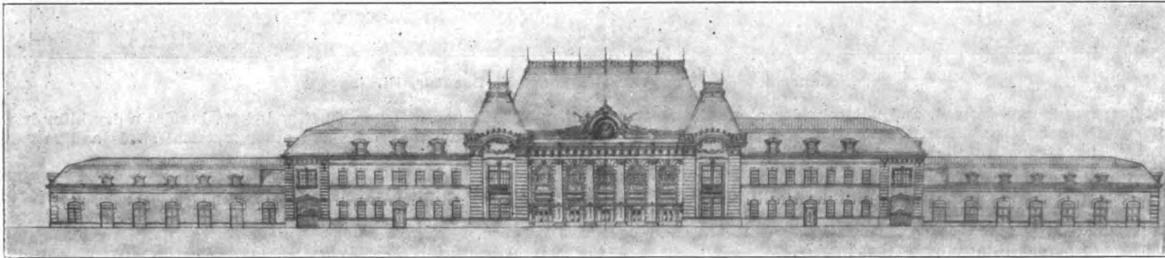

New Passenger Station at Salt Lake City for the Harriman Lines.

Plans have recently been completed for a large union passenger station at Salt Lake City, which will be used jointly by the Union Pacific, the Oregon Short Line and the San Pedro, Los Angeles & Salt Lake. This will complete the extensive terminal improvements which these roads have been making in Salt Lake City. A new freight yard has been built in North Salt Lake, and a large modern freight house has also been completed. Work on a steel viaduct carrying North Temple street over the approach tracks, and the lowering of the railroad grade for a distance of half a mile north of the new passenger station, is under way.

The new station will face east on South Temple street at the intersection of West Third street. It will be a through station, and the building will be parallel with the tracks. The accompanying illustration from the architect's drawing shows the appearance of the front of the building, which will be 700 ft. long, considerably larger than the proposed station in Salt Lake City for the Gould



East Front of Proposed New Station of the Harriman Lines in Salt Lake City.

Lines, the Rio Grande Western and the Western Pacific, which is to be 575 ft. long.

The building will be of brick with sandstone facing and terra cotta cornices and other ornamentation. The central portion, 300 ft. long, will be three stories high, the two top floors being used for railroad offices. The main entrances, five in number, lead from a vestibule into a central grand hall; to the left will be the telegraph office, and beyond in the space under the south tower will be located the men's smoking room; opposite, on the right hand side will be an information bureau with the ladies' waiting room beyond in the other hall. The main concourse, reached through the grand hall, will be 30 ft. wide and 312 ft. long, running parallel to the building between it and the tracks. The train shed will be about 300 ft. long and 240 ft. wide. The extensions of the train platforms at each end beyond the train shed will be protected by umbrella shads. Baggage elevators will be built in each train platform, and these will be connected under the tracks by a subway leading into the basement, where other elevators will raise the baggage trucks to the level of the baggage room floor. An overhead viaduct will be built out across the tracks from the second floor of the main building, with stairways leading down to each train platform, so that passengers may reach any track without crossing other tracks on the surface.

The two-story part of the building at the south end will have rooms for the news company, employees' toilet room, conductors' room, Pullman supply storeroom and baggage room, which is next to the main building. The south end of the main building between the baggage room and the main hall will be occupied by an immigrants' cafe and waiting room and barber shop. On the opposite side of the grand hall will be the news and parcel stand and ladies' rest rooms. In the two-story section north of the main building will be the yardmaster's office, emergency hospital and a cafe, dining room, kitchen, mail room, and quarters for the Pacific Express Company and the Wells Fargo Express Company.

