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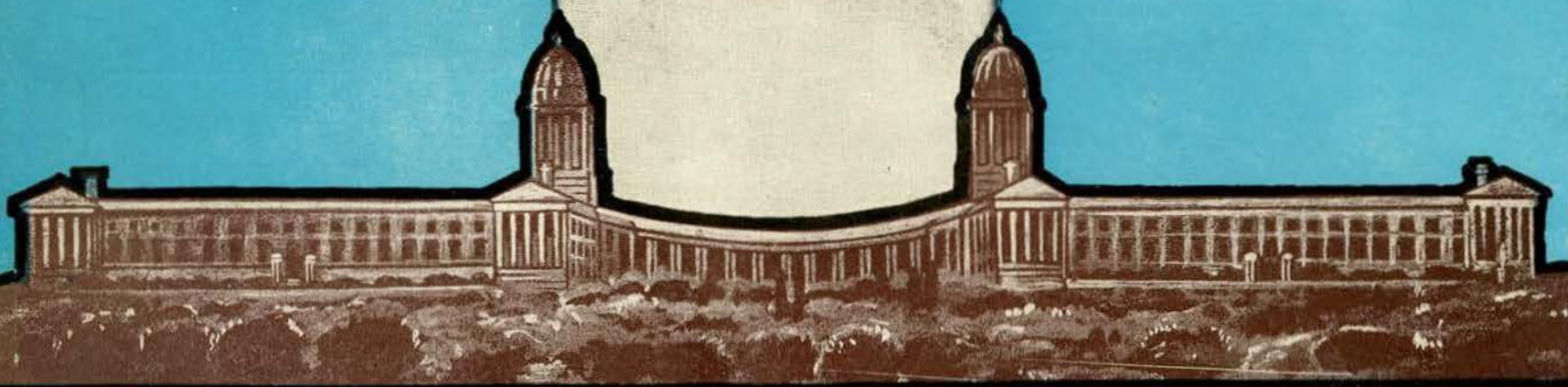
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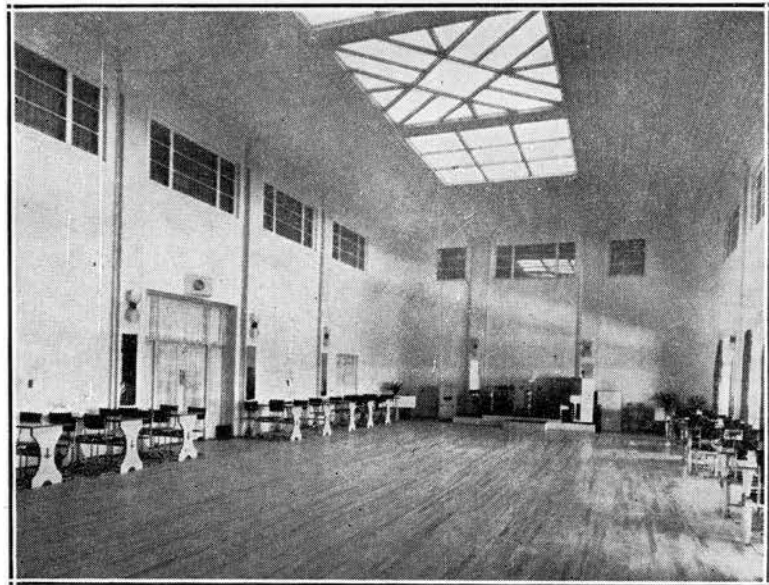
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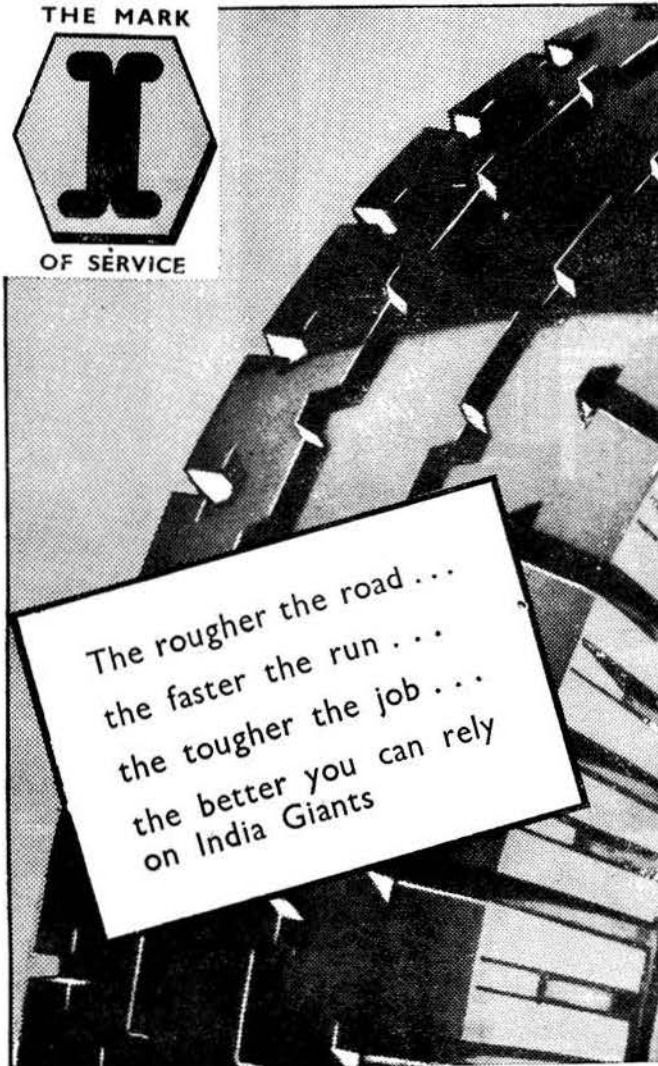
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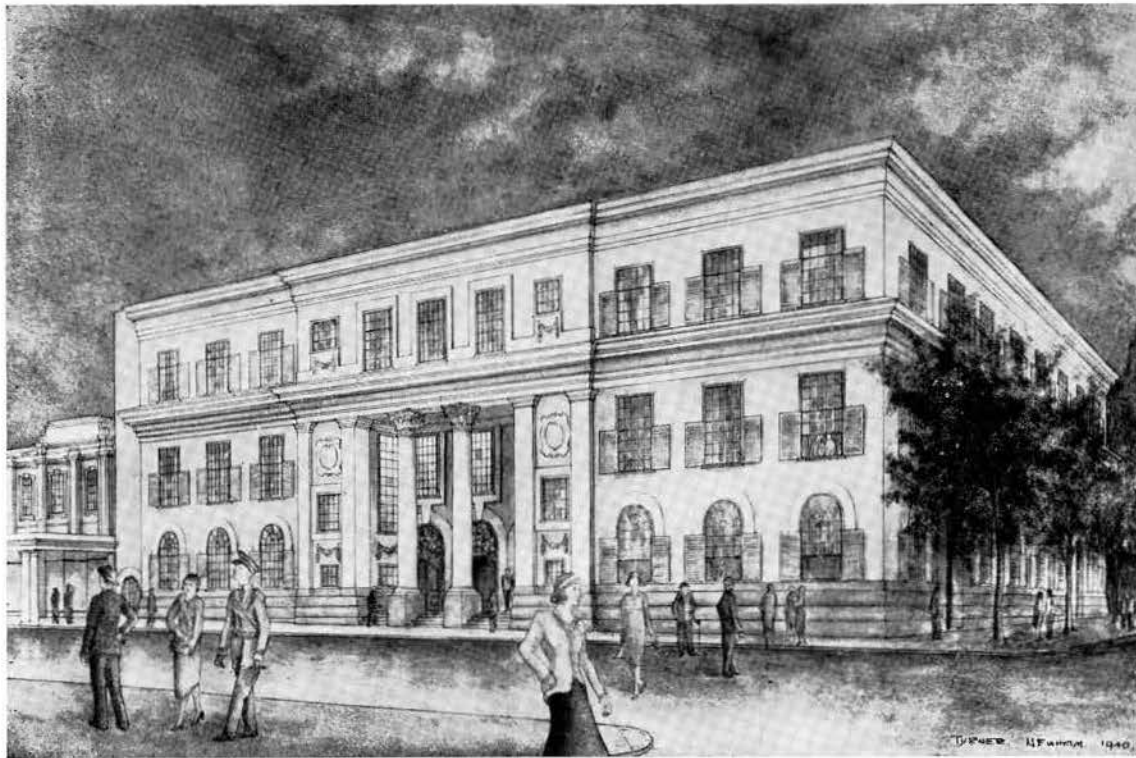
*“P*UBLIC WORKS OF SOUTH AFRICA,” which is published monthly, is intended to keep the public up-to-date in regard to projects of the Public Works Departments of South Africa, Union, Provincial and Local Government, giving expression to the activities of each of these departments of service.

