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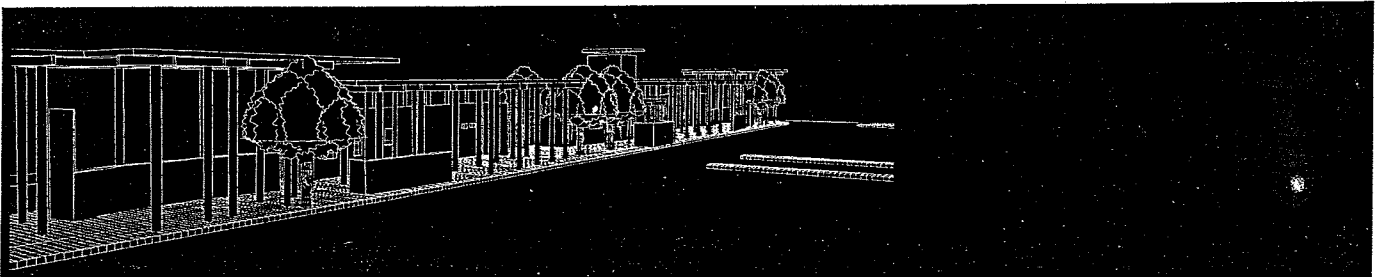
**Redevelopment of the
Baragwanath Public Transport Node
and Trader Market
for the**

Metropolitan Trading Company



26.06.2001

*Orlando Power Station Development - J.06.4
Kan hierdie fasiliteit kleiner wees?*



BARAGWANATH
Public Transport Node

26.06.2001

**REDEVELOPMENT AND MANAGEMENT
OF THE
BARAGWANATH PUBLIC TRANSPORT NODE AND TRADER MARKET
BY THE
METROPOLITAN TRADING COMPANY**

1. INTRODUCTION

1.1 Metropolitan Trading Company

The Metropolitan Trading Company (Pty) Ltd (MTC) was formed by the Greater Johannesburg Metropolitan Council (now City of Johannesburg) for the purpose of developing and managing markets for street traders and ancillary facilities.

The first development it undertook was the Yeoville market, which now accommodates approximately 150 traders and has a small drop off and pick up point for taxis. This market cost approximately R6 million and is being successfully managed by the MTC.

The MTC is now developing Metro Market which will provide stalls for approximately 600 traders and ranking for 1700 taxis and 22 buses and is valued at R150 million. The Gauteng Provincial Government has through its Blue IQ fund made R106 million available for the development and the Council contributed R44 million in the form of land and buildings. The shares in the MTC as a result of the funding structure are held as follows: Gauteng Provincial Government - 70%; City of Johannesburg - 30%. At Metro Market, the MTC is dealing with both the hawkers and the transport facilities as the design, development and management of those facilities are best dealt with in an integrated way.

The MTC has now also embarked on the development of the Hillbrow Traders Market, which focuses primarily on the hawkers but provides facilities for taxis as well.

It was because of the MTC's mission and its track record on the above mentioned developments that the City of Johannesburg resolved that the best way of dealing with the development and management of the Baragwanath Transport Node was through the offices of the MTC.

The MTC's brief was to appoint a team of professionals to undertake a Formulation Phase study that would enable funding to be secured for the Implementation Phase. The Formulation Phase would entail updating the data base, consulting with stakeholders, undertaking further studies as required, preparing preliminary sketch plans, designs and costings. The Formulation Phase is now complete and the document is an executive summary of the same.

1.2 BARAGWANATH PUBLIC TRANSPORT NODE

The Baragwanath Public Transport Node is one of the busiest public transport nodes in South Africa and is situated at one of the few major entry/exit points into and out of Soweto.

A large proportion of Soweto residents pass through the node on a daily basis in order to get to and from work and home. The transport node is situated on the northern side of a high order arterial road known as the "Old Potch Road". To the south of that road is the Chris Hani Baragwanath Hospital, an internationally renowned hospital, the biggest in South Africa and which renders good service to the community in difficult circumstances.

The hospital generates a significant amount of vehicular and pedestrian movement at the node. The Old Potch Road is a divided four lane facility and carries approximately 28 000 vehicles per day.