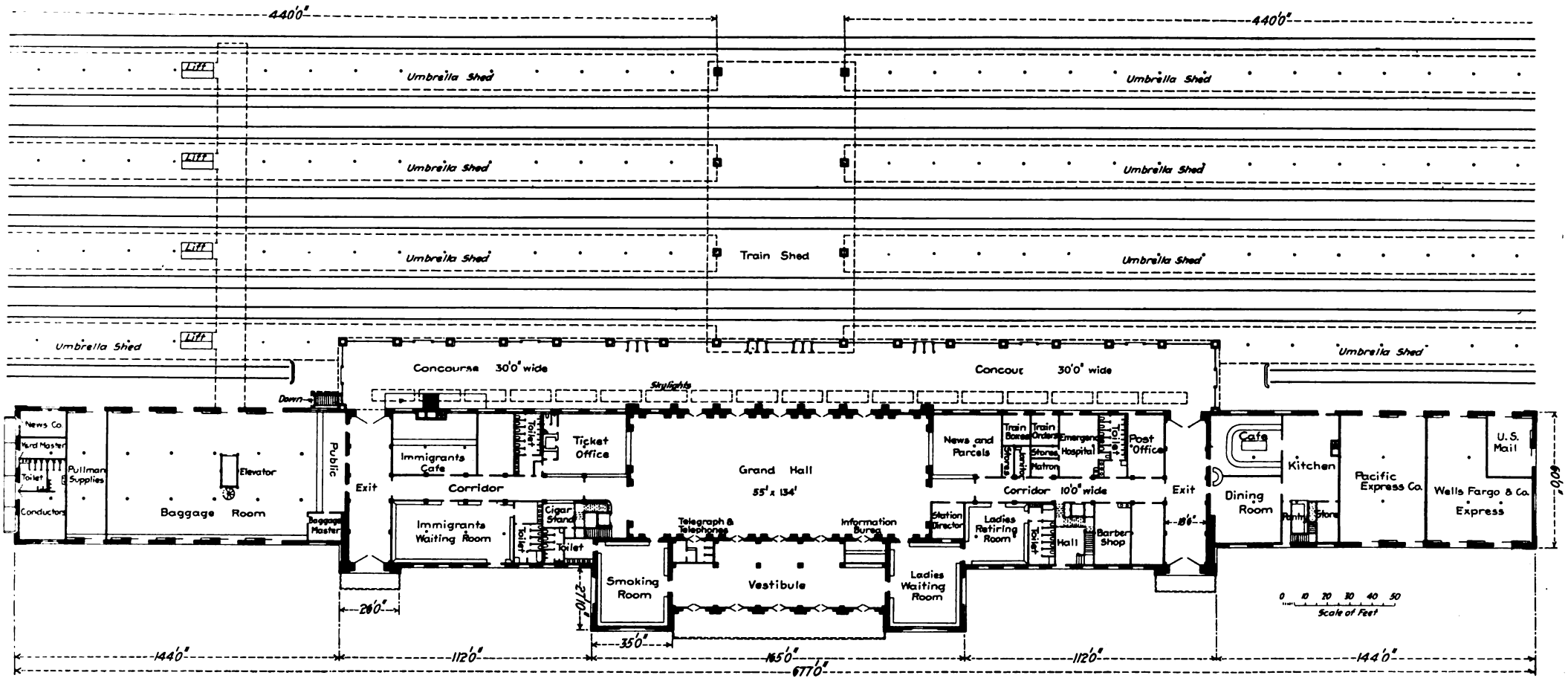
The general design of the building is in the French renaissance school of architecture. The interior decoration of the grand hall in the center of the main building, which will be 130 ft. long and 35 ft. wide, will be elaborately worked out with massive marble columns and marble finish. The mosaic floors will be of elaborate design, among other features being a colossal mosaic under the central skylight, representing some important epoch of the early history of the state. The building will cost approximately \$400,000.

