

TH&B
1932
HAMILTON
STATION

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The new building, a reproduction of an architect's drawing of which is given herewith, will have structural steel frame and Queenston stone curtain walls, backed with hollow tile, and steel stairs.

metal brackets will be provided in the ramp. The stairs connecting the concourse and the passenger traffic platform will leave the concourse at the southwest; the stairs will be 6¹/₄ ft. wide, and of concrete construction, with safety treads. The ramp will be 140 ft. 7 in. long, of concrete construction, with finished surface.

In connection with the grade separation work preceding the building of the new station, a complete description of which was given in Canadian Railway and Marine World for April, pg. 169, a new street running east and west, was built south of the railway tracks, as

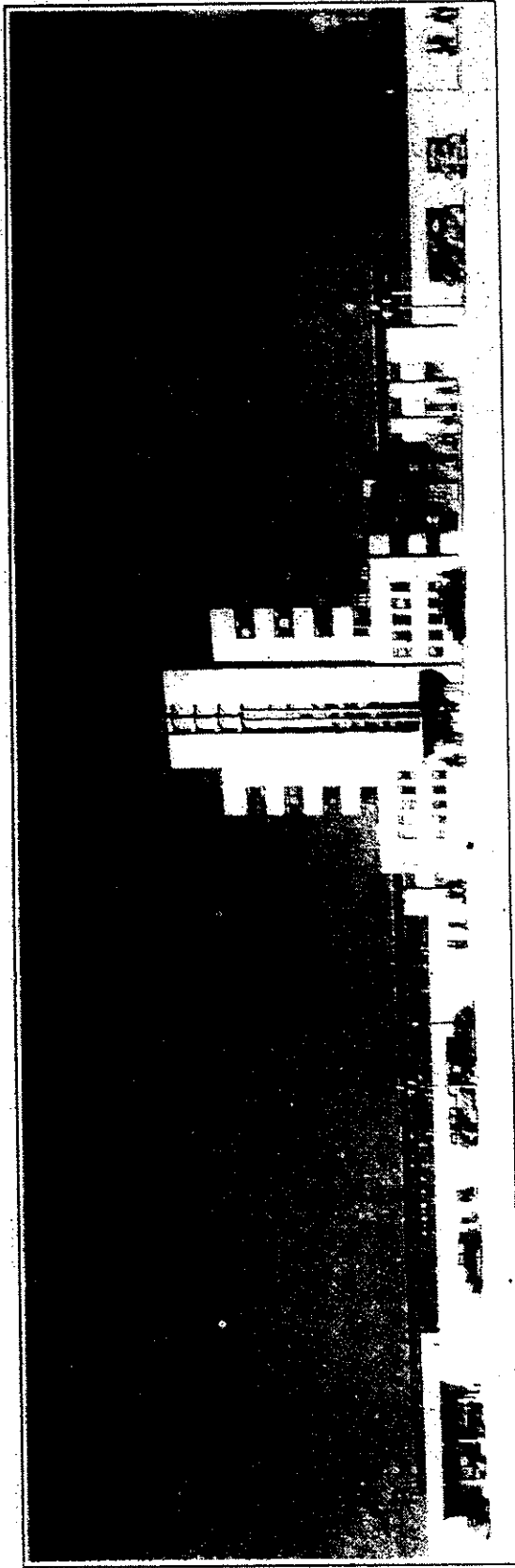
available for rental, for store or other purposes, to the east of the main vestibule; the cab office and bootblacks' stand north and south respectively of the east entrance vestibule; men's room and women's room at the east side of the concourse, with lavatory facilities to the east; a baggage and parcel checkroom at the southeast corner, between the passenger ramp outlet and the station master's office; a soda and lunch counter at the south side of the concourse; a telephone room at the southwest corner, adjoining the stairway leading to the passenger platform, and a large space available for rental between that stairway

and sash. It will be distinctly utilitarian in design, including chaste lines and dispensing with ornamentation. The main entrance will be at the north, with other entrance vestibules at both the east and west sides. The building will be 186 x 55 ft. over all, and will consist of a central portion with east and west wings. The main portion will have a north frontage of 110½ ft. The main vestibule, at the north side, will open

shown on the accompanying general plan. The baggage room, which is built already, has a frontage on the new street, and will be connected to the station concourse by a north and south passageway. Flanking this passageway will be the station master's office and offices for the Canadian and U.S.A. customs men, on one side, and space for purchasing department supplies and stores on the other. The baggage room

and the west entrance vestibule. The floors in the men's and women's room will be of Terrazzo; those in the lavatories will be of tile. The floors in the rental space, ticket office and other offices will be of cement.

The building will be served by a passenger elevator, with its shaft to the east of the main, or north, entrance vestibule, and a flight of stairs extending to the top of the building will be provided leading up from a landing to



passenger Station to be built at Hamilton, Ont., for Toronto, Hamilton and Buffalo Railway.

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Passenger Station to be Built at Hamilton for Toronto, Hamilton and Buffalo Railway.

The agreement between the Toronto, Hamilton and Buffalo Ry. Co. and the city of Hamilton, appended to the act respecting that city, Ontario Statutes of 1932, chap. 72, as schedule B, provides that the grade separation and other works agreed upon shall include, among other things, the construction of a station and the demolition of the present one. Construction of the new station is under way. Its site is shown in the accompanying general plan. The centre of the building will be at about the present Hunter and Hughson Sts. Intersection, between John and James Sts., and the building will be east and south of the present station, which occupies the site in the path of the driveway which will pass to the north of the new building.

The new building, a reproduction of architect's drawing of which is given herewith, will have structural steel frame and Queenston stone curtain walls, backed with hollow tile, and steel stairs

tion will be 322.13 ft.; that of the passenger platform will be 336.18 ft., a difference of approximately 14 ft. Communication between the concourse and the passenger track platform will be by ramp and stairs. The ramp will leave the concourse at the southeast; the ramp passage will be 6 $\frac{1}{4}$ ft. wide and the grade will be 10%. Wood handrail with metal brackets will be provided in the ramp. The stairs connecting the concourse and the passenger traffic platform will leave the concourse at the southwest; the stairs will be 6 $\frac{1}{4}$ ft. wide, and of concrete construction, with safety treads. The ramp will be 140 ft. 7 in. long, of concrete construction, with finished surface.

In connection with the grade separation work preceding the building of the new station, a complete description of which was given in Canadian Railway and Marine World for April, pg. 169, a new street, running east and west, was built south of the railway tracks, as

passenger car track, north express track and south express track. All tracks on the station area are through ones, making the station distinctly of the through, and not of the stub-end, type.

The arrangement of the facilities about the main concourse will include ticket office, to the west of the main, or north, vestibule entrance; a large space available for rental, for store or other purposes, to the east of the main vestibule; the cab office and bootblacks' stand north and south respectively of the east entrance vestibule; men's room and women's room at the east side of the concourse, with lavatory facilities to the east; a baggage and parcel checkroom at the southeast corner, between the passenger ramp outlet and the station master's office; a soda and lunch counter at the south side of the concourse; a telephone room at the southwest corner, adjoining the stairway leading to the passenger platform, and a large space available for rental between that stairway

Grade Separation and New Station at Hamilton for Toronto, Hamilton and Buffalo Railway.

