

THE GENERAL
RAILROAD LAWS OF CALIFORNIA,
THE
PACIFIC RAILROAD ACT OF CONGRESS,
AND THE
BY-LAWS
OF THE
Central Pacific Railroad Company
OF CALIFORNIA,
TOGETHER WITH
CITY ORDINANCE OF SACRAMENTO AND ACT DONATING SWAMP LAND.

SACRAMENTO :
H. S. CROCKER & CO.'S PRINT, 107 J STREET.
1862.

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[LELAND STANFORD'S]

STATEMENT

MADE TO THE

PRESIDENT OF THE UNITED STATES,

AND

SECRETARY OF THE INTERIOR,

OF THE

PROGRESS OF THE WORK,

OCTOBER 10th, 1865.

SACRAMENTO:

H. S. CROCKER & CO., PRINTERS, 92 J STREET.

1865.

Office of the Central Pacific R. R. Co., }
SACRAMENTO, CAL., Oct. 10, 1865. }

To His Excellency, ANDREW JOHNSON, President of the U. S.,
and the Hon. JAMES HARLAN, Secretary of the Interior:

SIRS—By the laws of Congress, known as the Pacific Railroad Acts, this Company was selected as one of the agents of the National Government, to construct the Western portion of that important national highway, the Pacific Railroad. The great interest taken by the Government and the people in its speedy completion, and the approaching session of Congress, would seem to justify a report from us of the progress made, and the prospect of the final completion of that portion of the work entrusted to this Company.

The first Pacific Railroad Act was passed July 1, 1862. It provided for the construction of a railroad and telegraph line from the Missouri River to the Pacific Ocean, a distance of about two thousand miles, and crossing the Rocky and Sierra Nevada Mountains. By its terms, this Company was authorized to build that portion lying between the Pacific Coast and the Eastern boundary of California, and from thence eastwardly until a meeting and connection should be formed with the road in the course of construction from the East.

SURVEYS MADE IN 1861.

In the Summer of 1861, and prior to the passage of that law, this Company made several surveys and examinations of routes

for a railroad over the Sierra Nevada Mountains, under the superintendence of its Chief Engineer, the late T. D. Judah, Esq. These were the first complete and thorough instrumental surveys ever made over those mountains. They were made for the purpose of ascertaining whether a feasible route existed, a fact long considered doubtful, and which had formed the great obstacle to the passage of a Pacific Railroad Bill. The result of those surveys and examinations fully demonstrated, not only the entire practicability of the line by the South Yuba and Donner Pass, but its great superiority over all other known routes. It was, therefore, adopted by the Company, after a full and careful consideration of so important a matter.

NECESSITY OF DISPATCH.

By the 9th Section of the Act, this Company was required to file its acceptance of its provisions, and assume the obligations and responsibilities therein imposed, within six months after its passage, which was done on the 3d day of December, 1862. By the 10th Section, we were required to complete fifty miles of the line within two years after filing the acceptance. The first fifty miles from Sacramento, the point from which this Company commences its portion of the work, carries the road far up the Western slope of the Sierra Nevadas, attaining an elevation of 2,306 feet, and includes some of the heaviest and most expensive grading on the whole line. All the iron, rolling stock and railroad material had to be manufactured in the Atlantic States, requiring months of time, and then transported by sea and river thousands of miles, running the gauntlet of the rebel pirates, involving an expense of ten per cent. war risk insurance on all the material, and taking an average of ten months time from its receipt on shipboard to its delivery at Sacramento. Time was also required to make the necessary location surveys, preparatory to the commencement of the work of grading. No time was therefore to be lost. Although the original Act contained

many provisions which rendered it difficult to induce capitalists to take an interest in so hazardous and expensive an undertaking, the ultimate success of which was still deemed uncertain, yet we did not hesitate to enter upon it vigorously, trusting that Congress would remedy the defects of the law. Many of these defects have been removed by subsequent legislation.

