

cisely the same mechanism will in one case produce disastrous results and in another the most beneficial. The same mechanism which will produce the finest results when made to serve the underlying principles of scientific management will lead to failure if accompanied by the wrong spirit in those who are using it.

ELECTION OF OFFICERS

The following officers were elected for the ensuing year: President, W. W. Scott, general foreman, D. L. & W., Buffalo, N. Y.; first vice-president, L. A. North, superintendent of shops, Illinois Central, Chicago; second vice-president, Walter Smith, Chicago & North Western, Chicago; third vice-president, W. T. Gale, machine foreman, Chicago & North Western, Chicago; fourth vice-president, W. G. Reyer, general foreman, Nashville, Chattanooga & St. Louis, Nashville, Tenn.; secretary-treasurer, Wm. Hall, Chicago & North Western, Winona, Minn.

CLOSING EXERCISES

J. Hannahan, formerly chief of the Firemen's Brotherhood and now a representative of the Locomotive Stoker Company, addressed the association, pointing out to the members the necessity of all railroad men working together to prevent so much adverse legislation that has proved to be merely political ammunition. Every railroad man should exert what influence he can to impress his representatives in either the state or federal legislatures, that they should treat the railroads fairly. He also spoke of the vast opportunities ahead of general foremen, mentioning a number of prominent men who have worked up through this position.

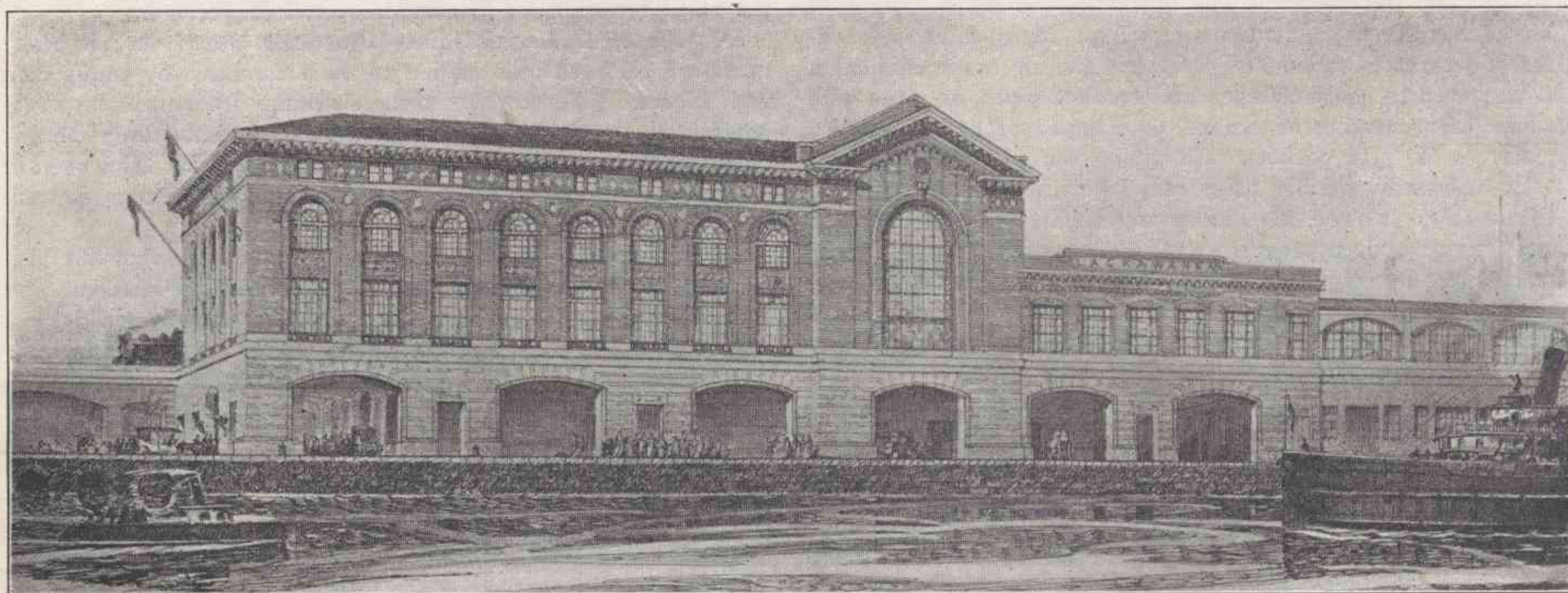
PASSENGER TERMINAL IMPROVEMENTS AT BUFFALO

The Delaware, Lackawanna & Western began construction work about the first of the year on its new passenger station and the rearrangement of its terminals in Buffalo, N. Y., in accordance with its agreement with the city's Terminal Station Commission. This commission was created by special act of the state legislature about four years ago, with power to negotiate with the railways entering the city to secure freight and passenger terminal improvements that have been desired both by the rail-

mediate relief for the passenger terminal situation was urgently needed.

There are at present four principal passenger stations at Buffalo; first: the so-called union station owned by the New York Central & Hudson River and used also by the Buffalo, Rochester & Pittsburgh; the Lake Shore & Michigan Southern; the Michigan Central; the Pennsylvania, and the West Shore; second: the Lehigh Valley station, used also by the Grand Trunk; third: the Erie station, used also by the New York, Chicago & St. Louis, and the Wabash; and fourth: the Delaware, Lackawanna & Western station. All of these stations are old and inadequate properly to handle the traffic. Also, in a number of instances the approaches cross streets at grade, endangering street traffic and causing delays in entering the station. Following extended negotiations with the Terminal Commission, the Lackawanna reached an agreement last year for the improvement of its entrance and the construction of a new station. The New York Central and the Lehigh Valley are still conducting negotiations for similar improvements and it is possible that in the rearrangement the roads now using the Erie station may become tenants of the New York Central. It has been tentatively decided to locate the New York Central station on the Terrace just west of the present union station near the location of a small station on the Niagara Falls branch of that road. It is expected that the Lehigh Valley will use its present entrance with some improvements in street crossings, but the location of its new station east and west has not yet been fixed.

The Lackawanna enters the downtown district of Buffalo from the southeast, approaching the Buffalo river near Michigan street and paralleling the river from that point to the passenger station and beyond to the coal docks. The double track line crosses Michigan street overhead and then drops down to the street level, the tracks being laid in Ohio street for the remaining distance to the station. The old passenger station is located on the west side of Main street with the lake freight house just across the tracks on the river front. The coal docks are located about one-half mile west of the station and the local freight house north of the main tracks near Columbia street. The advantages of this river front location for the freight traffic are evident, and as the passenger station is only a few blocks from



Perspective Sketch of Proposed D. L. & W. Passenger Station at Buffalo, N. Y., from the River Side

ways and the city. The membership of the commission, as fixed by the act of the legislature, consists of ten prominent citizens of Buffalo serving without pay, the commission having authority to act in this matter for the New York Public Service Commission. The constitutionality of the act was contested in the courts and was upheld by a decision rendered in March, 1913. The commission has done little toward the consideration of the problem of improving the city freight terminals, as some im-

the hotel and office district of the city and the other railway stations, its location was also satisfactory. The old building was entirely inadequate, however, having been remodeled from the structure used by the street railway company as a car barn in the days of horse car operation. It was also very desirable from the standpoint both of the railway and the city to remove the tracks from the public streets along the river front.

The traffic to be considered in designing the new passenger

station and terminal approaches consists of eight passenger trains each way per day, five of which in each direction are through trains to and from New York; a heavy movement of Pennsylvania coal, particularly in the summer, which is hauled to the coal dock for loading lake boats; and a considerable package freight traffic for transfer to and from lake steamers at the lake freight house, in addition to the local freight business handled at the separate house mentioned above. The passenger terminal is of the stub-end type, all through cars for western connections being handled at East Buffalo or other junction points east of the station. All locomotives and cars are handled at the East Buffalo terminal, about five miles from the station.

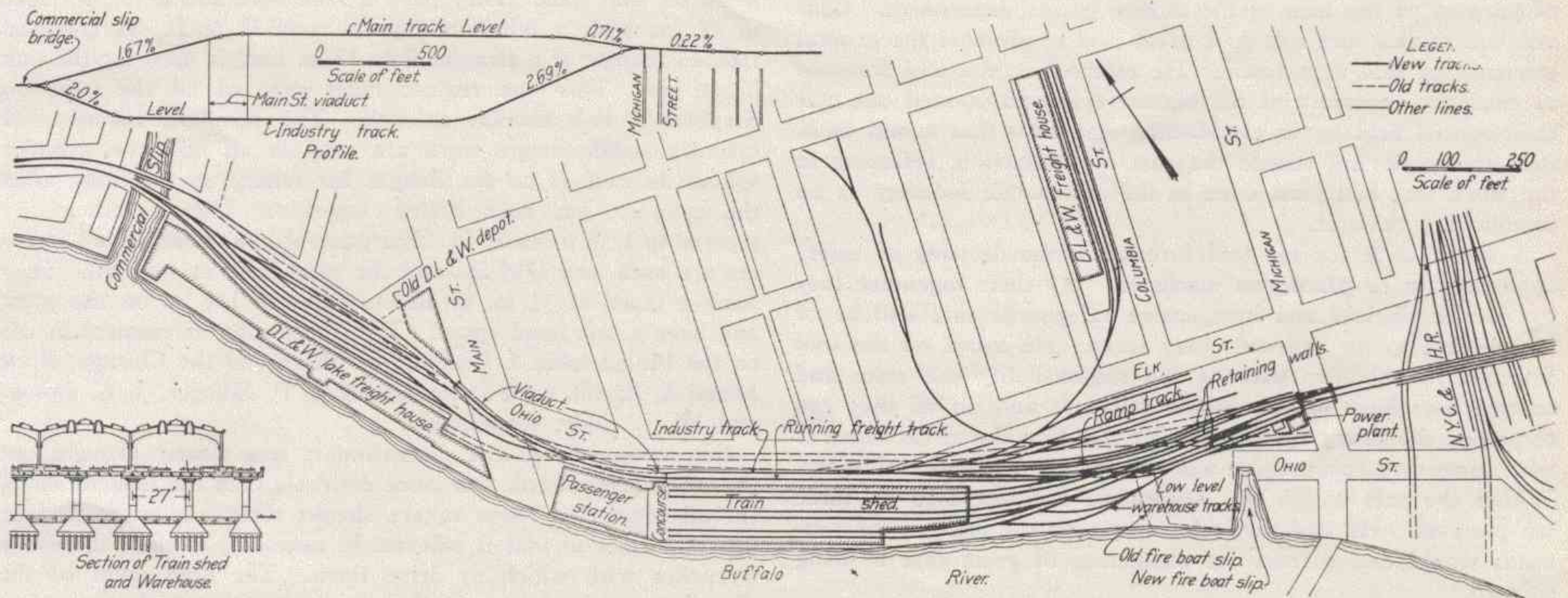
The new passenger station will be located just east of Main street adjacent to the river. By moving Ohio street about 40 ft. to the north and acquiring all property between Ohio street and the river this allows all tracks to be placed south of the street, leaving it unobstructed. The track level is raised about 22 ft. above the street and the single track lead to the coal dock is carried on this elevation across Main street on a steel viaduct encased in concrete. The only grade crossing involved in the new layout is the single track lead to the lake freight house just west of Main street. This lead is carried alongside the train shed and station building and under the Main street viaduct,