(Continued from page 169)

started at Catharine St., and as the railway had previously acquired the land necessary in connection with the grade separation work, the abutments were located on railway property, and it was

streets concerned was undertaken, Catharine St. having been the first to be dug out. The footings and piers for sidewalk and center columns were then provided. As the work of building the abutments, excavating for the subways and

work was that cut and fill about balanced, the material excavated for construction of the subways to carry the street under the tracks being just about equal to that required to build the fill upon which to carry the elevated tracks. This



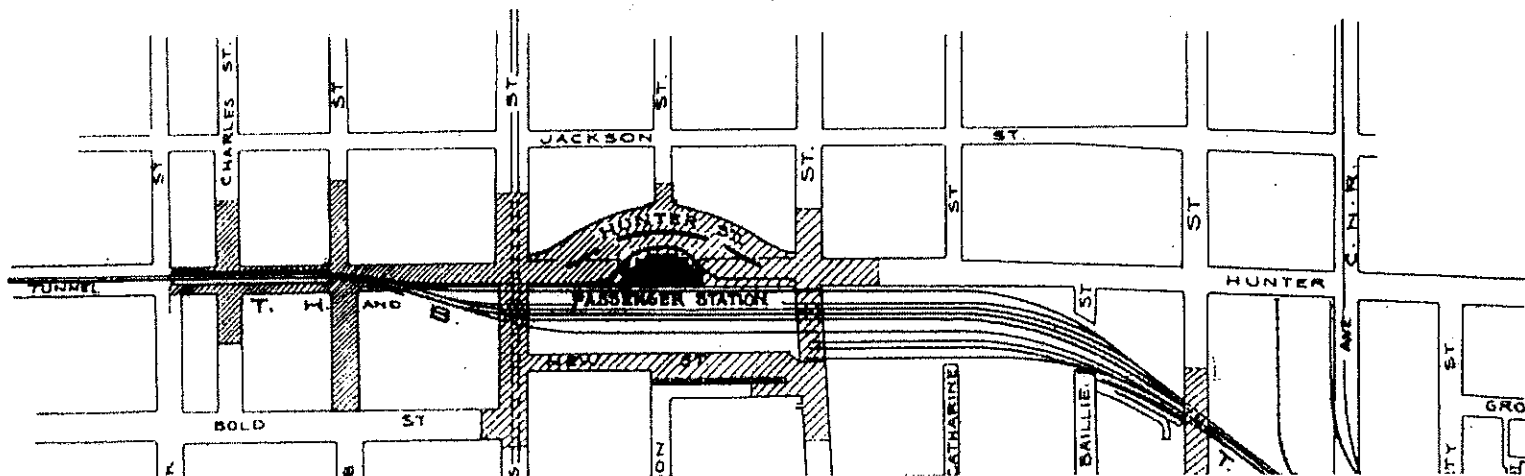
James Street, Hamilton, looking north, Jan. 12, 1932, showing the subway, carrying the street under the elevated tracks, completed.

thus possible to keep all intersecting streets open for vehicular and pedestrian traffic until that part of the work was completed. In order to permit building of subways at Walnut St., Ferguson Ave., Young St. and Victoria Ave., it was necessary to provide a main line detour

putting in the piers and footings progressed, it was possible to also build most of the retaining wall needed for confining the fill. As the new tracks have been built some distance south of the original ones, in the station area, considerable work was possible without dis-

obviated the expense of train haul or fill. The excavated material was handled to the fills by truck.

Following completion of the abutments, piers, etc., erection of the subway superstructures was undertaken. All these have been built to meet the re-



the north side, and on a viaduct at the south side, and the southerly area between Hughson St. projected and John St., below the tracks, will be occupied by Canadian Pacific Express Co., American Railway Express Agency, baggage room, customs rooms, parcel checking room; mail handling facilities, etc., the layout being such that those sub-track facilities will fit in with the plans for the new station.

Materials used in connection with the grade separation included approximately 3,700 tons of structural steel, 40,000 cu. yd. of concrete, and about 160,000 cu. yd. of excavation and fill. The layout is such that it has been possible to provide a new street parallel to the tracks and south of them connecting James and John Sts.; this new street will be of convenience to the general public and patrons of the railway, postal and express activities in affording access to the sub-track area.

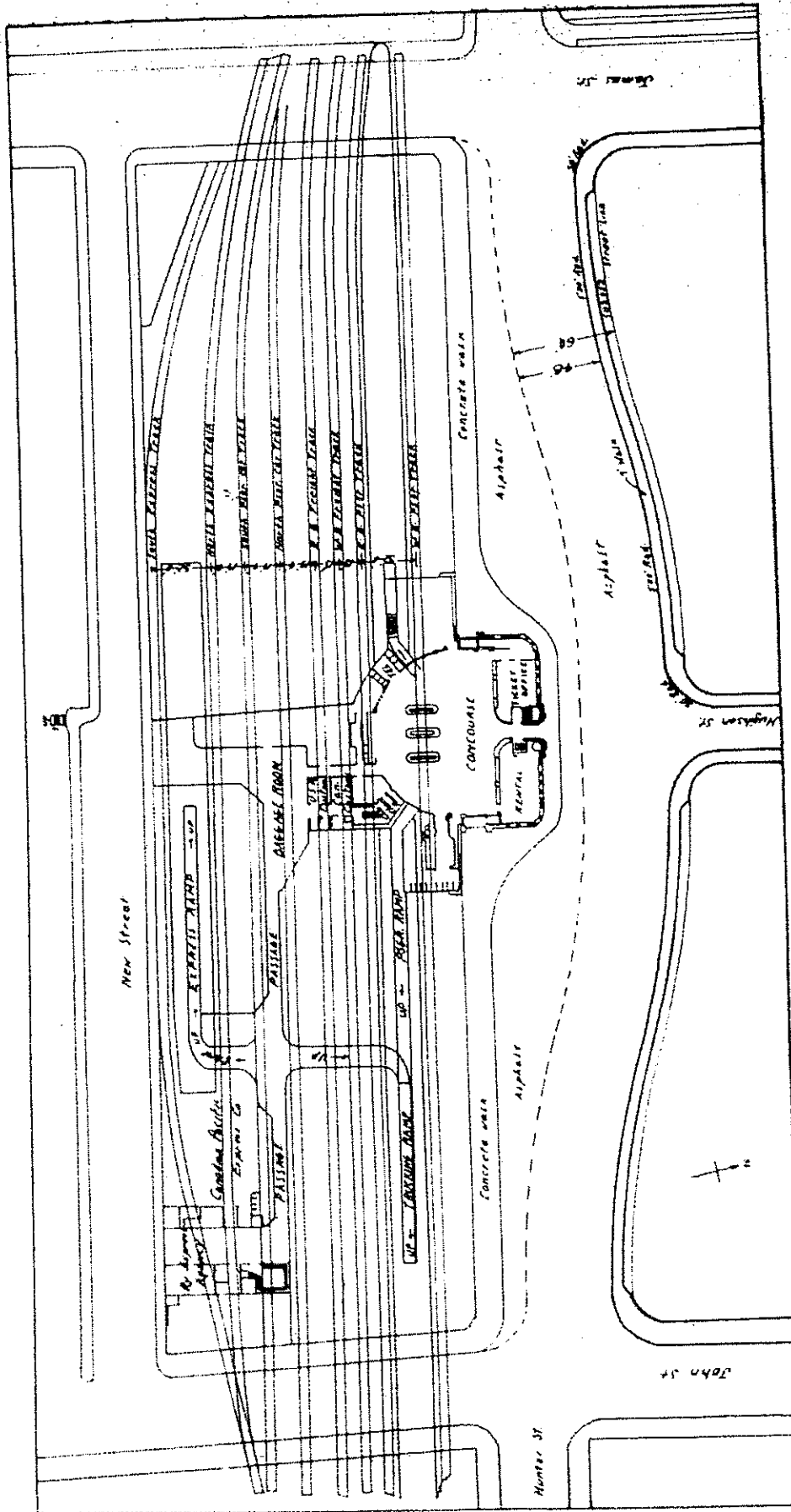
The agreement with the city providing for the work was entered into, Oct. 20, 1930. The Board of Railway Commissioners passed order 45,813, Nov. 14, 1930, approving plans and authorizing and directing the T.H. and B.R. to proceed with the work. Subsequently the Board passed order 46,930, approving further plans, and order 47,011, exempting the Bell Telephone Co. from the terms of order 46,930. The agreement between the railway and the city provides for a joint application to the Board for authority to carry out the work. The T.H. and B.R. management has had the project in mind for many years, and considerable of the land required was bought well in advance of the beginning of construction. The grade separation work has been of great help in meeting unemployment conditions. None of the orders issued by the Board have dealt with allocation of costs. It is expected that a hearing will take place shortly, to apportion the costs.