PROSECUTION OF THE WORK.

During the Summer and Fall of 1862, several parties of engineers were kept in the field, to secure the most favorable location of the first fifty miles of the road, and prepare the line for grading. An agent was promptly sent to the Atlantic States to procure the necessary iron, rolling stock and other railroad material; contracts for which were entered into immediately upon his arrival there. Contracts were also let for grading thirty-one miles, from Sacramento to Newcastle.

The work of grading was commenced in February, 1863. The first shipment of iron reached Sacramento October 8, 1863, and the track laying was immediately commenced, and steadily continued, with a few delays caused by the non-receipt of iron and ties within the contracted time, up to June 6, 1864, when the road was completed to Newcastle, a distance of 31 miles, attaining an elevation of about 1,000 feet above tide water. Much of this portion of the line is in rolling, rocky hills, requiring deep cuttings and heavy embankments, and was very expensive. The road was put in operation as soon as completed, and the trains have been run over it daily ever since—without any stoppage.

The work of grading has been continued without cessation from the commencement, in February, 1863, up to the present time. The road was completed and put in operation from Newcastle to Clipper Gap, a distance of 12 miles, attaining an elevation of 1,785 feet, June 10, 1865, and to Colfax, a further distance

of 12 miles, September 1st, making in all 55 miles from Sacramento, and attaining an elevation of 2,448 feet. Not less than three daily trains each way, have been run constantly, over the whole completed line, except on Sundays.

The grading between Newcastle and Colfax was very difficult and expensive, increasing as the line was pushed up the mountain slope. The cuttings have been deeper, the embankments higher, and more rock work encountered, as the line has progressed eastward. One cut is 63 feet deep and 800 feet long, and several others are from 40 to 50 feet deep and from 800 to 1,200 feet in length, all of which were through rock or hard cement, requiring to be blasted. Several expensive trestle bridges have been constructed across deep ravines, some as high as 100 feet in the center. Some of the embankments are over 70 feet high. Time is required to complete such heavy work. The first fifty miles was completed prior to the 1st day of September, 1865, and several months within the time required by the Acts of Congress, as extended by the 5th Section of the amended Act, passed July 2, 1864—an extension which was found necessary on account of the difficult character of the work.

DIFFICULTIES TO BE OVERCOME.

Nearly all this time the war with the rebels was raging. The only currency used in California as a circulating medium has been gold and silver coin—the national treasury notes having been practically excluded from general circulation. The Company has, therefore, been compelled to use coin in all its business transactions in this State—including all its large expenditures for ties, grading, bridge building, track laying, etc. The lack of capital, and the high rate of interest, which has generally been two per cent. per month, in California, compelled us to resort to the Eastern States for the means to prosecute the enterprise. In those States the national currency is in universal use, but to convert that currency into coin, when the latter ranged at a

premium of 200 to 280, involved too great a sacrifice. Thus the Company found itself hampered in its financial operations, and unable to secure the amount of coin necessary to carry on the work as vigorously as they desired, without a serious sacrifice of its means. Other causes of delay occurred, but as they were merely of a local and temporary character, it is unnecessary to refer to them.

On the first day of January, 1865, the prospect of a speedy close of the war, and favorable decisions by our State Courts of several matters which had been in litigation, placed the affairs of the Company in such a position, that we felt justified in putting forth all our energies. A call was issued for 5,000 laborers, and from that day to the present, every able bodied laborer that could be procured, has been employed and kept constantly at work in the construction of the road. Labor is, however, scarce and dear in this State. For several months the number procured was comparatively small, but recently they have increased more rapidly, until now 5,000 men are employed, with over 600 teams, and the prospect is, that the number of laborers will be increased to 6,000 during this season.

CHINESE LABOR.

A large majority of the white laboring class on the Pacific Coast, find more profitable and congenial employment in mining and agricultural pursuits, than in railroad work. The greater portion of the laborers employed by us are Chinese, who constitute a large element in the population of California. Without them it would be impossible to complete the western portion of this great national enterprise, within the time required by the Acts of Congress.