It will be of major benefit to the residents of Soweto to erect a modern and efficient facility that integrates all bus, taxis and hawkers activities in the area and which includes all the requisite supporting facilities such as toilets, offices for the respective associations, taxi wash bays, storage facilities for hawkers and convenience retail. The current situation is clearly unacceptable.

2. THE CHALLENGES

The challenges of redeveloping the Baragwanath Public Transport Node and Trader Markets are on the one hand to try and reconcile the competing needs of the various stakeholders (taxis, buses, hawkers, Hospital/Clinic) with the objective of providing a functionally efficient transport node which integrates hawker activities and which is also aesthetically pleasing. Given its situation at one of the gateways to Soweto, the latter point is very important.

Following discussions with stakeholders, the proposal provides for the bus terminus to be separate from the taxi rank. Taxi associations and bus companies all recognise the changing public transport environment which is moving to more integrated modes of public transport. Holding and loading facilities are integrated into the facility for both buses and taxis.

With regard to the taxi associations themselves a relatively stable situation exists with Baracity largely undertaking the line haul function (ie from Soweto to outlying areas and back again). The other three associations, WATA, STS and Barameadow MDN handle the collection and distribution within the township itself.

Competition between hawkers and taxis arises when the taxis feel that their passengers are not given free passage in the rank. The proposed solution is to provide specific trading areas for hawkers: alongside the major pedestrian route/walkway and to build 3 small hawker markets between the taxi loading ranks and one tourist orientated market at the eastern end of the rank.

In addition to reconciling competing interests was the need to deal with the ever growing ownership of private vehicles and their demands on road usage. The movement of through traffic should not be unduly delayed by movements into and out of the node.

The needs of the Baragwanath Hospital and their plans for expansion needed to be taken into account as well as those of the Lesedi Clinic.

The reconciliation of the various interests was critical to the success of the design and it is safe to say that full co-operation was enjoyed by the Project Team in its discussion with stakeholder groups. That is not to say that there was agreement on all the issues, but that there was a willingness to work together to find solutions.

The solution which has been proposed is, we believe both reasonable and feasible from a financial point of view.

3. TAXIS

Taxi operations have evolved into a fairly complex set of arrangements, with the routes that had been secured by each association having become fixed as part of the formalisation and registration process, originated by the Department of Transport.

Certain associations pick up from multiple points within Soweto and deliver to collection points on the periphery. Here a change over occurs and other associations transport people to a large

number of final destinations. As stated above, three associations, WATA, STS and Barameadow MDN handle the collection and distribution within the township itself, and Baracity undertakes the line haul function (ie from Soweto to outlying areas and back again).

A detailed assessment of existing taxi numbers, activities and operations revealed that there are some 2000 taxis operating from the site and its surrounds.

Four major holding and loading areas (see plan overleaf) were identified serving 46 different destinations/routes. A summary of the situation is set out below

Association	No. of Routes	Taxis Holding	Taxis Loading
STS	8	600	50
Baracity	4	380	20
Baracity	8		50
Baracity	4		20
Baracity	7		20
Baracity	6	120	40
WATA	5	700	40
Barameadow MDN	4	300	40
	46	2100	280

Experience in other ranks has shown that approximately one-third of the vehicles were on site during the off peak period. Three surveys were conducted at 11 am on the following days:

Monday 2 October 2000 - Maximum number holding and loading – 525 taxis
 Wednesday 4 October 2000 - Maximum number holding and loading – 630 taxis
 Sunday 29 October 2000 - Maximum number holding and loading – 485 taxis

We have worked on the basis that the capacity required is a minimum of 630 taxis. See overleaf for a plan showing the results of the survey on 4 October 2000

The rank has been laid out in co-operation with the taxi associations where each has their dedicated loading area towards the eastern side of the rank with the holding areas on the western side. The access arrangements have also been discussed in detail and agreed.

4. HAWKERS

Hawkers are attracted to areas where high pedestrian volumes exist and taxi ranks and bus termini are accordingly generally well frequented by hawkers. Hawking is strongly supported as a means whereby people sustain themselves and as a job creation mechanism. This should be encouraged within the ambit of the Council's by laws.

The challenge is to build upon the foundation that already exists and assist them to extend their businesses and become better traders. The proposed development will go a long way in that regard by providing excellent facilities for street trading together with the institutional a development of the representative associations.

