

Lackawanna Rebuilds Binghamton Freight Facilities

Provides large modern house, transfer platform and adequate teaming accommodations



The Lackawanna's New Freight House at Binghamton, N. Y.

THE Delaware, Lackawanna & Western has recently completed entirely new less-than-carload freight handling facilities at Binghamton, N. Y., which are designed not only to serve present industries effectively, but also to stimulate increased industrial activity at this point. These facilities consist principally of a modern, one and two-story brick and concrete freight house, about 500 ft. long by 50 ft. wide, a covered transfer platform, 870 ft. long by 18 ft. wide, an automobile dock, 240 ft. by 40 ft., six house and transfer tracks with capacity for 114 cars, and four groups of team tracks with a total capacity of 100 cars. The entire layout is provided with wide concrete driveways with easy access from the city streets, and one of the team track units is served by an overhead traveling crane of 25 tons capacity for handling heavy shipments.

Binghamton an Important Point

Binghamton has a population of about 80,000, and is the largest of what are known as the Triple Cities, the other two being Johnson City and Endicott. These cities closely adjoin each other and have a total population of about 125,000. It is located on the main line of the Lackawanna, midway between Buffalo and New York, and in the midst of about 260 active industries.

Binghamton is also an important terminal point on the Lackawanna. From here the Syracuse division extends through Syracuse to Oswego, N. Y., 115 miles, and the Utica division to Utica, 95 miles. About 400 cars are handled in interchange with the Delaware & Hudson daily. A large l. c. l. tonnage is also transferred at this point, to and from New England and for the Syracuse and Utica divisions.

Old Facilities Were Outgrown

The old freight house of the Lackawanna at Binghamton was for many years the freight terminal of the Syracuse, Binghamton and New York railroad, now the Syracuse division of the Lackawanna. This house, which was located in a congested area just east of the passenger station, was a one and two story frame structure, 380 ft. long by 30 ft. wide, supplemented by a 240-ft. covered platform at one end. For 26 years this

old house served Binghamton without any material change in its size or arrangement, the last important change having been made in 1900 when the second story was added to provide space for a general freight office.

Adjacent to the old house were team tracks having a capacity of 48 cars, served by brick driveways of sufficient width to accommodate horse-drawn drays only. Heavy freight at the house was handled with a hand-operated crane located on a flat car and automobiles were handled over a small automobile dock with a capacity for four cars. To relieve the congestion at the old freight house some years ago, a freight transfer platform, a warehouse and office, and several tracks were constructed in a different location but the situation was both unsatisfactory and uneconomical.

Because of this condition, the Lackawanna undertook about two years ago to rebuild its Binghamton freight facilities completely, in a new location which would afford adequate space for the larger facilities planned. The site selected was a triangular plot of ground, directly south of its tracks and its old freight house, within the block bounded by Fayette street on the west, Henry street on the south and Liberty street on the east. This area, which includes about eight



Looking Through the Interior of One Section of the House

acres, together with the site of the old freight terminal, has been developed for the new freight facilities. While the new site was particularly well situated for the new layout, it had the one disadvantage that the ground along Henry street, about midway between Fayette and Liberty streets, was about 12 ft. lower than the main line tracks. This difficulty was overcome, however, by laying out the facilities at different levels, and by constructing the leads to the various service tracks on suitable grades from the main line.