**New Station, Yard and Terminal Facilities of the Harriman Lines
at Salt Lake City.**

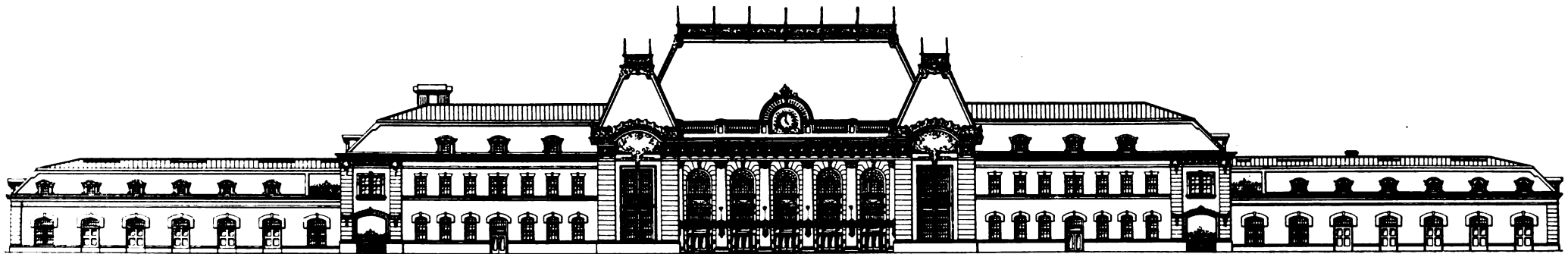
A view and brief description of the proposed new union station to be built at Salt Lake City, Utah, by the Oregon Short Line for the joint use of the Harriman lines centering there were given in our issue of January 25. Through the courtesy of J. D. Isaacs, Consulting Engineer of Bridges, Buildings and Signals for these lines, we are now enabled to present a more complete description, with plans and elevations from the architect's drawings.

In planning the station, careful study was given to securing the most desirable arrangement for the handling and comfort of its patrons. The location is ideal. It is in the center of South Temple street at the axis of West Third, affording a fine view of the building from East Temple street through rows of boxelder trees which line each side of South Temple street. The building is 677 ft. long over all by 70 ft. wide, with a height for the central portion of 100 ft. to the top of roof cresting. The entrances, five in number, leading to a spacious vestibule, are in the center of the main facade and are protected by a wide marquee supported by ornamental iron brackets and heavy chains.

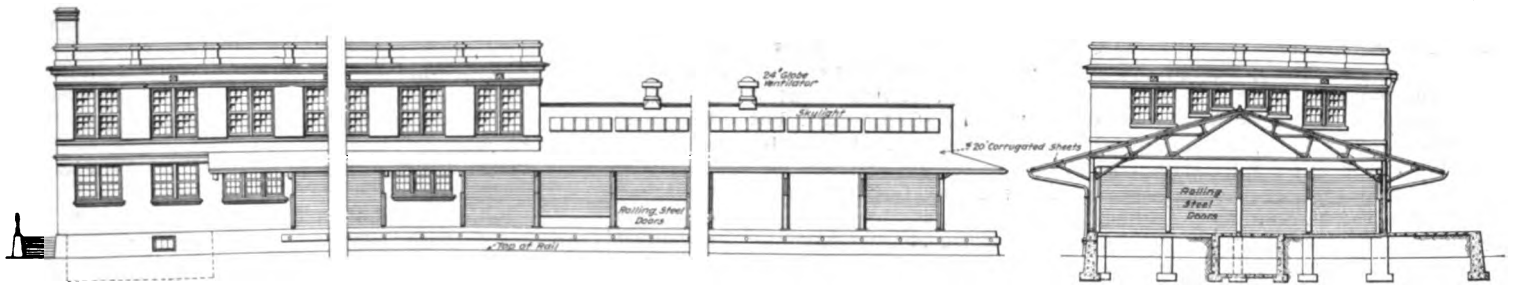
The vestibule opens into the general waiting room or grand



General Plan of Proposed Salt Lake City Union Station for the Harriman Lines.



Proposed Union Passenger Station for the Harriman Lines at Salt Lake City, Utah.



New Freight House at Salt Lake City; Harriman Lines.

hall, 55 ft. wide by 135 ft. long, with a vaulted ceiling two stories high from the spring of the arch, the ceiling being 60 ft. above the main floor. At the left or south of the general waiting room, separated from it only by a counter and screen, are the railroad and Pullman ticket offices and the telegraph and telephone offices; the news and parcel stands and the information bureau are at the north or opposite end of this room.

The two bays or towers flanking the central portion are occupied by the women's waiting room on the right and the men's smoking room on the left. In connection with the women's waiting room are a large retiring room, toilets, etc., and the remainder of this two-story wing contains the emergency hospital, station director's and matron's rooms and a branch postoffice. In the westerly two-story wing are the cigar stand, emigrants' waiting room, cafe, toilets, etc. Passengers coming from the trains do not enter the main waiting room, but pass through wide exits at each end of the two-story wings, going directly to the street or cab stands.