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New State Library



SKETCH BY TURNER NEWHAM.

The new Library as it will appear when completed. The portion already built comprises the ground and first floor of the corner wing on the right-hand side of the sketch.

New State Library For Pretoria

THE FINAL BUILDING

AS IT WILL APPEAR

THE perspective illustrated here shows the new State Library, Pretoria, as it will appear when completed. The block is on the corner of Andries and Vermeulen Streets, the entrance facing east.

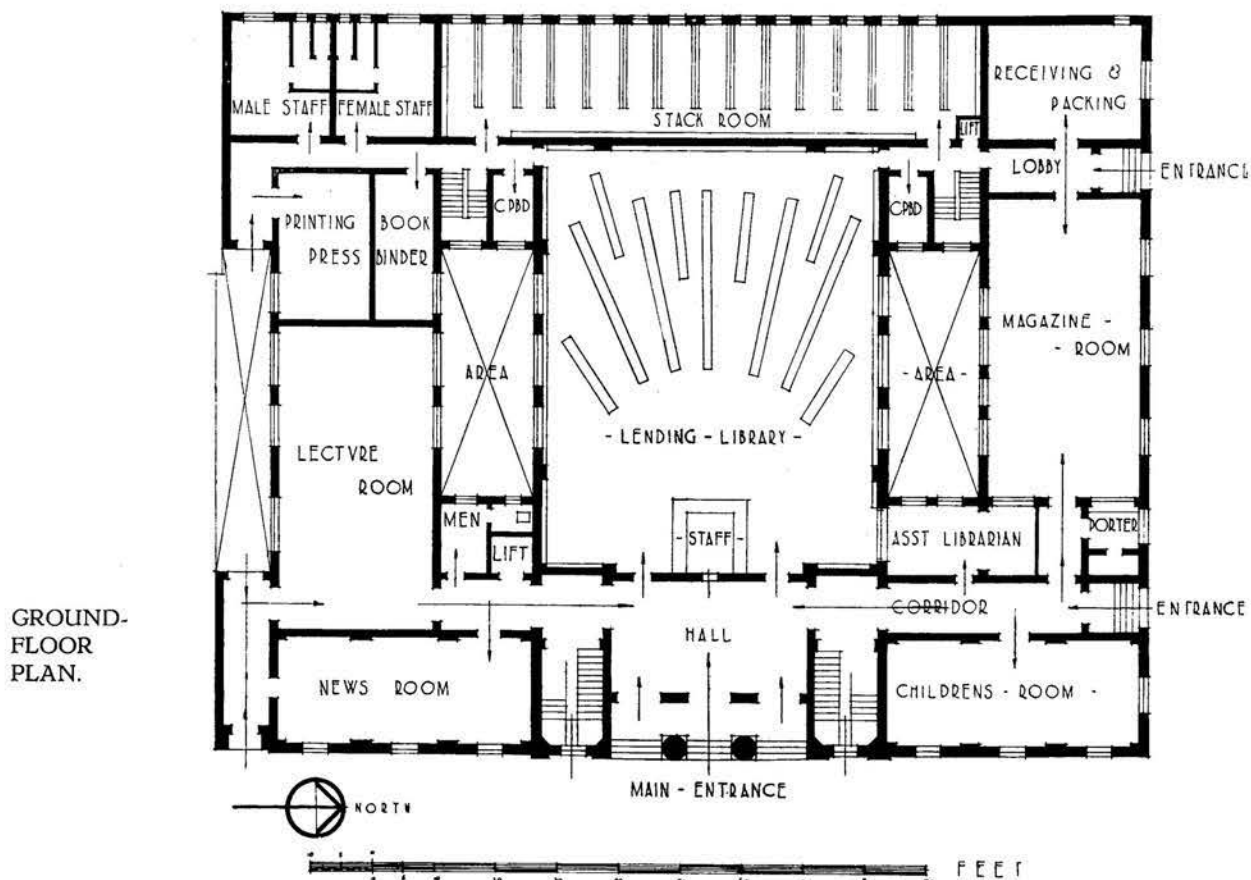
At the inception of the scheme the intention was to spread the building programme of four contracts over a period of about 10 years, each contract to be put in hand as funds became available. The first portion of the Library was completed and handed over for occupation on July 30, 1937. This portion is shown in the sketch as the right-hand wing, up to the cornice, flanking the entrance portico. It comprises the Children's Room and Magazine Room block shown on the right of the plan. The total cost of this portion, including furniture and steel shelving, was approximately £1,250. The attic floor is to be added later. Unfortunately, although the working drawings of the 1940 section comprising the Stack Room block (see plan) are complete, construction has had to be postponed owing to the war.

The style of the building may be said to be South African Dutch, the broad simple lines of which give this building a dignity and character of restfulness suitable to its function.

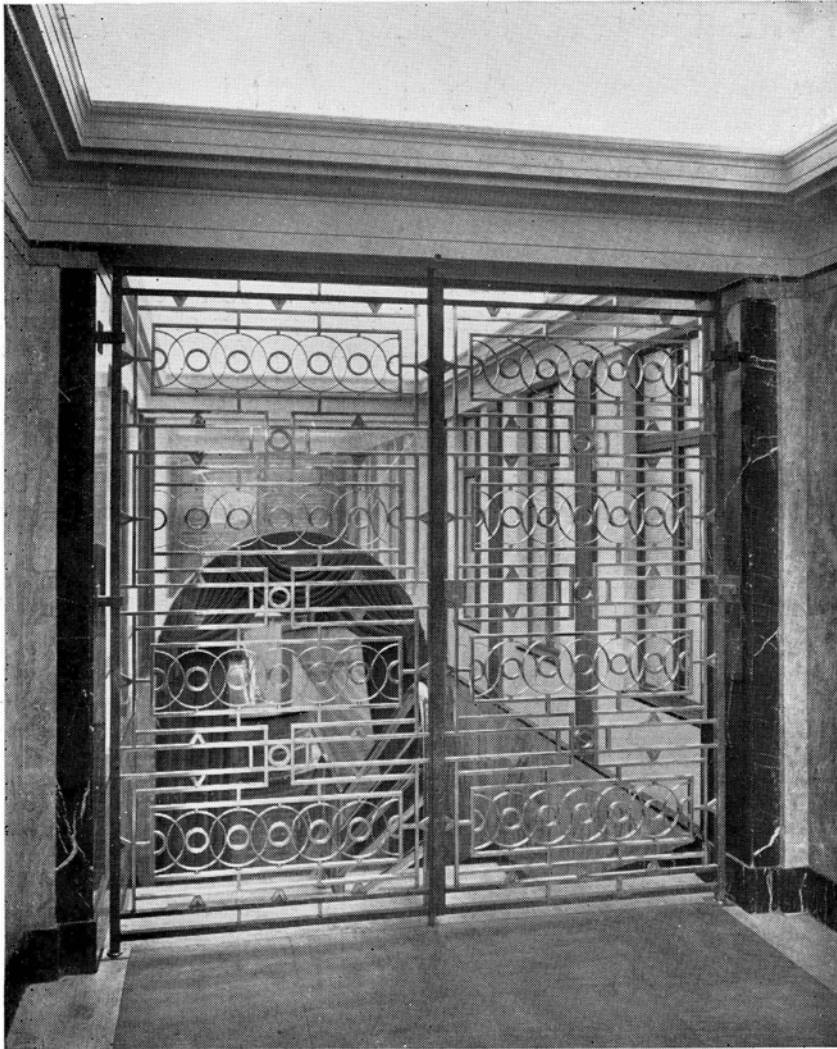
Red granite, from Leeufontein, 20 miles east of Pretoria, forms the plinth. Externally, the building is to be finished entirely of plaster, with all exposed windows and shutters of hardwood painted white. In the portico the main entrance doors, with carved fanlights above, are to be of oiled teak. Further details are not necessary at this stage as the plan and perspective are sufficiently clear.

The building was designed by the Union Public Works Department, Pretoria.

TURNER NEWHAM.



A Warm Note In Marble Interiors ::



Stair Approach

Fine New Refreshment Facility In Johannesburg City Hall

AN important addition to the reconstructed and renovated Johannesburg City Hall is a new refreshment bar, which should rank prominently among the amenities of the City as an outstanding example of internal architecture. Besides its decorative quality of design, achieved with considerable restraint, the bar is notable for warmth of tone created by dominant autumn tints, Napoleon marble facings and polished bronze stripping. It is to be used in conjunction with the City Hall or the Selborne Hall, to both of which it is directly accessible.

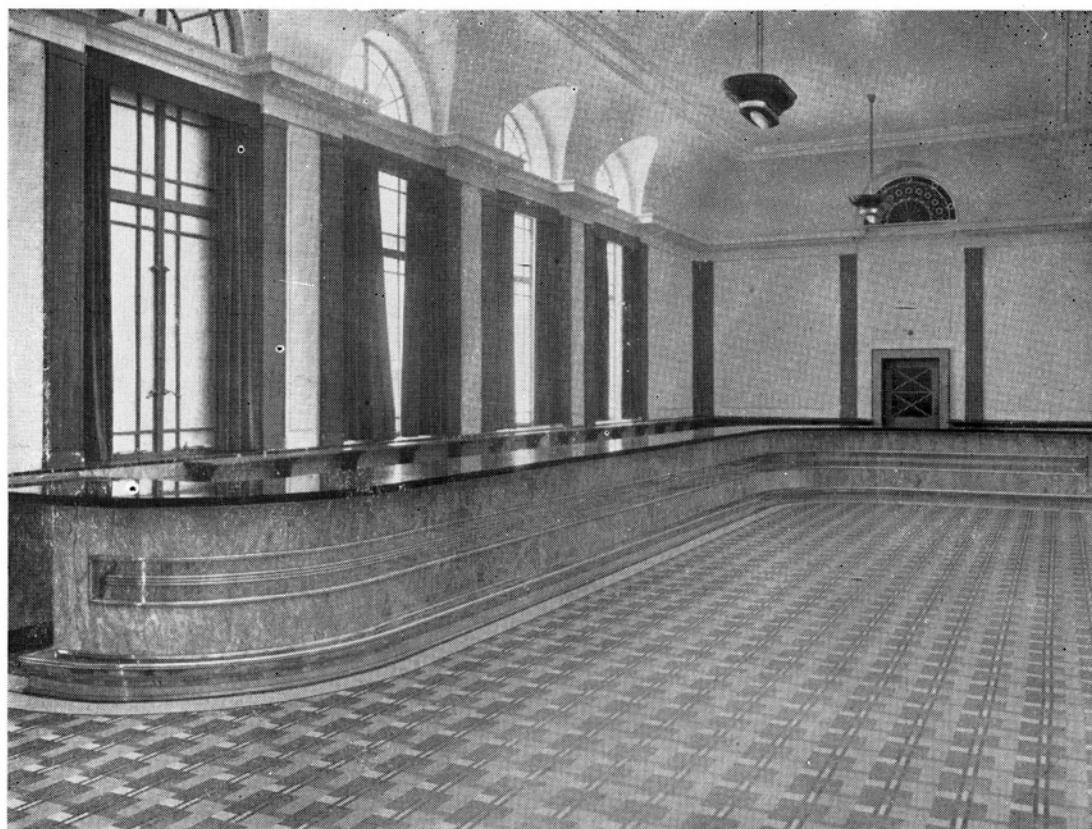
The architects are Messrs. Hawke, McKinlay & Sayce.

THE architectural possibilities of a stair approach are fully realised in this neat design, made necessary by a drop of 8ft. from the floor level of the Selborne Hall vestibule to that of the refreshment bar,

This 9ft.-wide approach leads down from the vestibule through the pair of polished bronze gates shown in the illustration. The gates are framed in dull steel, and strong definition is given to the setting by the flanking pilasters of Blue Belge marble. The walls of the small loggia before the gates are faced with Napoleon G.M. marble.

Two tones of travertine are used for the floor and the steps, and the latter are divided down the centre by a decorative bronze handrail. The walls flanking the steps have a dado of Napoleon G.M. marble set off by a Blue Belge skirting. Moulded pilasters, painted old gold, flank the windows, which are glazed with cross-reebed glass. Above the dado the walls are painted in two biscuit tones. The cove ceiling is tinted sky-blue, and is illuminated solely by fluorescent tube lighting concealed behind the moulded cornice.

An interesting feature is the mirrored arch at the bottom of the stairs. This arch is set in an exceptionally heavy constructional member which could not be lightened materially. Aesthetically cumbersome in its original form, it was felt necessary to disguise the weight of this member. The mirror surface achieves this, and, in addition, helps to create an atmosphere of depth readily appreciated in the comparatively small compass of the approach.

Refreshment
Bar

MARBLE has been used extensively in the refreshment bar to achieve a high lustre finish, the warm tones of Napoleon *grand mélange* fitting in well with the character of the room and the tone of the mosaic floor, carried out in autumn tints to the architect's design by Richards, England.

The 4-ft. dado to the walls is in Napoleon *grand mélange* set off by a skirting and topping of Blue Belge marble. Above the dado the wall is plaster, finished to the cornice with a rough texture surface and panel painted in two tones of biscuit. Moulded pilasters, painted old gold, flank doors and windows, and pickout corners. The cove ceiling is tinted sky-blue shaded up from the moulded cornice, above which semi-circular fanlights to the five large windows on the east are vaulted into the cove. These vaults are repeated as blanks over the three doors in the west wall, making suitable features for future mural decorations. These doors are of the double-swing type opening on to the foyer to the first floor of the City Hall. They are sound-proofed to prevent noise interference with any function held in the City Hall. Green and gold material, echoing the Johannesburg Municipal colours, is used for curtains to the windows and the archway to the stair approach. The bar has forced ventilation and is heated by means of special radiators concealed in the walls behind decorative bronze grilles. The bar is 60 ft. long and 25 ft. wide.

Cross-reebed glazing has been used for the windows. A point of interest is that only three of the windows are genuine. Owing to an adjacent room, the two north-end windows are blanks comprising the actual window-frame glazed with cross-reebed glass, silvered at the back. Although a subterfuge, this arrangement adds to the airy appearance of the room, and is particularly effective at night. Fluorescent tube lighting is concealed behind the cornice. The main illumination is provided by indirect diffused lighting fixtures suspended from the ceiling.

The counter front is faced with Napoleon *grand mélange* marble set off by an intermediate decorative strip of polished bronze. A polished bronze foot-rail with continuous cigarette and match tray forms the base. The counter-top material is a patent American composition known as "Formica." This substance is jet black, has a high polish and is resistant to fire, heat, spirits and scratching. The counter beneath is designed as a series of refrigerated units. Shelves at the back are unobtrusive.

Several facilities are included in the lay-out of the bar. On its south there is a refrigerated room for the storage of liquors and a sink-room or scullery. On the north, with access off the small loggia before the bronze gates to the stair approach, is a small well-appointed kitchen with white glazed tile walls. The bar is connected also to the main kitchen on the floor below by a small servery built into its north wall. This servery is fitted with an electrically operated food lift.

Bronze work was carried out by Messrs. Fredk. Sage & Co. (S.A.), Ltd.

Prospect Goods Yard & Shed



S.A.R. Photo.

THE GOODS YARD AT PROSPECT, showing construction of goods shed. Note in left foreground the concrete apron to channel deviating Natal Spruit. The marshalling yard is in the left background, but is not visible.

MAMMOTH RAILWAY UNDERTAKING AT PROSPECT TOWNSHIP:

New Goods and Marshalling
Yard for S.A.R. to
Supplement Kazerne



THE new railway goods and marshalling yard now being constructed at Prospect, some two and a half miles to the south-east of Johannesburg, is a mammoth undertaking. Not only is its construction estimated to cost approximately £600,000, but has already involved the handling of 1,250,000 cubic yards of earth. This huge total has been made up by the building of enormous earth embankments, the partial removal of a slimes dam fully 800 ft. wide and 50 ft. high, the diversion of a stream and the levelling-off of a large area for the goods yard. In addition to this, a reinforced concrete goods shed more than 1,000 ft. long and 360 ft. wide is being built, having a type of roof construction never used before in South Africa.

The main purpose of the new railway goods depôt at Prospect is to relieve the congestion which is being felt at the Kazerne goods yard almost adjacent to the Johannesburg station. Indeed, the decision to transfer portion of the activities at Kazerne to the Prospect Township site was prompted mainly by the necessity for coping with the increasing volume of traffic handled at Kazerne. This traffic at Kazerne has outgrown the available shed accommodation, handling facilities and yard space. Moreover, there is no room for expansion on the existing site. Another factor favouring the scheme is the relief it will give to the busy Braamfontein yard and the section Langlaagte-Germiston by the diversion of a considerable amount of goods traffic to the Rand mineral line on which the Prospect Township depôt is situated.

A secondary purpose, which is in accordance with the Railway Administration's policy of co-operating with Municipalities in improvement and development schemes, is to enable the Johannesburg Municipality to provide additional road arteries from the centre of the city to the northern and north-western areas. This will be made possible by the release of a certain portion of the Kazerne site to the Municipality, namely, about 14 acres. Another advantage from the point of view of the public of Johannesburg will be the alleviation of road congestion in the central portion of the

ALTHOUGH the South African Railways and Harbours Administration has had to curtail work and expenditure on the new goods and marshalling depôt at Prospect Township, construction already effected is sufficient to reveal the mammoth nature of the undertaking. Apart from the size of the depôt, there are many features of technical interest, the most prominent being the new goods shed which has a form of concrete roof construction never used before in South Africa.

We acknowledge our indebtedness to the Railway Administration for information and assistance so kindly given.—EDITOR.

city through a reduction in the haulage of heavy goods to and from Kazerne. It must be emphasised, however, that the closing of Kazerne as a goods depôt is not contemplated under this scheme, the purpose of which is to divide the traffic between the two depôts.

Some idea of the volume of traffic handled at Kazerne is given by the following figures, which represent a recent normal month. During this month goods arriving at Kazerne totalled 200,050 tons, while goods despatched amounted to 36,180 tons. This resolves into 44,454 tons a week or 7,409 tons a day for arrivals and 8,040 tons a week or 1,340 tons a day for despatches. These figures represent the arrival monthly of 1,417 trains at a daily average of 45.7, and a departure monthly of 1,240 trains at a daily average of 40. Altogether 2,657 trains arrive and depart monthly, the daily average for both being 85.7.

This enormous amount of goods traffic to and from Kazerne has to be handled in a space of approximately 45 acres, which is the area of the Kazerne site.

* * *

The Prospect Site: **A**LTHOUGH the laying down of a railway goods and marshalling yard normally would not be regarded as a spectacular achievement, the construction in progress at the Prospect Township site is of considerable engineering interest. It derives this interest, not from its size, but from the fact that its site bristled with difficulties. Indeed, if, prior to the start of construction, a layman had been asked to view the site, he would probably have rejected it as impossible.

The main difficulties were topographical. Originally the site was quite undeveloped, and was a rugged scoured strip of land about 3 miles long and a quarter of a mile wide, flanked on its north by mine dumps, partially occupied by a slimes dam and the dwellings of the old Prospect Native township. In addition, it was traversed by the Rand mineral line and a small but copious stream known as the Natal Spruit. Both mineral line and spruit have had to be diverted. The west end of the site, to be occupied by the goods yard



S.A.R. Photo.



BEFORE CONSTRUCTION STARTED.—A view of the goods yard, looking south-east. The Rand mineral line can just be seen in the centre of the photograph in its position before deviation.

and sheds, had a considerable slope down from south to north, but the eastern end, to be occupied by the marshalling yard, was more formidable. In formation it was a fairly deep depression, like a small valley, running down the site to the Rosherville lake. As the site of the marshalling yard is along the deepest part of this depression, enormous earth embankments were necessary.

The earthworks required may be summarised as follows. The site for the goods yard and sheds had to be levelled by removing soil from the south side and dumping it on the north side to a depth of 15 to 20 ft. in some places. The intruding slimes dam, which had a width of 800 ft. and an average height of 50 ft., has to be cut back for a distance of over 800 ft. The diversion of the Natal Spruit entailed considerable excavation as it was necessary to cut a deep channel through sandstone along the north boundary of the goods yard. Because of the proximity of Maritzburg Street, which has been retained to provide access for road transport, it was necessary to cover over 1,000 yards of this channel with concrete arches over a concrete lined bottom, and fill in with soil. The estimated peak flood discharge of this spruit is 3,000 cusecs. During heavy rains this stream has been known to acquire a width of 15 to 20 ft. in some places, with a depth of 6 to 8 ft.

The marshalling yard, however, has provided the more spectacular construction. From the Vickers Road subway which divides it from the goods yard on the west to its eastern extremity near the Rosherville lake, the marshalling yard comprises one large embankment. At the present time it has a maximum width of 130 ft. and a maximum height of 20 ft., and is carried over a length of approximately three-quarters of a mile. The embankment was built up mainly with soil from the slimes dam removed from the goods yard. A top dressing of red soil, 4 ft. in depth, was then added. The ruling grade of the embankment is 1:400.

The deviation of the mineral line also necessitated the construction of a large earth embankment from

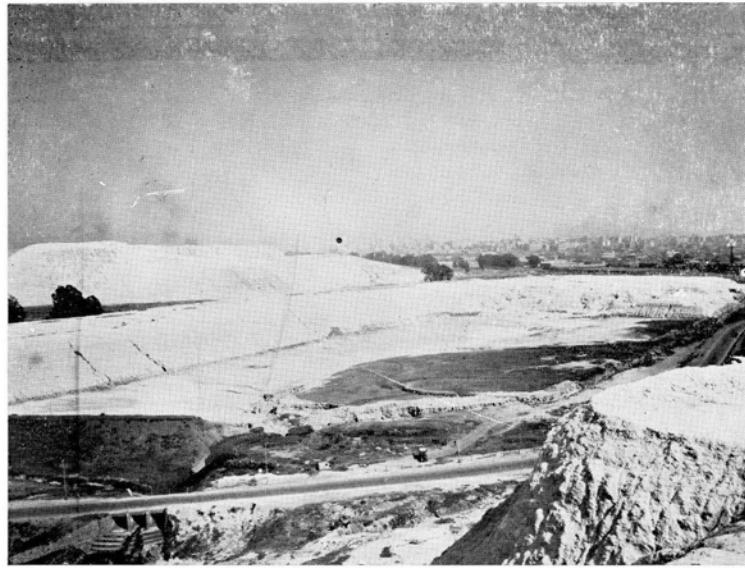
the Vickers Road subway down to the Rosherville lake, with a ruling grade of 1:80. It is the intention of the Administration in the future to widen the marshalling yard embankment by filling in the trough between it and the mineral line embankment and extending the earthworks to the north. At present only 19 railway tracks are to be laid in the marshalling yard. These will be divided into two groups of 9 tracks and 10 tracks respectively, representing stage one of the scheme.

* * *

Goods Sheds: IN June, 1939, the South African Railways and Harbours Administration called for competitive tenders for the design and erection of a reinforced concrete goods shed at Prospect. The proposed roof had to be carried by five rows of columns arranged along the centre lines of the platforms and comprised a construction of three spans of 90 ft. each and one of 50 ft.

The winning design is of special interest as it is the first roof of this type of construction to be built in South Africa, and at the same time is the largest span of its type in the world. The shed is now in the course of construction and will be completed early next year. The shed is being constructed by the Roberts Construction Co. (Pty.), Ltd., which Company employed Dr. E. O. Baumann as consultant.

The shed covers an area of 950 ft. by 320 ft., or 7½ acres, and its roof is reputed to be the largest in South Africa. Along its length the roof is sub-divided into units having a maximum length of 160 ft. In section the roof consists of a plurality of flat concrete slabs, the combination of which results in a free-carrying structure, without beams. However, this must not be mistaken for a trough-beam roof, for calculation and reinforcement are entirely different. In the top portion of a trough beam the midspan stresses are in compression, whereas in this type of construction the stresses are in tension in the whole height of the vertical wall which terminates either the roof or the unit.



S.A.R. Photo.

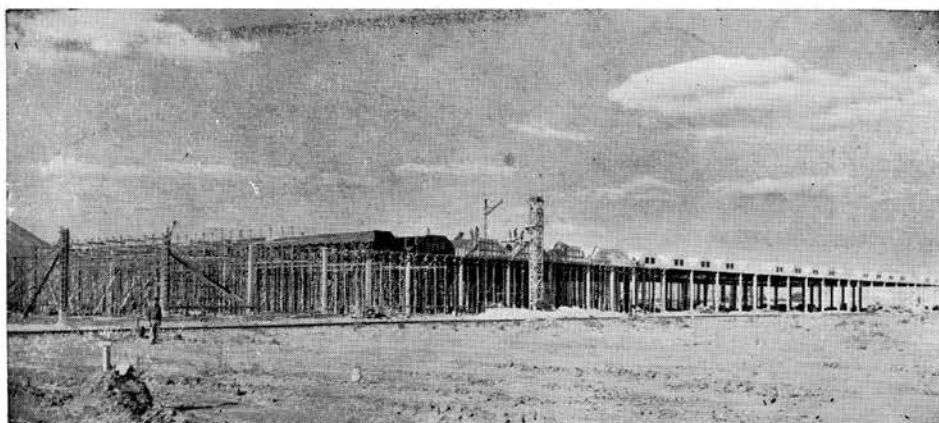
ABOVE is a view of the north end of the goods yard. Note the position of the Natal Spruit before being deviated to its new position along the foot of the mine dump in the right foreground.

BELOW: Another view of the north end of the goods yard taken recently. It shows in the foreground the channel being excavated for the deviation of the Natal Spruit. In the background is the slimes dam which has been cut back a distance of over 800 ft.



S.A.R. Photo.





THE GOODS SHED DURING ERECTION.
Note the roof construction, comprising a plurality of flat concrete slabs forming in combination a free carrying construction without beams. Details of construction are given in the article.

In this respect the construction has some likeness to the well-known shell type of roof. It is not, however, an enclosed polygon of the shell roof arch. If it was, it would be a better and more economical form of construction to have the polygon enclose the arch more closely, but this is not the case. The slabs have an average thickness of $3\frac{1}{2}$ ins. and act as beams with a 90 ft. span. With this form of construction the danger of the slabs buckling singly and in combination had to be considered, and the shuttering had to be cambered with great accuracy.

Three months after completion the first unit was carefully tested by loading with 30 lb. of sand to the square foot. This was done in order to examine the behaviour of the roof under twice the normal live load, and also to check up on the extensive calculations necessary in its design. Deflections were measured at 70 points, and the stresses were measured by Huggenberger Tensometers and gauge Extensometers used at 30 points. The influence of temperature is quite considerable, for the roof "breathes." In this type of roof, however, these up and down movements are not hindered, and consequently produce very small additional stresses, which is a further advantage of a light and flexible roof construction.

The roof is covered with bituminous sheeting and has a fall of 8 ins. in 90 ft. The valleys are provided with an additional fall of the same amount by filling in with breeze concrete. Down pipes are concreted in the columns and ample roof lighting is provided.

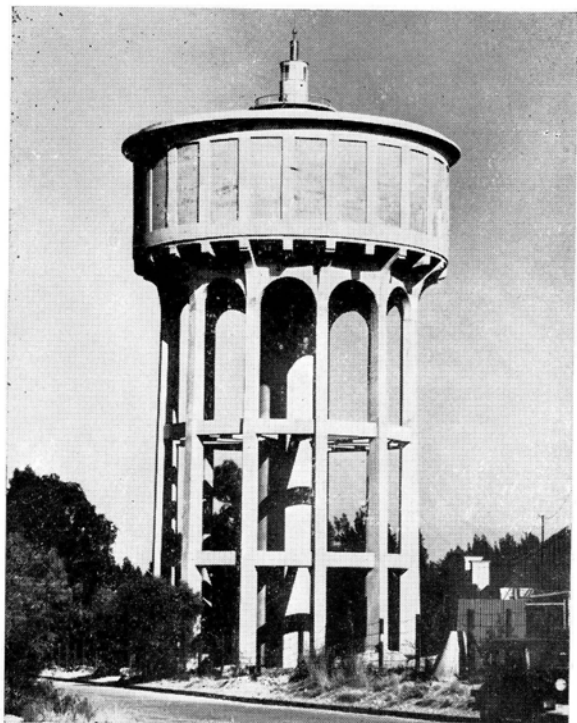
Great care was taken during the concreting of the roof, both in the method of placing and the grading. Placing was carried out without the use of top shutters

by using well-graded dry concrete with a slump of under 1 in. Grading the aggregate for the concrete was done by means of sieve analyses with the object of giving the concrete a maximum workability so that a mix as dry as possible could be used. Cube tests were taken regularly, and the average compressive strength obtained after seven days was in the neighbourhood of 3,500 lb. to the square inch. The mix was slightly richer than 1:2:4, and ordinary, not rapid hardening, cement was used. As a matter of interest, cubes giving as high a strength as 5,000 lb. at seven days have been obtained, this being due in all probability to correct grading and thorough mixing before placing. The mixing time for each batch was never less than two minutes.

When completed the new shed will be divided into arrival and despatch sections, and will contain three tracks with four platforms. It is intended also to provide separate facilities for dealing with the different classes of traffic such as crane traffic, rough goods and petrol, station-to-station traffic (truck loads), timber traffic and vehicles, etc. In general, the handling facilities will be more modern and more extensive than those at Kazerne. The actual equipment, however, has not yet been chosen. Other erections on the site include goods offices and staff facilities.

Owing to the war it has been necessary to curtail work and expenditure on the new goods depôt until normal times again prevail. Work already contracted out, however, is to be completed. The extent to which the new shed and other facilities will be used when completed will depend largely on service exigencies.

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at Prospect Goods and Marshalling Yard**

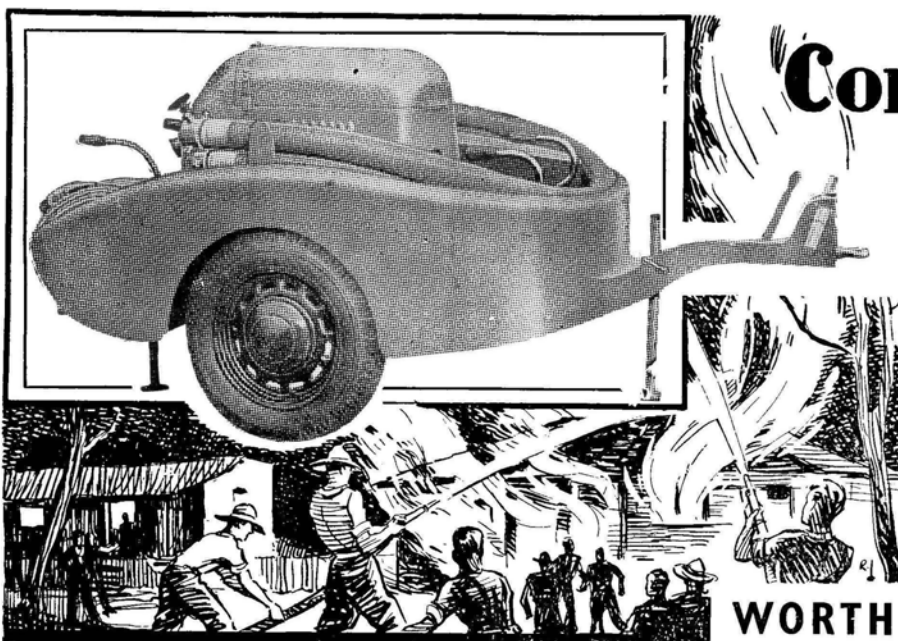
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AGRICULTURAL IMPLEMENTS AND MACHINERY.

Thresher for Vaal-Hartz Settlement, near Warrenton (tender S.O. 1122): Union Tender and Supplies Board, 271 Visagie Street (P.O. Box 371, 'phone 2-9145), Pretoria. **3rd October.**

AIR-CONDITIONING AND CENTRAL HEATING.

Central heating installation at new Single Officers' Mess and Quarters, Waterkloof Air Station, Pretoria: supply, delivery and erection (P.W.D. tender 740): P.W.D., Pretoria (Room 531, 'phone 2-6924). **3rd October.**

Ventilating plant at New G.P.O., Cape Town: supply, delivery and erection (P.W.D. tender 743): Particulars as above. **21st November.**

BUILDINGS AND ALTERATIONS, ETC.

Police wireless transmitting station, Brixton Ridge, Johannesburg (P.W.D. tender 753): P.W.D., Pretoria (Room 531, 'phone 2-6924). **3rd October.**

Sheep and wool shed at College of Agriculture, Glen, O.F.S. (P.W.D. tender 758): P.W.D., Pretoria (Room 531, 'phone 2-6924), and District Representative, P.W.D., Bloemfontein. **10th October.**

Kopjes School: repairs, etc (tender P.6465/1): District Engineer, Room 72a, P.W.D., Bloemfontein. **1st October.**

Frankfort School: repairs and renovations (tender P.6333/1): Particulars as above. **1st October.**

Alterations and additions to Greyling Street Coloured School, Pietermaritzburg: District Representative, P.W.D., Pietermaritzburg. **2nd October.**

CHEMICALS, LABORATORY EQUIPMENT, ETC.

Amber-coloured bottles for Onderstepoort Laboratory: supply of (tender S.O. 1108): Union Tender and Supplies Board, 271 Visagie Street (P.O. Box 371, 'phone 2-9145), Pretoria. **28th November.**

COOKING EQUIPMENT, ETC.

Dough mixer for Fort Napier Institution, Pietermaritzburg: supply and delivery (P.W.D. tender 737): P.W.D., Pretoria (Room 531, 'phone 2-6924). **21st November.**

Electric cooking apparatus and refrigerators for Ladysmith Hospital: supply and delivery: Secretary, P.W.D., Pretoria. **9th October.**

ELECTRICAL EQUIPMENT.

Electric light fittings for New G.P.O., Bloemfontein: supply and delivery (P.W.D. tender 760): P.W.D., Pretoria (Room 531, 'phone 2-9624). **12th December.**

Electrical signal material for S.A.R. & H. (tender 2933): Railway Stores at Salt River, Uitenhage, East London, Durban, Bloemfontein, Pretoria, and Chief Stores Superintendent, Park Chambers, Johannesburg. **18th November.**

Insulated signal cable and flame-proof wire for S.A.R. & H. (tender 2934): Particulars as above. **21st October.**

FENCING MATERIAL.