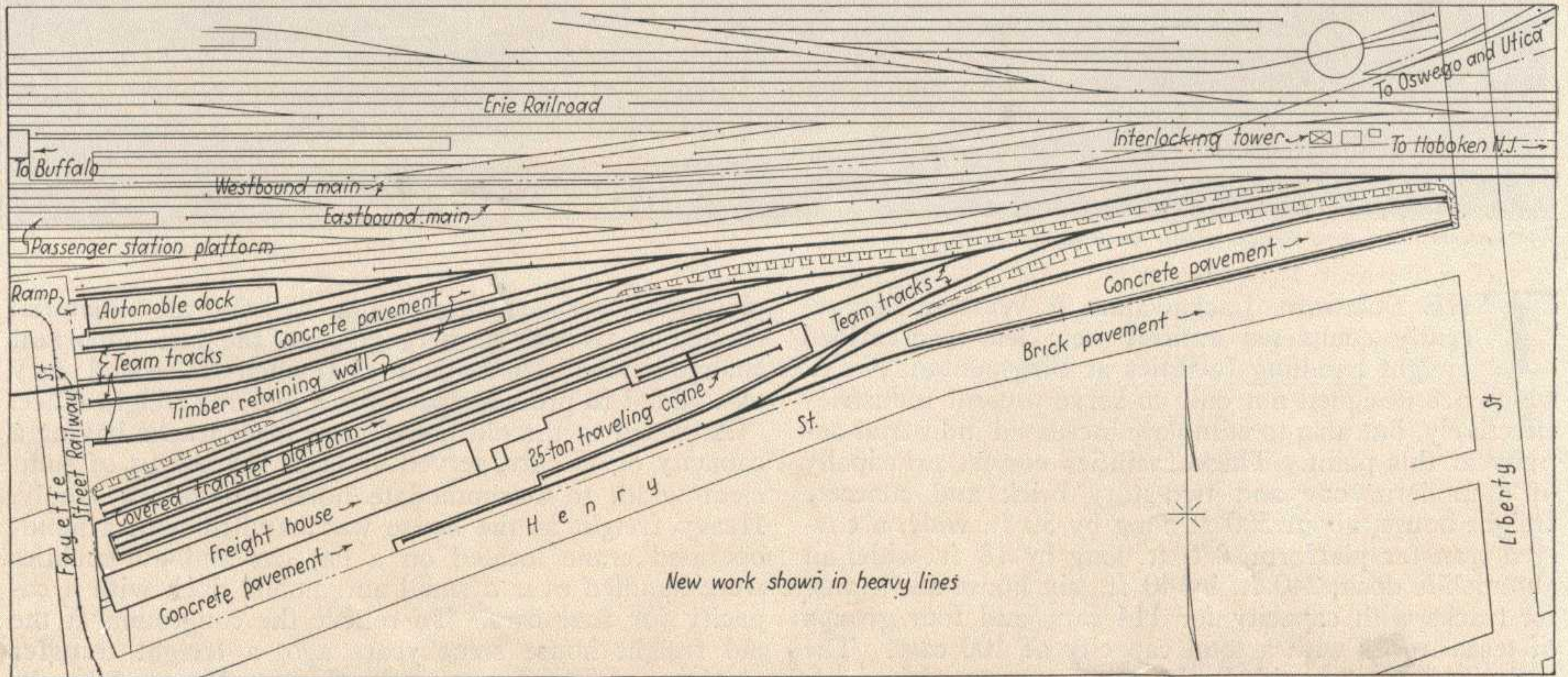
The New Freight House

The new freight house, which is 501 ft. 4 in. long by 50 ft. wide, with a second floor 101 ft. 4 in. long at the front end, faces on Fayette street, and is parallel with and at the level of Henry street, 56 ft. back from

ft. high, are of wood construction, with glazed upper panels to assist in daylighting the freight room when the doors are closed. All of the teaming doorways at the house are protected against damage by heavy reinforced concrete, steel-clad fenders, built directly into the foundations, as well as by 10-in. by 12-in. steel-protected bumping timbers.

The main daylighting of the room is secured through two rows of continuous steel sash, which extend along the sides of the freight room, directly above the doors. These sash are the top-hung type with suitable hand-operated opening mechanisms along the side walls to afford ventilation.

In order to facilitate trucking to and from cars, a concrete platform, 10 ft. wide, was provided along the entire track side of the building and extended around on



Layout of the Lackawanna's New Local Freight Facilities at Binghamton

that street's property line. The walls and pilasters of the one story portion of the freight house are constructed entirely of local common brick, while the walls of the two-story section are constructed of reinforced concrete with a common brick exterior facing. The entire building is supported on a concrete foundation.