The baggage room occupies the extreme western wing. It has a basement floor below and a low mezzanine story above the ground floor for the storage of baggage not immediately called for. It is reached by a central corridor leading directly from the general waiting room. A telpherage system of transferring baggage will be installed throughout these three floors, with a large elevator

lattice columns, architecturally designed, and of a height to allow the free passage of trains. This shed will protect passengers in bad weather. Between each series of tracks, and extending each way from the central train shed 400 ft., will be umbrella sheds 16 ft. wide and 10 ft. 6 in. high. The heating plant and other machinery will be located in a room in the basement.

In selecting a method of treatment the renaissance of the French school was adopted, and great care has been exercised to carry out the detail in true proportions as to ornamentation and application of same, so as not to make the building too ornate or overburdened with enrichment. Color effect of the materials for both the exterior and interior has entered largely into the design to produce a harmonious composition. The base or plinth above the ground line will be faced with finely tooled granite, while the walls above will be of brick with the outer face of pressed brick of a warm tone of buff, and the panels between windows of the central portion on the street elevation of Sienna marble. All belt courses, the water table and the entire cornice entablature will be of terra cotta of a color to match the brick work.

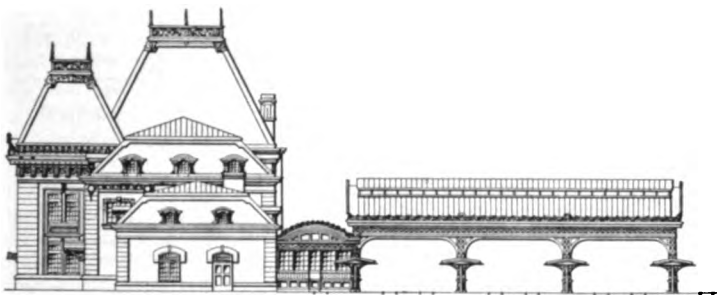
The entrance doors will be bronze, finished a dark copper color, and the marquees over the main entrance and side exits, as well as the ornamental roof cresting, will be of cast iron, plated to match the color of the doors. The entire roof will be covered with a dark green slate, laid in design, while all hips and decks of the roof will be of copper.

At the north end of the two-story wing will be an overhead iron bridge. This starts at the curb line of West Third street, gaining by easy steps a height sufficient to pass over all trains, and terminates at West Fourth street. This is to be a public thoroughfare. In the center of the main facade, above the cornice, will be a clock with the face large enough to be seen for several blocks.

The interior walls of the general waiting room are divided into panels, with pilasters placed so as to receive the ribs for the vaulted ceiling above. At the line of the second floor a cornice of ornate design will run around the entire room. The ceilings and walls at all openings will be deeply paneled with enriched plaster moulding. A large ceiling light will fill the center panel of the ceiling for about two-thirds of the length of the room, terminating with rounded ends made of art glass. Above the cornice line, at each end of the room, will be artistically designed clocks set in positions to be seen easily from any part of the room. The base and wainscot of the general waiting room and connecting corridors will be of marble and scagliola, selected for color and tone, and in harmony with the color scheme throughout the general waiting room and corridor. This color scheme will also be used in all of the second story corridors and the observation corridor. On the second floor, the observation corridor in front of the building will have arched openings, and on the opposite side there will be windows filled with art glass, appropriately designed. All of the interior wood finish throughout the building will be in quarter-sawn oak, finished in keeping with the color scheme.

The building is to be fire-proof throughout—the exterior walls of brick and the interior columns, floor girders and the floors of reinforced concrete. All of the trusses supporting the roof will be of steel, and the entire concourse and train shed will be of steel, having the roof covered with asbestos roofing. The building is to cost about \$450,000, and will be built from plans made in the office of J. H. Wallace, Assistant Chief Engineer of the Southern Pacific, under the direction of D. J. Patterson, Architect for that company.