A feature of the grade separation work as completed to date is the celerity

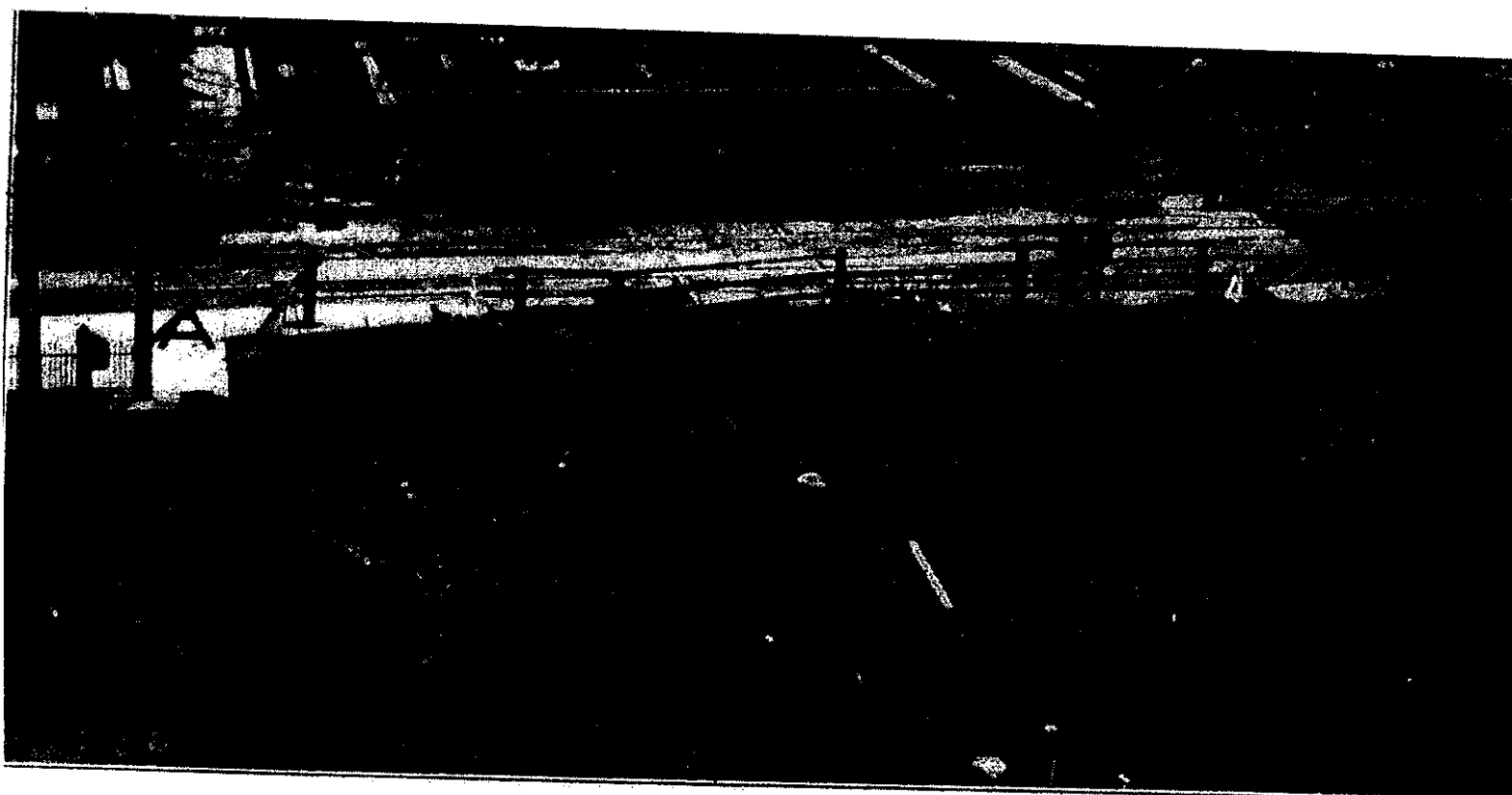
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The whole improvement project is being carried out under the general supervision of H. T. Malcolmson, Vice President and General Manager, R. L. Latham, Chief Engineer, T.H. and B.R., be-



General Layout of Passenger Station Area at Hamilton, Toronto, Hamilton and Buffalo Railway.



James Street, Hamilton, looking south, Nov. 9, 1931.

This view shows the abutments completed at the south side of the street, the southerly half of the excavation completed, the south portion of the subway's steel superstructure erected and an elevated track laid on it, the two original low level tracks, and the initial stakes of excavation for the north approach to the subway.

Canadian Railway and Marine World for Oct., 1930, pg. 631, with an illustration showing the passenger terminal as it was then proposed to be when the work will be completed, and a plan showing the layout of the T.H. and B. R. tracks through the city and the location of proposed subways. The grade separation was started soon after the announcement referred to, a contract for it having been awarded Dominion Construction Corporation, Toronto. The progress of the grade separation work has been dealt with from time to time in these columns, the most recent reference to it having been in our February issue, pg. 62, and complete progress report having been given in our January issue, pg. 14. At the time of writing, the first stage of the

two of the main business streets, crossing them at grade. The grade separation plan, as agreed upon between the railway management and the city, called for considerable elevation of the railway grade between Park St. and Emerald St., and for the construction of subways to carry Victoria Ave., Young St., Walnut St., Catharine St., John St. and James St., under the tracks, and for construction of pedestrian subways under the tracks at Ferguson Ave. and MacNab St.; for the provision, on each side of the tracks, as they come out of the tunnel portal in the line of Hunter St., for a driveway and sidewalk between Park St. and MacNab St.; for restoration of Hunter St. for street traffic between Park and Catharine Streets,

up grade through the tunnel being continued to James St. and thence on a lesser up grade to Catharine St., the grade rearrangement being shown in the accompanying profile.

Prior to beginning actual track elevation and subway construction, much work was necessary to change local facilities, such as sewers, waterworks, etc. The work of changing sewer mains was begun in March, 1931, and took about two months. The largest work in that connection was in the James St. area, where about 1,000 ft. of sewer between Bold and Main Sts. was rebuilt in much larger section than previously. The next step was the construction of abutments for the subway superstructures; this was

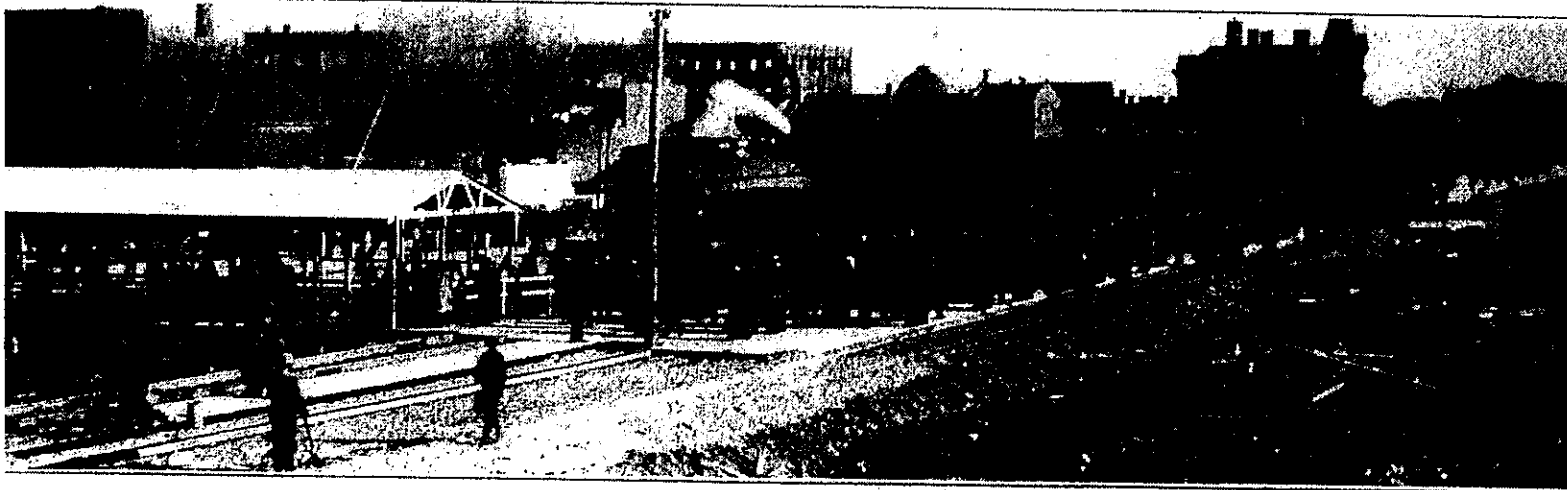
(Continued on page 180)

ditional Rys. track had to be diverted and built up on its own grade into close proximity to the T.H. and B.R. tracks, a structure carrying one C.N.R. track as well as the T.H. and B.R. ones. The pinning of the work on James St. was tied so as to have that subway com-

the new station and accompanying facilities.