A market survey identified a total of 359 traders of which and 177 were interviewed. It emerged that Baragwanath has a well established and stable trading community with:

- 86,2 % of traders having traded there for more than three years;
- 65 % belonging to a trader organisation of which 91% belonged to the Baragwanath

Hawkers Association and 8% to Masakhane Hawkens Association which we understand is to merge with the former organisation.

- 86% of traders own the and stalls they trade from,
- 22% of traders work for someone else
- 94% of traders store their goods off site i.e. other than in their stall, and 50% take their goods home with them
- 100 % of traders interviewed supported the idea of traders market
- 98% said they would be prepared to pay rental for a stall in such a market
- 48% were prepared to volunteer a rental, the average of which was R5,19 per day per stall

The Trading patterns are not unlike those of traders elsewhere with very little product identification. It could be said that the traders have reached a balance with regard to the market demand generated by the buses and taxis and the resettlement of traders from the wider area should be avoided. Very low hygiene conditions exist in many areas which would obviously be addressed in the formal design as would waste management.

The buying patterns of traders are as diverse as experienced elsewhere and room for wholesaling activity should be made. The MTC should incorporate a cooperative buying initiative into discussions with traders from the outset.

Storage facilities on site would be an important attraction given the figures reflected above. A dedicated tourist section could add a new dimensional to the trading area. The concept of a linear layout of trading stalls alongside pedestrian routes would ensure adequate exposure of traders to passing trade.

5. BUSES

Subsidised Buses

Our survey revealed:

- Approximately a 100 buses entered the rank
- 95 unique number plates were observed
- 99 destinations are served from the rank
- 5 buses entered the rank twice (making more than one feeder trip)
- The maximum number of buses in the rank at one time was approximately 10
- The maximum time that a bus spends in the rank is 15 minutes.

In the morning peak period Putco Soweto feeder services bring passengers to the Node. Some remain on the buses to continue their journeys while most of the others transfer to other buses and are likewise taken to other end destinations. The bus-to-bus transfers are the predominant type of transfer and are reinforced through the use of multi journey tickets allowing them to transfer between buses at the Node.

In the afternoon the return trips are much more spread out, arriving at 14:10 with the last bus departing at 19:35. Approximately 100 buses are used on the return trips. Currently the buses do not stop at the Node in the afternoon, transfers take place at the Putco Depot east of the hospital. A few buses load and off-load passengers on the southern side of Old Potch Road just after the main pedestrian bridge into the Hospital.

Long Distance Buses

A number of operators are providing long distance services from the Node. Their primary destinations are Northern Province, Kwazulu Natal, and the former Transkei (Eastern Cape). The buses mostly operate outside the peak periods and should not have a major affect on the subsidised services. Between Friday afternoon and Saturday mornings approximately a 100 long distance buses operate from the rank.

Provision will also be made for tourist buses to park and hold along the taxi rank service road in the northeastern corner of the facility.

New Dedicated Bus Rank

The land to the south of the Lesedi Clinic is earmarked for the dedicated bus rank will which have 25 bay that will serve both the subsidised and long distance buses. Access to the rank will be provided from Old Potch Road into the road to the east of the Lesedi clinic. A degree of congestion might occur during the Friday afternoon peak period when both the subsidised and long distance buses use the rank simultaneously.

When implemented the operators will use the new bus rank in the afternoon on their return trips. The allocation of bays between the bus operators and the operation of the rank will have to be discussed with the parties concerned.

6. PEDESTRIAN BRIDGE SURVEYS

There are two pedestrian bridges linking the rank to the Baragwanath Hospital. The main bridge is situated at the main entrance to the hospital providing access for staff, patients and visitors. The second bridge, which is narrower, is opposite the nurses hostel.

Currently a large number of hawkers are occupying the main reach the then by limiting the capacity of the bridge. With the new layout these hawkers will be relocated to formal Walker facility is within the rank. In addition it is proposed that must be erected to cover the length of the bridge to provide protection while people are queuing on the bridge, as they do during a visiting Callas between 1416 hundred. To assist the elderly and sick is proposed that they left be installed at each end of the main bridge. The investors bridge will stay as is.