Fencing Material for Levubu Settlement, near Louis Trichardt (tender S.O. 1124): Union Tender and Supplies Board, 271 Visagie Street (P.O. Box 371, 'phone 2-9145), Pretoria. **3rd October.**

FURNITURE, FITTINGS, ETC.

Lockers for boys at Trades School, Bloemfontein (tender S.O. 1117): Union Tender and Supplies Board, 271 Visagie Street (P.O. Box 371, 'phone 2-9145), Pretoria. **3rd October.**

ROADS AND ROAD-MAKING EQUIPMENT.

Approx. 20,000 gallons bitumen emulsion for Tvl. Prov. Administration (tender 133/1940): Controller of Provincial Stores, P.O. Box 857, Pretoria. **2nd October.**

WATER SUPPLY AND IRRIGATION EQUIPMENT.

Water supply to Public Offices, Gaol and Quarters at Mahlabatini, near Melmoth, Zululand (P.W.D. tender 759): P.W.D., Pretoria (Room 531, 'phone 2-6924), and District Representative, P.W.D., Pietermaritzburg. **10th October.**

Boreholes, drilling of, in Potgietersrust District for Native Affairs Department (tender S.O. 1118): Union Tender and Supplies Board, 271 Visagie Street (P.O. Box 371, 'phone 2-9145), Pretoria. **3rd October.**

MISCELLANEOUS.

Diffusers, registers and grills for New G.P.O., Cape Town: supply and delivery (P.W.D. tender 742): P.W.D., Pretoria (Room 531, 'phone 2-6924). **21st November.**

Town clock for new G.P.O., Bloemfontein: supply, delivery and erection (P.W.D. tender 754): Particulars as above. **5th December.**

Carriage fittings for S.A.R. & H. (tender 2835): Railway Stores at Salt River, Uitenhage, East London, Durban, Bloemfontein, Pretoria, and Chief Stores Superintendent, Park Chambers, Johannesburg. **25th November.**

3-ton welded-frame trailers for S.A.R. & H. (tender 2910): Particulars as above. **2nd December.**

1,000 steel bogie wagons, type B.21, for S.A.R. & H. (tender 2913): Particulars as above. **2nd December.**

Cable for Lyttleton Air Station, near Pretoria (P.W.D. tender 763): P.W.D., Pretoria (Room 531, 'phone 2-6924). **3rd October.**

Marquee tents (S.A.P. Indent 263): Quartermaster, South African Police (P.O. Box 449), 149 Koch Street, Pretoria. **17th October.**

Testing plant for road and bridge materials for Cape Prov. Admin. (tender F.94/1940): Particulars in Cape Provincial Gazette, 6th September. **4th October.**

Tenders Accepted

THE following are particulars of some of the contracts which have been awarded by Government Departments and Provincial Administrations. The name of the successful tenderer is given in each case, and, wherever practicable, the contract price.

AGRICULTURAL IMPLEMENTS AND MACHINERY, ETC.

(1) 38 double-furrow ploughs, (2) 8 scufflers, (3) 21 3-section harrows for Kareepoort Settlement (tender S.O. 993): (1) G. North & Sons, Ltd., Durban; (2) and (3) Massey-Harris Co. (S.A.) Ltd., Durban.

50 cultivators for Loskop Settlement (tender S.O. 918): International Harvester Co. (S.A.) (Pty.) Ltd., Durban. £2 10s. each, f.o.r. Durban.

McCormick-Deering ox-drawn grain binders (4) for Vaal-Hartz Settlement (tender S.O. 1026): International Harvester Co. (S.A.) (Pty.) Ltd., Durban. £81 12s. each, f.o.r. Durban.

Ransomes No. 3 disc harrows (7) for Tvl. Prov. Admin. (tender 77/1940): Mangold Bros., Ltd., Johannesburg. £97 15s. each, f.o.r. in bond Port Elizabeth.

BRIDGES AND MATERIALS.

Klip River Bridge, completion of (P.W.D. tender 719): S.A. Reinforced Concrete Co. (Pty.) Ltd., Johannesburg. £1,578.

BUILDINGS AND ALTERATIONS, ETC.

Alterations, additions and installation of water-borne drainage to gaol and gaol hospital, Middelburg, Tvl. (P.W.D. tender 705): Peter Robertson & Co., Middelburg. £1,694.

Additions to Voortrekker School, Pietermaritzburg: Robt. Barras. £4,444.

Additions to Mansfield Road Government School: Short & McDonald. £780.

CENTRAL HEATING, ETC.

Low-pressure steam heating installation at New G.P.O., Cape Town: supply, delivery and erection (P.W.D. tender 668): A. E. Barker, Johannesburg. £19,096.

COOKING EQUIPMENT, ETC.

Heat storage cooker for Bloemfontein Mental Hospital: delivery and installation (P.W.D. tender 648): G. A. Fichardt, Ltd., Bloemfontein. £175.

Butcher's mincing machines (electric) for S.A. Internment Battalion (tender S.O. 1085): (1) Halsted & Co., Johannesburg (£40 each, f.o.r. Johannesburg); (2) Chas. Westwood, Johannesburg (£46, f.o.r. Johannesburg).

Electric bread-slicing machines (4) for S.A. Internment Battalion (tender S.O. 1085): S.A. Scale Co., Ltd., Johannesburg. £46 each, f.o.r. Johannesburg.

Electric potato-peelers for S.A. Internment Battalion (tender S.O. 1085): S.A. Scale Co., Ltd., Johannesburg. £40 5s. each, f.o.r. Johannesburg.

ELECTRICAL EQUIPMENT.

Ten-panel industrial floor mounting switchboard for New Magistrates' Courts, Johannesburg (P.W.D. tender 667): Arthur Trevor Williams (Pty.) Ltd., Johannesburg. £606, f.o.b. Glasgow.

Copper earth-plates, grid pattern, F.799 for Department of Posts and Telegraphs (tender P.O. 886): Cyclone Gate & Fence Co., Ltd., Pietermaritzburg. £180, delivered.

Fully automatic 1,500-watt electric lighting plant and battery for Post Office, Machadodorp (P.W.D. tender 720): Automobile Electric Supply, Ltd., Johannesburg. £165 6s., f.o.r. Johannesburg.

Electric furnace and accessories for Department of Agriculture and Forestry (tender S.O. 949): Cooke, Troughton & Simms, Ltd., Cape Town. £90, f.o.b. London.

FENCING MATERIAL.

Fencing material for Ram Camp, Springbok (tender S.O. 1060): (1) Sam Newmans, Ltd., Cape Town; (2) South African Wire Co., Durban; (3) S. Machanick & Co., Cape Town; (4) Otto Landsberg & Co., Cape Town; (5) Jas. W. Weir & Co., Ltd., East London.

Fencing material for Department of Irrigation (tender S.O. 1070): (1) African Gate & Fence Works (Pty.) Ltd., Johannesburg; (2) William Bain & Co. (S.A.) Ltd., Johannesburg.

Fencing material for Department of Agriculture and Forestry (tender S.O. 1082): (1) Woolf Engineering Co. (Pty.) Ltd., Bloemfontein; (2) S. Machanick & Co., Cape Town.