Besides the new union station, the yards and terminal facilities

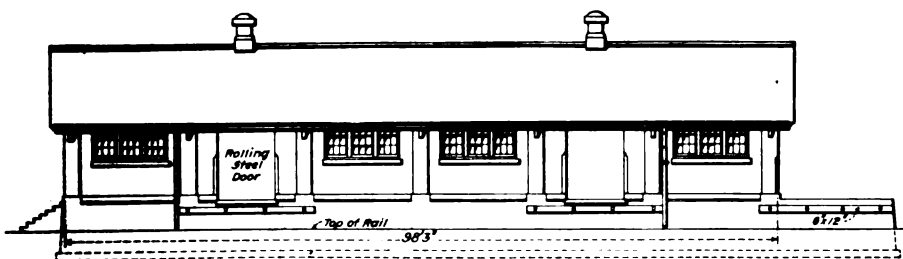


End Elevation; Salt Lake City Station.

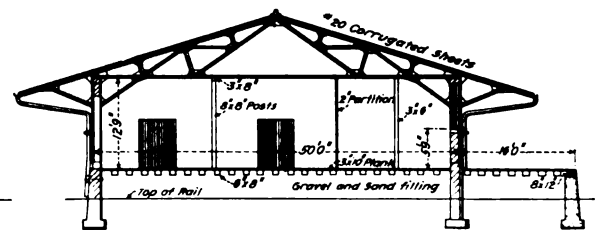
running from the mezzanine to the basement floor. A passage or subway on the level of the basement floor runs transversely under all the tracks, having hydraulic lifts between each series of tracks, so that baggage can be loaded on a truck and taken directly to the car by way of the subway and lift without cutting any of the trains. In the extreme eastern wing will be a large cafe and dining room, express rooms, quarters for the Pullman Company, and rooms for trainmen, conductors, etc., with all necessary toilets and lavatories.

The second floor is reached by two stairways and elevators, one at the western end of the general waiting room, the other from a street entrance at the opposite end. On this floor are the offices of the several roads which will use the station. These offices are arranged on each side of a wide corridor. On the three sides of the general waiting room is an observation corridor for the use of the public and patrons, giving a view of the entire floor of the general waiting room.

At the rear or track side of the building is a one-story concourse, 50 ft. wide by 390 ft. long, with steel roof. This concourse is open on the track side above a height of 6 ft., but is arranged to be closed with sash during the winter season. Spanning the tracks transversely is an open train shed 40 ft. wide, with open



New Hide House at Salt Lake City; Harriman Lines.



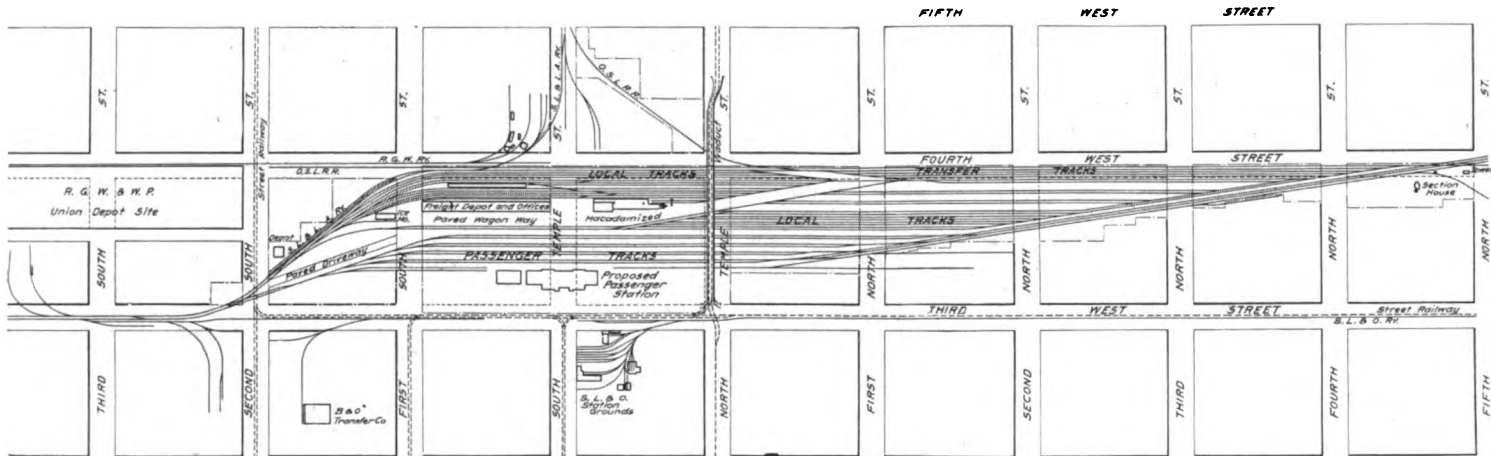
of the Harriman lines at Salt Lake City, are being rearranged and extended. This work is now nearly finished. More trackage and larger terminals were needed because of the great increase in freight and passenger traffic, due to the rapid growth of Salt Lake City and the development of the resources of the surrounding country, and also in part because of the building of the San Pedro, Los Angeles & Salt Lake, which uses the yards and terminal facilities of the Oregon Short Line at Salt Lake City.