After commencement of operation on the high level tracks, a start was made immediately upon removal of the original tracks, and upon preparations for completion of the second stage of the

subway was not dealt with in the stage, but is now complete, work upon having commenced Jan. 11. The order of completion of the other structures was as follows: Catharine St., John Ferguson Ave., Victoria Ave., W. St., Young and James Sts. Consider-



Arrival of first passenger train to operate into Hamilton on the high level track, Dec. 3, 1931.

portion of the present station is shown at the extreme left. Two flights of stairs lead from the present station platform level to the temporary shelter shown in left foreground. This shelter, and the temporary platforms upon which passengers are standing, will be removed when the new station and facilities are provided.

ended at the same date as the Young one, the desire being to have James closed for the shortest possible time. When the Young and James Sts. structures were completed, and tracks laid out, continuous tracks on the high level had been provided throughout the grade separation area. The connection of the James St. subway was made on Oct. 17, 1931; operation on the high level tracks was begun Dec. 3, 1931, and James St. was open for all traffic on Dec. 23, 1931.

To handle passenger traffic with the

work, which will consist of completion of the north approaches and of the bridging at all streets passing under the tracks. It was not possible to complete these approaches, and to extend the subway superstructures to their full length northerly, in the first stage of the work, on account of the presence of the original tracks, which had to be maintained to permit continuous operation. But now that the original tracks have been removed, the second stage work can proceed without obstruction, and at the time of writing the street work incident-

work remains to be done, at the time of writing, in connection with the second stage of operations, west of James St., viz., construction of retaining wall between James St. and the tunnel portal, extension of the tunnel portal, accommodation of the intersection between Hunter and Park Sts., and construction of the roadways, mentioned above, north and south of the tracks between Park and MacNab Sts.

An interesting feature of the work which has been done is the provision made for accommodation of baggage

Arrival of first passenger train to operate into Hamilton on the high level track, Dec. 3, 1931.

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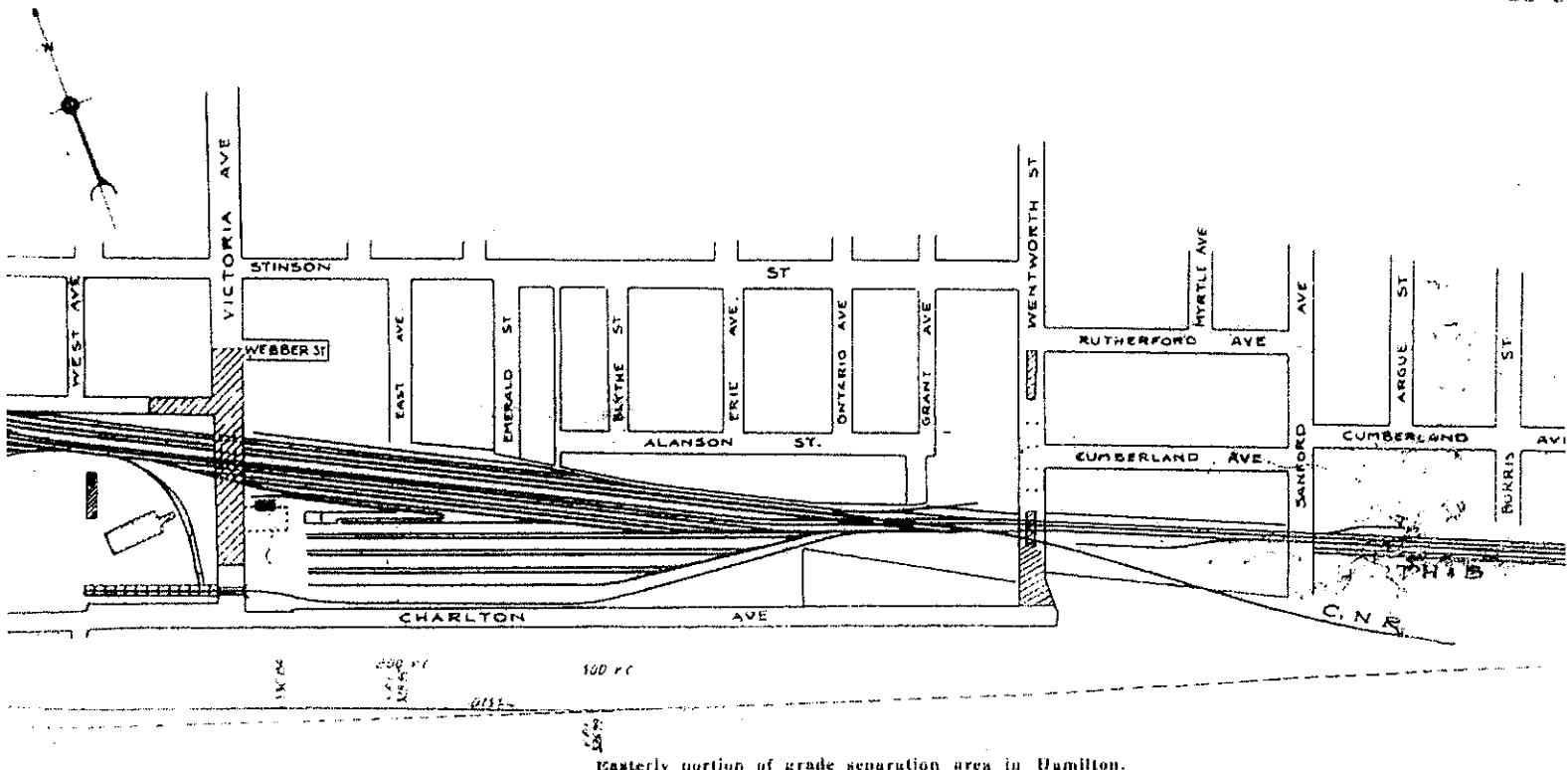
pleted at the same date as the Young St. one, the desire being to have James St. closed for the shortest possible time. When the Young and James Sts. structures were completed, and tracks laid over them, continuous tracks on the high level had been provided throughout the whole grade separation area. The construction of the James St. subway was begun, Oct. 17, 1931; operation on the high level tracks was begun Dec. 3, 1931, and James St. was open for all traffic Dec. 23, 1931.