The roof of the single-story section is constructed of heavy planks, protected by built-up waterproof asbestos felt, and is carried on pine purlins and steel trusses which extend across the building from wall to wall. The roof over the two-story portion of the house is of flat reinforced concrete construction, supported on structural steel members. Likewise, the second floor of the building is of reinforced concrete, this being supported by encased steel beams carried on columns similar to those supporting the roof structure. The roof covering over the two-story section, like that over the main freight shed, is a built-up waterproof asbestos felt.

Teaming Doorways Unusually Well Protected

The entire ground floor is utilized for freight handling purposes, with the exception of an area across the front end, 16 ft. wide, which is used for offices, an entrance lobby and general freight house utilities. So planned, both the north side of the house, which faces the house tracks, and the south side, which is used for teaming and trucking, are fitted throughout with large freight doors of the horizontal turnover, counterbalanced type. These doors, which are 10 ft. wide by 10

ft. high, are of wood construction, with glazed upper panels to assist in daylighting the freight room when the doors are closed. All of the teaming doorways at the house are protected against damage by heavy reinforced concrete, steel-clad fenders, built directly into the foundations, as well as by 10-in. by 12-in. steel-protected bumping timbers. The main daylighting of the room is secured through two rows of continuous steel sash, which extend along the sides of the freight room, directly above the doors. These sash are the top-hung type with suitable hand-operated opening mechanisms along the side walls to afford ventilation. In order to facilitate trucking to and from cars, a concrete platform, 10 ft. wide, was provided along the entire track side of the building and extended around on

Asphalt Mastic Affords Protection for Maple Flooring at Doorways

The main trucking floor of the freight house, which is 474 ft. long and the full width of the building, has an area of 21,752 sq. ft. This area is divided into four nearly equal sections by brick fire walls, the openings in which are protected with large, automatic, metal fire doors. The floor of the freight room, which is at car floor height, is constructed entirely of wood, with a 13/16-in. factory grade maple trucking surface, which rests upon a two-inch creosoted North Carolina pine sub-flooring laid diagonally across the width of the building. The sub-flooring in turn is laid on 3-in. by

4-in. creosoted North Carolina pine sleepers, 18 in. center to center, which rest directly upon a bed of tamped cinders. The areas directly in front of the team doors are paved with asphalt mastic, laid flush with the top of the finished floor. This pavement, which extends across the full width of the door openings and well into the room, protects the maple flooring against the weather, and at the same time absorbs the wear which is usually most severe at these points.

With the exception of the second floor supporting columns at the front end of the house, the only obstructions to the freight house floor area are the three fire walls, five four-ton scales with their platforms flush with the floor, a service room for perishable and valuable consignments, two tally or clerk's booths, a small toilet room and a lunch and locker room for the freight handlers.

The office portion of the first floor consists of an entrance from Fayette street, a cashier's office and a lobby from which stairs lead to the second floor and also to a small basement area directly beneath. The lobby serves the cashier's office, which is 16 ft. by 20 ft., and is separated from it by means of a wood and glass partition and the necessary counters for the convenience of patrons.