shed, will be available for future warehouse development. It will be necessary to construct a new fire boat slip in order to remove the old one which interfered with the location of the station leads.

The new station will be a steel frame structure, 110 ft. by 250 ft. in size, with a granite base course, brick facing above the waiting room floor level, and a tile roof. It will be four stories high with a mezzanine floor between the dock level and the train shed floor. The upper portion of the building will be devoted to offices. The new dock will have a concrete dock wall supported on timber piles, all of the timber construction being kept below the water line. About 10,700 piles are being driven under the station and train shed. About 30 ft. of quicksand has been encountered; under part of the work and under this condition the piles are jetted. Elsewhere they are driven. The piles are being driven to rock which is about 40 ft. below street grade.

An electro-pneumatic interlocking tower, controlling the entrance to the station, will be located on top of the power plant which will furnish heat to the new station. This is located just west of Michigan street, this somewhat remote location being chosen in order to leave the more valuable space along the river front free for development.

This improvement work is being carried out under the direc-



Track Plan Showing the Lackawanna Improvements along the River Front in Buffalo, N. Y.

connecting with the small yard adjacent to the freight house. The lead to the local freight house just west of Columbia street is unchanged, connecting with the low level tracks just north of the train shed. The two main tracks will remain unchanged across Michigan street, but just west of that point they will swing to the south diverging to six station tracks, two of which are about 475 ft. long and four 675 ft. long.

Advantage has been taken of the location of the station on the river front in a number of ways. Arrangements have been made to dock the passenger boats of the Detroit & Cleveland and the Cleveland & Buffalo boat lines alongside the station building and passengers of these steamers will use all of the station facilities in common with the railway company's patrons. A Bush type train shed will be used and the station tracks and platforms, as well as the shed, will be supported on a continuous deck structure of reinforced concrete, over the tops of the supporting columns, which will be spaced 27 ft. center to center in both directions. This type of construction will make available all of the space under the train shed for warehouse purposes. This storage space will be accessible to boats docking alongside and it can also be served by three spur tracks connecting by a switch-back, shown in the accompanying plan, under the station approach tracks to the low level track along the north side of the station. The new development will involve the construction of about 1,800 ft. of dock, a portion of which, just east of the train

tion of G. J. Ray, chief engineer, Delaware, Lackawanna & Western; A. E. Deal, bridge engineer; G. E. Boyd, division engineer, and O. H. Kellogg, assistant engineer. Kenneth M. Murchison, New York, is the architect for the station building. The contract for all foundation and dock work was let to the Buffalo Dredging Company, Buffalo, N. Y., and that for the station to the Hedden Construction Company, New York City.

SUMMARY OF RAILWAY PROGRESS IN CHILI.—The government of Chili now has under construction 208 miles of railroad estimated to cost about \$8,634,000, of which it is expected to complete 63 miles by the close of 1914 at a cost of \$1,848,000. On completion of these lines, the Chilean government will own and control 2,270 miles, of which 150 miles is double track. The private railroads of the country cover 1,860 miles with 878 miles under consideration. The 1,860 miles are valued at \$93,066,583, and the receipts for 1913 were \$14,460,425, with expenses at \$11,521,156, showing a net gain of \$6,051,378; while the state railways showed a loss of \$2,732,596. As has been noted before, the Chilean government is at present outlining a scheme of equipping the government railways with rolling stock sufficient in quantity to handle the growing business of the country, three-fourths of the total number of cars and locomotives required will have to be purchased abroad, and it is said that American material will have the preference at the same price.