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Easterly portion of grade separation area in Hamilton.

elevated tracks and with the present station, a temporary shelter has been provided, as shown in the accompanying illustration of the arrival of the first passenger train on the high level tracks. Temporary train platforms have also been provided. The shelter and platforms will be used until completion of

the second stage is about 25% complete, and the track work about 90% complete. At Young St. it was possible to complete the subway superstructure in the first stage operations, but completion of the easterly approach on that street had to await beginning of the second stage work. MacNab St. pedestrian

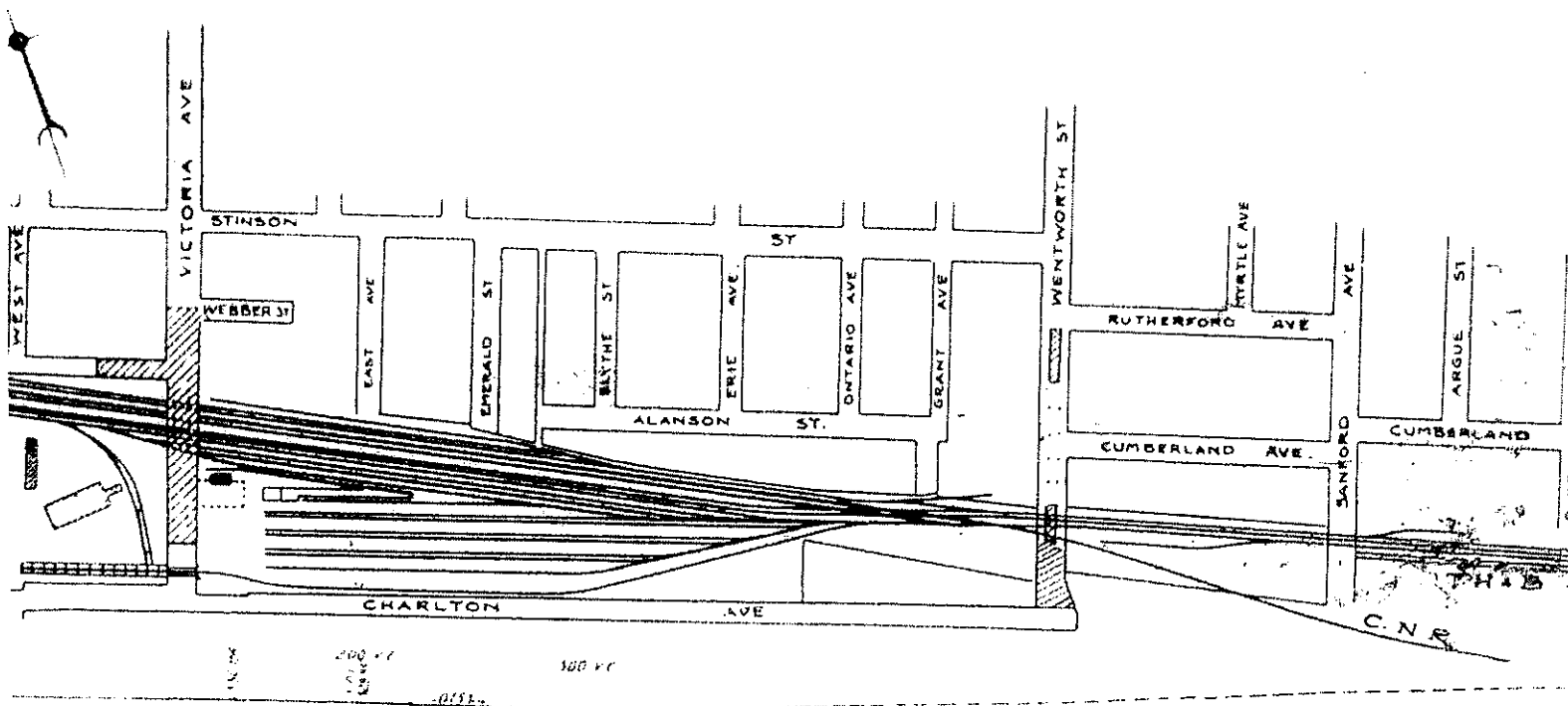
mail and express facilities to be used in connection with the new station when it is completed. Between Hughson St. projected (Hughson St. itself having been closed) and James St., the new high level tracks are carried on solid fill, from Hughson St. projected, easterly to John St., the track is carried on fill &

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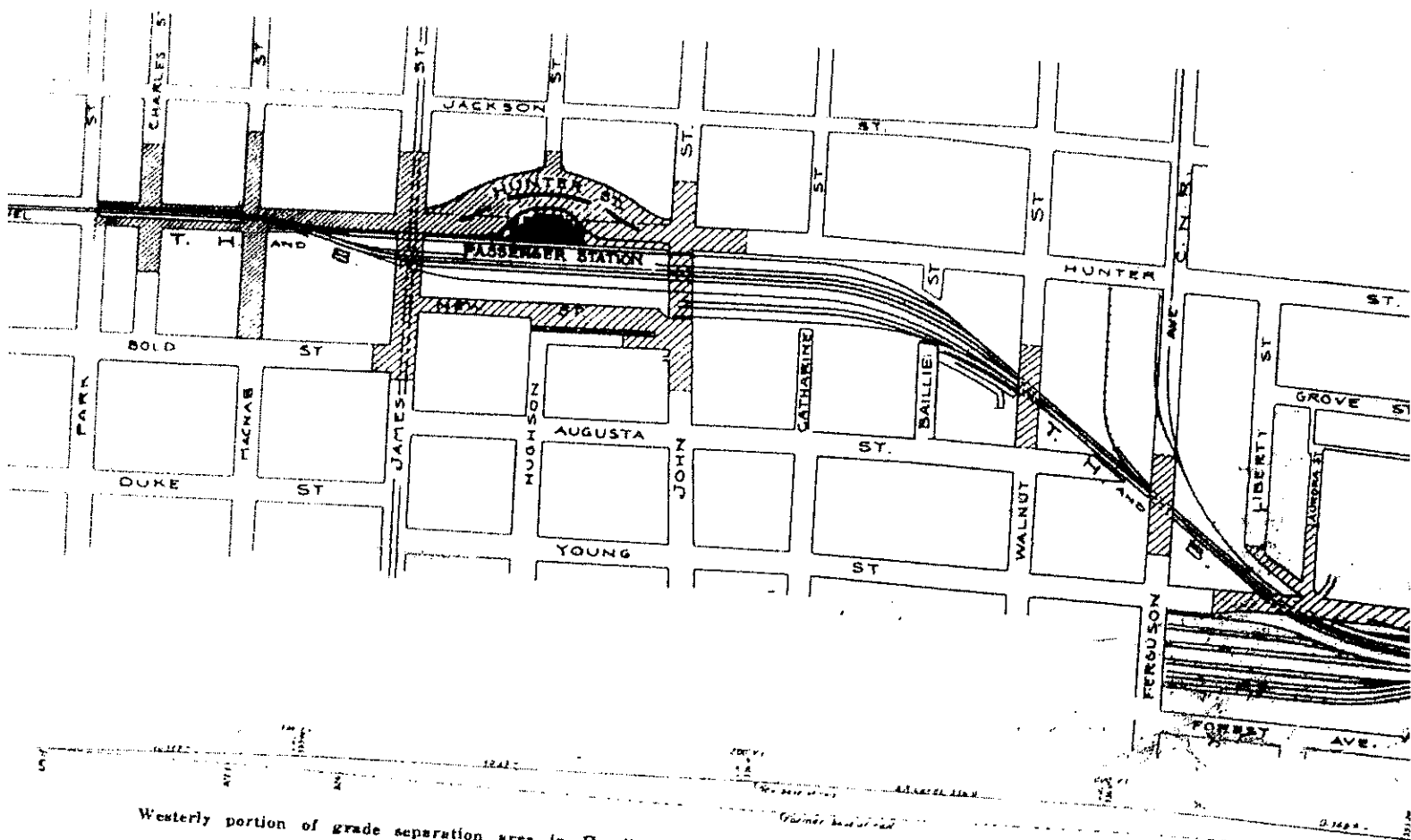


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mail and express facilities to be in connection with the new station will be completed. Between Hughson St. projected (Hughson St. itself having been closed) and James St., the new level tracks are carried on solid fill from Hughson St. projected, easterly to John St., the track is carried on a



Westerly portion of grade separation area in Hamilton. The plan shows the tracks in new location.