Second Floor Provides Adequate Office Space

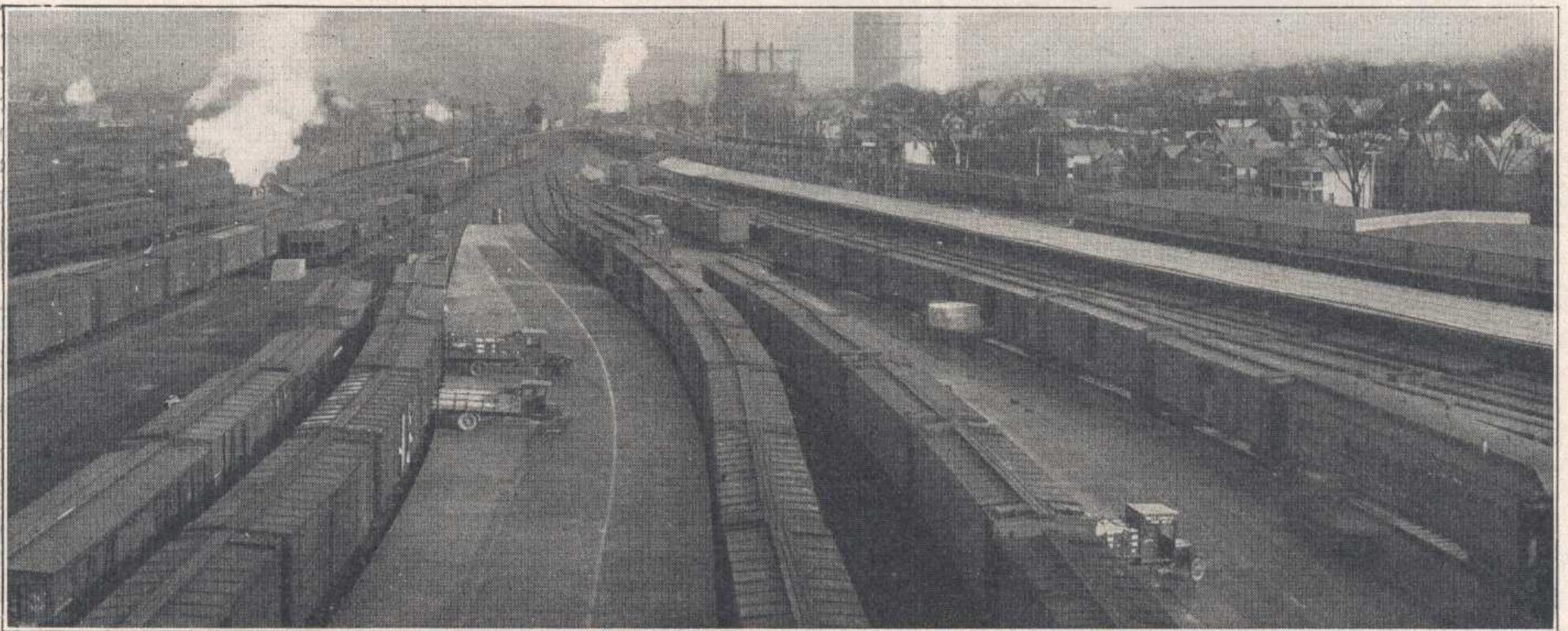
The second floor area of the new freight house is used exclusively for freight offices, with the exception

toilets have cement finished floors. All partitions throughout the second floor are of either terra cotta block or two-inch solid plaster, except the sub-partitions between the bridge and building department offices, which are of wood and glass construction. The ceilings and side walls on this floor are plastered throughout, the ceilings being hung from the roof structure above.

The office portion of the building on both floors, including the stairs, halls, toilets and service room, is heated by a direct steam heating plant located in the basement under the first floor offices. This basement, which is 16 ft. wide, extends across the full width of the building, and has an average height of 9 ft. The main freight room of the house is not supplied with heat except the clerk's booths which are heated by electricity.

All of the offices throughout the second floor are ventilated by means of metal ducts concealed in the partitions and side walls. These ducts are carried into the attic space above the second floor, where they discharge through three metal ventilators on the main roof.

The entire building, including the platforms, is adequately lighted by electricity. In addition to overhead lights, special outlets are provided under the platform on the track side of the building for extension lines into cars. The long platform beyond the east end of the house is illuminated by three flood lights located on the end of the building. Fire protection is provided in the



The New Freight Yard Showing a Part of the Team Tracks, Driveways, Transfer Platform and Freight House

of a small section at the rear end which is divided into offices for the bridge and building department. This latter space is approximately 19 ft. long across the width of the building, and is served by stairs from the loading platform.

The offices for freight purposes consist of a private office, 16 ft. by 14 ft., a chief clerk's space, 13 ft. by 16 ft., a general office area, 48 ft. by 35 ft., and a file or record storage room, 27 ft. by 48 ft. Other facilities on this floor include a men's lavatory and locker room, a women's lavatory and a separate toilet room in the rear for the use of the bridge and building department.

