

The Communists have announced a five-year plan of building 200,000 kilometers of railways in China, but they face tremendous difficulties owing to the serious shortage of steel rails. Engineering surveys are reported to have been completed on the following lines, which will be built as soon as finances permit, with priority given to four lines in the southwest and two in the north and northwest, as noted below.

Hunan-Kweiyang line. This 620-mile line, a westward extension of the Chekiang-Kiangsi (Hangchow-Chuchow) railway, would when completed form part of the most important east-west trunk line south of the Yangtze River. Its construction was begun by the Nationalists early in 1937, and after the outbreak of the Sino-Japanese war some 150 miles were finished. After Hankow fell to the Japanese in 1938 the project was abandoned, parts of the completed sections were dismantled, and the materials from them were used in building the Kweilin-Liuchow section of the Hunan-Kwangsi railway, which made a significant contribution to China’s war effort. This abandoned prewar project is now being revived by the Communists. After survey work was completed in August 1950, it was decided to build the section from Kweiyang southeastward to Tuyun, from where the line is to run northeastward to Chuchow on the Canton-Hankow railway.

New Lines to Szechwan

Chungking-Kweiyang line. In order to link the province of Szechwan with other southwestern provinces, the Chinese Communists are reported to be ready to revive the old project of building a railway from Chungking southward to Kweiyang, a distance of 303 miles. This, together with other projected lines, would form an important artery connecting China’s north-west and southwest.

Szechwan-Yunnan line. A railway from Kunming, the capital of Yunnan province, to Suifu on the Yangtze, in Szechwan, a distance of 528 miles, was projected in the early years of the war. Though this road would have been vitally important to China’s war effort, the engineering work was seriously hampered by lack of imported materials following the French capitulation to the Japanese in Indochina. One section of the line was opened to traffic in 1941, but another was torn up to prevent the Japanese from invading Yunnan. As the roadbed was completed as far as Weining and culverts and bridges had been constructed, it should not be difficult for the Communists to complete the task. This route runs through a region rich in mineral resources—coal, iron, and copper—, and its construction would pave the way for their rapid development.

Kwangtung-Kwangsi line. Continuing the 30-mile Canton-Samshui railway, this projected line runs in a northwesterly direction for over 300 miles, and will be linked at Liuchow with the Kweichow-Kwangsi railway. Its completion, together with that of other projected routes, would make it possible to travel by rail from Canton to Chengtu, as well as providing direct communication between Kwangtung and Kwangsi. This line, which passes through districts noted for antimony and coal deposits, was never surveyed by the Nationalists, but the Communists recently completed a survey of the route.

Paotow-Lanchow line. This route was projected thirty years ago as an extension of the Peking-Paotow railway. Under the Communist regime, an engineering survey was completed in 1951. The construction of this 680-mile line would link together the provinces of Suiyuan, Ninghsia, and Kansu and bring them into closer economic contact with the rest of China.

Kweiwui-Ulan Bator line. In August-September 1952 the Soviet Union was instrumental in bringing about the conclusion of an agreement on economic and cultural cooperation between China and Outer Mongolia.
Initiated at Moscow in the course of Russo-Chinese talks in which the Premier of Outer Mongolia was summoned to participate, the agreement was finally signed at Peking on October 4, 1952. Unpublished parts of the agreement were reported to include clauses providing for the establishment of a Sino-Mongolian Railway Company to build a southern branch of the Trans-Siberian, crossing Outer Mongolia and the Gobi Desert to Kweisi, the capital of Suiyuan province, on the Tientsin-Paotow railway. As the line from Ulan Ude in Russia to Ulan Bator in Outer Mongolia has already been built, the new company's job would be to construct the line on to Kweisi, thus linking the "Mongolian People's Republic" with the "People's Republic of China." Russian materials and Russian experts will be used, it is reported. This line, if completed, would open up a new region to economic development as well as providing a strategic transport link between Communist China and the Soviet Union.

At present, Communist China has only one rail link with Russia, through Manchuria. The construction of another line through Mongolia, together with the projected line through central Asia mentioned above, would provide three lines of rail communication. The difficulties of construction are, however, considerable.

It is evident from the above survey that a good start has been made in railway development in Communist China. But the effects of shortages of materials and the strain imposed by the Korean war are indicated by the fact that only 800 kilometers of new lines are planned for 1953. The realization of the many plans described above will therefore depend on whether conditions are favorable for overall economic development of the country.

India's Five-Year Plan: The Final Draft

Bombay, February 1953

In July 1951, when the Draft Outline of the Indian Five-Year Plan was presented to the public, the National Planning Commission stated: "We have . . . felt it necessary, before presenting our proposals in complete detail, to offer a Draft Outline of the Plan. The Draft is intended to be a document for widest possible discussion. . . ."

Since its publication numerous persons and organizations as well as the press have expressed themselves on the proposals in the Draft Outline. The National Planning Commission has met with various members of the central and state governments and with representatives of the principal political parties. These consultations and discussions have been taken into consideration in drawing up the final plan, which was presented by Prime Minister Nehru to both houses of Parliament on December 8, 1952.

The Plan as now presented contains all of the development projects included in the Draft Outline, together with a number of additions and changes. These changes have been made to strengthen the Plan at those points at which it was felt that the proposals made in the Draft Outline fell short of the needs of the country.

The total amount of investment has been increased by about 15 percent. The Draft Outline was divided into two parts, the first involving an expenditure of $3,145 million and the second proposing an outlay of about $600 million, which was to be undertaken if external assistance were available. In the final report the Plan no longer consists of two parts. The various programs have been brought together into a single plan, and the total outlay is estimated at $4,344 million.

The broad allocations among the main heads of development in the final Plan as compared with the Draft Outline are indicated in the accompanying table. In the field of agriculture and commodity development additional programs have been introduced with a view to ensuring that the targets of agricultural production will be reached. These include a provision of $189 million for Community Development Projects, $63 million for additional minor irrigation programs, and a scheme for the establishment of a National Extension Organization.

The Community Development Project is the method by which the Indian government hopes to bring the Plan down to the village level. By the use of village-level workers the government will endeavor to raise the enthusiasm of the people. The main lines of activities in a Community Project are agriculture and related matters; communications; education; health; supplementary employment; housing; and training in social welfare.

Each project contains about 300 villages with a total area of 450 to 500 square miles, a cultivated area of about 150,000 acres, and a population of about 200,000. The unit is continually subdivided until we finally arrive at a unit of five villages which are handled by one village-level worker. The present program includes 65 projects and it will reach about 15 million villagers.

The Commission has gone a long way in defining proposals for land reform, which in the Draft Outline were very ambiguous. The Commission states that the goal of its land policy is to be cooperative farming societies. They hope to achieve this goal by limiting the size of holdings; giving ownership of the land to those