A pedestrian count revealed the following:

Main Bridge

- 6700 people used the bridge to enter and 7200 used the bridge to leave the hospital between 06h00 and 18h00

Nurses Bridge

- 940 people used the bridge to enter and 680 used the bridge to leave the hospital between 06h00 and 18h00

7. TRAFFIC IMPACT ASSESSMENT

7.1 Historic Traffic Volumes

A 24-hour traffic count was conducted on the Old Potchefstroom Road on 15 April 1999 (just east of its intersection with Mokoena Street -approximately 2,85 km west of the main vehicular entrance to the Baragwanath Hospital). The following information was derived from this count:

- The average daily traffic volume was 28 189 vehicles
- Eastbound traffic totaled 14 674 vehicles

- Westbound traffic totaled 13 515 vehicles
- The eastbound peak hour occurred between 06:00 and 07:00, and peak hour traffic volume was a total of 1 375 vehicles
- The westbound peak hour occurred between 17:45 and 18:45, and the peak hour traffic volume was a total of 1 337 vehicles.

(Source of information: GJMC Traffic Counting Information System)

7.2 Peak Hour Traffic Analysis

As part of the investigation, a traffic impact assessment was conducted to determine the following:

- The peak period traffic movements between 6:00 and 8:00 in the morning and 16:00 and 18:00 in the afternoon;
- The peak hour turning movements at the priority intersections;
- The level of service (LOS) at each intersection during each peak hour;
- The extent of through traffic along Old Potch Road in the peak hours.

Traffic counts were conducted for the morning (6:00 to 8:00) and the afternoon (16:00 to 18:00) peak periods on 18, 19 and 21 September 2000 at the following twelve (12) intersections (as shown in Figure.01):

- main entrance to the Chris Hani Baragwanath Hospital on Old Potch road – 1;
- main rank exit on East Road next to Old Potch Road - 1.1;
- main mid-block entrance to the rank from Old Potch Road (which connects West Road with Old Potch Road) – 2;
- intersection between the internal rank service road and West Road – 3;
- un-signalised intersection on Old Potch Road (south of the Lesedi Clinic) – 4;
- access point onto the internal rank service road (on the eastern side of the Lesedi Clinic) - 4.1;
- intersection at the crossing between Old Potch Road and Immink Road at the BP service station – 5;
- intersection on Immink Road just west of West Road – 6;
- intersection between Immink and West Road at the Engen service station – 7;
- intersection between Immink and East Road - 8;
- intersection at Toby's service station and Cellular shop – 9;