The second floor construction is of reinforced concrete with steel encased floor beams. The finished floor in all offices is of maple, laid directly upon sleepers which are wired to the concrete floor construction. The stairs leading to the second floor and also the halls and

form of hydrants in each division of the house on the main floor and through stand-pipes which are carried up to the second floor level.

Long, Covered Platform Facilitates Handling Transfer Freight

The track layout serving the freight house lies parallel with the house, along the north side, and consists of six tracks with a total capacity of 114 cars. These tracks are laid out in two groups of three tracks each on 12 ft. 6 in. track centers, the groups being separated by a long covered transfer platform. This platform, which is 870 ft. long by 18 ft. wide, also extends around the west end of one group of the house tracks to a connection with the trucking platform serving the house.

The flooring of the transfer platform is of two-inch planks, laid lengthwise the platform. Each side of the platform is fitted with two six-inch channels, laid 23

in. center to center, and flush with the top of the platform, to form a trucking surface. The shed over the platform consists of round, cast iron columns, spaced 16 ft. center to center, which support steel roof trusses and 1½-in. roof sheathing on which a commercial roll roofing is placed. All of the shed columns were cast in the road's own foundry and all of the shed trusses were fabricated in the company's bridge shop.

On account of the necessity of constructing the transfer platform on a newly made fill, before adequate time had been allowed for settlement, the substructure was formed of three parallel rows of creosoted pine piling, the center row supporting the shed columns, while the



The 25-Ton Crane Which Serves One of the Team Tracks

two outside rows carry the weight of the platform. Above the piling, with the exception of the trucking surface, the platform is constructed entirely of creosoted timber.

Wide Concrete Driveways Serve Team Tracks

The team tracks in the new freight layout are separated into four groups which have a total capacity of 100 cars, and are each served by wide concrete driveways. One of these groups with a wide driveway lies adjacent to Henry street. Another group, consisting of two short tracks, is at the east end of the freight house driveway, where one of the tracks is served by an overhead electric traveling crane. This crane, which has a capacity of 25 tons, travels a distance of 180 ft. on a structural steel runway, spanning the track and 20 ft. of the driveway area. The other two groups of tracks, which have two tracks each, are located on a higher level, just north of the freight house and transfer tracks. Each pair of these tracks is served by a driveway from Fayette street.

Pavement

The driveways in the layout have an average width of 40 ft. and are constructed of reinforced concrete, eight inches thick, placed on six inches of cinders, which were wetted down and then compacted with a 12-ton steam roller. The concrete pavement was constructed in blocks 12 ft. by 30 ft., with premolded expansion points. In finishing the joints the upper two inches of each joint was cut out after the pavement was laid, and

a hot bituminous filler was poured in the opening to seal the joint against seepage and frost.

Automobile Platform

The new automobile platform at the freight station is of timber construction, 240 ft. long by 40 ft. wide. This facility occupies the site of the old freight house at the junction of Fayette and Lewis streets and is served by a six-car track on each side. The platform has a ramp leading down to the street level at one end, which also extends to one side, across the end of one of the platform tracks, for unloading end door cars.

New Facilities Effect Economies

With the completion of the new freight house in June, 1927, the old freight house was torn down and the remainder of the new facilities were completed. Since the entire layout has been in service, many advantages have been apparent. Whereas the transfer business was formerly handled separately, it is now possible to consolidate the transfer business with the city business, thus eliminating the loading of duplicate cars. Congestion at the freight house has been entirely relieved and economy is being effected in switching operations.

The new improvements, in connection with the freight facilities, have also made it possible to lengthen the main line station platform 180 ft. and increase the length of the station coach tracks an average of 175 ft.

All of these new facilities at Binghamton were planned and constructed under the direction of George J. Ray, chief engineer. The new freight house was designed in the office of D. F. Mack, architect. The actual work in the field was carried out under the general supervision of L. L. Tallyn, division engineer, at Scranton, Pa., to whom we are indebted for the information contained in this article.

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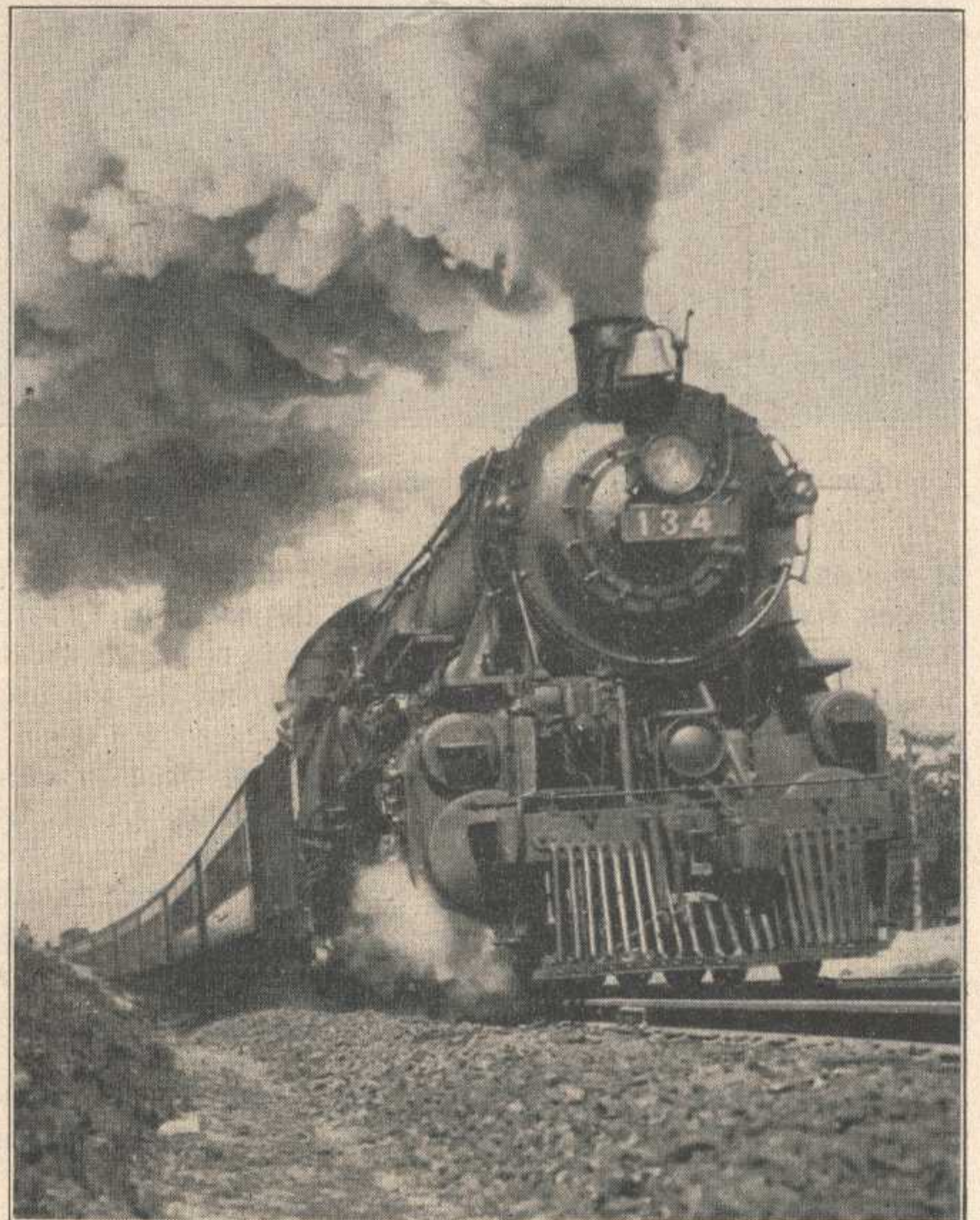


Photo by H. Armstrong Roberts.