As shown on the accompanying plan, the new terminal yards are composed of two parts, called the north yard and the south yard. In the north yard are the switching, repair, roundhouse, coaling and coach cleaning tracks, while the south yard contains the passenger station tracks, transfer and local freight tracks. All incoming freight trains are sent directly to the north yard, where distribution is made as required by car lading. All outbound trains are made up in this yard. Incoming passenger trains approach the passenger station from both north and south directly over main line tracks.

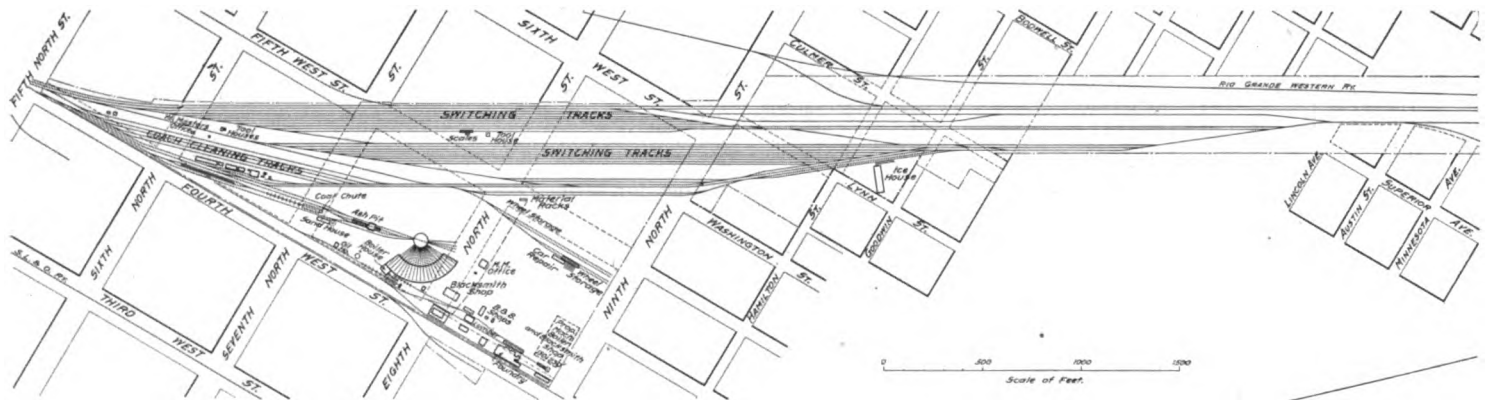
The combined yards when complete will contain in all 46.8 miles of track with room for 4,100 freight cars and 455 passenger coaches. The extreme length of the two yards is 2.98 miles and the area covered 134.27 acres, most of which was acquired for this purpose. The average gradient through the yards is about 0.3

story. A basement 26 ft. x 50 ft. under the south end holds a hot water boiler and coal bins. The whole building is of fireproof construction, the floors are of reinforced concrete and the roof also of reinforced concrete with surface of tar and gravel roofing. The first floor, which is on the platform level, contains the cashier's office, hallway, warm room, refrigerator room and general freight room. The cashier's office is in the south end of the freight house, directly on First South street. A vault 5 ft. 11 in. by 6 ft. 4 in. is connected with the cashier's office. The warm room, 37 ft. by 40 ft., is arranged for heating and is used for storing such freight as would be damaged by frost or cold. The refrigerator room, 10 ft. by 24 ft., is used for general freight and is connected directly with the freight shed. Rolling steel doors are installed on both sides of the building. The second floor is occupied by the local freight offices, consisting of the agent's private office, 14 ft. by 25 ft.; general clerks' office, 98 ft. by 50 ft., and record room, 32 ft. by 50 ft., complete with steel shelving and steel tables for handling the records.