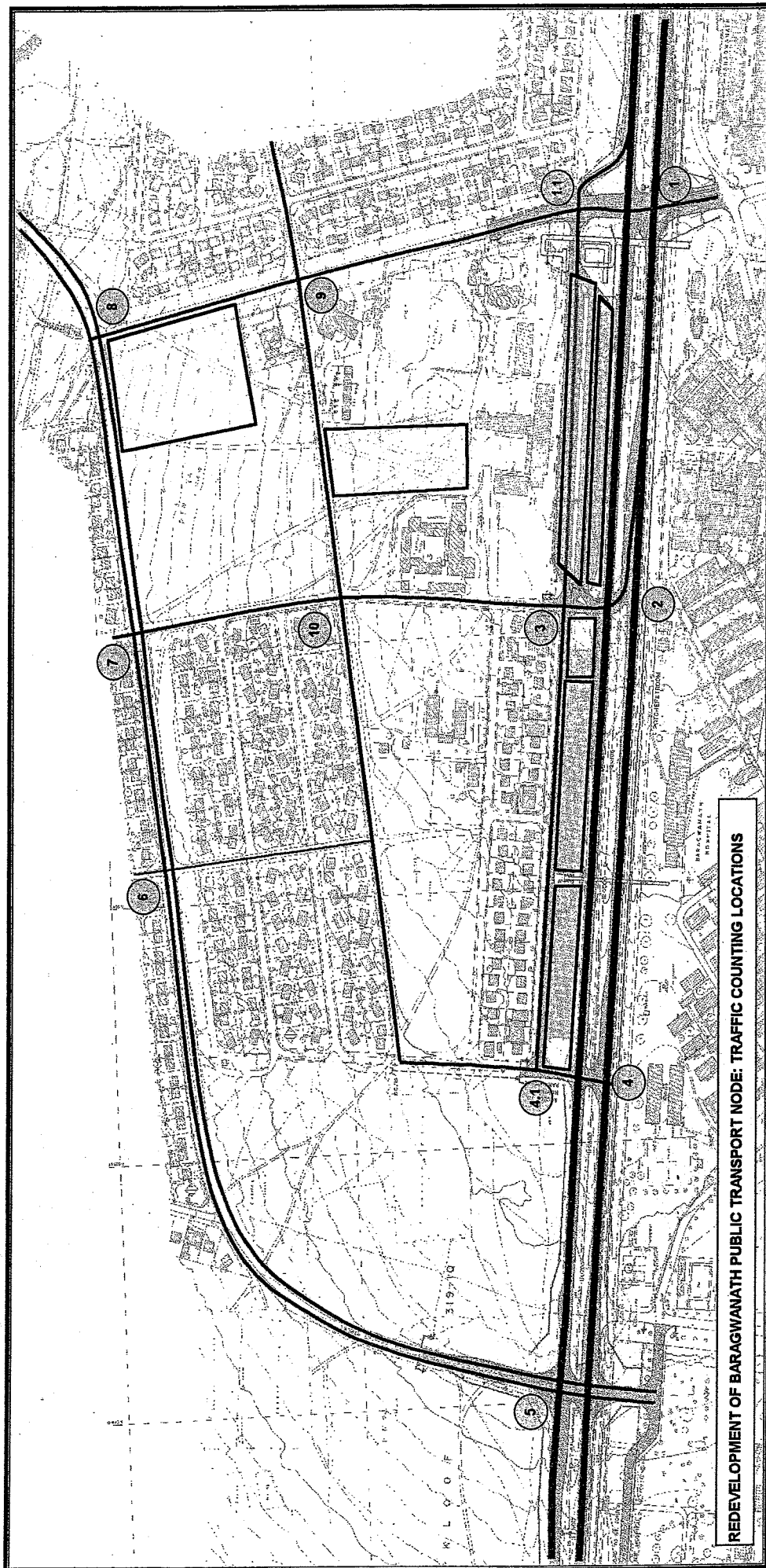


Fig.01

- intersection on West Street between the rank service road and Immink Road – 10.

The peak hour results from these traffic counts are shown in **Figure.02 and 03** .See **Appendix 01** for detailed analyses of the traffic counting surveys.

The morning and afternoon peak hours along Old Potch Road was observed between 6:45 and 7:45, and between 17:00 and 18:00 respectively.

The through traffic on Old Potch Road accounts for approximately 75% of the traffic between Immink and East Road. This emphasises the function of Old Potch Road as an major arterial. This function of the road should be secured for the future as far as possible.

Capacity analyses were performed on each intersection to establish the current level of service (LOS) for each turning movements and the intersection as a whole. These analyses were conducted with SIDRA, a program specifically developed to analyse individual intersections.

Annexure 02 provides detailed results on the level of service, delays and queuing for each turning movement at each intersection.

A summary of the results from the SIDRA analyses is given in **Table 1.2.1** below.

TABLE 1.2.1: SUMMARY OF SIDRA CAPACITY ANALYSIS FOR EACH INTERSECTION

INTERSECTION No.	MORNING PEAK HOUR		AFTERNOON PEAK HOUR	
	LOS	DELAY	LOS	DELAY
1	B	17.0	B	13.6
1.1	A	10.7	A	10.7
2	A	6.6	A	7.9
3	A	13.0	A	12.1
4	E	33.8	F	68.6
4.1	A	12.0	A	12.2
5	B	11.1	D	39.6
6	A	1.9	A	1.7
7	B	17.6	B	18.7
8	B	19.5	B	18.4
9	A	8.6	A	8.0
10	C	23.4	B	22.2

From the above results, it is clear that there are currently no major problems at any of the intersections in the area. There are minor problems at the unsignalised intersection No. 4 where the current level of service is F. This is caused by the delays experienced by traffic performing right turns at the intersection in the peak hour when high traffic volumes occur along Old Potch Road. This intersection will in future play a major role as access point to the new proposed bus rank.

7.3 Predicted Traffic Growth

Future traffic growth could influence the effective operation of the rank and traffic flow in the area, especially along Old Potch Road.

Very little historic traffic data is available for Old Potch Road in the vicinity of the Baragwanath Public Transport Node. The available data is relatively scattered, making it very difficult to determine a reliable traffic growth rate for the area.

Average traffic growth in Gauteng is approximately 3.5% per annum. This was used as a guideline for the area. Other factors that could influence traffic growth in the area are: