

from official reports, of the work carried on by each railway company respectively.

Paris-Lyon-Mediterranee

From August 26, 1914, the P.-L.-M. Railway Co., while having to contend with the very considerable requirements of army transport, was able gradually to resume its goods traffic. Early in 1915 its ordinary traffic had increased 20 per cent. compared to that of 1913. In 1917 the tonnage for goods had risen 32 per cent. compared to what it was in 1913. The future will permit us to give fuller particulars as to how, in the autumn of 1917, the efforts of the company exceeded even those made in 1914, and how by enabling large allied contingents to arrive speedily at a distant front, it merited the praise and gratitude of the country.

Paris-Orleans Railway

After having, during the first month of the war, run 3,500 military trains, besides facing the difficult task of re-victualling the entrenched camps around Paris, as well as the transporting of French and American troops, the Orleans Railway Co. has continually encouraged agricultural activity in the regions through which it runs, and repaired the wear caused to its rolling stock by giving large orders for this purpose. In 1917, its receipts amounted to 34 millions more than those of the preceding year, exceeding by about a 100 millions those of 1913. The gross tonnage per kilometre, for goods-traffic, rose to 16 milliards and a half tons (75 per cent. more than in 1913).

The Midi Railway

The fertile regions of the South West of France having been specially called upon to convey large quantities of food stuffs for the re-victualling of the armies and the civilian population, the Midi railway has had more than any other line, the struggle against the shortage of rolling stock. The gross receipts for 1917 have nevertheless exceeded by 18 millions those of the preceding year, and by 14 millions those of 1913.

The Etat Railway

Owing to the extent of coast line it serves, the Etat Railway constitutes the principal means of transmission for raw material as well as for conveying munitions and overseas-troops. But the chief characteristic of its work during the war has been, above all, the considerable development made in connection with transactions for fuel, for the requirements of the civilian population and this in accordance with a decree signed on December 4, 1914, conferring upon the company the rights of importation and sale. The Etat Railway is also entrusted with the financial side of the question of a relief fleet formed with the object of assuring certain transports connected with supplies for the Allies. It has, moreover, undertaken the running of a private fleet with a view to increasing the freight available for the transport of English coal. This undertaking as well as the military effort accomplished by it, to the same degree as by the other companies, deserves to be looked upon as a valuable factor in the renewal of the economic life of the country.

The Nord and Est Railways

Although the Nord and Est Railways are partly in invaded territory and, above all, used for purposes of national defence, it is a remarkable fact that, according to statistics, their commercial traffic is again regularly progressing, and is even on certain lines proportionately superior to what it was in times of peace.

The above brief statements prove that the return of France to an economic régime almost approaching that of normal times is, for the most part, due to French railway companies which have also made it a point of honor to give all the help in their power with the national defence loans, either by their respective subscriptions or the repayment of coupons to shareholders. We must also mention the grants and allowances given as indemnities for the high cost of living to the companies' officials, both male and female. These grants, which were at first made by the government, are retroactively borne by the companies, from the time the rise in transport tariffs voted by parliament comes into force.

Certainly, before the end of hostilities, so as to meet all military requirements, and after the conclusion of peace, to repair the damage done to the railways and assure their financial security in future, there will be many difficulties to contend with and overcome. But it will not be one of the least results of the war, if a solution is found to such an important question by creating between the different companies, interested in the matter, co-ordination of effort, and patriotic emulation eminently conducive to France's economic expansion, which is so closely associated with the prosperous condition of her railway systems.

DESIGNING STREETS TO ACCOMMODATE TRAFFIC*

TOO much attention cannot be given to the proper design of streets. Too often is a street laid out with no provision to accommodate an increase in traffic. As a result traffic must accommodate itself to the street, resulting in a loss of time, the aggregate of which is enormous.

A city engineer in determining the width of a new street, should be careful to allow liberally for possible future increase in traffic. In some instances the money available may not be sufficient to pave to the full desired width. This may be overcome by leaving an unpaved parkway in the centre. It is not expensive and gives an attractive appearance.

Engineers are too apt to follow the practices as set by their predecessors, rather than to strike out on new and improved lines. A curb radius of a foot and a half may have been satisfactory for horse-drawn traffic, but with automobiles having a turning radius of about 14 feet, a curb at an intersection should have a radius of not less than 10 feet, preferably much more.

Neither should we lose sight of the advantages to be gained by giving a curb the proper batter, and seeing that the intersection of the curb with the pavement is properly rounded. This point is an important one in the design of streets, for it saves much wear on the tires and rims of automobiles which come in contact with the face of the curb if it does not slant away from the pavement. The rounded gutter line provides a more sanitary pavement for the reason that dust and dirt do not accumulate and are easily removed.

The whole problem of the design of streets must be viewed from the standpoint of accommodating traffic, rather than making traffic accommodate itself to the street. Wider streets, easier turns and battered curbs are three most important points to be considered in the whole problem of street layout.

*From the Concrete Highway Magazine.