The freight shed proper is built entirely of steel. Rolling steel doors, 12 ft. by 10 ft., extend the full length of the shed on both sides, enabling any part or the whole shed to be thrown open. The building is lighted throughout by electricity, the wires being enclosed in iron conduits. In the freight shed arc lights about 40 ft.



South End of New Salt Lake City Yard.



North End of New Yard at Salt Lake City; Harriman Lines.

Note change of angle in drawing.

per cent. The passenger tracks are laid with 80-lb. and the freight tracks with 70-lb. rails, with No. 7 and No. 9 frogs. All tracks connecting the north and south yards at Fifth North street are protected by an interlocking plant. The crossing of the Oregon Short Line and the main line of the Rio Grande Western on Ninth South and Fifth West streets is also protected by an interlocking plant. All switches except the ones controlled by these interlocking plants are operated by hand. The entire yards are ballasted with gravel and drain to the city's drainage system.

The new terminal facilities in the north yard include an 85-ft., 20-stall brick engine house; a 600-ton coal chute with six pockets and cable hoist; a new foundry; car repair shops; store house; coach cleaning plant; Pullman linen house, and a new ice house of 3,000 tons capacity equipped with an electric elevator of the most improved type. In the south yards a freight house, hide house, ice house, transfer platform and heavy freight platform have been built.

As indicated by the accompanying plans, the freight house is of brick, concrete and steel construction. It is 660 ft. long by 50 ft. wide, with a platform 16 ft. wide running the full length of the building on the west, or track, side. The south 157 feet of the building is two stories high, the upper story occupied by the local freight offices. The remaining 503 feet, the freight shed proper, is one

apart are used. The entire freight house, except the freight shed, is heated by hot water. The building was completed February 1, its total cost being \$110,000.

The hide house is 50 ft. wide by 98 ft. long, and is of the same construction as the freight shed. It is used for handling green hides, beer kegs, junk, etc. It is divided in 12 compartments, each of which can be closed independently of the others. The total cost, including a 16-ft. platform on the west side, was \$8,000.

North of the hide house and connected with it is the heavy transfer platform, 160 ft. long by 54 ft. wide at the south end and 30 ft. at the north end. A concrete retaining wall surrounds the entire platform. Three platform scales are provided, and at the north end there is a pillar crane of 10 tons capacity. The other transfer platform is west of the freight house and is 18 ft. wide by 400 ft. long. A corrugated iron roof covers the entire shed. The total cost of the two platforms was \$7,600.

On North Temple street a solid reinforced concrete conduit was built by the railroad company across the whole width of its yards to carry the overflow from City Creek canyon. This conduit is 600 ft. long, with a sectional area of 3 ft. 9 in. by 10 ft. and a controlling gradient of about 1 per cent., while at its approach to the tracks the gradient is 6 per cent.

The North Temple street viaduct, as shown on the plan, spans

all of the Oregon Short Line tracks on North Temple street between Third West and Fourth West streets. It is a substantial steel structure of through plate girder construction supported by steel bents on concrete foundations. The length of the steel work is 916 ft. The east approach is 117 ft. long and the west approach 168 ft. long, making a total length of 1,201 ft. The minimum clearance over the tracks is 22 ft. The gradient on the east approach is 6 per cent., on the west approach 7 per cent., and on the viaduct 0.9 per cent. The floor is of wood and affords a clear roadway 24 ft. wide. On the south side a 6-ft. sidewalk is provided, which is reached by stairways at suitable points. The approaches to the viaduct are paved with stone blocks and are supported between concrete retaining walls ending in concrete abutments.

The total cost of these improvements, not including the new passenger station, will be about \$1,000,000. We are indebted to W. H. Bancroft, General Manager of the Oregon Short Line, for the information. The plans for the freight and passenger yard were made in the office of William Ashton, Chief Engineer, under his personal supervision; likewise the plans for the freight house, which were prepared directly under J. P. Hill, Engineer of Buildings. The construction work was in charge of L. L. Dagrón, Assistant Engineer.