between Baillie St., which has been widened to Victoria Ave. Part of this widening consisted of about 1,000 ft. of new National Rys. tracks, which were laid under an agreement entered into between the T.H. and B.R. and the City of Hamilton. Following beginning of the subway abutments at the streets mentioned was begun. The abutments had been commenced on the lines of the

disturbing the original layout; in fact, the fill for the elevated tracks and accompanying structures had to be completed to where new tracks were available with which to carry on operation, before the original tracks could be removed. That the work was being done in a passenger terminal area, involving rearrangement of water services, passenger platforms, etc., as well as tracks, produced numerous problems, which were all solved satisfactorily. One fortunate feature of the

requirements of Cooper's E-70 loading. The superstructures are of steel, with concrete decks covered with waterproof membrane and asphalt plank, carrying ballasted track. Following completion of the subway superstructures, those at Young and James Sts. having been the last two built, the laying of new tracks followed. The Young St. structure was a particularly difficult one to design and erect, not only on account of curvature and skew, but also because a Canadian

be flanked at the north side by a sidewalk 7 ft. wide, with a sodded space 5 ft. wide between the curb and the street line. A concrete walk will be provided along the north side of the building throughout the whole station area, between James and John Sts., and will be extended at the middle of the block to wholly enclose the station on the north side. Asphalt surface will be provided between the walk and the street line of the new driveway.

The site of the present station, to the north and west of the site of the new one, will be occupied ultimately by a portion of the driveway. The present building will not be demolished until the new one is completed and fully in operation, and following its demolition the driveway will be completed.

The new station is part of the T.H. and B.R. general improvement scheme for Hamilton, the other part being the grade separation work which has been

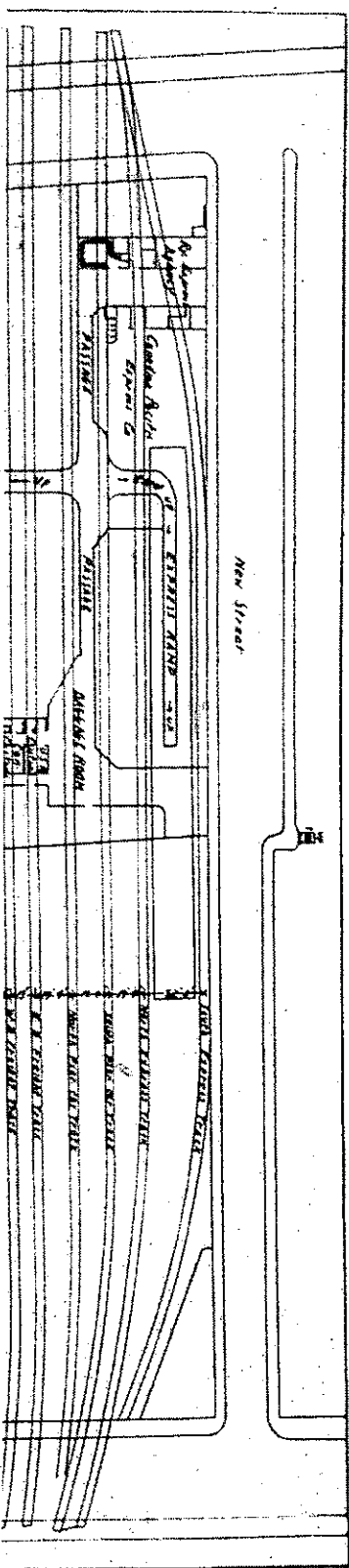
ornamental ironwork, Geo. B. Meadows, Ltd., Toronto, and Hamilton Guild of Metal Crafts; chimney, Francis Hankin and Co., Toronto; structural steel, Hamilton Bridge Co.; steel sash, Truscon Steel Co. of Canada, Walkerville; stone work, Ritchie Cut Stone Co., Hamilton. The architects are Felheimer and Wagner, New York, N.Y. The construction of the station and the other portions of the whole terminal improvement project is being done under the general supervision of H. T. Malcolmson, Vice President and General Manager, T. H. and B. R., R. L. Latham, Chief Engineer, being in direct charge, assisted by E. M. Brennan, Construction Engineer.

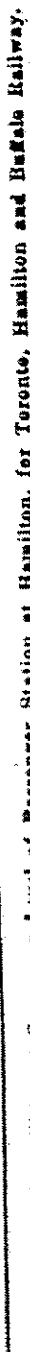
The Pas Board of Trade on Hudson Bay Railway Management.

The Pas, Man., Board of Trade passed a resolution recently as follows:—

eventually is made of the Hudson Bay Ry. and subsidiary northern lines, the necessity of northern operating management, in direct control of, and in direct contact with, those railways is essential; and further be it resolved that this board suggests to the Railways and Canals Department that maintenance of the Hudson Bay Ry. as a separate railway entity, with both Canadian railways having running rights, is worthy of consideration."

Canadian Pacific Ry. Sequestered Stock.—J. K. Blair, Wellington North, Ontario, asked in the House of Commons, Oct. 26:—"For how many years did the Canadian custodian of enemy alien property hold Canadian Pacific Co. stock sequestered from alien enemies residing in Germany and Austria, and what was the value of the stock so sequestered? Has the Canadian Pacific Ry. Co. paid





be 312.42. The boiler and pump room Traffic Manager, and a general office for The boiler installation will also be used

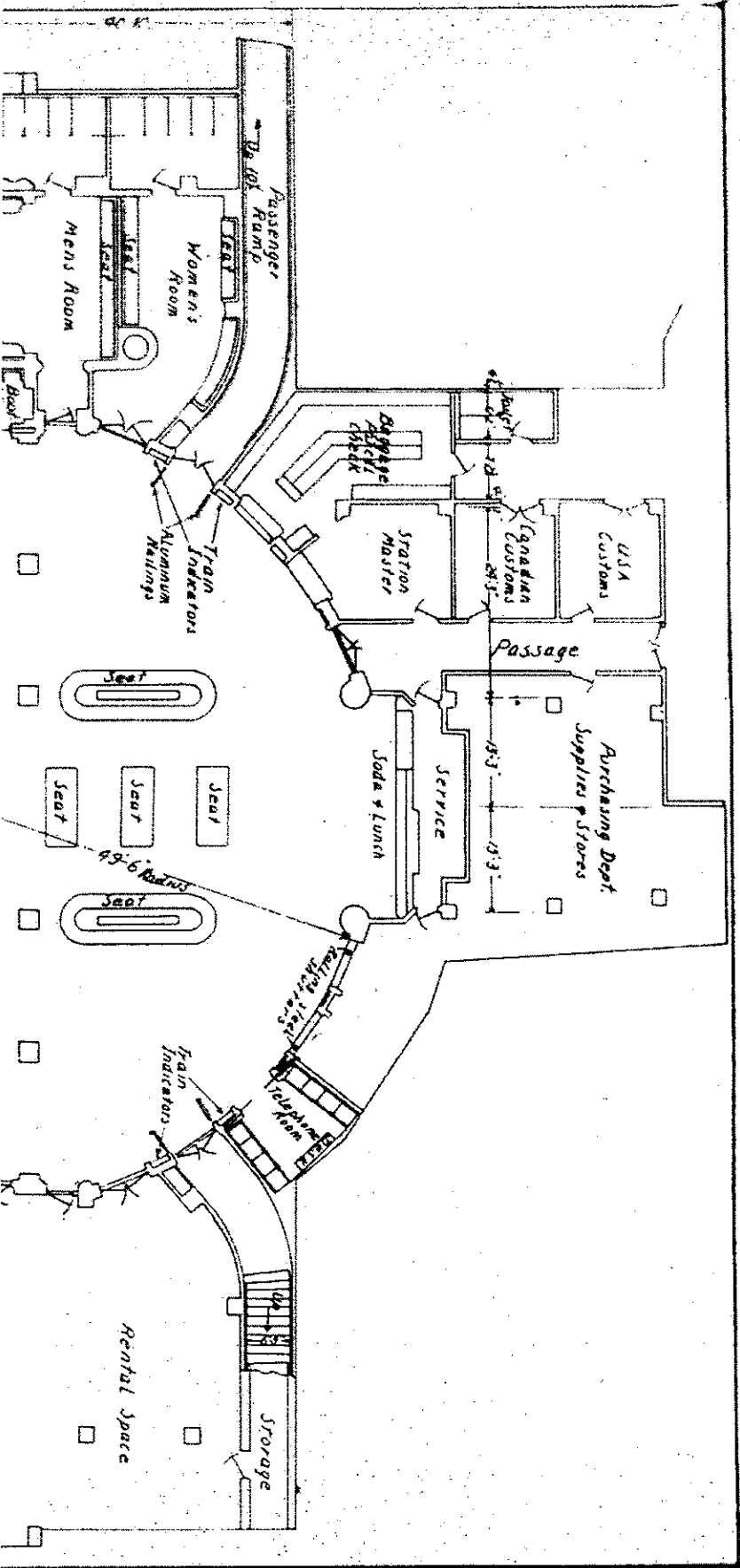
will extend to the north frontage of the building. Access to the basement will be by stairway leaving the concourse floor at the north vestibule, and the basement will also be served by the elevator. The basement will contain switchboard room, transformer room, a large storage room, and boiler and pump room and coal storage space, and will also have space for a relay room to house equipment planned in connection with future signal and switch control of passenger yard operation. The elevation of the basement stair hall, storage room, switchboard room, relay room, etc., will