As a class they are quiet, peaceable, patient, industrious and economical—ready and apt to learn all the different kinds of work required in railroad building, they soon become as efficient as white laborers. More prudent and economical, they are con-

tented with less wages. We find them organized into societies for mutual aid and assistance. These societies, that count their numbers by thousands, are conducted by shrewd, intelligent business men, who promptly advise their subordinates where employment can be found on the most favorable terms.

No system similar to slavery, serfdom or peonage prevails among these laborers. Their wages, which are always paid in coin, at the end of each month, are divided among them by their agents, who attend to their business, in proportion to the labor done by each person. These agents are generally American or Chinese merchants, who furnish them their supplies of food, the value of which they deduct from their monthly pay. We have assurances from leading Chinese merchants, that under the just and liberal policy pursued by the Company, it will be able to procure during the next year, not less than 15,000 laborers. With this large force, the Company will be able to push on the work so as not only to complete it far within the time required by the Acts of Congress, but so as to meet the public impatience.

FUTURE PROSPECTS.

With the force of laborers which we are confident can be procured, if the National Government shall promptly issue to us the bonds granted by the Acts of Congress, we shall be able to complete the railroad over the Sierra Nevadas to the Truckee river, a distance of 120 miles from Sacramento, attaining at the Summit an altitude of 7,000 feet above tide water, during the year 1866. Thence to a point 50 miles east of the Great Bend of the Truckee river, during the year 1867, and to Salt Lake in two years thereafter, where we hope to meet the road being built from the East. We feel confident of being able, after reaching the Truckee river, to construct the road eastward as rapidly as the track can be laid.

The construction of a railroad over so high a mountain range, is necessarily slow and expensive, but it is the deter-

mination of this Company to press on vigorously, and to employ all the men and means they can command, to complete the road as early as practicable. We have encountered and are now laboring upon the most difficult and expensive portion of the line entrusted to us. This, too, at the very commencement of our efforts. But another year will enable us to extend the road over the long dreaded Sierras. We have gone far enough already to convince the most incredulous, not only of the entire feasibility of the route, but that the work can and will be accomplished within the time stated.

CHARACTER OF ROAD BUILT.

The road, so far as completed, will compare favorably with any other railroad in the United States. The rails used are of the best quality of American iron, from 24 to 28 feet long, and weighing 60 pounds to the yard. The chairs are of wrought iron. The cross ties are 6 by 8 and 10 inches, and 8 feet long, of redwood, which is equal to red cedar or locust for durability, and number 2,400 to the mile. The culverts are all of granite or other hard rock, except a few of hard burnt brick in the valley, where stone could not be procured. The bridges and trestle work are made of the best quality of Puget Sound timber, with redwood sills, placed on foundations of masonry. The drainage is ample and complete. The road is well ballasted with gravel and broken rock. The alignment is remarkable for its directness in such a broken, mountainous country. The least radius of curvature is 573 feet, or ten degrees. The grades are necessarily high to surmount the summit, which is 7,000 feet above the sea level, which is attained without any undulatory grades—the rise and fall being constant—and no elevation being lost. The highest grade used is 105 feet per mile, of which there are $13\frac{1}{2}$ miles on the present completed line. We find no difficulty in operating these portions of the road, running the regular passenger trains thereon at the rate of 25

miles, and freight trains 12 miles per hour. A greater speed could be obtained, but so far it has not been found necessary.

Mr. Geo. E. Gray, late Chief Engineer of the New York Central Railroad, after a careful examination of the work, reports as follows: "That portion of the railroad completed and in operation from the city of Sacramento to Clipper Gap, 43 miles,* will compare most favorably in every respect with any railroad in the United States." The locomotives and cars in use are of the best kind, of American manufacture, and kept in perfect order. All the tunnels will be constructed wide enough for double tracks, as we are confident a double track will be needed in a few years to do the business of the road.