Fencing material for Department of Social Welfare (tender S.O. 1091): (1) S. Machanick & Co., Cape Town; (2) Jas. W. Weir & Co., Ltd., East London.

FURNITURE, FITTINGS, ETC.

Furniture for S.A. Internment Battalion (tender S.O. 1036): (1) J. S. Unterhalter (Pty.) Ltd., Pretoria; (2) Central Cabinet Works (Pty.) Ltd., Pretoria; (3) Premier Cabinet Works (Pty.) Ltd., Johannesburg; (4) Modern Wood Turning Works, Jeppe, Johannesburg.

28 men's wardrobes (S.A.P. Indent 256): Beard, Ellis & Berlyn, Ltd., East London. £231 delivered, East London.

REFRIGERATING PLANT.

Refrigerating plant for Mental Hospital, Pretoria: supply, delivery and erection (P.W.D. tender 675): S.A. General Electric Co., Ltd., Johannesburg. £437.

ROADS AND ROAD-MAKING EQUIPMENT.

Crushed stone for Tvl. Prov. Admin. (tender 113/1940): Pioneer Crushers (Pty.) Ltd., Johannesburg.

2-cu. yd. dump wagons (20) for Tvl. Prov. Admin. (tender 64/1940): British Mining Supply Co., Ltd., Johannesburg. £105 each, f.o.r. Johannesburg.

Diesel-engined motor graders, complete (3) for Tvl. Prov. Admin. (tender 65/1940): W. S. Thomas & Co., Ltd., Johannesburg. £1,474 each, f.o.r. in bond East London.

Petrol-engined motor graders, complete (6) for Tvl. Prov. Admin. (tender 66/1940): W. S. Thomas & Co., Ltd., Johannesburg. £1,260 each, f.o.r. in bond East London.

Road-marking machines (3) for Tvl. Prov. Admin. (tender 31/1940): Ash Bros. (Pty.) Ltd., Johannesburg. £74 each, f.o.r. in bond Durban.

Tractors (20) for Tvl. Prov. Admin. (tender 51/1940): W. S. Thomas & Co., Ltd., Johannesburg. £327 each, f.o.r. in bond East London.

Concrete mixers for Tvl. Prov. Admin. (tender 79/1940): (1) Union Guncrete Prop., Ltd., Johannesburg (6 at £167 18s. each, f.o.r. Johannesburg); (2) Hubert Davies & Co., Ltd., Johannesburg (7 at £167 each, f.o.r. in bond Algoa Bay).

Concrete mixers (10) for Tvl. Prov. Admin. (tender 80/1940): Hubert Davies & Co., Ltd., Johannesburg. £57 each, f.o.r. Algoa Bay.

Caravans (20) for Tvl. Prov. Admin. (tender 91/1940): British Mining Supply Co., Ltd. £153 each, f.o.r. Johannesburg.

Water tank trailers (51) for Tvl. Prov. Admin. (tender 96/1940): F. A. Poole (Pty.) Ltd., Pretoria. £40 4s. 8d. each, f.o.r. Pretoria.

Road rippers (19) for Tvl. Prov. Admin. (tender 75/1940): Thos. Barlow & Sons (S.A.) Ltd., Johannesburg. 5 at £157 10s., f.o.r. in bond Durban; 14 at £90, f.o.r. in bond Durban.

Bitumen boilers (5) for Tvl. Prov. Admin. (tender 78/1940): Rogers-Jenkins & Co. (Pty.) Ltd., Johannesburg. £197 each, f.o.r. in bond Durban.

Graders for Tvl. Prov. Admin. (tender 84/1940): Jeffrey-Galion (Pty.) Ltd., Johannesburg.

WATER SUPPLY AND IRRIGATION EQUIPMENT.

Boreholes in Nongoma and Mahlabatini Districts (tender S.O. 1015): East Rand Waterboring Co., Boksburg.

Windmill for S.A. Police: supply, delivery and erection (indent 259): G. North & Son, Ltd., East London. £162 7s. 6d., f.o.r. East London.

MISCELLANEOUS.

Motor-driven tool-grinding machine for State Alluvial Diggings (tender S.O. 1001): D. Drury & Co. (Pty.) Ltd., Johannesburg. £454, f.o.b. New York.

Electric passenger lift for G.P.O., Pretoria: supply, delivery and erection (P.W.D. tender 647): Waygood-Otis (S.A.) Ltd., Johannesburg. £1,615.

37 torches and torch-burners, and empty cylinders (P.O. tender 877): African Oxygen & Acetylene (Pty.) Ltd., Germiston.

Blue-print machine (P.O. tender 876): Argonauts (S.A.) Ltd., Johannesburg. £197 10s., f.o.b. London.

Native huts for Tvl. Prov. Admin. (tender 94/1940): F. A. Poole (Pty.) Ltd., Pretoria. 134 small at £24 each; 35 large at £30 each, f.o.r. Pretoria.

Portable storage huts (196) for Tvl. Prov. Admin. (tender 95/1940): J. Frates & Sons (Pty.) Ltd., Pretoria. £15 17s. 6d. each, f.o.r. Pretoria.

Gangers' huts (244) for Tvl. Prov. Admin. (tender 93/1940): Graham Alfred Fyfe, Johannesburg. £26 8s. each, f.o.r. Kazerne.

Chevrolet motor delivery vans (26) for Tvl. Prov. Admin. (tender 73/1940): Alderson & Flitton (Pty.) Ltd., Pretoria. £189 each, f.o.r. in bond Port Elizabeth.

(1) **4 drill sharpeners, complete with furnace; (2) 4 shank grinders**, for Tvl. Prov. Admin. (tender 88/1940): (1) Gradner-Denver Co. Africa (Pty.) Ltd., Johannesburg (£231 9s. 9d. each, f.o.r. Johannesburg); (2) Ingersoll-Rand Co. (S.A.) Ltd., Johannesburg (£31 each, f.o.r. Johannesburg).

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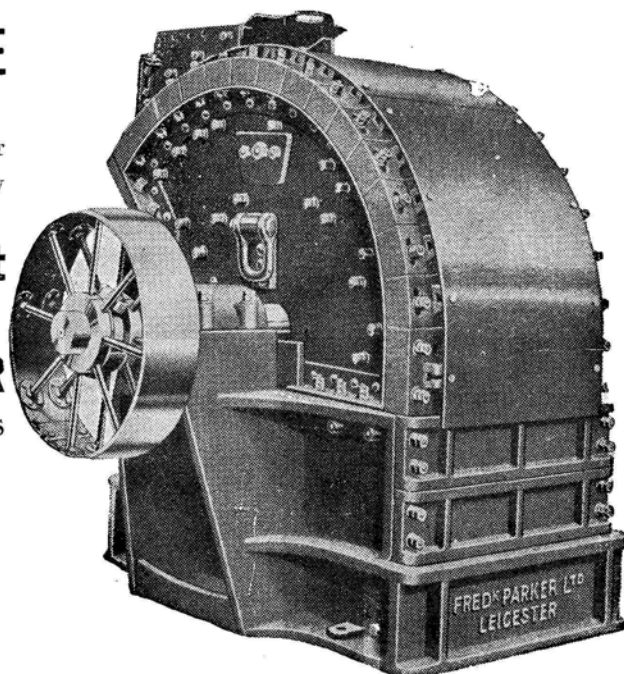
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