be between the elevator and the stairs. West of the upper concourse space will be the operator's office and a room for trainmen.

The building will have a basement and seven floors above; the first floor above the basement will contain the main concourse and other facilities which have been described; the second, at about track level, will provide for the upper extension of the concourse and housing facilities as described. The third, referred to in the plans as the first office floor, will contain offices for General Freight and Passenger Agent, General

house the elevator machinery. On the third, fifth and sixth floors, or, first, third, fourth and sixth office floors, lavatory facilities will be provided, adjoining the stairway and elevator shaft; and, on the office floors, the stairway, and elevator shaft will open into a hall, and adequate provision for public space is being made.

The building will be heated by steam radiators, the boiler equipment, in the basement, to consist of a stoker-fired 100 h.p. Erie City Economic type boiler, with provision in the boiler room for accommodation of a second unit if necessary.

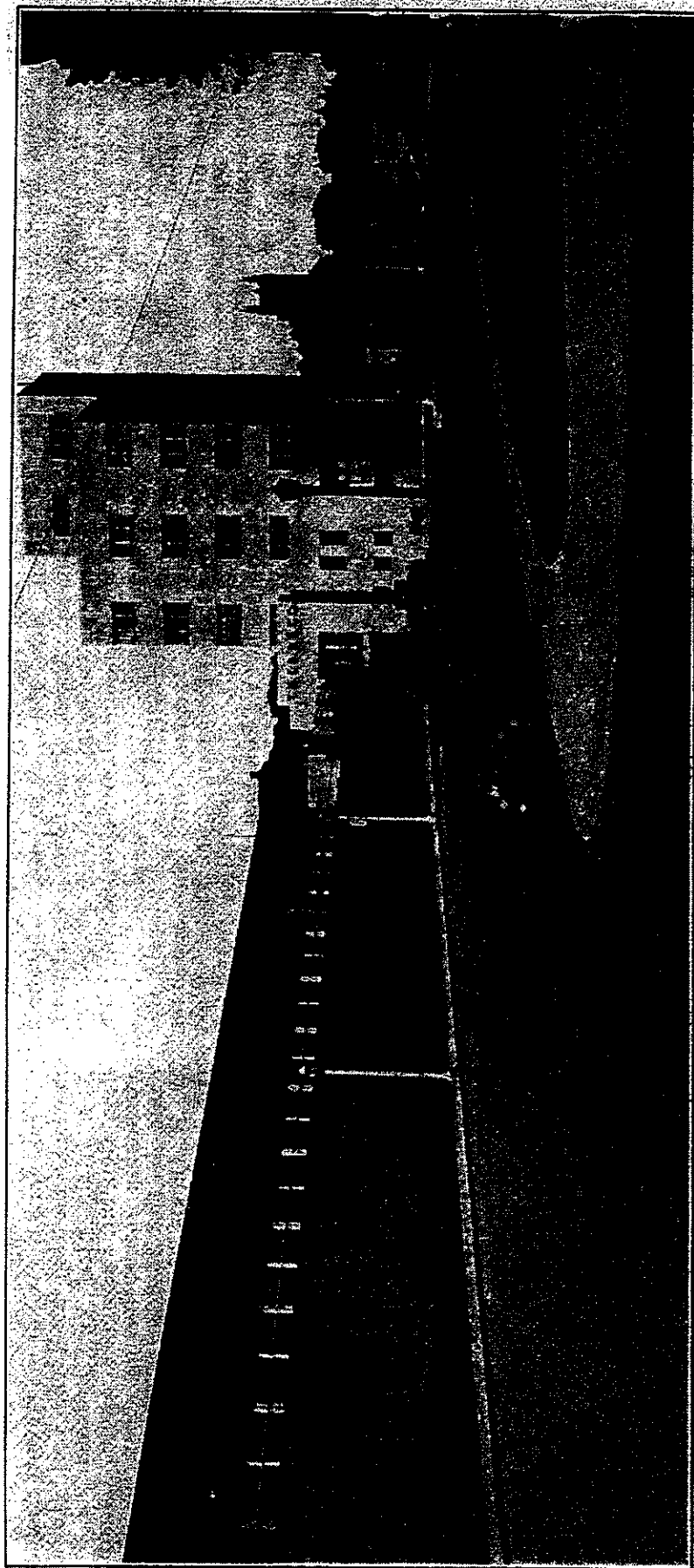


bought well in advance of the beginning of construction. The grade separation work has been of great help in meeting unemployment conditions. None of the orders issued by the Board have dealt with allocation of costs. It is expected that a hearing will take place shortly, to apportion the costs.

A feature of the grade separation work as completed to date is the celerity with which it has been carried on. To begin with, many houses and stores had to be demolished, and the site cleared. Sewers, waterlines and other public utilities had to be dealt with, all work possible clear of the streets had to be done first to minimize interference with highway traffic, and the work through-out had to be done so as to interfere as little as possible with both highway and railway traffic. When it is considered that the grade separation work extended over a mile, and involved construction of eight subways and the carrying out of an enormous amount of sub-surface work, street paving, sidewalk construction, tracklaying, while traffic had to be maintained on the railway as well as on the streets, it may be stated that the work has been carried out in a remarkably short construction period, reflecting great concentration of effort with a view to having the job completed in the shortest possible time.

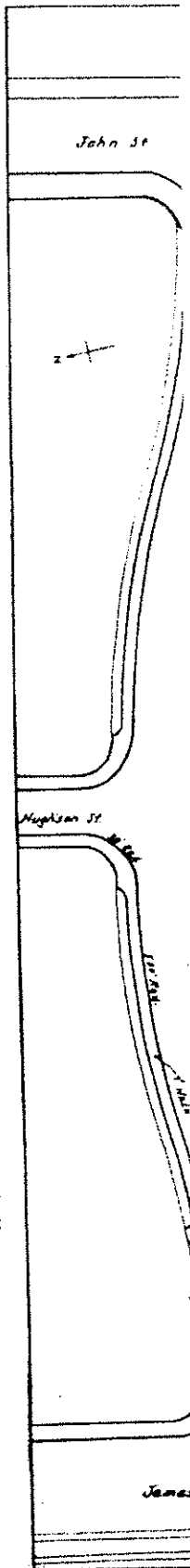
When the new station which is planned is completed, the present station will be demolished, also the temporary passenger shelter and train platforms now being used. The present station is located on land which is in the path of the proposed Hunter St. crescent, and its demolition will be necessary before the Hunter St. layout can be completed. The new station will, we are advised, be designed so as to provide, from the standpoint of accessibility of train platforms from street level, and vice versa, maxi-

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New Station at Hamilton, Ont., Toronto, Hamilton and Buffalo Railway.

under normal weather conditions to see about the



General Layout of Passenger Station Area at Hamilton, Toronto, Hamilton and Buffalo Railway.

practically completed and which was described in our issue of April last. Both parts of the whole project dovetail into each other; for instance, the station building, ramps, stairways, etc., are designed to fit in with the new track level which was provided by the grade separation work in the station area. The structures in connection with grade separation are of pleasing design and built for permanence. On completion of the new station Hamilton will have a railway terminal layout which will provide a complete measure of railway-street grade separation and afford adequate and most convenient facilities for passenger, express and associated traffic.