STATISTICS OF WORK AND MATERIAL.

The following is a statement of the amount of work done, and materials and rolling stock purchased up to this date:

Earth excavated—No. of cubic yards.....	1,465,970
Rock excavated—No. of cubic yards.....	821,984
Stone masonry—No. of cubic yards.....	21,299
Culverts, No. 215—length in feet.....	12,626
No. of brick in the work.....	389,894
Timber and lumber in structures, feet B. M.....	2,034,106
No. of ties laid.....	135,000
No. of ties contracted for.....	125,000
Tons of iron laid.....	6,000
Tons of iron purchased and not laid.....	2,000
Pounds of iron in bridges.....	162,700
No. of locomotives in use	6
No. of locomotives purchased and shipped.....	5
No. of locomotives being constructed.....	4
No. of cars in use.....	134
No. of cars shipped.....	124

A steam engine and the proper machinery for large machine, repair and car shops, has been shipped from the Eastern States

* That portion between Clipper Gap and Colfax has been completed since his report.

and is now over due. A large wharf with steam engine and derricks, with suitable freight and passenger depots, have been constructed at Sacramento. Depot buildings have also been constructed at all the towns on the road. The flooring and platforms of the freight depot at Colfax are 600 feet in length and 56 feet wide. The road is well supplied with water tanks (built of redwood), switches, side tracks and turn-tables.

There is, in addition to the completed road, a large amount of grading and other work done upon that portion of the line between Colfax and Dutch Flat and points above, a distance of 25 miles, which is now being rapidly prepared for the track. A full force is also employed constructing a tunnel 1,600 feet in length at the summit of the Sierras, as also another tunnel 900 feet long, 7 miles east of the summit, with three shifts of laborers working eight hours each, night and day. Work has also been commenced on all the tunnels between Dutch Flat and the Truckee River, 8 in number. The whole cost of the work done and materials purchased amounts to the sum of \$5,596,476 89.

GOVERNMENT COMPENSATION.

The road had been completed 43 miles to Clipper Gap, before any of the compensation granted by the Acts of Congress was received by the Company. If the bonds authorized by Congress shall be promptly issued upon the reports of the Commissioners, the work will be greatly expedited, as the Company can make the necessary financial arrangements for employing a large force, without fear of embarrassments caused by delays in the receipt of this portion of its means.

With the large force of laborers employed, and which will be greatly increased next year, with large contracts for the supply of iron, rolling stock, timber and other railroad material, and engaged as we are in the construction of the most difficult and expensive portion of the whole line between the Missouri

River and the Pacific Ocean, the Company will need all the means it can command, to push on the work as vigorously as the public necessities demand.

The rails used being of extra weight, and the high grades requiring powerful locomotives, all these have to be manufactured specially for the Company, and have to be paid for upon delivery on board ship, full ten months before they can be placed upon the road. In addition, large disbursements are required to grade the road in advance of the completed line. Thus it follows that the Company are compelled to expend generally over \$4,000,000 in advance, before receiving the Government bonds, upon the different sections of completed road. It will be seen that any great delay in receiving the means provided by Congress, will necessarily cause a serious derangement of our plans, and hinder the progress of the work.

In conclusion we would say, that it is the intention of this Company to carry out the requirements of the Acts of Congress with scrupulous fidelity, to construct a permanent first class railroad and telegraph line, one that will do credit to the nation, for whose benefit, and under whose auspices it is made, and that will perform all the services required of it in every emergency.

Having a thoroughly organized force of trained laborers, under the management of most efficient Superintendents and Foremen, a force which can be increased to any extent required, with all the tools, machinery and appliances necessary for the rapid prosecution of the work, we expect to complete the road ready for the use of the Government years in advance of the time prescribed by the law. All our energies will be devoted to this great enterprise until the iron highway shall span the American Continent.

LELAND STANFORD,

Pres't C. P. R. R. Co.