The contract for the foundation for the station building was awarded Dominion Construction Co., Toronto, a sub-contract for the excavation having been given A. Cope and Sons, Hamilton. The general contract for the station building was awarded W. H. Cooper, Hamilton, and, at the time of writing, sub-contracts have been given as follows:—electrical work, Culley Electric Co., Hamilton;

"Whereas problems peculiar to the port of Churchill and to freight haulage from and to northern Manitoba mines will always exist in the operation of the Hudson Bay Railway and the railways from The Pas to Flin Flon and Sherritt-Gordon mine; whereas efficient operation of those railways, giving the utmost in service, not only to the north but to all points in the country; originating and terminating railway business, can be most readily secured by operating management located in direct contact with those railways; whereas running rights over the Hudson Bay Ry., for the Canadian Pacific Ry., must inevitably be established in the near future, so that all Canadian railway points will have through freight rates available to Churchill; and whereas northern operating management of the Hudson Bay Ry. would eliminate costly and unnecessary complications as between the two railways, when those running rights are established, be it resolved that this board suggests to the Railways and Canals Department that in whatever disposal

the government of Canada the dividends earned upon such sequestered stock? How much Canadian Pacific Co. stock is still in the hands of the custodian?"—The Prime Minister, Mr. Bennett, replied:—"This question will stand. It is doubtful whether in the public interest it should be answered. I am having some further inquiries made. It is not a department of government that is affected."

Caughnawaga Bridge.—Contracts have been awarded by Lake St. Louis Bridge Corporation for construction of a bridge over the St. Lawrence River between Ville La Salle, near Lachine, Que., and Caughnawaga, as follows:—A. Janin and Co., Ltd., substructure and approaches, \$1,786,000; Dominion Bridge Co., superstructure, \$773,248.—Janin and Co. is beginning work on the substructure at once, and hopes to complete its portion by the summer of 1934, and to have work so far advanced by the spring of 1934 that Dominion Bridge Co. may then start on the steel erection. (Aug., 1931, pg. 526.)

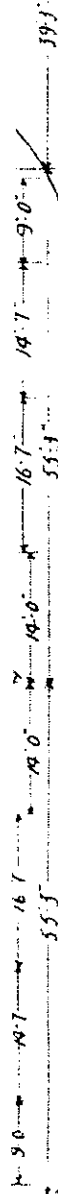
Passenger Station to be built at Hamilton, Ont., for Toronto, Hamilton and Buffalo Railway.

and sash. It will be distinctly utilitarian in design, including chaste lines and dispensing with ornamentation. The main entrance will be at the north, with other entrance vestibules at both the east and west sides. The building will be 86 x 55 ft. over all, and will consist of a central portion with east and west wings. The main portion will have a north frontage of 110½ ft. The main vestibule, at the north side, will open directly into the station concourse, the north part of which will be rectangular, and the south part semi-circular. The rectangular portion will be 33 1/3 ft. x 13½ ft.; the semi-circular portion will have a radius of 49½ ft. The concourse floor will be Terrazzo; the walls will have metal wainscoting with plaster above. The rectangular portion will be 7 ft. 8½ in. high; the south semi-circular portion, which will extend under the two passenger tracks, will have 9 ft. headroom. The ceiling of the high portion, with plaster finish, will be recessed, to accommodate a large ceiling lighting fixture, which will extend from east to west. The ceiling of the semi-circular portion, under the passenger tracks, will be plastered and fitted with lighting fixtures. There will be no seats in the rectangular portion of the concourse, leaving it a large clear space; five long seats will be arranged in the semi-circular portion. The concourse floor eleva-

shown on the accompanying general plan. The baggage room, which is built already, has a frontage on the new street, and will be connected to the station concourse by a north and south passageway. Flanking this passageway will be the station master's office, and offices for the Canadian and U.S.A. customs men, on one side, and space for purchasing, department, supplies and stores on the other. The baggage room will open into a passage to the east, off which ramps will lead up to train platform level. The Canadian Pacific Express Co. and the Railway Express Agency facilities will be located as shown in the general plan, and the ramp striking south from the passage mentioned, and then running up to the west, will be the express ramp, emerging at the platform between the north and south express tracks. The ramp striking north from the passage referred to, and then running up to the east, will be the trucking ramp, emerging at the passenger platform and being primarily for baggage, although accessible for express also. The ramps, passageway, etc., are of concrete construction. The platforms at track level are all of concrete construction. From north to south are the westbound passenger track, eastbound passenger track, westbound through freight track, eastbound through freight track, north passenger car track, south

and the west entrance vestibule. The floors in the men's and women's rooms will be of Terrazzo; those in the lavatories will be of tile. The floors in the rental space, ticket office and other offices will be of cement.

The building will be served by a passenger elevator, with its shaft to the east of the main, or north, entrance vestibule, and a flight of stairs extending to the top of the building will be provided, leading up from a landing to the west of the main entrance to the concourse. The second floor of the building, at about track level (elevation 332.67) will be taken up in part by the upper portion of the concourse, with that space surrounded by railway offices. The station headhouse will contain five additional floors, all of which, except the top one, will be for railway offices, the top one to be divided into a conference room and space for housing the elevator machinery. On the five upper stories, the floors will be of concrete, and walls and ceilings will be plaster. Provision will be made for the addition of two more stories to the station headhouse if required. Entrances to the building will be provided at both the east and west ends from the track level. The basement will underlie the rectangular portion of the concourse, the ticket office and the large rental space east of the main entrance vestibule, and



Arrangement of Facilities at Concourse Level of Passenger Station at Hamilton, for Toronto, Hamilton and Buffalo Railway.

be 312.42. The boiler and pump room and coal storage space will be at somewhat lower level, the floor elevations there to be 306.42, with a steel stairway, just south of the elevator shaft, leading down to the boiler facilities.

The portion of the track level floor which will be occupied by the upward extension of the concourse will be 93 2/3 ft. from east to west and 25 2/3 ft. from north to south. At the north side of that space there will be a corridor opening on a balcony, flanked by offices for Signal Supervisor, Roadmaster and clerks, Trainmaster, Superintendent and clerks, Chief Train Dispatcher, and train dispatchers. Lavatory space will be provided to the north of the balcony be-

Traffic Manager, and a general office for clerks and stenographers. The fourth, or second office, floor will contain an office for the Vice President and General Manager, one for the assistant to him, an office for the chief clerk and a general office for clerks and stenographers. The fifth, or third office, floor will contain an office for the Chief Engineer, one for the Assistant Engineer, an office for clerks and stenographers, and a drafting room with a record vault adjoining. The sixth, or fourth office, floor will contain offices for the Purchasing Agent and Superintendent of Car Service, and offices for the chief clerk, clerks and stenographers. The seventh floor will provide space for a conference room and

The boiler installation will also be used to heat the express and baggage areas under the tracks, to the south of the station, and also to supply steam for passenger cars standing in the station area. The heating in the express and baggage areas will be by unit heaters, employing fans forcing the air past steam coil. Electric current for lighting, motor etc., will be supplied by Hamilton Hydro Electric Commission, to be delivered to the station at 2,200 volts and stepped down to 220 and 110 volts.

The driveway which will be provided to the north of the station between John and James Sts., with Hughson St. opening into it, will be surfaced with asphalt. The driveway will be 48 ft. wide and will